



2019 Minerals Yearbook

PAKISTAN [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF PAKISTAN

By Ji Won Moon

In 2019, Pakistan was the world's third-ranked producer of iron oxide pigments. The country was ranked 11th in the production of barite, accounting for 1.2% of the world's production and for an estimated 10.3% of the world's reserves. Pakistan also produced other mineral commodities, such as cement, chromite, clay, coal, copper, crude petroleum, gypsum, iron ore, lead, limestone, natural gas, silver, and zinc (Briche, 2021; McRae, 2021).

Minerals in the National Economy

In 2019, the growth rate of Pakistan's real gross domestic product (GDP) was 1.9% compared with 5.5% in 2018, and the nominal GDP decreased to \$276 billion¹ in 2019 from \$313 billion in 2018. In fiscal year 2019 (July 1, 2018, through June 30, 2019), the mining and quarrying sector contributed 2.6% of the GDP and the growth rate of the mining and quarrying sector was negative 1.96% compared with 7.72% in fiscal year 2018 (International Monetary Fund, 2020; State Bank of Pakistan, 2020a, p. 18–19; 2020b, p. 8; 2020d, p. 3).

The total import value in fiscal year 2019 was \$54.8 billion compared with \$60.8 billion in fiscal year 2018. The import value of mineral fuels, oils, and their distillation products was \$16.0 billion; iron and steel, \$3.38 billion; articles of iron or steel, \$840 million; and aluminum and articles of aluminum, \$349 million. The total export value in fiscal year 2019 was \$23.0 billion compared with \$23.2 billion in fiscal year 2018. The export value of mineral fuels, oils, and their distillation products was \$477 million; salt, sulfur, lime, and stone, \$463 million; and copper and articles of copper, \$269 million (State Bank of Pakistan, 2020c, p. 123–124).

Mining in Pakistan is regulated by the Regulation of Mines and Oilfields and Mineral Development Act at the Federal level (enacted in 1948 and amended in 1976), the Mining Concession Rules for four Provinces (enacted between 2002 and 2005), and the National Mineral Policy at the Federal and provincial levels (enacted in 1995 and amended in 2013) (Maluka, 2017, p. 158–166).

In August 2019, Balochistan Province enacted the new Balochistan Mines and Mineral Development Policy. The provincial government stated the goal of this policy was to attract foreign investment for large-scale projects. In December 2019, the Khyber Pakhtunkhwa Minerals Sector Governance (Amendment) Act, 2019, was published. This act defines the mining operation process, including the lease and licensing rules for the newly-merged tribal districts, so that the priority of licensing is given to the local community, which is authorized to enter into joint ventures with exploration and mining companies

(News International, The, 2019; Provincial Assembly of Khyber Pakhtunkhwa, 2019; Zafar, 2019b; Express Tribune, The, 2020).

Production

In 2019, the production of lignite was estimated to have increased by 180%; lead (mine, Pb content), by 68%; feldspar, by 61%; chromium (mine, Cr₂O₃ content), by 46%; zinc (mine, Zn content), by 39%; talc, by 38%; lead (secondary, refinery), by 33% (reported); soda ash, by 27%; bentonite, by 24%; kaolin, by 17%; and sand and gravel (industrial, silica), by 12%. In contrast, the production of fuller's earth was estimated to have decreased by 85%; dolomite, by 57%; bauxite, by 49%; iron oxide pigment, by 47%; magnesite, by 39%; sulfur (native), by 38%; pumice, by 33%; raw steel, by 30% (reported); limestone, by 22%; iron (mine, Fe content) and phosphate rock (gross weight), by 20% each; barite, by 15%; sand and gravel (industrial, unspecified), by 13%; rock salt, by 12%; and quartz, by 11%. Data on mineral production are in table 1.

Structure of the Mineral Industry

Provincial governments, along with the Federal Government and domestic and foreign companies, participated in the mining of metallic and industrial minerals, including barite, copper, gold, and iron ore. The Federal Government, through the Ministry of Petroleum and Natural Resources and possession of high-percentage shares in public and international companies, was actively engaged in coal and petroleum production. Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Copper and Gold.—In 2019, Metallurgical Corporation of China Ltd. (MCC) applied for an extension of its mining license for the Saindak copper-gold mine, which was set to expire in 2022. MCC operated the Saindak Mine through a 50%-owned subsidiary, Saindak Metals Ltd. The company produced 13,049 metric tons (t) of copper (mine, Cu content) in 2019, which was an increase of 4.1% from the 12,538 t produced in 2018. MCC mined mainly the south and north ore bodies using open pit mining; the deposits were expected to be depleted of minable resources after 2021. The east ore body of the mine was estimated to have 278 million metric tons (Mt) of ore and an expected mine life of 19 years. The exports of copper and articles thereof from Pakistan to China increased to \$550 million in 2019 from \$106 million in 2016 (Metallurgical Corporation of China Ltd., 2019, p. 32; 2020, p. 31; Shahid, 2019; Independent News Pakistan, 2020).

