



2019 Minerals Yearbook

COLOMBIA [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF COLOMBIA

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Colombia was the fourth largest economy in Latin America in 2019, after Brazil, Mexico and Argentina. Colombia's real gross domestic product (GDP) increased by 3.3% during the year compared with an increase of 2.5% in 2018. The nominal GDP of Colombia in 2019 was about \$322 billion. In 2019, the Government of Colombia reported that mineral concession titles were present in only 3.1% of its national territory. The mineral industry in Colombia continued to be dominated by the petroleum sector, which accounted for about 40% of the country's total export revenue and nearly 4% of the gross domestic product (GDP).¹ The Organization of the Petroleum Exporting Countries (OPEC) reported that Colombia maintained its position as the fourth-ranked petroleum producer in Latin America in 2019 and had the sixth-largest proven reserves of petroleum in Latin America. Colombia was a leading coal-producing country in the world and the leading coal producer in Latin America, with a preliminary reported annual production of 77.6 million metric tons (Mt) of coal in 2019. Colombia was also the only platinum-producing country in Latin America and the world's top emerald producer. The country's 2019 nickel production ranked fourth in Latin America. Other minerals produced included bentonite, copper, gold, iron ore, phosphate rock, salt, and silver. Other mineral fuels produced included coke and natural gas (Agencia Nacional de Minería, 2020a, p. 10–12; Departamento Administrativo Nacional de Estadística, 2020a, d; Organization of the Petroleum Exporting Countries, 2020, p. 22, 26; World Bank, The, 2020).

Minerals in the National Economy

In 2019, the industrial manufacturing sector accounted for about 12% of the country's GDP; the construction sector, 7%; the hydrocarbon sector, 3%; and the mining and quarrying sector, about 2%. In 2019, the value contributed to the GDP from mineral production (including hydrocarbons) was about \$16.1 billion. The total value-added growth in the mining industry was 2.1% in 2019 and was led by a 6.6% growth in the metals sector and a 2.4% growth in the natural gas and petroleum sector. The value of mineral exports (including hydrocarbons) accounted for 56% of the country's total exports in 2019. The mineral industry employed 350,000 people in Colombia during the year (Agencia Nacional de Minería, 2020a, p. 6–7; Departamento Administrativo Nacional de Estadística, 2020e, p. 8).

Total foreign direct investment (FDI) inflows into Colombia increased to about \$14 billion in 2019 from \$11.3 billion in 2018. The main sources of FDI to Colombia were the United States (\$2.6 billion), Spain (\$2.5 billion), Switzerland (\$1.2 billion), Brazil (\$1.1 billion), and the United Kingdom (\$1 billion).

The mineral industry continued to be a leader in attracting FDI to the country, accounting for about 29% of Colombia's total overall FDI inflows in 2019. FDI inflows designated for the petroleum sector totaled more than \$2.7 billion during the year compared with \$2.5 billion in 2018; and inflows designated for the mining and quarrying sector totaled about \$1.8 billion compared with \$1.4 billion in 2018. FDI investments towards the mining and quarrying sector have increased steadily since 2017 (Banco Central de Colombia, 2020c, d).

Government Policies and Programs

The Ministry of Mines and Energy (MME) was created by Decree 636 of April 10, 1974 and is the principal authority in Colombia in charge of managing mining resources and formulating mining policies. The legislative framework for the mineral sector in Colombia is provided by law No. 685/2001. The mining law includes provisions for the formalization of small-scale mining operations, including those that operate intermittently, those operations that produce no more than 250 metric tons per year (t/yr) of material, and those that rely on hand-operated tools and human power for mining. The law grants unlicensed miners extracting minerals from state-owned land 3 years to register with the national mining registry to legalize their operations. The law introduced the concept of special reserve areas for those engaged in traditional informal mining and defined these reserve areas as places where geologic and mining studies could take place. If the studies show potential for the occurrence of mineral resources, a special mining concession contract can be prioritized and signed with the beneficiary mining community. Under the mining law, other special privileges were given to mining cooperatives, including financing; technical assistance and training; tax credits and exemptions; and business, legal, and financial training. The mining law and a related penal code describe an obligation to control illegal mining, the powers of municipalities to carry out decommissioning and suspension of illegal operations, and the confiscation of minerals found to be traded or transported without invoices or proof of the mines from which they came (Agencia Nacional de Minería, 2020b, p. 17–18; Ministerio de Minas y Energía, 2020a).

