VALLEY OF THE RIO DOCE CO
Form 20-F
June 10, 2004

As filed with the Securities and Exchange Commission on June 10, 2004

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 20-F

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended: **December 31, 2003**
Commission file number: **001-15030**

COMPANHIA VALE DO RIO DOCE
(Exact name of Registrant as specified in its charter)

VALE OVERSEAS LIMITED
(Exact name of Registrant as specified in its charter)

Federative Republic of Brazil

Cayman Islands
(Jurisdiction of incorporation or organization)

Avenida Graça Aranha, No. 26
20030-900 Rio de Janeiro, RJ, Brazil
(Address of principal executive offices)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Preferred class A shares of CVRD, no par value per share	New York Stock Exchange*
American depositary shares (as evidenced by American depositary receipts) each representing one preferred class A share of CVRD	New York Stock Exchange
Common shares of CVRD, no par value per share	New York Stock Exchange*
American depositary shares (as evidenced by American depositary receipts) each representing one common share of CVRD	New York Stock Exchange

* Shares are not listed for trading, but only in connection with the registration of American depositary shares pursuant to the requirements of the New York Stock Exchange.

Securities registered or to be registered pursuant to Section 12(g) of the Act: **None**

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: **None**

The number of outstanding shares of each class of stock of CVRD as of December 31, 2003 was:

245,267,973 common shares, no par value per share
138,571,729 preferred class A shares, no par value per share
1 golden share, no par value per share

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

Yes x No o

Indicate by check mark which financial statement item the registrant has elected to follow.

Item 17 o Item 18 x

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GLOSSARY

Alumina	Aluminum oxide. It is extracted from bauxite in a chemical refining process and is the principal raw material in the electro-chemical process from which aluminum is produced.
Bauxite	A rock composed primarily of hydrated aluminum oxides. It is the principal ore of alumina, the raw material from which aluminum is made.
Beneficiation	The process of separating, concentrating and classifying ore by particle size or some other characteristic (*e.g.*, specific gravity, magnetic susceptibility, surface chemistry, etc.) in order to obtain the mineral or metal of interest.
Concentration	Physical, chemical or biological process to increase the grade of the metal or mineral of interest.
Copper Concentrate	Material produced by concentration of copper minerals contained in the copper ore. It is the raw material used by the smelters to produce copper metal.
Copper	A reddish brown metallic element. Copper is remarkably conductive, both thermally and electrically. It is highly malleable and ductile and is easily rolled into sheet and drawn into wire.
DR	Direct Reduction. Process that converts iron ore into DRI or HBI using natural gas.
DRI	Direct Reduced Iron. Processed iron ore (lump or pellets) into Direct Reduction process, used as a scrap substitute in electric furnace steelmaking.
DWT	Deadweight ton. The measurement unit of a vessel s capacity for cargo, fuel oil, stores and crew, measured in metric tons of 1,000 kg. A vessel s total deadweight is the total weight the vessel can carry when loaded to a particular load line.
Fe unit	A measure of the iron content in the iron ore that is equivalent to 1% iron content in 1 ton of iron ore.
Ferroalloys	Ferroalloys are alloys of iron that contain one or more other chemical elements. These alloys are used to add these other elements into molten metal, usually in steelmaking. The principal ferroalloys are those of chromium, manganese ore, and silicon. Manganese ore is essential to the production of virtually all steels and is important to the production of cast iron. Manganese ore is used to neutralize the harmful effect of sulfur and as an alloying element.
FOB	Free on Board. It indicates that the purchaser pays for shipping, insurance and all the other costs associated with transportation of the goods to their destination.
Grade	The proportion of metal or mineral present in ore or any other host material.
HBI	Hot Briquetted Iron. Direct reduced iron that has been processed into briquettes. Instead of using a blast furnace, the oxygen is removed from the ore using natural gas and results in a substance that is 90%-92% iron. Because DRI (direct reduced iron) may

	spontaneously combust during transportation, HBI is preferred when the metallic material must be stored or moved.
Kaolin	A fine white aluminum silicate clay used as a coating agent, filler, extender and absorbent in the paper, ceramics and pharmaceutical industries.
Lump ore	Iron ore or manganese ore with the coarsest particle size in the range of 6.35 mm to 50 mm diameter, but varying slightly between different mines and ores.
Manganese ore	A hard brittle metallic element found primarily in the minerals pyrolusite, hausmannite and manganate.
Mineral deposit(s) or mineralized material(s)	Refers to a mineralized body that has been intersected by a sufficient number of closely spaced drill holes and/or underground/surface samples to support sufficient tonnage and grade of metal(s) or mineral(s) of interest to warrant further exploration-development work. The deposit does not qualify as an ore body until it can be legally and economically extracted at the time of ore reserve determination.
Open pit mining	The extraction method by which surface or barren rock is removed so that ore may be removed using power shovels, front-end loaders, hydraulic excavators, draglines, etc.
Oxides	Compounds of oxygen with another element. For example, magnetite (Fe_3O_4) is an oxide mineral formed by the chemical union of iron with oxygen.
Pellet feed (Ultra-fine)	Ultra-fine (less than 0.15 mm) iron ore particles generated by the mining, grading, handling and transporting of iron ore, with no practical direct application in the steel industry, unless the material is aggregated into pellets through an agglomeration process.
Pellets	Agglomerated ultra-fine iron ore particles of a size and quality suitable for particular steelmaking processes. Our pellets range in size from 8 mm to 18 mm.
Pig iron	Melted iron produced in a blast furnace.
Potash	A potassium chloride compound, chiefly KCl, used in the production of fertilizer.
Primary Aluminum	White metal that is obtained in the electro-chemical process of reduction of the aluminum oxide.
Probable (indicated) reserves	Reserves for which quantity and grade and/or quality are computed from information similar to that used for proven (measured) reserves, but the sites for inspection, sampling and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven (measured) reserves, is high enough to assume continuity between points of observation.
Proven (measured) reserves	Reserves for which (1) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; (2) grade and/or quality are computed from the results of detailed sampling; and (3) the sites for inspection, sampling and

measurement are spaced so closely and the geologic character is so well defined that

	size, shape, depth and mineral content of reserves are well-established.
Reserve	Refers to that part of a mineral deposit that could be economically and legally extracted or produced at the time of the reserve determination.
Run-of-mine	Ore in its natural (unprocessed) state, as mined, without having been crushed.
Seaborne market	Comprises the total ore trade (imports and exports) between countries using ocean bulk vessels.
Sinter feed (Fines)	Refers to iron ore with particles in the range of 0.15 mm to 6.35 mm diameter. Suitable for sintering.
Sintering	Refers to the agglomeration of small particles into a coherent mass by heating without melting.
Slabs	The most common type of semi-finished steel. Traditional slabs measure 10 inches thick and 30-85 inches wide (and average about 20 feet long), while the output of the recently developed thin slab casters is approximately two inches thick. Subsequent to casting, slabs are sent to the hot-strip mill to be rolled into coiled sheet and plate products.
Ton	Metric ton, equaling 1,000 kilograms.
Troy ounce	One troy ounce equals 31.103 grams.
Underground Mining	Mineral exploitation in which extraction operations are carried out beneath the earth s surface.

PRESENTATION OF FINANCIAL INFORMATION

We have prepared our financial statements appearing in this annual report in accordance with generally accepted accounting principles in the United States (U.S. GAAP), which differ in certain respects from accounting practices adopted in Brazil (defined as Brazilian GAAP). Brazilian GAAP is determined by the requirements of Law No. 6,404, dated December 15, 1976, as amended (the Brazilian Corporate Law), and the rules and regulations of the *Comissão de Valores Mobiliários*, or CVM, the Brazilian Securities Commission. We also publish Brazilian GAAP financial statements in Brazil, which we refer to as our Brazilian Corporate Law financial statements. We use our Brazilian Corporate Law financial statements for:

reports to Brazilian shareholders;

filings with the CVM;

determination of dividend payments; and

determination of tax liability.

Our financial statements and the other financial information appearing in this annual report have been translated from Brazilian *reais* into U.S. dollars on the basis explained in Note 3(a) to our financial statements unless we indicate otherwise.

References to *real, reais* or R$ are to Brazilian *reais* (plural) and to the Brazilian *real* (singular), the official currency of Brazil. References to U.S. dollars, dollars or US$ are to United States dollars.

Unless otherwise specified, metric units have been used, *e.g.*, tons refer to metric tons.

References to us or we are to CVRD, its consolidated subsidiaries and its joint ventures and other affiliated companies. References to CVRD are to Companhia Vale do Rio Doce. References to Vale Overseas are to Vale Overseas Limited. References to affiliated companies are to companies in which Companhia Vale do Rio Doce has a minority investment, and exclude controlled affiliates that are consolidated for financial reporting purposes.

References to ANEEL are to *Agência Nacional de Energia Elétrica*, the Brazilian energy regulatory agency.

References to ANTT are to *Agência Nacional de Transportes Terrestres*, the Brazilian regulatory agency for the transportation sector.

References to our ADSs or American depositary shares include both our common American depositary shares (our common ADSs), each of which represents one common share of CVRD, and our preferred American depositary shares (our preferred ADSs), each of which represents one preferred class A share of CVRD. American depositary shares are represented by American depositary receipts (ADRs) issued by JPMorgan Chase Bank, as depositary.

PRESENTATION OF INFORMATION CONCERNING RESERVES

The estimates of the proven and probable reserves at our mines and the estimates of mine life, as of December 31, 2003, included in this annual report have been calculated according to the technical definitions required by the U.S. Securities and Exchange Commission, or the SEC. We derived estimates of mine life described in this annual report from such reserve estimates. We have adjusted ore reserve estimates for extraction losses and metallurgical recoveries during extraction for manganese ore and bauxite deposits. Our reserve estimates of iron, kaolin, copper and potash are

reported as *in situ* tons with adjustments for dilution and mining losses. See *Item 3. Key Information Risk Factors Risks Relating to Our Business* for a description of risks relating to reserves and reserves estimates. We have retained Golder Associates S.A., or Golder, to audit and verify most of our estimates of proven and probable reserves as of December 31, 2003.

FORWARD-LOOKING STATEMENTS

This annual report contains statements that constitute forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. Many of the forward-looking statements contained in this annual report can be identified by the use of forward-looking words such as anticipate, believe, could, expect, should, intend, estimate and potential, among others. Those statements appear in a number of places in this annual report and include statements regarding our intent, belief or current expectations with respect to:

- our direction and future operation;
- the implementation of our principal operating strategies, including our potential participation in privatization, acquisition or joint venture transactions or other investment opportunities;
- our acquisition or divestiture plans;
- the implementation of our financing strategy and capital expenditure plans;
- the exploration of mineral reserves and development of mining facilities;
- the depletion and exhaustion of mines and mineral reserves;
- the declaration or payment of dividends;
- industry trends, including the direction of prices and expected levels of supply and demand;
- other factors or trends affecting our financial condition or results of operations; and
- the factors discussed under *Item 3. Key Information Risk Factors.*

We caution you that forward-looking statements are not guarantees of future performance and involve risks and uncertainties. Actual results may differ materially from those in the forward-looking statements as a result of various factors, including those identified under *Item 3. Key Information Risk Factors*. These risks and uncertainties include factors relating to the Brazilian economy and securities markets, which exhibit volatility and can be adversely affected by developments in other countries, factors relating to the iron ore business and its dependence on the global steel industry, which is cyclical in nature, and factors relating to the highly competitive industries in which we operate. For

additional information on factors that could cause our actual results to differ from expectations reflected in forward-looking statements, please see *Item 3. Key Information Risk Factors*, and our reports filed with the SEC. Forward-looking statements speak only as of the date they are made, and we do not undertake any obligation to update them in light of new information or future developments.

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

SELECTED FINANCIAL DATA

The table below presents selected consolidated financial information as of and for the periods indicated. You should read this information together with our consolidated financial statements appearing in this annual report.

	For the Year Ended December 31,				
	1999	**2000**	**2001**	**2002**	**2003**
	(in millions of US$)				
Statement of Income Data					
Net operating revenues	US$ 3,076	US$ 3,935	US$ 3,935	US$ 4,123	US$ 5,350
Cost of products and services	(1,806)	(2,429)	(2,272)	(2,263)	(3,128)
Selling, general and administrative expenses	(138)	(225)	(241)	(224)	(265)
Research and development	(27)	(48)	(43)	(50)	(82)
Employee profit sharing plan	(24)	(29)	(38)	(38)	(32)
Other expenses	(155)	(180)	(379)	(119)	(199)
Operating income	926	1,024	962	1,429	1,644
Non-operating income (expenses):					
Financial income (expenses)	(33)	(107)	(200)	(248)	(249)
Foreign exchange and monetary losses, net	(223)	(240)	(426)	(580)	242
Gain on sale of investments		54	784		17
Subtotal	(256)	(293)	158	(828)	10
Income before income taxes, equity results and minority interests	670	731	1,120	601	1,654
Income taxes benefit (charge)	(33)	32	218	149	(297)
Equity in results of affiliates and joint ventures and change in provision for losses on equity investments	(227)	322	(53)	(87)	306
Minority interests	2	1	2	17	(105)
Change in accounting practice for asset retirement obligations					(10)

Net income	US$ 412	US$ 1,086	US$ 1,287	US$ 680	US$ 1,548
Total cash paid to shareholders(1)	US$ 452	US$ 246	US$ 1,066	US$ 602	US$ 675

(1) Total cash paid to shareholders consists of cash paid during the period in respect to interest on shareholders equity.

	For the Year Ended December 31,				
	1999	**2000**	**2001**	**2002**	**2003**
	(in US$ except recorded dividends and interest on shareholders equity per share in Brazilian reais and share numbers)				
Per Share Data Earnings and Dividends					
Basic earnings per Common and Preferred Class A Share(1)	US$ 1.07	US$ 2.82	US$ 3.34	US$ 1.77	US$ 4.03
Distributions on shareholders equity per share in US$(2)	US$ 1.30	US$ 0.66	US$ 2.64	US$ 1.69	US$ 1.76
Distributions on shareholders equity per share in Brazilian *reais*(2)	R$ 2.26	R$ 1.17	R$ 5.64	R$ 4.99	R$ 5.04
Weighted average number of shares outstanding (in thousands):					
Common shares(1)	249,983	249,983	249,864	249,864	245,268
Preferred class A shares(1)	134,917	134,917	135,042	135,042	138,571
Total	384,900	384,900	384,906	384,906	383,839

(1) Each common American depositary share represents one common share and each preferred American depositary share represents one preferred class A share.

(2) Our distributions to shareholders may take the form of dividends or of interest on shareholders equity. Since 1997, all distributions have taken the form of interest on shareholders equity. The amount shown represents distributions paid during the year.

	At December 31,				
	1999	2000	2001	2002	2003
	(in millions of US$)				
Balance Sheet Data					
Current assets	US$2,490	US$2,502	US$2,638	US$2,589	US$ 2,474
Property, plant and equipment, net	3,943	3,955	3,813	3,297	6,484
Investments in affiliated companies and joint ventures and other investments	1,203	1,795	1,218	732	1,034
Other assets	1,052	1,543	1,839	1,337	1,442
Total assets	US$8,688	US$9,795	US$9,508	US$7,955	US$11,434
Current liabilities	2,072	2,136	1,921	1,508	2,253
Long-term liabilities (1)	601	1,061	772	774	1,201
Long-term debt (2)	1,321	2,020	2,170	2,359	2,767
Total liabilities	3,994	5,217	4,863	4,641	6,221
Minority interest	3	9	5	27	329
Stockholders equity:					
Capital stock	1,927	1,927	2,211	2,446	2,869
Additional paid-in capital	498	498	498	498	498
Reserves and retained earnings	2,266	2,144	1,931	343	1,517
Total stockholders equity	4,691	4,569	4,640	3,287	4,884
Total liabilities and stockholders equity	US$8,688	US$9,795	US$9,508	US$7,955	US$11,434

(1) Excludes long-term debt.

(2) Excludes current portion. At December 31, 2003, we had extended guarantees for borrowings of joint ventures and affiliated companies in an aggregate amount of US$ 283 million. These contingent liabilities do not appear on the face of our consolidated balance sheets, but are disclosed in Note 18(a) to our consolidated financial statements.

EXCHANGE RATES

There are two principal foreign exchange markets in Brazil:

the commercial rate exchange market, and

the floating rate exchange market.

Most trade and financial foreign-exchange transactions are carried out on the commercial rate exchange market. These transactions include the purchase or sale of shares or the payment of dividends or interest with respect to shares. Foreign currencies may only be purchased through a Brazilian bank authorized to operate in these markets. In both markets, rates are freely negotiated but may be influenced by the Central Bank of Brazil intervention. In 1999, the Central Bank of Brazil placed the commercial rate exchange market and the floating rate exchange market under identical operational limits, which led to a convergence in the pricing and liquidity of both markets. Since February 1, 1999, the floating market rate has been the same as the commercial market rate. However, there is no guarantee that these rates will continue to be the same in the future. Despite the convergence in the pricing and liquidity of both markets, each market continues to be regulated differently.

Since 1999, the Central Bank of Brazil has allowed the *real*/U.S. dollar exchange rate to float freely, and during that period, the *real*/U.S. dollar exchange rate has fluctuated considerably. In the past, the Central Bank of Brazil has intervened occasionally to control unstable movements in foreign exchange rates. We cannot predict whether the Central Bank of Brazil or the Brazilian government will continue to let the *real* float freely or will intervene in the exchange rate market through a currency band system or otherwise. The *real* may depreciate or appreciate substantially in the future. For more information on these risks, see *Item 3. Key Information Risk Factors Risks Relating to Brazil*.

The following table sets forth the commercial selling rate, expressed in *reais* per U.S. dollar (R$/US$) for the periods indicated.

	Period-end	Average for Period	Low	High
Year ended				
December 31, 1999	R$1.789	R$1.851(1)	R$1.208	R$2.165
December 31, 2000	1.955	1.835(1)	1.723	1.985
December 31, 2001	2.320	2.353(1)	1.936	2.801
December 31, 2002	3.533	2.998(1)	2.270	3.955
December 31, 2003	2.889	3.059(1)	2.822	3.662
Month ended				
December 2003	R$2.889	R$2.916(2)	R$2.888	R$2.943
January 2004	2.941	2.872(2)	2.802	2.941
February 2004	2.914	2.946(2)	2.904	2.988
March 2004	2.909	2.908(2)	2.875	2.941
April 2004	2.945	2.913(2)	2.874	2.952
May 2004	3.129	3.081(2)	2.957	3.205
June 2004 (through June 8, 2004)	3.115	3.134	3.112	3.157

(1) Average of the rates of each period, using the average of the exchange rates on the last day of each month during each period.

(2) Average of the lowest and highest rates in the month. Source: Central Bank of Brazil.

On June 8, 2004, the commercial selling rate was R$3.115 per US$ 1.00.

RISK FACTORS

Risks Relating to Our Business

Due to our dependence on the global steel industry, fluctuations in the demand for steel could adversely affect our business.

Sales prices and volumes in the seaborne iron ore mining industry depend on the prevailing and expected level of demand for iron ore in the world steel industry. The world steel industry is cyclical. A number of factors, the most significant of these being the prevailing level of worldwide demand for steel products, influence the world steel industry. During periods of sluggish or declining regional or world economic growth, demand for steel products generally decreases, which usually leads to corresponding reductions in demand for iron ore.

Driven primarily by strong demand from Chinese steelmakers, together with a modest expansion in other markets, the global seaborne iron ore market experienced high demand and rising iron ore and pellet prices in 2003. We cannot guarantee the length of time that demand will remain at current high levels or the direction of future prices. Sustained declines in world contract prices or sales volumes for iron ore could have a material adverse effect on our revenues.

The mining industry is an intensely competitive industry, and we may have difficulty effectively competing with other mining companies in the future.

Intense competition characterizes the worldwide iron ore industry. We compete with a number of large international mining companies. Some of these competitors possess substantial iron ore mineral deposits at locations closer to our principal Asian and European customers. Competition from foreign or Brazilian iron ore producers may result in our losing market share and revenues. Our aluminum, manganese ore, copper concentrate and other activities are also subject to intense competition and are subject to similar risks.

Demand for iron ore in peak periods may outstrip our production capacity, rendering us unable to satisfy customer demand.

Our ability to rapidly increase production capacity to satisfy increases in demand for iron ore is limited. In periods where customer demand exceeds our production capacity, we generally satisfy excess customer demand by reselling iron ore and pellets purchased from joint ventures or third parties. If we are unable to satisfy excess customer demand by purchasing from joint ventures or third parties, we may lose customers. Similarly, because it takes time to increase production capacity, we may fail to complete our iron ore expansion projects in time to take

advantage of the current high levels of worldwide demand for iron ore. In addition, operating at or above full capacity may expose us to higher costs, including demurrage fees due to capacity restraints in our ports.

Aluminum, gold and copper are actively traded on world commodity exchanges, and their prices are subject to fluctuations.

Aluminum, gold and copper are sold in an active world market and traded on commodity exchanges, such as the London Metals Exchange and the Commodity Exchange, Inc. Prices for these metals are subject to wide fluctuations and are affected by many factors, including international economic and political conditions, levels of supply and demand, the availability and cost of substitutes, inventory levels maintained by producers and others, and actions of participants in the commodity markets. Prices for these metals are more volatile than iron ore and pellet prices because they respond more quickly to actual and expected changes in supply and demand. Sustained declines in world market prices for our aluminum-related products could have a material adverse effect on our revenues.

Commencement of our copper operations will expose us to new risks.

We recently began producing and marketing copper concentrate from our Sossego mine in Carajás. Copper is a new business for CVRD. Among others, risks involved with our expansion into the copper business include:

- copper concentrate is sold at prices determined by reference to copper prices on the London Metals Exchange, which are more volatile than prices in our core iron ore and pellet businesses;
- we may experience higher than expected treating and refining costs that decrease our margins;
- capacity increases by other copper producers may place downward pressure on copper prices; and
- we may encounter unexpected setbacks in launching and expanding our copper operations due to construction delays or difficulties obtaining required environmental licenses.

Brazilian export products (e.g., grain and steel) could lose their international competitiveness, reducing the internal demand for logistics services.

Agriculture and steel industries are currently the primary drivers of demand for logistics services. In 2003, almost 60% of our logistics revenues were attributable to these markets. A reduction in world demand for Brazilian steel or agriculture exports could reduce demand for our logistics services and harm the profitability of our logistics business.

We are vulnerable to adverse developments affecting the world economy, especially China.

The world economy is the primary driver of demand in the global seaborne market for iron ore and pellets. In recent years, China has been the main driver of our sales increases. In 2003, 14% of our iron ore and pellet gross revenues were attributable to customers in China, and customers in China accounted for 10.5% of our total consolidated net operating revenues. During the same period, 7.6% of our consolidated net revenues were attributable to Japanese customers and 32.2% were attributable to sales to European customers. A weakened global economy or a weakened economy in specific markets where we sell our products, such as China, could reduce demand, leading to lower revenues and profitability.

Our reserve estimates may be materially different from mineral quantities that we may actually recover, our estimates of mine life may prove inaccurate and market price fluctuations and changes in operating and capital costs may render certain ore reserves or mineral deposits uneconomical to mine.

Our reported ore reserves and mineral deposits are estimated quantities of ore and minerals that have the potential to be economically mined and processed under present and anticipated conditions to extract their mineral content. There are numerous uncertainties inherent in estimating quantities of reserves and in projecting potential future rates of mineral production, including many factors beyond our control. Reserve engineering is a subjective process of estimating underground deposits of minerals that cannot be measured in an exact manner, and the accuracy of any reserve estimate is a function of the quality of available data and engineering and geological interpretation and judgment. Estimates of different engineers may vary, and results of our mining and production subsequent to the date of an estimate may lead to revision of estimates. Reserve estimates may require revision based on actual production experience and other factors. For example, fluctuations in the market price of metals,

reduced recovery rates or increased production costs due to inflation or other factors may render proven and probable reserves containing relatively lower grades of mineralization uneconomic to exploit and may ultimately result in a restatement of reserves.

We may not be able to replenish our reserves, which could adversely affect our mining prospects.

We engage in mineral exploration, which is highly speculative in nature, involves many risks and frequently is nonproductive. Our exploration programs, which involve significant capital expenditures, may fail to result in the expansion or replacement of reserves depleted by current production. If we do not develop new reserves, we will not be able to sustain our current level of production beyond the remaining life of our existing mines.

Even if we discover minerals, we remain subject to drilling and production risks, which could adversely affect the mining process.

Once we discover minerals, it can take us a number of years from the initial phases of drilling until production is possible, during which the economic feasibility of production may change. It takes substantial time and expenditures to:

establish ore reserves through drilling;

determine appropriate metallurgical processes for optimizing the recovery of metal contained in ore;

obtain environmental and other licenses;

construct mining and processing facilities for greenfield properties; and

obtain the ore or extract the metals from the ore.

If a project proves not to be economically feasible by the time we are able to exploit it, we may incur substantial write-offs. In addition, potential changes or complications involving metallurgical and other technological processes arising during the life of a project may result in cost overruns that may render the project not economically feasible.

We face rising extraction costs as our deposits decrease.

Ore reserves gradually decrease in the ordinary course of a given mining operation. As reserves decrease, it becomes necessary to use more expensive processes to extract the remaining ore. As a result, over time, we usually experience rising unit extraction costs with respect to each mine. Several of our mines have operated for long periods, and we will likely experience rising extraction costs per unit in the future at these operations.

An increase in fuel costs may adversely affect our business.

Our operations rely heavily on fuel sources. Oil and gas represented 11.2% of our cost of goods sold in 2003. Fuel costs are a major component of our total costs in our logistics and pellets businesses, and indirectly affect numerous other areas of our business, including our mining and aluminum-related businesses. An increase in oil and gas prices may lead to lower margins in our logistics, mining and aluminum-related businesses.

We are subject to ongoing antitrust investigations.

We are currently involved in 14 proceedings before the *Conselho Administrativo de Defesa Econômica*, or CADE, which is the primary Brazilian antitrust regulator. Most of these proceedings involve post-transaction review of

acquisition or joint venture transactions, which is required for nearly all of our acquisitions and joint ventures. The remaining are administrative proceedings alleging that we have engaged in illegal anticompetitive conduct in connection with our logistics and aluminum businesses. We intend to defend these claims vigorously. We cannot predict the outcome of these proceedings. If CADE were to determine that undue concentration exists in any of our industries, it could impose measures to safeguard competition, which could include requirements that we divest operations or respect price restrictions. If CADE were to find that we have engaged in anticompetitive conduct, it could order us to cease the conduct and/or to pay fines, which could be substantial.

Our principal shareholder could have significant influence over our company.

Valepar, our principal shareholder, currently owns 53.3% of our outstanding common stock and 34.1% of our total outstanding capital. For a description of the ownership of our shares, see *Item 7. Major Shareholders and Related Party Transactions Principal Shareholder*. As a result of its share ownership, Valepar can control the outcome of any action requiring shareholder approval. Further, the Brazilian government owns a golden share in us that gives it limited veto powers over certain actions that we could propose to take. For a detailed description of the veto powers granted to the Brazilian government by virtue of its ownership of this golden share, see *Item 10. Additional Information Common Shares and Preferred Shares General.*

Many of our operations depend on joint ventures; our business could be adversely affected if our joint venture partners do not observe their commitments.

We currently operate important parts of our pelletizing, energy, aluminum and steel businesses through joint ventures with other companies. Our forecasts and plans for these joint ventures assume that our joint venture partners will observe their obligations to make capital contributions, purchase products and, in some cases, provide managerial talent. If any of our joint venture partners fails to observe its commitments, the affected joint venture may not be able to operate in accordance with its business plans or we may have to increase the level of our investment to give effect to these plans. For more information on our joint ventures, see *Item 4. Information on the Company Lines of Business*.

Our risk management strategy may not be effective.

We are exposed to fluctuations in interest rates, foreign currency exchange rates, and prices relating to our aluminum production, and since the start-up of our copper operations in Carajás, we are be subject to fluctuations in copper prices. In order to partially protect ourselves against unusual market volatility, we periodically enter into hedging transactions to manage these risks. See *Item 11. Quantitative and Qualitative Disclosures About Market Risk.* Our hedging strategy may not be successful in minimizing our exposure to these fluctuations. In addition, to the extent we hedge our commodity price exposure, we limit the upside benefits that we would otherwise experience if commodities prices were to increase. We do not hedge risks relating to iron ore price fluctuations.

We may not have adequate, if any, insurance coverage for some business risks that could lead to economically harmful consequences to us.

Our businesses are generally subject to a number of risks and hazards, including:

- industrial accidents;
- railroad accidents;
- labor disputes;
- slope failures;
- environmental hazards;
- electricity stoppages;
- equipment or vessel failures; and

severe weather and other natural phenomena.

These occurrences could result in damage to, or destruction of, mineral properties, production facilities, transportation facilities, equipment or vessels. They could also result in personal injury or death, environmental damage, waste of resources or intermediate products, delays or interruption in mining, production or transportation activities, monetary losses and possible legal liability. The insurance we maintain against risks that are typical in our business may not provide adequate coverage. Insurance against some risks (including liabilities for environmental pollution or certain hazards or interruption of certain business activities) may not be available at a reasonable cost or at all. As a result, accidents or other negative developments involving our mining, production or transportation facilities could have a material adverse effect on our operations.