Tethyan Copper Co., which was a joint venture between Barrick Gold Corp. of Canada and Antofagasta PLC of Chile, was engaged in a legal dispute with the Government of Pakistan

¹Where necessary, values have been converted from Pakistan rupees (PKR) to U.S. dollars (US\$) at an annual average exchange rate of PKR136.0901=US\$1.00 for 2019 and PKR109.8444=US\$1.00 for 2018.

over the Reko Diq project. In 2019, the World Bank's International Centre for Settlement of Investment Disputes and the International Chamber of Commerce levied a \$5.9 billion fine on the Pakistan Government for violating its contractual commitments. MCC, which operated the Saindak Mine close to Reko Diq, was also interested in the bigger deposit of the Reko Diq project. The Reko Diq deposit, once developed, could yield 200,000 metric tons per year (t/yr) of copper and 7,800 kilograms per year of gold and would have an expected mine life of 56 years (Ali, 2019; Burns, 2019; Jorgic, 2019; Tethyan Copper Co., 2020).

Lead and Zinc.—In 2019, MCC achieved the full mine production capacity of 500,000 t/yr of ore at the Duddar lead-zinc mine, which was the country's sole underground metal mine. The production of lead and zinc concentrate (gross weight) increased to 13,481 t and 74,729 t, respectively, from 8,036 t of lead concentrates and 53,957 t of zinc concentrates in 2018 (Metallurgical Corporation of China Ltd., 2019, p. 31; 2020, p. 31; Zafar, 2019a).

Industrial Minerals

Cement.—In 2019, Pakistan produced 40.2 Mt of cement, which was a decrease of 1.5% from the amount produced in 2018. Pakistan had approximately 30 cement plants as of December 2019, of which the operational capacity exceeded 62 million metric tons per year (Mt/yr) of cement. The country's utilization rate decreased to less than 80% in fiscal year 2019 from more than 90% in fiscal year 2018 owing to a 15.5% increase in the installed capacity. Cement and clinker exports increased to 2.1 Mt, or by 40.5%, in fiscal year 2019 owing mainly to the restarting of clinker exports (which had been stopped in fiscal year 2012) (table 1; All Pakistan Cement Manufacturer Association, 2020a, b; State Bank of Pakistan, 2020a, p. 25).

Kohat Cement Co. Ltd. expected to complete the expansion of its installed cement production capacity in January 2020, to 5.29 Mt/yr of cement from 2.95 Mt/yr. In 2019, the company produced 2.31 Mt of cement at a 78% utilization rate. Lucky Cement Ltd. completed a 2.8 Mt/yr cement production line, which increased its overall capacity to approximately 12.2 Mt/yr in 2019. Lucky Cement produced 6.79 Mt of clinker and 6.55 Mt of cement. In July, Power Cement Ltd. installed a third production line at its Nooriabad plant, including 2.46-Mt/yr-capacity clinker line and 2.72-Mt/yr-capacity cement line, and shut down some of its old production lines owing to their inefficient operation (Global Cement, 2019a, b; Kohat Cement Co. Ltd., 2019a, p. 3; 2019b, p. 14; 2020, p. 3; Lucky Cement Ltd., 2019a, p. 3; 2019b, p. 110; 2020, p. 6).

Mineral Fuels and Related Materials

Coal.—The production of lignite increased by 180% to 4.0 Mt in 2019 from 1.4 Mt in 2018. Sindh Engro Coal Mining Co. (SECMC) had started production at the country's first open pit lignite mine in Thar Block II with a mining capacity of 3.8 Mt/yr in June 2018. SECMC supplied 2.28 Mt of coal to Engro Powergen Thar (Pvt) Ltd.'s 660-megawatt (MW)-capacity powerplant in Tharparkar District, Sindh Province,

from July to December 2019 and signed a 30-year coal supply agreement to supply 1.9 Mt/yr of coal to Siddiqsons Energy Ltd. (table 1; Nasir, 2019; Engro Energy Ltd., 2020; Sindh Engro Coal Mining Co., 2020, p. 4).

