

BRAZILIAN PETROLEUM CORP

Form 20-F

June 30, 2004

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# SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

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## FORM 20-F

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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 1-15106

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# PETRÓLEO BRASILEIRO S.A. - PETROBRAS

(Exact name of registrant as specified in its charter)

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Brazilian Petroleum Corporation -PETROBRAS  
(Translation of registrant's name into English)

The Federative Republic of Brazil  
(Jurisdiction of incorporation or organization)

Avenida República do Chile, 65

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20035-900 - Rio de Janeiro - RJ

Brazil

(Address of principal executive offices)

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

<b>Title of each class:</b>	<b>Name of each exchange on which registered:</b>
<b>Common Shares, without par value*</b> <b>American Depositary Shares (as evidenced by</b> <b>American Depositary Receipts), each representing</b> <b>1 Common Share</b>	<b>New York Stock Exchange</b>
<b>Preferred Shares, without par value*</b> <b>American Depositary Shares (as evidenced by</b> <b>American Depositary Receipts), each representing</b> <b>1 Preferred Share</b>	<b>New York Stock Exchange</b>

\* Not for trading, but only in connection with the registration of American Depositary Shares, pursuant to the requirements of the Securities and Exchange Commission.

**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**

**Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock**

**as of the close of the period covered by this Annual Report:**

**At December 31, 2003, there were outstanding:**

**634,168,418 Common Shares, without par value**

**462,369,507 Preferred Shares, without par value**

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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  No

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

Item 17  Item 18

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**FORWARD-LOOKING STATEMENTS**

Many statements made in this annual report are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, that are not based on historical facts and are not assurances of future results. Many of the forward-looking statements contained in this annual report may be identified by the use of forward-looking words, such as believe, expect, anticipate, should, planned, estimate and potential, among others. We have made forward-looking statements to address, among other things, our:

regional marketing and expansion strategy;

drilling and other exploration activities;

import and export activities;

projected and targeted capital expenditures and other costs, commitments and revenues;

liquidity; and

development of additional revenue sources.

Because these forward-looking statements involve risks and uncertainties, there are important factors that could cause actual results to differ materially from those expressed or implied by these forward-looking statements. These factors include:

general economic and business conditions, including crude oil and other commodity prices, refining margins and prevailing exchange rates;

international and Brazilian political, economic and social developments;

our ability to obtain financing;

competition;

technical difficulties in the operation of our equipment and the provision of our services;

changes in, or failure to comply with, governmental regulations;

receipt of governmental approvals and licenses;

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business abilities and judgment of personnel;

military operations, terrorists acts, wars or embargoes;

the cost and availability of adequate insurance coverage; and

other factors discussed below under Risk Factors.

All forward-looking statements are expressly qualified in their entirety by this cautionary statement, and you should not place reliance on any forward-looking statement contained in this annual report.

The crude oil and natural gas reserve data presented or described in this annual report are only estimates and our actual production, revenues and expenditures with respect to our reserves may materially differ from these estimates.

Unless the context otherwise requires, the terms Petrobras, we, us, and our refer to Petróleo Brasileiro S.A.-Petrobras and its consolidated subsidiaries.

### **CERTAIN TERMS AND CONVENTIONS**

A glossary of petroleum industry terms, a table of abbreviations and a conversion table are presented beginning on page 116.

### **PRESENTATION OF FINANCIAL INFORMATION**

In this annual report, references to Real, Reais or R\$ are to Brazilian Reais and references to U.S. dollars or U.S.\$ are to United States dollars.

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The audited consolidated financial statements of Petrobras and our consolidated subsidiaries as of December 31, 2003 and 2002, and for each of the three years in the period ended December 31, 2003, and the accompanying notes, contained in this annual report have been presented in U.S. dollars and prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP). See Item 5 Operating and Financial Review and Prospects and Note 2(a) to our audited consolidated financial statements. We also publish financial statements in Brazil in Reais in accordance with the accounting principles required by Brazilian Corporation Law and the regulations promulgated by the *Comissão de Valores Mobiliários* (Brazilian Securities Commission, or the CVM) Brazilian GAAP, which differs in significant respects from U.S. GAAP.

We are required by Brazilian Corporation Law to change auditors every five years and to select auditors through a bidding process. Since June 2003, Ernst & Young Auditores Independentes S/S has served as our independent auditors and audited our financial statements for the year ending December 31, 2003. PricewaterhouseCoopers Auditores Independentes audited our financial statements for each of the years ending December 31, 2002, 2001, 2000 and 1999.

Our functional currency is the Brazilian Real. As described more fully in Note 2(a) to our audited consolidated financial statements, the U.S. dollar amounts as of the dates and for the periods presented in our audited consolidated financial statements have been remeasured or translated from the Real amounts in accordance with the criteria set forth in Statement of Financial Accounting Standards No. 52 of the U.S. Financial Accounting Standards Board, or SFAS 52. U.S. dollar amounts presented in this annual report have been translated from Reais at the period-end exchange rate for balance sheet items and the average exchange rate prevailing during the period for income statement and cash flow items.

Unless the context otherwise indicates,

historical data contained in this annual report that were not derived from the consolidated financial statements have been translated from Reais on a similar basis;

forward-looking amounts, including estimated future capital expenditures, have been projected on a constant basis and have been translated from Reais in 2004 at an estimated average exchange rate of R\$3.0147 to U.S.\$1.00, and future calculations involving an assumed price of crude oil have been calculated using a Brent crude oil price of U.S.\$28.00 for 2004 and U.S.\$23.00 thereafter, adjusted for our quality and locational differences, unless otherwise stated; and

estimated future capital expenditures are based on the most recently budgeted amounts, which may not have been adjusted to reflect all factors that could affect such amounts.

Certain figures included in this annual report have been subject to rounding adjustments; accordingly, figures shown as totals in certain tables may not be an exact arithmetic aggregation of the figures that precede them.

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**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 following table sets forth our selected consolidated financial data, presented in U.S. dollars and prepared in accordance with U.S. GAAP. The data for each of the five years in the period ended December 31, 2003 have been derived from our audited consolidated financial statements, which were audited by Ernst & Young Auditores Independentes S/S for the year ended December 31, 2003 and by PricewaterhouseCoopers Auditores Independentes for each of the years ending December 31, 2002, 2001, 2000 and 1999. The information below should be read in conjunction with, and is qualified in its entirety by reference to, our audited consolidated financial statements and the accompanying notes and Item 5 Operating and Financial Review and Prospects.

**Table of Contents****BALANCE SHEET DATA**

	As of December 31,				
	2003	2002	2001	2000	1999
	(in millions of U.S. dollars)				
<b>Assets</b>					
Current assets:					
Cash and cash equivalents	\$ 9,610	\$ 3,301	\$ 7,360	\$ 5,826	\$ 3,015
Accounts receivable, net	2,905	2,267	2,759	2,211	1,575
Inventories	2,947	2,540	2,399	3,087	2,270
Recoverable taxes	917	672	664	463	335
Advances to suppliers	504	794	483	268	109
Other current assets	1,017	748	661	671	863
<b>Total current assets</b>	<b>17,900</b>	<b>10,322</b>	<b>14,326</b>	<b>12,526</b>	<b>8,167</b>
Property, plant and equipment, net	30,805	18,224	19,179	19,237	18,426
Investments in non-consolidated companies and other investments	1,173	334	499	530	438
Other assets:					
Accounts receivables, net	528	369	476	359	88
Advances to suppliers	416	450	403	496	502
Petroleum and Alcohol Account-Receivable from Federal Government	239	182	81	1,509	1,352
Government securities	283	176	665	3,542	3,573
Unrecognized pension obligation		61	187	333	486
Restricted deposits for legal proceedings and guarantees	543	290	337	230	156
Recoverable taxes	467	156	164		
Investments PEPSA and PELSA		1,073			
Goodwill in PEPSA and PELSA	183				
Prepaid expenses	190	100	78	42	
Marketable securities	340	208	212	30	
Others	545	209	257	302	545
<b>Total other assets</b>	<b>3,734</b>	<b>3,274</b>	<b>2,860</b>	<b>6,843</b>	<b>6,702</b>
<b>Total assets</b>	<b>\$ 53,612</b>	<b>\$ 32,154</b>	<b>\$ 36,864</b>	<b>\$ 39,136</b>	<b>\$ 33,733</b>
<b>Liabilities and Shareholders equity</b>					
Current liabilities:					
Trade accounts payable	\$ 2,261	\$ 1,702	\$ 1,783	\$ 2,011	\$ 1,314
Taxes payable	2,305	1,801	2,145	1,616	1,208
Short-term debt	1,329	671	1,101	3,128	4,629
Current portion of long-term debt	1,145	727	940	952	1,136
Current portion of project financings	842	239	680	565	359
Current portion of capital lease obligations	378	349	298	236	168
Dividends and interest on capital payable	1,139	307	93	6	
Payroll and related charges	581	283	333	289	326
Advances from customers	258	119	26	55	
Employee benefits obligations Pension	160	89	117	454	245
Other current liabilities	823	976	528	328	426
<b>Total current liabilities</b>	<b>11,221</b>	<b>7,263</b>	<b>8,044</b>	<b>9,640</b>	<b>9,811</b>
Long-term liabilities:					

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Long-term debt	11,888	6,987	5,908	4,833	4,778
Project financings	5,066	3,800	3,153	2,056	681
Employee benefits obligations Pension	1,895	1,363	1,971	2,854	3,762
Employee benefits obligation Health Care	1,580	1,060	1,409	1,465	1,401
Capital lease obligations	1,242	1,907	1,930	1,370	1,100
Deferred income tax	1,122	259	717	1,722	874
Thermoelectric liabilities	1,142				
Provision for abandonment of wells	396				
Other liabilities	541	350	406	338	367
	<u>          </u>				
Total long-term liabilities	24,872	15,726	15,494	14,638	12,963
	<u>          </u>				
Minority interest	367	(136)	79	153	237
	<u>          </u>				
<b>Shareholders equity</b>					
Shares authorized and issued:					
Preferred stock	2,973	2,459	1,882	1,882	1,882
Common stock	4,289	3,761	2,952	2,952	2,952
Capital reserve and other comprehensive income	9,890	3,081	8,413	9,871	5,888
	<u>          </u>				
Total Shareholders equity	17,152	9,301	13,247	14,705	10,722
	<u>          </u>				
Total liabilities and Shareholders equity	\$ 53,612	\$ 32,154	\$ 36,864	\$ 39,136	\$ 33,733
	<u>          </u>				

**Table of Contents****INCOME STATEMENT DATA**

For the Year Ended December 31,

	2003	2002	2001	2000	1999
	(in millions of U.S. dollars, except for share and per share data)				
Sales of products and services	\$ 42,690	\$ 32,987	\$ 34,145	\$ 35,496	\$ 23,467
Value-added and other taxes on sales and services	(6,348)	(5,241)	(8,627)	(8,829)	(5,453)
CIDE(8)	(5,545)	(5,134)			
Specific parcel price PPE			(969)	288	(1,656)
<b>Net operating revenues</b>	<b>30,797</b>	<b>22,612</b>	<b>24,549</b>	<b>26,955</b>	<b>16,358</b>
Cost of sales(1)	15,416	11,506	12,807	13,449	8,210
Depreciation, depletion and amortization(2)	1,785	1,930	1,729	2,022	2,262
Exploration, including exploratory dry holes(2)	512	435	404	440	295
Selling, general and administrative expenses	2,091	1,741	1,751	1,450	1,282
Other operating expense(3)	271	222	277	189	108
<b>Total costs and expenses</b>	<b>20,075</b>	<b>15,834</b>	<b>16,968</b>	<b>17,550</b>	<b>12,157</b>
Financial income	602	1,142	1,375	1,113	928
Financial expense	(1,247)	(774)	(808)	(909)	(715)
Monetary and exchange variation on monetary assets and liabilities, net	509	(2,068)	(915)	(575)	(2,745)
Employee benefit expense	(595)	(451)	(594)	(370)	(319)
Other non-operating income (expense), net(4)	(1,218)	(1,395)	(1,847)	(861)	(404)
<b>Income before income taxes, minority interest and accounting change</b>	<b>8,773</b>	<b>3,232</b>	<b>4,792</b>	<b>7,803</b>	<b>946</b>
Income tax (expense) benefit:					
Current	(2,599)	(1,269)	(1,196)	(1,574)	(65)
Deferred	(64)	116	(193)	(949)	(184)
<b>Total income tax expense</b>	<b>(2,663)</b>	<b>(1,153)</b>	<b>(1,389)</b>	<b>(2,523)</b>	<b>(249)</b>
Minority interest in results of consolidated subsidiaries	(248)	232	88	62	30
<b>Income before effect of change in accounting principle</b>	<b>5,862</b>	<b>2,311</b>	<b>3,491</b>	<b>5,342</b>	<b>727</b>
Cumulative effect of change in accounting principle, net of taxes(2)	697				
<b>Net income for the year</b>	<b>\$ 6,559</b>	<b>\$ 2,311</b>	<b>\$ 3,491</b>	<b>\$ 5,342</b>	<b>\$ 727</b>

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Weighted average number of shares outstanding:(5)					
Common/ADS	634,168,418	634,168,418	634,168,418	634,168,418	634,168,418
Preferred/ADS	462,369,507	451,935,669	451,935,669	451,935,669	451,935,669
Basic and diluted earnings per share:					
Common/ADS(6)	\$ 5.98	\$ 2.13	\$ 3.21	\$ 4.92	\$ 0.67
Preferred/ADS(6)	5.98	2.13	3.21	4.92	0.67
Cash dividends per share(7):					
Common/ADS	\$ 1.78	\$ 1.19	\$ 1.62	\$ 0.45	\$ 0.28
Preferred/ADS	1.78	1.19	1.62	0.45	0.39

- (1) Amounts reported are net of impact of government charges and taxes of U.S.\$68 million in 2001 and U.S.\$143 million in 1999 and a credit of U.S.\$19 million in 2000. The governmental regulations giving rise to such charges/credits and taxes were abolished in 2002.
- (2) In 2002, U.S.\$284 million in abandonment costs were recognized as depreciation, depletion and amortization in accordance with SFAS 19. In 2003, as a result of our adoption of SFAS 143 - Accounting for Asset Retirement Obligations, depreciation on the asset retirement obligation was recorded under depreciation, depletion and amortization, while accretion expense was recorded under exploration, including exploratory dry holes. This change resulted in U.S.\$43 million in abandonment costs being recognized as exploration, including exploratory dry holes in 2003. The cumulative effect of adoption is recorded separately.
- (3) Amounts reported are net of impact of government charges and taxes of U.S.\$45 million in 2001, U.S.\$81 million in 2000 and U.S.\$132 million in 1999. The governmental regulations giving rise to such charges and taxes were abolished in 2002.
- (4) Amounts reported include financial charges in respect of the Petroleum and Alcohol Account of U.S.\$2 million in 2002, U.S.\$16 million in 2001, U.S.\$35 million in 2000 and U.S.\$95 million in 1999.
- (5) On April 24, 2000, our board of directors authorized a 1 for 100 reverse stock split effective May 23, 2000. Share data and basic and diluted earnings per share for all years presented give retroactive effect to this change.
- (6) Basic and diluted earnings per share for 2003 were affected by our adoption of SFAS 143. That change in accounting principle altered our 2003 basic and diluted earnings per share from 5.35 (before effect of change in accounting principle) to 5.98 (after effect of change in accounting principle).
- (7) Represents dividends declared in respect of the earnings of each period.
- (8) Contribution of intervention in the economic domain charge.

### Exchange Rates

There are two principal foreign exchange markets in Brazil, the commercial rate exchange market and the floating rate exchange market.

On January 13, 1999, the Brazilian government announced the unification of the exchange positions of the Brazilian financial institutions in the commercial rate exchange market and floating rate exchange market, which led to a convergence in the pricing and liquidity of both markets. However, complete unification has not yet occurred and each market continues to be subject to specific regulation. Most trade and financial transactions are carried out on the commercial rate exchange market. These transactions include the purchase or sale of our shares or the payment of dividends with respect to our shares to shareholders outside Brazil. Transactions not carried out on the commercial rate exchange market are generally carried out on the floating rate exchange market. Foreign currencies may only be purchased through Brazilian financial institutions authorized to operate in these markets. In both markets, rates are freely negotiated but may be influenced by the intervention of the Central Bank of Brazil. Since 1999, the Central Bank of Brazil has allowed the Real to float freely.

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The Real depreciated 18.7% in 2001 and 52.3% in 2002 against the U.S. dollar, before appreciating 18.2% in 2003. As of June 15, 2004, the Real has depreciated to R\$3.138 per U.S.\$1.00, representing a depreciation of approximately 6.7% in 2004 year-to-date. The Real may depreciate or appreciate substantially in the future. See -Risk Factors-Risks Relating to Brazil.

The following table sets forth the commercial selling rate for U.S. dollars for the periods and dates indicated. The average exchange rates represent the average of the month-end exchange rates (R\$/U.S.\$) during the relevant period.

**COMMERCIAL SELLING RATE FOR U.S. DOLLARS**

For the Year Ended December 31, (R\$ /U.S.\$ )

	<u>High</u>	<u>Low</u>	<u>Average(1)</u>	<u>Period End</u>
2003	3.662	2.822	3.075	2.889
2002	3.955	2.271	2.924	3.533
2001	2.835	1.935	2.352	2.320
2000	1.985	1.723	1.830	1.956
1999	2.165	1.208	1.814	1.789
<b>2003</b>				
December	2.943	2.888	2.925	2.889
<b>2004</b>				
January	2.941	2.802	2.855	2.941
February	2.988	2.904	2.895	2.914
March	2.941	2.875	2.899	2.909
April	2.952	2.874	2.900	2.945
May	3.205	2.945	2.939	3.129
June (through June 15)	3.165	3.112	3.135	3.138

Source: Central Bank of Brazil

- (1) Year-end figures stated for calendar years 2003, 2002, 2001 and 2000 represent the average of the month-end exchange rates during the relevant period. The figure provided for the period of calendar year 2004 up to and including June 15, 2004 represents the average of the exchange rates at the close of trading on each business day during such period.

Brazilian law provides that, whenever there is a serious imbalance in Brazil's balance of payments or serious reasons to foresee such an imbalance, temporary restrictions on remittances from Brazil may be imposed by the Brazilian government. These types of measures may be taken by the Brazilian government in the future, including measures relating to remittances related to our preferred or common shares or ADSs. See Risk Factors-Risks Relating to Brazil.