The MME integrated several mining-related powers as a result of Decree 70 of 2001 and created special administrative units, including the Unidad de Planeación Minero Energética [Mining and Energy Planning Unit] (UPME) and the Comisión de Regulación de Energía y Gas [Energy and Gas Regulatory Commission] (CREG). Related public institutions include the Instituto de Investigación e Información Geocientífica, Minero Ambiental y Nuclear [Institute for Geoscientific, Mining, Environmental and Nuclear Research and Information] (INGEOMINAS); the Instituto de Planificación y Promoción de Soluciones Energéticas [Institute for Planning and Promotion of Energy Solutions] (IPSE); and related companies, including

¹Where necessary, values have been converted from Colombian pesos (COP) to U.S. dollars (US\$) at the annual average exchange rate of COP3296.80=US\$1.00 for 2019.

Empresa Colombiana de Petróleos (ECOPETROL), Empresa Colombiana de Gas (ECOGAS), and Empresa Nacional Minera Ltda. (MINERCOL), among others (Ministerio de Minas y Energía, 2020a, p. 1–2).

The Agencia Nacional de Minería [National Mining Agency] (ANM), which is the mining authority in Colombia, was also created to help strengthen mineral-related institutions in the country. The primary responsibilities of the ANM (as outlined in Decree 4134 of November 3, 2011) include managing Colombia's mineral resources and granting rights for exploration and mining, managing contracts and concessions, collecting and overseeing the transfer of royalties, coordinating mine safety, and developing and implementing strategies to promote the exploration and mining of the country's mineral resources. The Agencia Nacional de Hidrocarburos [National Hydrocarbon Agency (ANH)] was created by Decree 1760 of June 26, 2003, to bring about comprehensive management of hydrocarbon reserves (Agencia Nacional de Minería, 2020c; Ministerio de Minas y Energía, 2020b, c).

In 2019, ANM launched Anna Minería, a new digital mining cadaster system that merged environmental and mining information into a single digital platform. With Anna Minería, users are able to access a single platform to file, track, and manage mining concessions, contract proposals, mining titles, and other mineral-industry-related functions. The Government of Colombia continued with its efforts to formalize the country's unlicensed artisanal and small-scale miners (ASM). Unlicensed mining of mineral deposits, such as deposits of coal, gold, and construction materials, has had effects on the environment, including river pollution and deforestation. As part of a Governmentwide mining initiative to help formalize the ASM sector, about 500 local gold panners or "barequeros" from the Department of El Choco registered with the Government and obtained special permits that allowed for the manual production of gold without the use of mercury. Registered barequeros received competitive prices and were subject to strict guidelines before they could sell their gold. The traceable gold sourced by the barequeros from El Choco was exported to refineries in Switzerland for processing (Agencia Nacional de Minería, 2020a, p. 23; Ministerio de Minas y Energía, 2019).

The Colombian Geological Survey (CGS) was created by Decree 4131 of 2011. CGS is charged with contributing to the socioeconomic development of the nation through research in basic and applied geosciences of the subsoil, assessing the potential of its resources, evaluating and monitoring threats of geologic origin, managing the geoscientific knowledge of the nation, and studying nuclear and radioactive elements (Servicio Geológico Colombiano, 2020).

Production

Notable increases in Colombia's mineral commodity production in 2019 compared with 2018 included production of phosphate rock, which increased by 47%, and iron ore and refinery products (estimated), by 14%. Decreases in mineral commodity production included that of emerald, by 69%; platinum, by 39%; silver, by 27%; coke, by 25% (estimated); copper, by 23%; bentonite, by 13%; and rock salt, by 11%. Data on mineral production are in table 1.