In October 2019, Sino-Sindh Resources Pvt. Ltd. (SSRL), a wholly owned subsidiary of Global Mining Co. (Pvt) Ltd. of China, commenced the construction of a 7.8-Mt/yr-capacity open pit coal mine at the Thar Block I that was expected to be completed in the last quarter of 2022. SSRL's lignite resources included 600 Mt of measured resources, 1.9 billion metric tons (Gt) of indicated resources, and 1.0 Gt of inferred resources. SSRL initiated an agreement to supply coal to Thar Coal Block-1 Power Generation Co (Pvt) Ltd., a subsidiary of Shanghai Electric Group of China, for its two 660-MW powerplants in Tharparkar District, Sindh Province (Mirza, 2019).

Natural Gas.—Pakistan was in the process of building five liquefied natural gas (LNG) terminals that were expected to start operation in 2021 or 2022. The new terminals would triple Pakistan's LNG imports and help lessen the gas shortage in the country. Pakistan had been subject to shortages of natural gas for power generation, fertilizer production, and household usages owing to the country's inability to supply enough gas from domestic resources, its aged distribution network, and the difficulty in sourcing LNG cargoes (Nickel, 2019; Abbasi, 2020; Mohanty and others, 2021).

Petroleum.—Eni Pakistan Ltd. (owned by Eni S.p.A. of Italy, as operator), Exploration and Production Pakistan BV, Oil and Gas Development Co., and Pakistan Petroleum Ltd. each held a 25% interest in the Kekra-1 well of the Indus Block G. In 2019, the consortium ended exploration at the Kekra-1 well after no reserves of petroleum were found (Hassan, 2019; Rarrick, 2019).

In 2019, Parco Coastal Refinery Ltd.—a joint venture of the Government of Pakistan (60%), United Arab Emirates' International Petroleum Investment Co. (30%), and OMV Group (10%)—was in the process of constructing the Khalifa Point refinery, which would be the largest petroleum refinery in the country. The refinery would have the capacity to process 250,000 barrels per day of petroleum and was to begin operating in 2025 or 2026 (Mustafa, 2019).

Outlook

In 2020, Pakistan's real GDP is forecasted to decrease by 0.4% owing to the effects of the global coronavirus disease 2019 (COVID-19) pandemic compared with an increase by 1.9% in 2019. The Reko Diq copper-gold project, if successfully developed, will contribute significantly to Pakistan's economy in the future. Construction of additional LNG terminals and recently commissioned coal mines are expected to alleviate the gas shortage for related industries, including fertilizer production and power generation, respectively. The planned commissioning of the Khalifa Point refinery in 2025 is expected to reduce the country's import reliance on refined mineral fuels (International Monetary Fund, 2020).

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TABLE 1
PAKISTAN: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise specified)