**Risk Factors****Risks Relating to Our Operations**

*Substantial or extended declines in the prices of crude oil and oil products may have a material adverse effect on us.*

We do not, and will not, have control over the factors affecting international prices for crude oil and oil products. The average prices of Brent crude, an international benchmark oil, were approximately U.S.\$28.84 per barrel for 2003, U.S.\$25.02 per barrel for 2002 and U.S.\$24.44 per barrel for 2001.

Changes in crude oil prices typically result in changes in prices for oil products. Lower crude oil prices have various effects on us, including decreasing our net operating revenues, net income and cash flows. In comparison, higher crude oil prices generally lead to increases in our net operating revenues, net income and cash flows. However, even during periods of high crude oil prices, depending on the behavior of demand, it may not be possible to pass through higher prices to consumers.

Historically, international prices for crude oil and oil products have fluctuated widely as a result of many factors. These factors include:

global and regional economic and political developments in crude oil producing regions, particularly in the Middle East;

the ability of the Organization of Petroleum Exporting Countries (OPEC) and other crude oil producing nations to set and maintain crude oil production levels and prices;

other actions taken by major crude oil producing or consuming countries;

global and regional supply and demand for crude oil and oil products;

competition from other energy sources;

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domestic and foreign government regulations;

weather conditions;

war; and

terrorism.

Until January 2, 2002, the prices we were allowed to charge for crude oil and oil products (and, as a result, our recorded prices for the calculation of net operating revenues) were determined on the basis of a pricing formula established by the Brazilian government designed to reflect changes in the Real/U.S. dollar exchange rate and international market prices for relevant benchmark products. As of January 2, 2002, the crude oil and oil products markets in Brazil were deregulated in their entirety.

We expect continued volatility and uncertainty in international prices for crude oil and oil products. Substantial or extended declines in international crude oil prices may have a material adverse effect on our business, results of operations and financial condition and the value of our proved reserves.

***Because of changes in government regulations, we face increased competition and may lose market share.***

The Brazilian government eliminated all price controls on crude oil and oil products in early 2002. Prices remain regulated, however, for natural gas and electricity. These controls could have an adverse effect on revenues from these business activities.

The changes in government regulation have enabled multinational and regional oil companies to enter the Brazilian energy market. Competition in our upstream and downstream activities has increased and will increase further, as existing and new participants expand their activities as a result of these regulatory changes.

***Although our prices for oil products are based on international prices, in periods of high international prices or sharp devaluations of the Real, we may not be able to adjust our prices in Reais sufficiently to maintain parity with international prices.***

Since the Brazilian government's elimination of all price controls on crude oil and oil products in January 2002, there have been periods of high international prices or sharp devaluations of the Real when we have been unable to increase prices in Reais sufficiently to maintain parity with international prices. While we do not have an obligation to supply the Brazilian market, during periods when the local prices of oil products were below prevailing international prices, our competitors were unwilling to supply the local market. In order to ensure adequate supply of oil products in Brazil, we sold oil products below prevailing international prices.

As a result of deregulation of the Brazilian market, and the elimination of import tariffs in particular, our competitors can sell products in the Brazilian market at parity with international prices. In light of this increased competition, we have less flexibility to maintain local prices above international prices to compensate for revenues not realized in periods in which we sold oil products below prevailing international market

prices.

***We may be required to sell some of our refining capacity in Brazil.***

We presently own 98.6% of the existing refining capacity in Brazil. We plan to upgrade our present refineries and we may build new refineries in Brazil, sell participation interests in our present refineries to new partners or engage in asset swaps, as we did through our business combination in 2001 involving assets of Repsol-YPF S.A. Although we are not presently subject to any requirement to divest any assets, and the Brazilian government has not made any proposal in that respect, it is possible that we will be required to divest a portion of our refining capacity or other assets in the future. Any such divestiture could have a material adverse effect on our financial condition and results of operations.

***Our ability to achieve our growth objectives depends on our ability to gain access to additional reserves.***

Our ability to achieve our growth objectives is highly dependent upon our level of success in finding, acquiring or gaining access to additional reserves, as well as successfully developing current reserves. In general, the volume of production from crude oil and natural gas properties declines as reserves are depleted, with the rate of decline depending on reservoir characteristics. Unless we conduct successful exploration and development activities or acquire properties containing proved reserves, or both, our proved reserves will decline as reserves are extracted.

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***Exploratory drilling involves numerous risks, including the risk that we will not discover commercially productive oil or natural gas reserves.***

Our exploration and development activities expose us to the inherent risks of drilling, including the risk that we will not discover commercially productive crude oil or natural gas reserves. The costs of drilling, completing and operating wells are often uncertain and numerous factors beyond our control (such as unexpected drilling conditions, equipment failures or accidents and shortages or delays in the availability of drilling rigs and the delivery of equipment) may cause drilling operations to be curtailed, delayed or cancelled. Our future drilling, exploration and acquisition activities may not be successful and, if unsuccessful, could harm our future results of operations and financial condition.

***Our crude oil and natural gas reserve estimates involve some degree of uncertainty and may prove to be incorrect over time.***

The proved crude oil and natural gas reserves set forth in this annual report are our estimated quantities of crude oil, natural gas and natural gas liquids that geological and engineering data demonstrate with reasonable certainty to be recoverable from known reservoirs under existing economic and operating conditions (i.e., prices and costs as of the date the estimate is made). Our proved developed crude oil and natural gas reserves are reserves that can be expected to be recovered through existing wells with existing equipment and operating methods. Although 91% of our domestic reserves are independently certified, there are uncertainties in estimating quantities of proved reserves related to prevailing crude oil and natural gas prices applicable to our production, which may lead us to make revisions to our reserve estimates.

***Our equipment, facilities and operations are subject to numerous environmental and health regulations which have become more stringent in the recent past and may result in increased liabilities and increased capital expenditures.***

Our activities are subject to a wide variety of federal, state and local laws, regulations and permit requirements relating to the protection of human health and the environment, both in Brazil and in other jurisdictions in which we operate. In Brazil, we could be exposed to civil penalties, criminal sanctions and closure orders for non-compliance with these environmental regulations, which, among other things, limit or prohibit emissions or spills of toxic substances produced in connection with our operations. Waste disposal and emissions regulations may require us to clean up or retrofit our facilities at substantial cost and could result in substantial liabilities. The *Instituto Brasileiro do Meio Ambiente dos Recursos Naturais Renováveis* (Brazilian Institute of the Environment and Renewable Natural Resources, or IBAMA) routinely inspects our oil platforms in the Campos Basin, and may impose fines, restrictions on operations or other sanctions in connection with its inspections.

We spent approximately U.S.\$750 million in 2003, U.S.\$466 million in 2002 and U.S.\$473 million in 2001 to comply with environmental laws and to implement improvements in our environmental practices. Because environmental regulations have become more stringent in Brazil and in other jurisdictions where we operate, it is probable that our capital expenditures for compliance with environmental regulations and to effect improvements in our health, safety and environmental practices will increase substantially in the future. In addition, due to the possibility of unanticipated regulatory or other developments, the amount and timing of future environmental expenditures may vary widely from those currently anticipated. The amount of investments we make in any given year is subject to limitations by the Brazilian government. Accordingly, expenditures required for compliance with environmental regulation could result in reductions in other strategic investments that we have planned, and any such reduction may have a material adverse effect on our results of operations or financial condition.

***In the past, significant oil spills have occurred and we have incurred, and may continue to incur, liabilities in connection with oil spills, including clean up costs, government fines and potential lawsuits.***

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From time to time, oil spills occur in connection with our operations. In 2003, we experienced spills totaling 73,000 gallons of crude oil, as compared to 52,000 gallons in 2002 and 691,000 gallons in 2001. As a result of certain of our spills, we were fined by various state and federal environmental agencies, named the defendant in several civil and criminal suits and remain subject to several investigations and potential civil and criminal liabilities. These or any future oil spills may have a material adverse effect on our financial condition or results of operations. Accordingly, if one or more of the potential liabilities resulting from these oil spills were to result in an actual fine or civil or criminal liability, our operations and financial condition could be negatively affected.

*We may incur losses and spend time and money defending pending litigation and arbitration.*

We are currently a party to numerous legal proceedings relating to civil, administrative, environmental, labor and tax claims filed against us. These claims involve substantial amounts of money and other remedies. Several individual disputes account for a significant part of the total amount of claims against us. Our audited financial statements as of December 31, 2003 include reserves totaling U.S.\$260 million as of that date, for probable and reasonably estimable losses and expenses we may incur in connection with all of our pending litigation and an additional provision of U.S.\$95 million related to various tax assessments received from the *Instituto Nacional de Seguridade Social* (National Security Institute, or INSS), as further described in Item 8 Financial Information-Legal Proceedings.

In the event that a number of the claims that we consider to represent remote or reasonably possible risks of loss were to be decided against us, or in the event that the losses estimated turn out to be higher than the reserves made, the aggregate cost of

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unfavorable decisions could have a material adverse effect on our financial condition and results of operations. Additionally, our management may be required to direct its time and attention to defending these claims, which could preclude them from focusing on our core business. Depending on the outcome, certain litigation, including matters involving our platforms and asset swaps, could result in restrictions on our operations and have a material adverse effect on certain of our businesses.

***If a State of Rio de Janeiro law imposing ICMS on oil upstream activities is applied to us, our results of operations and financial condition may be adversely affected.***

In June 2003, the State of Rio de Janeiro enacted a law imposing the *Imposto sobre Circulação de Mercadorias e Serviços* (state sales tax, or ICMS) on upstream activities. Although the law is technically in force, the government of the State of Rio de Janeiro has yet to apply it. Currently, the ICMS is assessed at the point of sale from refineries to distributors but not at the wellhead level. As a result, the tax is mainly collected in the eight states where our refineries are located (Rio de Janeiro, São Paulo, Rio Grande do Sul, Paraná, Minas Gerais, Amazonas, Ceará and Bahia). If the State of Rio de Janeiro applies the law to us, it would change the point of collection of a portion of the ICMS from the refinery level to the wellhead level of production in the State of Rio de Janeiro. As a result, we would be unable to utilize part of the taxes imposed at the wellhead level in Rio de Janeiro to offset taxes that are imposed at the refinery level in other states, and therefore would have paid taxes on the same oil products at both production and refining levels. The attorney general has filed a lawsuit with the Brazilian Supreme Court challenging the constitutionality of the ICMS legislation. If the law is declared constitutional and the State of Rio de Janeiro applies the law to us, the amount of ICMS that we would be required to pay to the State of Rio de Janeiro could increase by approximately R\$5.4 billion (U.S.\$1.9 billion) per year. This increase could have a material adverse effect on our results of operations and financial condition.

***A final judicial ruling upholding the view of the Brazilian Revenue Service of Rio de Janeiro that drilling and production platforms may no longer be classified as sea-going vessels will increase the amount of taxes we pay, and such an increase may have a material adverse effect on our results of operations and financial condition.***

The Rio de Janeiro branch of the Brazilian Revenue Service (*Secretaria de Receita Federal*) has asserted that, under Brazilian law, drilling and production platforms may not be classified as sea-going vessels and therefore should not be chartered but leased. Based on this interpretation of Brazilian law, overseas remittances for charter payments would be reclassified as lease payments, and would be subject to withholding tax at the rate of 15%.

The Brazilian Revenue Service has filed two tax assessments against us in connection with the withholding tax (IRRF) on foreign remittances of payments related to the charter of vessels of movable platform types. On February 17, 2003, the Brazilian Revenue Service served us with a tax assessment notice for R\$93 million (U.S.\$32 million) covering disputed taxes for 1998. On June 27, 2003, the Brazilian Revenue Service served us with a tax assessment notice for R\$3,064 million (U.S.\$1,066 million) covering disputed taxes for the period from 1999 to 2002. We recently received two unfavorable rulings from the Brazilian Revenue Service with respect to these tax assessments, and have appealed these rulings to a higher administrative court.

We believe that Brazilian law supports our view that drilling and production platforms may be classified as sea-going vessels. However, in the event that a final judicial ruling supports the Brazilian Revenue Service's position, the taxes we pay in connection with our drilling and production platforms would significantly increase, and such an increase could have a material adverse effect on our level of investments and, therefore, on our results of operations and financial condition.

***Labor disputes, strikes, work stoppages and protests could lead to increased operating costs.***

All of our employees, other than our maritime employees, are subject to a collective bargaining agreement with the Oil Workers Unified Federation, which was signed on November 4, 2003, and is retroactive to September 1, 2003. This collective bargaining agreement will expire on August 31, 2004. We negotiated a separate collective bargaining agreement with the maritime employees union. The agreement was signed on January 30, 2004, is retroactive to November 1, 2003 and will expire on October 31, 2004.

From time to time, we have been subject to strikes and work stoppages. In 2001, our oil workers began a five-day strike, which led to a decrease in crude oil production of four million barrels of oil equivalent per day. If our workers were to strike, the resulting work stoppages could have an adverse effect on us, as we do not carry insurance for losses incurred as a result of business interruptions of any nature, including business interruptions caused by labor action. As a result, our financial condition and results of operations could be adversely affected by future strikes, work stoppages, protests or similar activities.

***Our participation in the domestic power market has generated losses, and the Brazilian regulatory environment for the energy sector remains uncertain.***

Consistent with the global trend of other major oil and gas companies and to secure demand for our natural gas, we participate in the domestic power market. Despite a number of incentives introduced by the former Brazilian government to promote the development of thermoelectric power plants, development of such plants by private investors has been slow to progress. We have

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invested in 11 (5 in operation and 6 under construction or development) of the 39 gas-fired power generation plants being built or proposed to be built in Brazil under the program to promote the development of thermoelectric plants, known as the *Programa Prioritário de Termoeletricidade* (Thermoelectric Priority Program, or PPT). We invest in some of these plants with partners, many of whom may have power purchase agreements with the plants. We have had contractual disputes in connection with these investments and other disputes may occur. Depending on the outcome of any such disputes, they could have an adverse economic impact on us, including on the profitability of our investments.

In 2002, the Brazilian Congress passed a law increasing government intervention in the domestic power market, and in 2003 the current administration proposed a new regulatory model for the energy sector. The New Industry Model Law was enacted on March 16, 2004, but because the new law remains subject to the enactment of decrees of the Brazilian government and implementing resolutions of the National Electric Energy Agency (ANEEL), many aspects of the regulatory environment for thermoelectric power remain uncertain, and it is not clear that thermoelectric power will remain a priority for the country.

We have limited our investments in the domestic power market, but our participation in this market may never become profitable and may continue to adversely affect our operating results and financial condition.

***We may not be able to obtain financing for all of our planned investments.***

The Brazilian government maintains control over our budget and establishes limits on our investments and long-term debt. As a state-controlled entity, we must submit our proposed annual budgets to the Ministry of Planning, Budget and Management, the Ministry of Mines and Energy, and the Brazilian Congress for approval. We are endeavoring to obtain financing that does not require Brazilian government approval, such as structured financings, but there can be no assurance that we will succeed. As a result, we may not be free to make all the investments we envision, including those we have agreed to make to expand and develop our crude oil and natural gas fields. If we are unable to make these investments, our operating results and financial condition may be adversely affected. In addition, failure to make our planned investments in Brazil could hurt our competitive position in the Brazilian oil and gas sector, particularly as other companies enter the market.

***Currency fluctuations could have a material adverse effect on our financial condition and results of operations, because most of our revenues are in Reais and a large portion of our liabilities are in foreign currencies.***

The principal market for our products is Brazil, and over the last three fiscal years over 83% of our revenues have been denominated in Reais. A substantial portion of our indebtedness and some of our operating expenses and capital expenditures are, and are expected to continue to be, denominated in or indexed to U.S. dollars and other foreign currencies. In addition, during 2003, we imported U.S.\$5.7 billion of crude oil and oil products, the prices of which were all denominated in U.S. dollars.

The Real depreciated 18.7% in 2001 and 52.3% in 2002 against the U.S. dollar, before appreciating 18.2% in 2003 against the U.S. dollar. As of June 15, 2004, the exchange rate of the Real to the U.S. dollar was R\$3.138 per U.S.\$1.00, representing a depreciation of approximately 6.7% in 2004 year-to-date. The value of the Real in relation to the U.S. dollar may continue to fluctuate and may include a significant depreciation of the Real against the U.S. dollar as occurred in 2002. Any future substantial devaluation of the Real may adversely affect our operating cash flows and our ability to meet our foreign currency-denominated obligations. You should consider this risk in light of past devaluations of the Real caused by inflationary and other pressures.

*We are exposed to increases in prevailing market interest rates.*

As of December 31, 2003, approximately 57% of our total indebtedness consisted of floating rate debt. Although we are changing our risk management practices, we have not yet entered into derivative contracts or made other arrangements to hedge against interest rate risk. Accordingly, if market interest rates (principally LIBOR) rise, our financing expenses will increase.

*In the aftermath of the U.S. military action in Iraq there may be changes to the international oil markets, some of which could have an adverse effect on us.*

Following the formal declaration of the end of hostilities in Iraq, the United Nations eliminated sanctions that had limited Iraq's ability to participate in the international oil markets. As a result, it is expected that in the future, Iraq will substantially increase its production and export sales of crude oil and oil products. Given the uncertainty surrounding the circumstances under which Iraq's oil industry will be managed over the next few years, it is impossible to predict the economic or political goals which the United States government or any other party controlling such industry will seek to achieve. The changes to the international oil markets that could result from Iraq's full re-entry into such markets could have a material adverse effect on our financial condition and results of operations.

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*We are not insured against business interruption for our Brazilian operations and most of our assets are not insured against war and terrorism.*

We do not maintain coverage for business interruption for our Brazilian operations and do not insure most of our assets against war and terrorism. A terrorist attack or an operational incident could therefore have a material adverse effect on our financial condition or results of operations.

