

# COLOMBIA

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In 2001, the Colombian economy grew at a moderate pace. Many internal factors contributed to the slow increase. High unemployment and a decrease in petroleum output were two significant reasons limiting the growth. The gross domestic product (GDP) was \$80.7 billion<sup>1</sup> (\$301.72 billion in purchasing power parity) (Fundación para la Educación Superior y el Desarrollo, 2002<sup>2</sup>, p. 59; International Monetary Fund, 2002<sup>3</sup>). In real terms, this 1.5% increase was a slower increase than that of 2000 when the GDP grew at a rate of 2.8% but was an improvement from 1999 when the GDP decreased by 4.5% (Banco de la República, 2002<sup>4</sup>). Preliminary data indicate that the increase in 2001 was led by agriculture (3.4%), followed by industry (3.3%), commerce (3.0%), and construction (2.0%). Mining and quarrying was the only sector of the economy that decreased—by 6.4%; this was the second consecutive year of decrease (Fundación para la Educación Superior y el Desarrollo, 2002<sup>5</sup>). The decrease by the petroleum subsector was the chief cause of the reduction of the mining and quarrying sector. Lower output from producing wells and attacks on petroleum pipelines throughout the year were two of the main reasons for the reduction in the petroleum subsector (Fundación para la Educación Superior y el Desarrollo, 2002<sup>6</sup>). The construction sector was only the fourth fastest growing sector; it still displayed a significant improvement because it reversed a 3-year declining trend.

Despite a decrease in petroleum output and exports, this commodity continues to dominate the mining sector, which represented 7.5% of the GDP (Fundación para la Educación Superior y el Desarrollo, 2002<sup>7</sup>).

## Government Policies and Programs

After years under consideration, the new mining code (law 685 of 2001), was promulgated in August. The purpose of this law is to encourage exploration and production of mineral resources and to redefine the role of the Government in the mining sector along with its interaction with the private sector. The Government role has become limited to one of a regulatory and administrative entity.

The law also clarifies the provisions for establishing mining contracts. It establishes the concession as the only instrument to enter into a contract with the Government for exploration and production of nonrenewable resources. The legal rights of contracts under previous laws are protected. Construction materials and rock and evaporated salt are concessionable and regulated by the mining code. Near surface production of industrial minerals by the owner of the surface land for noncommercial purpose not exceeding 250 metric tons per year (t/yr) is excluded from the code. Alluvial production of

precious metals and precious and semiprecious stones by artisanal means is legal in certain areas and must be registered with the mayor of the locality of the production area. Ethnic communities have specific protections under the code.

Concessions are granted for 30 years from the time when they are recorded in the Registro Minero Nacional with the option to be renewed for another 30 years. The exploration phase of the concession is for 3 years and can be extended for 2 years. This phase is followed by a 3-year period for construction, infrastructure, and additional installation and work necessary to begin production, which can be extended for 1 year. An additional 2-year period can be granted for the construction of a processing plant when necessary. During the exploration phase, a program of work must be completed and approved by the Government. This program must include an environmental impact study.

## Environmental Issues

The Ministerio del Medioambiente is Colombia's highest Government authority with responsibility for environmental matters. The Corporaciones Autónomas are responsible for administering natural resources and controlling environmental deterioration associated with productive activities, such as mining.

Under Decreto 266/2000, the time allowed for a project's environmental evaluation was reduced, thus decreasing the licensing process for mining projects. As means of protection to the indigenous and black communities, the decree also requires the Government entity Instituto Geográfico Agustí Codazzi to produce a map of the areas occupied by indigenous and black communities before project development can begin.

In 1999, the Ministerio del Medioambiente adopted several environmental management plans for prospecting (resolución 1167), mining and cement manufacturing (resolución 1168), industrial minerals (resolución 1169), production of sedimentary materials (resolución 1170), and production of gold (resoluciones 1171 and 1172) (Empresa Nacional Minera Ltda., Instituto de Información e Investigación Geocientífica Minero-Ambiental y Nuclear, and Unidad de Planeación Minero-Energética, 2000, p. 19-21).