Structure of the Mineral Industry

In 2019, the majority of mining operations in Colombia were controlled or owned by the private sector, and operations of natural gas and petroleum facilities were Government owned. Table 2 is a list of major mineral industry facilities.

Mineral Trade

In 2019, the value of total exports from Colombia increased to about \$39.5 billion from \$41.9 billion in 2018. Colombia had either free trade agreements (FTAs) or partial scope agreements with 62 countries in the world, including Canada and the United States. Other FTAs were being negotiated with Australia, Japan, New Zealand, Singapore, and Turkey. The United States continued to be Colombia's principal trading partner, accounting for about 29% (\$11.5 billion) of Colombia's total exports, in terms of value. China was the second-ranked destination for Colombian exports, by value (received 11.5% of Colombia's exports), followed by Panama (6.0%), Ecuador (4.9%), Brazil (3.7%), and Mexico (3.6%) (Agencia Nacional de Minería, 2020a, p. 36; Departamento Administrativo Nacional de Estadística, 2020a, b).

The value of the country's mineral export products (excluding hydrocarbons) totaled about \$2.0 billion in 2019. Coal, which was the country's leading mineral product export, accounted for about \$5.7 billion—a decrease in value of almost 24% compared with that in 2018. The downward trend in coal exports was owing mainly to lower prices on the international market. Colombia's other leading mineral exports included gold, which had a value of \$1.7 billion compared with \$1.4 billion in 2018; ferronickel, \$545 million compared with \$559 million in 2018; and emerald, \$147 million compared with \$138 million in 2018. Colombia exported more than 225 million barrels (Mbbbl) of crude petroleum in 2019, which was a 6% increase from that in 2018 (Banco Central de Colombia, 2020a, b; Organization of the Petroleum Exporting Countries, 2020, p. 48).

Commodity Review

Metals

Copper.—Atico Mining Corp.'s majority-owned Minera El Roble Mine, which is located in Choco Department, produced the country's only mined copper in 2019. Reported copper production at El Roble decreased by almost 23% to 7,644 metric tons (t) in 2019. The decrease in copper production was owing mainly to a 75-day strike that resulted in the temporary shutdown of operations. The strike began after negotiations over a multiyear collective bargaining agreement failed. El Roble Mine, which had mineral concession areas covering a total of 6,355 hectares (ha), had a production capacity of nearly 10,000 t/yr. El Roble processing plant had a rated nominal throughput capacity of 850 metric tons per day and the mine had an estimated 1.47 Mt of proven and probable reserves grading 3.40% copper and 1.88 g/t grams per metric ton gold (Atico Mining Corp., 2020a, p. 4–6; 2020b).

The Government announced that it was committed to diversifying its mineral economy by continuing to support ongoing copper exploration projects in the country. Mining in

Colombia had traditionally been focused on large-scale coal mines along its northern coast and small- to medium-scale emerald and gold operations in the Andes Mountains. Ongoing copper exploration projects by Canada's Cordoba Minerals and Minera Cobre Corp. as well as by South Africa's AngloGold Ashanti Ltd. were expected to continue during the year (Acosta, 2019).

Gold.—In 2019, Colombia was the sixth-ranked gold-producing country in Latin America and the 24th-ranked gold-producing country in the world. Gold production in Colombia during the year increased by slightly more than 3% to 36,676 kilograms (kg). Artisanal and small-scale mining operations accounted for most of the country's gold production. Formalizing the gold sector remained a priority for the Government. In 2019, Gran Colombia Gold Corp. of Canada's Segovia operations remained the country's leading gold and silver producer. Located in Antioquia Department, production from the Segovia operation was reported to have achieved a record gold production of 6,664 kg in 2019, which was an increase of 11% compared with production in 2018 (table 1; Agencia Nacional de Minería, 2020a, p. 14; Gran Colombia Gold Corp., 2020).