*We are subject to substantial risks relating to our operations in Argentina and other South American countries.*

We operate in Argentina through our subsidiary, Petrobras Energia Participaciones S.A. (PEPSA). Approximately 5.9% of our total crude oil and natural gas production and 3.5% of our proved crude oil and natural gas reserves were located in Argentina at December 31, 2003. As a result, PEPSA's results of operations and financial condition, and consequently, our results of operations and financial condition, may be adversely affected by fluctuations in the Argentine economy, Argentine political instability, and governmental actions concerning the economy, including:

the imposition of exchange controls, which could restrict the flow of capital out of Argentina and make it more difficult for PEPSA to service its non-Peso denominated debt, totaling U.S.\$1,960 million at December 31, 2003;

the imposition of restrictions on hydrocarbon exports, which could decrease PEPSA's U.S. dollar cash receipts and limit PEPSA's ability to make payment on its foreign-currency denominated debt;

the devaluation of the Argentine Peso, which could adversely affect PEPSA's results of operations, financial condition and ability to make payment on its foreign-currency denominated debt;

increases in export tax rates for crude oil and oil products, which could lead to a reduction in PEPSA's export margins and cash flows;

the imposition of price controls restricting PEPSA's ability to increase the price of energy and natural gas sold in the Argentine market, which could adversely affect PEPSA's results of operations, financial condition and ability to make payment on its foreign-currency denominated debt; and

the pesification of utility rates, which combined with the devaluation of the Argentine Peso, resulted in payment defaults by three of PEPSA's affiliated utility companies, Transportadora de Gas del Sur (TGS), Compañía de Inversiones de Energía S.A. (CIESA, the parent of TGS), and Transener, and which could lead to defaults by other affiliated utility companies.

We are also active in Venezuela, Ecuador, Colombia, Bolivia and Peru. Our operations in Venezuela and Bolivia are our most significant international operations outside of Argentina. Our operations in Venezuela represented 2.1% of our total production in barrels of oil equivalent in 2003 and 2.6% of our proved crude oil and natural gas reserves at December 31, 2003. Our operations in Bolivia represented 1.5% of our total production in barrels of oil equivalent in 2003 and 2.9% of our proved crude oil and natural gas reserves at December 31, 2003. Accordingly, our operations may be negatively affected by:

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political, social and economic instability in Venezuela and Bolivia, including strikes and other forms of political protest, similar to those experienced by Venezuela during the first quarter of 2003 and by Bolivia during the third quarter of 2003;

increases in royalty payments from production in our Venezuelan fields;

any decisions by OPEC to decrease production volumes, as Venezuela is a member of OPEC, and we are subject to any decisions by OPEC to reduce production;

any decision by the Venezuelan government to modify the terms and conditions of PEPSA's operating agreements in Venezuela; and

any decision by the Bolivian government to modify the existing energy regulatory framework, including the regulation and taxation of the oil and natural gas industry.

If one or more of the risks described above were to materialize, we may not achieve our strategic objectives in South America, resulting in a material adverse effect on our results of operations and financial condition.

***The current Argentine economic, political, energy and social crisis could adversely affect our Argentine operations.***

From the last quarter of 1998 until 2003, the Argentine economy was in a recession marked by reduced levels of consumption and investment, increased unemployment, declining gross domestic product, capital flight and a suspension of payments on its approximately U.S.\$95 billion of sovereign debt owed to private creditors. Argentina's GDP contracted by 4.4% in 2001 and 10.9% in 2002.

On December 1, 2001, the Argentine government led by President Fernando de la Rúa effectively froze bank deposits and introduced exchange controls restricting capital outflows. The measures were perceived as further paralyzing the economy for the

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benefit of the banking sector and caused a sharp rise in social discontent, ultimately triggering public protests, outbreaks of violence and the looting of stores throughout Argentina. On December 20, 2001, President Fernando de la Rúa resigned, and since then, Argentina has had several presidents, including President Eduardo Duhalde, who held office from January 2002 to May 2003. During his term, President Duhalde and his government undertook a number of far-reaching initiatives, including:

ratifying the suspension of payment of certain of Argentina's sovereign debt;

amending Argentina's Convertibility Law to allow the exchange rate of the Argentine Peso to float, breaking the Peso's decade-old one-to-one relationship to the U.S. dollar, and resulting in a 66.4% decline in the value of the Peso against the U.S. dollar from January 7, 2002 to March 31, 2003;

converting certain U.S. dollar-denominated debts into peso-denominated debts at a one-to-one exchange rate and U.S. dollar-denominated bank deposits into peso-denominated bank deposits at an exchange rate of 1.4 Argentine Pesos per U.S.\$1.00;

restructuring bank deposits and maintaining restrictions on bank withdrawals;

enacting an amendment to the Argentine Central Bank's charter to (i) allow it to print currency in excess of the amount of the foreign reserves it holds, (ii) make short-term advances to the Argentine federal government and (iii) provide financial assistance to financial institutions with liquidity constraints or solvency problems;

imposing restrictions on transfers of funds abroad subject to certain exceptions; and

requiring the deposit into the banking system of foreign currency earned from exports, subject to certain exceptions.

On May 25, 2003, a new president, Néstor Kirchner, took office. His current term will expire on December 10, 2007. There remains uncertainty as to the nature and scope of the measures to be adopted by Mr. Kirchner's government to address many of the country's unresolved economic problems, including the ongoing renegotiation of the country's public debt.

During 2003, some economic indicators of the Argentine economy began to stabilize. In 2003, GDP grew by approximately 8.7%, inflation remained below 4%, consumption and investment increased and the peso appreciated significantly against the U.S. dollar. Nevertheless, this return to growth and partial stabilization are recent developments and may not be sustainable. These developments must be viewed against the significant declines preceding 2003 and against the substantial continuing uncertainties in Argentina's economic and legal environment, including the renegotiation of the country's external public debt and public utility contracts, restructuring of the financial system and redesigning of the federal fiscal regime. We cannot be certain that the economy will not suffer additional shocks.

Over the last few years, Argentina has also been afflicted by an energy crisis. In May 2002, the Argentine government declared a state of emergency in the supply of hydrocarbons in Argentina. Subsequently, in March 2004, Argentina's Secretary of Energy issued a resolution pursuant to which limits on natural gas exports may be imposed and, in fact, some limits have already been imposed. Further Argentine political instability, volatility in Argentina's energy industry, fluctuations in the Argentine economy and governmental actions concerning the economy could adversely affect our operations in Argentina and may have a material adverse impact on our results of operations and financial condition.

**Risks Relating to the Relationship between us and the Brazilian Government**

*The Brazilian government, as our controlling shareholder, may cause us to pursue certain macroeconomic and social objectives that may have an adverse effect on our results of operations and financial condition.*

The Brazilian government, as our controlling shareholder, has pursued, and may pursue in the future, certain of its macroeconomic and social objectives through us. Brazilian law requires the Brazilian government to own a majority of our voting stock, and so long as it does, the Brazilian government will have the power to elect a majority of the members of our board of directors and, through them, a majority of the executive officers who are responsible for our day-to-day management. As a result, we may engage in activities that give preference to the objectives of the Brazilian government rather than to our own economic and business objectives. In particular, we continue to assist the Brazilian government to ensure that the supply of crude oil and oil products in Brazil meets Brazilian consumption requirements. Accordingly, we may continue to make investments, incur costs and engage in sales on terms that may have an adverse effect on our results of operations and financial condition.

*If the Brazilian government reinstates controls over the prices we can charge for crude oil and oil products, such price controls could affect our financial condition and results of operations.*

In the past, the Brazilian government set prices for crude oil and oil products in Brazil, often below prevailing prices on the world oil markets. These prices involved elements of cross-subsidy among different oil products sold in various regions in Brazil. The cumulative impact of this price regulation system on us is recorded as an asset on our balance sheet under the line item Petroleum and Alcohol Account-Receivable from the Brazilian government. The balance of the account at December 31, 2003

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was U.S.\$239 million. Effective January 2, 2002, all price controls for crude oil and oil products ended, and while no price controls were imposed on crude oil and oil products in 2002 or 2003, the Brazilian government could decide to reinstate price controls in the future as a result of market instability or other conditions. If this were to occur, our financial condition and results of operations could be adversely affected.

*Historical Brazilian government control of our sales prices and regulation of our operating revenues mean that our results of operations cannot be easily compared from year to year.*

One of the tools available to the Brazilian government to control inflation and pursue other economic and social objectives has been the regulation of oil product prices. The method by which the Brazilian government has controlled our prices has varied from year to year. Until December 31, 2001, the Brazilian government regulated the prices at which we were permitted to sell our oil products. The Brazilian government also established freight subsidies to ensure uniform oil product prices throughout Brazil, but these subsidies have since been phased out. Beginning in July 1998, and until the institution of price deregulation on January 2, 2002, the Brazilian government established a new methodology for calculating our net operating revenues based on fluctuations in exchange rates and international market prices for relevant benchmark products.

Because of this government price control and the change in methodology:

the various line items in our financial statements are not necessarily comparable from period to period; and

our results of operations reflect not only our consolidated operations, but also the results of economic activity undertaken on behalf of the Brazilian government.

Additionally, from time to time, the Brazilian government may impose specific taxes or other special payment obligations on our operations that may affect our results of operations.

*We do not own any of the crude oil and natural gas reserves in Brazil.*

A guaranteed source of crude oil and natural gas reserves is essential to an oil and gas company's sustained production and generation of income. As a result, many oil and gas companies own crude oil and natural gas reserves in other countries. Under Brazilian law, the Brazilian government owns all crude oil and natural gas reserves in Brazil. We possess the exclusive right to develop our reserves pursuant to concession agreements awarded to us by the Brazilian government, but if the Brazilian government were to restrict or prevent us from exploiting these crude oil and natural gas reserves, our ability to generate income would 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 may have a material adverse effect on us.*

The Brazilian economy has been characterized by significant involvement by the Brazilian government, which often changes monetary, credit and other policies to influence Brazil's economy. The Brazilian government's actions to control inflation and other economic policies have often involved wage and price controls, modifications to the Central Bank's base interest rates, and other measures, such as the freezing of bank accounts, which occurred in 1990.

The Brazilian government's economic policies may have important effects on Brazilian corporations and other entities, including us, and on market conditions and prices of Brazilian securities. Our financial condition and results of operations may be adversely affected by the following factors and the Brazilian government's response to these factors:

devaluations and other exchange rate movements;

inflation;

exchange control policies;

social instability;

price instability;

energy shortages;

interest rates;

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liquidity of domestic capital and lending markets;

tax policy; and

other political, diplomatic, 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, financial condition and results of operations.***

Our principal market is Brazil, which has, in the past, periodically experienced extremely high rates of inflation. Inflation, along with recent governmental measures to combat inflation and public speculation about possible future measures, has had significant negative effects on the Brazilian economy. The annual rates of inflation, as measured by the National Consumer Price Index (*Índice Nacional de Preços ao Consumidor*), have decreased from 2,489.1% in 1993 to 929.3% in 1994, to 8.4% in 1999 and to 5.3% in 2000. The same index increased to 9.4% during 2001 and to 14.7% in 2002, before decreasing to 10.4% in 2003.

Brazil may experience high levels of inflation in the future. The lower levels of inflation experienced since 1994 may not continue. Future governmental actions, including actions to adjust the value of the Real, could trigger increases in inflation.

***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 negatively impact our business and lower the value of our securities.***

Over the last three fiscal years, approximately 83% of our revenues have been denominated in Reais, although prices for crude oil and oil products have been based on international prices. A substantial portion of our indebtedness and some of our operating expenses and capital expenditures are, and are expected to continue to be, denominated in or indexed to the U.S. dollar and other foreign currencies. In addition, during the year ended December 31, 2003, we imported approximately U.S.\$5.7 billion of crude oil and oil products, the prices of which were all denominated in U.S. dollars.

As a result of inflationary pressures, the Real and its predecessor currencies have been devalued periodically during the last four decades. Throughout this period, the Brazilian government has implemented various economic plans and utilized a number of 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. From time to time, there have been significant fluctuations in the exchange rates between the Real and the U.S. dollar and other currencies. For example, the Real declined in value against the U.S. dollar by 18.7% in 2001 and by 52.3% in 2002, before appreciating 18.2% against the U.S. dollar in 2003.

Devaluation of the Real relative to the U.S. dollar could create additional inflationary pressures in Brazil by generally increasing the price of imported products and requiring recessionary governmental policies to curb aggregate demand. On the other hand, appreciation of the Real against the U.S. dollar may lead to a deterioration of the country's current account and the balance of payments, as well as dampen export-driven growth. The potential impact of the floating exchange rate and of measures by the Brazilian government aimed at stabilizing the Real is uncertain. In addition, a substantial increase in inflation may weaken investor confidence in Brazil. Policies pursued by the Brazilian government, and investors' reactions to actual or potential governmental policies, may contribute to economic uncertainty in Brazil and adversely

affect our financial condition and results of operations.

*Access to international capital markets for Brazilian companies is influenced by the perception of risk in Brazil and other emerging economies, which may hurt our ability to finance our operations.*

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. As a result of economic problems in various emerging market countries in recent years (such as the Asian financial crisis of 1997, the Russian financial crisis in 1998 and the Argentine financial crisis which began in 2001 and is continuing), investors have viewed investments in emerging markets with heightened caution. These crises produced a significant outflow of U.S. dollars from Brazil, causing Brazilian companies to face higher costs for raising funds, both domestically and abroad, and impeding access to international capital markets. 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 our share price.

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### **Risks Relating to our Equity and Debt Securities**

*The Brazilian securities markets are smaller, more volatile and less liquid than the major U.S. and European securities markets and therefore you may not be able to sell the common or preferred shares underlying our ADSs.*

The Brazilian securities markets are smaller, more volatile and less liquid than the major securities markets in the United States and other jurisdictions, and are not as highly regulated or supervised. The relatively small capitalization and liquidity of the Brazilian equity markets may substantially limit your ability to sell the common or preferred shares underlying our ADSs at the price and time you desire. These markets may also be substantially affected by economic circumstances unique to Brazil, such as currency devaluations.

*You may be unable to exercise preemptive rights with respect to the common or preferred shares underlying the ADSs.*

Holders of ADSs that are residents of the United States may not be able to exercise the preemptive rights relating to the common or preferred shares underlying our ADSs unless a registration statement under the U.S. Securities Act of 1933 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 with respect to the common or preferred shares relating to these preemptive rights, and therefore we may not file any such registration statement. If a registration statement is not filed and an exemption from registration does not exist, Citibank N.A., 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 common or preferred shares, see Item 10 Additional Information-Memorandum and Articles of Association-Preemptive Rights.

*You may not be able to sell your ADSs at the time or the price you desire because an active or liquid market for our ADSs may not be sustained.*

Our preferred ADSs have been listed on the New York Stock Exchange since February 21, 2001, while our common ADSs have been listed on the New York Stock Exchange since August 7, 2000. Although our ADSs are currently traded on the New York Stock Exchange, we cannot predict whether an active liquid public trading market for our ADSs will be sustained. Active, liquid trading markets generally result in lower price volatility and more efficient execution of buy and sell orders for investors. Liquidity of a securities market is often a function of the volume of the underlying shares that are publicly held by unrelated parties. Although ADS holders are entitled to withdraw the common or preferred shares underlying the ADSs from the depositary at any time, we do not anticipate that a public market for our common or preferred shares will develop in the United States.

*Restrictions on the movement of capital out of Brazil may impair your ability to receive dividends and distributions on, and the proceeds of any sale of, the common or preferred shares underlying the ADSs and may impact our ability to service certain debt obligations.*

The Brazilian government may impose temporary restrictions on the conversion of Brazilian currency into foreign currencies and on the remittance to foreign investors of proceeds from their investments in Brazil. Brazilian law permits the Brazilian government to impose these restrictions whenever there is a serious imbalance in Brazil's balance of payments or there are reasons to foresee a serious imbalance.

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The Brazilian government imposed remittance restrictions for approximately six months in 1990. Similar restrictions, if imposed, could impair or prevent the conversion of dividends, distributions, or the proceeds from any sale of common or preferred shares from Reais into U.S. dollars and the remittance of the U.S. dollars abroad. The Brazilian government could decide to take similar measures in the future. In such a case, the depositary for the ADSs will hold the Reais it cannot convert for the account of the ADS holders who have not been paid. The depositary will not invest the Reais and will not be liable for the interest.

Additionally, if the Brazilian government were to impose restrictions on our ability to convert Reais into U.S. dollars, we would not be able to make payment on our dollar-denominated debt obligations. For example, any such restrictions could prevent us from making funds available to our subsidiary, Petrobras International Finance Company (PIFCo), for payment of its debt obligations, certain of which are supported by us through standby purchase agreements.

***If you exchange your ADSs for common or preferred shares, you risk losing the ability to remit foreign currency abroad and forfeiting Brazilian tax advantages.***

The Brazilian custodian for our common or preferred shares underlying our ADSs must obtain a certificate of registration from the Central Bank of Brazil to be entitled to remit U.S. dollars abroad for payments of dividends and other distributions relating to our preferred and common shares or upon the disposition of the common or preferred shares. If you decide to exchange your ADSs for the underlying common or preferred shares, you will be entitled to continue to rely, for five Brazilian business days from the date of exchange, on the custodian's certificate of registration. After that period, you may not be able to obtain and remit U.S. dollars abroad upon the disposition of the common or preferred shares, or distributions relating to the common or preferred shares, unless you obtain your own certificate of registration or register under Resolution No. 2,689, of January 26, 2000, of the *Conselho Monetário Nacional* (National Monetary Council), which entitles registered foreign investors to buy and sell on the São Paulo Stock Exchange. If you do not obtain a certificate of registration or register under Resolution No. 2,689, you may be subject to less favorable tax treatment on gains with respect to the common or preferred shares.

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If you attempt to obtain your own certificate of 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 common or preferred shares or the return of your capital in a timely manner. The custodian's certificate of registration or any foreign capital registration obtained by you may be affected by future legislative or regulatory changes, or that additional restrictions applicable to you, the disposition of the underlying common or preferred shares or the repatriation of the proceeds from disposition will not be imposed in the future.

*You may face difficulties in protecting your interests as a shareholder because we are subject to different corporate rules and regulations as a Brazilian company and because holders of our common shares, preferred shares and ADSs have fewer and less well-defined shareholders rights than those traditionally enjoyed by United States shareholders.*

Our corporate affairs are governed by our bylaws and the Brazilian Corporation Law, which differ from the legal principles that would apply if we were incorporated in a jurisdiction in the United States, such as the States of Delaware or New York, or in other jurisdictions outside Brazil. In addition, your rights as an ADS holder or the rights of holders of the common or preferred shares under Brazilian Corporation Law to protect their interests against actions by our board of directors may be fewer and less well-defined than those under the laws of other jurisdictions.