## Production

Mineral production in Colombia was dominated by the fuel sector. Petroleum was the backbone of the mineral industry because it provided a large portion of Government revenues through exports and taxes. According to U.S. Geological Survey (USGS) data, Colombia was the fourth largest producer of crude petroleum in Latin America in 2001. Colombia was also the largest producer of coal and had the largest reserves of bituminous coal in the region. Efforts to increase the production capacity of the coal industry has resulted in a 34.1% increase production since 1997.

Historically, Colombia has been recognized as an important

<sup>1</sup>Where necessary, values have been converted from Colombian pesos (Col\$) to U.S. dollars (US\$) at the rate of Col\$2,323.97=US\$1.00.

<sup>2</sup>References that include a section twist (§) are found in the Internet References Cited section.

producer and the world's leading exporter of emeralds. In addition, it produced a significant amount of gold and is among the largest producers of ferronickel in the world. In Latin America, Colombia was the only producer of platinum; the country also produced bauxite, copper, iron ore, lead, pig iron, steel, silver, and zinc. Colombia was a significant producer of cement in Latin America; it also produced small amounts of many industrial minerals and construction materials.

In 2001, the volume of most minerals produced in Colombia either decreased or remained the same. A few minerals increased significantly from the levels of 2000; these were coal, ferronickel, platinum, and pig iron (table 1).

## Trade

According to the Departamento Administrativo Nacional de Estadísticas, the total value of Colombian exports in 2001 was \$12.3 billion; this was a decrease of 6.2% compared with \$13.1 billion in 2000. The United States, which was Colombia's main trading partner, received an estimated 44% of Colombia's exports. Other important trading partners were the Andean Community, which received 22% of Colombia's exports, followed by the European Union, 13%; and Japan, 1% (Banco de la República, 2002c§).

The value of traditional exports, which includes coal, coffee, emeralds, ferronickel, and petroleum decreased by 18.3%. With \$3.3 billion, \$1.2 billion, and \$235 million in exports, respectively, petroleum and its products, coal, and nickel were three very important commodities to Colombia's trade and significant sources of foreign exchange; these accounted for 38.2% of the value of total exports. The official value of emerald exports totaled \$89.2 million (Banco de la República, 2002b§, d§). Coal exports increased by about 20%; coal became Colombia's second largest export item. In 2000 (the latest year for which data are available), about 68% and 19% of Colombia's coal exports went to Europe and the United States, respectively. Since 1997, the level of Colombian coal exports has doubled (Barlow Jonker, 2002§).

Colombia exported about 46% of its petroleum production to the United States (U.S. Department of Energy, 2002§).

## Structure of the Mineral Industry

The Ministerio de Minas y Energía was the highest entity with responsibility for the mineral and energy sectors. With the new mining code of 2001, the structure of the mineral industry in Colombia was changing, and more production was in the hands of the private sector.

After the Government sold its 50% share of Cerrejón Zona Norte, which was the largest coal mine in Colombia, to a consortium of Anglo American Plc, BHP Billiton Ltd., and Glencor International AG, all Colombia's coal was produced by the private sector. In 2001, ExxonMobil Corporation held the remaining 50% of Cerrejón Zona Norte. Drummond Company, Inc., of the United States was a producer and exporter of coal in Colombia through its subsidiary Drummond Ltd.

Empresa Colombiana de Petróleos (Ecopetrol), which was a Government-owned company, was responsible for regulating and producing petroleum in Colombia. The private sector participated in crude production in joint ventures with Ecopetrol. Ecopetrol was legally required to hold a minimum 30% share in the joint venture. Colombia's petroleum refineries

were owned and operated by Ecopetrol.

The electric power sector was deregulated in 1994 with the purpose of privatizing the sector. Although private ownership of electricity distribution was about 40% in 2001; further privatization has been delayed because of guerrilla attacks on the electric infrastructure (U.S. Department of Energy, 2001§, 2002§).

## Commodity Review

### Metals

**Copper.**—Colombia produced a small amount of copper; reported production was from El Roble mine in the Carmen de Atrato municipality in the Chocó Department. The mine was owned by Minera El Roble S.A. (known as Miner S.A.). Production from El Roble began in 1990. Reserves in 1990 were calculated to be about 1 million metric tons (Mt) with an average grade of 4.41% copper, 3.11 grams per ton (g/t) gold, and 9.81 g/t silver. The mine had a production capacity of 96,000 t/yr of crude ore and 14,000 t/yr of copper concentrate with a typical copper content of 24% with gold and silver contents in concentrate of 12 g/t and 25 g/t, respectively (Empresa Nacional Minera Ltda., undated b§). Based on this information and production levels for the past 11 years, the mine would be depleted in the very near future. All the production from El Roble was exported to Japan. Although copper was produced in Ancuya in the Nariño Department and El Dovio in the Valle Department, production from these areas is not included in Colombia's official copper production (Empresa Nacional Minera Ltda., undated b§).