Difficulties in implementing enterprise resource planning software may interfere with the normal functioning of our business.

We are in the process of implementing enterprise resource planning software. If we are unable to replace, upgrade or modify our information technology systems to adapt to this new software in a timely and cost effective manner, our ability to capture and process financial transactions may be impacted. Implementing the software may prove more costly or take longer than expected, result in the loss of data or lead to system malfunctions that interfere with the normal functioning of our business. If we are unable to successfully manage the process of implementing the new software our results of operations may be adversely affected.

Risks Relating to Brazil

The Brazilian government has historically exercised, and continues to exercise, significant influence over the Brazilian economy. Brazilian political and economic conditions have a direct impact on our business and the market price of our securities.

The Brazilian government frequently intervenes in the Brazilian economy and occasionally makes substantial changes in policy, as often occurs in other emerging economies. The Brazilian government s actions to control inflation and carry out other policies have in the past involved wage and price controls, currency devaluations, capital controls and limits on imports, among other things. Our business, financial condition and results of operations may be adversely affected by factors in Brazil including:

currency fluctuations;

inflation;

monetary policy and interest rates;

fiscal policy;

international trade policy;

foreign exchange controls;

energy shortages; and

other political, social and economic developments in or affecting Brazil.

Inflation and government measures to curb inflation may contribute significantly to economic uncertainty in Brazil and to heightened volatility in the Brazilian securities markets and, consequently, may adversely affect the market value of our securities.

Brazil has in the past experienced extremely high rates of inflation, with annual rates of inflation reaching as high as 2,708% in 1993 (as measured by the *Índice Geral de Preços do Mercado* published by *Fundação Getúlio Vargas*, or IGP-M Index). More recently, Brazil s rates of inflation were 9.9% in 2000, 10.4% in 2001, 25.3% in 2002, 8.7% in 2003 and 5.3% in the five months ended May 31, 2004 (as measured by the IGP-M Index). Inflation, governmental measures to combat inflation and public speculation about possible future actions have in the past had significant negative effects on the Brazilian economy, and have contributed to economic uncertainty in Brazil and to heightened volatility in the Brazilian securities markets. If Brazil experiences substantial inflation in the future, our costs may increase, our operating and net margins may decrease and, if investor confidence declines, the price of our securities

may fall. Inflationary pressures may also curtail our ability to access foreign financial markets and may lead to further government intervention in the economy, which could involve the introduction of government policies that may adversely affect the overall performance of the Brazilian economy.

Fluctuations in the value of the* real *against the U.S. dollar may result in uncertainty in the Brazilian economy and the Brazilian securities market and could have a material adverse effect on our net income.

The Brazilian currency has historically suffered frequent devaluation. In the past, the Brazilian government has implemented various economic plans and exchange rate policies, including sudden devaluations, periodic mini-devaluations during which the frequency of adjustments has ranged from daily to monthly, floating exchange rate

systems, exchange controls and dual exchange rate markets. Although over long periods depreciation of the Brazilian currency generally is correlated with the differential in the inflation rate in Brazil versus the inflation rate in the U.S., depreciation over shorter periods has resulted in significant fluctuations in the exchange rate between the Brazilian currency and the U.S. dollar and other currencies.

The *real* appreciated by 22.3% against the U.S. dollar in 2003, and depreciated by 8.3% during the first five months of 2004. The exchange rate between the *real* and the U.S. dollar may continue to fluctuate and may rise or decline substantially from current levels.

Depreciation of the *real* against the U.S. dollar reduces the U.S. dollar value of distributions and the dividends on our American depositary shares and may also reduce the market value of our securities. In addition, exchange rate variations often have a significant effect on our net income. Depreciation of the *real* relative to the U.S. dollar may require us to record substantial foreign exchange and monetary losses on our U.S. dollar-denominated debt, whereas appreciation of the *real* against the U.S. dollar generally leads to the opposite effect. These foreign exchange and monetary gains or losses can be substantial, which can make our earnings from one period to the next more volatile. Exchange rate variations also have a substantial impact on our revenues and costs, because most of our revenues are in U.S. dollars and most of our costs are in *reais.* As a result, appreciation of the *real* against the U.S. dollar generally results in lower revenues and higher costs, which can hurt our operating profitability. Exchange rate variations also influence the Brazilian economy and inflation rates, which may lead the Brazilian government to adopt policies that may have an adverse impact on our business. For additional information about historical exchange rates, see *Item 3. Key Information Exchange Rates*.

Access to and the cost of borrowing in international capital markets for Brazilian companies are influenced by investor perceptions of risk in Brazil and other emerging economies, which may hurt our ability to finance our operations at acceptable cost or reduce the trading price of our securities.

International investors generally consider Brazil to be an emerging market. As a result, economic and market conditions in other emerging market countries, especially those in Latin America, influence the market for securities issued by Brazilian companies. Economic crises in one or more emerging market countries may reduce overall investor appetite for securities of emerging market issuers. Past economic crises in emerging markets, such as in Southeast Asia, Russia and Argentina, have resulted in significant outflows of U.S. dollars from Brazil and caused Brazilian companies to face higher costs for raising funds, both domestically and abroad, and have effectively impeded the access to international capital markets for extended periods. We cannot assure you that international capital markets will remain open to Brazilian companies or that prevailing interest rates in these markets will be advantageous to us. In addition, future financial crises in emerging market countries may have a negative impact on the Brazilian markets, which could adversely affect the trading price of our securities.

Brazilian government policies in the energy sector may have an adverse impact on the cost or supply of electricity for our aluminum-related and ferroalloy operations.

We are a significant consumer of Brazil s electricity production, and accounted for approximately 4.5% of total consumption in Brazil in 2003. Electricity costs are a significant component of the cost of producing aluminum and ferroalloys.

Brazil faced a shortage of energy during the second half of 2001, which led to an energy-rationing program that required a decrease in energy consumption by at least 20%. As a result of this program, we experienced a temporary reduction in our aluminum and ferroalloy production, both of which use significant amounts of electricity. Although the energy shortages ended in late 2001, and energy-use restrictions were lifted in March 2002, we cannot assure you that Brazil will not experience future energy shortages. Future shortages and government policies to respond to or

prevent shortages may have an adverse impact on the cost or supply of electricity for our aluminum and ferroalloy operations.

The Brazilian power generation business depends on concessions granted by the government and is regulated and supervised by ANEEL. A new law for the electricity sector was recently approved by the Brazilian Congress and the Federal Government is studying other proposals for significant changes in many of the regulations that relate to the new sector law and govern the Brazilian electricity sector. Changes in the laws, regulations or governmental policies regarding the power sector or concession requirements could lower the returns we are expecting from our investments in power generation. For more information on the regulations governing our energy production, see *Item 4. Information on the Company Regulatory Matters.*

Our mining and logistics activities depend on authorizations of regulatory agencies, and changes in regulations could have an adverse effect on our business.

Our mining and logistics activities in Brazil depend on authorizations and concessions by regulatory agencies of the Brazilian government. Our exploration, mining, mineral processing and logistics activities are also subject to Brazilian laws and regulations, which can change at any time. If these laws and regulations change in the future, modifications to our technologies and operations could be required, and we could be required to make unbudgeted capital expenditures, which could lead to an increase in our borrowing costs. For a more detailed discussion about the authorizations and concessions by regulatory agencies of the Brazilian government upon which our mining and logistics activities depend, see *Item 4. Information on the Company Regulatory Matters.*

Brazilian environmental laws may adversely affect our mining and energy businesses.

Our operations often involve using, handling, disposing and discharging hazardous materials into the environment or the use of natural resources, and are therefore subject to the environmental laws and regulations of Brazil. Environmental regulation in Brazil has become stricter in recent years, and it is possible that more regulation or more aggressive enforcement of existing regulations will adversely affect us by imposing restrictions on our activities, creating new requirements for the issuance or renewal of environmental licenses, raising our costs or requiring us to engage in expensive reclamation efforts.

Our projects often require us to obtain or renew environmental licenses. Difficulties in obtaining those licenses may lead to construction delays or cost increases and in some cases may lead us to abandon a project.

We are also subject to recent Brazilian environmental legislation that requires companies undertaking projects with significant environmental impact to pay an environmental compensation fee in the amount of at least 0.5% of the total investment in the venture. There are numerous uncertainties about how this law will be applied in practice. If we were required to pay this fee with respect to past investments or if the level of the fees actually charged were increased above 0.5%, it would significantly increase our costs and, depending on the magnitude of the fees involved, could have a material adverse effect on our liquidity. Uncertainties regarding calculation and payment of these fees may strain our relations with the Brazilian environmental authorities or lead to delays in obtaining necessary environmental permits. See *Item 8. Financial Information Legal Proceedings.*

Brazilian laws restricting development in the Amazon river basin and surrounding areas may place limits on our ability to expand certain of our operations and to fully exploit our mineral rights in those regions. See *Item 4. Information on the Company Regulatory Matters Environmental Matters.*

Several Brazilian states in which we operate are currently considering implementing water usage fees under the National Hydrological Resources Policy. This may require us to pay usage fees in the future for water rights that we currently use for free, which could considerably increase our costs in areas where water resources are scarce.

In addition, we are currently a defendant in an action brought by the municipality of Itabira, in the state of Minas Gerais, which alleges that our Itabira iron ore mining operations have caused environmental and social damages. If we do not prevail in this lawsuit, we could incur a substantial expense. For more information on environmental laws and the legal challenges we face, see *Item 4. Information on the Company Regulatory Matters Environmental Matters* and *Item 8. Financial Information Legal Proceedings.*

Risks Relating to the American Depositary Shares

Restrictions on the movement of capital out of Brazil may hinder your ability to receive dividends and distributions on American depositary shares, and the proceeds from any sale of American depositary shares.

From time to time, the Brazilian government may impose restrictions on capital outflow that would hinder or prevent the custodian who acts on behalf of the depositary for the American depositary shares from converting proceeds from the shares underlying the American depositary shares into U.S. dollars and remitting those proceeds abroad. Brazilian law permits the government to impose these restrictions whenever there is a serious imbalance in Brazil s balance of payments or reason to foresee a serious imbalance.

The Brazilian government imposed remittance restrictions for approximately six months in 1989 and early 1990. If enacted in the future, similar restrictions would hinder or prevent the conversion of dividends, distributions or the proceeds from any sale of shares from *reais* into U.S. dollars and the remittance of the U.S. dollars abroad. In

that event, the custodian, acting on behalf of the depositary, will hold the *reais* it cannot convert for the account of the holders of American depositary receipts who have not been paid. The depositary will not invest the *reais* and will not be liable for interest on those amounts. Furthermore, any *reais* so held will be subject to devaluation risk.

If you exchange American depositary shares for the underlying shares, as a result of Brazilian regulations you risk losing the ability to remit foreign currency abroad and Brazilian tax advantages.

The Brazilian custodian for the shares underlying our American depositary shares will obtain an electronic registration from the Central Bank of Brazil to entitle it to remit U.S. dollars abroad for payments of dividends and other distributions relating to the shares underlying our American depositary shares or upon the disposition of the underlying shares. If you decide to exchange your American depositary shares for the underlying shares, you will be entitled to continue to rely, for five business days from the date of exchange, on the custodian s electronic registration. Thereafter, you may not be able to obtain and remit U.S. dollars abroad upon the disposition of, or distributions relating to, the underlying shares unless you obtain your own electronic registration by registering your investment in the underlying shares under Resolution No. 2,689 of the National Monetary Council, which entitles foreign investors to buy and sell securities on the São Paulo stock exchange, or BOVESPA. For more information regarding these exchange controls, see *Item 10. Additional Information Exchange Controls and Other Limitations Affecting Security Holders*. If you attempt to obtain your own electronic registration, you may incur expenses or suffer delays in the application process, which could delay your ability to receive dividends or distributions relating to the underlying shares or the return of your capital in a timely manner. We cannot assure you that the custodian s electronic registration or any certificate of foreign capital registration obtained by you will not be affected by future legislative changes, or that additional restrictions applicable to you, the disposition of the underlying shares or the repatriation of the proceeds from disposition will not be imposed in the future.

Because we are not obligated to file a registration statement with respect to preemptive rights relating to our shares, you may be unable to exercise those preemptive rights.

Holders of American depositary receipts that are residents of the United States may not be able to exercise preemptive rights, or exercise other types of rights, with respect to the underlying shares. Your ability to exercise preemptive rights is not assured unless a registration statement is effective with respect to those rights or an exemption from the registration requirements of the Securities Act is available. We are not obligated to file a registration statement relating to preemptive rights with respect to the underlying shares or to undertake steps that may be needed to make exemptions from registration available, and we cannot assure you that we will file any registration statement or take such steps. If a registration statement is not filed and an exemption from registration does not exist, JPMorgan Chase Bank, as depositary, will attempt to sell the preemptive rights, and you will be entitled to receive the proceeds of the sale. However, the preemptive rights will expire if the depositary cannot sell them. For a more complete description of preemptive rights with respect to the underlying shares, see *Item 10. Additional Information Common Shares and Preferred Shares Preemptive Rights*.

Holders of our American depositary shares may encounter difficulties in the exercise of voting rights.

Holders of our common and preferred class A shares are entitled to vote on shareholder matters. You may encounter difficulties in the exercise of some of your rights as a shareholder if you hold our American depositary shares rather than the underlying shares. For example, if we fail to provide the depositary with voting materials on a timely basis, you may not be able to vote by giving instructions to the depositary on how to vote for you.

Our corporate affairs are governed by our bylaws and the Brazilian Corporate Law, which differ from the legal principles that would apply if we were incorporated in a jurisdiction in the United States or elsewhere outside Brazil. Under the Brazilian Corporate Law, holders of our common and preferred class A shares may have fewer and less

well-defined rights to protect their interests relative to actions taken by our board of directors or the holders of common shares than under the laws of some jurisdictions outside Brazil.

Although Brazilian law imposes restrictions on insider trading and price manipulation, the Brazilian securities markets are not as highly regulated and supervised as the U.S. securities markets or markets in certain other jurisdictions. In addition, rules and policies against self-dealing and regarding the preservation of minority shareholder interests may be less well developed and enforced in Brazil than in the United States, which could potentially disadvantage you as a holder of the underlying shares and American depositary shares. For example, when compared to Delaware general corporation law, Brazilian corporate law and practice has less detailed and well-established rules and judicial precedents relating to the review of management decisions against duty of care and duty of loyalty standards in the context of corporate restructurings, transactions with related parties, and sale-of-business

transactions. In addition, shareholders in Brazilian companies ordinarily do not have standing to bring a class action.

In addition, as a foreign private issuer, we are not required to follow many of the corporate governance rules that apply to U.S. domestic issuers with securities listed on the New York Stock Exchange. For more information concerning our corporate governance policies, see *Item 6. Directors, Senior Management and Employees.*

Item 4. Information on the Company

BUSINESS OVERVIEW

General

We are the world s largest producer and exporter of iron ore and pellets, the largest diversified mining company in the Americas by market capitalization and one of the largest companies in Latin America. We hold exploration claims that cover 9.8 million hectares (24.1 million acres) in Brazil, and 395.8 thousand hectares (977.9 thousand acres) outside Brazil in Gabon, Chile and Peru. We operate large logistics systems including railroads and ports that are integrated with our mining operations. Directly and through affiliates and joint ventures, we have major investments in the aluminum-related, energy and steel businesses. We are investing heavily in copper exploration, and our first copper mine began operations in June 2004.

Our main lines of business are:

Ferrous minerals (69.4% of 2003 consolidated gross operating revenues). We operate two fully integrated world-class systems in Brazil for producing and distributing iron ore (the Northern System and the Southern System), consisting of mines, railroads and port and terminal facilities, and a third system consisting of mines and port facilities. At December 31, 2003, we had a total of 4,926 million tons of proven and probable iron ore reserves in our two fully integrated systems in Brazil, with an average grade of 53.57% iron in our Southern System and 66.56% in our Northern System. We also operate ten pellet-producing facilities, six of which are joint ventures with international partners, and have a 50% stake in a joint venture that owns and operates two pelletizing plants. We are one of the world s largest producers of manganese ore and ferroalloys.

Non-ferrous minerals (3.8% of 2003 consolidated gross operating revenues). We are Brazil s largest producer of kaolin and potash. Our non-ferrous minerals business also includes our exploration efforts related to copper and gold. We are in the process of completing our Sossego copper mining project in Carajás, where we began production of copper concentrate (with gold as a by-product) in 2004.

Logistics (10.9% of 2003 consolidated gross operating revenues). We are a leading provider of logistics services in Brazil, with operations in the railroad, coastal shipping and port operations industries. Each of the iron ore complexes of our Northern and Southern Systems incorporates an integrated railroad network linked to automated port and terminal facilities, and is designed to provide iron ore, freight and passenger rail transportation, bulk terminal storage and ship loading services to us and third parties. In 2003, our railroads transported approximately 68% of the total freight tonnage transported by Brazilian railroads, or approximately 201 million tons of cargo, of which 149 million tons were our iron ore and pellets.

Aluminum-related operations (15.4% of 2003 consolidated gross operating revenues). Through subsidiaries and joint ventures, we conduct major operations in the production of aluminum-related products. They include:

Bauxite mining, which we conduct through our 40.0% interest in Mineração Rio do Norte S.A., or MRN, which holds substantial bauxite reserves with a low strip ratio and high recovery rate. MRN, one of the largest bauxite producers in the world, has a nominal production capacity of 16.3 million tons per year and produced 14.4 million tons of bauxite in 2003. We also own substantial bauxite mining rights in the Paragominas region, in the state of Pará.

Alumina refining, which we conduct via our alumina refining subsidiary, Alunorte-Alumina do Norte do Brasil S.A., or Alunorte, which currently has a nominal production capacity of 2.4 million tons of alumina per year. In July 2003, Alunorte began work on a capacity expansion designed to increase its annual capacity to 4.2 million tons per year. We are also exploring a potential joint venture with the Aluminum Corporation of China Limited (Chalco) to construct a new alumina refinery in the state of Pará, Brazil.

Aluminum metal smelting, which we conduct through two aluminum smelting joint ventures, Albras Alumínio Brasileiro S.A., or Albras, which produces aluminum ingots and in which we have a 51.0% interest, and Valesul Alumínio S.A., or Valesul, which produces aluminum ingots, slabs, bars, billets

and alloys and in which we have a 54.5% interest. These joint ventures currently have a combined production capacity of approximately 530,000 tons of aluminum per year.

Other investments. In addition to our core mining activities, we currently have investments in four steel companies, and are in the process of conducting a feasibility study to determine whether to implement a joint venture with Baosteel Shanghai Group Corporation (Baosteel) to construct and operate a steel slab plant in São Luis, state of Maranhão. We also hold stakes in nine hydroelectric power generation projects with a total projected capacity of 3,364 MW (of which our share is 1,333.5 MW), three of which have already begun operations, and the remainder of which are scheduled to start operations within the next five years. Negotiations are currently underway to return the concession for the Santa Isabel hydroelectric project to the Brazilian government.

Through our mineral prospecting and development activities in Brazil, we have acquired extensive experience in exploration techniques and processes specifically designed for use in tropical areas of the world, and maintain an active mineral exploration program in Brazil and overseas. In 2003, our mineral exploration efforts were focused on copper, gold, nickel, manganese ore, kaolin, bauxite and platinum group metals. We spent US$ 82 million on research and development in 2003, including mineral exploration expenses of US$ 69 million (of this amount, US$ 56.6 million, or 82%, consisted of expenditures for mineral exploration in Brazil). International mineral exploration included activities in Chile, Gabon and Peru.

Incorporation of CVRD and Vale Overseas

Vale Overseas

Vale Overseas is a finance company wholly owned by CVRD. It was registered and incorporated as a Cayman Islands exempted company with limited liability on April 3, 2001 (registration number 113637). Vale Overseas is incorporated for an indefinite period of time. Its registered office is at Walker House, P.O. Box 908 GT, Mary Street, Georgetown, Grand Cayman, Cayman Islands.

Vale Overseas business is to issue debt securities to finance CVRD s activities. It has no other operations or employees. Vale Overseas has issued three series of debt securities, including its US$ 300 million 8.625% Notes due 2007, which were issued in March 2002, its US$ 300 million 9.0% Notes due 2013, which were issued in August 2003 and its US$ 500 million 8.25% Notes due 2034, which were issued in January 2004. We used the proceeds of these securities for general corporate purposes.

CVRD

CVRD s legal and commercial name is Companhia Vale do Rio Doce. CVRD is a stock corporation, or *sociedade por ações*, duly organized on January 11, 1943, and existing under the laws of the Federative Republic of Brazil.

CVRD was privatized in three stages between 1997 and 2002, beginning with the sale by the Brazilian government of a controlling stake in CVRD to Valepar in 1997. The last stage of the privatization took place in 2002, when the Brazilian government sold a remaining minority stake through a global equity offering. It is organized for an unlimited period of time. CVRD s principal executive offices are located at Avenida Graça Aranha, No. 26, 20030-900 Rio de Janeiro, RJ, Brazil, and our telephone number is 55-21-3814-4540.

Acquisitions, Asset Sales and Significant Changes in 2003 and 2004

Mining

Caemi. In September 2003, we purchased Mitsui & Co. (Mitsui) s remaining stake in Caemi Mineração e Metalurgia S.A. (Caemi) for US$ 426.4 million. Together with the 50% stake in Caemi s voting shares acquired in 2001, this acquisition gives us 60.2% of Caemi s total capital, with 100% of Caemi s common shares and 40% its preferred shares. The acquisition of Caemi strengthens our position as a leading producer in the iron ore market by giving us majority control of Minerações Brasileiras Reunidas S.A. (MBR), the second largest producer and exporter of iron ore in Brazil and also gives us a majority stake in Cadam S.A., Brazil s largest producer and exporter of kaolin. MBR also owns 32.93% of MRS Logística S.A. (MRS Logística), a railway company.

Rio Doce Manganese Norway. In February 2003, we acquired for US$ 17.6 million 100% of Elkem Rana AS, a Norwegian ferroalloy producer, which we subsequently renamed Rio Doce Manganese Norway AS (RDMN). RDMN has a plant located in an industrial park in Mo I Rana, Norway, where ferrochrome was produced until June 2002. In 2003, we invested US$ 16.7 million to convert the plant to allow the production of ferro manganese alloys, including by revamping one of its electrical furnaces and the plant s environmental protection and safety procedures. The plant started operations with one furnace in June 2003 and brought its second furnace online in November 2003. The ferroalloy plant, which consumes manganese ore fines from our Azul mine in Carajás, has a production capacity of 110,000 tons per year and produces ferro silicon manganese and high carbon ferro manganese alloys. The acquisition of RDMN expands our ferroalloy business in continental Europe, where our wholly owned subsidiary Rio Doce Manganese Europe has operated a manganese ferroalloy plant since 1992.

Restructuring of MSG Minas da Serra Geral S.A. In July 2003, we and JFE Steel Corporation (JFES) signed an agreement to restructure the shareholding composition of Minas da Serra Geral S.A. (MSG), a joint venture created in 1982 to develop the Capanema iron ore mine, which was discontinued in 2003. The restructuring involved the purchase by JFES of a 1% equity stake in MSG previously owned by us and a 24.5% equity stake previously owned by a Japanese group of companies. Following the restructuring, each of CVRD and JFES now owns 50% of MSG s equity. CVRD and JFES will continue the MSG joint venture, whose purpose will now be to provide equipment for use in the development of our wholly-owned Fábrica Nova iron ore mine, located in the central region of the Iron Ore Quadrangle, in the state of Minas Gerais, 25 km east of Capanema. Fábrica Nova is expected to start operations by 2005, producing 10 million tons of iron ore per year, and is expected to reach full-scale production of 15 million tons by 2007. We currently estimate capital expenditures for the development of Fábrica Nova at US$ 85 million.

Rio Doce Manganês. On October 15, 2003, our subsidiary SIBRA Eletrosiderúrgica Brasileira S.A. (SIBRA) was renamed Rio Doce Manganês S.A. (RDM). In February 2004, all of the operational assets of our subsidiaries Sociedade Mineira de Mineração, S.A., Companhia Paulista de Ferro Ligas (CPFL), Minérios Metalúrgicos do Nordeste S.A., and Mineração Urandi S.A., were consolidated into RDM.

Simplification of corporate structure. In August 2003, our wholly-owned subsidiaries Ferteco Mineração S.A. (Ferteco) and Celmar S.A. Indústria de Celulose e Papel (Celmar) were merged into CVRD. The merger of Ferteco, which provides us with direct control over Ferteco s stake in MRS Logística, should allow us to achieve synergies between the two companies via cost reduction and greater operational flexibility in iron ore production and logistics. Celmar s 30,000 hectares of renewable eucalyptus forest have been contributed to our Ferro Gusa Carajás (Ferro Gusa) pig iron joint venture, as described below.

In December 2003, the following wholly-owned subsidiaries were merged and consolidated into CVRD: Rio Doce Geologia e Mineração S.A. Docegeo (Docegeo), Mineração Serra do Sossego S.A. (Sossego), Vale do Rio Doce Alumínio S.A. Aluvale (Aluvale) and its subsidiary, Mineração Vera Cruz S.A. (MVC). CVRD assumed all of these

subsidiaries assets and obligations. The consolidations were implemented to simplify our organizational structure.

Logistics

Coastal shipping. In May 2003, we signed a stock purchase agreement with Mitsui, a major Japanese participant in the global logistics market. Under the agreement, our wholly-owned subsidiary Navegação Vale do Rio Doce S.A.-Docenave, or Docenave, will own 79% of the total shares of a new company, DCNDB Overseas S.A., or DCNDB, established to develop the intermodal coastal shipping business. Mitsui will own the remaining 21% of the shares of DCNDB. All approvals have been obtained, except the license to operate long haul services,

which is expected during the first half of 2004. We expect the association with Mitsui to allow Docenave to offer service between the ports of Salvador and Itajai, a line which is currently not serviced by any other major carriers, as well as service between other ports in Argentina. We believe this joint venture will help increase Docenave s share in the coastal shipping market and enable it to attract additional domestic and international customers.

Restructuring of certain logistics holdings. In April 2003, we, Companhia Siderúrgica Nacional (CSN), and others signed an agreement for the purchase and sale of shares in logistics companies. The agreement involved three principal transactions:

- our acquisition of CSN s stake in Ferrovia Centro-Atlântica S.A. (FCA), the largest railroad in Latin America;
- the sale to CSN of our indirect stake in Sepetiba Tecon S.A. (STSA), a company that operates a terminal at the Port of Sepetiba in the state of Rio de Janeiro; and
- the transfer to CSN and Taquari Participações S.A. of our stake in Companhia Ferroviária do Nordeste CFN (CFN), a railroad company with no significant synergies with other CVRD assets.

In the second half of 2003, ANTT authorized these transactions, and we, CSN and the other parties concluded the transactions contemplated in the April agreement. We expect the consummation of these transactions to allow us to focus on and promote new investments in railroad infrastructure and equipment and increase the supply and quality of general cargo transportation services to our clients.

After receiving authorization from ANTT, a capital increase of FCA was carried out. CVRD fully subscribed to the capital increase, for a total of R$ 1,003 million, of which R$ 789.3 million corresponded to the conversion of advance payments for future capital increases already made, and the remaining R$ 204.9 million were paid in four cash installments. Upon completion of the capital increase, CVRD became the controlling shareholder of FCA.

Aluminum-Related Operations

Alunorte capacity expansions. In April 2003, Alunorte inaugurated its third production line, which has a capacity of 825,000 tons of alumina per year. With this third line, Alunorte increased its production capacity to 2.4 million tons of alumina per year. Alunorte s total investment in this project amounted to approximately US$ 300 million.

In July 2003, Alunorte began work on a new capacity expansion for its alumina refinery in Barcarena, in the state of Pará. This brownfield project involves the construction of stages 4 and 5 of the plant, and is expected to increase its annual capacity from 2.4 million to 4.2 million tons of alumina per year. Alunorte s total investment in this project is expected to be approximately US$ 583 million.

ABC Refinery Project. In May 2004, we signed a framework agreement with Chalco that sets forth a general outline of some of the principal terms for a joint investment in an alumina refinery in Brazil (ABC refinery). Under

the agreement, we and Chalco have agreed to develop a joint study for the construction of a greenfield refinery in the state of Pará, Brazil near the existing facilities of Alunorte. The alumina refinery is expected to have an initial capacity of 1.8 million tpy, and to reach a final capacity of 7.2 million tpy by gradual expansions. The refinery project would form part of a series of related transactions involving mining, transportation, shipping and port development in Brazil. The framework agreement contemplates that bauxite for the project would be supplied from our Paragominas bauxite mines. The initial phase of the refinery project is preliminarily estimated to have a capital expenditure cost of approximately US$ 1 billion. The first stage of the refinery is expected to be completed and operational in 2007. The project remains subject to further discussion and to the negotiation of final documentation and a number of other conditions, including receipt of board and governmental approvals.

