

# Minerals & Mining

**Africa is not only one of the world's major sources of hydrocarbon fuels but also of hard minerals. It ranks first or second in terms of concentration of world reserves of gold, antimony, bauxite, chromite, cobalt, diamonds, fluorspar, hafnium, manganese, phosphate rock, the platinum group, titanium, vanadium, vermiculite, and zirconium. The continent accounts for between 1% to 6% of the world's supplies of aluminum, cement, coal, copper, graphite, iron ore, lead, steel, and zinc; from 11% to 31% of the total global supplies of bauxite, cobalt, gold, manganese, phosphate, and uranium; and from 50% to 57% of the world's chromium and diamonds. South Africa alone accounts for 76% of the world supply of vermiculite, 62% of vanadium, 59% of its alumino-silicates (andalusite and kyanite), 43% of its platinum-group of metals, 26% of the world's supply of total zirconium minerals, and 23% of all titanium minerals.**

These natural resources continue to be vital to the economies of African nations as earners of

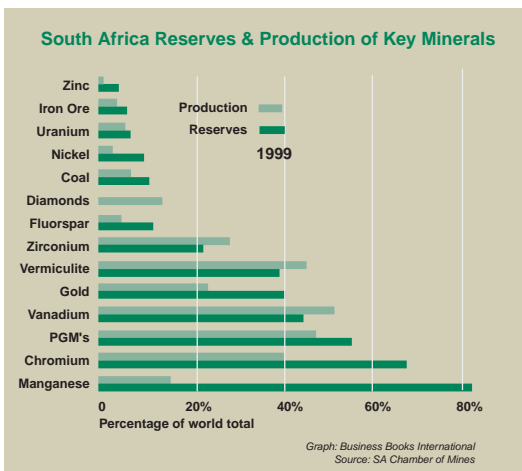
foreign exchange, providers of employment and stimulants for the development of transportation, energy and other infrastructure projects. Trade in both fuel and hard minerals in countries such as Algeria, Angola, Botswana, Gabon, Guinea, Libya, Namibia, Niger, Nigeria, Zaire, and Zambia accounts for between 50% and 95% of their export earnings, and between 50% and 66% of the export earnings of South Africa, Ghana and Egypt. West and North Africa dominate in oil and gas and subequatorial Africa (especially the southern portion) leads in the production of hard minerals.

## Key

Mining is seen as key to economic development and attaining an international competitive advantage in a mineral-rich Africa. Mining operators, who are often pioneer foreign investors in African countries, generate substantial amounts of foreign exchange that significantly boost government revenues. Unlike other infrastructural projects, the immediate foreign exchange earnings of mines minimizes currency risk, one of the main bugbears of investment in Africa. Mining, unlike manufacturing, does not bring the same level of competition from other low-wage countries. In recent years, mining transformed the economies of several countries. Botswana's earnings from its diamond mining industry enabled it to post impressive growth rates. Foreign direct investment (FDI) of more than \$800 million in Zambia's copper mines revived a stagnant sector and the economy at large while in Zimbabwe foreign mining investment totaling \$544 million gave a shot in the arm to a sagging economy in 1998. Mozambique's economic revival was greatly accelerated by a \$1 billion aluminum smelter and renewed exploration interest. FDI totalling \$297 million in Tanzania's mining sector during 1995-1999, and further likely investments following the discovery of promising gold ore bodies, are bound to stimulate growth in other sectors as well. Mining's contribution to these economies involves not only mining operations themselves but also upstream and downstream activities.

## South Africa

In South Africa—Africa's and the world's foremost mineral giant—mining still accounts for