**Iron and Steel.**—Plans for the construction of a 1.2-million-metric-ton-per-year (Mt/yr) steel slab project were canceled (Metal Bulletin, 2001). Plant construction had been scheduled to begin in 2004. The project was a joint venture between Acerías de Colombia S.A. and Brazil's iron ore producer Companhia Vale do Rio Doce (CVRD). CVRD expected the Government of Colombia to offer price guarantees on natural gas until 2020; the Government offered to guarantee the price until 2010, which was unacceptable to CVRD, and the Brazilian company withdrew from the project. The project had also been affected by market and financing uncertainties.

**Nickel.**—Although mine production of nickel decreased in 2001 by 11.6% to 52,962 metric tons (t), production of nickel content of ferronickel increased by 38.6% to 38,446 t. According to USGS data, Colombia was the third largest producer of ferronickel in 2001. Cerro Matoso S.A. (a subsidiary of BHP Billiton Plc through QNI Limited) was the sole producer of nickel and ferronickel in Colombia. The mine and ferronickel plant were located in northwestern Colombia near the town of Montelíbano in the Department of Córdoba. Reserves of the lateritic nickel mine were estimated to be 39.9 Mt with a 2.3% nickel content (QNI Limited, 2002§). Increased production of ferronickel from Cerro Matoso was due to the expansion of the plant, which began in 1999. A second production line was completed in January 2001, 3 months ahead of schedule, and was set to double its ferronickel production capacity to 55,000 t/yr of nickel. In 2001, the company's workforce totaled about 1,300, which included 600 contractors (BHP Billiton Stainless Steel Materials, 2001, p. 10).

## *Industrial Minerals*

**Cement.**—Colombia was Latin America's third largest producer of cement. Production in 2001 was estimated to be 9.8 Mt. The largest cement producer in Colombia was Sindicato Antioqueño with 53% of Colombia's market share. CEMEX S.A. de C.V., which was one of the world's largest cement companies, was Colombia's second largest producers with five cement plants and a capacity of 4.8 Mt/yr (CEMEX S.A. de C.V., 2001§).

**Emerald.**—Official production of emeralds decreased by almost 35% to 5.5 million carats. According to Government estimates, 10% of the emeralds were sold in the country, and 90% were destined for exports. Emerald deposits in Colombia are located in the central region of the country in the sedimentary basin of the Cordillera Oriental. Production was from two Departments, Boyacá and Cundinamarca in the Cinturón Esmeraldífero Oriental (Eastern Emerald Belt) and Cinturón Esmeraldífero Occidental (Western Emerald Belt) regions with a combined area of 730,000 hectares. More than 60 production licenses awarded by the Government were active (Empresa Nacional Minera Ltda., undated a§).

## *Mineral Fuels*

**Coal.**—Colombia was the largest producer of coal in Latin America. The country also had the largest reserves in the region, which were estimated to be 6.650 billion metric tons (Gt) measured and 2.6 Gt indicated (Mining Magazine, 2002). Most of the reserves are located in the César and the Guajira Departments, which produced about 90% of Colombia's coal.

The largest producer of coal in Colombia was Cerrejón Zona Norte in the Guajira Department. Cerrejón Zona Norte was owned by International Colombia Resources Corporation (Intercor) (a subsidiary of ExxonMobil Corporation) (50%) and a consortium of Anglo American, Glencor International, and BHP Billiton (50%) after the Government sold the 50% interest it held in the property through Carbones de Colombia S.A. in October 2000 (Mining Magazine, 2001). In 2001, Cerrejón Zona Norte produced almost 50% of Colombia's coal. All its production was exported from Puerto Bolívar.

In early 2002, after holding a contract with the Government since 1975 and operating Cerrejón Zona Norte since 1984 through Intercor, ExxonMobil signed an agreement to sell its equity on Cerrejón Zona Norte to its partners in the mine (ExxonMobil Corporation, 2002).