Steel

Companhia Siderúrgica Tubarão. In April 2003, we completed the acquisition of shares of Companhia Siderúrgica de Tubarão (CST) from Acesita S.A. (Acesita) that are not subject to the CST controlling shareholders agreement. We acquired 4.42% of the common shares and 5.64% of the preferred shares of CST, representing 5.17% of CST s total capital, for US$ 59.7 million. Following this transaction, we now own 24.93% of CST s common shares and 29.96% of CST s preferred shares, totaling 28.02% of CST s capital. Subject to the renewal of the controlling shareholders agreement in 2005, we expect to acquire, jointly with other parties, the remaining shares

of CST held by Acesita. We expect that the cost of acquiring the stake in CST will be US$ 22.66 per block of thousand shares (equivalent to US$ 33 million as of March 27, 2003) plus 4.25% a year, less distributed dividends. We have also entered into agreements with Arcelor to guarantee the liquidity of our position, under which we have the right to decrease our participation in CST between 2007 and 2009 to 20% of the CST shares owned by the controlling group. Between 2009 and 2015, we have the option to sell our remaining stake in CST to Arcelor. The prices of both divestments will be determined based on a valuation performed by two investment banks.

A CST expansion project, involving the construction of a third blast furnace, a third continuous casting and a new coke plant, is scheduled to come onstream in 2006. The project will not require capital injections and/or financial guarantees from its shareholders.

Ferro Gusa pig iron joint venture. In April 2003, we signed an investment agreement with Nucor Corporation, a North American steelmaker, in order to form a joint venture in Brazil, Ferro Gusa, in which approximately 78% and 22% of the voting shares will be held by CVRD and Nucor Corporation (or one of its affiliates), respectively. The main purpose of Ferro Gusa is the production and sale of pig iron. In September 2003, we contributed to Ferro Gusa the forest assets once held by Celmar, a wholly-owned subsidiary of CVRD which was merged into CVRD in August 2003. The cultivated forest assets, now owned by Ferro Gusa, will be used as an energy source for its pig iron production. On May 3, 2004 Nucor Brasil Participações Ltda. (Nucor) an affiliate of Nucor Corporation, subscribed to a capital increase of Ferro Gusa for US$ 5 million. As a result, CVRD currently has 88% and Nucor currently has 12% of the voting shares of Ferro Gusa. Nucor is expected to invest an additional US$ 5 million to increase its participation in the capital of Ferro Gusa to approximately 22%, as contemplated in the investment agreement.

Steel slab plant feasibility study. In February 2004 we agreed with Baosteel, a major Chinese steelmaker, to commence a study to assess the feasibility of implementing a joint venture to build and operate an integrated steel plant in São Luis, in the state of Maranhão, Brazil. An Engineering Service Agreement has been signed authorizing the basic engineering and formal feasibility study for the project. If the project is implemented, it would be the largest investment in the Brazilian steel industry in many years. As currently planned, the plant is expected to produce approximately 3.7 million tons of steel slabs per year, with a possible future capacity expansion to 7.5 million tons per year. If the project is implemented, we expect it to further increase demand for our iron ore products. We and Baosteel are currently negotiating with Arcelor regarding its possible participation in the project. The capital expenditures required for the development of the plant have not yet been determined.

Coal

Mozambique coal mine pre-feasibility study. In June 2003, we, the Industrial Development Corporation of South Africa, and Iscor, a major South African steel producer, signed a non-binding Memorandum of Understanding to undertake a feasibility study for the development of the Moatize coal deposit in Mozambique. The group expects to spend US$ 3 million in updating the pre-feasibility study which was first undertaken in the 1980s by CVRD and others. It is anticipated that the project will involve the development of the mine to produce coking and steam coal for export and domestic consumption in Mozambique, the rebuilding of the Sena railway line and the development of a port near Beira for coal export. If the pre-feasibility study is positive, the group intends to carry out a formal feasibility study and to implement the project. The project is subject to the Mozambican government s concession of rights for mining, railroad and port operations and to multi-lateral and government agencies support for the related infrastructure investments. The size of the mine and capital expenditures required for its development have not yet been determined.

Yongcheng Coal Project. In May 2004, we entered into an agreement with Shanghai Baosteel Group Corporation (Baosteel), the largest steelmaker in China, and with Yongcheng Coal & Electricity Group (Yongcheng), one of the largest coal producers in China. The agreement contemplates the establishment of a joint venture for anthracite and

coal production in China. The agreement contemplates that we will have guaranteed off-take rights to a portion of the production of the mines, which we intend to consume at our pelletizing plants and to sell to clients in the Brazilian market. The project remains subject to further discussion and to the negotiation of final documentation, as well as to other conditions including receipt of board and governmental approvals.

Yankuang Coke and Coal Projects. In May 2004, we entered into an agreement with the Yankuang Group (Yankuang), one of the largest coal producers in China, to explore the possibility of participating in a joint venture for the purpose of developing, owning and operating a plant in Jining City, Shandong Province, China that would produce 2,000,000 tons of coke and 200,000 tons of methanol per year. As currently planned, the plant would begin operations in 2006 and approximately 25% of the plant s production would be exported mainly to Brazil. We are also exploring with Yankuang the possibility of participating in a joint venture to develop new coal mines in the city

of Zhaolou, Shandong province, China. The planned production capacity of the first mine to be developed would be three million tons per year and, if the project proceeds, the mine is expected to start operations in 2007. Each of the coke plant and coal mine projects remains subject to further discussion, negotiation of final documentation and a number of other conditions, including receipt of board and governmental approvals.

Dispositions and Asset Sales

In line with our focus on mining and logistics, we have continued to pare down our holdings of non-strategic assets. We summarize below our key dispositions and asset sales since the beginning of 2003.

Sale of Docenave vessels. In the transportation industry, we continued in 2003 the divestiture of our dry-bulk shipping business begun in 2001, by continuing to sell the fleet of vessels owned by Docenave. In June 2003, we sold two additional ships of Docenave to Magna Marine, Inc. for US$ 36 million. As a result of the sale, Docenave now remains with three ships which we intend to sell in the near future.

Sale of Fazenda Brasileiro gold mine. In August 2003, we sold our one remaining gold mine, Fazenda Brasileiro, which was near full exhaustion, to Yamana Resources Inc., a Canadian mining company, for US$ 20.9 million. With the sale of Fazenda Brasileiro, our gold production has been discontinued, and we do not expect to begin producing gold again except in connection with the start-up of the copper projects we are currently developing in Carajás, where we expect to produce gold as a by-product of the copper mining process. We continue to invest in mineral exploration aiming at the discovery of new gold reserves.

Sale of our stake in Fosfértil. In October 2003, we sold our interest in Fertilizantes Fosfatados S.A. (Fosfértil) shares to Bunge Fertilizantes S.A. for US$ 84 million. The sale involved 10.96% of Fosfértil s voting capital, 11.19% of its preferred capital and 11.12% of its total capital. This transaction is consistent with CVRD s focus in mining and logistics and with its strategy of selling portfolio investments.

Santa Isabel hydroelectric power project. Negotiations are currently underway with ANEEL to return the concession for the Santa Isabel hydroelectric project due to difficulties related to environmental issues.

Business Strategy

Our goal is to strengthen our competitiveness among the world s leading mining companies by focusing on diversified growth in mining (mainly based on the exploitation of organic growth opportunities) and developing our logistics business. We are pursuing disciplined capital management, looking to maximize return on invested capital and total return to shareholders. Although we are emphasizing organic growth in our core businesses, we will continue to pursue selective acquisitions in order to create value for our shareholders.

Over the past several years, we have developed a more efficient governance structure and a robust long-term strategic planning process. Now we are building on these changes with ambitious long-range plans in each of our principal business areas. We are planning substantial capital expenditures for organic growth through 2010. The following paragraphs highlight specific major strategies.

Maintaining Our Leadership Position in the Seaborne Iron Ore Market

In 2003, we consolidated our leadership in the seaborne iron ore trade market, achieving an estimated 32.9% of the total 537 million tons traded in the year. We are committed to maintaining our position in the world iron ore market by strengthening relationships with clients, focusing our product line to capture industry trends, increasing our

production capacity in line with demand growth and controlling costs. We believe that our strong relationships with major customers (reinforced through long term contracts), tailored product line and high quality products will enable us to achieve this goal.

Growing Our Logistics Business

We believe that the quality of our railway assets and our many years of experience as a railroad and port operator, together with the lack of efficient transportation for general cargo that Brazil faces, position us to establish ourselves as a leading Brazilian logistics company serving both domestic and export markets. In 2003, the Brazilian regulatory authorities authorized us to increase our stake in FCA, the largest Brazilian railroad, becoming the owner of 99.99% of its capital. This railroad is a component of our Southern Logistics System, comprising the Estrada de Ferro Vitória a Minas (EFVM) railroad and the complex of Vitória ports (Tubarão, Praia Mole, TPD Terminal de

Produtos Diversos and Terminal de Vila Velha). We are focusing on the maximization of asset utilization by means of increasing railroad traffic and port handling, improving levels of service offered and developing new logistics solutions for our clients.

Developing Our Copper Resources

We believe that our copper projects, which are all situated in the Carajás region, can be among the most competitive in the world in terms of investment cost per ton of ore. Our copper mines will benefit from our transportation facilities serving the Northern System. Sossego, our first copper project, began commercial production in June 2004, and will have an average annual capacity of 140,000 tons of copper in concentrate. We have a Mineral Risk Contract with BNDES providing for the joint development of certain unexplored mineral resources in approximately two million identified hectares of land in the Carajás region, as well as proportional participation in any financial benefits earned from the development of those resources. In April 2004, the Mineral Risk Contract was renewed for an additional period of five years.

Increasing Our Aluminum-Related Activities

We plan to develop and increase production capacity in our aluminum-related operations, focusing on the upstream of the production chain, developing low cost bauxite and alumina projects. Our bauxite joint venture, MRN and our alumina subsidiary, Alunorte, each increased their production capacity in 2003. We are currently building a new capacity expansion at Alunorte and expect to begin developing a new bauxite mine, Paragominas, which is wholly owned by CVRD. The expansion of Alunorte is expected to be completed by 2006. We are also studying the possibility of a joint venture with Chalco to build a new alumina plant in the state of Pará that would further increase our alumina production. We may pursue acquisitions and/or partnerships in the production of primary aluminum to guarantee demand for our alumina.

Globalization of Multi- Commodity Exploration Efforts

We are engaged in an active mineral exploration program, with efforts in several countries around the globe, including Brazil, Peru, Chile, Mongolia, Gabon, Angola and China. We are mainly seeking new copper, gold, manganese ore, nickel, kaolin, bauxite and platinum group metals deposits. Mineral exploration is an important part of our organic growth strategy.

Developing Power Generation Projects

Energy management and efficient supply has become a priority for us, driven both by structural changes in the industry and regulatory uncertainties, which could increase the risk of rising electricity prices and energy shortages, such as Brazil experienced in the second half of 2001. We have invested in nine consortia to develop hydroelectric power generation projects and we plan to use the electricity from these projects for our internal needs. As a large consumer of electricity, we expect that investing in power projects will help protect us against volatility in the price and supply of energy.

LINES OF BUSINESS

Our principal lines of business consist of mining and logistics. For internal management purposes, we group our aluminum-related operations together with our other significant equity participations in other companies.

Mining

Ferrous Minerals

Our ferrous minerals business segment includes iron ore mining, pellet production, manganese ore mining and ferroalloy production.

The table below sets forth our ferrous minerals gross revenues by geographic market and by category for the periods indicated as reflected in our consolidated financial statements.

	For the Year ended December 31,		
	2001	**2002**	**2003(1)**
	(in millions of US$)		
Gross revenues classified by geographic destination			
Export sales:			
America, except United States	US$ 238	US$ 392	US$ 526
United States	247	340	337
Europe	1,469	1,799	2,214
Middle East/Africa/Oceania	216	239	292
Japan	525	488	569
China(2)		574	897
Asia, other than Japan and China (2)	863	368	422
Subtotal	3,558	4,200	5,257
Domestic sales	1,083	996	1,142
Subtotal	4,641	5,196	6,399
Eliminations(3)	(1,782)	(2,093)	(2,550)
Total	US$ 2,859	US$ 3,103	US$ 3,849
Gross revenues classified by category			
Iron ore	2,003	2,147	2,662
Pellets	597	673	838
Manganese ore and ferroalloys	259	283	349

Total	US$ 2,859	US$ 3,103	US$ 3,849

(1) The operations of Caemi are reflected in the above table as of September 2003, the date on which we acquired and began consolidating its operations.

(2) In 2001, China was classified within Asia.

(3) Eliminations of transactions between consolidated figures.

Iron Ore

We conduct our iron ore business primarily at the parent company level and through our subsidiaries Urucum Mineração S.A., or Urucum and Caemi.

System Structure

The table below sets forth information regarding our proven and probable iron ore reserves and projected exhaustion dates as of December 31, 2003. The estimates of mineral reserves have been audited and verified by Golder, experts in geology, mining and ore reserve determination. The projected exhaustion dates are estimated based on our estimates of future production levels.

Given the recent nature of our acquisition of Caemi, we have not yet completed the process of establishing proven and probable reserves for Caemi under the applicable SEC requirements.

Mine(1)	Began Operations	Projected/Actual Exhaustion Date	Production For the Year Ended December 31,			Proven and Probable Reserves at December 31, 2003	
			2001	2002	2003	Ore Tonnage	Grade
			(in millions of tons)			(in millions of tons)	(% Fe)
Southern System							
Itabira Complex:							
Cauê(2)	1942	2004	19.7	20.7	22.3		
Conceição(3)	1957	2022	19.2	20.0	20.8	449.6	54.7
Minas do Meio(4)	1976	2022				621.1	53.5

(1) CVRD s equity interest in mines is 100% unless otherwise noted.

(2) Average product recovery after beneficiation was 74%. Reserves were not reported for 2003 due to the mine s depleted state.

(3) Average product recovery after beneficiation is 78%.

(4) Average product recovery after beneficiation is 72%. The run of mine is sent to Cauê Concentration Plant and Conceição Concentration Plant. The production is declared in Cauê and Conceição.

(5) CVRD ownership is 60%. Average product recovery after beneficiation is 51%.

(6) Average product recovery after beneficiation is 84%.

(7) Average product recovery is 100% (direct shipping).

(8) Average product recovery is 84%.

(9) Average product recovery is 84%.

(10) Average product recovery is 100% (direct shipping). Reserves were not reported for 2003 due to the mine s depleted state.

(11) Average product recovery after beneficiation is 73%.

(12) Average product recovery is 100% (direct shipping). It produces lump ore only.

(13) Average product recovery after beneficiation is 77%.

(14) CVRD s ownership interest is 51%. Average product recovery after beneficiation is 84%. Reserves were not reported for 2003 due to the mine s depleted state.

(15) Average product recovery after beneficiation is 80%.

(16) Average product recovery is 70%. The run of mine is sent to Fábrica Concentration Plant.

(17) There are no proven and probable iron ore reserves at Urucum.

(18) Average product recovery after beneficiation is 92%.

(19) Proven and probable reserves have not yet been established for Caemi.

Integrated Systems

The following map shows the location of our current principal operations.

Our iron ore mining and related operations are concentrated in three systems in Brazil, the Southern System, the Northern System and the Caemi System. The Southern System is located in the states of Minas Gerais and Espírito Santo, and the Northern System is located in the states of Pará and Maranhão. Caemi s iron ore mining area is concentrated in the Iron Ore Quadrangle region in the state of Minas Gerais. Each our Northern and Southern Systems includes iron ore reserves and other mineral deposits, mines, ore processing facilities and integrated railroad and terminal transportation facilities. Our railroads connect the Northern System mines to the Ponta da Madeira Maritime Terminal Complex and the Southern System mines to the Tubarão Maritime Terminal Complex. The operation of these separate systems, each with transportation capability, enhances reliability and consistency of service to our customers. The Caemi System does not include a wholly owned railroad. Instead, we contract freight services from MRS Logística, a railway company in which we have a minority interest, to transport products from mines in the Caemi System to the Guaiba Maritime Terminal Complex, in the state of Rio de Janeiro.

Southern System

The Southern System is an integrated system consisting of iron ore mines, the Vitória a Minas railroad, and the Tubarão Maritime Terminal Complex (located in Vitória, in the state of Espírito Santo). The iron ore mines of the Southern System are located in a region called the Iron Ore Quadrangle in the state of Minas Gerais, in the southeast of Brazil. The Southern System is accessible by road or by spur tracks of the Vitória a Minas railroad. The iron ore from our Southern System mines is also transported through MRS Logística s railroad to our Port of Sepetiba, in the state of Rio de Janeiro. Transportation of the iron ore concentrate, lump and natural pellet ore produced in the Southern System is discussed below in *Item 4. Information on the Company Line of Business Logistics*.

Iron ore in the Southern System is mined by open pit methods. These ore reserves have high ratios of itabirite ore relative to hematite ore. Itabirite is a quartz-hematite rock with an average iron content ranging from 35% to 65%, requiring concentration to achieve shipping grade, which is above a 64% average iron content. Hematite is a high grade ore with an average iron content around 66%. Mines in the Southern System generally process their run-of-mine by means of standard crushing, classification and concentration steps, producing sinter feed, lump ore and pellet feed.

Northern System

The Northern System is an integrated mine, railroad and port system, including open pit mines and an ore processing complex. The Northern System is located in the Carajás region, in the states of Pará and Maranhão in the north of Brazil (in the Amazon River basin), on public lands for which we hold mining concessions. The Northern System s reserves are among the largest iron ore deposits in the world. These reserves are divided into two main ranges (north and south), situated approximately 35 kilometers apart. Iron ore mining activities in the Northern System are currently being conducted in the northern range, which is divided into six main mining bodies (N4E, N4WC, N4WN, N5W, N5E and N5EN).

The N4E deposit is the largest operational pit in the Northern Region. Industrial scale mining operations began at this mine in 1985. We selected the N4E mine as the first iron body to be developed in the Northern System because development of the N4E would facilitate access to the N4W and N5 deposits, which could share the N4E beneficiation complex and train-loading terminal. We began mining operations at N4W in 1994, opening two pits (N4WC and N4WN). We completed the construction of two in-pit crushing systems located at N4E and N4WN mines in late December 1998. The N4E and N4W mines use conventional open pit benching, with drilling and blasting to open a free face followed by shovel loading. During 1998, we also started operations in the N5 mines (N5W and N5E). Operations in the N5EN mine commenced in 2003.

Because of the high iron content (66.6% on average) in the Northern System, we do not have to operate a concentration plant at Carajás. The beneficiation process consists simply of sizing operations, including screening, hydrocycloning, crushing and filtration. This allows us to produce marketable iron ore in the Northern System at a lower cost than in the Southern System. Output from the beneficiation process consists of sinter feed, pellet feed, special fines for direct reduction processes and lump ore, which is sampled regularly before storage at the Carajás stockyard by automatic sampling systems that conform to ISO 9002 standards. After the beneficiation process, our Carajás railroad transports Northern System iron ore to the Ponta da Madeira Maritime Terminal Complex located at São Luís in the state of Maranhão.

Our complex in Carajás is accessible by road, air and rail. It obtains electrical power at market rates from regional utilities. To support our Carajás operations and to reduce turnover of mining personnel, we have housing and other facilities in a nearby township.

Caemi System

Caemi operates its iron ore activities through its subsidiary MBR. MBR operates in the Iron Ore Quadrangle in the state of Minas Gerais and exports through its own maritime terminal on Guaiba Island, in Sepetiba Bay, state of Rio de Janeiro.

MBR presently operates three mines: Tamanduá, Pico and Jangada. Iron ore is mined by the open pit method in each of the mines. Lump ore, sinter feed fines and pellet feed fines are produced from iron ore extracted from each mine after beneficiation.

The Pico Complex (which includes the mine and the surrounding area which supports the mine) has a beneficiation plant that contains concentration columns. Concentration columns are used to isolate pellet feed fines from silica, resulting in an improved product grade. The Tamanduá Complex has a beneficiation plant at Vargem Grande. MBR transports its iron ore to the Guaiba Island Maritime Terminal at market rates via the MRS Logística railway, in which we currently have a minority interest. The Jangada Complex has a beneficiation plant near the mine and its ore is transported through MRS Logística railway to the Guaiba Island Maritime Terminal.

Pellets

The table below sets forth information regarding our share ownership and joint venture partners as of April 30, 2004 and total pellet production by us and our joint ventures for the periods indicated.

	System	Our Direct or Indirect Share of Capital		Partners	Total Pellet Production(1)(2) for the Year Ended December 31,			Nominal Capacity
		Voting	Total		2001	2002	2003	
		%			(in millions of tons)			
CVRD(3)	Northern/ Southern	n.a.	n.a.	n.a.	8.6	10.3	13.0	15.2
GIIC	Bahrain	50.0	50.0	GIC	2.7	3.1	3.7	4.0
Hispanobrás	Southern	51.0	50.9	Aceralia	3.7	3.7	3.6	3.8
Itabrasco	Southern	51.0	50.0	Ilva	3.3	3.3	3.3	3.3
Kobrasco	Southern	50.0	50.0	Posco	4.2	4.1	4.4	4.3
Nibrasco	Southern	51.1	51.0	Nippon Steel Sumitomo JFE Steel Kobe Steel Nisshin Steel SOJITZ Corp.	7.1	7.1	7.7	8.4
Samarco	Ponta do Ubú	50.0	50.0	BHP Billiton	9.9	11.6	13.3	14.0
Total					39.5	43.2	49.0	53.0

(1) Total production by joint venture entity.

(2) Production figures are for the full year beginning the year of acquisition by CVRD of an equity interest in the entity even if acquired during the year.

(3) Production and capacity figures include CVRD I and II in Tubarão, the São Luiz pelletizing plant and the former operations of Ferteco, the Fábrica pelletizing plant. Ferteco operated as a separate subsidiary of CVRD until August 2003.

Our pellet activities increase our market for fine and ultrafine iron ore products. We sell pellet feed to our pellet joint ventures at market-based prices. Historically, we have supplied all of the iron ore requirements of our joint ventures located in the Southern System. Besides BF pellets, some of the pellets we and our joint ventures produce are DR pellets, which are used in steel mills that use electric arc furnace rather than blast furnace technology.

The table below sets forth information regarding iron ore shipments to our pellet joint ventures for the periods indicated.

	For the Year Ended December 31,		
	2001	**2002**	**2003**
	(in millions of tons)		
GIIC	1.7	2.6	2.7
Hispanobrás	3.9	3.7	3.8
Itabrasco	3.6	3.6	3.5
Kobrasco	4.5	4.4	4.7
Nibrasco	7.8	7.3	7.1
Samarco	1.9	2.0	2.0
Total	23.4	23.6	23.9

Customers, Sales and Marketing (Iron Ore and Pellets)

We use all of our iron ore and pellets (including our share of joint venture pellet production) to supply the steelmaking industry. Prevailing and expected levels of demand for steel products affect demand for our iron ore and pellets. Demand for steel products is influenced by many factors, such as expected rates of economic growth.

Historically, we have exported more than two-thirds of our iron ore shipments. We export iron ore and pellets primarily to Asia and Europe, with customers in China, Japan, South Korea, France and Germany accounting for approximately 44.8% of our total iron ore and pellets export shipments in 2003. Our 10 largest customers collectively purchased 70.6 million tons of iron ore and pellets from us, representing 38% of our 2003 iron ore and pellet shipments and 41% of our total iron ore and pellets revenues. No individual customer accounted for more than 11% of our sales of iron ore and pellets for any of the three years ended December 31, 2003.

We strongly emphasize customer service in order to improve our competitiveness. We work with our customers to understand their principal objectives and then tailor our iron ore to meet specific customer needs. To provide a tailored product, we take advantage of our large number of iron ore mines in order to produce multiple iron ore products possessing different grades of iron, silica and alumina, and varying physical properties, including grain size. We believe that we offer our customers more variety than our competitors. This variety helps us offset disadvantages in relation to competitors who may be more conveniently located geographically. In addition to offering technical assistance to our customers, CVRD operates sales support offices in Tokyo, Brussels, New York and Shanghai. These offices allow us to stay in close contact with our customers, monitor their requirements and our contract performance, and ensure that our customers receive deliveries on schedule. Our central sales office in Rio de Janeiro coordinates the activities of these offices. Caemi s sales support offices are located in Connecticut (USA), Den Haag (The Netherlands), Hong Kong and Shanghai.

Distribution (Iron Ore and Pellets)

Our ownership and operation of transportation systems designed for the efficient transportation of iron ore products complement our iron ore mining business in the Northern and Southern Systems. We operate an integrated railroad and terminal network in each of our Northern and Southern Systems. These networks transport our iron ore products from interior mining locations to the maritime terminal and domestic customers. A more detailed description of the networks is provided in the section below entitled *Logistics*.

We do not own or operate an integrated transportation system for our Caemi System. Instead we enter into freight contracts with MRS Logística, a railway company in which we own a minority interest, to transport our iron ore products at market rates from MBR s mines to its maritime terminal on Guaiba Island and to its domestic customers.

Competition (Iron Ore and Pellets)

In general, the international iron ore market is highly competitive. Several large producers operate in this market. The principal factors affecting competition are price, quality, range of products offered, reliability and transportation costs. In 2003, the European market and the Asian market (primarily China, Japan and South Korea) were the primary markets for our iron ore.

Our biggest competitors in the Asian market are located in Australia and include subsidiaries and affiliates of BHP Billiton PLC and Rio Tinto Ltd. Although the transportation costs of delivering iron ore from Australia to Asian customers are generally lower than ours as a result of Australia s geographical proximity, we believe we are able to remain competitive in the Asian market for two principal reasons. First, steel producers generally seek to obtain the types (or blends) of iron ore which can produce the intended final product in the most economic and efficient manner. Our iron ore has low impurity levels, which generally lead to lower processing costs. For example, the alumina content of our iron ore is very low compared to Australian ore. Our ore also has high iron grade, which improves productivity in blast furnaces, which is important during periods of high demand. Second, steel mills often develop sales relationships based on a reliable supply of a specific mix of iron ore. We have a customer-oriented marketing policy of meeting our clients needs to the extent possible, including placing specialized personnel in direct contact with our clients to determine the blend that best suits each particular client. We sell most of our products FOB from

our ports, which means that the invoice price includes delivery at our expense to our ports and no further. In general, in the Northern and Southern Systems our ownership of the process of producing and transporting iron ore to our ports makes it easier for us to ensure that our products get to our ports on schedule and at competitive costs.

We are competitive in the European market for the reasons we described above, as well as the proximity of the Ponta da Madeira port facilities to European customers. Our principal competitors in Europe are:

Rio Tinto PLC (UK), Rio Tinto Ltd (Australia) subsidiaries and affiliates,

BHP Billiton (Australia) and affiliates,

Kumba Resources (South Africa),

Luossavaara Kiirunavaara AB LKAB (Sweden), and

Sociétè Nationale Industrielle et Minière SNIM (Mauritania).

The Brazilian iron ore market is highly competitive with a wide range of smaller producers. Although pricing is relevant, quality and reliability are important competitive factors as well. We believe that our integrated transportation systems, high-quality ore and technical services make us a strong competitor in domestic sales. Prevailing export market prices, with adjustments negotiated to compensate for lower transport costs to domestic customers, influence iron ore sales in the domestic market.

Manganese Ore and Ferroalloys

We conduct our manganese ore and ferroalloy business primarily through the following subsidiaries and joint ventures, as of April 30, 2004:

	Our Direct or Indirect Share of Capital		
	Voting	**Total**	**Partners**
	(%)		
Nova Era Silicon S.A. (NES)	49.0%	49.0%	Mitsubishi JFE Steel
Rio Doce Manganèse Europe (RDME)	100	100	
Rio Doce Manganese Norway AS (RDMN)	100	100	
Rio Doce Manganês S.A. (RDM)	100	100	
Urucum Mineração S.A. (Urucum)	100	100	

In 2003, we were the largest manganese ore producer in the Americas and one of the largest players in the global seaborne market, with total shipments of approximately 885 thousand tons of manganese ore and 502 thousand tons of ferroalloys. We had US$ 349 million in revenues in 2003 from manganese ore and ferroalloy sales.

We produce manganese ore products from the Azul mine in the Carajás region in the state of Pará and from the Urucum mine in the Pantanal region in the state of Mato Grosso do Sul. We operate on-site beneficiation plants at both the Azul and Urucum mines. Both mines are accessible by road and obtain electrical power at market rates from regional electric utilities. We also operate five minor mines, Morro da Mina, Coribe, Barnabé, Cobra and São Desidério, in the states of Minas Gerais and Bahia.

Our manganese ore mines produce three types of manganese ore products:

metallurgical ore used primarily for the production of ferroalloys;

natural manganese dioxide suitable for the manufacture of electrolytic batteries; and

chemical ore used in several industries for the production of fertilizer, pesticides and animal food, and used as a pigment in the ceramics industry.

The production of ferroalloys consumes significant amounts of electricity. For information on the risks associated with potential energy shortages, see *Item 3. Key Information Risk Factors*.