Commodity ²	2015	2016	2017	2018	2019
METALS					
Antimony, mine, Sb content	114	21	15	-- ^r	--
Bauxite	31,092	90,193	103,412	121,438	61,900 ^e
Chromium, mine, chromite:					
Gross weight	100,155	81,250	88,781	111,586 ^r	163,000 ^e
Cr ₂ O ₃ content	53,000	43,000	47,000	59,000 ^r	86,000 ^e
Copper:					
Mine, concentrates, Cu content	13,056	14,136	10,052	12,538	13,049
Smelter	13,000 ^e	14,000 ^e	10,000 ^e	12,500 ^r	12,500
Iron ore, mine:					
Gross weight	439	471	616	685 ^r	547 ^e
Fe content	140	151	197	219 ^r	175 ^e
Iron and steel:					
Pig iron	163	--	--	--	-- ^e
Steel:					
Raw steel	2,892	3,553	4,966	4,719	3,313
Products	NA	NA	9,440 ^e	8,850 ^e	8,040 ^e
Lead:					
Mine, concentrates:					
Gross weight	NA	1,994	5,079	8,036	13,481
Pb content	NA	1,280 ^e	3,250 ^e	5,140 ^e	8,630 ^e
Refinery, secondary	5,000	8,000	5,000 ^r	18,000 ^r	24,000
Silver, mine, Ag content	9,693	3,110	3,000 ^e	3,000 ^e	3,000 ^e
Zinc, mine, concentrates:					
Gross weight	NA	15,403	38,913	53,957	74,729
Zn content	NA	7,700 ^e	19,500 ^e	27,000 ^e	37,400 ^e
INDUSTRIAL MINERALS					
Barite	121,575	107,224	105,554	99,286 ^r	84,000 ^e
Cement, hydraulic	33,232	37,020	38,900	40,800	40,200 ^e
Clay:					
Bentonite	33,612	31,384	79,417	42,932 ^r	53,100 ^e
Fire clay	473,906	546,134	754,701	774,839 ^r	753,000 ^e
Fuller's earth	10,396	22,880	9,162	13,592 ^r	2,090 ^e
Kaolin	23,064	27,576	20,666	16,887 ^r	19,800 ^e
Feldspar	141,582	305,308	253,185	224,383 ^r	362,000 ^e
Fluorspar	7,692	6,625	2,298	5,887 ^r	5,500 ^e
Graphite, crystalline flake	2,900	10,000 ^e	14,000 ^e	14,000 ^e	14,000 ^e
Gypsum, mine	1,660	1,998	2,178 ^r	2,679 ^r	1,670 ^e
Iron oxide pigments, mineral, natural, ocher	51,534	90,424	71,779	90,619	47,800 ^e
Magnesite	24,271	22,581	21,481	41,017 ^r	25,000 ^e
Nitrogen, ammonia, N content	3,100	3,300	3,100	3,000 ^r	3,100 ^e
Phosphate rock: ^e					
Gross weight	100,000	88,000	65,000	76,000 ^r	61,000
P ₂ O ₅ content	25,000	22,000	16,000	19,000 ^r	15,000
Pumice ^e	1,200	2,700	3,200	2,700 ^r	1,800
Quartz	64,400 ^e	93,675 ^r	118,715 ^r	120,959 ^r	108,000 ^e

See footnotes at end of table.

TABLE 1—Continued
PAKISTAN: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise specified)

Commodity ²	2015	2016	2017	2018	2019
INDUSTRIAL MINERALS—Continued					
Salt:					
Rock salt thousand metric tons	2,779	3,535	3,493	3,959	3,470 ^e
Sea salt ^e do.	212	214	222	212 ^r	228
Sand and gravel, industrial:					
Silica	6,510 ^r	50,854 ^r	27,710 ^r	17,740 ^r	19,800 ^e
Unspecified	359,000	395,000	315,000	683,000	594,000 ^e
Sodium compounds:					
Caustic soda thousand metric tons	227	218	241	277	275 ^e
Soda ash, synthetic do.	449	476	476	546	695 ^e
Stone:					
Crushed:					
Chalk	100	110	--	--	-- ^e
Dolomite thousand metric tons	271	691	332	537 ^r	231 ^e
Limestone do.	44,252	47,577	60,765	76,540 ^r	59,600 ^e
Dimension, marble do.	3,219	5,149	7,118 ^r	8,198 ^r	8,420 ^e
Sulfur, native, S content	14,888	20,243	22,787	23,758 ^r	14,800 ^e
Talc and related materials, soapstone	113,509	116,678	177,345	132,272 ^r	183,000 ^e
MINERAL FUELS AND RELATED MATERIALS					
Coal:					
Bituminous thousand metric tons	2,324	2,827	2,982	2,856 ^r	2,800 ^e
Lignite do.	951	1,157	1,221	1,428 ^r	4,000 ^e
Natural gas, marketable million cubic meters	41,948	41,507	41,474	40,934	40,400 ^e
Petroleum:					
Crude thousand 42-gallon barrels	32,996	31,285	32,799	32,630	32,300 ^e
Refinery:					
Distillate fuel oil do.	55,333	52,607	56,421	59,141	54,400 ^e
Gasoline do.	14,283	14,308	16,743	19,930	19,200 ^e
Jet fuel do.	6,680	6,964	7,024	6,866	6,400 ^e
Kerosene do.	1,290	1,021	986	844	920 ^e
Liquefied petroleum gas do.	2,576	2,926	3,700	5,318	5,170 ^e
Lubricants do.	1,378	1,445	1,238	1,361	1,380 ^e
Naphtha do.	8,713	6,837	6,864	5,264	5,610 ^e
Other do.	313	166	217	291	310 ^e
Total	90,566	86,274	93,193	99,015	93,390^e

^eEstimated. ^rRevised. do. Ditto. NA Not available. -- Zero.