**Natural Gas.**—As of January 1, 2002, natural gas reserves totaled 121.7 billion cubic meters (U.S. Department of Energy, 2002§). Colombia's largest producer of natural gas was ChevronTexaco Corp. in association with Ecopetrol. ChevronTexaco produced about 80% of Colombia's natural gas from two fields, the Chuchupa and the Ballena, in Guajira Department. Chuchupa was the only offshore gas field in Colombia (ChevronTexaco Corp., 2001§).

In August, ChevronTexaco announced that it had signed a nonbinding memorandum of understanding with Ecopetrol and the gas division of Venezuela's Government-owned company, Petróleos de Venezuela S.A. (PDVSA) to carry out a feasibility study on a construction of a 200-kilometer (km) gas pipeline between Colombia and Venezuela (ChevronTexaco Corp.,

2001). If feasible, the pipeline would connect the ChevronTexaco offshore infrastructure in the Guajira Department to Lake Maracaibo with the purpose of exporting Colombian gas to western Venezuela, which was experiencing a shortage in natural gas.

**Petroleum.**—Production of crude petroleum decreased by about 12% to 604,000 barrels per day (bbl/d). About 75% of the production was from Ecopetrol in association with the private sector (Ministerio de Minas y Energía, 2002§). Commercial production was from 7 of 18 sedimentary basins (U.S. Department of Energy, 2002§). The three largest production fields were Caño Limón in Arauca Department and Cupiagua and Cusiana in the Casanare Department. BP plc. operated the Cupiagua and Cusiana fields, and Occidental Petroleum operated the Caño Limón field. Petroleum output continued to be affected by the attacks on the Caño Limón-Coveñas pipelines, which reduced the output by one of the largest oilfields in the country by about 24 million barrels in a year. The pipeline was attacked 170 times in 2001. Production was also affected by lower output in other producing fields. Despite the reduction in output, Ecopetrol's earnings had a record year, the best ever by a domestic company. They totaled \$611 million and represented 23% of the Government revenues. This improvement was mainly due to higher domestic sales, a decrease in financial expenditures, and lower operating costs. Ecopetrol ended the year with a surplus of \$221 million (Empresa Colombiana de Petróleo, 2002b, e).

As of January 1, 2002, Colombia's proven crude oil reserves were estimated to be 1.75 billion barrels (U.S. Department of Energy, 2002§). Although the potential reserves are much higher, Colombia could become a net importer of crude petroleum in the medium term if no new discoveries are made. At 2001 production rates, proven reserves would be depleted in less than 8 years.

Efforts by Colombia to increase reserves and production from existing fields continued during 2001. By October, Ecopetrol had signed 18 new association contracts with international petroleum companies. Among the companies that signed new contracts with Ecopetrol were Nexen (formerly Canadian Occidental Petroleum) from Canada, Omimex Energy, Inc. from the United States, and a consortium between HOCOL S.A. and TotalFinaElf (France). These companies were already producing crude in Colombia in association with Ecopetrol (Empresa Colombiana de Petróleo, 2002a, c). Ecopetrol also signed a production contract for the southeastern region with a consortium that included two domestic private companies and the Russian producer Rosneft. This was the first time that Rosneft had become involved in the petroleum sector in Latin America (Empresa Colombiana de Petróleo, 2002d).

**Refinery Products.**—Ecopetrol announced plans to expand the Cartagena refinery, which was located in the Mamonal industrial zone. The refinery, which began production in 1956, had a production capacity of 75,000 bbl/d in 2001. Plans called for an expansion to 140,000 bbl/d by 2005 at an estimated cost of \$630 million; this included \$130 million in industrial services. In 2000 (the latest year for which information was available), exports from the Cartagena refinery represented 47.2% of total refinery revenues and 18% of Ecopetrol's exports (Empresa Colombiana de Petróleo, 2002§).

## Infrastructure

Colombia had 110,000 km of highways, of which 26,000 km was paved. The country had 10 major ports and harbors—Bahía de Portete, Barranquilla, Buenaventura, Cartagena, Leticia, Puerto Bolívar, San Andrés, Santa Marta, Tumaco, and Turbo. The country's railway system covered 3,304 km. Coal production from the largest coal producers was transported by railway. The Cerrejón Norte line was used by Cerrejón Zona Norte and Carbones del Cerrejón. Drummond used a portion of the Atlantic Richfield line for its transportation of coal. The transportation methods of the smaller coal producers was trucks and barges.