The table below sets forth information regarding our manganese ore mines and recent manganese ore production for the periods indicated. The estimates of mineral reserves of Urucum and Azul have been audited and verified by Golder. We own 100% of all mines. For our small mines in Minas Gerais and Bahia, geological surveys are under way in order to assess reserves and resources.

	Began Operations	Projected Exhaustion Date	Production For the Year Ended December 31,			Proven and Probable Reserves		
			2001	2002	2003	Type	Ore Tonnage (1)	Grade(2)
Azul	1986	2012	1.4	1.8	1.5	Open Pit	17.2	46.4
Urucum(3)	1976	2018	0.3	0.3	0.4	Underground	6.9	46.9
Morro da Mina	1902	n.a.	0.1	0.1	0.1	Open Pit	n.a.	n.a.
Coribe, Barnabé, Cobra and São Desidério	1972	n.a.	0.1	0.1	0.2	Open Pit	n.a.	n.a.
Total			1.9	2.3	2.2		n.a.	n.a.

(1) Reported as recoverable wet product tons, in millions of tons.

(2) Reported as wet recoverable product grade.

(3) Underground mine with reserves based on vertical channel samples at a nominal 25 meter spacing and extensions to these for approximately 360 meters (3 mining panels).

We currently operate eight mills that produce ferroalloys Santa Rita, Barbacena, Ouro Preto, São João del Rey (all located in Minas Gerais state), Simões Filho (in the state of Bahia), Corumbá (in the state of Mato Grosso do Sul), Rio Doce Manganese Europe (in Dunkerque, France) and RDMN (in Mo I Rana, Norway). The table below sets forth information regarding our ferroalloy production in 2003:

	Production Capacity	Production in 2003

	(In thousands of tons per year)	(In thousands of tons)
Rio Doce Manganese Europe (RDME)	130	128
Rio Doce Manganese Norway (RDMN)(1)	110	21
Rio Doce Manganês S.A. (RDM)	310	313
Urucum Mineração S.A.	20	18
Nova Era Silicon S.A. (NES)	45	38
Total	615	511

(1) RDMN s furnaces started up in July and November 2003 after conversion from chrome production to manganese ferroalloy production.

Competition (Manganese Ore and Ferroalloys)

The markets for manganese ore and ferroalloys are highly competitive. Competition in the manganese ore market takes place in two sectors. High-grade (40% Mn or more) manganese ore competes on a seaborne basis, while low grade ore competes on a regional basis. For some ferroalloys high-grade ore is mandatory, while for some others high and low grade ores are complementary. Besides manganese ore content, cost and physical-chemical features play an important role in competition (*e.g.* moisture, impurities). The main suppliers of high-grade (HG) ores are South Africa, Gabon and Australia. The main producers of low-grade (LG) ores are Ukraine, China, Ghana, Kazakhstan, India and Mexico. CVRD is the second largest worldwide supplier of manganese ores, with HG ores in Carajás and Urucum mines, and LG ores in the smaller mines in Minas Gerais and Bahia states.

The ferroalloy market is characterized by a large number of market participants who compete primarily on the basis of price. The principal competitive factors in this market are costs of manganese ore, electricity, logistics and carbon. We compete both with standalone producers and integrated producers that also mine their own ore. Our competitors are located principally in manganese ore or steel producing countries.

Non-Ferrous Minerals

Our non-ferrous minerals business segment includes the production of non-ferrous minerals, such as kaolin and potash. We also include our former gold production and our current copper, gold and nickel exploration efforts in the non-ferrous category. The table below sets forth information regarding our non-ferrous gross revenues and sales by geographic market for the periods indicated.

	For the Year Ended December 31,		
	2001	**2002**	**2003**
	(in millions of US$)		
Gross revenues classified by geographic destination			
Export sales:			
United States	US$ 139	US$ 35	US$ 8
Europe	33	100	76
China (1)		4	7
Japan		3	13
Asia, other than Japan and China	1	1	1
Subtotal	173	147	105
Domestic sales	78	96	106
Total	US$ 251	US$ 239	US$ 211
Gross revenues classified by category			
Gold	US$ 139	US$ 103	US$ 21
Potash	71	91	94
Kaolin	41	45	96
Total	US$ 251	US$ 239	US$ 211

(1) 2001 data not available.

Kaolin

Kaolin is a fine white aluminum silicate clay used in the paper, ceramic and pharmaceutical industries as a coating agent and filler. We conduct our kaolin business through our controlling stake in Pará Pigmentos S.A. (PPSA), which began operations in August 1996, and our controlling stake in Cadam, which we obtained when we acquired control of Caemi in September 2003. Our total and voting interests in PPSA are 82.04% and 85.57%, respectively. Our partners in PPSA are Mitsubishi Corporation and International Finance Corporation. Our partners in Cadam are Banco do Brasil S.A. and BNDES. PPSA has proven and probable reserves of 10.3 million tons as presented in the table

below. Due to the recent nature of our acquisition of Caemi, we have not established the proven and probable reserves of Cadam.

PPSA sold approximately 423,000 tons of kaolin in 2003. Cadam sold approximately 686,000 tons of kaolin in 2003, of which 231,000 tons were sold since CVRD acquired control of Cadam in September 2003.

PPSA s Rio Capim mine and beneficiation plant are located in Ipixuna, in the state of Pará. These operations are linked to the dry and port facilities in Barcarena, also in the state of Pará, via a 180km pipeline. The beneficiated kaolin is pumped through the pipeline, which helps preserve the environment, guarantee the product quality and meet delivery schedules.

PPSA produces three products: Century HC, Century S and Paraprint, which are sold mainly in the European and Asian markets.

Cadam is located on the border of the states of Pará and Amapá, in the Amazon area in Northern Brazil. Due to the quality and logistics of its products, it has gained a solid competitive global position in its market segment. Cadam s reserves are principally concentrated in the Felipe Mine, in Mazagão, state of Amapá. The beneficiation plant and private port are situated on the west bank of the Jari River, in Munguba, state of Pará. Cadam extracts kaolin from its open-pit mine. The kaolin is mixed with water and chemicals to create a liquid, which is pumped to a degritting station where natural impurities are removed.

Cadam s production process is unique: after extracting the raw ore and removing sand, the product is dispersed in water and transported by gravity through a 6 km ore pipeline to the beneficiation plant on the opposite side of the Jari River. After desanding, centrifuging, removing iron by magnetic separation and chemical bleaching, the resulting material is filtered, evaporated and dried to produce lump or spray-dried kaolin, which is then shipped from Cadam s private port, situated near the beneficiation plant on the west bank of the Jari River.

Coating kaolin is loaded onto ships at Cadam s port in Munguba. Some of the lump production is also processed into slurry form by Cadam s subsidiary located in Antwerp, Belgium. In Holland, an advanced Technical Assistance Center is constantly researching the use of kaolin, offering technical and commercial support to European and Asian customers.

	Began Operations	Projected Exhaustion Date	Production For the Year Ended December 31, (in tons per year)			Proven and Probable Reserves				
								Grade		
			2001	2002	2003	Ore Type	Tonnage	Brightness	Grit	PSD
Felipe	1976		767.2	710.7	711.2	Open Pit		n.a.	n.a.	n.a.
Rio Capim (1)	1996	2008	363.0	330.0	423.0	Open Pit	10.3	85.0%	26.8	61.9
Total			1,130.2	1,040.7	1,134.2					

(1) Recovery is 37%.

Potash

Potash is an important raw material used in the production of fertilizers. We lease a potash mine (Taquari Vassouras mine) in Rosario do Catete, in the state of Sergipe, from Petrobras Petróleo Brasileiro S.A. (Petrobras), the Brazilian oil company. The lease was signed in 1991 for a period of 25 years, and is renewable for another 25 years. The mine is the only potash mine in Brazil and has a current nominal capacity of 600,000 tons per year. Taquari Vassouras is an underground mine with a depth that varies from 430 to 640 meters. In 2003, we produced 658,000 tons of potash with total shipments of 675,000 tons, which included shipments of our 2002 inventories, and we had gross revenues of US$ 94 million. All sales from Taquari Vassouras mine are destined for the domestic market.

We have budgeted US$ 67 million in capital expenditures to expand the mine capacity to 850,000 tons per year by 2005. Our proven and probable reserves should be sufficient to ensure the estimated production for the next 7 years.

	Began Operations	Projected Exhaustion Date	Production For the Year Ended December 31, (in thousands of tons per year)	Proven and Probable Reserves
				Ore

				2001	2002	2003	Type	Tonnage	Grade
Taquari	Vassouras(1)	1992(2)	2010	595	627	658	Underground	19.2	31.0
Total								19.2	31.0

(1) CVRD leases the Taquari Vassouras mine. Drill spacing is on nominal 200 meter intersections from vertical and subhorizontal drilling. Tons are expressed as ROM dry metric tons. Recovery is 90%.

(2) The mine began operations in 1986.

Gold

In August 2003, we sold the assets of our one remaining gold mine, Fazenda Brasileiro, which was near full exhaustion, to Yamana Resources Inc., a Canadian mining company, for US$ 20.9 million. As a result of the sale, our gold operations have been interrupted. We have discontinued our gold operations except as a by-product of the copper projects we are currently developing in Carajás. We expect these projects to produce gold as a by-product of their copper mining operations. We also continue to invest in mineral exploration aiming at the discovery of gold reserves.

From January 2003 to August 2003, we produced 51.3 thousand troy ounces of refined gold in Fazenda Brasileiro mine, and from January 2003 to December 2003, we produced 2.3 thousand troy ounces as a by-product of iron ore in Itabira mine. We were responsible for approximately 3% of all gold produced on an industrial scale in Brazil in 2003. Gold sales generated US$ 21 million of revenues in 2003. The table below sets forth information regarding our gold mines and recent gold production for the periods indicated. The projected exhaustion date is

based on 2003 production levels. The average total cash cost of production (US$ per troy ounce) was US$ 146 in 2001, US$ 141 in 2002 and US$ 307 in 2003.

	Began Operations	Exhaustion Date	Production For the Year Ended December 31,		
			2001	2002	2003
			(thousands of troy ounces)		
Almas	1985	2001	0.6		
Caeté	1996	2001	0.4		
Fazenda Brasileiro	1984	(1)	165.2	153.2	51.3(2)
Igarapé Bahia	1991	2002	328.3	148.2	
Itabira (3)	1984	n.a.	18.8	13.1	2.3
Total			513.3	314.5	53.6(1)

(1) Fazenda Brasileiro was sold in August 2003.

(2) Includes production prior to the sale of Fazenda Brasileiro.

(3) Gold in Itabira mine is produced together with iron ore. These are small gold bodies and they depend on the iron ore works.

Copper

Sossego

Sossego is our first copper project and began commercial production of copper concentrate in June 2004. The Sossego copper project is located in the Carajás Mineral District, in the Southeastern portion of the state of Pará, in northern Brazil. We conduct our Sossego operation primarily at the parent company level and we are investing an estimated US$ 413 million to develop it.

The Sossego copper project has two main ore bodies (Sossego and Sequeirinho). The copper ore is mined by open pit method and the run-of-mine is processed by means of standard primary crushing and conveying, SAG and ball milling, copper concentrate flotation, tailings disposal, concentrate thickening, filtration and load out. Projected annual operating capacity is 15 million tons of run-of-mine, to produce an average of 140,000 tons of copper in concentrate. The concentrate will be trucked to the Parauapebas storage terminal and then transported via our existing Carajás railroad to the Ponta da Madeira maritime terminal in São Luís, Maranhão state, situated about 890 km from Carajás. The following table shows Sossego s proven and probable reserves.

	Began	Projected Exhaustion	Proven and Probable

	Operations	Date	Reserves		
			Type	Ore Tonnage	Grade
Sossego Complex (1)	2004	2020	Open pit	244.7	0.97

(1) Recovery for Sossego complex copper reserves is 88% of metal in concentrate. Drill spacing is on nominal 80 meter centres.

We have constructed an 85-kilometer road to link Sossego to the Carajás air and rail facilities and a power line to allow us to get electrical power at market rates. We have an energy supply contract with Eletronorte, which will sell to us energy from Tucuruí Hydroelectric Power Plant, located on the Tocantins River.

Copper exploration projects

The table below sets forth information, at April 30, 2004, regarding our joint ventures and the status and potential productivity of our principal copper (Cu) prospects, all but one of which features a gold (Au) by-product.

	Our Direct or Indirect Share of Capital (Voting and Total) (1)	**Status**	**Total Expected Mineral Deposits**	**Total Expected Capital Expenditures**	**Anticipated Start-up Date**
	(%)		**(Millions of tons)**	**(In millions of US$)**	
118	50.0	Feasibility concluded	64 at 0.80% Cu	185	2006
Salobo	100.0	Feasibility in progress	784 at 0.96% Cu and 0.6 g/t Au	n.a.	n.a.
Cristalino	50.0	Pre-feasibility in progress	250 at 0.79% Cu and 0.15 g/t Au	n.a.	n.a.
Alemão	67.0	Pre-feasibility in progress	200 at 1.60% Cu and 0.90 g/t Au	n.a.	n.a.

(1) Where the project is not wholly-owned, our partner in the project is BNDES.

In addition, we and BNDES are prospecting the Carajás region for new copper exploration projects.

See *Item 4. Information on the Company Lines of Business Mining Mineral Risk Contract.*

Exploration

As part of our mineral prospecting and development activities in Brazil, we have acquired extensive experience in exploration techniques and processes specifically designed for use in tropical areas of the world. Our current mineral exploration efforts are mainly in Brazil, Peru, Chile, Mongolia, Gabon and China and focus primarily on copper, gold, nickel, manganese ore, kaolin, bauxite and platinum group metals. Exploration costs are recorded as expenses until viability of mining activities is established (see Note 3(d) to our financial statements). Expenditures in 2003 for research and development were US$ 82 million, including our mineral exploration program, which amounted to US$ 69 million. The budget for 2004 is US$ 78 million.

Since 1998, we have focused our exploration efforts in Brazil on areas where geological knowledge was more advanced, focusing primarily on gold and copper, and let lapse those claims we did not consider economically attractive. As a result, our undeveloped acreage claims decreased from approximately 31.2 million hectares as of December 31, 1997, to 9.8 million hectares as of December 31, 2003.

Mineral Risk Contract

We and BNDES entered into a Mineral Risk Contract in March 1997, relating to prospecting authorizations for mining regions where drilling and exploration are still in their early stages. The Mineral Risk Contract provides for the

joint development of certain unexplored mineral deposits in approximately two million identified hectares of land in the Carajás region, which is part of the Northern System, as well as proportional participation in any financial benefits earned from the development of such resources. Iron ore and manganese ore deposits already identified and subject to development were specifically excluded from the Mineral Risk Contract.

Pursuant to the Mineral Risk Contract, we and BNDES each agreed to provide US$ 205 million, which represents half of the US$ 410 million in expenditures estimated as necessary to complete geological exploration and mineral resource development projects in the region over a period of five years, which was extended for an additional period of two years. We will oversee these projects and BNDES will advance us half of our costs on a quarterly basis. Under the Mineral Risk Contract, as of December 31, 2003, the remaining contributions towards exploration and development activities totaled US$ 87 million. In the event that either of us wishes to conduct

further exploration and development after having spent such US$ 205 million, the contract provides that each party may either choose to match the other party s contributions, or may choose to have its financial interest proportionally diluted. If a party s participation in the project is diluted to an amount lower than 40% of the amount invested in connection with exploration and development projects, then the Mineral Risk Contract provides that the diluted party will lose all the rights and benefits provided for in the Mineral Risk Contract and any amounts previously contributed to the project.

Under the Mineral Risk Contract, BNDES has agreed to compensate us for our contribution of existing development and ownership rights in the Carajás region through a finder s fee production royalty on mineral resources that are discovered and placed into production. This finder s fee is equal to 3.5% of the revenues derived from the sale of gold, silver and platinum group metals and 1.5% of the revenues derived from the sale of other minerals, including copper, except for gold and other minerals discovered at Serra Leste, for which the finder s fee is equal to 6.5% of revenues.

In April 2004, the Mineral Risk Contract was renewed for an additional period of five years or until the total value of US$ 410 million is spent (including disbursements already made, which amount to US$ 332.8 million) whichever occurs first.

Logistics

We operate our logistics business, which is comprised of the transportation of third-party products and passengers, through the following subsidiaries and joint ventures as of April 30, 2004:

	Principal Activity	**Our Direct or Indirect Share of Capital**		**Partners**
		Voting	**Total**	
		(%)		
Cia. Portuária Baía de Sepetiba (CPBS)	Ports and Terminals	100.00%	100.00%	
DCNDB Overseas S.A. (DCNDB)	Shipping	100.00	100.00	Mitsui (1)
Navegação Vale do Rio Doce S.A- Docenave (Docenave)	Shipping	100.00	100.00	
Ferrovia Centro-Atlântica S.A. (FCA)	Railroad	99.99	99.99	Employees Others
Terminal de Vila Velha S.A. (TVV)	Ports and Terminals	99.89	99.89	Employees
MRS Logística S.A. (MRS) (includes CVRD and MBR stakes)	Railroad	34.14	38.76	CSN Usiminas Gerdau Employees Others
Ferroban-Ferrovias Bandeirantes S.A. (Ferroban)	Railroad	0.00	3.75	Nova Ferroban Others

(1) It is contemplated that Mitsui will take a 21% stake in DCNDB at or prior to the time DCNDB commences operations. See *Item 4 Information on the Company Acquisitions, Asset Sales and Significant Changes in 2003 and 2004 Logistics Coastal Shipping*.

The table below sets forth information regarding our third-party logistics gross revenues and sales by geographic market for the periods indicated.

	For the Year Ended December 31,		
	2001	**2002**	**2003**
	(in millions of US$)		
Revenues classified by geographic destination:			
Export sales:			
America, except United States	US$ 65	US$ 25	US$ 38
United States	21	3	
Europe	44	9	30
Middle East	4		4
Japan	10	1	
Asia, other than Japan	3	3	3
Subtotal	147	41	75
Domestic sales	344	374	472
Subtotal	491	415	547
Eliminations(1)	117	43	57
Total	US$608	US$458	US$604
Revenues classified by category			
Railroads	299	286	373
Ports	104	107	144
Ships	205	65	87
Total	US$608	US$458	US$604

(1) Eliminations of transactions between consolidated entities.

Railroads

Vitória a Minas railroad. The Vitória a Minas railroad, in the Southern System, links our Southern System mines in the Iron Ore Quadrangle in the state of Minas Gerais with the Tubarão Port complex, in Vitória, Espírito Santo state. We operate this railroad under a 30-year renewable concession, which expires in 2027. This railroad extends 905 kilometers to our Tubarão Maritime Terminal Complex located near the port of Vitória in the state of Espírito Santo.

The Vitória a Minas railroad consists of two lines of track extending for a distance of 601 kilometers to permit continuous railroad travel in opposite directions, and single-track branches of 304 kilometers. Industrial manufacturers are located near this area and major agricultural regions are adjacent and accessible to the Vitória a Minas railroad. The Vitória a Minas has a daily capacity of 300,000 tons of iron ore. In 2003, the Vitória a Minas railroad carried a total of 116.3 million tons of iron ore and other cargo (of which 43.2 million tons, or 37%, consisted of cargo transported for third parties). The Vitória a Minas railroad also carried approximately 1.1 million passengers in 2003.

The principal cargo of the Vitória a Minas railroad consists of:

iron ore and pellets, carried for us and third parties,

steel, coal, pig iron, limestone and other raw material carried for steel manufacturers located along the railroad,

agricultural products, such as grains soybean and soybean meal, and

other general cargo such as building materials, pulp and fuel and chemical products.

We charge market rates for third-party freight, including pellets originating from joint ventures and other enterprises in which we do not own 100% of the equity interest. Market rates vary based upon the distance traveled, the kind of product and the weight of the freight in question.

Carajás railroad. We operate the Carajás railroad under a 30-year renewable concession, which expires in 2027. This railroad, located in the Northern System, starts at our Carajás iron ore mine in the state of Pará, and extends 892 kilometers to our Ponta da Madeira Maritime Terminal Complex facilities located near the Port of São Luís in the state of Maranhão. The Carajás railroad consists of one line of track, with spur tracks and turnouts to permit the passage of trains in opposite directions. The Carajás railroad has a daily capacity of 130,000 tons of iron ore. In 2003, the Carajás railroad carried a total of 62.9 million tons of iron ore and other cargo (of which 7.7

million tons, or 12%, consisted of cargo transported for third parties). The Carajás railroad also carried approximately 441,000 passengers in 2003. The principal cargo of the Carajás railroad consists of iron ore, principally carried for us.

Ferrovia Centro-Atlântica. Our subsidiary FCA operates the central east regional railway network of the Brazilian national railway system under a 30-year renewable concession granted in 1996. The central east network contains approximately 7,000 kilometers of track extending into the states of Sergipe, Bahia, Espírito Santo, Minas Gerais, Goiás, Rio de Janeiro and Distrito Federal. It connects with our Vitória a Minas railroad near the cities of Belo Horizonte and Vitória. FCA operates on the same track gauge as our Vitória a Minas railroad. The section of the network of Ferroban-Ferrovias Bandeirantes S.A. (Ferroban) between Araguari and Valefertil railstation, near the city of Uberaba, in the state of Minas Gerais, has been operated by FCA since 1998 and in January 2002, FCA began operating the section between Valefertil in the state of Minas Gerais and Boa Vista in the state of São Paulo. This connection allows FCA to reach the port of Santos, in the state of São Paulo. In 2003, the FCA railroad transported a total of 23.8 million tons of cargo for third parties.

Other investments. We currently hold 3.75% of the total capital and none of the voting capital of Ferroban. Ferroban operates a 4,236 kilometer railroad linking the states of São Paulo, Minas Gerais, Paraná and Mato Grosso do Sul. In 2003, Ferroban reported net revenues of US$ 43 million and a net loss of US$ 43 million.

We own directly and indirectly 38.76% of the total capital and 34.14% of the voting capital in MRS Logística. MRS Logística is a 1,612-kilometer railroad, which links the states of Rio de Janeiro, São Paulo and Minas Gerais with a capacity to transport 85 million tons per year. MRS Logística operates under a 30-year renewable concession granted in 1996. Under the terms of the concession bid rules, no person may directly or indirectly own more than 20% of the voting capital of MRS Logística, unless approved by the ANTT. We are currently discussing the shareholding structure with ANTT and our partners in MRS Logística in order to comply with the applicable requirements.

Ports and Terminals

We operate ports and terminals principally as a means to complete the distribution of our iron ore and pellets to seaborne vessels serving the export market. See *Item 4. Information on the Company Lines of Business Mining Ferrous Minerals Pellets Distribution (Iron Ore and Pellets)*. We also use our ports and terminals to handle third-party cargo. In 2003, 25% of the cargo handled by our ports and terminals represented cargo handled for third parties.

Tubarão Maritime Terminal Complex. The Tubarão Maritime Terminal Complex, which covers an area of approximately 18 square kilometers, is located near the Port of Vitória in the state of Espírito Santo. The iron ore maritime terminal located in this area has two piers. Pier I can accommodate two vessels at a time, one of up to 170,000 DWT on the southern side and one of up to 200,000 DWT on the northern side. Pier II can accommodate one vessel of up to 360,000 DWT at a time, limited at 20 meters draft plus tide. In Pier I there are two shiploaders, which can load up to a combined total of 14,000 tons per hour. In Pier II there are two shiploaders that work alternately and can each load up to 16,000 tons per hour. In 2003, 72 million tons of iron ore and pellets were shipped through the terminal (of which 69 million tons were shipped for us and 3 million tons were shipped for third-parties). Praia Mole Terminal, also located in the Tubarão Maritime Terminal Complex, is principally a coal terminal and shipped 11.9 million tons in 2003. In 2004, we have budgeted US$ 4.8 million for the expansion of the Praia Mole Terminal. We operate a grain terminal in the Tubarão area, which shipped 4.5 million tons of grains and fertilizers in 2003. We also operate a bulk liquid terminal that shipped 0.5 million tons in 2003. CVRD also operates the Paul Terminal, which specializes in pig iron and is located near the Port of Vitória, in the State of Espírito Santo. This Terminal has one pier that can accommodate one vessel of up to 75,000 DWT, which can load up to 900 tons per hour. The Paul Terminal shipped 1.9 million tons of pig iron in 2003.

Ponta da Madeira Maritime Terminal Complex. The Ponta da Madeira Maritime Terminal Complex is located near the Port of São Luís in the state of Maranhão. The Ponta da Madeira port facilities can accommodate three vessels. Pier I can accommodate vessels displacing up to 420,000 DWT. Pier II can accommodate vessels of up to 155,000 DWT. The two berths have a maximum loading rate of 16,000 tons per hour at Pier I and 8,000 tons per hour at Pier II. In February 2004, the government of the state of Maranhão authorized the operation of Pier III, which is able to accommodate vessels of up to 220,000 DWT and has a maximum loading rate of 8,000 tons per hour.

Cargo shipped through our Ponta da Madeira Maritime Terminal Complex consists principally of iron ore for us. Other cargo includes manganese ore for us and pig iron and soybeans for third parties. In 2003, 55.4 million tons were shipped through the terminal for us and 2.9 million tons were shipped through the terminal for third parties.

Other investments. Since November 1994, CVRD has operated a maritime terminal located in the state of Sergipe, Inácio Barbosa Maritime Terminal. This terminal was built by Petrobras and transferred to Sergiportos, a state owned company. In December 2002, Petrobras took over control of Inácio Barbosa Maritime Terminal in exchange for the cancellation of a liability of the state of Sergipe. CVRD and Petrobras are negotiating an agreement that will allow CVRD to run this terminal for the next 10 years.

In May 1998, we entered into a 25-year lease for the Capuaba maritime terminal in Vitória, in the state of Espírito Santo. To run this terminal CVRD established Terminal de Vila Velha S.A. (TVV). TVV is a port for loading and unloading of containers, in addition to being an alternative for general cargo (import and export operations) and automobile operations in Southeast and Midwest Brazil. It is connected to the Vitória a Minas railroad and with easy access to the BR101 and BR262 highways. The terminal is formed by berths 203 and 204 at the Capuaba Quay, has a 450-meter berth area and retro-area measuring nearly 100 thousand square meters. It has a covered storage area measuring 13,300 square meters and a yard with capacity for 3,300 containers. TVV is equipped with two quays cranes, two portainers and four transtainers. In 2003, TVV shipped over 114.3 thousand containers and approximately 713.5 thousand tons of general cargo.

Cia. Portuária Baía de Sepetiba (CPBS) is a company created to operate the iron ore export terminal in the Port of Sepetiba. The iron ore export terminal has a pier that allows the boarding of ships of up to 18.1 meters and up to 230,000 DWT. In 2003, the terminal uploaded approximately 13.3 million tons of iron ore, of which only 1,200 tons were uploaded for companies unrelated to CVRD.

Shipping

We operate in three distinct shipping areas: seaborne dry-bulk services, coastal shipping containers and tug boat services.

In seaborne dry-bulk service, we carried 9.3 million tons of dry bulk, generating a revenue of US$ 70 million in 2003. The table below sets forth information on the volume of cargo that our seaborne dry bulk shipping service carried for the periods indicated.

	For the Year Ended December 31,		
	2001	**2002**	**2003**
	(thousands of tons)		
Iron ore:			
CVRD	7,179	4,287	4,386
Third party	7,748	1,888	1,860
Coal	3,824	437	256
Other	7,036	1,294	2,819
Total	25,787	7,906	9,321

We continued in 2003 the divestiture of our seaborne dry-bulk shipping business, which we began in 2001, by selling our fleet of vessels. Since 2001, we have sold 14 ships. In the first half of 2003, we owned a fleet of five vessels. The fleet, however, was reduced to three capesize vessels after the sale of two panamax vessels for US$ 36 million. We intend to sell these three remaining ships in the near future. In addition to the remaining fleet, we also charter six vessels on a monthly basis.

The container business is operated by five vessels, chartered on a bare boat basis from Frota Oceânica S/A, and generated revenues of US$ 42 million with 65,860 twenty equivalent units (teus) transported in 2003. The container business services ports of Brazil and Argentina, from the city of Fortaleza to Buenos Aires.

We also operate a fleet of eight tug boats in the ports of Vitória in the state of Espírito Santo, Trombetas in the state of Pará, São Luís in the state of Maranhão and Aracaju in the state of Sergipe. In addition to this fleet, we also have four chartered tug boats, two operating in Trombetas, one in Aracaju and the other one in Vitória. The services in Vitória and Trombetas generated a revenue of US$ 20 million performing 4,892 operations (maneuvers) in 2003.

In São Luiz and Aracaju we operate through a tug boat consortium with 50% participation in each operation (maneuver).

Competition in the logistics industry. Our railroads compete with road transport, including trucks, with the main factors being cost and shipping time. We also have many international competitors in the coastal shipping industry.

Aluminum-Related Operations

The table below sets forth information regarding our consolidated bauxite, alumina and aluminum revenues and sales by geographic market for the periods indicated. These figures do not include the revenues of our unconsolidated joint ventures.