Although insider trading and price manipulation are considered crimes under Brazilian law, the Brazilian securities markets are not as highly regulated and supervised as the U.S. securities markets or markets in some other jurisdictions. In addition, rules and policies against self-dealing and regarding the preservation of shareholder interests may be less well-defined and enforced in Brazil than in the United States, putting holders of our common shares, preferred shares and ADSs at a potential disadvantage. Corporate disclosure may be less complete or informative than what may be expected of a U.S. public company.

We are a mixed-capital company organized under the laws of Brazil and all of our directors and officers reside in Brazil. Substantially all of our assets and those of our directors and officers are located in Brazil. As a result, it may not be possible for you to effect service of process upon us or our directors and officers within the United States or other jurisdictions outside Brazil or to enforce against us or our directors and officers judgments obtained in the United States or other jurisdictions outside Brazil. Because judgments of U.S. courts for civil liabilities based upon the U.S. federal securities laws may only be enforced in Brazil if certain requirements are met, you may face more difficulties in protecting your interests in the case of actions against us or our directors and officers than would shareholders of a corporation incorporated in a state or other jurisdiction of the United States.

*Preferred shares and the ADSs representing preferred shares generally do not give you voting rights.*

A portion of our ADSs represents our preferred shares. Under Brazilian law and our bylaws, holders of preferred shares generally do not have the right to vote in meetings of our stockholders. This means, among other things, that holders of ADSs representing preferred shares are not entitled to vote on important corporate transactions or decisions. See Item 10 Additional Information-Memorandum and Articles of Incorporation-Voting Rights for a discussion of the limited voting rights of our preferred shares.

*Developments in other emerging market countries may affect the trading values of our securities.*

Securities of Brazilian companies have been influenced by economic and market conditions in other emerging market countries to varying degrees. Although economic conditions are different in each country, investors' reactions to developments in one country may affect the

securities of issuers in other countries, including Brazil. Between the fourth quarter of 1997 and the first quarter of 1999, the international financial markets experienced significant volatility, and a large number of market indices, including those in Brazil, declined significantly. The 1997 Asian economic crisis, the 1998 Russian debt moratorium and devaluation of the Russian currency, and the relatively recent political and economic crisis in Argentina, for example, resulted in increased volatility in securities markets in Latin America and in other emerging market countries.

#### **ITEM 4. INFORMATION ON THE COMPANY**

##### **History and Development of the Company**

We are a mixed-capital company created pursuant to Law No. 2,004 (effective as of October 3, 1953). A mixed-capital company is a Brazilian corporation created by special law of which a majority of the voting capital must be owned by the Brazilian federal government, a state or a municipality. We are controlled by the Brazilian federal government, but our common and preferred shares are also publicly traded. Our principal executive office is located at Avenida República do Chile, 65, 20035-900 - Rio de Janeiro - RJ, Brazil and our telephone number is (55-21) 2534-4477.

We began operations in Brazil in 1954 as a wholly-owned government enterprise responsible for all hydrocarbon activities in Brazil. From that time until 1995, we had a government-granted monopoly for all crude oil and natural gas production and refining activities in Brazil. On November 9, 1995, the Brazilian Constitution was amended to authorize the Brazilian government to contract with any state or privately owned company to carry out the activities related to the upstream and downstream segments of the Brazilian oil and gas sector. This amendment eliminated our legal monopoly.

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The crude oil and natural gas industry in Brazil has experienced significant reforms since the enactment of Law No. 9,478, or the Oil Law, on August 6, 1997, which established competition in Brazilian markets for crude oil, oil products and natural gas in order to benefit end-users. Effective January 2, 2002, the Brazilian government deregulated prices for crude oil and oil products. See -Regulation of the Oil and Gas Industry in Brazil-Price Regulation. The gradual transformation of the oil and gas industry since 1997 has led to increased participation by international companies in Brazil across all segments of our business, both as our competitors and partners.

Based upon our 2003 consolidated revenues, we are the largest corporation in Brazil and one of the largest oil and gas companies in Latin America. In 2003, we had sales of products and services of U.S.\$42,690 million, net operating revenues of U.S.\$30,797 million and net income of U.S.\$6,559 million.

We engage in a broad range of oil and gas activities, which cover the following segments of our operations:

**Exploration and Production** Our exploration and production segment encompasses exploration, development and production activities in Brazil.

**Refining, Transportation and Marketing** Our refining, transportation and marketing segment encompasses refining, logistics, transportation and the purchase of crude oil, as well as the purchase and sale of oil products and fuel alcohol. Additionally, this segment includes the petrochemical and fertilizers division, which includes investments in domestic petrochemical companies and our two domestic fertilizer plants.

**Distribution** Our distribution segment encompasses oil product and fuel alcohol distribution activities conducted by our majority owned subsidiary, Petrobras Distribuidora S.A. - BR in Brazil.

**Natural Gas and Power** Our natural gas and power segment encompasses the purchase, sale and transportation of natural gas produced in or imported into Brazil. Additionally, this segment includes our domestic electric energy commercialization activities as well as investments in domestic natural gas transportation companies, state owned natural gas distributors and thermal electric companies.

**International** Our international segment encompasses international activities conducted in 10 countries, which include Exploration and Production, Supply, Distribution and Gas and Energy.

**Corporate** Our corporate segment includes those activities not attributable to other segments, including corporate financial management, overhead related with central administration and other expenses, including pension and health care expenses.

## **Our Competitive Strengths**

We have a number of key strengths, including:

our dominant market position in the production, refining and transportation of crude oil and oil products in Brazil;

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our reserve base and comparatively long reserve life;

our deepwater technological expertise;

our cost efficiencies created by our large scale operations combined with our vertical integration within each of our business segments;

our strong position in Brazil's growing natural gas markets; and

our success in attracting international partners in all our activities.

### *Our dominant market position in the production, refining and transportation of crude oil and oil products in Brazil*

Our legacy as Brazil's former sole supplier of crude oil and oil products has provided us with a fully developed operational infrastructure throughout Brazil and a large proved reserve base. Our long history, resources and established presence in Brazil permit us to compete effectively with other market participants and new entrants now that the Brazilian oil and gas industry has been deregulated. We operate all major development fields in Brazil and operate approximately 98.6% of the country's refining capacity. Our average domestic daily production of crude oil and NGLs increased 2.7% in 2003, 12.3% in 2002 and 10.2% in 2001.

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### *Our reserve base and comparatively long reserve life*

As of December 31, 2003, we had estimated proved developed and undeveloped reserves of approximately 11.6 billion barrels of crude oil equivalent in Brazil and abroad. In addition, we have a substantial base of exploration acreage both in Brazil and abroad, which we are exploring by ourselves and with industry partners in order to continue to increase our reserves.

As of December 31, 2003, our proved reserves to production ratio was 17 years, as compared to an international industry average of 13 years.

We believe that our proved reserves will provide us with significant opportunities for:

sustaining and increasing production growth;

substituting imported light crude oil with production from newly discovered lighter crude oil reserves; and

controlling costs in the future as we achieve greater economies of scale.

### *Our deepwater technological expertise*

While developing Brazil's offshore basins over the past 35 years, we have gained expertise in deepwater drilling, development and production techniques and technologies. We are currently in the process of developing technology to permit production from wells at water depths of up to 9,842 feet (3,000 meters).

Our deepwater development and production expertise has allowed us to achieve high production volumes and relatively low lifting costs (excluding royalties, special government participation and rental of areas, which we refer to as government take). Our aggregate average lifting cost for crude oil and natural gas products in Brazil for 2003, excluding government take, increased to U.S.\$3.48 per barrel of oil equivalent, as compared to U.S.\$3.04 per barrel of oil equivalent for 2002. Including government take, our lifting costs increased to U.S.\$8.62 per barrel of oil equivalent for 2003, as compared to U.S.\$7.04 per barrel of oil equivalent for 2002.

### *Our cost efficiencies created by our large scale operations combined with our vertical integration within each of our business segments*

As the dominant integrated crude oil and natural gas company in Brazil, we can be cost efficient as a result of:

the location of over 80% of our proved reserves in large, contiguous and highly productive fields in the offshore Campos Basin, which allows for the concentration of our operational infrastructure, thereby reducing our total costs of exploration, development and

production;

the location of most of our refining capacity in the Southeast region, directly adjacent to the Campos Basin and situated within the country's most heavily populated and industrialized markets; and

the relative balance between our current production of 1.54 million barrels per day, our refining throughput of 1.61 million barrels per day and the Brazilian market total demand for hydrocarbon products of 1.7 million barrels per day as of December 2003.

We believe that these cost efficiencies created by our integration, our existing infrastructure and our balance allow us to compete effectively with other Brazilian producers and importers of oil products into the Brazilian market.

*Our strong position in Brazil's potentially growing natural gas markets*

We participate in most aspects of the Brazilian natural gas market. Because of the diversity of our natural gas operations, we believe that we are well-positioned to take advantage of the opportunity to meet potentially growing energy needs in Brazil through the use of natural gas. We intend to do so through our:

development of significant proved natural gas reserves in Bolivia and the 1,969 miles (3,150 kilometers) long Bolivia-Brazil natural gas pipeline;

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increasing production of non-associated natural gas, and natural gas associated with our domestic crude oil production, combined with the necessary investments to process such gas from recent discoveries of non-associated gas reserves, mainly in the Santos Basin of Brazil;

planned investments in expansion of the natural gas transportation network throughout Brazil;

increased participation in the natural gas distribution market through investments in 17 of the 23 natural gas distribution companies in Brazil; and

investments in thermoelectric power plants, which serve as sources of demand for our natural gas.

### *Our success in attracting international partners in all our activities*

As a result of our experience, expertise and extensive infrastructure network in Brazil, we have attracted partners in our exploration, development, refining and power activities such as Repsol-YPF, ExxonMobil, Shell, British Petroleum, Chevron-Texaco and Total. Partnering with other companies allows us to share risks, capital commitments and technology in our continuing development and expansion.

We may face significant risks in our ability to take full advantage of these competitive strengths. See Item 3 Key Information-Risk Factors.

## **Our Business Strategy**

We intend to continue to expand our oil and gas exploration and production activities and pursue strategic investments within and outside of Brazil to further develop our business. We seek to evolve from a dominant integrated oil and gas company in Brazil into an energy industry leader in Latin America and a significant international energy company. In line with our Strategic Plan and to further these goals, we intend to:

expand production while increasing reserves;

upgrade our refineries to increase their ability to process heavier domestic crude oil production while at the same time fulfilling a growing percentage of the current demands of the Brazilian market and meeting stricter quality standards;

expand international operations through internal growth and by participating selectively in new partnerships in core activities where we have competitive advantages;

expand the natural gas market in Brazil to ensure a market for the natural gas that we produce or acquire through existing off-take obligations;

develop and improve company-wide initiatives to address environmental, health and safety concerns and ensure compliance with environmental regulations;

operate successfully and transparently in a deregulated market;

improve gasoline and diesel quality to comply with stricter environmental regulations currently being implemented; and

meet targeted operating costs and return on capital, while being socially and environmentally responsible and contributing to the development of Brazil and the other countries where we operate.

*Expand production while increasing reserves*

We seek to generate production growth from the continued development of our proved undeveloped reserve base of 6.04 billion barrels of oil equivalent at December 31, 2003, which represents approximately 58.1% of our total proved reserves. Our 2004-2010 budget contemplates capital expenditures of approximately U.S.\$53.6 billion in development activities for this seven-year period, including U.S.\$5.9 billion to be financed through project financings. The majority of these capital expenditures, U.S.\$32.1 billion, will be directed towards exploration and production activities, of which U.S.\$26.2 billion will be directed towards domestic exploration and production activities. We intend to increase our effort in production to produce lighter crude oil from our newly discovered reserves.

At the same time that we seek to expand production, we intend to increase our proved reserves principally through an exploration program focused on deepwater exploration in Brazil. We have net exploration, development and production rights in 21 million acres (85,082 square kilometers) in Brazil. We expect to continue to participate selectively with major regional and international oil and gas companies in bidding for new concessions and in developing our large offshore fields.

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We also intend to pursue international exploration and production opportunities with industry participants primarily in South America, the Gulf of Mexico and the west coast of Africa. As a result of this strategy, we participate in joint ventures, which have resulted in discoveries in Agbami and Akpo (off the coast of Nigeria) and in a deepwater field in the Gulf of Mexico (Cascade Project). We are also exploring opportunities in new areas for our international activities, such as in the Middle East. In 2003, we participated in a tender for exploration blocks in Iran. At December 2003, we had exploration, development and production rights in 19.2 million gross and 9.7 million net acres (78,000 gross and 39,000 net square kilometers) outside Brazil.

*Upgrade our refineries to increase their ability to process heavier domestic crude production while at the same time fulfilling a growing percentage of the current demands of the Brazilian market*

Our refineries were originally constructed to process light imported crude oil, whereas our current reserves and production increasingly consist of heavier crude oil. We plan to improve and adapt our refineries to better process our domestic production of heavier crude oil by continuing to:

invest in our refineries to allow them to process greater volumes of heavier domestic crude oil, thereby reducing the amount of crude oil we have to import to meet demand;

invest in our refineries to produce the light and middle distillate products that are of higher value and greater demand in the Brazilian market;

upgrade the technology of our refining operations to increase efficiency; and

improve the interconnection between our domestic and international activities to improve operating efficiencies.

*Expand international operations through internal growth and by participating selectively in new partnerships in core areas where we have competitive advantages.*

In the near term, we expect to expand internationally by using our existing asset base or participating in selective partnerships in core activities where we have a competitive advantage. We consider our core activities to be integrated oil and gas operations throughout South America and deepwater exploration and development off the U.S. Gulf Coast and West Africa. During 2003 we acquired interests in exploration blocks in Argentina, Bolivia, Colombia and the Gulf of Mexico.

*Develop and improve systematic, company-wide initiatives to address health, safety and environmental concerns and ensure compliance with environmental regulations*

The protection of human health and the environment is one of our primary concerns, and is essential to our success as an integrated oil, gas and energy company. In order to address and prioritize health, safety and environmental concerns and ensure compliance with environmental regulations, we have taken several measures, of which the most extensive is the *Programa de Excelência em Gestão Ambiental e Segurança Operacional* (Program for Excellence in Environmental and Operational Safety Management, or PEGASO). Through the program, we seek to improve technology, upgrade our pipelines, reduce emissions and wastes, improve our emergency response readiness and prevent environmental accidents. Another important initiative is the *Programa de Segurança de Processo* (Process Safety Program) that aims to strengthen our

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corporate commitment to safety through the implementation of standardized, company-wide health, safety and environmental guidelines. See Health, Safety and Environmental Matters.

*Expand the natural gas market in Brazil to ensure a market for the natural gas that we produce or acquire through existing off take obligations*

Through our participation in all segments of the natural gas market, both in Brazil and abroad, we seek to stimulate and meet natural gas demand. We intend to continue to expand our participation in the natural gas market by:

expanding our production of associated gas offshore and exploiting our non-associated gas reserves in Bolivia and the Solimões basin and recent discoveries in the Santos Basin;

expanding our extensive natural gas pipeline network to further connect our natural gas reserves with refineries and other primary distribution points throughout Brazil; and

maintaining investments in natural gas distribution and transportation companies.

As a result of our investments and the growing importance of natural gas as an energy alternative, we anticipate that the proportion of our revenues and the proportion of our assets represented by our natural gas operations will increase, leading to a greater impact of these activities on our results of operations.

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*Operate successfully and transparently in a deregulated market*

Since the beginning of market liberalization in 1997 and price deregulation in 2002, we have been taking steps to prepare for market competition. In order to meet the challenges of competition, we have:

conducted analyses of the actual and potential sources of competition in each of our business segments; and

planned to continue upgrading and modernizing our refineries to increase their capacity to refine heavy oil and improve the quality of the oil products we produce in order to compete with imports of oil products.

We continue the process of transforming our corporate culture and bylaws to encourage greater transparency and accountability to shareholders. In March 2002, we amended our bylaws to comply with changes to the Brazilian Corporation Law and improve our corporate governance. We believe that these corporate changes better position us to compete in a deregulated market, increase investor confidence in our company and enhance our market value.

In addition to the changes we have implemented in our bylaws, we have adopted the following policies and procedures:

the Corporate Governance Guidelines, which establish procedures for our board of directors and set forth matters where the opinion of our preferred shareholders will be considered;

the Code of Good Practices, which institutes corporate policies relating to matters such as information disclosure, insider trading restrictions, management and professional behavior, selection of management of subsidiaries and affiliates and investor relations;

the Code of Competition Conduct, which is part of our effort to ensure that our commercial policies and practices comply with Brazilian competition laws;

the Internal Regulation, which defines responsibilities and procedures governing the meetings of the board of directors, board committees, business committee and management committee; and

the Code of Ethics, which sets forth fundamental principles for business transparency and rules of ethical conduct.

As a foreign private issuer, we are exempt from many of the corporate governance standards the New York Stock Exchange (the NYSE) applies to U.S. domestic issuers listed on the NYSE. In accordance with Section 303A.11 of the NYSE Listed Company Manual, we have posted a summary of significant differences between the NYSE standards and our corporate governance practice on our website, [www.petrobras.com.br](http://www.petrobras.com.br).

*Meet targeted operating costs and return on capital, while being socially and environmentally responsible and contributing to the development of Brazil and other countries where we operate.*

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We are undertaking a number of initiatives to control our operating costs. We are targeting a reduction in the aggregate average lifting costs in Brazil for crude oil and natural gas in order to achieve lifting costs of U.S.\$3.00 per barrel of oil equivalent in 2010 (excluding government take) as compared to U.S.\$3.48 per barrel of oil equivalent in 2003. We will seek to reduce our operating costs per barrel by a number of means, including:

expanding our exploration, development and production activities near our existing operations (which allows for the concentration of our operational infrastructure);

targeting a return on capital employed of 15% for 2010, assuming a price of U.S.\$23 per barrel for Brent crude oil;

bringing additional developments onstream in large new offshore fields with high well productivity;

employing ongoing improvements in production techniques developed by us and by the drilling industry;

improve reservoir management technique; and

increasing gas sales transported through the Bolivia-Brazil pipeline and from our own associated gas production.