Colombia had five petroleum pipelines that covered a total of 3,585 km. Four of these pipelines—the Alto Magdalena, the Colombia, the Caño Limón (788 km), and the Orensa (805 km)—connected production fields to Coveñas. TransAndino, transported petroleum from Colombia's Orito field to Tumaco in the Pacific. For years, petroleum pipelines have been the targets of terrorist attacks. Petroleum products, natural gas, and natural gas liquids were also transported by pipelines.

In recent years, the Government has been planning infrastructure improvements and new developments. Slow economic growth, however, has curbed the progress of these plans.

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TABLE 1  
COLOMBIA: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

	1997	1998	1999	2000	2001
<b>METALS</b>					
Bauxite e/	1,700	1,700	1,700	1,700	1,700
Copper, mine output, Cu content	1,800	1,400	2,295	2,062	2,000 e/
Gold kilograms	18,811	18,810	34,847 r/	37,018	21,813
Iron and steel:					
Iron ore and concentrate thousand tons	755 r/	526 r/	576	660	637
Pig iron do.	324	256	264	285	318
Steel, crude do.	734	636	534	660	637
Semimanufactures, hot-rolled e/ do.	650	650	650	650	552 3/
Lead:					
Mine output, Pb content	311	272	166	226	220 e/
Refined (secondary)	10,000	12,000	12,000	12,000	12,000 e/
Nickel:					
Mine output, Ni content	31,230	29,422	39,274	58,927	52,962
Ferronickel, Ni content	25,171	28,143	28,342	27,736	38,446
Platinum kilograms	406	411	488	339	674
Silver do.	3,515	5,218	7,593	7,970	7,242
Zinc, mine output, Zn content	59	41	27	42	40 e/
<b>INDUSTRIAL MINERALS</b>					
Asbestos, mine output e/	136,700 3/	136,000	136,000	136,000	136,000 e/
Barite e/	900 3/	600	600	600	600 e/
Cement, hydraulic thousand tons	8,446	9,190	9,200 e/	9,750 e/	9,800 e/
Clays:					
Bentonite e/	8,640	8,500	8,500	8,500	8,500
Common clay and kaolin e/ thousand tons	8,040 3/	8,000	8,000	8,400	8,400
Diatomite e/	4000	4,000	4,000	4,000	4,000
Feldspar e/	66,845 3/	55,000	55,000	55,000	55,000 e/
Fluorite e/	802 3/	800	800	800	800
Gemstones, emerald thousand carats	6,688 4/	9,360 4/	6,800 r/	8,454	5,499
Gypsum e/	564,680 3/	560,000	560,000	560,000	560,000 e/
Lime, hydrated and quicklime e/ thousand tons	1,300	1,300	1,300	1,300	1,300
Magnesite e/	44,517 3/	10,500	10,500	10,500	10,500 e/
Mica e/	55	55	55	55	55
Nitrogen, N content of ammonia	80,900	100,300	75,400	92,900	95,200
Phosphate rock	44,517	43,688	43,148	42,615	43,000
Salt:					
Rock	141,923	165,699	156,933	177,690	110,212
Marine	232,107	330,404	304,433	282,188	285,073
Total	374,030	496,103	461,366	459,878	395,285
Sodium compounds, n.e.s., sodium carbonate e/	125,000	125,000	125,000	125,000	125,000
Stone and sand: e/					
Calcite	6,500	6,500	6,500	6,500	6,500
Dolomite thousand tons	45	45	45	45	45
Limestone do.	13,392	14,409 r/	10,933 r/	11,987 r/	11,475
Marble e/	191,250 3/	190,000	190,000	190,000	190,000
Sand, excluding metal-bearing	900,000	925,000	925,000	925,000	925,000
Sulfur:					
Native, from ore	1,008	52,727	89,024	91,966	69,344
Byproduct, from petroleum e/	14,872 3/	15,000	16,000	16,000	16,000
Total e/	15,880 3/	67,727	105,024	107,966	85,344
Talc, soapstone, pyrophyllite e/	14,832 3/	15,000	15,000	15,000	15,000
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
Carbon black e/	24,000	24,000 3/	24,000	24,000	24,000
Coal thousand tons	32,742	33,751	32,754	38,142	43,910
Coke, all types e/ do.	610	615	615	615	615
Gas, natural:					
Gross million cubic meters	13,013 r/	20,743 r/	30,063 r/	34,023 r/	35,850
Marketed do.	7,402 r/	8,213 r/	7,121 r/	8,079 r/	8,495
Natural gas liquids e/ thousand 42-gallon barrels	2,600	2,600	2,600	2,600	2,600

See footnotes at end of table.