## Mineral briefs

- ☑ Africa is a major supplier of strategic minerals to the United States and other world markets.
- ☑ There has been a resurgence in mineral exploration in recent years involving major and medium-sized US, Canadian and South African mining companies. *The Metals and Economics Group* of Halifax, Canada, estimated an exploration outlay of some \$418 million by 223 firms in various parts of the continent.
- ☑ The World Bank's Multilateral Investment Guarantee Agency (MIGA) has worked with many African countries to develop more progressive mining and foreign investment laws to lure foreign capital and technology.
- ☑ Recent changes in the political climate made it possible to resume exploration in countries such as Mozambique and Angola.
- ☑ With the lifting of sanctions the mining giants of post-apartheid South Africa have been able to spread their wings over the rest of Africa, frequently in profitable partnership with other foreign entrepreneurs.
- ☑ Economic reforms in countries such as Ghana and Zambia have widened the scope for private enterprise and led to greater efficiency and profitability in privatized former state mining enterprises.
- ☑ There is a high probability that much of Africa's mineral wealth still lies hidden in remote and high risk regions. As infrastructures improve and governments stabilize, these new opportunities are bound to attract mineral seekers from abroad.

half of all exports and continues to be the single most important earner of foreign exchange. Despite the contraction in gold mining output and the decline in the weighting of the mining industry on the JSE Securities Exchange, the country's other major minerals have experienced impressive growth. Numerous large-scale investment projects are at varying stages of design and implementation. Sectors such as coal, platinum group metals (PGM) and chrome have doubled in size since 1980, while iron ore production has increased by more than half. Major projects were launched in ferrochrome, zinc and other minerals and new investment in mines and smelters has grown at a rate of 5-7 per cent per year. Since the 1990s there has been modernization at several levels: mining house, mining company and workplace. Emerging is a leaner, more focused, more competitive and internationally active mining industry with world-class mining companies in gold, platinum, diamonds, coal, ferrochrome and base metals. There are also world-class engineering and other companies that serve the industry. The mining industry provides the base for the country's competitive advantage in electricity, chemicals and related industries.

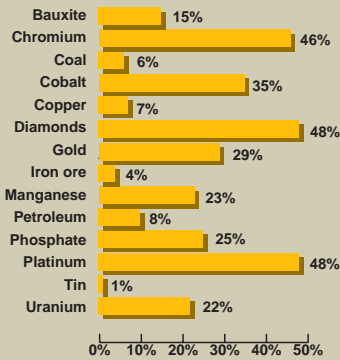
### Development

Post-apartheid South Africa has become a prime driving force for mining development in Africa and the world at large. South African mining companies are leading the resurgence of mining activity on the continent, frequently in partnership with foreign mining operations. Anglo American, Randgold, Gencor and JCI have invested heavily in exploration. Billiton is building an aluminum smelter in Mozambique and Anglo American and Gold Fields are involved in gold projects in West Africa. Both Anglo American and Anglovaal Mining have invested in copper/cobalt operations in Zambia. Johannesburg is in the process of becoming the global center for mining technology, specialist services and supplies. South African firms are among world leaders in mining explosives, drilling equipment and abrasives, metallurgical processes and plants, and delivering knowledge-based services to mines everywhere. AECI and Sasol lead as suppliers of mining explosives; Boart International is a world leader in abrasives; and two South African firms, SRK and Bateman, are among the foremost mining consultancies in the world.

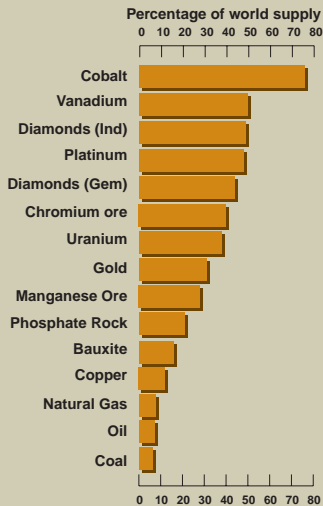
# African minerals



**Africa's Share of World Mineral Production (1998)**



**Africa's Mineral Resources**



Map & Graphs: Business Books International  
Source: World Bank, US Geological Survey

**AFRICAN PRODUCTION OF SELECTED MINERAL COMMODITIES 1998**  
(Thousand metric tons gross weight unless otherwise specified)