	For the Year Ended December 31,		
	(in millions of US$)		
	2001	**2002**	**2003**
Revenues classified by geographic destination			
Export sales:			
America, except United States	US$9	US$27	US$156
Europe	173	318	378
Japan	12	11	96
United States	73	10	32
Asia, other than Japan	16	21	96
Subtotal	283	387	758
Domestic sales	1	75	165
Subtotal	284	462	923
Eliminations(1)			(71)
Total	US$284	US$462	US$852
Revenues classified by category			
Bauxite	21	23	37
Alumina	32	159	495
Aluminum	231	280	320
Total	US$284	US$462	US$852

(1) Eliminations of transactions between consolidated entities.

We operate our aluminum-related businesses through the following subsidiaries and joint ventures, as of April 30, 2004:

	Business	Our Direct or Indirect Share of Capital (Voting, Total)		Partners
		Voting	Total	
		(%)		
Albras-Alumínio Brasileiro S.A. (Albras)	Aluminum	51.00%	51.00%	Nippon Amazon Companhia
Alunorte-Alumina do Norte do Brasil S.A. (Alunorte)	Alumina	61.29	57.03	Brasileira de Alumínio CBA JAIC Mitsui Mitsubishi Nippon Amazon Norsk Hydro
Mineração Rio do Norte S.A. (MRN)	Bauxite	40.00	40.00	Abalco Alcoa Alcan BHP Billiton Metais Companhia Brasileira de Alumínio Norsk Hydro
Valesul Aluminio S.A. (Valesul)	Aluminum	54.50	54.50	BHP Billiton Metais

These subsidiaries and joint ventures engage in:

mining bauxite,

refining bauxite into alumina, and

using alumina to produce primary aluminum and aluminum alloys.

In 2003, net revenues from aluminum-related products totaled US$ 843 million.

Bauxite

MRN. MRN, the largest bauxite producer in Latin America and one of the largest in the world, produces bauxite for sale to us and our joint venture partners. Excess production may be sold to third parties. MRN operates three open-pit bauxite mines, which produce high quality bauxite. In addition, MRN controls substantial additional high quality bauxite resources that it believes can be produced economically in the future. MRN had net revenues of US$ 254 million and net income of US$ 81 million in 2003. MRN s mines are located in the northern region of the state of Pará.

The table below sets forth information regarding MRN s bauxite reserves as of December 31, 2003. The estimates of mineral reserves have been audited and verified by Golder. We are in the process of confirming the amount of proven and probable reserves at the Paragominas mine.

		Proven and Probable Reserves(1)		
	Projected Exhaustion Date	Type	Ore Tonnage	Grade(2)
			(millions of tons)	(% Al_2O_3)
Mineração Rio do Norte S.A.				
Almeidas	2009	Open pit	26.6	51.2
Aviso	2015	Open pit	71.0	50.8
Saraca V	2018	Open pit	14.5	48.2

(1) Reported as recoverable product. CVRD s ownership of MRN s bauxite reserves is 40%.

(2) Expressed as Al_2O_3.

Operations at MRN s mines commenced in 1979. For 2001, 2002 and 2003, production equaled 10.7, 9.9 and 14.4 million tons, respectively.

MRN operates ore beneficiation facilities at its mines, which are connected by rail to a loading terminal and port facilities on the Trombetas River. The Trombetas River is a tributary of the Amazon River and MRN s port facilities can handle vessels of up to 50,000 DWT. MRN owns and operates the rail and the port facilities serving its mines. The MRN bauxite mines are accessible by road from the port area and obtain electricity from their own thermoelectric

power station. MRN completed the expansion of its capacity from 11.0 million tons to 16.3 million tons in 2003.

Our MRN bauxite joint venture produces bauxite for sale on a take-or-pay basis to us and our joint venture partners at a price that is determined by a formula linked to the prevailing world prices of aluminum. Our Alunorte alumina subsidiary, which we began consolidating in July 2002, purchases all of its bauxite requirements from MRN. Our annual purchase commitment for 2003 was approximately US$ 53 million.

Paragominas project. In July 2002, we acquired 64% of the total capital of MVC, which gave us 100% of MVC s total capital. MVC was subsequently merged into CVRD. Through the acquisition of MVC s assets, we hold active mining rights in the Paragominas region in the state of Pará. A new wholly-owned bauxite mine located in Paragominas, is expected to begin operations in 2006 to supply Alunorte s new expansion with 4.5 million tons per year of wet 12% moisture bauxite. However, because of delay in the issuance of required environmental licenses by the state government, we are not certain that the bauxite mine will be able to commence operations before the end of 2006. The bauxite quality will be similar to MRN s, and the project will use the strip mining method of extraction, and have a beneficiation plant including milling and a 230-kilometer long slurry pipeline. We expect that total capital expenditures on this project will be approximately US$ 280 million.

Alumina

Alunorte began operations in July 1995 and produces alumina by refining bauxite that MRN supplies. The Alunorte plant recently concluded an expansion of capacity and now has a production capacity of 2.4 million tons of alumina per year. In 2003, Alunorte produced 2.323 million tons. Alunorte sells the major portion of its production to Albras, Valesul and third-party aluminum companies for the production of aluminum. The Alunorte plant is located near Belém, in the state of Pará, next to Albras s aluminum production facilities. This allows Alunorte and its principal customer, Albras, to share infrastructure and other resources. Alunorte had net revenues of US$ 405 million and net income of US$ 127 million in 2003.

Each Alunorte joint venture partner must purchase on a take-or-pay basis all alumina produced by Alunorte in proportion to its respective interest. The joint ventures each pay the same price, which is determined by a formula based on prevailing world market prices of aluminum.

Alunorte capacity expansions. In April 2003, Alunorte inaugurated its third production line, which has a capacity of 825,000 tons per year. With this third line, Alunorte increased its production capacity to 2.4 million tons of alumina per year.

In July 2003, Alunorte began work on a new capacity expansion for its alumina refinery. This brownfield project, estimated to start up by 2006, involves the construction of stages 4 and 5 of the plant, and is expected to increase its annual capacity from 2.4 million to 4.2 million tons of alumina per year. Alunorte s total investment in this project is expected to be approximately US$ 583 million.

ABC Refinery Project. In May 2004, we signed a framework agreement with Chalco that sets forth a general outline of some of the principal terms for a joint investment in an alumina refinery in Brazil (ABC refinery). Under the agreement, we and Chalco have agreed to develop a joint study for the construction of a greenfield refinery in the state of Pará, Brazil near the existing facilities of Alunorte. The alumina refinery is expected to have an initial capacity of 1.8 million tpy, and to reach a final capacity of 7.2 million tpy by gradual expansions. The refinery project would form part of a series of related transactions involving mining, transportation, shipping and port development in Brazil. The framework agreement contemplates that bauxite for the project would be supplied from our Paragominas bauxite mines. The initial phase of the refinery project is preliminarily estimated to have a capital expenditure cost of approximately US$ 1 billion. The first stage of the refinery is expected to be completed and operational in 2007. The project remains subject to further discussion and to the negotiation of final documentation and a number of other conditions, including receipt of board and governmental approvals.

Aluminum

Albras and Valesul each produce aluminum using alumina which Alunorte supplies. Alunorte has supplied all of Albras s alumina requirements and 54.5% of Valesul s alumina requirements since October 1995. Albras produces aluminum ingots and Valesul produces aluminum ingots, slabs, bars, billets and alloys. Aluminum is produced from alumina by means of a continuous electro-chemical process which requires substantial amounts of electricity.

Albras. The Albras plant is one of the largest aluminum plants in Latin America, with a capacity of approximately 430,000 tons per year. Albras started its operations in 1985 at a plant located near Belém in the state of Pará. Albras had net revenues of US$ 592 million and net income of US$ 198 million in 2003.

The Albras joint venture partners must purchase on a take-or-pay basis all aluminum produced by Albras in proportion to their ownership interests which represents an annual commitment from us of US$ 302 million. See Note 18(d) to our consolidated financial statements. We generally market our share of Albras s output in international export

markets to third-party aluminum processing companies.

The table below sets forth information regarding Albras s recent aluminum production and our recent purchases from Albras.

	For the Year Ended December 31,		
	2001	2002	2003
	(thousands of tons)		
Albras production	333.0	407.7	432.1
Our purchases from Albras	167.0	208.8	204.9

The production of aluminum requires a continuous flow of substantial amounts of electricity. Albras purchases electrical power from Eletronorte, a state-owned electric power utility. Eletronorte generates electricity at the Tucuruí Hydroelectric Power Plant located on the Tocantins River. This plant is the sole source of electrical power in the region in the quantities required for Albras s operations. Albras consumes approximately one-quarter of the non-peak period output of the Eletronorte plant.

In May 2004, Albras successfully executed an auction to purchase electricity for a 20-year period. This agreement will become effective beginning June 2004. The basic purchase price is R$ 53.00 per megawatt hour (MWh), indexed to the general market price index, IGP-M, as calculated by *Fundação Getúlio Vargas*. In addition to the basic price, there will be a price increase once the price of primary aluminum exceeds US$ 1,450.00 per ton, as registered at the London Metal Exchange (LME). According to the terms established in the auction, Albras will pre-purchase electricity in the amount of R$ 1,200 million. See *Item 4. Information on the Company Regulatory Matters Energy*.

Valesul. Valesul started its operations in 1982 and operates a plant located in the state of Rio de Janeiro. Valesul produces primary aluminum and aluminum alloys in the form of ingots, slabs, bars and billets. Valesul s aluminum is sold primarily in the domestic Brazilian market on a spot basis. Valesul had net revenues of US$ 157 million and net income of US$ 18 million in 2003. Valesul sells directly to its own clients.

The table below sets forth information regarding Valesul s recent primary aluminum production and third-party scrap recycled by Valesul.

	For the Year Ended December 31,		
	2001	2002	2003
	(thousands of tons)		
Valesul production	80.1	92.9	94.0
Third-party scrap recycled	20.1	19.6	16.7

Valesul currently obtains a portion of its electrical energy requirements from four wholly-owned small hydroelectric power plants located in the state of Minas Gerais, a portion from the Machadinho hydroelectric power plant in which Valesul has a share of 7%, and the remainder from a third-party power company at market rates. Valesul is able to supply 38% of its own energy requirements.

Competition in Bauxite, Alumina and Aluminum

The global aluminum market is highly competitive. The largest producers are Alcoa, Rusal, Alcan, Norsk Hydro, BHP Billiton and Chalco. The alumina and bauxite markets are also competitive, but are much smaller, because many

of the major aluminum-producing companies have integrated bauxite, alumina and aluminum operations.

Bauxite. Most of global bauxite production is not traded, as it is dedicated to integrated alumina refineries. Competition in the bauxite export market is based primarily on two key factors: quality of bauxite and reliability of supply. We believe that MRN remains competitive in this market because of the high quality of Brazilian bauxite, and our aluminum production system, which ensures internal use of our bauxite production. We use substantially all of our portion of MRN s bauxite production to supply Alunorte with alumina.

Alumina. Competition in the alumina market is based primarily on quality, price and reliability of supply. We believe that Alunorte is competitive in the alumina market because of the high quality of its alumina, its advantages in scale and technology, its efficient port facilities, and the ongoing commitment of its owners to purchase a substantial portion of its annual production. We use a substantial portion of our share of Alunorte s alumina production to supply Albras and Valesul, and sell the remainder on the world market. In 2003, the main markets for the portion of our alumina not sold to Albras and Valesul were Norway and Canada.

Aluminum. As aluminum is a commodity, competition in the aluminum market is based primarily on the economics of transportation and the costs of production. We believe that Albras is competitive in the aluminum market because of its relatively efficient and accessible port facilities, and its generally prevailing lower costs of production. We generally market our share of Albras production to third-party aluminum processing companies in Asia and Europe.

Steel Investments

We have investments in the following joint ventures in the steel business, as of April 30, 2004:

	Our Direct or Indirect Share of Capital (Voting-Total)		Partners	2003 Net Revenues	Principal Products
	Voting	Total		(in millions of US$)	
	(%)				
CSI (California, USA)	50.0%	50.0%	JFE Steel	US$ 764	Hot-rolled steel; cold-rolled steel; galvanized steel; steel tubes
CST (Brazil)	24.9	28.0(2)	Acesita Arcelor JFE Steel Others	1,284(1)	Steel slabs; hot-rolled steel
Siderar (Argentina)	5.0	4.9	Techint Group Employees Usiminas Others	904(1)	Steel slabs; hot-rolled steel; cold-rolled steel; galvanized steel; tin plates
Usiminas (Brazil)	23.0	11.5	Nippon Usiminas Previ Caixa dos Empregados da Usiminas Others	2,819(1)	Hot-rolled steel; cold-rolled steel; heavy steel plates; electro galvanized steel

(1) Represents amounts translated from local financial statements and converted into U.S. dollars (where applicable) at prevailing.

(2) We are party to a shareholders agreement which permits us to participate in a control group.

The market value of our investments in CST, Usiminas and Siderar, all of which have publicly traded equity, was US$ 476 million, US$ 219 million and US$ 89 million, respectively, at December 31, 2003. The aggregate net book value of these investments was US$ 206 million at December 31, 2003. The aggregate net book value of our total investments in steel producing companies (including CSI, a privately held company) was US$ 309 million at December 31, 2003. We earned US$ 60 million in dividends from these investments in 2003.

In line with our strategy to consolidate and focus on mining and logistics, in March 2001 we unwound our cross-holding relationships with CSN. As part of the unwinding transaction, CSN granted us the following rights of first refusal relating to CSN s Casa de Pedra iron ore mine, each of which lasts for a period of 30 years:

the right to purchase at market prices any iron ore produced by the mine beyond CSN s internal requirements,

the right to purchase or lease the mine should CSN decide to sell or lease it, and

the right to become a joint venture partner should CSN decide to form a pelletizing joint venture with a third-party with iron ore produced by the mine.

In return, we have granted CSN a right of first refusal to participate with us in the construction of any new steel producing facilities undertaken prior to March 2006 relating to slabs, coils and rolled products over which projects we will have direct or indirect control.

This unwinding transaction, as a whole, is subject to post-notification review by the Brazilian antitrust authorities (CADE).

CVRD and Nucor Corporation signed an agreement to construct and operate an environmentally friendly pig iron project in Northern Brazil in April 2003. The project will utilize two conventional mini-blast furnaces to produce about 380,000 metric tons of pig iron per year in its initial phase, using CVRD iron ore from our Carajás mines in Northern Brazil. The charcoal source will be exclusively from eucalyptus trees grown in a cultivated forest of 82,000 acres with the total project encompassing approximately 200,000 acres. CVRD and Nucor Corporation will form a joint venture company to operate the facility. It is anticipated that Nucor Corporation will purchase all of the production of the plant.

Approximately 78% and 22% of the voting shares will be held by CVRD and Nucor (or one of its affiliates), respectively, see *Item 4. Information on the Company Acquisitions, Asset Sales and Significant Changes in 2003 and 2004 Steel*. Cultivated forest assets, previously owned by Celmar and now directly owned by CVRD, will be used as an energy source for Ferro Gusa s pig iron production.

Energy Investments

In 2003, we consumed 15.8 TWh of electricity. Energy management and efficient supply have become priorities for us, driven by the uncertainties associated with the sector s privatization and changes in the regulatory framework, which increased the risk of rising electricity prices and energy shortages, such as the one Brazil experienced in the second half of 2001. We perceived favorable investment opportunities in the Brazilian electricity sector and took advantage of them by investing in nine hydroelectric power generation projects set forth in the table below. We plan to use the electricity produced by these projects for our internal needs. We could experience construction delays in certain generation projects due to environmental and regulatory issues, which could consequently, lead to higher costs. Analysis of each project s feasibility and investments will depend on the new laws and regulations applicable to the electricity sector, which are currently under review by the federal government, and their impact on electricity prices and supply. As a large consumer of electricity, we expect that investing in power projects will help to reduce costs and protect us against price and energy supply volatility.

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The following table sets forth information regarding our power generation projects as of April 30, 2004:

	Location	Our Ownership Interest	Partners	Begins Operations	Projected Capacity	Our Investment	
		(%)			(in MW)	As of December 31, 2003	Projected Total
						(in millions of US$)	
Aimorés	Rio Doce basin, in the state of Minas Gerais.	51.00%	Cemig	July 2005(1)	330MW	US$ 91	US$127.1
Candonga	Rio Doce basin, in the state of Minas Gerais.	50.00	Alcan	August 2004(1)(2)	140	44	45.3
Capim Branco I	Araguari river, in the state of Minas Gerais.	48.42	Cemig-Capim Branco Paineiras CMM	February 2006(1)	240	12	82.4
Capim Branco II	Araguari river, in the state of Minas Gerais.	48.42	Cemig-Capim Branco Paineiras CMM Camargo Corrêa Cimentos S.A.	December 2006(1)	210	4	79.8
Estreito	Tocantins river, on the border of the states of Maranhão and Tocantins.	30.00	Tractebel Alcoa BHP Billiton Camargo Energia S.A.	October 2008(1)	1,087	1	197.9
Foz do Chapecó	Uruguai river, on the border of the states of Santa	40.00	CPFL G CEEE	July 2008(1)	855	2	202.4

	Catarina and Rio Grande do Sul.						
Funil	Rio Grande, on the border of the states of São Paulo and Minas Gerais.	51.00	Cemig	December 2002	180	57	
Igarapava	Rio Grande, on the border of the states of São Paulo and Minas Gerais.	38.15	CMM CSN Cemig MMV	January 1999	210	52	
Porto Estrela	Santo Antonio river, in the state of Minas Gerais.	33.33	Cemig Coteminas	September 2001	112	19	
Total (3)					3,364MW	US$282.1	US$734.9

(1) Projected date for commencement of the first unit of the project.

(2) Commencement date listed assumes the lifting of a judicial injunction prohibiting the filling of the reservoir and is subject to potential delay depending on the outcome of pending litigation.

(3) We also hold 43.85% of a consortium that has the concession right to build the Santa Isabel hydroelectric power plant at the Araguaia river, which would have a projected capacity of 1,087 MW. In view of difficulties in obtaining the necessary environmental license to begin its construction, we are currently negotiating with ANEEL to return this concession.

Our partners in our energy investments include:

Companhia Energética de Minas Gerais, known as Cemig, a state-government controlled company.

Cemig Capim Branco Energia S.A., known as Cemig-Capim Branco, an affiliate of Cemig.

Comercial e Agrícola Paineiras Ltda., known as Paineiras, which is an affiliate of Suzano Participações S.A.

BHP Billiton Metais S.A., a wholly-owned subsidiary of BHP Billiton.

Companhia Mineira de Metais, known as CMM, which is an affiliate of Votorantim Participações S.A.

Alcoa Alumínio S.A., known as Alcoa, which is an affiliate of Alcoa Inc.

Mineração Morro Velho Ltda., known as MMV, which is an affiliate of Anglo American Brasil Ltda., which in turn is affiliated with Anglo American Plc.

Companhia de Tecidos do Norte de Minas, known as Coteminas, which is an affiliate of Coteminas International Ltd.

Tractebel Egi South America Ltda., known as Tractebel, which is a subsidiary of Tractebel S.A., a SUEZ group energy division.

Alcan, Inc.

CPFL Geração de Energia S.A., known as CPFLs-G, a subsidiary of CPFL Energia, a controlled company of VBC Participações.

Companhia Estadual de Energia Elétrica, known as CEEE, is a state-owned power company.

Our total projected investment in these hydroelectric projects is estimated at US$ 735 million. We cannot assure you that the aggregate cost will not escalate or that the projects will be completed on schedule.

In addition to the above, some of our affiliates generate part of their own energy.

REGULATORY MATTERS

Mining

Under the Brazilian Constitution, all mineral resources in Brazil belong to the Brazilian government. The Brazilian Constitution requires that mining companies incorporate in accordance with Brazilian law.

The Brazilian Constitution and Mining Code impose on mining companies various regulatory restrictions relating to, among other things:

the manner in which mineral deposits are exploited,

the health and safety of workers,

the protection and restoration of the environment,

the prevention of pollution, and

the promotion of local communities where mines are located.

Mining companies in Brazil can only prospect and mine for mineral resources pursuant to prospecting authorizations or mining concessions granted by the National Mineral Production Department, *Departamento Nacional de Produção Mineral*, or DNPM, an agency of the Ministry of Mines and Energy of the Brazilian

government. DNPM grants prospecting authorizations to a requesting party for an initial period of three years. These authorizations are renewable at DNPM s discretion for another period of one to three years, provided that the requesting party is able to show that the renewal is necessary for proper conclusion of prospecting activities. On-site prospecting activities must start within 60 days of official publication of the issuance of a prospecting authorization. Upon completion of prospecting activities and geological exploration at the site, the grantee must submit a final report to DNPM. If the geological exploration reveals the existence of a mineral deposit that is economically exploitable, the grantee will have one year (which DNPM may extend) from approval of the report by DNPM to apply for a mining concession or to transfer its right to apply for a mining concession to a third-party. When a mining concession is granted, the holder of the concession must begin on-site mining activities within six months. DNPM grants mining concessions for an indeterminate period of time lasting until the exhaustion of the mineral deposit. Extracted minerals that are specified in the concession belong to the holder of the concession. With the prior approval of DNPM, the holder of a mining concession can transfer it to a third-party that is qualified to own concessions. In some cases, mining concessions are challenged by third parties.

Pursuant to Article 20 of the Brazilian Constitution of 1988, as implemented by Law No. 8001/1990, the Brazilian government charges us a royalty, known as *Financial Compensation for Exploiting Mineral Resources* (CFEM), on the revenues from the sale of minerals we extract, net of taxes, insurance costs and costs of transportation. The annual rates paid on our products are:

iron ore and potash fertilizer, 2%;

bauxite and manganese ore, 3%;

kaolin, 2%;

copper, 2%; and

gold, 1%.

It also imposes other financial obligations. For example, mining companies must compensate landowners for the damages and loss of income caused by the use and occupation of the land (either for exploitation or exploration) and must also share with the landowners the results of the exploration based on 50% of the CFEM. Mining companies must also compensate the government for damages caused to public lands. A substantial majority of our mines and mining concessions are on lands owned by us or on public lands for which we hold mining concessions.

Railroads

The Brazilian government, acting through the Ministry of Transportation and the ANTT, regulates and supervises the policies for the railroad transportation sector. The Federal Government may grant private companies concessions for the construction, operation or commercial exploration of railroads. Railroad concession contracts granted by the Federal Government impose certain shareholder ownership limitations. For FCA and MRS Logística the concession contracts provide that each shareholder can only own up to 20% of the voting capital of the concessionaire, unless otherwise permitted by ANTT. We are in compliance with the requirements imposed by the concession contracts for our railroad operations. We received an authorization for our ownership of FCA, see *Item 4. Information on the Company Business Overview Acquisitions, Asset Sales and Significant Changes in 2003 and 2004 Logistics*. As part of our acquisition of Caemi in September 2003, we acquired MBR s stake in MRS Logística, which increased our share in MRS Logística to 34.1% of the voting capital and 38.8% of the total capital. We are currently discussing the shareholding structure with ANTT and our partners in MRS Logística in order to comply with the applicable requirements, see *Item 4. Information on the Company Lines of Business Logistics*. The ownership limitation does not apply in the cases of EFVM and Estrada de Ferro Carajás (EFC).

The ANTT also sets different tariff limits for railroad services for each of the concessionaires and each of the different products transported. So long as these limits are respected, the actual prices charged can be negotiated directly with the users of such services.

Energy

The power industry in Brazil is regulated by the Brazilian government, acting through the Ministry of Mines and Energy and ANEEL. The role of ANEEL is to implement and enforce policies and regulations designated by the Ministry of Mines and Energy and aimed at organizing and regulating the electricity sector and power

companies. ANEEL should ensure consumers an efficient and economical energy supply through regulation enforcement and the monitoring of prices and the operational efficiency of power companies.

Under the law governing the electricity sector, concessions grant exclusive rights to generate and transmit or to distribute electricity in a particular area for a period of time that should be sufficient for the concessionaire to recover its investment. The concessions for power generation are granted for 35 years and may be renewed at the federal government s discretion for an additional 20 years. Concessionaires are required to supply electricity for public services, on a continuing basis, in sufficient quantity and within approved standards of quality.

Given the hydrologic and integrated nature of the Brazilian electricity generation matrix, ANEEL has implemented regulations that created the Energy Reallocation Mechanism, known as MRE, a mechanism for sharing hydrological risk, and consequently reducing generation volatility among all generators. In order to implement the MRE, ANEEL designates a level of energy production, known as Assured Energy, for each generator, every five years. Assured Energy is calculated in accordance with a statistical model based on average rainfalls in the relevant region, water flows of rivers and water levels in each plant s reservoir over a multi-year time frame. Each generator is allowed to enter into contracts to sell up to 100% of its Assured Energy. To the extent a generator has signed contracts for the sale of its Assured Energy, and as long as MRE members as a whole are able to meet MRE Assured Energy levels, it receives payments based on these contractual terms, regardless of its level of actual generation. If all MRE members meet their contracted energy and there is a surplus of energy remaining, the net regional surplus generation is allocated among generators in different regions and this energy surplus may be sold in the wholesale market.

All contracts for wholesale energy purchases and sales are currently recorded in the wholesale energy market, or MAE. The MAE is a non-profit private entity subject to the authorization, regulation and supervision of ANEEL, and is responsible for operating the wholesale energy market and for ensuring that energy transactions in the short-term market are settled and cleared in an efficient manner. The MAE is primarily designed to effect the settlement of differences between the amount of energy contracted under bilateral contracts of the several market agents (generators, distributors, traders and large consumers), and the amount of energy actually consumed and produced. The settlement is done in accordance with the MAE spot prices, which are expressed in R$/MWh and are calculated for each settlement period for each sub-market. Approximately 22% of the settlement balance the MAE has indicated is due to CVRD is under judicial dispute by other market agents.

In March 2004, the Brazilian government approved a new law, Law No. 10848/2004, for the electricity sector. Although the full regulations under the law have not yet been enacted, we believe that this new law will create an even tighter regulated sector, especially in the generation segment. The new law transfers jurisdiction of some regulatory areas from ANEEL to the Ministry of Mines and Energy. Under this new law, all consumers of electricity, including large consumers, such as CVRD, must contract the totality of their energy needs through contracts and penalties may apply for errors above 5% of consumed energy. This new law creates two parallel markets for energy: a regulated market, in which a *consumidor cativo*, or regulated consumer, will enter into contracts subject to regulated prices, and an unregulated market, in which a *consumidor livre,* or free consumer, will enter contracts with independent power producers at prevailing market prices. Consumers may migrate from one market to another. However, consumers must wait until the termination of their long-term contracts and, under pending regulations, may have to notify the Ministry of Mines and Energy that they intend to switch markets one, two, three or even five years in advance, depending on the circumstances.

The new law also creates an energy trading commission CCEE (Câmara de Comercialização de Energia Elétrica), also called *pool*, which will be responsible for settling all energy transactions between distributors and generators. The CCEE will eventually replace the MAE as the wholesale energy market, but we do not expect significant changes in the settlement procedures regarding short-term transactions. Self-generators of energy, such as CVRD, may be required to provide a certain percentage of their generated energy from new concessions acquired after 2004 to the

pool. The exact percentage, in addition to any tax on the amount of energy used by self-generators, has not yet been determined. Other factors which have not yet been determined and are the subject of pending regulation include the price that ANEEL will charge self-generators for the use of transmission lines, and the way in which energy projects will be auctioned.

Because the pending regulation for the sector is still under review by the Ministry of Mines and Energy, we cannot be certain of all the material impacts that this new law could have on our energy business. Changes in the regulatory environment could negatively affect our energy investments.

Environmental Matters

Federal, state and municipal legislation contain provisions for the control and protection of the environment in Brazil. These laws govern the use of natural resources, the reclamation and restoration of mined areas, the control of atmospheric emissions, the treatment of industrial effluents, as well as the use, handling and final disposal of hazardous materials, and the control of water resources under the National Hydrological Resources Policy, which establishes hydrologic use rights and the fees applicable to that use. It is possible that environmental regulations will become stricter in the future. Any strengthening of these laws may lead to greater costs for environmental compliance.

In order to conduct our mining, energy generation and industrial activities, we must prepare environmental impact assessments and submit them to authorities who oversee the granting of environmental permits. We seek to comply with all legal requirements and to achieve good relationships with interested parties, especially communities located near our operations. Our environmental management system is designed to provide a systematic approach to environmental issues.

Under Brazilian Federal Law No. 9,605, non-compliance with environmental laws and regulations can result in criminal penalties, such as imprisonment and other restrictions for individuals (including directors, officers and managers of companies), and fines and the mandatory rendering of public services by companies. Administrative penalties range from warnings and fines to the suspension of corporate activities, and may also include the loss or reduction of incentives, or the cancellation or interruption of credit facilities granted by governmental institutions.

Issuance of Environmental Licenses. We must obtain environmental licenses in order to build, develop, expand and operate facilities that use natural resources or may pollute the environment. We seek to obtain the legally required licenses for each of our facilities and activities. In some cases, this process requires a significant amount of time for the preparation of comprehensive environmental reports and their evaluation, as well as for the establishment of appropriate programs for environmental education of communities residing in areas affected by the proposed projects. We have entered into agreements with the appropriate environmental authorities with respect to facilities where environmental non-compliance has been detected in order to make these facilities compliant.