TABLE 1--Continued  
COLOMBIA: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity	1997	1998	1999	2000	2001	
<b>MINERAL FUELS AND RELATED MATERIALS--Continued</b>						
Petroleum:						
Crude	thousand 42-gallon barrels	238,090 r/	275,320 r/	297,840	250,755 r/	220,460
Refinery products:						
Liquefied petroleum gas	do.	7,881	7,491	7,500 e/	7,500 e/	7,500 e/
Gasoline:						
Aviation	do.	142	145	145 e/	145 e/	145 e/
Motor	do.	37,920	38,371	38,500 e/	38,500 e/	38,500 e/
Jet fuel	do.	5,792	6,188	6,200 e/	6,200 e/	6,200 e/
Kerosene	do.	1,180	1,025	1,100 e/	1,100 e/	1,100 e/
Medium distillate fuel oil	do.	24,265	23,209	24,000 e/	24,000 e/	24,000 e/
Lubricants	do.	442	431	450 e/	450 e/	450 e/
Residual fuel oil, black oil	do.	19,730	18,759	19,000 e/	19,000 e/	19,000 e/
Asphalt and bitumen	do.	3,077	2,081	3,000 e/	3,000 e/	3,000 e/
Refinery fuel and losses and unspecified products e/	do.	15,000	4,375	5,000 e/	5,000 e/	5,000 e/
Total	do.	115,429	102,075	105,000 e/	105,000 e/	105,000 e/

e/ Estimated. r/ Revised.

1/ Includes data available through August 1, 2002.

2/ Estimated data are rounded to no more than three significant digits; may not add to the totals shown.

3/ Reported figure.

4/ Based on registered exports by the Banco de la República.

TABLE 2  
COLOMBIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2001

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity	
Carbon black	Cabot Colombiana S.A. (private, 100%)	Cartagena, Bolívar Department (plant)	NA.	
Do.	Productos Petroquímicos S.A. (private, 100%)	Cali, Valle del Cauca Department (two plants)	12.	
Cement	Cía. Colombia de Clinker S.A. (Colclinker) (private, 100%)	Cartagena, Bolívar Department (plant)	1,100.	
Do.	Cementos Boyacá S.A. (private, 100%)	Nobsá, Boyacá Department	NA.	
Do.	CEMEX Colombia (100% CEMEX, S.A. de C.V.)	Five plants	4,800.	
Do.	Cementos del Caribe S.A. (private, 100%)	Barranquilla, Atlántico Department	1,000.	
Do.	Cementos del Valle S.A. (private, 100%)	Yumbo, Valle del Cauca Department	1,200.	
Do.	Cementos Río Claro S.A. (private, 100%)	Puerto Trifuno, Antioquia Department	1,750.	
Coal	Corrección Zona Norte S.A. (Anglo American Plc, Glencor International AG, and BHP Billiton plc., 50%; ExxonMobil Corporation through International Resources Corporation, 50%)	El Corrección Zona Norte mine, La Guajira Department	19,000.	
Do.	Carbones de Corrección S.A. (Anglo American Plc, 33.3%; Glencor International AG, 33.3%; BHP Billiton plc., 33.3%)	Corrección Centro mines, Corrección Sur mines, and Oreganal mines, La Guajira Department	4,500.	
Do.	Drummond, Ltd. (Drummond Company Inc., 100%)	Drummond mine, Cesar Department	7,000.	
Do.	Prodeco (private, 100%)	Calenturitas in César Department	NA.	
Do.	Acerías Paz del Río S.A. (private, 100%)	Paz del Río, Boyacá Department (mine)	600.	
Copper	Minera El Roble S.A.	El Roble mine, El Carmen, Choco Department	3.	
Emerald	Minerales de Colombia S.A. (MINERALCO) (Government, 100%)	Chivor, Coscuez, Muzo, and Quipama mines, Boyacá Department	NA.	
Gold	kilograms	Frontino Gold Mines Ltd. (private, 100%)	El Silencio mine, Segovia, Antioquia Department	1,500.
Do.	do.	Fisher-Watt Gold Co. (private, 100%)	Oronorte mine, Segovia, Antioquia Department	500.
Do.	do.	Mineros de Antioquia S.A. (private, 100%)	Río Nechi, near El Bagre, Antioquia Department (mines)	2,000.
Do.	do.	Small miners (cooperatives and individual prospectors)	Río Nechi, Antioquia Department (mines)	NA.
Iron ore	Acerías Paz del Río S.A.	Paz del Río, Boyacá Department (mine)	800.	