Canada's Continental Gold Ltd., which was developing the Buritica gold-silver project in Antioquia Department, announced that commercial production was scheduled to commence in 2020. The Buritica project, which had mineral concession areas covering more than 75,000 ha, was scheduled to reach full production in 2021. Although Buritica had been a small-scale operation since 2007, the Buritica project was expected to be Colombia's first large-scale gold-producing mine and would have a gold production capacity of about 9,400 kilograms per year. Continental Gold was the first company in the country to formalize ASM associations and was one of the leading employers in northwestern Antioquia. ASM associations allow for independent miners to work within the company's mining titles (Medellin Herald, 2018; Continental Gold, 2020).

Nickel.—In 2019, the Cerro Matoso Mine, which was owned by South32 Ltd. of Australia, remained Colombia's only ferronickel producer. The mine produced 41,100 t of ferronickel during its production year, which ended on June 30, 2019. Cerro Matoso was an integrated nickel laterite mine and smelter located in northern Colombia. In 2018, Colombia's constitutional court reached a decision on appeal that South32 would not be required to pay damages as a result of the mine's prior alleged waste emissions. The court had previously ruled that waste emissions seriously affected local communities in the Province of Cordoba and required Cerro Matoso to establish a special compensation fund as well as to obtain new environmental licensing approvals for its operation. The court did, however, uphold part of the original ruling that required Cerro Matoso to reapply for its environmental license, including to engage in a community consultation process (Thomson Reuters, 2018; South32 Ltd., 2019, p. 10, 35).

Industrial Minerals

Cement.—In 2019, cement production in Colombia increased by 4.3% to nearly 13.0 Mt, and shipments increased by 4.2% to 12.5 Mt. Shipments for Cementos Argos Colombia S.A. (Argos),

a leading producer of cement in the country, reached almost 5 Mt during the year, which was 3% lower than the shipments in 2018. In October 2019, Empresa Colombiana de Cementos (Ecocementos), which was a joint venture of Spain's Cementos Molins and Grupo Corona, commissioned a 1.35-million-metric-ton-per-year cement plant located in Antioquia Department. The new cement plant was expected to create about 170 direct jobs (Cementos Argos S.A., 2020, p. 29; Cementos Molins, 2020, p. 20, 71; Departamento Administrativo Nacional de Estadística, 2020c).

Gemstones.—Colombia's emerald deposits are found in the Cordillera Oriental [Eastern Ranges] of the Colombian Andes. Emerald is extracted from emerald belts in the eastern and western zones of the eastern mountain range. Mining districts in the eastern belt included Chivor, Gachala and Macanal, and those in the western district included Coscuez, Muzo, La Palma-Yacopí, La Pita, and Peñas Blancas. Most of the emerald mined in the country came from the Muzo formation and the Coscuez Mine in the San Pablo de Borbur Municipality. Colombia's most significant emerald producers were Canada's Fura Gems Inc., which operated in the mining district of Coscuez, and Minería Texas Colombia S.A., which operated in the mining district of Muzo. Despite emerald exports increasing in terms of value in 2019, the Government reported significant decreases in emerald production in the country during the year. Production by Fura Gems, which was the first emerald miner to operate in Colombia, had been affected by declining investments and outdated mining methods. The company, which was also combatting informal mining on its properties, expected production to rebound in late 2020 after the mine undergoes modernization. Since 2014, the value of the country's emerald exports had been averaging about \$147 million per year (Cobb and Taylor, 2018; Agencia Nacional de Minería, 2020a, p. 16; Banco Central de Colombia, 2020b).