¹Table includes data available through August 27, 2020. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits; may not add to totals shown.

²In addition to the commodities listed, secondary aluminum, gemstones, gold, and uranium may have been produced, but available information was inadequate to make reliable estimates of output.

TABLE 2
PAKISTAN: STRUCTURE OF THE MINERAL INDUSTRY IN 2019

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity ^c	
Aluminum, metal, secondary	Alpha Aluminum Co.	Smelter in Lahore	1,000	
Do.	do.	Aluminum Co. of Pakistan Industries (Pvt.) Ltd. (ALCOP)	Smelters in Karachi and Lahore	2,700
Do.	do.	Chawla Chemical & Metal Industries (Pvt.) Ltd.	Smelter in Lahore	NA
Do.	do.	Japan Metal Industries	Smelter in Karachi	1,500
Do.	do.	Khan Aluminum Industries	do.	2,700
Do.	do.	Lucky Industries (Pvt.) Ltd.	do.	1,200
Do.	do.	Pakistan Cables Ltd.	do.	2,500
Do.	do.	Pakistan Metal Industries	do.	4,000
Do.	do.	Sun Metal Industries (Pvt.) Ltd.	do.	14,400
Antimony	do.	MTEQ Pakistan (Pvt.) Ltd.	Mines in Vashouk and Dalbadin, Balochistan	100
Barite	Bolan Mining Enterprises (BME) (government of Balochistan Province, 50%, and Pakistan Petroleum Ltd., 50%)	Mine in Khuzdar, Balochistan	120	
Do.	Razvi Mining (Pvt.) Ltd.	Mines in Gandori, Kalan, and Retri	30	
Bauxite	NA	Chhoi-Akhori desposit, Haripur, Khyber Pakhtunkhwa	NA	
Do.	NA	Katha-Pail desposit, Khushab, Punjab	NA	
Cement	Askari Cement Co. Ltd.	Plant in Wah, Rawalpindi, Punjab	1,100	
Do.	do.	Plant in Nizampur, Nowshera, Khyber Pakhtunkhwa	1,700	
Do.	Attock Cement Pakistan Ltd. (Pharaoh Group)	Plant in Hub, Lasbela, Baluchistan	3,000	
Do.	Bestway Cement Ltd.	Plant in Farooqia, Haripur, Khyber Pakhtunkhwa	2,980	
Do.	do.	Plant in Hattar, Haripur, Khyber Pakhtunkhwa	1,230	
Do.	do.	Plant in Kallar Kahar, Chakwal, Punjab	2,520	
Do.	do.	Plant in Tatal, Chakwal, Punjab	3,600	
Do.	Cherat Cement Co. Ltd.	Plant in Lakrai, Nowshera, Khyber Pakhtunkhwa	4,540	
Do.	Dadabhoy Cement Industries Ltd. (Popular Group)	Plant in Kalu Kohar, Dadu, Sindh	660	
Do.	Dandot Cement Co. Ltd. (Three Stars Cement Pvt. Ltd., 49.5%; Rasheed family, 31.6%; others 18.9%)	Plant in Dandot, Chakwal, Punjab	500	
Do.	Dewan Cement Ltd. (A Yousuf Dewan Co.)	Plant in Deh Dhand, Malir, Sindh	1,760	
Do.	do.	Plant in Kamilpur, Haripur, Khyber Pakhtunkhwa	1,130	
Do.	D.G. Khan Cement Co. Ltd.	Plant in Dera Ghazi Khan, Punjab	2,110	
Do.	do.	Plant in Khairpur, Chakwal, Punjab	2,110	
Do.	do.	Plant in Hub, Lasbela, Balochistan	2,900	
Do.	Fauji Cement Co. Ltd.	Plant in Pateh Jang, Attock, Punjab	3,430	
Do.	Fecto Cement Ltd.	Plant in Hattar, Haripur, Khyber Pakhtunkhwa	820	
Do.	Flying Cement Co. Ltd.	Plant in Mangowal, Khushab, Punjab	1,200	
Do.	Gharibwal Cement Ltd.	Plant in Pind Dadan Khan, Chakwal, Punjab	2,110	
Do.	Kohat Cement Co. Ltd.	Plant in Kohat, Khyber Pakhtunkhwa	2,950	
Do.	Lucky Cement Ltd.	Plant in Lakki Marwat District, Karachi	4,800	
Do.	do.	Plant in Pezu District, Khyber Pakhtunkhwa	6,810	
Do.	Maple Leaf Cement Factory Ltd. (Kohinoor Maple Leaf Group)	Plant in Daudkhel, Mianwali, Punjab	5,670	
Do.	Pioneer Cement Ltd.	Plant in Chenki, Khushab, Punjab	2,030	
Do.	Power Cement Ltd. (Arif Habib Group, 100%)	Plant in Kalo Kohar, Jamshoroo, Sindh	2,720	
Do.	Thatta Cement Co. Ltd. (Arif Habib Group, 100%)	Plant in Makli, Thatta, Sindh	490	
Do.	Zeal Pak Cement Factory Ltd.	Plant in Hyderabad, Sindh	530	
Chromite	MTEQ Pakistan (Pvt.) Ltd.	Mines in Dargai, Malakand, Khyber Pakhtunkhwa	120	
Do.	Mughne Group	NA	NA	
Do.	Svah Resources Inc.	Mines in Muslim Bagh and Khanozai, Pishin, Balochistan	180	
Coal	Al-Muhandus Corp. [Ghani Mines (Pvt.) Ltd.]	Coalfield in Quaidabad, Khushab, Punjab	NA	
Do.	Ghani Corp. (Ghani Mines Ltd.)	NA	NA	
Do.	Ghani Mines (Pvt.) Ltd.	Coalfield in Quaidabad, Khushab, Punjab	NA	