See footnotes at end of table.

TABLE 2--Continued  
 COLOMBIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2001

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Kaolin		Cerámicas del Valle Ltda., (private, 100%)	Yumbo, Valle del Cauca Department (mine)	NA.
Natural gas	million cubic meters	Empresa Colombiana de Petróleos (Ecopetrol) (Government, 100%)	North coast, La Guajira Department (national gasfields)	4,500.
Do.	do.	International Petroleum Colombia, Ltd. (International Petroleum Corp., 100%)	Barrancabermeja locale, Antioquia and Santander Departments	2,200.
Nickel		Cerro Matoso S.A. (QNI Ltd., 100%; latter owned by BHP Billiton plc., 100%)	Cerro Matoso mine, Montelíbano, Córdoba Department	55 plant.
Nitrogen		Abonos de Colombia (private, 100%)	Cartagena, Bolívar Department (plant)	100.
Do.		Monómeros Colombo-Venezolanos S.A. (private, 100%)	Barranquilla, Atlántico Department (plant)	85.
Petroleum 1/	thousand 42-gallon barrels	Ecopetrol	16 fields in various Departments	70,000.
Do.	do.	HOCOL S.A.	14 fields in various Departments	36,500.
Petroleum products	do.	Ecopetrol	Barrancabermeja refinery, Santander Department	74,400.
Do.	do.	do.	Cartegena refinery, Bolívar Department	25,806.
Do.	do.	do.	Tibu, Norte de Santander Department	1,825.
Do.	do.	do.	Orito, Putumayo Department	875.
Phosphate		Fosfatos de Colombia S.A. (private, 100%)	Neiva, Huila Department	30.
Do.		Fosfatos Boyacá, S.A. (Government, 100%)	Iza, Boyacá Department	20.
Platinum		Small miners (cooperatives and individual prospectors)	Río San Juan, Choco Department	NA.
Salt, marine		Instituto de Fomento Industrial (IFI) (Government, 100%)	Manaure Salina, La Guajira Department	700.
Salt, rock		Concesión Salinas (Government, 100%)	Zipaquira, Cundinamarca Department	500.
Silver	kilograms	Frontino Gold Mines Ltd.	El Silencio mine, Segovia, Antioquia Department	2,500.
Do.	do.	Small miners (individual prospectors and cooperatives)	Río Nechi, Antioquia Department (mines)	2,000.
Steel, intergrated plant		Acerías Paz del Río S.A.	Belencito, Boyacá Department	400.
Steel, semi-intergrated plants		Siderúrgica del Caribe (private, 100%)	Cartagena, Bolívar Department	NA.
Do.		Siderúrgica del Boyacá S.A. (private, 100%)	Santa Fe de Bogotá	NA.
Do.		Siderúrgica del Medellín S.A. (private, 100%)	Medellín, Antioquia Department	NA.
Do.		Siderúrgica del Muna S.A. (private, 100%)	Chusaca, Federal District	NA.
Do.		Siderúrgica del Pacífico S.A. (private, 100%)	Cali, Valle del Cauca Department	NA.
Sulfur		Industrias Purace S.A. (private, 100%)	El Vinagre mine, Cauca Department	60.
Do.		ECOPETROL	Barrancabermeja, Santander Department	29.

NA Not available.

1/ These two petroleum entries are only examples. Colombia has more than 3,000 producing wells, drilled by both Government and private companies, having combined capacities exceeding 755,000 barrels per day (calendar) of oil.