Environmental Compensation. Environmental Law No. 9985/2000 requires us to pay environmental compensation to state and federal authorities, in order to create and maintain protected sites, in the amount of at least 0.5% of the total investment of each venture with a material environmental impact. There are a number of uncertainties regarding the scope and application of this law, including what rate will be applied by the federal or state governments environmental agencies, how such a rate will be applied and under what basis an investment will be valued.

Legal Reserve. Under the Brazilian Forest Code, as amended, the exploration of economic activities in the Amazon basin can only reach 20% of a project s land. We have a number of projects in the Amazon basin, such as Carajás and Cadam. We are currently below the exploitation threshold in all of these projects. However, some of our mines may approach this threshold as we expand our operations. There are a number of uncertainties regarding the scope and application of the Brazilian Forest Code, as amended, in particular where a company has pre-existing operations, as is the case with our current mining operations.

Prevention and Environmental Control Measures. Our environmental policies also aim to prevent, control and reduce the environmental impact caused by our business operations. To that end, we have made significant environment-related investments in our facilities and in employee training programs (approximately US$ 29.2 million in 2003). We are also investing to develop environmental projects directed at the communities located near our facilities (approximately US$ 6.5 million in 2003).

Water Use. We are intensive water users in eleven states with hydrological resources that vary from very high water availability in the Amazon to the scarcity in the northeast of Brazil. The Hydrological Resources Management System that is being implemented throughout CVRD includes evaluation of the availability of water in the areas where we operate and rationalization and control of water use. We continually monitor new water legislation and regulations and take particular interest in requirements adopted under the National Policy of Hydrological Resources, established by Law No. 9433/97, which defines the conditions for obtaining water use grants and for effluents disposal. Water use taxation has been discussed since 2002. However, no decision has yet been taken in any region where CVRD operates.

ISO Certifications. Our environmental management system is based on International Organization for Standardization (ISO) standard 14001. We have obtained 16 certificates covering iron ore and manganese ore and ferroalloys production, pelletizing plants, alumina refinery, port operations and our research center.

Environmental Control Systems. As a mining company, air emissions control is one of our main objectives, including in our pelletizing plants. Control equipment and systems at our facilities are complemented by monitoring systems and control software.

With respect to improvements in water quality, we strive to treat and control the pollutants disposed into the sea and local rivers or other water sources and also use extensive water recycling in our operations.

Through a comprehensive waste management system under implementation, we aim to achieve greater control of the generation and disposal of our waste, to develop opportunities to reuse and recycle, and to reduce waste.

In 2003, our mine decommissioning manual was developed, which described a complete set of directives, including technical practices and procedures to be followed during mine closures. The manual outlines procedures for the rehabilitation and monitoring of degraded areas, the main steps and sequence to be followed during closure, and any liabilities that may result after mine closure. The manual also provides standardized basic criteria and procedures, based on the directives of the CVM and the SEC (FAS 143), for cost evaluation, the establishment of current budgets, future decommissioning and reclamation (see Note 4 to our consolidated financial statements).

Our environmental program also includes reforestation projects which are intended to protect the soil against erosion processes, or to create buffers between our activities and communities in the surrounding areas.

In 2003, we spent US$ 3.5 million on these activities. We also participate in the maintenance and preservation of Brazilian forests, including the National Carajás Forest in the Amazon, and we own and preserve the Vale do Rio Doce Natural Reserve, one of the remaining areas of the Atlantic Forest in the state of Espírito Santo. In the last twenty years we have provided support to the indigenous communities in the areas of education, health, infrastructure development and technical assistance with the aim of enhancing life quality and self-sustainability of these communities. Expenditures on these programs amounted to US$ 5.8 million in 2003.

PATENTS AND TRADEMARKS

We hold, or have applied for, a significant number of patents with legal intellectual property agencies in 25 countries and in Brazil s *Instituto Nacional de Propriedade Industrial* (INPI), the governmental agency responsible for granting patents and registering trademarks. Most of our patents relate to proprietary rights over iron ore dressing. One of our most successful patents relates to lower grade iron ore concentration, generally known as itabirite, which is widely used by other iron ore mining companies the world over. We are currently conducting technological research to investigate commercial exploration of our hard itabirites. We also hold registration certificates of our marks, including both trademark (logotype) and brand names, filed with INPI and 32 other countries. These registrations are systematically renewed every ten years in Brazil and abroad in accordance with each country s current legislation.

INSURANCE

We carry insurance covering various types of risks, such as property, plant, equipment, liability, vehicles, liability of maritime terminals and transportation, as well as a group life insurance policy for our employees. We believe that our policies are in such amounts and cover such risks as are usually carried by companies in our industry. In 2002, we

established SRV Insurance Company Limited, a captive reinsurance subsidiary incorporated in the Cayman Islands to enable us to obtain insurance and reinsurance at more competitive rates by assuming a portion of the risk under our property and business interruption insurance policy.

CAPITAL EXPENDITURES

During the year 2003, CVRD made capital expenditures and other investments of US$ 1,991 million.

Growth capital expenditures consisted of US$ 913 million on projects and US$ 82 million dedicated to research and development, including mineral exploration of US$ 69 million.

The main investment projects were as follows:

US$ 61.0 million spent on increasing annual production capacity at the Carajás iron ore mine by 14 million tons. The capacity expansion at Carajás to 70 million tons per year was completed almost 12 months ahead of the original schedule.

US$ 27.7 million was spent on development of the Fábrica Nova and Brucutu mines, located in the Southern System, whose first phases will enter into operation in 2005 and 2006, respectively, adding a total of 22 million tons a year of iron ore to our production capacity.

US$ 9.9 million was spent on the construction of Pier III at Ponta da Madeira, which entered into operation at the end of 2003. The pier is being used for the shipment of iron ore and pellets, supporting the expansion to production capacity at Carajás.

US$ 95 million on the expansion of Alunorte, with US$ 66 million on module 3, which was completed in April 2003 and US$ 29 million to build modules 4 and 5, scheduled to start up in 2006.

US$ 329 million on the Sossego copper mine project, with commercial production at full capacity scheduled for June 2004.

US$ 28.4 million was spent on the capacity expansion project at the Taquari-Vassouras potash mine,

which will increase capacity from the current 600,000 tons a year, to 850,000 tons. This is scheduled for completion by 2005.

US$ 156 million was spent on the purchase of 1,860 wagons and 44 locomotives for the transport of iron ore, and 57 locomotives and 1,126 wagons for the transport of general cargo: 101 locomotives and 2,986 wagons in all. Of this total, 77 locomotives and 2,022 wagons have already been delivered by the manufacturers and incorporated into our railroad fleet.

US$ 17.5 million was spent on the construction of the Candonga hydroelectric power plant, which is nearing the completion stage and scheduled to begin operations in 2004.

US$ 19.6 million was spent on the construction of the Aimorés hydroelectric power plant, scheduled to enter into service in 2005.

In addition to these projects, US$ 82 million was invested in research and development, including mineral exploration of US$ 69 million, of which our share was US$ 50 million, and US$ 19 million was invested by BNDES, in accordance with the Mineral Risk Contract, signed in 1997. Of this total:

63% was spent on prospecting in the Carajás mineral province, where we are principally searching for copper, nickel, gold, platinum metals group and manganese ore;

19% of this total was invested in other areas of Brazil, particularly in prospecting for kaolin and bauxite in the east of state of Pará; prospecting for copper in the states of Ceará and Paraíba; and prospecting for nickel in the states of Piauí, Goiás and São Paulo; and

18% was spent on prospecting for mineral deposits outside Brazil, the Company having established mineral prospecting offices in Peru and Chile, where the search is for copper and gold, and in Gabon, where the search is for manganese ore.

Our 2003 acquisitions consisted of:

purchasing full control of Elkem Rana, now RDMN, a producer of ferromanganese alloys, for US$ 17.6 million;

purchasing shares of CST for US$ 57.8 million, which increased our stake in this steel company from 22.85% to 28.02%; and

purchasing 50% of the common shares and 40% of the preferred shares of Caemi, for US$ 426.4 million.

The table below sets forth our historical capital expenditures by business area for the periods indicated. Our capital expenditures have historically been more intensive in the second half of the year. See *Item 5. Overview Key Factors Affecting Revenues and Results of Operations Divestitures and Asset Sales*, for a description of our divestitures.

	For the Year Ended December 31,		
	2001	**2002**	**2003**
	(in millions of US$)		
Ferrous Minerals	US$454	US$435	US$698
Non-ferrous Minerals	40	132	332
Logistics	25	33	274
Energy	52	72	40
Aluminum		63	79
Corporate center	24	31	120
Total capital expenditures	595	766	1,543
Acquisitions and other investments	854	46	448
Total	US$1,449	US$812	US$1,991

We have budgeted US$ 1,815 million for capital expenditures in 2004. Of this total, 66.2%, or US$ 1,202 million, will be capital expenditures on items for promoting growth (growth capital expenditures) and the remaining US$ 613.3 million will be capital expenditures on items for maintaining existing operations (stay-in-business capital expenditures).

The budgeted investment projects for 2004 are as follows:

US$ 76.4 million has been budgeted for continued projects in connection with the capacity expansion of the Carajás iron ore mines to 70 million tons per year in 2004. An additional US$ 28.8 million will be spent on a further expansion of the iron ore output at Carajás to 85 million tons per year. This includes mine, mill and port expansion. Startup is expected in 2006.

US$ 37.3 million has been budgeted for completion of phase I of the Brucutu iron ore mine. The first phase is scheduled for startup in 2006, when the mine will have a capacity of 12 million tons per year. Phase II, already planned, will add a further 12 million ton per year capacity beginning in 2008.

US$ 31.1 million has been budgeted for the Fábrica Nova iron ore mine, which is expected to reach nominal production capacity of 10 million tons per year in 2005 and 15 million tons per year in 2007.

US$ 3.0 million has been budgeted for a 14 million tons per year expansion of the Fazendão iron ore mine. Startup is expected in 2006.

US$ 13.2 million has been budgeted for an expansion of Itabira iron ore mine s production from 43 to 46 million tons per year. Startup is planned for 2006.

US$ 25.9 million has been budgeted for the increase of Tubarão Maritime Terminal s port capacity via the acquisition of new equipment and construction of silos and stockyards. Completion of the project is scheduled for 2005.

US$ 44.8 million has been budgeted for the 118 copper project. The project, with its expected production of 45,000 tons per year of copper cathode, is scheduled to come on stream in December 2005.

US$ 21.2 million has been budgeted for the expansion of the Taquari-Vassouras potash mine to a capacity of 850,000 tons per year.

US$ 83.2 million has been budgeted for the Paragominas I project.

US$ 183.3 million has been budgeted for stages 4 and 5 of Alunorte to expand the plant s capacity by 1.8 million tons per year. Construction began in third quarter 2003 and completion is expected in 2006.

US$ 182.0 million has been budgeted for the purchase 18 locomotives and 2,011 wagons to be used for the transport of iron ore and general cargo in the Vitória a Minas and Carajás railroads.

US$ 130.6 million has been budgeted for the purchase of 70 locomotives (mostly secondhand for refurbishment) and 1,167 wagons, to be used for the transportation of general cargo by FCA.

US$19.0 million has been budgeted for the Aimorés hydroelectric plant.

US$3.5 million has been budgeted for the Candonga hydroelectric project.

US$33.6 million has been budgeted for the Capim Branco Hydroelectric plants.

In addition to these projects, CVRD has budgeted US$ 78 million for mineral exploration, of which our share is US$ 64 million and US$ 14 million is to be invested by BNDES, in accordance with the Mineral Risk Contract. The US$ 14 million BNDES contribution is not included in the US$ 1,815 million capital expenditures budget. Of the total budgeted capital expenditures for mineral exploration, 41.6% is expected to be spent in the Carajás mineral province and 35.5% in other areas of Brazil. The remaining 22.9% is budgeted for exploration in Peru, Chile, Gabon, Mozambique, Mongolia and China and other countries where CVRD is evaluating exploration opportunities.

Item 5. Operating and Financial Review and Prospects

Overview

Our 2003 net income of US$ 1,548 million was the highest in our history, and represented a 127.6% increase over the US$ 680 million we recorded in 2002. This performance was driven by higher operating income, foreign exchange and monetary gains and the improved performance of our affiliates and joint ventures. Our operating income rose by 15.0%, driven by a 29.8% increase in net revenues, partially offset by a 37.6% increase in our operating costs and expenses. Highlights from 2003 include:

A 29.8% increase in net operating revenues compared to 2003, driven primarily by:

A 24.1% increase in revenues from iron ore and pellets, reflecting high demand levels that continued to exceed our production capacity, as well as higher prices. The increase in our iron ore and pellets revenues also reflects four months of the results of Caemi following our acquisition of control in September 2003;

An 84.4% increase in aluminum-related revenues, driven primarily by higher alumina revenues, which were fueled by a capacity expansion at Alunorte, higher alumina prices, and the impact of consolidating a full year of Alunorte s results in 2003, compared to only 6 months in 2002; and

A 31.9% increase in logistics services revenues, due to a 10.7% increase in volumes transported by our Vitória a Minas and Carajás railroads and to our September 2003 consolidation of FCA.

A 37.6 % increase in operating costs and expenses, driven mainly by a 38.2% increase in cost of goods sold. The higher cost of goods sold resulted from higher volumes, an increase in fuel and oil expenses, and the impact of consolidating Caemi and FCA, both of which have higher costs than the rest of our iron ore and logistics operations.

Foreign exchange and monetary gains of US$ 242 million in 2003, compared to foreign exchange and monetary losses of US$ 580 million in 2002.

A turnaround in the performance of our joint ventures and affiliates, which contributed US$ 306 million to net income in 2003, after reducing our net income by US$ 87 million in 2002.

Key Factors Affecting Revenue and Results of Operations

Demand

Demand for iron ore and pellets

In recent years, we have experienced a significant increase in demand from China, and in 2003 we began to see a recovery in demand in Europe and Japan. Demand for our iron ore products is a function of worldwide demand for steel, which is, in turn, heavily influenced by worldwide economic activity. Worldwide demand for steel has been growing since the first quarter of 2002. A slowdown in global economic activity will generally affect demand for our iron ore products, although we expect there will typically be a lag effect, such as we have been observing in recent years.

Demand for iron ore and pellets exceeded our production capacity throughout 2003, and we expect that demand will continue to exceed our production capacity in 2004. We plan to invest US$ 215.7 million in 2004 to increase the production capacity of our mines and to expand the capacity of our ports in order to better meet rising customer

demand. To the extent demand exceeds our production capacity, we expect to purchase and resell iron ore and pellets from third parties to attempt to meet any shortfall. In 2003, we purchased 9.2 million tons of iron ore and pellets from third parties. We expect our purchases from third parties to increase in 2004.

Demand for aluminum-related products

Demand for aluminum-related products is driven primarily by world economic conditions. In recent years, China has been the primary driver of demand in the aluminum sector. World demand for bauxite, alumina and aluminum currently exceeds supply, and we expect this trend to continue throughout 2004.

Demand for third-party transportation services

Demand for our third party transportation services in Brazil is primarily driven by repressed demand for efficient logistics services since most of the cargo is transported using trucks. The market is currently much more supply driven than demand driven and we believe our ability to increase our revenues is mainly dependent on our ability to increase our wagon and locomotive fleets.

Production Capacity

Capacity expansions are a key factor influencing our revenues. In 2003, we completed capacity expansions at Alunorte and MRN. The principal capacity expansions we expect to complete in 2004 include:

Expansion of Carajás annual production capacity to 70 million tons per year from the current 56 million tons per year. This capacity expansion will help partially offset the closure of our Capanema mine, which produced 6.4 million tons of iron ore in 2003 prior to ceasing operations in December 2003.

Launch of copper concentrate production at our Sossego mine, scheduled for mid-2004.

Purchase of 88 locomotives and 3,178 wagons in 2004 to expand the general cargo and iron ore transportation capacity of our railroads.

See *Item 4. Information on the Company Capital Expenditures* for more details concerning our 2004 capital expenditures budget.

Prices

Ores and metals

Iron ore. Our iron ore export sales are made pursuant to long-term supply contracts, which provide for annual price adjustments. Cyclical changes in the world demand for steel products affect sales prices and volumes in the world iron ore market. Different factors, such as the iron content of specific ore deposits, the various beneficiation and purifying processes required to produce the desired final product, particle size, moisture content, and the type and

concentration of contaminants (such as phosphorus, alumina and manganese ore) in the ore, influence prices for iron ore. Fines, lump ore and pellets typically command different prices. We generally conduct annual price negotiations beginning in November of each year and ending early in the following year. Separate prices are established for the Asian and European iron ore markets. In the Asian market, the renegotiated prices are effective from April of the current year until March of the following year. In the European market, the renegotiated prices are generally effective for the calendar year. Because of the wide variety of iron ore and pellet quality and physical characteristics, iron ore and pellets are not considered commodities. This factor combined with the structure of the market has prevented the development of an iron ore futures market. We do not hedge our exposure to iron ore price volatility.

Reference Prices for Europe in US$ cents/metric ton Fe unit

Year	Carajás fines	Standard sinter feed	Blast furnace pellets
2001	30.03	28.92	50.10
2002	29.31	28.62	47.36
2003	31.95	31.04	52.00
2004	37.00	36.45	61.88

Our reference prices per Fe unit for Carajás iron ore fines increased across-the-board in 2003 by 9% from 2002 levels, after declining by 2.4% in 2002 from 2001 levels. We experienced similar trends in the market for pellets, where reference prices increased by 9.8% in 2003, after declining by 5.5% in 2002. We have reached agreements with major steelmakers under which our iron ore prices for 2004 will increase by an average of 18% and our pellet prices will increase by an average of 19%.

Aluminum-related operations. We operate our aluminum operations through a combination of subsidiaries and unconsolidated joint ventures. We consolidate the revenues of (i) Alunorte, which refines and sells alumina,

and (ii) our wholly-owned trading subsidiary Itabira Rio Doce Company Ltd., which we refer to as Itaco, which resells bauxite, alumina and aluminum. Our remaining bauxite, alumina and aluminum operations are reflected in the line item Equity in results of affiliates and joint ventures and change in provision for losses on equity investments in our consolidated income statement.

Through Itaco, we sell our aluminum in an active world market where prices are determined by reference to prices prevailing on terminal markets, such as the London Metals Exchange and the Commodity Exchange, Inc., or COMEX, at the time of delivery. The following table sets forth the three-month average market prices for aluminum on the London Metals Exchange for the periods indicated.

	Aluminum
	($ per ton)
1Q01	1,561.47
2Q01	1,511.59
3Q01	1,405.96
4Q01	1,334.66
1Q02	1,394.48
2Q02	1,377.17
3Q02	1,330.35
4Q02	1,356.92
1Q03	1,392.04
2Q03	1,379.55
3Q03	1,419.94
4Q03	1,519.80
1Q04	1,667.37

Source: Bloomberg.

Albras and Alunorte seek to manage the risks associated with changes in aluminum prices by hedging. For more information about aluminum-related hedging, see *Item 11. Quantitative and Qualitative Disclosures About Market Risk*. During the first quarter of 2004, average market prices for aluminum on the London Metals Exchange rose by 9.7% compared to the previous quarter. Alumina prices remained at high levels during the first quarter of 2004, and we believe that the current structural imbalance between supply and demand in the alumina market will continue to have a positive impact on alumina prices in the near term.

Our unconsolidated joint venture MRN sells a substantial proportion of its bauxite to our consolidated subsidiary Alunorte, which in turn sells a substantial portion of its alumina production to our unconsolidated joint ventures Albras and Valesul. The basic arrangements under which these sales are made are as follows:

Our MRN bauxite joint venture produces bauxite for sale on a take-or-pay basis to us and our joint venture partners at a price that is determined by a formula based on prevailing world prices of aluminum. Our Alunorte alumina subsidiary, which we began consolidating on June 30, 2002, purchases all of its bauxite requirements from MRN. Our annual purchase commitment for 2003 was approximately US$ 53 million.

Each Alunorte partner must purchase on a take-or-pay basis all alumina produced by Alunorte in proportion to its respective interest. Each partner pays the same price, which is determined by a formula linked to the prevailing world prices of aluminum. On June 30, 2002, we increased our stake in and acquired control of

Alunorte and began consolidating it in our financial statements. As a result, since that date, payments we make to Alunorte under our take-or-pay commitment are eliminated in preparing our consolidated financial statements. In 2003, we sold 35.5% of our share of Alunorte s production to Albras, 2.2% to Valesul, and the remainder to the market.

Each Albras aluminum joint venture partner must purchase on a take-or-pay basis all aluminum produced by Albras in proportion to its ownership interest. In our case, our take-or-pay commitment is 51% (representing our proportional ownership interest) of the joint venture s annual aluminum production. Although our annual purchase commitment to Albras can be substantial, approximately US$ 302 million in 2003, prevailing world market prices for aluminum (subject to discount in accordance with the terms of our joint venture agreements) determine the aluminum prices at which we purchase from Albras. We resell the primary aluminum we receive from Albras through our trading subsidiary Itaco and earn a margin on the sale. We do not have a take-or-pay commitment to Valesul, which sells aluminum products directly to its customers.

Manganese ore and ferroalloys. Manganese ore and ferroalloy prices are strongly influenced by trends in the steel market. Manganese ore prices are generally negotiated on an annual basis using a benchmark established in

the Japanese market based on the reference price for the related ferroalloys. Ferroalloy prices are negotiated in open bids, quarterly contracts (particularly in Europe) or on a spot basis. They are influenced by a number of factors and are more volatile than prices for manganese ore. Among the principal factors are the price of manganese ore, the inventories held by producers or traders, occasional interruptions in production and anti-dumping tariffs in the principal markets (U.S., Europe, Japan and South Korea). Average manganese ore prices remained relatively stable, rising from US$ 54 per ton in 2002 to US$ 55 per ton in 2003. Average ferroalloy prices increased from US$ 464 per ton in 2002 to US$ 548 per ton in 2003, reflecting the general increase in the price of raw materials for steel. Ferroalloys are not a standardized product since we sell several kinds of alloys with various prices.

Potash and kaolin. Potash prices were higher in 2003 than in 2002, primarily reflecting a greater demand for fertilizers. Kaolin prices increased from US$ 136 per ton in 2002 to US$ 147 per ton in 2003 primarily reflecting high levels of demand.

Logistics

We earn our logistics revenues primarily from fees charged to customers for the transportation of cargo via our railroads, ports and ships. Most of these revenues are earned by our railways, and nearly all of our logistics revenues are denominated in *reais.* Prices in the Brazilian railroad market are subject to maximum levels set by the Brazilian regulatory authorities but in practice have historically fallen well below the maximum levels permitted by law, primarily reflecting railroads need to remain competitive with the trucking industry.

Currency Fluctuations

Most of our sales are dollar-denominated, while most of our costs (other than debt expenses) are denominated in Brazilian currency. As a result, when the *real* is relatively strong against the dollar, this tends to have a negative effect on our reported financial results from operations, and vice versa. On the other hand, because most of our debt (and debt at the joint venture and affiliate level) is dollar-denominated, a decline in the value of the *real* causes us to record foreign-exchange losses.

Exchange rate effects had a significant positive effect on our net income in 2003. The average R$/US$ exchange rate was R$ 2.9286 in 2002 and R$ 3.0722 in 2003, representing a 4.9% nominal depreciation of the *real* relative to the U.S. dollar. This decline in the average value of the *real* relative to the U.S. dollar had a positive effect on our revenues, most of which are denominated in U.S. dollars, and helped reduce our costs, most of which are denominated in *reais*.

At the same time, although the average value of the *real* relative to the U.S. dollar was lower in 2003 than in 2002, the *real* appreciated by 22.3% relative to the U.S. dollar in 2003, from R$ 3.5333 to US$ 1.00 at December 31, 2002 to R$ 2.8892 to US$ 1.00 at December 31, 2003. As a result of this appreciation relative to the U.S. dollar, we recorded substantial foreign exchange gains on our U.S. dollar-denominated debt in 2003. In contrast, in 2002, the *real* depreciated against the dollar, causing us to record substantial foreign exchange losses.

Acquisitions

We completed several significant acquisitions in 2002 and 2003.

In June 2002, we increased our stake in and acquired control of Alunorte and began consolidating it in our financial statements. We previously had accounted for Alunorte under the equity method.

In February 2003, we acquired for US$ 17.6 million 100% of Elkem Rana AS, a Norwegian ferrochrome producer, which we subsequently renamed RDMN. We invested US$ 16.7 million to convert RDMN s plant to allow production of ferro manganese alloys. The plant started operations with one furnace in June 2003 and brought its second furnace online in November 2003.

In April 2003, we completed our acquisition from Acesita of shares of CST that are not subject to the CST controlling shareholders agreement. We acquired 4.42% of the common shares and 5.64% of the preferred shares of CST, representing 5.17% of CST s total capital, for US$ 59.7 million. Following this transaction, we now own 24.93% of CST s common shares and 29.96% of CST s preferred shares, totaling 28.02% of CST s capital.

In September 2003, we completed the acquisition of Mitsui s interest in Caemi, and now own 100% of Caemi s common shares and 40% of its preferred shares, totaling 60.2% of Caemi s share capital. We

began consolidating Caemi as from that date. Caemi s subsidiary MBR contributed US$ 233 million to our net revenues from iron ore for 2003 and US$ 179 million to our total operating expenses for iron ore. Our acquisition of Caemi also gives us a controlling interest in Cadam, a kaolin producer. Cadam contributed US$ 29 million to our net revenues from kaolin for 2003 and US$ 32 million to our total operating expenses for kaolin.

Our acquisition of Caemi has increased our iron ore revenues, but had a negative impact on our operating margins. The lower margins at Caemi result primarily from the fact that unlike our Northern and Southern systems, which include their own railroads, MBR uses the services of a third-party railway operator MRS Logística to transport iron ore from its mines to its ports.

In September 2003, we began consolidating FCA. FCA contributed US$ 53 million to our net revenues from logistics services in 2003 and US$ 86 million to our total operating expenses. FCA has lower operating margins than our other railways, principally due to higher concession costs and older infrastructure.

Divestitures and Asset Sales

We completed the following principal divestitures and asset sales in 2002 and 2003.

In 2002, we sold the forestry assets of Florestas Rio Doce in connection with our exit from the pulp and paper business, and sold ships in connection with a change of strategy in our dry-bulk shipping business.

In August 2003, we sold our last remaining gold mine, Fazenda Brasileiro, to Yamana Resources Inc., for US$ 21 million.

In November 2003, we sold our interest in Sepetiba Tecon S.A. to CSN and our interest in Companhia CFN to CSN and Taquari Participações S.A. These sales were made in connection with the purchase of FCA described above.

In October 2003, we sold our interest in Fosfértil to Bunge Fertilizantes S.A. for US$ 84 million.

Effects of Certain Equity Method Affiliates and Investments Carried at Cost

The financial condition and results of operations of our joint ventures, affiliated companies and investments can have a significant effect on our results of operations and financial condition. See Note 13 to our consolidated financial statements for information on these effects.

Rising Unit Extraction Costs

Several of our mines have operated for long periods and may experience rising extraction costs per unit as more expensive processes become necessary to extract remaining ore in these mines. Increases in extraction costs at each of these mines have not materially affected our results of operations as such increases were offset by productivity gains and by the favorable foreign exchange effects on these costs.

Electricity Costs

The average price per megawatt hour (MWh) paid by Albras for the years ended December 31, 2003, 2002 and 2001 was US$ 15.07, US$ 12.86 and US$ 11.27. In May 2004, Albras successfully executed an auction to purchase electricity for a 20-year period. This contract will become effective beginning June 2004. The basic purchase price is R$ 53.00 MWh, indexed to the general market price index, IGP-M, as calculated by *Fundação Getúlio Vargas*. In addition to the basic price, the electricity seller will have the right to participate in earnings from our sale of primary

aluminum when the price exceeds US$ 1,450.00 per ton, as registered at the London Metal Exchange (LME).

Domestic Inflation Rates in Brazil

As measured by the IGP-M Index, the Brazilian inflation rate was approximately 10.4% in 2001, 25.3% in 2002 and 8.7% in 2003. Most of our costs are incurred in Brazil in *reais,* while most of our revenues are earned

outside of Brazil in U.S. dollars. Inflation generally has a negative impact on our operating margins only in periods where it exceeds the rate of devaluation of the *real* against the U.S. dollar.

Operating expenses

Our principal operating expenses consist of cost of goods sold and selling, general and administrative expenses.

Cost of goods sold. Our cost of goods sold consists principally of costs for raw materials, bauxite and aluminum purchased under take-or-pay arrangements from MRN and Albras, iron ore and pellets purchased from third parties, logistics services purchased from third parties, labor costs, fuel costs, energy costs, and depreciation and exhaustion. Our cost of goods sold increased as a percentage of net operating revenues in 2003, driven principally by higher fuel costs and an increase in logistics costs due to our acquisition of Caemi.