See footnotes at end of table.

TABLE 2—Continued
PAKISTAN: STRUCTURE OF THE MINERAL INDUSTRY IN 2019

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity ^c	
Coal—Continued	Lakhra Coal Development Co. Ltd. (Pakistan Mineral Development Corp., 50%; government of Sindh Province, 25%; Water and Power Development Authority, 25%)	Coalfield in Latifabad, Hyderabad, Sindh (a powerplant at Khanote, Jamshoro, Sindh)	NA	
Do.	Nara Minerals [Ghani Mines (Pvt.) Ltd.]	Coalfield in Jogi Tilla, Jhelum, Punjab	NA	
Do.	Pakistan Mineral Development Corp. (Ministry of Petroleum and Natural Resources, Government of Pakistan)	Degari Coalfield, Mastung, Balochistan	17	
Do.	do.	Lakhra Coalfields, Hyderabad, Sindh	285	
Do.	do.	Shahrig-Khost-Harnai Coalfield, Sibi, Balochistan	221	
Do.	do.	Sor-Range Coalfield, Quetta, Balochistan	60	
Do.	Sindh Carbon Energy Ltd. (Oracle Power Plc., 100%)	Thar Coalfield, Block VI, Tharparkar, Sindh	4,000	
Do.	Sindh Coal Authority (Energy Department, government of Sindh Province)	Coalfield in Dadu, Sindh	4,000	
Do.	do.	Coalfield in Tharparkar, Sindh	NA	
Do.	Sindh Engro Coal Mining Co. (government of Sindh Province, 51%, and others, 49%)	Thar Coalfield, Block II, Tharparkar, Sindh	3,800	
Copper:				
Mine, Cu content	MTEQ Pakistan (Pvt.) Ltd.	NA	NA	
Do.	Saindak Metals Ltd. (Metallurgical Corporation of China Ltd., 50%; government of Balochistan, 35%; Government of Pakistan, 15%)	Saindak Mine, Balochistan	15	
Smelter, primary	do.	Smelter in Saindak, Balochistan	20	
Feldspar	Pakistan Minerals Co.	Mine in Karachi, Sindh	400	
Fertilizer	Engro Fertilizer Ltd. (Engro Corp., 56.3%; financial institutes, 14.5%; public, 13.1%; others 16.1%)	Plant in Daharki, Ghotki, Sindh	2,000	
Do.	Fatima Fertilizer Co. Ltd. (Directors and affiliates, 27.3%; Fatima Holding Ltd., 22.9%; Arif Habib Group, 17.8%; others, 32%)	Calcium ammonium nitrate plant, Integrated complex in Sadiqabad, Rahim Yar Khan, Punjab	420	
Do.	do.	Nitrophosphate plant, Integrated complex in Sadiqabad, Rahim Yar Khan, Punjab	360	
Do.	do.	Urea plant, Integrated complex in Sadiqabad, Rahim Yar Khan, Punjab	500	
Do.	Fauji Fertilizer Bin Qasim Ltd. (Fauji Fertilizer Co., 49.9%; Fauji Foundation, 18.3%; others, 31.8%)	Diammonium phosphate plant, Bin Qasim Eastern Industrial Zone, Karachi, Sindh	815	
Do.	do.	Urea plant, Bin Qasim Eastern Industrial Zone, Karachi, Sindh	700	
Do.	Pakarab Fertilizer Ltd. (Fatima Group)	Calcium ammonium nitrate plant, Multan, Punjab	450	
Do.	do.	Nitrophosphate plant, Multan, Punjab	305	
Do.	do.	Urea plant, Multan, Punjab	100	
Gas, natural	million cubic meters	Mari Petroleum Co. Ltd.	5 gasfields in Sindh; 3 gasfields in Punjab; 1 gasfield in Balochistan	6,900
Do.	do.	MOL Pakistan Oil and Gas Co. (MOL Group)	9 gasfields in Khyber Pakhtunkhwa	530
Do.	do.	Ocean Pakistan Ltd. (Hashoo Group)	3 gasfields in Punjab	70
Do.	do.	Oil and Gas Development Co. Ltd. (OGDCL)	37 gasfields in Sindh; 12 gasfields in Punjab; 3 gasfields in Balochistan; 3 gasfields in Khyber Pakhtunkhwa	10,900
Do.	do.	Pakistan Oilfields Ltd. (POL)	8 gasfields in Punjab	810
Do.	do.	Pakistan Petroleum Ltd. (PPL) (Government of Pakistan, 68%; PPL Employees Empowerment Trust, 7%; private investors, 25%)	10 gasfields in Sindh; 2 gasfields in Punjab; 1 gasfield in Balochistan	9,300
Do.	do.	United Energy Pakistan Ltd. (United Energy Group)	86 gasfields in Sindh	12,000