Country	Diamonds (thousand carats)	Gold <sup>e</sup> (kilogram)	Manga- nese ore	Phos- phate rock <sup>e</sup>	Uranium concen- trate <sup>3</sup> (mt. tons)	Bauxite	Chromite	Alumi- num	Cobalt mt. tons
Algeria	--	--	--	1,155 <sup>1</sup>	--	--	--	--	--
Angola	2,764 <sup>1</sup>	--	--	--	--	--	--	--	--
Botswana	19,772 <sup>1</sup>	1 <sup>1</sup>	--	--	--	--	--	--	335 <sup>1</sup>
Burkina Faso	--	1,100	1 <sup>1</sup>	--	--	--	--	--	--
Burundi	--	5	--	--	--	--	--	--	--
Cameroon	--	1,000	--	--	--	--	--	88	--
Central African Republic	530	100	--	--	--	--	--	--	--
Congo Rep. of	--	10	--	--	--	--	--	--	--
Congo Dem. Rep. of	24,500	134	--	--	--	--	--	--	1,500
Côte d'Ivoire	310	1,500	--	--	--	--	--	--	--
Egypt	--	--	10	1,050 <sup>1</sup>	--	--	--	230 <sup>1</sup>	--
Eritrea	--	573	--	--	--	--	--	--	--
Ethiopia	--	2,500	--	--	--	--	--	--	--
Gabon	500	70	2,092	--	862	--	--	--	--
Ghana	809 <sup>1</sup>	72,541 <sup>1</sup>	537	--	--	650	--	56 <sup>1</sup>	--
Guinea	400	14,000	--	--	--	15,000	--	--	--
Kenya	--	388 <sup>1</sup>	--	--	--	--	--	--	--
Liberia	300	800	--	--	--	--	--	--	--
Madagascar	--	50	--	--	--	--	150 <sup>p</sup>	--	--
Mali	--	25,000	--	--	--	--	--	--	--
Morocco	--	450	28	23,587 <sup>2</sup>	--	--	--	--	230 <sup>1</sup>
Mozambique	--	17 <sup>1</sup>	--	--	--	6	--	--	--
Namibia	1,467 <sup>1</sup>	1,882 <sup>1</sup>	--	--	3,257	--	--	--	--
Niger	--	1,000	--	--	4,400	--	--	--	--
Nigeria	--	10	--	--	--	--	--	20	--
Rwanda	--	26	--	--	--	--	--	--	--
Senegal	--	--	--	1,320	--	--	--	--	--
Sierra Leone	250	15	--	--	--	--	--	--	--
Somalia	--	--	--	--	--	--	--	--	--
South Africa	10,756 <sup>1</sup>	464,216 <sup>1</sup>	3,044	2,739	1,134	--	6,480	693 <sup>1</sup>	435
Sudan	--	5,000	--	--	--	--	20 <sup>e</sup>	--	--
Swaziland	70	--	--	--	--	--	--	--	--
Tanzania	93	720	--	2	--	--	--	--	--
Togo	--	--	--	1,900	--	--	--	--	--
Tunisia	--	--	--	7,901 <sup>1</sup>	--	--	--	--	--
Uganda	--	2,500	--	--	--	--	--	--	--
Zambia	--	25,175 <sup>1</sup>	--	--	--	--	--	--	5,011
Zimbabwe	29 <sup>1</sup>	634	--	91	--	--	605 <sup>e</sup>	--	137
<b>TOTAL AFRICA<sup>4</sup></b>	<b>62,550</b>	<b>621,548</b>	<b>5,712</b>	<b>39,745</b>	<b>9,653</b>	<b>15,656</b>	<b>7,246</b>	<b>1,089</b>	<b>7,648</b>
<b>TOTAL WORLD</b>	<b>114,938</b>	<b>2,480,000</b>	<b>18,700</b>	<b>145,000</b>	<b>40,016</b>	<b>122,000</b>	<b>13,503</b>	<b>22,100</b>	<b>26,300</b>
<b>AFRICA SHARE</b>	<b>54%</b>	<b>25%</b>	<b>31%</b>	<b>27%</b>	<b>24%</b>	<b>13%</b>	<b>54%</b>	<b>5%</b>	<b>29%</b>

1. Reported figure.

2. Includes production from Western Sahara.

3. U<sub>3</sub>O<sub>8</sub> Source Uranium Institute, London, England.

4. Rounded figures.

e. Estimated.

p. Preliminary.