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### **Overview by Business Segment**

#### ***Exploration, Development and Production***

##### *Summary and Strategy*

Our exploration and production segment includes exploration, development and production activities in Brazil. We began domestic production in 1954 and international production in 1972. As of December 31, 2003, our estimated net proved crude oil and natural gas reserves in Brazil were approximately 10.4 billion barrels of oil equivalent. Crude oil represented 87% and natural gas represented 13% of these reserves. Our proved reserves are located principally in the Campos Basin.

During 2003, our average daily domestic production was 1.5 million barrels per day of crude oil and NGLs and 1.5 billion cubic feet of natural gas per day. Our aggregate average lifting costs for crude oil and natural gas in 2003 were U.S.\$3.48 per barrel of oil equivalent in Brazil (excluding government take).

We conduct our exploration, development and production activities in Brazil through concession contracts. Under the terms of the Oil Law, in 1998 we were granted the concession rights to areas where we were already producing or could demonstrate we could explore or develop within a certain time frame ( Round O ). In a number of our concessions, we have agreed with foreign partners to jointly explore and develop the concessions. In conjunction with the majority of these arrangements, we received a carried interest for capital expenditures made during the exploration phase, with our partners incurring all capital expenditures until the development of a commercial discovery commences.

At December 31, 2003, we held 326 areas, representing 21 million acres (85,082 square kilometers). We currently have joint venture agreements for exploration and production in Brazil with approximately 26 foreign and domestic companies. We are also active in exploration and production activities outside Brazil. For a full description of our international activities, see -International-Exploration and Production. In addition, we have added to our exploration acreage through our participation in bidding rounds that have been conducted annually by the *Agência Nacional de Petróleo* (the National Petroleum Agency, or the ANP) since 1999.

Our main strategies in exploration, development and production in Brazil are to:

increase production by developing our proved reserves, mainly by focusing on deepwater offshore activities;

accelerate production of recent discoveries of light crude oil and non-associated gas;

increase reserves through continued exploration;

improve our reservoir management;

reduce lifting costs; and

continue to take advantage of opportunities to acquire exploration concessions in Brazil.

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### *Principal Domestic Oil and Gas Producing Regions*

Our annual daily production in Brazil has grown over the years. In 1970, we produced 167 Mbd of crude oil, condensate and natural gas liquids in Brazil. We increased production to 188 Mbd in 1980, 654 Mbd in 1990, 1,271 Mbd in 2000 and 1,540 Mbd in 2003.

#### Campos Basin

The Campos Basin is our largest oil and gas producing region, and covers approximately 28.4 million acres (115 thousand square kilometers). Since exploration activities in this area began in 1968, over 40 hydrocarbon reservoirs have been discovered in this region, including eight large oil fields in deepwater and ultra deepwater. In terms of proved hydrocarbon reserves and annual production, the Campos Basin is the largest oil basin in Brazil and one of the most prolific oil and gas areas in South America. Annual crude oil production volume in the region has steadily increased for the past ten years and reached 1,252 Mbd in 2003, which accounted for approximately 81.3% of Brazilian oil production.

At December 31, 2003, we produced crude oil from 33 fields in the Campos Basin and our proved crude oil reserves were 8.09 billion barrels, representing 89.4% of our total proved crude oil reserves. In 2003, the crude oil we produced in the Campos Basin had an average API gravity of 23.5° and an average water cut of 1.6%. We currently have 24 floating production systems, 13 fixed platforms and 4,225 kilometers of pipeline operating in 33 fields at water depths of 262 to 6,188 feet (80 - 1,886 meters) in the Campos Basin.

#### Santos Basin

The Santos Basin represents one of our most active and promising exploration areas. We currently have exploration rights to 15 blocks in the Santos Basin, with a combined acreage of 34.3 thousand square kilometers (as compared to 9 thousand square kilometers under concession in the Campos Basin). Current production of oil and natural gas is 8.2 Mboe per day in the Coral and Merluza fields. In 2003, we discovered significant quantities of natural gas and light crude oil in this region.

#### Espírito Santo Basin

In partnership with Shell and Chevron Texaco, we have made several discoveries of heavy crude oil in the Espírito Santo Basin. During 2003, we produced 52.2 Mboe per day of oil and natural gas in the Espírito Santo Basin (33.0 Mboe onshore and 19.2 Mboe offshore). In 2003, we discovered crude oil with an API gravity of 40° to 41° in Block BES-100.

#### Solimões Basin

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The Solimões Basin is primarily a natural gas producing region which covers approximately 235 million acres (950,000 square kilometers) in the Amazon region. During 2003, we produced 104.6 Mboe per day of oil and natural gas in the Solimões Basin.

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## Properties

The following table sets forth our developed and undeveloped acreage by oil region and associated crude oil and natural gas production:

	Production		Average Oil and	Average Oil and
	Acreage as of		Natural Gas	Natural Gas
	December 31, 2003		Production for	Production for
	Developed	Undeveloped	the Year	the Year
			Ended December 31,	Ended December 31,
			2003(1)(3)	2002(1)(3)
	(in acres)		(boe per day)(2)	
<b>Brazil(1)</b>				
Offshore				
Campos Basin	1,713,920	65,482	1,361,909	1,329,717
Other offshore	313,576	117,621	70,625	78,052
Total offshore	2,027,496	183,103	1,432,534	1,407,769
Onshore	987,431	122,316	358,094	344,158
<b>Total Brazil</b>	<b>3,014,927</b>	<b>305,419</b>	<b>1,790,628</b>	<b>1,751,927</b>
<b>International</b>	<b>2,796,620</b>	<b>1,712,253</b>	<b>245,879</b>	<b>58,171</b>
<b>Total</b>	<b>5,811,547</b>	<b>2,017,672</b>	<b>2,036,507</b>	<b>1,810,098</b>

(1) Over 90% of our production of natural gas is associated gas.

(2) See Conversion Table for the ratios used to convert cubic feet of natural gas to barrels of oil equivalent.

(3) Includes production from shale oil reserves, natural gas liquids and reinjected gas volumes, which are not included in our proved reserves figures.

*Deepwater Expertise*

We are a leader in deepwater drilling, with recognized expertise in deepwater exploration, development and production. We have developed our expertise over many years and have achieved significant milestones, including the following:

in 2000, we confirmed the discovery of crude oil at a depth of 7,359 feet (2,243 meters) in the Campos Basin, achieving a new record for our deepwater exploration;

at the end of August 2001, we drilled the world's second deepwater multi-lateral well (having drilled the first such well in August 1998), in the Barracuda-Caratinga field in the Campos Basin at a water depth of 2,815 feet (858 meters), consisting of two legs with 1,782 feet (543 meters), and 1,345 feet (410 meters) of horizontal displacement;

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at December 31, 2003, we were operating 26 wells at water depths in excess of 3,281 feet (1,000 meters); and

at December 31, 2003, we had drilled 383 wells in water depth greater than 3,281 feet (1,000 meters), the deepest well being in water depth of 9,360 feet (2,853 meters), making it the fifth deepest offshore exploratory well in the world.

Because many of Brazil's richest oil fields are located offshore in deep waters, we intend to continue to focus on our deepwater production technology to increase our proved reserves and future domestic production. See Item 5 Operating and Financial Review and Prospects-Research and Development. Our main exploration and development efforts involve offshore fields neighboring our existing fields and production infrastructure, where higher drilling costs have been offset by higher drilling success ratios and relatively higher production. On a per-well basis, the exploration, development and production costs of an offshore well are generally higher than those costs for an onshore well. We believe, however, that offshore production is cost-effective, because historically:

we have been more successful in finding and developing crude oil offshore, as a result of the existence of the larger number and size of oil reservoirs offshore as compared to onshore reservoirs and the greater volume of offshore seismic data collected; and

we have been able to spread the total costs of exploration, development and production over a large base, given the size and productivity of our offshore reserves. Offshore production has exceeded onshore production by a per barrel production ratio of 5.20:1 in 2003, 5.18:1 in 2002 and 4.79:1 in 2001.

We currently extract hydrocarbons from offshore wells in waters with depths of up to 6,188 feet (1,886 meters), and we have been developing technology to permit production from wells at water depths of up to 9,843 feet (3,000 meters). Set forth below is the distribution, by water depth, of offshore oil production in 2003 and 2002.

**Table of Contents****OFFSHORE PRODUCTION BY WATER DEPTH**

<u>Depth</u>	<u>Percentage in 2003</u>	<u>Percentage in 2002</u>
0-400 meters (0-1,312 feet)	21%	20%
400-1,000 meters (1,312 feet-3,281 feet)	58%	67%
More than 1,000 meters (3,281 feet)	21%	13%

*Exploration Activities*

## Our Concessions in Brazil

Prior to 1998, we had the right to exploit all exploration, development and production areas in Brazil as a result of the monopoly that was granted to us by the Brazilian government. When the Brazilian oil and gas sector was deregulated beginning in 1998, our government-granted monopoly ended. On August 6, 1998, we signed concession contracts with the ANP for all of the areas we had been using prior to 1998. Those concession contracts covered 397 areas, consisting of 231 production areas, 115 exploration areas and 51 development areas, for a total area aggregating 113.3 million gross acres (458,532 square kilometers).

At December 31, 2003, we had 326 areas, consisting of 235 production areas, 54 exploration areas and 37 development areas, for a total area aggregating 21 million net acres (85 thousand square kilometers). This total area represents 1.4% of the Brazilian sedimentary basins.

## Exploration bidding rounds

Since 1998, the ANP has conducted bidding rounds for exploration rights which are open to us and qualified third parties. We have competed in the public auctions conducted by the ANP, acquiring a large number of exploration rights, as detailed in the table below. We have also relinquished a considerable number of the exploratory areas in which we were not interested or successful in exploring.

The following chart summarizes our success in the exploration bidding rounds conducted by the ANP, as described above:

<u>Event</u>	<u>Exploration</u>	<u>Development</u>	<u>Production</u>	<u>Total</u>
Areas requested (October 13, 1997)	133	52	240	425
Concessions granted (August 6, 1998), Round 0	115	51	231	397
Areas redefined	0	(2)	2	0
<b>Areas held (December 31, 1998)</b>	115	49	233	397
Areas relinquished (May 11, 1999)	(26)	0	0	(26)
Areas redefined	0	(3)	3	0

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Areas won on Bid, Round 1	5	0	0	5
Areas redefined	0	(3)	3	0
New concessions (July 1, 1999)	0	1	0	1
<b>Areas held (December 31, 1999)</b>	<b>94</b>	<b>44</b>	<b>239</b>	<b>377</b>
Areas relinquished on January 26, 2000	(3)	0	0	(3)
Areas won on Bid, Round 2	8	0	0	8
Areas redefined	0	(3)	3	0
<b>Areas held (December 31, 2000)</b>	<b>99</b>	<b>41</b>	<b>242</b>	<b>382</b>
New concession (March 21, 2001) (Angico)	0	1	0	1
Areas sold (May 10 and May 11, 2001)	0	(3)	(10)	(13)
Areas won on Bid, Round 3	15	0	0	15
New concession (August 1, 2001) (Curió)	0	1	0	1
New concession (August 2, 2001) (Beija-Flor)	0	1	0	1
Areas relinquished (August 6, 2001)	(57)	0	0	(57)
Areas relinquished (October 5, 2001) (BC-8)	(1)	0	0	(1)
New concession (August 1, 2001) (Cardeal)	0	1	0	1
Areas relinquished (November 5, 2001)	(1)	0	0	(1)
Areas redefined (August 6, 2001) (Pojuca Norte)	0	(1)	1	0
<b>Areas held (December 31, 2001)</b>	<b>55</b>	<b>41</b>	<b>233</b>	<b>329</b>
Areas relinquished (May 2002) (BA-1)	(1)	0	0	(1)

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Areas won on Bid, Round 4	8	0	0	8
Areas relinquished (August 6, 2002) (BM-CAL-1 and BM-C-6)	(2)	0	0	(2)
Areas relinquished (August 2002) (BS-2)	(1)	0	0	(1)
Areas relinquished (September 2002) (BES-2)	(1)	0	0	(1)
New concession (February 6, 2002) (Siri)	0	1	0	1
New concession (August 27, 2002) (Asa Branca)	0	1	0	1
New concession (November 22, 2002) (Manati)	0	1	0	1
New concession (December 11, 2002) (Jubarte)	0	1	0	1
New concession (December 27, 2002) (Cachalote)	0	1	0	1
Areas relinquished (March 13, April 24, 2002)	0	(1)	(4)	(5)
Areas redefined (April 26, May 10, August 6, August 10, October 9 and December 12, 2002)	0	(6)	6	0
Areas relinquished (Caraína - PETROBRAS not operator)	0	0	(1)	(1)
<b>Areas held (December 31, 2002)</b>	<b>58</b>	<b>39</b>	<b>234</b>	<b>331</b>
Areas redefined (July 2003) (BCAM-40)	1	0	0	1
Areas relinquished (August 6, 2003)	(22)	0	0	(22)
Areas won on Bid, Round 5	17	0	0	17
New concession (January 29, 2003) (Guajá)	0	1	0	1
New concession (August 4, 2003) (Cavalo-Marinho)	0	1	0	1
Areas redefined (February 3, 2003) (Coral)	0	(1)	1	0
Areas redefined (July 15, 2003) (Beija-Flor)	0	(1)	1	0
Joint concession COG to CCN (1)	0	0	(1)	(1)
Joint concession CDL to MP (2)	0	0	(1)	(1)
Areas relinquished (BAS-104)	0	(1)	0	(1)
Areas relinquished (Arraia)	0	(1)	0	(1)
<b>Total areas held (as of December 31, 2003)</b>	<b>54</b>	<b>37</b>	<b>234</b>	<b>325</b>
Net land area held in million acres (as of December 31, 2003)	17,780,005	285,397	2,957,994	21,023,396

- (1) COG Córrego Grande, CCN Córrego Cedro Grande  
(2) CDL Cardeal, MP Massapê

**Joint Ventures**

As of December 31, 2003, we had 47 exploration and development agreements with respect to our concessions with numerous oil and gas companies. Our percentage participation ranges from 20% to 85%, and in 30 of the 47 agreements, we are principally responsible for conducting the exploration and development activities. During 2003, we entered into 3 partnership projects relating to exploration activities. As of December 31, 2003, we had partnerships with 26 foreign and domestic companies.

In conjunction with the majority of these arrangements, we receive a carried interest for capital expenditures made during the exploration phase, with our partners incurring all capital expenditures until the development of a commercial discovery commences.

**Drilling Activities**

During 2003, we drilled a total of 305 development wells and 79 exploratory wells. Of those wells, 40 development wells and 37 exploratory wells were located in our principal Campos Basin fields. Of those development wells, 20% were drilled in the Marlim Sul field, with the remainder concentrated in the Roncador (12.5%), Barracuda (12.5%), Marlim (10%), Albacora Leste (10%), Caratinga Bicudo (10%), Pampo

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(5%), Albacora (2.5%), Linguado (2.5%) and Voador (2.5%) fields. An additional 54 of the 364 new development wells we plan to drill during 2004 will be drilled in the Albacora Leste, Roncador, Marlim Sul, Pampo, Marlim and Marlim Leste fields.

We plan to expand our exploration and development activities in 2004 by:

drilling approximately 77 new exploratory and approximately 364 new development wells;

shooting and processing two-dimensional and three-dimensional seismic surveys; and

constructing onshore and offshore production and support facilities.

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The following table sets forth the number of wells we drilled, or in which we participated, and the results achieved, for the periods indicated:

**EXPLORATORY AND DEVELOPMENT WELLS**

Period		Brazil				Total
		Offshore		Onshore	International	
		Campos Basin	Other			
<b>2003</b>	<b>Net Exploratory Wells Drilled</b>	21	10	7	4	42
	Successful	7	2	2	2	13
	Unsuccessful	14	8	5	2	29
	<b>Net Development Wells Drilled</b>	12	0	264	26	302
	Successful	12	0	256	26	294
	Unsuccessful	0	0	8	0	8
<b>2002</b>	<b>Net Exploratory Wells Drilled</b>	19	21	16	4	60
	Successful	4	2	5	3	14
	Unsuccessful	15	19	11	1	46
	<b>Net Development Wells Drilled</b>	20	10	247	7	284
	Successful	20	10	238	7	275
	Unsuccessful	0	0	9	0	9
<b>2001</b>	<b>Net Exploratory Wells Drilled</b>	14	37	36	6	93
	Successful	4	6	9	3	22
	Unsuccessful	10	31	27	3	71
	<b>Net Development Wells Drilled</b>	41	9	294	11	355
	Successful	40	5	283	11	339
	Unsuccessful	1	4	11	0	16

The following table sets forth our total fleet of drilling rig units. We will use these owned and leased rigs to support our future exploration, production and development activities. Most of the offshore rigs are operated in the Campos Basin.

**DRILLING UNITS**

2003		2002		2001	
Brazil	Int 1	Brazil	Int 1	Brazil	Int 1

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<b>Land rigs for onshore exploration and development</b>	15	10	16	4	42	0
Owned	13	0	12	0	17	0
Leased	2	10	4	4	25	0
<b>Semi-submersible rigs</b>	17	0	20	0	22	22
Owned	4	0	4	0	4	13
Leased	13	0	16	0	18	9
<b>Drill ships</b>	8	1	5	0	11	0
Owned	0	0	4	0	0	0
Leased	8	1	1	0	11	0
<b>Jack-up rigs</b>	6	0	5	0	6	1
Owned	5	0	5	0	4	1
Leased	1	0	0	0	2	0
<b>Moduled rigs for offshore exploration and development</b>	9	0	4	0	10	6
Owned	6	0	4	0	7	0
Leased	3	0	0	0	3	6
<b>Total</b>	<b>55</b>	<b>11</b>	<b>50</b>	<b>4</b>	<b>91</b>	<b>29</b>

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### *Development Activities*

The development stage occurs after the completion of exploration and appraisal and prior to hydrocarbon production, and involves the development of production facilities including platforms and pipelines. We have an active development program in existing fields and in the discovery and recovery of new reserve finds. Over the last five years, we have concentrated our development investments in the deepwater fields located in the Campos Basin, where most of our proved reserves are located. We develop our fields in stages of production, which we refer to as modules.