Mineral Fuels

Coal.—In 2019, preliminary coal figures released by the Government of Colombia indicated that the country's overall coal output had decreased by more than 9% during the year, owing partly to a sluggish global economy coupled with lower coal prices on the international market. The country's coal production continued to be dominated by two major coal companies: Carbones del Cerrejón LLC. and Drummond Ltd. of the United States. In 2019, Drummond was the country's top-ranked coal-producing company with total annual production of 32.6 Mt of coal, of which 31.1 Mt was exported. Central America and South America were the top-ranked destinations for the company's coal exports (23.5%), followed by Central Eurasia (21.5%), North America (18.7%), the Asia and the Pacific region (17.3%), Europe (11.6%), and Africa and the Middle East (7.4%) (table 2; Drummond Ltd., 2020, p. 2).

Petroleum.—In 2019, production of petroleum in Colombia increased to 323.4 Mbbl or by about 2.4% compared with that in 2018. Colombia exported nearly 70% of the petroleum produced in the country during the year. Petroleum exports were destined mainly for customers in Asia and the United States. There were 33 active oil rigs in Colombia in 2019 compared with 30 in 2018. The Colombia state-owned petroleum company

Ecopetrol S.A. produced 725,000 barrels of oil equivalent per day (boe/d), which included an estimated 177 boe/d of natural gas. Ecopetrol exported about 59% of its total annual production during the year. In 2019, Ecopetrol's refinery production reached a new high of 373,700 barrels per day. Ecopetrol owned and operated two of the country's largest refineries and three ports in Colombia. Ecopetrol also owned the majority of the nation's petroleum pipelines. Colombia had nearly 2 billion barrels of proven crude petroleum reserves at yearend 2019, which was a 10% increase compared with reserves in 2018 (Organization of the Petroleum Exporting Countries, 2020, p. 22, 26, 48; Ecopetrol S.A., 2020, p. 10–11, 27, 138, 157).

Outlook

Owing largely to the effects of the coronavirus disease 2019 (COVID-19) pandemic, Colombia's real GDP growth was projected to decrease in 2020 by 8.2% before showing an increase in 2021 of 4.0%. Colombia is expected to increase its copper production significantly in the coming years. Continued interest in copper mineral exploration mainly in the Departments of Antioquia, Choco, and Cordoba, are expected to keep advancing the development of the country's copper industry. Ongoing exploration activities have resulted in the discovery of world-class gold deposits, such as Continental Gold's Buritica gold-silver project. The Buritica Mine, which would be the country's first large-scale gold mine, is expected to begin production in 2020. Continued gold mineral exploration in the Departments of Antioquia and Caldas are expected to advance Colombia's gold production in the coming years; the country is expected to rank near the world's top 15 gold producers by 2025. The Government anticipates continuing with national programs to formalize the country's ASM sector and remain engaged with these communities to avoid social and environmental conflicts among mineral industry stakeholders (Agencia Nacional de Minería, 2020a, p. 14, 18; International Monetary Fund, 2020, p. 145).

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TABLE 1
COLOMBIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise specified)