See footnotes at end of table

TABLE 2—Continued
PAKISTAN: STRUCTURE OF THE MINERAL INDUSTRY IN 2019

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity ^c
Gemstone		Azad Kashmir Mineral Industrial Development Corp.	Mines in Chitta Katha and Nungi Mali, Neelum Valley	NA
Gold, mine		Saindak Metals Ltd. (Metallurgical Corporation of China Ltd., 50%; government of Balochistan, 35%; Government of Pakistan, 15%)	Saindak Mine, Chaghi, Balochistan	NA
Gypsum		United Gypsum Pvt. Ltd.	Gypsum plant in Karachi	100
Iron ore		Mines and Minerals Enterprises Pakistan	Mine in Sargodha, Punjab	4
Do.		Small-scale local mines	NA	1,000
Lead and zinc, ore, gross weight		China Huaye Group Co. Ltd. [Metallurgical Corporation of China Ltd. (MCC), 75%, and Pakistan Mineral Development Corp. (PMDC) and the government of Balochistan, 25%]	Duddar lead-zinc mine, Duddar, Balochistan	500
Petroleum:				
Crude, including condensate	thousand 42-gallon barrels	Mari Petroleum Co. Ltd.	5 oilfields in Punjab, 4 oilfields in Sindh; 1 oilfield in Khyber Pakhtunkhwa	600
Do.	do.	MOL Pakistan Oil and Gas Co. (MOL Group)	9 oilfields in Khyber Pakhtunkhwa	900
Do.	do.	Ocean Pakistan Ltd. (Hashoo Group)	3 oilfields in Punjab	180
Do.	do.	Oil and Gas Development Co. Ltd. (Government of Pakistan, 74.97%, and private investor, 25.03%)	38 oilfields in Sindh; 11 oilfields in Punjab; 3 oilfields in Khyber Pakhtunkhwa; 1 oilfield in Balochistan	16,600
Do.	do.	Pakistan Oilfields Ltd.	12 oilfields in Punjab	2,470
Do.	do.	Pakistan Petroleum Ltd. (Government of Pakistan, 68%; PPL Employees Empowerment Trust, 7%; private investors, 25%)	8 oilfields in Sindh; 2 oilfields in Punjab; 1 oilfield in Balochistan	6,000
Do.	do.	United Energy Pakistan Ltd. (United Energy Group)	71 oilfields in Sindh	5,600
Refined	42-gallon barrels per day	Attock Refinery Ltd.	Refinery in Rawalpindi, Punjab	53,400
Do.	do.	Byco Petroleum Pakistan Ltd.	Refinery in Mouza Kund, Tehsil Gadani, Lasbela District, Balochistan.	155,000
Do.	do.	National Refinery Ltd.	Refinery in Korangi Industrial Area, Karachi, Sindh	59,000
Do.	do.	Pakistan Refinery Ltd. (Shell Petroleum Co. Ltd., 32.1%; Pakistan State Oil Co. Ltd., 24.1%; public, 20.1%; Hascol Petroleum Ltd., 14.7%; others, 9.0%)	Refinery in Karachi District, Sindh	55,000
Phosphate rock		Al-Muhandus Corp. [Ghani Mines (Pvt.) Ltd.]	Quarries in Salt Range, near village Choa, Warcha, Quaidabad, Khushab	NA
Do.		Ghani Mines (Pvt.) Ltd.	Quarries in Quaidabad, Khushab, Punjab	90
Do.		Pakistan Mining Co. Ltd.	NA	90
Salt		Hub-Pak Salt Refinery	Hub, Ankerio, and Mukhai plants	2,400
Do.		Pakistan Mineral Development Corp. (administrative control of Ministry of Petroleum and Natural Resources)	Bahadur Khel / Karak Salt Mines, Karak, Khyber Pakhtunkhwa	NA
Do.		do.	Jatta Salt Mines, Khyber-Pakhtunkhwa	73
Do.		do.	Kalabagh Salt Mines, Mainwali, Punjab	80
Do.		do.	Khewra Salt Mines, Salt Ranges, Jhelum, Punjab	435
Do.		do.	Warcha Salt Mines, Mianwali, Punjab	613
Silica sand		Al-Muhandus Corp. [Ghani Mines (Pvt.) Ltd.]	NA	NA
Do.		MTEQ Pakistan (Pvt.) Ltd.	NA	120
Soda ash		ICI Pakistan Ltd.	Khewra, Punjab	350