### Campos Basin Fields

*Marlim.* The Marlim field is located at water depths between 2,133 and 3,445 feet (650 - 1,050 meters). It is our largest field based on production. Average production of crude oil during 2003 was 532.1 Mbd, or more than 42% of total production in the Campos Basin. We have developed the Marlim field in five modules. We currently have seven floating production systems with a total capacity of 690 Mbd operating in the Marlim field. We have a total of 82 production wells and 46 injection wells, and expect to drill another 4 wells in 2004. Peak production of 602 Mboe was achieved in 2002.

*Roncador.* The Roncador field is located at water depths between 4,921 and 6,234 feet (1,500 - 1,900 meters). The first module of the development of this field consisted of Platform P-36, which sank in March 2001, and which was producing 80 Mbd prior to the accident. Since the loss of P-36, we have contracted a temporary Floating Production Storage and Offloading unit (FPSO Brazil) with a capacity of 90 Mbd. First oil from this unit was attained on December 8, 2002. A total of eight wells, which were previously attached to P-36, are currently being attached to the new FPSO unit. A second platform (P-52) with a 180 Mbd capacity is under construction. First oil from the unit is expected in 2007. A total of 20 production wells are planned in this first module, including the eight which were completed before the sinking of P-36.

The contracts for a third production unit, with production capacity of 190 Mbd, were signed on June 17, 2004. The production unit consists of an FPSO (P-54). A total of ten production wells and six injection wells are planned.

*Marlim Sul (South Marlim).* The Marlim Sul field is located at water depths between 2,789 and 7,874 feet (850 - 2,400 meters). Production of crude oil began on December 17, 2001. In 2003, the average production for Marlim Sul was 170 Mbd. We plan to develop the Marlim Sul field in two modules. The first module includes a production system consisting of a semi-submersible platform (P-40) and an FPSO unit and has a total capacity of 255 Mbd. Nine wells are currently producing through P-40, out of a total of 16 planned production wells and ten injection wells. Production from the Marlim Sul FPSO unit began on June 7, 2004 and is currently producing 33,000 boe per day.

The contracts for a second module, with a production capacity of 180 Mbd, were signed on June 17, 2004. The production system consists of a semi-submersible unit (P-51), which is currently under contracting phase. A total of 14 production wells and ten injection wells are planned.

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*Barracuda and Caratinga.* The Barracuda and Caratinga fields are located at water depths between 2,274 and 3,899 feet (700 - 1,200 meters). Production of first oil is expected by the end of 2004 through two FPSO units (P-43, which was constructed in Singapore and moved to Brazil for completion and which will be installed in the Barracuda field and P-48, which is being constructed in Brazil and which will be installed in the Caratinga field). Each FPSO unit has a capacity of 150 Mbpd. A total of 32 production wells and 21 injection wells are planned for the two fields.

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*Albacora Leste (East Albacora)*. Albacora Leste is located at water depths between 3,609 and 4,921 feet (1,100 - 1,500 meters). First oil is expected in the end of 2005. An FPSO unit (P-50) with a capacity of 180 Mbd is currently being converted in Singapore. A total of 18 horizontal wells and 11 injection wells are planned. We are the operator and Repsol-YPF is a partner with a 10% interest.

### Other Planned Developments

Other developments include: (1) the Jubarte field, already producing through a pilot system, that consists of an FPSO unit (Seillean) with a capacity of 20 Mbd that will, in phase I of the field development, be replaced by another FPSO (P-34) with 60 Mbd capacity in the end of 2005, (2) the Frade field, which we are developing in partnership with Chevron Texaco and (3) the Marlim Leste field, that will have an FPSO unit (P-53) with a 180 Mbd capacity, currently in the bidding phase. The contract to increase the production capacity of P-34 to 60 Mbd was signed on June 17, 2004.

Some of these fields are being financed through project financings. See Item 5 Operating and Financial Review and Prospects-Liquidity and Capital Resources-Project Finance and Off Balance Sheet Arrangements-Project Finance.

### Participation by Brazilian Companies

Our Strategic Plan for 2004 to 2010 contemplates greater domestic content in our construction activities and other projects. We estimate that of the U.S.\$46.1 billion in domestic capital expenditures for 2004 to 2010, at least U.S.\$31.7 billion (69%) will be utilized to pay for equipment and services provided by Brazilian contractors, suppliers and other service providers.

### *Production Activities*

Our domestic crude oil and natural gas production activities involve fields located on Brazil's continental shelf off the coast of nine Brazilian states, of which the Campos Basin is the most important area, and onshore in seven Brazilian states. We are also producing crude oil and natural gas in eight other countries: Angola, Argentina, Bolivia, Colombia, Ecuador, Peru, the United States and Venezuela. See -International.

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The following table sets forth our average daily crude oil and natural gas production, our average sales price and our average lifting costs for each of 2003, 2002 and 2001:

	<b>For the Year Ended December 31,</b>		
	<b>2003(1)</b>	<b>2002</b>	<b>2001</b>
<b>Crude Oil and NGL Production (in Mbpd)</b>			
Brazil (2)			
Offshore			
Campos Basin	1,252	1,217	1,053
Other	39	40	44
	<u>1,291</u>	<u>1,257</u>	<u>1,097</u>
Total offshore			
Onshore	248	243	239
	<u>1,540</u>	<u>1,500</u>	<u>1,336</u>
Total Brazil			
International	161	35	43
	<u>1,701</u>	<u>1,535</u>	<u>1,379</u>
<b>Crude Oil and NGL Average Sales Price (U.S. dollars per Bbl)</b>			
Brazil	\$ 27.01	\$ 22.30	\$ 19.89
International	23.77	23.00	22.32
<b>Natural Gas Production (in Mmcfd)</b>			
Brazil(3)			
Offshore			
Campos Basin	657	690	601
Other	186	213	219
	<u>843</u>	<u>903</u>	<u>820</u>
Total offshore			
Onshore	657	609	572
	<u>1,500</u>	<u>1,512</u>	<u>1,392</u>
Total Brazil			
International	510	138	150
	<u>2,010</u>	<u>1,650</u>	<u>1,542</u>
<b>Total natural gas production</b>			
<b>Natural Gas Average Sales Price (U.S. dollars per Mcf)</b>			
Brazil	\$ 1.79	\$ 1.22	\$ 1.39
International	1.26	1.34	2.35
<b>Aggregate Average Lifting Costs (oil and natural gas) (U.S. dollars per boe)</b>			
Brazil(4)	\$ 8.62	7.04	\$ 6.51
International(5)	2.46	2.08	2.58

- (1) International production figures for 2003 include PEPSA and PELSA as of January 1, 2003.
- (2) Brazilian figures include production from shale oil reserves and natural gas liquids, which are not included in our proved reserves figures.
- (3) Brazilian figures include reinjected gas volumes, which are not included in our proved reserves figures.
- (4) Includes Brazilian government take.
- (5) Excludes Brazilian government take.

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Our increased offshore production over the three years ended December 31, 2003 was primarily attributable to our discovery and development of fields on the continental shelf off the coast of Rio de Janeiro in the Campos Basin. Increased average daily natural gas production was principally attributable to growth in the volume of associated gas recovered from the same fields.

Average Brazilian production of crude oil and NGL for 2003 increased 2.7% relative to 2002, reaching 1.54 million barrels per day, principally as a result of:

the inauguration of new wells located in the Roncador field; and

the startup of production, on August 12, 2003, of the Bijupirá and Salema fields under a consortium involving Shell and us, of which we have a 20% interest.

### *Reserves*

Our estimated worldwide proved reserves of crude oil and natural gas as of December 31, 2003 totaled approximately:

9.77 billion barrels of crude oil and NGLs; and

11,202 billion cubic feet of natural gas.

We calculate reserves based on forecasts of field production, which depend on a number of technical parameters, such as seismic interpretation, geological maps, well tests and economic data. All reserve estimates involve some degree of uncertainty. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of this data. Therefore, the reliability of reserve estimates depends on factors that are beyond our control and many of which may prove to be incorrect over time.

As of December 31, 2003, our domestic proved developed crude oil reserves represented 40.1% of our total domestic proved developed and undeveloped crude oil reserves. Our domestic proved developed natural gas reserves represented 54.2% of our total domestic proved developed and undeveloped natural gas reserves. Total domestic proved hydrocarbon reserves on a barrel of oil equivalent basis increased at a compounded annual growth rate of 2.7% from the end of 1997 to 10.4 billion barrels of oil

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equivalent at the end of 2003. Natural gas as a percentage of total domestic proved hydrocarbon reserves increased 40.3% over the same period, representing an increase in volume from 5,782 billion cubic feet in 1997 to 8,111 billion cubic feet at the end of 2003, increasing at a compounded annual growth rate of 6.7% from the end of 1997 to 2003.

DeGolyer and MacNaughton, or D&M, reviewed and certified 91% of our gross domestic reserve estimates as of December 31, 2003. The estimates for the certification were performed in accordance with Rule 410 of Reg S-X of the SEC.

The following table sets forth our estimated net proved developed and undeveloped reserves and net proved developed reserves of crude oil and natural gas as of December 31, 2003, 2002 and 2001:

**WORLDWIDE ESTIMATED NET PROVED RESERVES**

	Brazil			International			Combined Global Proved Reserves
	Crude Oil	Natural Gas(1)	Combined(2)	Crude Oil	Natural Gas(1)	Combined(2)	
	(MMbbl)	(Bcf)	(MMboe)	(MMbbl)	(Bcf)	(MMboe)	
<b>Net Proved Developed and Undeveloped Reserves:</b>							
Reserves as of December 31, 2000	8,227.4	6,266.8	9,271.9	128.9	2,173.2	491.1	9,763.0
Revisions of previous estimates	(949.6)	401.1	(882.8)	(0.3)	13.0	1.9	(880.9)
Extensions, discoveries and improved recovery	877.6	835.3	1,016.9	2.2	65.5	13.2	1,030.1
Sales of reserves in place	(31.6)	(194.0)	(63.9)	(20.2)	(38.8)	(26.7)	(90.6)
Production for the year	(471.0)	(423.9)	(541.7)	(14.6)	(50.7)	(23.1)	(564.8)
Reserves as of December 31, 2001	7,652.8	6,885.3	8,800.4	96.0	2,162.2	456.4	9,256.8
Revisions of previous estimates	822.0	787.0	953.2	3.1	(49.8)	(5.2)	948.0
Extensions, discoveries and improved recovery	888.2	102.2	905.2	10.8	9.2	12.3	917.5
Sales of reserves in place	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Purchase of reserves in place	0.0	0.0	0.0	23.6	71.5	35.5	35.5
Production for the year	(529.8)	(446.7)	(604.3)	(11.8)	(48.1)	(19.8)	(624.1)
Reserves as of December 31, 2002	8,833.2	7,327.8	10,054.5	121.7	2,145.0	479.2	10,533.7
Revisions of previous estimates	(682.1)	459.3	(605.6)	(10.8)	(294.8)	(59.9)	(665.5)
Extensions, discoveries and improved recovery	1,439.8	778.3	1,569.6	55.5	80.1	68.9	1,638.5
Purchase of reserves in place	0.0	0.0	0.0	602.8	1,346.9	827.3	827.3
Sales of reserves in place	0.0	0.0	0.0	(7.7)	(49.5)	(16.0)	(16.0)
Production for the year	(539.5)	(454.0)	(615.2)	(40.8)	(136.8)	(63.6)	(678.8)
Reserves as of December 31, 2003	9,051.4	8,111.4	10,403.3	720.7	3,090.9	1,235.9	11,639.2
<b>Net Proved Developed Reserves:</b>							

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As of December 31, 2000	3,780.8	3,614.3	4,383.2	80.1	1,368.4	308.2	4,691.4
As of December 31, 2001	3,899.4	3,946.0	4,557.1	66.6	1,336.8	289.4	4,846.5
As of December 31, 2002	3,912.9	3,892.5	4,561.7	94.7	2,043.9	435.4	4,997.1
As of December 31, 2003	3,629.5	4,398.1	4,362.5	404.1	2,548.4	828.8	5,191.4

- (1) Natural gas liquids are extracted and recovered at natural gas processing plants downstream from the field. The volumes presented for natural gas reserves are prior to the extraction of natural gas liquids.
- (2) See Conversion Table for the ratios used to convert cubic feet of natural gas to barrels of crude oil equivalent. Production of shale oil and associated reserves are not included.

The following tables set forth our crude oil and natural gas proved reserves by region, as of December 31, 2003, 2002 and 2001:

**CRUDE OIL NET PROVED RESERVES BY REGION**

	As of December 31,					
	2003		2002		2001	
	Proved		Proved		Proved	
	Developed and Undeveloped	Proved Developed	Developed and Undeveloped	Proved Developed	Developed and Undeveloped	Proved Developed
	(MMbbl)					
<b>Brazil</b>						
Offshore						
Campos Basin	8,089.1	2,899.6	7,829.8	2,742.5	6,656.4	3,131.5
Other	159.8	111.7	162.7	498.5	169.9	117.3
<b>Total offshore</b>	<b>8,248.9</b>	<b>3,011.3</b>	<b>7,992.5</b>	<b>3,241.0</b>	<b>6,826.3</b>	<b>3,248.8</b>
Onshore	802.5	618.2	840.7	671.9	826.5	650.6
<b>Total Brazil</b>	<b>9,051.4</b>	<b>3,629.5</b>	<b>8,833.2</b>	<b>3,912.9</b>	<b>7,652.8</b>	<b>3,899.4</b>
<b>International</b>						
Other South America(1)	703.9	387.6	99.5	72.8	66.8	45.1
West Coast of Africa	14.0	14.0	19.1	19.1	26.0	18.2
Gulf of Mexico	2.8	2.4	3.2	2.8	3.2	3.2
<b>Total international</b>	<b>720.7</b>	<b>404.1</b>	<b>121.7</b>	<b>94.7</b>	<b>96.0</b>	<b>66.6</b>
<b>Total</b>	<b>9,772.1</b>	<b>4,033.6</b>	<b>8,955.0</b>	<b>4,007.6</b>	<b>7,748.8</b>	<b>3,966.0</b>

- (1) Includes Argentina, Bolivia Colombia, Ecuador, Peru and Venezuela.

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	As of December 31,					
	2003		2002		2001	
	Proved		Proved		Proved	
	Developed		Developed		Developed	
	and	Proved	and	Proved	and	Proved
	Undeveloped	Developed	Undeveloped	Developed	Undeveloped	Developed
	(Bcf)					
<b>Brazil</b>						
Offshore						
Campos Basin	4,096.2	1,598.0	4,147.2	1,529.4	3,644.3	1,696.4
Other	1,291.2	959.5	1,372.8	880.5	1,214.9	802.7
<b>Total offshore</b>	<b>5,387.4</b>	<b>2,557.5</b>	<b>5,520.0</b>	<b>2,409.9</b>	<b>4,859.2</b>	<b>2,499.1</b>
Onshore	2,724.0	1,840.6	1,807.8	1,482.6	2,026.1	1,446.9
<b>Total Brazil</b>	<b>8,111.4</b>	<b>4,398.1</b>	<b>7,327.8</b>	<b>3,892.5</b>	<b>6,885.3</b>	<b>3,946.0</b>
<b>International</b>						
Other South America(1)	3058.2	2,526.8	2,092.0	2,001.9	2,104.6	1,279.2
West Coast of Africa	0.0	0.0	0.0	0.0	0.0	0.0
Gulf of Mexico	32.7	21.6	53.0	42.0	57.6	57.6
<b>Total international</b>	<b>3,090.9</b>	<b>2,548.4</b>	<b>2,145.0</b>	<b>2,043.9</b>	<b>2,162.2</b>	<b>1,336.8</b>
<b>Total</b>	<b>11,202.3</b>	<b>6,946.5</b>	<b>9,472.8</b>	<b>5,936.4</b>	<b>9,047.5</b>	<b>5,282.8</b>

(1) Includes Argentina, Bolivia, Colombia, Peru and Venezuela.

Please see Supplementary Information on Oil and Gas Producing Activities in our audited consolidated financial statements for further details on our proved reserves.

**Refining, Transportation and Marketing***Summary and Strategy*

Our refining, transportation and marketing business segment encompasses the refining, transportation and marketing of crude oil, oil products and fuel alcohol, including investments in petrochemicals.

We own and operate 11 refineries in Brazil, with a total processing capacity of 1.97 million barrels per day. There are only two other competing refineries in Brazil which have an aggregate installed capacity of approximately 0.03 million barrels per day. Our domestic refining capacity constitutes 98.6% of the Brazilian refining capacity. We built nine of our 11 refineries prior to 1972, and we completed the last refinery (Henrique Lage) in 1980. At that time, we were only producing 200 Mbpd of crude oil in Brazil. Our refineries were built to process light imported crude oil. Subsequent to their completion, we discovered larger reserves of heavier crude in Brazil. As a result, we are continually upgrading and improving our refineries to process a heavier crude slate.

We process as much of our domestically produced crude oil as possible through our refineries, and supply the remaining demand within Brazil by importing crude oil (which we also process in our refineries) and oil products. We also export some oil products. As our own domestic production increases and refinery upgrades enable us to process more throughput, we expect to import proportionately less crude oil and oil products. Until January of 2002, we were the sole supplier of oil products to the Brazilian market. Now that the market is deregulated and we are no longer the sole supplier of oil products to the Brazilian market, we intend to reevaluate our import strategy and may reduce imports to the extent such reductions improve our profitability. We also export, to the extent our production of oil products exceeds Brazilian demand or our refineries are unable to process our growing domestic crude oil production.

We transport oil products and crude oil to domestic wholesale and export markets through a coordinated network of marketing centers, storage facilities, pipelines and shipping vessels. As the monopoly supplier for almost fifty years of a country that ranks as the 11th largest consuming nation in the world, according to the June 2003 issue of *Statistical Review of the World*, we have developed a large and complex infrastructure. Our refineries are generally located near Brazil's population and industrial centers and near our production areas, which we believe creates logistical efficiencies in our operations.

In accordance with the requirements of the Oil Law, we have placed our shipping assets into a separate subsidiary, Petrobras Transporte S.A., or Transpetro. This subsidiary leases storage and pipeline facilities and provides open access to these assets to all market participants. Our petrochemicals business is now also included in the refining, transportation and marketing segment.

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Our main strategies in refining and transportation are to:

continue upgrading our refineries to process our heavier domestic crude oil production while better meeting the current demands of the Brazilian market;

improve quality to meet stricter environmental standards; and

continue to grow and modernize our transportation infrastructure, including the renewal of our shipping fleet.

Our refining, transportation and marketing results are reflected in the Supply segment in our audited consolidated financial statements.