Commodity ²		2015	2016	2017	2018	2019
METALS						
Copper, mine, concentrates, Cu content		5,463	8,493	9,355	9,920	7,644
Gold, mine, Au content	kilograms	59,202	61,805	42,100	35,560	36,676
Iron ore, mine:						
Gross weight	thousand metric tons	902	716	713	572	650
Fe content	do.	541	429	428	344	391
Iron and steel:						
Pig iron	do.	240	225	203	205	210
Raw steel	do.	1,211	1,272	1,253	1,219	1,200
Nickel, ferronickel, Ni content		36,671	37,092	40,600	43,100	41,100
Platinum, mine, Pt content	kilograms	861	917	566	269	163
Silver, mine, Ag content	do.	10,155	10,427	10,922	15,967	11,666
INDUSTRIAL MINERALS						
Cement, hydraulic	thousand metric tons	13,153	12,495	12,299	12,452	12,993
Clay, bentonite		154,552 ^r	116,577 ^r	98,550 ^r	166,778 ^r	144,407
Gemstones, emerald	thousand carats	2,263	3,578	2,412	2,128	655
Phosphate rock:						
Gross weight	thousand metric tons	95	84 ^r	63 ^r	53 ^r	78
P ₂ O ₅ content ^e	do.	27	13	14	15	15
Salt:						
Rock salt		334,804	354,373	336,373	391,222	347,183
Sea salt		95,652	176,021	165,126	170,000 ^e	170,000 ^e
Stone, crushed, limestone	thousand metric tons	15,757	18,252	16,608	18,855 ^r	17,391
Sulfur, native, S content		76,239	76,331	76,000 ^e	24,000 ^{r,e}	24,000 ^e
MINERAL FUELS AND RELATED MATERIALS						
Coal:						
Bituminous	thousand metric tons	80,415	85,596	85,421	80,293	72,600 ^p
Metallurgical	do.	5,133	5,464	5,452	5,144	5,000 ^p
Coke, metallurgical	do.	2,164	2,043	2,821	2,800 ^e	2,100 ^e
Natural gas	million cubic meters	11,910	10,400	9,600	9,500 ^r	9,800
Petroleum:						
Crude	thousand 42-gallon barrels	367,044	322,405	311,564	315,798	323,354
Refinery, products	do.	84,680	120,450	126,900	136,145	155,000 ^e

^eEstimated. ^pPreliminary. ^rRevised. do. Ditto.

¹Table includes data available through November 3, 2020. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits.

²In addition to the commodities listed, coke, feldspar, gypsum, magnesite, sand and gravel, secondary iron, semimanufactures, thorium, and uranium may have been produced, but available information was inadequate to make reliable estimates of output.

TABLE 2
COLOMBIA: 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
Cement	CEMEX Colombia S.A. (CEMEX S.A.B. de C.V., 99.7%)		Bucaramanga plant, Santander Department; Buenos Aires, Tolima Department; Pamplona, Norte de Santander Department; La Calera, Cundinamarca Department	3,980
Do.	Cementos del Caribe S.A. (Cementos Argos Colombia S.A., 74%)		Barranquilla plant, Atlantico Department	1,500
Do.	Cementos del Valle S.A. (Cementos Argos Colombia S.A., 70%)		Yumbo plant, Valle del Cauca Department	1,500
Do.	Cementos Boyacá S.A. (LafargeHolcim Group, 100%)		Nobsa plant, Boyaca Department	1,500
Do.	Cía. Colombiana de Clinker S.A. (Cementos Argos Colombia S.A., 100%)		Cartagena plant, Bolivar Department	1,250
Do.	Cementos Rioclaro S.A. (Cementos Argos Colombia S.A., 99%)		Sonson plant, Antioquia Department	1,400
Do.	Cales y Cementos de Toluviéjo S.A. (Cementos Argos Colombia S.A., 95%)		Toluviéjo plant, Sucre Department	980
Do.	Cementos Paz del Río S.A. (Cementos Argos Colombia S.A., 62%)		Belencito plant, Boyaca Department	880
Do.	Cementos El Cairo S.A. (Cementos Argos Colombia S.A., 100%)		Montebello plant, Antioquia Department	450
Do.	Cementos del Nare S.A. (Cementos Argos Colombia S.A., 100%)		Puerto Nare plant, Antioquia Department	210
Coal	Carbones del Cerrejón LLC (Anglo American plc, 33.3%; BHP Billiton plc, 33.3%; Glencore plc, 33.3%)		Cerrejon Mine Centro, La Guajira Department	35,000
Do.	Drummond Ltd. (Drummond Co. Inc., 80%, and Itochu Corp., 20%)		La Loma Mine, Cesar Department	33,000
Do.	do.		El Descanso Mine, Cesar Department	12,000
Do.	Glencore plc, 100%		Calenturitas Mine, Cesar Department	16,000
Do.	do.		La Jagua Mine, Cesar Department	7,000
Do.	Pacific Coal Resources Ltd., 100%		La Caypa Mine, La Guajira Department	1,300
Do.	do.		Cerro Largo Mine, Cesar Department	600
Do.	Colombia Energy Resources, 100%		Ruku Mine, Boyaca Department	80
Do.	Continental Coal Ltd., 50%		Colombia Mine, Guainía Department	NA
Do.	Carbones San Fernando S.A., 100%		San Fernando Mine, Antioquia Department	330
Do.	Mineral & Rocks Corp., 100%		Boyaca Mine, Boyaca Department	50
Do.	Colombian Natural Resources, 100%		El Hatillo Mine, Cesar Department	3,600
Do.	Glencore plc, 100%		Prodeco Mine, Cesar Department	14,500
Do.	CarboCoque, 100%		Soacha Mine, Cundinamarca Province	3,000
Do.	Colombia Natural Resources, 100%		El Hatillo Mine, Cesar Province	1,800
Do.	Andean Coal (BVI) Ltd., 51%, and Carbid SAS, 49%,		Escalones Mine, Boyaca Department	NA
Copper	metric tons	Atico Mining Corp., 90%, and Minera El Roble S.A., 10%	El Roble Mine, El Carmen, Choco Department	9,950
Emerald	thousand carats	Fura de Colombia S.A. (Fura Gems Inc., 76%, and other investors, 24%)	Coscuez Mine, Boyaca Department	800
Do.		Mineria Texas Colombia S.A., 100%	Muzo Mine, Boyaca Department	NA
Gold	kilograms	Gran Colombia Gold Corp., 90%, and Investcol Ltd., 10%	Segovia Operations, Antioquia Department, 220 kilometers northeast of Medellin, including El Silencio Mine, Providencia Mine, and Sandra K Mine; Carla Mine, 10 kilometers southeast of Segovia operations	6,700
Do.	do.	do.	Marmato Mine, Caldas Department, 80 kilometers south of Medellin	850