Selling, general and administrative expenses. Our selling, general and administrative expenses consist principally of the expenses of marketing our products and costs of our corporate headquarters.

Brazilian Taxes

We are subject to a number of Brazilian taxes. The principal taxes we pay are:

Value-Added Tax and Revenue Taxes. Our gross revenues consist of total revenues from sales, net of discounts, returns and allowances, together with amounts we collect in respect of value-added tax. Net operating revenues represent revenues less value-added tax, which we collect on behalf of, and must remit to, state taxing authorities. We also collect other revenue taxes for social programs that are recorded under the line items value-added tax and other financial expenses in our financial statements. Export sales are currently exempt from both the value-added tax and the social taxes.

Income Tax and Social Contribution on Profits. We pay income taxes, which include a tax called the social contribution on profits. The social contribution on profits tax rate is currently 9% and income tax rate is 25% representing a statutory composite rate of 34%.

Brazilian tax legislation changes, which are frequent, can have a significant impact on our results of operations. For example, in 2001, changes in Brazilian tax legislation were introduced, including a requirement that earnings from foreign subsidiaries be included in the determination of income taxes payable in Brazil. Based on the advice of legal counsel, we believe that the possibility that we will have to pay certain taxes potentially covered by this legislation is remote and accordingly have not recorded provisions for such taxes in our financial statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

We believe that the following are our critical accounting policies. We consider an accounting policy to be critical if it is important to our financial condition and results of operations and requires significant judgments and estimates on the part of our management. For a summary of all of our significant accounting policies, see Note 3 to our consolidated financial statements.

Translation Adjustments

Our reporting currency is the U.S. dollar, but our functional currency for the majority of our operations is the *real*. In accordance with Statement of Financial Accounting Standards (SFAS) 52 Foreign Currency Translation, we translate statement of income items to reflect the approximate results that would have occurred if each transaction had been translated using the exchange rate in effect on the date that the transaction was recognized. Because the separate

translation of every transaction is impractical, an appropriate weighted-average exchange rate for the period is used. In most cases, we translate our statement of income accounts and those of subsidiaries that use the *real* as their functional currency into U.S. dollars at weighted-average monthly rates for the relevant reporting period. In the case of material exceptional items, we translate the amounts into U.S. dollars using the exchange rate on the date of the transaction. Additionally, during periods of high exchange rate volatility, we use estimated daily rates to translate our foreign exchange and monetary losses or gains, financial income and financial expenses. The determination of the appropriate weighted-average exchange rate requires significant management judgment and estimates. From January 1 to December 31, 2003, the *real* appreciated by approximately 22.3% against the U.S. dollar and generated a credit for the year recorded directly in the cumulative translation adjustment account of US$ 736 million.

Mineral Reserves and Life of Mines

We regularly evaluate and update our estimates of proven and probable mineral reserves. Our proven and probable mineral reserves are determined using generally accepted estimation techniques and are audited by Golder Associates, an expert in geology, mining and iron ore reserves. Calculating our reserves requires us to make assumptions about future conditions that are highly uncertain, including future ore prices, foreign currency exchange rates, inflation rates, mining technology, availability of permits and production costs. Changes in some or all of these assumptions could have a significant impact on our recorded proven and probable reserves.

One of the ways we use our ore reserve estimates is to determine the mine closure dates used in recording the fair value liability for our asset retirement obligations and the periods over which we amortize our mining assets. Any change in our estimates of total expected future mine or asset lives could have a significant impact on the depreciation, depletion and amortization charges recorded in our consolidated financial statements under cost of goods sold. Changes in the estimated lives of our mines could also significantly impact our estimates of environmental and site reclamation costs, which are described in greater detail below.

Environmental and Site Reclamation Costs

Expenditures relating to ongoing compliance with environmental regulations are charged against earnings or capitalized as appropriate. These ongoing programs are designed to minimize the environmental impact of our activities.

Until December 31, 2002, we provided only for environmental liabilities relating to site restoration at mines already closed or which were expected to close in the next two years. The estimation of environmental costs was based on projections limited to the next two years and was not discounted to present value.

Effective January 1, 2003, we adopted SFAS 143 Accounting for Asset Retirement Obligations. SFAS 143 requires that we recognize a liability for the fair value of our estimated asset retirement obligations in the period in which they are incurred, if a reasonable estimate can be made. We consider the accounting estimates related to reclamation and closure costs to be critical accounting estimates because:

- we will not incur most of these costs for a number of years, requiring us to make estimates over a long period;
- reclamation and closure laws and regulations could change in the future or circumstances affecting our operations could change, either of which could result in significant changes to our current plans;
- calculating the fair value of our asset retirement obligations in accordance with SFAS 143 requires us to assign probabilities to projected cash flows, to make long-term assumptions about inflation rates, to determine our credit-adjusted risk-free interest rates and to determine market risk premiums that are appropriate for our operations; and
- given the significance of these factors in the determination of our estimated environmental and site reclamation costs, changes in any or all of these estimates could have a material impact on net income. In particular, given the long periods over which many of these charges are discounted to present value, changes in our assumptions about credit-adjusted risk-free interest rates could have a significant impact on the size of our provision. At January 1, 2003, we estimated the fair value of our aggregate total asset retirement obligations to be approximately US$ 41 million, representing an increase of US$ 26 million over the amount recorded under the prior accounting policy.

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Impairment of Long-Lived Assets and Goodwill

We evaluate our investments and long-lived assets, which primarily include identifiable property, plant and equipment, for impairment whenever events or changes in circumstances indicate that the balance sheet carrying value of the asset may not be recoverable. If the asset is determined to be impaired, we record an impairment loss, and write down the asset, based upon the amount by which the carrying amount of the asset exceeds the higher of net realizable value and value in use. We generally determine value in use by discounting expected future cash flows using a risk-adjusted pre-tax discount rate that we believe is appropriate to the risks inherent in the asset. In order to estimate future cash flows, we must make various assumptions about matters that are highly uncertain, including future production and sales, product prices (which we estimate based on current and historical prices, price trends and related factors), recoverable reserves, operating costs, environmental and site reclamation costs and planned capital costs. Arriving at assumptions and estimates concerning these matters is a complex and often subjective process. These assumptions and estimates can be affected by a variety of matters, including external factors such as industry and economic trends, and internal factors such as changes in our business strategy and our internal forecasts. Although we believe the assumptions and estimates we have made in the past have been reasonable and appropriate, different assumptions and estimates could materially impact our reported financial results. More conservative assumptions of the anticipated future benefits from these businesses would result in greater impairment charges, which would decrease net income and result in lower asset values on our balance sheet. Conversely, less conservative assumptions would result in smaller impairment charges, higher net income and higher asset values.

In assessing potential impairment of our equity investments, we evaluate the carrying value of our listed equity investments relative to publicly available quoted market prices. If the quoted market price is below carrying value, and we consider the decline to be other than temporary, we write down our equity investments to quoted market value. For investments for which quoted market prices are not readily available, we evaluate the investments for impairment whenever the performance of the underlying entity indicates that impairment may exist. In such cases, the fair value of the investments is estimated principally based on discounted estimated cash flows using assumptions similar to those described above.

In relation to goodwill, each year on September 30, we use a two-step process to test for the recoverability of goodwill for each of our reporting units. Step one requires a comparison of the fair value of the reporting unit to the book value of its net assets. The fair value of the net assets is based on discounted cash flows using assumptions similar to those used in the process described above. Step two requires an estimate of the fair value of the individual assets and liabilities within the reporting unit. In the year ended December 31, 2003, after conducting impairment tests, we concluded that no write-down was necessary.

Derivatives and Hedging Activity

As of January 1, 2001, we adopted SFAS 133 Accounting for Derivative Financial Instruments and Hedging Activities, as amended by SFAS 137, SFAS 138 and SFAS 149. Those standards require that we recognize all derivative financial instruments as either assets or liabilities on our balance sheet and measure such instruments at fair value. Changes in the fair value of derivatives are recorded in each period in current earnings or in other comprehensive income (outside net income), in the latter case depending on whether a transaction is designated as an effective hedge. In 2003, we did not designate any derivative financial instruments as hedges and the fair value adjustments to our derivatives were thus recorded in current net income. Had we designated our hedging instruments as permitted under SFAS 133, there would have been corresponding fair value adjustments, for certain of our hedging instruments, to the related hedged items in the case of fair value hedges or directly to stockholders equity in the case of cash flow hedges. During the year ended December 31, 2003, we recorded a charge of US$ 43 million in relation to fair value adjustments on derivative instruments.

Income Taxes

In accordance with SFAS 109 Accounting for Income Taxes, we recognize deferred tax effects of tax loss carryforwards and temporary differences in our consolidated financial statements. We record a valuation allowance when we believe that it is more likely than not that tax assets will not be fully recoverable in the future.

When we prepare our consolidated financial statements, we estimate our income taxes based on regulations in the various jurisdictions where we conduct business. This requires us to estimate our actual current tax exposure and to assess temporary differences that result from differing treatment of certain items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which we show on our consolidated balance sheet. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income.

To the extent we believe that recovery is not likely, we establish a valuation allowance. When we establish a valuation allowance or increase this allowance in an accounting period, we record a tax expense in our statement of income. When we reduce the valuation allowance, as occurred in 2003, we record a tax benefit in our statement of income.

Determining our provision for income taxes, our deferred tax assets and liabilities and any valuation allowance to be recorded against our net deferred tax assets requires significant management judgment and estimates and assumptions about matters that are highly uncertain. For each income tax asset, we evaluate the likelihood of whether some portion or all of the asset will not be realized. The valuation allowance made in relation to accumulated income tax losses depends on our assessment of the probability of generation of future taxable profits within the legal entity in which the related deferred tax asset is recorded based on our production and sales plans, selling prices, operating costs, environmental costs, group restructuring plans for subsidiaries and site reclamation costs and planned capital costs.

Contingencies

We disclose material contingent liabilities unless the possibility of any loss arising is considered remote, and material contingent assets where the inflow of economic benefits is probable. We discuss our material contingencies in Note 18 to our financial statements.

We account for contingencies in accordance with SFAS 5 Accounting for Contingencies, which requires that we record an estimated loss from a loss contingency when information available prior to issuance of our financial statements indicates that it is probable that a future event will confirm that an asset has been impaired or a liability has been incurred at the date of the financial statements, and the amount of the loss can be reasonably estimated. In particular, given the uncertain nature of Brazilian tax legislation, the assessment of potential tax liabilities requires significant management judgment. By their nature contingencies will only be resolved when one or more future events occur or fail to occur and typically those events will occur a number of years in the future. Assessing such liabilities, particularly in the uncertain Brazilian legal environment, inherently involves the exercise of significant management judgment and estimates of the outcome of future events.

The provision for contingencies at December 31, 2003, totaling US$ 635 million, consists of provisions of US$ 177 million, US$ 167 million, US$ 285 million and US$ 6 million for labor, civil, tax and other claims, respectively.

Employee Post-retirement Benefits

We sponsor a defined-benefit pension plan covering substantially all of our employees. We account for these benefits in accordance with SFAS No. 87 Employers Accounting for Pensions.

The determination of the amount of our obligations for pension benefits depends on certain actuarial assumptions. These assumptions are described in Note 17 to our consolidated financial statements and include, among others, the expected long-term rate of return on plan assets and increases in salaries. In accordance with U.S. GAAP, actual results that differ from our assumptions are accumulated and amortized over future periods and generally affect our recognized expenses and recorded obligations in such future periods.

RESULTS OF OPERATIONS

2003 Compared to 2002

Revenues

Our gross operating revenues increased from US$ 4,282 million in 2002 to US$ 5,545 million in 2003. Our net operating revenues increased 29.8% from US$ 4,123 million in 2002 to US$ 5,350 million in 2003. The following table summarizes our gross revenues by product and our net operating revenues for the periods indicated:

	Year ended December 31,		
	2003	2002	% Change
	(in millions of US$)		
Iron ore and pellets			
Iron ore	US$2,662	US$2,147	24.0%
Pellets	838	673	24.5
Subtotal	3,500	2,820	24.1
Gold	21	103	(79.6)
Manganese ore and ferroalloys	349	283	23.3
Potash	94	91	3.3
Kaolin	96	45	113.3
Revenues from logistic services	604	458	31.9
Aluminum-related products	852	462	84.4
Other products and services	29	20	45.0
Gross revenues	5,545	4,282	29.5
Value added tax	(195)	(159)	22.6
Net operating revenues	US$5,350	US$4,123	29.8

Iron ore and pellets

The global seaborne iron ore market is currently experiencing the highest demand pressure it has faced in the past two decades. Reflecting these global market conditions, in 2003, customer demand for iron ore and pellets exceeded CVRD s production capacity, continuing the trend experienced in the second half of 2002. Our gross revenues for 2003 were also positively affected by price increases. We reached agreements with major steelmakers in May and June 2003 (retroactive to January 2003 for sales to Europe and April 2003 for sales to Asia), respectively,

under which our reference prices for iron ore and pellets increased by an average of 9% and 9.8% respectively. Reflecting these positive volume and pricing trends, our gross revenues from iron ore and pellets increased 24.1%, from US$ 2,820 million in 2002 to US$ 3,500 million in 2003.

Iron ore. Gross revenues from iron ore increased by 24.0% from US$ 2,147 million in 2002 to US$ 2,662 million in 2003, driven primarily by a 13.3% increase in shipments of iron ore from 143.6 million tons in 2002 to 162.7 million tons in 2003. The volume growth includes by continued growth in shipments to China, which increased by 7.7 million tons compared to 2002. Shipments for 2003 also include four month s worth of shipments, accounting for 13.9 million tons of iron ore, by Caemi, which we began consolidating in September 2003. Actual average selling prices for iron ore were 9.4% higher in 2003 than in 2002, primarily reflecting price increases agreed with major steelmakers in May 2003.

Pellets. Gross revenues from pellets increased by 24.5%, from US$ 673 million in 2002 to US$ 838 million in 2003. The increase was primarily driven by a 14.6% increase in volume shipped, from 20.6 million tons in 2002 to 23.6 million tons in 2003. The average selling price for pellets increased by 8.4% in 2003 compared to the same period in 2002, reflecting the impact of the price increases agreed with major steelmakers in June 2003.

Gold

Gross revenues from sales of gold decreased 79.6%, from US$ 103 million in 2002 to US$ 21 million in 2003, reflecting the closure of our Igarapé Bahia mine in 2002 and lower yields from our Fazenda Brasileiro mine prior to its sale in August 2003. These developments led to an 81.4% decrease in volume sold. The volume declines were partially offset by a 14.6% increase in average selling prices in 2003, reflecting higher world gold prices due primarily to the devaluation of the U.S. dollar relative to other currencies and the war in Iraq.

On August 15, 2003, we sold Fazenda Brasileiro to Yamana Resources for US$ 21 million. Since completion of the sale, our gold operations have been discontinued.

Manganese ore and ferroalloys

Gross revenues from sales of manganese ore and ferroalloys increased by 23.3%, from US$ 283 million in 2002 to US$ 349 million in 2003. This increase resulted from:

A 36.1% increase in sales of manganese ore, from US$ 36 million in 2002 to US$ 49 million in 2003. The sales increase was driven primarily by higher sales volume, which rose by 33.1%, mainly reflecting higher shipments of manganese ore sinter feed from our Carajás mine to China. Revenues were also positively affected by higher average selling prices, which increased by 2.3% compared to the same period in 2002.

A 21.5% increase in gross revenues from ferroalloys, from US$ 247 million in 2002 to US$ 300 million in 2003. The increase was driven by strong demand for our principal ferroalloy products from the steel industry, which experienced an 18.0% increase in average selling prices and a 5.5% increase in volume. This increase was also impacted by the acquisition of RDMN. The plant started operations with one furnace in June 2003 and brought its second furnace online in November 2003.

Potash

Gross revenues from sales of potash increased by 3.3%, from US$ 91 million in 2002 to US$ 94 million in 2003. The increase was driven by a 12.0% increase in average selling prices, reflecting strong demand. The higher average selling prices were partially offset by lower sales volume, which decreased 7.8% in 2003 due to inventory drawdowns. Shipments were higher in 2002 because we sold inventories on hand in addition to volumes produced in that period. Demand for potash in 2003 exceeded production capacity, and we expect this trend to continue in 2004.

Kaolin

Gross revenues from sales of kaolin increased by 113.3%, from US$ 45 million in 2002 to US$ 96 million in 2003. Of the total US$ 51 million increase in kaolin revenues, US$ 31 million resulted from the consolidation of Cadam, the kaolin subsidiary of Caemi, beginning September 2003. Total volume shipped increased by 98.2%, reflecting the Cadam acquisition as well as increased marketing efforts by our PPSA subsidiary, and average selling prices rose by 7.7%.

Logistic services

Gross revenues from logistic services increased by 31.9% from US$ 458 million in 2002 to US$ 604 million in 2003. The improved performance in logistics revenues reflects in large part our efforts to exploit opportunities provided by agricultural production, especially grains, and by increased shipments due to higher Brazilian steel production in 2003. Our gross revenues were also positively affected by the consolidation of FCA beginning September 2003. In particular, the increase in gross revenues from logistic services reflects:

A 30.4% increase in revenues from railroad transportation, from US$ 286 million in 2002 to US$ 373 million in 2003. Of the US$ 87 million increase, US$ 61 million resulted from our consolidation of FCA beginning September 2003. The increase in revenues reflects an 11.2% increase in volume transported and 17.3% increase in average selling prices.

A 34.6% increase in gross revenues from port operations, from US$ 107 million in 2002 to US$ 144 million in 2003. The increase in port operations gross revenues was driven by a 29.8% increase in average selling prices and a 1.8% increase in volume.

A 33.8% increase in gross revenues from shipping, from US$ 65 million in 2002 to US$ 87 million in 2003.

Aluminum-related products

Gross revenues from aluminum products increased 84.4%, from US$ 462 million in 2002 to US$ 852 million in 2003. This increase resulted from:

A US$ 336 million increase in gross revenues from sales of alumina, from US$ 159 million in 2002 to US$ 495 million in 2003. The increased alumina gross revenues primarily reflect the completion of a capacity expansion at Alunorte that went on-line in April 2003, increasing Alunorte s capacity from 1.6 million tons per year to 2.4 million tons per year. Average selling prices for alumina were 16.1% higher in 2003, reflecting the increase in worldwide demand for alumina. The inclusion of a full year

of Alunorte s results in 2003, compared with only 6 months in 2002, also positively affected gross revenues in 2003.

A 14.3% increase in gross revenues from sales of aluminum, from US$ 280 million in 2002 to US$ 320 million in 2003. The increase in gross revenues from aluminum resulted from increased worldwide demand for aluminum, which led to a 7.1% increase in volume sold, and a 3.1% increase in average selling prices.

A 60.9% increase in gross revenues from sales of bauxite, from US$ 23 million in 2002 to US$ 37 million in 2003. The increase in gross revenues from bauxite resulted from a 30.8% increase in volume sold and a 22.9% increase in average selling prices. The expansion of MRN s capacity from 11 million tons per year to 16 million tons per year completed in 2003 was the primary driver behind the volume increase. The price increase reflected a general rise in worldwide bauxite prices.

Other products and services

Gross revenues from other products and services increased 45.0%, from US$ 20 million in 2002 to US$ 29 million in 2003, primarily reflecting the sale by RDMN of excess energy to third parties in the Norwegian market during the conversion of its plant, which more than offset the decline in revenues due to the sale of our forestry assets, which was completed in 2002.

Operating costs and expenses

The following table summarizes our operating costs and expenses for the periods indicated.

	Year ended December 31,		
	2003	**2002**	**% change**
	(in millions of US$)		
Cost of ores and metals	US$2,066	US$1,579	30.8%
Cost of logistic services	370	252	46.8
Cost of aluminum-related products	678	412	64.6
Others	14	20	(30.0)
Cost of goods sold	3,128	2,263	38.2
Selling, general and administrative expenses	265	224	18.3
Research and development	82	50	64.0
Employee profit sharing plan	32	38	(15.8)
Other costs and expense	199	119	67.2
Total operating costs and expenses	US$3,706	US$2,694	37.6

Cost of goods sold

General. Total cost of goods sold increased 38.2%, from US$ 2,263 million in 2002 to US$ 3,128 million in 2003. CVRD s costs, as expressed in U.S. dollars, were positively affected by the depreciation of the *real* against the U.S. dollar because the majority of CVRD s costs and expenses are denominated in *reais*. The average R$/US$ exchange was R$ 2.9286 during 2002 and R$ 3.0722 during 2003, representing a nominal depreciation of 4.9%. At the same time, inflation as measured by the IGP-M, reached 8.7% in 2003, contributing to increases in our costs.

The major factors behind the increase in cost of goods sold during 2003 were:

Material costs increased by US$ 283 million in 2003 due to the significant increase in our total production, combined with a 43% increase in the price of fuel. Fuel and gas expenses accounted for 46.1% of our total materials cost in 2003, compared with 40.5% in 2002.

Cost of outsourced services increased by US$ 248 million in 2003. The principal component of this line was an increase in costs for outsourced logistics services resulting from our consolidation of Caemi beginning in September 2003. Unlike our Northern and Southern systems, where we use our own railroads, Caemi uses a third-party logistics provider MRS Logística to transport its iron ore to the port. Caemi accounted for US$ 94 million in outsourced logistics costs in 2003. In 2003, our western mines in the Southern System also transported a portion of their output via MRS Logística, for a total freight cost of US$ 39 million in 2003 compared with US$ 28 million in 2002.

Expenditures on purchases of products other than iron ore and pellets increased from US$ 422 million

in 2002 to US$ 604 million in 2003. The 40.3% increase in alumina production meant proportional growth in purchases of bauxite from MRN, accounting for US$ 115 million in expenses. Similarly an increase in sales volume and prices of primary aluminum translated into an increase of about US$ 39 million in our take-or-pay commitment to Albras.

We incurred US$ 46 million in demurrage expenses in 2003 due to congestion in our ports resulting from excess demand for iron ore and the resulting pressure on our logistics system.

Cost of ores and metals. Cost of ores and metals sold increased by 30.8% to US$ 2,066 million in 2003 from US$ 1,579 million in 2002, primarily due to increased production volumes required by the 13.5% increase in sales of iron ore and pellets. A portion of the increase in the cost of ores and metals sold also reflects the higher costs associated with purchases of iron ore from third parties to meet excess demand. The cost of ores and metals during 2003 also includes US$ 147 million in costs generated by Caemi after its consolidation beginning in September 2003.

Cost of logistic services. Cost of logistic services increased by 46.8%, from US$ 252 million in 2002 to US$ 370 million in 2003. Of the US$ 118 million increase, US$ 71 million relates to costs generated by FCA after its consolidation beginning in September 2003. The remaining increase in costs resulted primarily from an increase in the number of ships chartered by Docenave.

Cost of aluminum-related products. Cost of aluminum-related products increased by 64.6%, from US$ 412 million in 2002 to US$ 678 million in 2003. The increase is primarily due to the increase in Alunorte s production capacity and the consolidation of Alunorte beginning in June 2002, which increased our consolidated costs by US$ 205 million during 2003 compared with 2002.

Cost of other products and services. Cost of other products and services declined 30.0%, from US$ 20 million in 2002 to US$ 14 million in 2003, primarily due to the end of pulp purchases following our exit from the pulp and paper business.

Selling, general and administrative expenses

Selling, general and administrative expenses increased 18.3%, from US$ 224 million in 2002 to US$ 265 million in 2003. We experienced higher *real*-denominated expenses in 2003 related to increased sales volumes. As expressed in U.S. dollars, these expenses were partially offset by the depreciation of the *real* against the U.S. dollar.

Other costs and expenses

Other costs and expenses increased from US$ 119 million in 2002 to US$ 199 million in 2003. The US$ 80 million increase was primarily attributable to a US$ 31 million increase in provisions for ICMS taxes, a US$ 12 million write-off of assets at the São Luis pelletizing plant and US$ 8 million of contingencies. In 2002, we recorded US$ 49 million of income due to the sale of certain forestry assets of our subsidiary Florestas Rio Doce S.A.

Operating Income by Segment

The following table provides information concerning our operating income by segment and as a percentage of revenues for the periods indicated.

	Year ended December 31,			
	2003		2002	
	Operating income (loss)	% of net operating revenues	Operating income (loss)	% of net operating revenues
	(in millions of US$)		(in millions of US$)	
Ferrous minerals				
Iron ore	US$1,164	45%	US$1,082	52%
Pellets	169	22	101	15
Manganese ore	7	n.a.	5	16
Ferroalloys	34	28	59	25
Non-ferrous minerals				
Gold	17	81	(33)	n.a.
Potash	35	43	32	41
Kaolin	4	4	15	34
Aluminum-related				
Alumina	109	24	32	21
Aluminum	25	8	26	9
Bauxite	3	8	1	4
Logistics				
Railroads	111	33	128	49
Ports	46	35	22	23
Ships	(38)	n.a.	(20)	n.a.
Others	(42)	n.a.	(21)	n.a.
Total	US$1,644	30.7	US$1,429	34.7

Our operating income as a percentage of net operating revenues declined from 34.7% in 2002 to 30.7% in 2003. The decline was driven primarily by:

a decline in the operating profitability of our iron ore business due mainly to the consolidation of Caemi in September 2003. As described above, Caemi uses a third-party railroad to transport its iron ore from the mine to the port, resulting in higher costs for outsourced services; and

a decline in the operating profitability of our railroad business due principally to the consolidation of FCA in

September 2003. FCA is less profitable than our other railroads, primarily as a result of a more expensive concession contract.

Our margins in our kaolin business dropped sharply in 2003, driven both by a significant increase in operating costs at PPSA in 2003 and by the recording of impairment charges in 2003 relating to value-added taxes at both Cadam and PPSA.

Non-operating income (Expenses)

The following table details our non-operating income (expenses) for the periods indicated.

	Year ended December 31,	
	2003	**2002**
	(millions of US$)	
Financial income	US$ 102	US$ 127
Financial expenses	(351)	(375)
Foreign exchange and monetary gains (losses) net	242	(580)
Gain on sale of investments	17	
Non-operating income (expenses)	US$ 10	US$ (828)

Net non-operating income in 2003 amounted to US$ 10 million, compared to net non-operating expenses of US$ 828 million in 2002. This change primarily reflects:

The effect of exchange rate movements on our net U.S.-dollar denominated liabilities (mainly short and long-term debt, less cash and cash equivalents), which generated a net foreign exchange gain of US$ 222 million in 2003, compared to a loss of US$ 515 million in 2002.

A decrease in financial income from US$ 127 million in 2002 to US$ 102 million in 2003 due to lower cash balances and reductions in interest rates.

A decrease in financial expenses from US$ 375 million in 2002 to US$ 351 million in 2003, principally due to the recognition, in 2002, of US$ 60 million relative to losses on interest rate derivatives against only US$ 3 million in 2003 and lower interest rates.

A net gain of US$ 17 million, reflecting a gain of US$ 61 million on the sale of Fosfértil in October 2003, less a loss of US$ 44 million on the sale of CFN in November 2003.

Income Taxes

In 2003, we recorded a net tax expense of US$ 297 million, compared to a net tax benefit of US$ 149 million in 2002. The difference resulted primarily from:

An increase in tax expense at nominal statutory rates from US$ 204 million in 2002 to US$ 562 million in 2003 due to higher pre-tax income.

Accrual of a US$ 59 million expense in respect of exempt foreign income in 2003, compared to a tax benefit of US$ 196 million in 2002. This change resulted primarily from the effects of the foreign exchange variations on the foreign assets that are exempt for tax purposes.

Accrual of a US$ 56 million expense related to the difference on tax basis of equity investees in 2003, compared to a tax benefit of US$ 20 million in 2002. This resulted mainly from effect of the deductible amortization of goodwill for local tax purposes.

An increase in tax incentives from US$ 4 million in 2002 to US$ 60 million in 2003 due to the iron ore and alumina incentives on the higher income tax basis in 2003.

The above factors were partially offset by the tax benefit of tax-deductible dividends that we pay in the form of interest on shareholders equity, which amounted to US$ 271 million in 2003, as compared to US$ 99 million in 2002.

Affiliates and Joint Ventures

Our equity in the results of affiliates and joint ventures and provisions for losses on equity investments resulted in a gain of US$ 306 million in 2003, compared to a loss of US$ 87 million in 2002. The following table summarizes the composition of our equity in results of affiliates and joint ventures and provisions for losses on equity investments for the periods indicated.

	Year ended December 31,	
	2003	**2002**
	(in millions of US$)	
Equity in results of affiliates and joint ventures and provision for losses on equity investments		
Ferrous	US$ 133	US$ (66)
Logistics	(52)	(88)
Aluminum and Bauxite	147	39
Steel	81	23
Others	(3)	5
Total equity in results of affiliates and joint ventures and provisions for losses	US$ 306	US$ (87)

Iron ore and pellets. Our equity in the results of iron ore and pellet affiliates and joint ventures and provisions for losses on equity investments amounted to a gain of US$ 133 million in 2003, compared to a loss of US$ 66 million in 2002. The higher gain in 2003 resulted primarily from improved results at Samarco and Kobrasco and improved results at Caemi prior to its consolidation in September 2003. The loss in 2002 also reflected a write-down in the value of our investment in Caemi to its fair value, which resulted in recognition of a loss of US$ 86 million. The improvements at each of these affiliates were due to strong demand in the market for iron ore and pellets.