### *Refining*

At December 31, 2003, we had total installed capacity of approximately 2.10 million barrels per day, which, according to *Petroleum Intelligence Weekly*, made us the seventh largest refiner of oil products in the world among publicly traded companies in 2002. Worldwide, we processed an average of 1.70 million barrels of oil per day in 2003, which represents a utilization rate of 81% for the year, calculated on total capacity. This compares with 83% average utilization rates in 2002 and 83% average utilization rates in 2001.

Our domestic production in 2003 supplied approximately 80% of the crude oil feedstock for our refinery operations in Brazil, as compared to 79% in 2002 and 76% in 2001. We expect an increasing percentage of our crude oil feedstock to be supplied by our relatively lower cost domestic production, as our overall domestic production increases. Because our domestic refining capacity constitutes 98.6% of the Brazilian refining capacity, we supply almost all of the refined product needs of third-party wholesalers, exporters and petrochemical companies, in addition to satisfying our internal consumption requirements with respect to wholesale marketing operations and petrochemical feedstock.

Our refineries are located throughout Brazil, with a heavy concentration in the Southeast region of the country where the demand for domestic products is greatest, due to significant industrial activity and large population centers. Most of our refineries are located near our crude oil pipelines, storage facilities, refined product pipelines and major petrochemical facilities. This configuration facilitates our access to crude oil supply and major end-user markets in Brazil.

### *Refinery Production and Capacity*

For 2003, we processed, in Brazil, 588 million barrels of crude oil or 1.61 million barrels per day. Our average refining costs (consisting of variable costs and excluding depreciation and amortization) in Brazil were U.S.\$1.17 per barrel in 2003, U.S.\$0.91 per barrel in 2002 and U.S.\$0.95 per barrel in 2001. Our production in Brazil supplied approximately 80% of this crude oil. Due to the heavier crude characteristic of many Brazilian fields, we have invested in equipment and machinery that allows us to convert heavy crude oil to lighter products. The majority of our heavy crude conversion capacity is located in our largest refineries located near our heavy crude oil reserves in the Campos Basin: Landulpho Alves, Duque de Caxias, Paulínia, Presidente Bernardes, Gabriel Passos and Henrique Lage.



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The following table describes the installed capacity, refining throughput and utilization of our refineries for each of 2003, 2002 and 2001:

**REFINING STATISTICS**

Refineries	2003			2002			2001		
	Capacity	Throughput	Utilization	Capacity	Throughput	Utilization	Capacity	Throughput	Utilization
	(Mbpd)	(Mbpd)	(%)	(Mbpd)	(Mbpd)	(%)	(Mbpd)	(Mbpd)	(%)
Paulínia	371	297	80%	352	329	93%	352	325	92%
Landulpho Alves	306	200	65	306	213	70	306	215	70
Duque de Caxias	242	214	88	242	204	84	242	197	81
Henrique Lage	251	219	87	226	198	88	226	222	98
Alberto Pasqualini(1)	189	105	56	189	106	56	189	115	61
Pres. Getúlio Vargas	189	191	101	189	192	101	189	191	101
Pres. Bernardes	170	164	96	170	154	90	170	156	92
Gabriel Passos	151	129	85	151	128	85	151	133	88
Manaus	46	44	96	46	45	98	46	44	96
Capuava	53	44	83	53	44	83	53	46	87
Fortaleza	6	5	83	6	6	100	6	6	100
Total Brazilian	1,974	1,612	82	1,930	1,619	84	1,930	1,650	85
Gualberto Villarroel(2)	40	18	45	40	18	45	40	17	43
Ricardo Eliçabe(3)(4)	31	30	97	31	29	94	31		
Guillermo Elder Bell(2)	20	15	75	20	14	70	20	13	65
San Lorenzo (5)	38	33	87						
Del Norte (6)									
Total International	129	96	74	91	61	67	91	30	33
Total	2,103	1,708	81%	2,021	1,680	83%	2,021	1,680	83%

(1) We do not own 100% of this refinery.

(2) Located in Bolivia.

(3) Located in Argentina.

(4) We acquired this refinery through the business combination with Repsol-YPF. As this acquisition occurred in December 2001, we did not consolidate its throughput as part of our 2001 refining statistics.

(5) We acquired this refinery through our acquisition of Petrobras Energia, formerly Perez Companac.

(6) Del Norte statistics are not included since we own just 28.5% of that refinery.

We operate our refineries, to the extent possible, to satisfy Brazilian demand. Brazil demands a proportionally high amount of diesel, relative to gasoline, both of which together represent more than half of our production. As we operate our refineries to maximize the output of diesel fuel, we produce volumes of gasoline and fuel oil which must be exported.

Brazil's demand for oil products has been relatively constant for the last three years, but we continue to increase our refinery throughput, thereby reducing the amount of products we must import to satisfy demand. We have also increased our exports of refined products. The following table sets forth our domestic production volume for our principal oil products for each of 2003, 2002 and 2001:

#### DOMESTIC PRODUCTION VOLUME OF OIL PRODUCTS

	2003	%	2002	%	2001	%
	(Mbpd)		(Mbpd)		(Mbpd)	
<b>Product</b>						
Diesel	623.4	38.0%	596.7	36.4%	570.0	34.6%
Gasoline	290.9	17.8	311.1	19.0	316.8	19.2
Fuel oil	266.4	16.2	278.3	17.0	293.8	17.9
Naphtha and jet fuel	219.6	13.4	213.3	12.9	241.5	14.7
Other	238.6	14.6	241.4	14.7	224.3	13.6
<b>Total</b>	<b>1,638.9</b>	<b>100.0%</b>	<b>1,640.8</b>	<b>100.0%</b>	<b>1,646.4</b>	<b>100.0%</b>

#### Refinery Investments and Improvements

In recent years, we have made investments in our refinery assets in order to improve our yields of middle and lighter distillates, which typically generate higher margin sales and reduce the need to import such products. Our principal strategy with respect to our refinery operations is to maximize throughput of domestic crude oil. Since our heavy domestic crude oil produces a higher proportion of fuel oil for each barrel of crude oil processed, production of fuel oil is expected to remain relatively constant as throughput of additional Brazilian crude oil offsets new investment in conversion capacity.

We plan to invest in refinery projects designed to:

enhance the value of our Brazilian crude oil by upgrading our refineries to increase their capacity to refine greater quantities of heavier crude oil that is produced domestically;

increase production of oil products demanded by the Brazilian market that we currently must import, such as diesel;

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improve gasoline and diesel quality to comply with stricter environmental regulations currently being implemented;

reduce processing costs; and

reduce emissions and pollutant streams.

Major Refinery Projects

Included in our Strategic Plan are a number of upgrades to our key refineries. Our major investments are generally (1) coking units to further break down our heavy oil into middle distillates or (2) hydro treatment units that reduce sulfur to produce products that meet international standards. We believe our hydro-treatment units will make it possible to offer diesel fuel containing a maximum sulfur content of 0.05% to metropolitan regions around Brazil, thus meeting stricter environmental standards being implemented under Brazilian law. The principal refineries and planned investments are as follows:

<u>Refinery</u>	<u>Objective</u>
Alberto Pasqualini (REFAP)	Expand and modernize refinery, including the installation of a coking unit
Presidente Getúlio Vargas Refinery (REPAR)	Conversion, modernization and expansion of existing refinery and units to upgrade the quality of diesel and fuel
Henrique Lage (REVAP)	Installation of coking units and units to upgrade the quality of diesel and fuel
Paulínia Refinery (REPLAN) (two units)	Modernization and expansion of existing refinery, units to upgrade the quality of diesel and fuel and the installation of coking units
Landulpho Alves (RLAM)	Conversion, modernization and expansion of existing refinery and units to upgrade the quality of diesel and fuel
Duque de Caxias Refinery (REDUC)	Expansion of existing refinery, installation of a coking unit and units to upgrade the quality of diesel and fuel

*Imports*

Although our domestic production is increasing, we continue to import crude oil and refined oil products because our own production is not sufficient to satisfy Brazilian demand. In addition, because the bulk of our domestic reserves consist of heavy crude oil, we need to import lighter crude oils to improve the mix of oils to be refined, and to create certain oil products for which there is demand in the market but that would be too costly for us to produce.

Imported crude oil is transferred into our refineries for storage and processing, with a small percentage being sold to the other two Brazilian refiners. Imported oil products are sold to the retail market in Brazil through distributors, including our subsidiary BR.

As our production has increased and our refineries have become capable of processing larger quantities of our own crude oil, the average daily volume of our imports of crude oil has decreased to 320,600 barrels per day in 2003, as compared to 337,000 barrels per day in 2002 and 399,000 barrels per day in 2001. The following table sets forth the percentage of crude oil that we imported during each of 2003, 2002 and 2001 by region.

**IMPORTS OF CRUDE OIL BY REGION**

	<u>2003</u>	<u>2002</u>	<u>2001</u>
	Volume (%)		
<b>Region</b>			
Africa	63.7%	57.3%	43.6%
Middle East	30.9	29.7	35.8
Central and South America/Caribbean	3.1	10.4	19.5
Oceania	0.9	0.0	0.0
Europe	1.4	2.6	1.1
	<u>          </u>	<u>          </u>	<u>          </u>
<b>Total</b>	100.0%	100.0%	100.0%
	<u>          </u>	<u>          </u>	<u>          </u>

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In 2003, our total costs of imports of crude oil from all these regions was U.S.\$3,541 million, as compared to U.S.\$3,162 million in 2002 and U.S.\$3,635 million in 2001.

We purchased approximately 23% of our 2003 crude oil imports and 33% of our 2002 crude oil imports pursuant to one-year term contracts, which are considered to be long-term contracts within the industry standard practice. At December 31, 2003, we had one long-term contract providing for the supply of crude oil to us in Brazil, with suppliers from Saudi Arabia. This contract was renewed in February 2003 under identical terms, and will now expire in January 2005. We are also a significant buyer of crude oil and oil products from suppliers in the international spot market.

The volume of imports of oil products also decreased to 121,827 barrels per day in 2003, as compared to 215,121 barrels per day in 2002 and 328,100 barrels per day in 2001, primarily as a result of the reduction in the import of petrochemical naphtha and diesel, and growing domestic refinery production. The following table sets forth the volume of oil products that we imported during each of 2003, 2002 and 2001:

**IMPORTS OF OIL PRODUCTS**

	<u>2003</u>	<u>2002</u>	<u>2001</u>
	Volume (Mbbbl)		
<b>Oil Product</b>			
LPG	12,033.7	20,554.4	25,447.5
Distillates(1)	23,182.6	43,998.8	43,317.0
Naphtha	5,025.9	5,855.9	21,556.9
Others(2)	4,224.6	8,110.2	29,436.6
	<u>44,466.7</u>	<u>78,519.3</u>	<u>119,758.0</u>

(1) Includes gasoline, diesel fuel and some intermediate fractions.

(2) Includes Algerian NGLs, fuel oil, Ethanol, Methanol and others.

In 2003, our total costs of oil product imports, measured on a cost-insurance-and-freight basis, was U.S.\$1,542 million, as compared to U.S.\$2,086 million in 2002 and U.S.\$3,103 million in 2001. For a discussion of import purchase volumes and prices, see Item 5 Operating and Financial Review and Prospects-Sales Volumes and Prices-Import Purchase Volumes and Prices.

*Exports*

We also export that portion of oil products processed by our refineries that exceed Brazilian demand. In addition, we export domestic crude oil that we are unable to process in our refineries because of limited conversion capacity. The following table sets forth the volumes of oil products we exported during each of 2003, 2002 and 2001:

## EXPORTS OF OIL AND OIL PRODUCTS(1)

	<u>2003</u>	<u>2002</u>	<u>2001</u>
		(Mbbbl)	
Crude oil	84,899	85,123	35,999
Fuel oil (including bunker fuel)	85,740	89,350	60,775
Gasoline	13,656	17,337	19,327
Other	8,250	10,192	9,161
<b>Total</b>	<u>192,545</u>	<u>202,003</u>	<u>125,261</u>

(1) The figure includes sales made by PIFCo to unaffiliated third parties, including sales of oil and oil products purchased internationally.

The total value of our crude oil and oil products exports, measured on a free-on-board basis, was U.S.\$5,335 million in 2003, U.S.\$4,610 million in 2002 and U.S.\$2,707 million in 2001.

#### *Transportation*

The Oil Law requires that a separate company operate and manage the transportation network for crude oil, oil products and natural gas in Brazil. Therefore, in 1998, we created a wholly-owned subsidiary, Transpetro, to build and manage our vessels, pipelines and maritime terminals and handle various other transportation activities. In May 2000, Transpetro also took over the operation of our transportation network and our storage terminals to comply with the requirements of the Oil Law. As of October 1, 2001, with the approval from the ANP, these pipelines and terminals were leased to Transpetro, which started to offer its transportation services to us and third parties. As the owner of the facilities leased to Transpetro, we retain the right of preference for its shipments, based on the historical level of transportation assessed for each pipeline, formally assigned by the ANP. The excess capacity is offered to third parties on a non-discriminatory basis and under equal terms and conditions.

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Prior to the enactment of the Oil Law, we were the only company authorized to ship oil products to and from Brazil and to own and operate Brazilian pipelines. Additionally, only vessels flying the Brazilian flag were entitled to carry shipments to and from Brazil. Pursuant to the Oil Law, the ANP now has the power to authorize any company or consortium organized under Brazilian law to transport crude oil, oil products and natural gas for use in the Brazilian market or in connection with import or export activities, and to build facilities for use in any of these activities. The Oil Law has also provided the basis for open competition in the construction and operation of pipeline facilities.

### Pipelines and Terminals

We own, operate and maintain an extensive network of crude oil and natural gas pipelines connecting our terminals to our refineries and other points of primary distribution throughout Brazil. At December 31, 2003, our onshore and offshore crude oil and oil products pipelines aggregated 5,130 miles (8,262 kilometers) in length and our natural gas pipelines aggregated approximately 4,763 miles (7,669 kilometers) in length, including the Brazilian side (1,609 miles, or 2,589 kilometers) of the Bolivia-Brazil pipeline.

### NATURAL GAS PIPELINES

Up to December 2003, we had the intention to develop a project, which we refer to as PDET, for the enhancement of our crude oil transportation system extending from our most productive fields, located in the Campos Basin, to our refineries located in the Southeast region of Brazil.

At the end of 2003, the government of Rio de Janeiro enacted a law creating severe obstacles to the economic feasibility of the original concept of the onshore portion of PDET. After three months of ultimately unsuccessful negotiations with the Rio de Janeiro State government, we announced the cancellation of the onshore portion of the PDET project and a revision to the project's original design.

Under the revised project, the original offshore fixed platform (PRA-1) will be connected to six offshore production platforms through pipelines and will transfer the crude oil to a floating, storage and offloading platform (FSO) and two monobuoys, which will in turn facilitate the transfer of the crude oil to shuttle tankers or the export of the crude oil to other countries. The shuttle tankers will transport the oil to the Southeast terminals where it will be pumped to existing onshore pipelines connected to refineries in Rio de Janeiro, Minas Gerais and São Paulo. This project will cost approximately U.S.\$700 million and is expected to start its commercial operation in January 2007.

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Transpetro also operates 43 storage terminals with aggregate capacity of 63.3 million barrels of oil equivalent. At December 31, 2003, tankage capacity at these terminals consisted of 34.1 million barrels of crude oil, 26.7 million barrels of oil products and fuel alcohol and 2.5 million barrels of LPG.

Transpetro is currently evaluating alternatives to improve the efficiency of its transportation system, including evaluating improvements to the monitoring and control of the crude oil and natural gas pipeline network through the gradual implementation of a supervisory control and data acquisition system, which, when completed, will monitor the pipelines and storage facilities located throughout the country. Transpetro has already implemented the first phase of the project and inaugurated a centralized control and operating center in June 2002, in its headquarters in Rio de Janeiro. Currently, there are a national back-up master station and two regional master stations connected through satellite communication. Tank-farms and pump stations are equipped with mini stations connected to the regional master stations. Transpetro's goal is to be able to operate all of its domestic pipelines remotely, initially via the regional stations, and ultimately via the centralized control and operating center located in its headquarters in Rio de Janeiro.

**Shipping**

At December 31, 2003, our fleet consisted of the following 54 vessels (50 owned and 4 bareboat chartered), 36 of which are single hulled and 18 of which are double hulled, with aggregate deadweight tonnage of 2.71 million:

**OWNED/BAREBOAT CHARTERED VESSELS**

<b>Type of Vessel</b>	<b>Number</b>	<b>Capacity</b>
		<b>(deadweight tonnage in thousands)</b>
Tankers	42	2,101.0
Ore/Oil vessels	4	532.8
Liquefied petroleum gas tankers	6	40.2
AHTS Anchor Handling Tug Supply	1	2.2
FSO Floating, Storage and Offloading	1	28.9
<b>Total</b>	<b>54</b>	<b>2,705.1</b>

These vessels are currently operated by Transpetro and their activities are mainly concentrated in the Brazilian coastline, South America (Venezuela and Argentina), Mediterranean Sea, Caribbean Sea, Gulf of Mexico, West Africa and the Persian Gulf. Our shipping operations support the transportation of crude oil from offshore production systems, our import and export of crude oil and oil products and our coastal trade. Our Strategic Plan calls for an investment of U.S.\$1.2 billion from 2004-2010 to renew our fleet, including orders for an additional 53 vessels. The table below sets forth the types of products and quantities of such products we transported during each of the years indicated.

**PRODUCTS AND QUANTITIES TRANSPORTED**

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	<u>2003</u>	<u>2002</u>	<u>2001</u>
	(millions of tons)		
<b>Product</b>			
Crude oil	96.6	93.2	81.6
Oil Products	28.1	30.1	34.0
Fuel Alcohol			0.2
	<u>          </u>	<u>          </u>	<u>          </u>
<b>Total</b>	124.7	123.3	115.8
	<u>          </u>	<u>          </u>	<u>          </u>
Percentage transported by our owned/bareboat chartered fleet	45.3%	45.1%	48.3%
Coastal transport as a percentage of total tonnage	64.2%	65.6%	64.9%

The average monthly-chartered tonnage in 2003 amounted to 4.0 million deadweight tons, as compared to 3.9 million deadweight tons in 2002 and 3.6 million deadweight tons in 2001. The chartered tonnage is continuously adjusted to our needs for overall market supply cost reduction. Our aggregate annual cost for vessel charters was U.S.\$537 million in 2003, U.S.\$431 million in 2002 and U.S.\$707 million in 2001.