See footnotes at end of table.

TABLE 2—Continued
COLOMBIA: 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
Gold—Continued	kilograms	Mineros S.A., 100%	Antioquia Mine (Mina La Ye), Antioquia Department, 50 kilometers northwest of Medellín	4,200
Do.	do.	Soma Gold Corp., 100%	El Mango Mine, Antioquia Department	2,000
Do.	do.	Cordillera Gold, Ltd., 100%	Santa Paublina Mine, Antioquia Department	800
Do.	do.	Antioquia Gold Inc., 100%	Cisneros Mine, Antioquia Department	400
Do.	do.	Atico Mining Corp., 90%, and Minera El Roble S.A., 10%	El Roble Mine, El Carmen, Choco Department	300
Iron ore		Acerías Paz del Río S.A. (Votorantim Industrial, S.A., 82.42%)	El Uvo, Pírgua, and Ubala Mines, Boyaca Department	200
Do.		Votorantim Industrial S.A., 82.42%	Paz del Río Mine, Boyaca Department	720
Iron and steel, steel		Diacon S.A. (Gerdau S.A.)	Tuta and Duitama plants, Boyaca Department; Cali, Valle del Cauca Department; Tocancipa, Cundinamarca Department	1,500
Natural gas	million cubic meters	Ecopetrol S.A. (Government, 100%)	National gasfields, north coast, La Guajira Department	13,000
Nickel		Cerro Matoso S.A. (South32 Ltd., 99.94%, and mine workers, 0.06%)	Cerro Matoso Mine, Cordoba Department	50
Do.		do.	Smelter in Montelibano, Cordoba Department	NA
Petroleum	thousand 42-gallon barrels	Ecopetrol S.A. (Government, 100%)	33 oilfields in various Departments	330,000
Petroleum products	do.	do.	Barrancabermeja refinery, Norte de Santander Department	100,000
Do.	do.	do.	Cartagena refinery, Bolivar Department	55,000
Silver	kilograms	Gran Colombia Gold Corp., 90%, and Investcol Ltd., 10%	Marmato Mine, Caladas Department, 80 kilometers south of Medellin	6,000
Do., do. Ditto. NA Not available.				