Logistics. In 2003, our equity in the results of logistics affiliates and joint ventures and provisions for losses on equity investments amounted to a net loss of US$ 52 million, compared with a net loss of US$ 88 million in 2002. The lower net loss in 2003 was driven primarily by improved results at MRS Logística, which partially offset the recording of higher provisions for losses related to FCA in 2003 than in 2002. We recorded higher provisions for losses related to FCA in 2003 due to asset impairment provisions.

Aluminum-related. Our equity in the results of our aluminum-related affiliates and joint ventures and provisions for losses on equity investments improved from a net gain of US$ 39 million in 2002, compared to a net gain of US$ 147 million in 2003. The improvement was driven by improved results at Albras, which more than offset a decline in the net gains we recorded on our investments in Valesul and MRN compared to 2002. The result in 2002 included a net loss of US$ 23 million related to Alunorte prior to its consolidation beginning in June 2002.

In 2003, our aluminum-related affiliates recorded exchange gains due to the effects of the appreciation of the *real* at December 31, 2003, compared to December 31, 2002, on their foreign currency denominated debt. In addition to exchange rate effects, the operating results of Albras, Valesul and MRN in 2003 were influenced by the following

factors:

Albras. In 2003, Albras generated net income of US$ 198 million on net sales of US$ 592 million, compared to a net loss of US$ 22 million in 2002 on net sales of US$ 529 million. Our portion of net income of Albras was US$ 104 million in 2003, compared with a reversal of a provision for losses of US$ 10 million in 2002. The 11.9% increase in net sales at Albras resulted primarily from a 6.9% increase in sales volume due to increased worldwide demand for aluminum and process improvements that helped expand production capacity. This increase in sales volume was reinforced by a 4.4% increase in the average sales price of aluminum from US$ 1,306.38 per ton in 2002 to US$ 1,363.68 per ton in 2003. The impact of the appreciation of the *real* on Albras foreign currency denominated debt was the main driver for the increase in earnings during the period.

Valesul. In 2003, Valesul generated net income of US$ 18 million on net sales of US$ 157 million, compared to net income of US$ 25 million in 2002 on net sales of US$ 139 million. CVRD s portion of the net income of Valesul was US$ 10 million in 2003, compared to US$ 14 million in 2002. The decline in net income at Valesul was driven primarily by an increase in electricity costs, which more than offset the improvement in net sales.

MRN. In 2003, MRN generated net income of US$ 81 million on net sales of US$ 254 million, compared to net income of US$ 94 million in 2002 on net sales of US$ 173 million. Our portion of the net income of MRN was US$ 33 million in 2003 and US$ 38 million in 2002. The revenue increase was driven by a 42.2% increase in sales volume, due principally to a capacity expansion completed in March 2003, and a 1.5% increase in average selling prices for bauxite. Net income was lower in 2003 due to higher financial expenses related to the financing of the capacity expansion, and the inclusion in MRN s 2002 results of a gain on the sale by MRN of its shares of Alunorte.

Steel. In 2003, we recorded a net gain of US$ 81 million in respect of our equity in the results of steel affiliates and joint ventures, compared to a net gain of US$ 23 million in 2002. The increase reflects improved performance at Usiminas and CST, which more than offset lower returns at CSI. The improved performance at CST primarily reflects a 23.4% increase in average selling prices, reflecting higher slab prices and the start up of sales of hot rolled coils (HRC), a higher value product. The improved performance at Usiminas primarily reflects the positive impact of exchange rate variations on Usiminas U.S. dollar-denominated debt. CSI s net income declined in 2003 primarily due to a sharp increase in the cost of steel slabs, an important raw material for its operations, which reduced CSI s gross margins.

2002 Compared to 2001

Revenues

The following table summarizes our gross revenues by product and our net operating revenues for the periods indicated:

	For the Year Ended December 31,		
	2002	**2001**	**% change**
	(in millions of US$)		
Iron ore and pellets			
Iron ore	US$2,147	US$2,003	7.2%
Pellets	673	597	12.7
Subtotal	2,820	2,600	8.5
Gold	103	139	(25.9)
Manganese ore and Ferroalloys	283	259	9.3
Potash	91	71	28.2
Others	45	41	9.8
Revenues from logistic services	458	608	(24.7)
Aluminum-related products	462	284	62.7
Other products and services	20	75	(73.3)
Gross Revenues	4,282	4,077	5.0
Value Added Tax	(159)	(142)	12.0

Net Operating Revenues	US$4,123	US$3,935	4.8

Net operating revenues increased 4.8% to US$ 4,123 million in 2002 from US$ 3,935 million in 2001. This increase reflected higher gross revenues from our iron ore and pellets, aluminum-related products and other mining products, which were partially offset by decreases in gross revenues from logistics, gold and other products and services.

Iron ore and pellets

Gross revenues from iron ore and pellets increased 8.5% to US$ 2,820 million in 2002 from US$ 2,600 million in 2001, reflecting a 10.4% increase in volume sold, partially offset by lower average selling prices.

Sales of iron ore attained record levels in 2002, amounting to 143.6 million tons in 2002, compared to 130.8 million tons in 2001, an increase of 9.8%. The expansion seen in sales of pellets was greater in percentage terms than sales growth for iron ore, reflecting the strong demand for steel and the use of pellets to increase the productivity of blast furnaces in making steel, particularly in China. Pellet sales rose from 17.9 million tons in 2001 to 20.6 million tons in 2002, a 14.8% increase. The increase in volume of iron ore and pellets in 2002 was driven primarily by strong demand from China, where increased demand for consumer durables, coupled with substantial investment in infrastructure and housing, resulted in sharply higher steel consumption, leading Chinese steelmakers to dramatically increase their purchases of iron ore and pellets. Demand in our other principal markets was stable.

Actual average selling prices for iron and pellets declined by 1.7%, reflecting an across-the-board reduction in reference prices following the 2002 price negotiations with steel manufacturers, and a decrease of 0.2% due to an increase in the proportion of pellets in the product mix, which accentuated the effect of reductions in pellet prices.

Gold

Revenues from gold sales decreased 25.9% to US$ 103 million in 2002 from US$ 139 million in 2001, reflecting a 34.8% decrease in volume sold, which was partially offset by an 8.9% increase in average selling prices. The 34.8% decrease in volume from 508,472 troy ounces in 2001 to 331,479 troy ounces in 2002 was primarily due to the closure of our Igarapé Bahia gold mine in 2002 and reduced production at Fazenda Brasileiro, which is nearing the end of its productive life and has encountered lower gold yields. We have since agreed to sell Fazenda Brasileiro as described above. The 8.9% increase in average selling prices reflects the increase in world gold prices during 2002 as a result of increased political uncertainty, lower equity prices, weakness in the U.S. dollar and other factors which made gold an attractive alternative investment.

Manganese ore and ferroalloys

Gross revenues from sales of manganese ore and ferroalloys increased by 9.3%, from US$ 259 million in 2001 to US$ 283 million in 2002, driven by higher sales of ferroalloys, which more than offset a decline in sales of manganese ore. Gross revenues from ferroalloys increased by US$ 45 million, or 22%, driven by a 107% increase in volume resulting from strong demand for steel and from the end of the energy rationing in Brazil, which was partially offset by a decline in prices due to the shift in product mix. Gross revenues from sales of manganese ore declined by US$ 21 million, or 37%, primarily as a result of a 27% decline in volume. The decline in manganese ore volumes resulted primarily from the delay of a major shipment in December 2002. Average selling prices for manganese ore fell by 15% in 2002, driven by lower overall demand for manganese ore from the steel industry at the time the annual prices were established.

Potash

Gross revenues from sales of potash increased by 28.2%, from US$ 71 million in 2001 to US$ 91 million in 2002, primarily due to a 45% increase in volume, which more than offset a 16.7% decline in average selling prices. The significant increase in volume resulted from strong demand from the domestic fertilizer sector. The decline in average selling prices primarily reflects a reduction in prices to match our international competitors.

Others

Gross revenues from sales of kaolin increased by 9.8%, from US$ 41 million in 2001 to US$ 45 million in 2002, mainly due to an increase in sales volume as well as higher average selling prices.

Logistic services

Gross revenues from logistic services decreased by 24.7% to US$ 458 million in 2002 from US$ 608 million in 2001. This reduction is principally due to a decrease of US$ 140 million in our world-wide logistics revenues due principally to our divestitures in the dry-bulk shipping business in the second half of 2001. It also reflects the impact of a decrease relating to revenues from services provided to Ferteco and Samitri in 2001 prior to our acquisition of these companies. In addition, gross logistics revenues were adversely affected by the devaluation of the *real*, which largely offset increases in volumes in the domestic market. General cargo shipped by our railroads increased by 14.0%, from 12,900 million net ton kilometers in 2001 to 14,700 million net ton kilometers in 2002. The increase in volume reflects strong increases in the transport of grains and soybeans, increases in steel shipments, and increases in the inter-modal transport of containers, which exploits the connections between highway transportation, rail, ports and coastal shipping. Our ports handled 26.3 million tons of general cargo in 2002, compared with 21.7 million tons in the previous year.

Aluminum-related products

Revenues from aluminum products (bauxite, alumina, aluminum) increased 62.7% to US$ 462 million in 2002 from US$ 284 million in 2001. Of the total increase of US$ 178 million, US$ 124 million was due to the consolidation of Alunorte beginning June 30, 2002, when we acquired control of this previously affiliated company. The remaining US$ 54 million resulted from:

resales by us of increased aluminum purchased from our affiliate Albras, under take-or-pay arrangements, reflecting Albras increase in production capacity beginning at the start of 2002 and the end of energy rationing; and

US$ 21 million in resales of alumina purchased from third parties to meet excess customer demand at Alunorte.

Other products and services

Revenues from other products and services decreased 73.3% to US$ 20 million in 2002 from US$ 75 million in 2001, reflecting our exit from the pulp and paper business, which began in 2001 with the sale of Bahia Sul and Cenibra, and was completed in 2002 upon the sale of approximately 47,700 hectares of Eucalyptus forest owned by our subsidiary Florestas Rio Doce S.A.

Operating costs and expenses

The following table summarizes our operating costs and expenses for the periods indicated.

	For the Year Ended December 31,	
	2002	**2001**
	(in millions of US$)	
Cost of ores and metals sold	US$ 1,579	US$ 1,550
Cost of logistic services	252	378
Cost of aluminum-related products	412	269
Others	20	75
Cost of goods sold	2,263	2,272
Selling, general and administrative expenses	224	241
Research and development, employee profit sharing and other costs and expenses	207	460
Total operating costs and expenses	US$ 2,694	US$ 2,973

Cost of goods sold

Total cost of goods sold decreased 0.4% to US$ 2,263 million in 2002 from US$ 2,272 million in 2001. Our costs, as expressed in U.S. dollars, were favorably affected by the significant devaluation of the *real* against the U.S. dollar during the period (from R$ 2.3204 to US$ 1.00 at December 31, 2001 to R$ 3.5333 to US$ 1.00 at December 31, 2002, or a devaluation of 34.3%), because the majority of these costs and expenses are denominated in *reais.* The average rate of exchange was R$ 2.9286 to US$ 1.00 during 2002 and R$ 2.2464 to US$ 1.00 during 2001, representing a devaluation of 23.3%. The average rate of devaluation is lower than year-on-year devaluation because the exchange rate movements were concentrated in the second half of 2002.

Cost of ores and metal sold increased 1.8% to US$ 1,579 million in 2002 from US$ 1,550 million in 2001, primarily due to increased production volumes required by the 10.3% increase in sales of iron ore and pellets, offset by an near-equivalent decrease attributed to the effects of devaluation of the *real* on our domestic costs (approximately 52% of our total costs is denominated in *reais*) net of wage and price increases linked to local inflation. The amount in 2002 also includes US$ 22 million in gold derivatives losses. A portion of the increase in cost of ores and metal sold also reflects higher costs associated with purchases of iron ore from third parties to meet excess demand.

Cost of logistic services decreased 33.3% to US$ 252 million in 2002 from US$ 378 million in 2001, whereas our corresponding revenue decreased only 24.7%. The decrease in costs at a rate greater than the decrease in revenue is due to the effects of the devaluation of the *real* on our domestic costs as described above.

Cost of aluminum-related products increased 53.2% to US$ 412 million in 2002 from US$ 269 million in 2001. The increase is partly due to the consolidation of Alunorte beginning on June 30, 2002, which contributed

US$ 91 million to consolidated costs. The remaining US$ 52 million cost increase relates to the take-or-pay arrangements and third party sales described above. The effects of exchange rate movements on the cost of aluminum-related products were insignificant, since the related costs are primarily determined by international market prices.

Cost of other products and services decreased 73.3% to US$ 20 million in 2002 from US$ 75 million in 2001, reflecting principally the decreases in volumes of pulp purchases as a result of our divestitures in this line of business.

Selling, general and administrative expenses

Selling, general and administrative expenses decreased 7.1% to US$ 224 million in 2002 from US$ 241 million in 2001, due principally to the favorable effects of exchange rate movements, partly offset by the effects of increased selling expenses due to increased volumes. As a percentage of net operating revenues, selling, general and administrative expenses declined from 6.1% in 2001 to 5.4% in 2002.

Research and development, employee profit sharing and other operating costs and expenses

Research and development, employee profit sharing and other costs and expenses decreased 55.0% to US$ 207 million in 2002 from US$ 460 million in 2001. This decrease resulted primarily from a US$ 260 million reduction in other operating costs and expenses, which more than offset a US$ 7 million increase in research and development expenses.

The US$ 260 million reduction in other operating costs and expenses primarily reflects three asset impairment provisions that occurred in 2001:

- plant and equipment impairment provisions of US$ 67 million and US$ 34 million due to impairment of certain shipping assets;
- amortization of goodwill of US$ 34 million; and
- a write-off of value added taxes of US$ 54 million on products purchased based on our agreement with a state government.

The reduction also reflects:

- a US$ 26 million reduction in contingency provisions, to US$ 53 million in 2002 from US$ 79 million in 2001; and
- a gain in 2002 of US$ 49 million on the sale of certain forestry assets of our subsidiary Florestas Rio Doce S.A.

Together, these two factors more than offset a US$ 40 million provision in 2002 related to the acceleration of the expected closing date for our Fazenda Brasileiro gold mine, from 2009 to 2005.

Non-Operating Income (Expenses)

	For the Year Ended December 31,	
	2002	**2001**

	(in millions of US$)	
Financial income	US$ 127	US$ 135
Financial expenses	(375)	(335)
Foreign exchange and monetary losses, net	(580)	(426)
Gain on sale of investments		784
Non-operating income (expenses)	US$ (828)	US$ 158

Net non-operating expenses in 2002 were US$ 828 million, compared to net non-operating income of US$ 158 million in 2001. The principal reasons for this change were:

the negative effect of exchange rate movements on our net U.S.-dollar denominated liabilities (mainly short and long-term debt less cash and cash equivalents). Our net foreign exchange losses amounted to US$ 515 million in 2002, compared to US$ 410 million in 2001; and

gains of US$ 784 million in 2001 upon divestitures of our interests in Bahia Sul, CSN and Cenibra.

In addition, our financial income decreased to US$ 127 million in 2002 from US$ 135 million in 2001, due primarily to lower international interest rates following the terrorist attacks in the United States in September 2001. Our financial expenses increased to US$ 375 million in 2002 from US$ 335 million in 2001 mainly due to our consolidation of Alunorte, which increased our financial expenses by US$ 14 million in the second half of 2002, and to US$ 60 million in losses we incurred on interest rate derivatives.

In 2002, we included the cost of contractual increases in supplementary benefits related to early retirement programs (US$ 35 million in 2002) in financial expenses. Until 2001, this cost had been recorded under other operating expenses. In 2001, this cost was US$ 33 million.

Income Taxes

In 2002, we recorded a tax benefit of US$ 149 million, as compared to a tax benefit of US$ 218 million in 2001. Our tax expense at statutory rates would have been US$ 204 million in 2002 and US$ 381 million in 2001. The difference is principally due to the tax benefit of tax-deductible dividends that we pay in the form of interest on shareholders equity, which amounted to US$ 99 million in 2002, as compared to US$ 260 million in 2001, and US$ 196 million due to tax-exempt foreign income in 2002, as compared to US$ 226 million in 2001.

Affiliates and Joint Ventures

Our equity in the results of affiliates and joint ventures and provisions for losses on equity investments in aggregate totaled a loss of US$ 87 million in 2002, compared to a loss of US$ 53 million in 2001.

Iron ore and pellets. Our equity in the results of iron ore and pellet affiliates and joint ventures amounted to a loss of US$ 55 million in 2002, compared to a loss of US$ 7 million in 2001. The loss in 2002 included a charge of US$ 86 million for a goodwill write-down relating to our investment in Caemi, which more than offset improved results at several of our other pellet joint ventures, including Samarco, where earnings were helped by volumes that increased by 29% and the elimination of goodwill amortization expenses in 2002. The writedown of our investment at Caemi reflects the decline in the listed market price of Caemi s preferred shares. We also recorded a provision for losses at Kobrasco in the amount of US$ 14 million.

Aluminum and bauxite. Our equity in the results of aluminum and bauxite affiliates and joint ventures declined from US$ 37 million in 2001 to US$ 29 million in 2002, and we recorded a US$ 10 million release of a provision related to our investment in Albras. Our portion of Alunorte s losses up until the time we acquired control in June 2002 was US$ 23 million, compared to losses of US$ 6 million for the whole of 2001. The increased losses at Alunorte primarily reflect the effects of the devaluation of the *real* on Alunorte s U.S.-dollar denominated debt.

Like Alunorte, in 2002, our affiliates in the aluminum sector recorded increased losses due to the effects of the depreciation of the *real* on their foreign currency denominated debt. In addition to exchange rate effects, the operating results of Albras and MRN in 2002 compared to 2001 were influenced by the following factors:

Albras. In 2002, Albras generated net income of US$ 20 million on net sales of US$ 529 million. This compares to net income of US$ 8 million in 2001 on net sales of US$ 472 million. Our portion of net income of Albras was US$ 10 million in 2002, compared with US$ 4 million in 2001. The increase in sales at Albras primarily reflects a 22.3% increase in sales volume resulting from a capacity expansion completed at the beginning of 2002. This increase in volume was partially offset by an 8.6% decline in the average sales price of aluminum from US$ 1,428 per ton in 2001 to US$ 1,306 per ton in 2002.

MRN. In 2002, MRN generated net income of US$ 94 million on net sales of US$ 173 million. This compares to net income of US$ 81 million in 2001 on net sales of US$ 211 million. Our portion of the net income of MRN was US$ 38 million in 2002, compared with US$ 32 million in 2001. MRN s revenues declined in 2002 due to an 8.1% reduction in the average sales price of bauxite to US$ 18.95 per ton in 2002 from US$ 20.63 per ton in 2001, and a 9.3% decline in sales volume to 9.9 million tons in 2002 from 10.9 million tons in 2001 due to lower demand in the first half of the year and interference from the expansion work in the second half of the year. However, since most of MRN s costs are incurred in *reais*, the reduction in costs as expressed in U.S. dollars more than offset the reduction in revenue, resulting in an increase in net income.

Steel. Our equity in the results of steel affiliates and joint ventures increased from US$ 5 million in 2001 to US$ 23 million in 2002, reflecting higher net income at CST and CSI, which more than offset a loss at Usiminas. The improved performance at CSI primarily reflects lower energy costs in 2002 in California. The improved performance in CST primarily reflects higher average sales prices partially offset by a decline in volumes of slabs sold. The loss at Usiminas primarily reflects the effects of the devaluation of the *real* on Usiminas U.S. dollar-denominated debt.

Paper and pulp. Reflecting our sale of Cenibra and Bahia Sul in 2001, we recorded no equity in results of paper and pulp affiliates and joint ventures in 2002. These companies had contributed in aggregate US$ 20 million to our equity results up to the date of sale.

Other affiliates and joint ventures. Our equity in the results of other affiliates and joint ventures amounted to a loss of US$ 25 million in 2002, compared to a loss of US$ 95 million in 2001. We recorded a provision for losses related to FCA of US$ 42 million in 2002, after recording a loss of US$ 95 million in 2001 (which had included a US$ 74 million write-off of goodwill). In addition, our affiliate MRS Logística generated significant losses in 2002, of which our portion was US$ 20 million; in addition to this amount, we recorded a provision for losses of US$ 7 million related to MRS Logística. We and the other shareholders of these companies continue to explore various alternatives to restructure their businesses.

Upon adoption of SFAS 142 Goodwill and other intangible assets, beginning January 1, 2002, we ceased amortizing goodwill. In 2001, we recorded goodwill amortization of US$ 45 million relating to us and our consolidated subsidiaries and US$ 47 million related to equity investees.

Liquidity and Capital Resources

Overview

Our principal uses of funds are for capital expenditures, dividend payments and repayment of debt. We have historically met these requirements by using cash generated from operating activities and through short-term and long-term debt. We believe these sources of funds, together with our cash and cash equivalents on hand, will continue to be adequate to meet our currently anticipated capital requirements.

In addition, from time to time, we review acquisition and investment opportunities and will, if a suitable opportunity arises, make selected acquisitions and investments to implement our business strategy. We generally make investments either directly or through subsidiaries, joint ventures or affiliated companies, and fund these investments through internally generated funds, the issuance of debt or a combination of these methods.

In 2004, our major cash needs include announced expected capital expenditures of US$ 1,815 million, an announced minimum cash dividend of US$ 550 million, and repayment or refinancing of US$ 1,257 million in long-term debt that matures in 2004. We expect to meet our cash needs for 2004 primarily through a combination of operating cash flow, cash and cash equivalents on hand and new long-term debt.

Sources of Funds

Our principal sources of liquidity are cash and cash equivalents on hand and cash flows from operating activities. At December 31, 2003, we had cash and cash equivalents of US$ 585 million. Our operating activities generated positive net cash flows of US$ 1,757 million in 2003.

In addition to the above sources of liquidity, we believe we are well-positioned to raise additional capital in the debt markets. We are among the most highly rated Brazilian corporate borrowers, which we believe enhances our ability to access the debt markets. Our most recent bond offering, in January 2004, was rated Ba2 by Moody s, three notches above the Brazilian sovereign debt rating.

CVRD uses committed credit line instruments with the aim of improving the efficiency of its cash management and alleviating debt refinancing risks during moments of instability in financial markets. To this end, US$ 500 million in global committed credit line facilities have been established with the main commercial banks, US$ 400 million of which can be used over a period of up to one year after the date of disbursement, with a repayment period of up to one year, and US$ 100 million, which can be used for a period of up to 24 months, with a repayment period of 36 months after the contract is signed. These credit lines will be made available to CVRD although we do not intend to use them unless liquidity becomes excessively tight.

We have completed two major financings since the end of 2003.

In December 2003, we filed a US$ 2,000 million shelf registration statement with the U.S. Securities and Exchange Commission. We completed our first offering under the shelf registration statement in January 2004, issuing US$ 500 million in 30-year guaranteed notes through Vale Overseas Limited, leaving us with remaining capacity under our shelf registration statement of US$ 1,500 million. The January 2004 bond offering raised net proceeds of US$ 490.4 million.

In March 2004, we entered into a syndicated loan, which will be disbursed in installments by a bank syndicate, in the amount of US$ 300 million. The term of the loan is seven years, with an average life of 4.25 years. The cost is

the 6-month LIBOR plus 0.7% per annum. This transaction has 97.5% of political risk insurance and 95% of commercial risk insurance provided by the Japanese agency Nippon Export and Investment Insurance (NEXI). The facility is unsecured and there is no link to imports or export receivables. In April we drew US$ 200 million under this facility and the remaining US$ 100 million may be disbursed at any time prior to March 2005.

Uses of Funds

Capital expenditures

In 2003, we used US$ 1,991 million in investing activities, of which US$ 1,543 million constituted capital expenditures. We have budgeted a total of US$ 1,815 million for capital expenditures in 2004. This amount

includes expenditures on projects as well as expenditures for maintenance and exploration. See *Item 4. Information on the Company Capital Expenditures.*

Dividends

We paid aggregate dividends of US$ 675 million in 2003. For 2004, CVRD has announced a minimum dividend of US$ 550 million.

Debt

At December 31, 2003, our aggregate outstanding debt was US$ 4,028 million, consisting of short-term debt of US$ 1,257 million (including US$ 1,009 million in current portion of long-term debt and US$ 119 million in loans from related parties), and long-term debt of US$ 2,771 million (including US$ 4 million in loans from related parties). We describe the average interest rates and security interests granted on our long-term debt in Note 15 to our audited financial statements.

Our short-term debt consists primarily of U.S. dollar-denominated trade financing, mainly in the form of export prepayments and export sales advances with foreign and Brazilian financial institutions.

Our major categories of long-term indebtedness (including the current portion of long-term debt) are as follows:

U.S. dollar-denominated foreign loans and financing (US$ 1,621 million at December 31, 2003). These loans primarily include export financing lines, import finance from export credit agencies, loans from commercial banks and multilateral organizations. The loans generally bear floating rate interest at spreads over LIBOR. In April 2004, we drew US$ 200 million under a syndicated loan facility.

U.S. dollar-denominated fixed rate notes (US$ 900 million at December 31, 2003). We have issued several series of fixed rate bonds both at the CVRD parent company level and through our finance subsidiary Vale Overseas Limited with a CVRD guarantee. The US$ 900 million outstanding at December 31, 2003 includes US$ 300 million of 9.0% guaranteed notes due 2013 issued by Vale Overseas in August 2003, US$ 300 million of 8.625% enhanced guaranteed notes due 2007 issued by Vale Overseas in March 2002 and US$ 300 million of 10.0% notes due April 2004 issued by CVRD in April 1996. In January 2004, Vale Overseas Limited issued US$ 500 million in 8.25% Guaranteed Notes due 2034.

U.S. dollar-denominated export securitizations (US$ 525 million outstanding at December 31, 2003). We have a US$ 550 million securitization program based on existing and future receivables generated by our subsidiary CVRD Overseas Ltd that relates to exports of iron ore and pellets to six of our customers in Europe, Asia and the United States. The securitization transaction is divided into three fixed rate tranches and one floating rate tranche.

Perpetual notes (US$ 65 million at December 31, 2003). We have issued perpetual notes that are exchangeable for 48,000 million preferred shares of MRN. Interest is payable on the notes in an amount equal to dividends paid on the underlying preferred shares relating to periods beginning with the 2000 fiscal year.

Local debt (US$ 551 million at December 31, 2003). We have a series of Brazilian loans, principally from BNDES, most of which are indexed to U.S. dollars, and the remainder of which are linked to baskets of currencies or floating rates in Brazil.

Some of our long-term debt instruments contain financial covenants. Our principal covenants require us to maintain certain ratios, such as debt to equity, net debt to EBITDA and interest coverage. We were in full compliance

with our financial covenants as of December 31, 2003, and we believe that our existing covenants will not significantly restrict our ability to borrow additional funds as needed to meet our capital requirements. We believe we will be able to operate within the terms of our financial covenants for the foreseeable future. None of these covenants directly restricts our ability to pay dividends on equity securities at the parent company level.

For additional information about our debt, please see Notes 14 and 15 to our audited financial statements.

Shareholder debentures

At the time of the first stage of our privatization in 1997, we issued debentures to our shareholders. The terms of the debentures were established to ensure that our pre-privatization shareholders, including the Brazilian government, would participate alongside us in potential future financial benefits that we derive from exploiting certain mineral resources that were not taken into account in determining the minimum purchase price of our shares in the privatization. In accordance with the debentures deed, holders have the right to receive semi-annual payments equal to an agreed percentage of our net revenues (revenues less value added tax, transport fee and insurance expenses related to the trading of the products) from certain identified mineral resources that we owned at the time of the privatization, to the extent that we exceed defined thresholds of sales volume relating to certain mineral resources, and from the sale of mineral rights that we owned at that time. Our obligation to make payments to the holders will cease when the relevant mineral resources are exhausted. We made no payments under the shareholder debentures in 2003. The first payment, of R$ 0.012 per debenture, was made on March 31, 2004. See Note 18(f) to our consolidated financial statements for a description of the terms of the debentures.

Contractual Obligations

The following table summarizes our long-term debt, short-term debt, operating lease obligations, purchase obligations and Alunorte take or pay obligations at December 31, 2003. This table excludes other obligations that we may have, including pension obligations (discussed in Note 17 to our consolidated financial statements).

	Payments Due by Period				
	Total	**Less than 1 year**	**2005-2006**	**2007-2008**	**Thereafter**
			(in millions of US$)		
Long-term debt (a)(b)	US$3,776	US$1,009	US$1,044	US$752	US$971
Short-term debt (c)		248			
Operating lease obligations	841	37	74	74	656
Purchase obligations	1,217	619	262	316	20
Take-or-pay obligation (MRN)(d)	855	53	107	107	588
Take-or-pay obligation (Albras)(e)	1,510(f)	302	604	604	(e)(f)