See footnotes at end of table

TABLE 2—Continued
PAKISTAN: STRUCTURE OF THE MINERAL INDUSTRY IN 2019

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity ^c
Steel:			
Raw steel	Agha Steel Industries Ltd.	Plant in Port Qasim Authority, Karachi, Sindh	240
Do.	Amreli Steels (Pvt.) Ltd.	Plant in Karachi, Sindh	200
Do.	Ittefaq Iron Industries Ltd.	Plant in Manga-Raiwind, Punjab	120
Do.	Mughal Iron & Steel Industries Ltd. (MISIL)	Plant in Lahore, Punjab	688
Do.	Pakistan Steel Mills Corp. (Pvt.) Ltd. (Ministry of Industries and Production, Government of Pakistan)	Plant in Bin Qasim, Karachi, Sindh	1,100
Products	Abbas Steel Group	Plants in Karachi, Sindh and Lahore, Punjab	200
Do.	Agha Steel Industries Ltd.	Plant in Port Qasim Authority, Karachi, Sindh	150
Do.	Aisha Steel Mills Ltd. (Arif Habib Group, 45.7%; Mr. Arif Habib, 19.6%; others, 34.7%)	Plant in Bin Qasim, Karachi, Sindh	700
Do.	Amreli Steels (Pvt.) Ltd.	Plant in Karachi, Sindh	300
Do.	Fazal Steel (Pvt.) Ltd.	Plant in Industrial Area, Islamabad Capital Territory	130
Do.	International Steels Ltd.	Plant in Landhi, Karachi, Sindh	1,010
Do.	Pakistan Steel Mills Corp. (Pvt.) Ltd. (Ministry of Industries and Production, Government of Pakistan)	Plant in Bin Qasim, Karachi, Sindh	1,100
Do.	Peoples Steel Mills Ltd.	Plant in Karachi, Sindh	70
Stone, marble	Azeem Marble & Onyx Industries	Quarry in Karachi, Sindh	NA
Sulfur	Oil and Gas Development Co. Ltd. (OGDC)	Dakhni field, Jand, Punjab	23
Do.	metric tons Pakistan Oilfields Ltd.	15 oilfields and gasfields in Punjab	566
Talc	CapriCorn Minerals	Mine in Bandi Sadique, Mansehra, Khyber Pakhtunkhwa	960

^cEstimated. Do., do. Ditto. NA Not available.