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We sell oil products to various wholesale customers and retail distributors in Brazil, including our subsidiary BR and other retailers such as Shell Brasileira de Petróleo S.A., Esso Brasileira de Petróleo S.A., Companhia de Petróleo Ipiranga S.A. and Texaco do Brasil S.A. In 2003, we sold 167.2 million barrels of oil products to wholesale customers, with gasoline and diesel fuel representing approximately 84.5% of these sales. Of our total sales in 2003, 133.6 million barrels of oil products were supplied to BR for retail marketing. The following table sets forth our oil product sales to wholesale customers and retail distributors for each of 2003, 2002 and 2001:

**OIL PRODUCT SALES**

	<u>2003</u>	<u>2002</u>	<u>2001</u>
	(MMbbl)		
<b>Product</b>			
Diesel	208.3	218.0	214.3
Gasoline	101.8	110.2	93.6
Fuel oil	98.5	77.5	105.5
Naphtha and jet fuel	76.6	80.9	101.6
Other	283.2	311.6	246.4
	<u>768.4</u>	<u>798.2</u>	<u>761.4</u>
<b>Customer</b>			
<b>Wholesalers</b>			
Diesel	100.2	110.6	111.6
Gasoline	41.0	46.6	46.7
Other	26.0	32.4	34.7
	<u>167.2</u>	<u>189.6</u>	<u>193.0</u>
<b>Retail distributors</b>			
BR	133.6	158.0	146.0
Third parties	467.6	450.6	422.4
<b>Total retail distributors</b>	<u>601.2</u>	<u>608.6</u>	<u>568.4</u>
<b>Total customers</b>	<u>768.4</u>	<u>798.2</u>	<u>761.4</u>

*Petrochemicals*

We conduct our petrochemical activities through our subsidiary, Petrobras Química S.A., or Petroquisa, with the exception of naphtha sales. Petroquisa is a holding company which holds minority voting interests in nine operational petrochemical affiliated companies involved in the production and sale of basic petrochemical products, derivative petrochemical products and utilities. At December 31, 2003, our ownership percentage of the total capital of these affiliates ranged from 11.09% to 59.92% and our ownership percentage of the voting capital of these affiliates ranged from 7.78% to 50%. The total book value of these investments is U.S.\$463 million.

The basic supply feedstock used in Brazil's petrochemical industry is naphtha, an oil based product. Until 2001, we were the sole supplier of naphtha to Brazil's petrochemical industry. Following deregulation of the product in 2002, the petrochemical industry began importing naphtha directly. In 2003, the industry imported approximately 30% of its naphtha needs, and we supply the remainder from our refining operations.

Our petrochemicals business, based on the equity in results of affiliate companies, accounted for U.S.\$27 million in 2003. We currently expect to maintain a presence in the petrochemicals industry principally by participating in projects integrated with our refineries. We expect that our selective investments in petrochemicals will solidify our involvement in the entire value chain, integrating refining and basic and derivative products. Although we have divested of certain interests in the petrochemical segment in the past, we plan on increasing the current level of our investments, as part of our downstream strategy.

In line with our strategy of stimulating demand for natural gas products, we also continue to invest in Rio Polímeros S.A., which is located next to our Duque de Caxias refinery (REDUC). Other investors include BNDES (the Brazilian federal development bank) and two leading private Brazilian petrochemical companies, Suzano and Unipar. Petroquisa holds a 16.7% interest of the voting and preferred capital in Rio Polímeros. Of the approximately U.S.\$1.0 billion budgeted construction cost over the next three years, 60% is being provided by long-term loans from, or guaranteed by, U.S. Ex-Im Bank, BNDES and SACE (the Italian Export Credit Agency), and 40% is expected to be funded by equity investments, of which our portion is approximately U.S.\$74 million. At December 31, 2003, we had spent approximately U.S.\$54 million of this total. We expect Rio Polímeros to be operational by mid-2005 and to produce 540,000 tons per year of polyethylene and 60,000 tons per year of propylene, from ethane and propane extracted from natural gas originated in the Campos Basin.

We also intend to market products derived from our refining processes. We have started negotiating with BASF, a German chemicals company, to create a joint venture in order to produce 90,000 tons per year of Acrylic Acid and 60,000 tons per year of Super Absorbent Polymer -SAP. As raw material for production, we would use the propylene derived from LPG refined at our Henrique Lage refinery (REVAP). In June 2003, BASF and we decided to delay the creation of a joint venture in order to produce 90,000 tons per year of Acrylic Acid and 60,000 tons per year of Super Absorbent Polymer -SAP. This decision was a

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result of the lower than expected market demand for acrylic monomers and SAP. BASF and we will monitor market developments and continue discussions, but have not undertaken any commitments with respect to feedstock supply or the creation of a joint venture.

### *Distribution*

#### *Summary and Strategy*

Through BR, we distribute oil products, fuel alcohol and natural gas to retail, commercial and industrial customers throughout Brazil. Our operations are supported by tankage capacity of approximately 6.5 million boe, at 71 storage facilities and 105 aviation product depots at airports throughout Brazil.

Our main strategies in distribution and marketing are to:

achieve a leadership position in all market segments where BR operates, focusing on innovation, integration of our profitable service stations network, and providing effective energy solutions for BR's customers;

establish BR as the model of logistical and operational efficiency within the fuel distribution segment, while abiding by international health, safety and environmental guidelines; and

position BR as the top brand in the eyes of customers by providing a recognizable national network of quality service providers.

On June 25, 2004 we announced that our board of directors, and the board of directors of our subsidiary BR, approved the final terms and conditions negotiated by BR in order to acquire from ENI S.p.A. its Brazilian subsidiary Agip do Brasil S.A. for approximately U.S.\$450 million, subject to adjustments based on the closing balance sheet. Agip do Brasil S.A. is a liquefied petroleum gas (LPG), fuel and lubricant distributor operating in Brazil under the Liquigás, Novogás and Tropigás brands for LPG distribution and the Agip, Companhia São Paulo de Petróleo and Ipê brands for fuel distribution. This acquisition should enable us to increase BR's share of the LPG distribution market as well as consolidate its presence in the automotive fuel distribution market.

### *Retail*

As of December 31, 2003, our sales network in Brazil included 7,000 active and non-active retail service stations compared to 7,119 as of December 31, 2002, and comprised approximately 21.3% of the total number of service stations in Brazil, all under the brand name BR. Over 65% of these BR stations are located in the South and Southeast regions of Brazil, where over 59% of Brazil's total population of 170 million reside. Of these 7,000 service stations, 5,095 were active stations and BR owned 631. As required under Brazilian law, BR subcontracts the operation of all its service stations to third parties. The other 6,369 service stations were owned and operated by dealers, who use the BR brand name under license with BR facilities as their exclusive suppliers. BR provides technical support, training and advertising for its network of service stations.

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In 2003, 204 of our service stations also sold vehicular natural gas, compared to 170 in 2002 and 119 in 2001. The sales from these stations consisted of 14,554 million cubic feet (412 million cubic meters) in 2003, representing 31.2% of Brazilian market share, 13,245 million cubic feet (375 million cubic meters) in 2002, representing 60.6% of Brazilian market share and 9,893 million cubic feet (280 million cubic meters) in 2001, representing 61.4% of the Brazilian market share.

The table below sets forth market share (based on volume) for retail sales of different products in Brazil for each of 2003, 2002 and 2001:

### DISTRIBUTION MARKET SHARE

	2003	2002	2001
Fuel oil	65.2%	67.4%	66.5%
Diesel	26.7	27.1	26.6
Gasoline	21.9	23.8	21.8
Fuel alcohol	33.3	30.5	26.6
<b>Total</b>	31.5%	32.9%	32.8%

Source: Petrobras - based on figures provided by *Sindicato*

*dos Distribuidores de Combustíveis-Sindicom*

Prices to retailers have generally tended to remain consistent between competing distributors, particularly due to the low margin usually provided. Therefore, competition among distributors continues to be primarily based on product quality, service and image.

BR provides financing to certain of its service station operators to improve their competitiveness, the terms of which may vary in accordance with the provisions of each financing agreement. These agreements are of two types: unconditional and conditional. The unconditional agreements must be paid in full and bear interest at market rates. The conditional agreements are contingent upon the service station operators purchases of minimum volumes of oil products as set forth in each financing agreement, in which case the total amount of the conditional agreement is forgiven by BR. These costs amounted to approximately U.S.\$23.4 million during 2003, as compared to U.S.\$43.6 million in 2002 and U.S.\$24.5 million in 2001.

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During 2003, approximately 21.3% of the retail sales at service stations in Brazil were through BR-owned or franchised entities. We believe that our market share position has remained strong over the past several years due to the strong brand name recognition of BR, the remodeling of our service stations and the addition of lubrication centers and convenience stores.

In 1996, BR created the *De olho no Combustível* program (the Eye on the Fuel program), which is designed to ensure that the fuels sold to end consumers at our service station networks are identical in content to the fuels originating from our refineries. We have already certified 3,707 service stations under this program.

The market for gasoline and diesel fuel in Brazil is highly competitive and we expect that prices will be subject to continuing pressure. Accordingly, we intend to build upon the strong brand image that we have established in Brazil to enhance profitability and customer loyalty. Currently, we plan to take the following actions through 2005:

increase non-fuel product sales through oil lubrication centers, supplied by our lubricants plant in the State of Rio de Janeiro, which is one of the most advanced industrial plants for lubricants in South America;

increase the number of franchise convenience stores under the BR Mania name;

increase the use of client loyalty programs and new technologies; and

reduce operating and administrative costs and provide services, such as financial services and controls, through investments in advanced telecommunications and data processing technology.

We also participate in the retail sector in Argentina, where we currently own 681 retail service stations that operate under a number of brand names, including Petrobras, Eg3 and San Lorenzo.

### Commercial and Industrial

We distribute oil products to commercial and industrial customers through BR. Our major customers are aviation, transportation and utility companies and government entities, all of which generate relatively stable demand. We have a market share in the commercial and industrial distribution segment in excess of 31.5%, which has remained relatively constant over the past several years.

Set forth below are commercial and industrial sales statistics for each of 2003, 2002 and 2001:

### COMMERCIAL AND INDUSTRIAL SALES BY PRODUCT

	For the Year Ended		
	December 31,		
	2003	2002	2001
	(Mboe)		
Fuel oil	26,368	32,642	40,062
Diesel	65,183	67,374	63,694
Gasoline	28,710	30,688	27,651
Jet fuels	14,343	14,397	15,460
Fuel alcohol	3,286	3,522	2,960
Lubricants	1,256	1,397	1,293
Others	19,492	20,586	18,818
<b>Total</b>	<b>158,638</b>	<b>170,606</b>	<b>169,938</b>

#### Delisting of BR

On November 7, 2002, our board of directors approved a public tender offer for all the outstanding shares of BR through a swap of BR shares for preferred shares to be issued by us. Prior to the share swap, we owned 73.6% of BR's shares. We conducted the share swap and acquired an additional 25.6% of BR's shares to bring our total to 99.2% of BR's shares. We then incorporated BR as a wholly-owned subsidiary and effected the delisting of BR's public shares, which were publicly traded in Brazil. A public tender auction was held on January 29, 2003 and our board of directors approved the issue of 9,866,828 preferred shares at an issue price of U.S.\$12.76 per share, under the terms of the capital increase approved during the meeting of our board of directors held on November 7, 2002. As a result, our capital increased by U.S.\$122 million. After verifying that all of the conditions for delisting BR's shares were met, on February 5, 2003, the CVM effected the delisting of BR shares.

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### *Natural Gas and Power*

#### *Summary and Strategy*

Our natural gas and power segment encompasses the purchase, sale and transportation of natural gas produced in or imported into Brazil. Additionally, this segment includes our domestic electric energy commercialization activities as well as investments in domestic natural gas transportation companies, state-owned natural gas distributors and thermal electric companies.

The natural gas market in Brazil has been growing steadily. In 2003, we estimate that natural gas consumption represented approximately 6.5-7.0% of Brazil's primary energy consumption, as compared to 5.5-6.0% in 2002 and 4.7% in 2001. The Brazilian government has estimated that natural gas will represent 10% of primary energy consumption by 2005 and 12% by 2010. We expect that a large portion of this growth will come from the development of natural gas-fired thermoelectric plants in Brazil, increased industrial demand, as well as from the Brazilian government's environmental policies encouraging the replacement of traditional industrial fuels with cleaner energy sources. During the last three years, we estimate that industrial consumption of natural gas has grown by 75% while vehicular consumption has grown by approximately 70%.

To capitalize on these growth opportunities, we have adopted a vertically integrated strategy. As a result of our petroleum exploration and production activities in Brazil, we produce significant amounts of associated natural gas as a by-product. We have also invested heavily in production facilities and pipeline capacity to import natural gas from Bolivia, where we, and other oil companies, have discovered substantial non-associated reserves. To secure a market for our natural gas, we have been investing in domestic gas distribution companies, as well as in thermoelectric plants, with the intention to further develop the market for our natural gas.

Our main strategies in the natural gas and power segment are to:

expand the natural gas market in Brazil to ensure a market for the natural gas that we produce, or acquire through off-take obligations;

become an important participant in the South American gas and power markets, while effectively integrating these business segments with our other business segments;

participate in the Brazilian power market in order to ensure a market for our natural gas and oil products; and

dedicate 0.5% of our total capital spending to renewable energy, including wind power, biomass and photo voltaic power generation.

Our natural gas and power results are reflected in the Gas and Energy segment in our audited consolidated financial statements.

#### *Natural Gas*

Pipelines

Our main pipeline investment has been the development and construction of the Bolivia-Brazil natural gas pipeline, which has a total capacity of 1,060 MMscfd (30 MMcmd). The pipeline is 1,969 miles (3,150 kilometers) in length, representing 40% of the existing Brazilian onshore gas pipelines, and running from Rio Grande in Bolivia to Porto Alegre in Southern Brazil. The Bolivia-Brazil pipeline connects to our domestic pipeline system that transports natural gas from the Campos and Santos Basins. We are a significant investor in the Bolivia-Brazil natural gas pipeline, holding an 11% interest in GTB - Gas TransBoliviano S.A., or GTB, the corporate entity owning the Bolivian portion of the pipeline, and a 51% interest in TBG - Transportadora Brasileira do Gasoduto Bolívia-Brasil S.A., or TBG, the corporate entity owning the Brazilian portion of the pipeline.

Our investment in the Bolivia-Brazil gas pipeline was the result of a 1996 gas supply agreement (the GSA ) for the purchase of natural gas between the Bolivian state oil company, Yacimientos Petrolíferos Fiscales Bolivianos YPFB, and us. The GSA requires us to purchase from YPFB, on a take-or-pay basis, specified quantities of natural gas transported through the pipeline over a 20-year term.

We are also investing in three major domestic natural gas projects: Cabiúnas, the Southeast Gas Pipeline Network and the Northeast Gas Pipeline Network.

The Cabiúnas project comprises transportation and processing facilities of natural gas from the offshore oil fields in the Campos Basin to the State of Rio de Janeiro, and includes the construction of an undersea facility for storage of natural gas during declines in consumption. We expect this project to be fully operational by the beginning of 2005 and to increase transportation capacity from the current 290 million cubic

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feet (8.2 million cubic meters) per day to a total of 494 million cubic feet (14 million cubic meters) per day of associated gas while reducing the volumes of natural gas currently flared on offshore platforms and alleviating existing constraints on oil production from these platforms. In 2003, the average daily volume of natural gas flared on the offshore platforms of the Campos Basin was 7,346,300 million cubic feet (208,024 million cubic meters).

We are currently developing the Southeast and the Northeast Gas Pipeline Networks (*Malha Sudeste and Malha Nordeste*) jointly with private capital investors (the Malhas Project). These projects will create additional transportation capacity by expanding the existing natural gas infrastructure, delivering natural gas to markets in the Northeast and Southeast regions of Brazil, and includes the construction of an approximately 890-mile (1,423 kilometers) pipeline, which is expected to start operations in 2005, at a total cost of approximately U.S.\$1,000 million.

We are also conducting feasibility studies for projects to deliver natural gas to the states of Amazonas and Rondônia in Northern Brazil (Urucu Porto Velho and Urucu Manaus Gas Pipelines). An additional feasibility study is being conducted for the Southeast-Northeast Gas Pipeline. This pipeline, with a length of 1,280 kilometers, will connect the Southeast and Northeast gas pipeline networks, linking more gas supply sources to demand and increasing the existing gas pipeline network's overall reliability. The Southeast-Northeast Gas Pipeline will enable gas imported from Bolivia to reach demand centers located in Northeastern Brazil.

### Local Distribution Companies

We sell natural gas in Brazil to local gas distribution companies, as under Brazilian law, each state has the monopoly right to distribute gas within a certain region. Most states established companies to act as local gas distributors and sold minority interests in them. We have invested actively in local gas distribution companies, and we currently have minority interests in 17 of these natural gas distribution companies, 12 of which are in operation. We invested in gas distribution companies through BR until March 2002, and subsequently sold these investments to our subsidiary, Petrobras Gás S.A. Gaspetro. In one state, Espírito Santo, we have the exclusive rights to distribute natural gas through BR.

Our capital expenditures in these natural gas distribution companies as of December 31, 2003 totaled U.S.\$36 million, as compared to U.S.\$35 million as of December 31, 2002 and U.S.\$32 million as of December 31, 2001. Our business plan includes total budgeted capital expenditures in the gas distribution business of approximately U.S.\$370 million from 2004 through 2010. We serve as the technical and commercial operator in all of the distribution companies in which we have a minority shareholding stake.

Each of the distribution companies in operation in which we have an interest has entered into long term gas supply contracts with us under which such companies have take-or-pay obligations (in the case of contracts relating to Brazilian gas), and ship-or-pay and take-or-pay obligations (in the case of contracts relating to Bolivian gas or with thermoelectric power producers).

The following table sets forth our domestic sales of natural gas to affiliated and non-affiliated local distribution companies for each of 2003, 2002 and 2001:

### **DOMESTIC SALES OF NATURAL GAS TO LOCAL DISTRIBUTION COMPANIES**

	Year Ended December 31,		
	2003	2002	2001
	(in MMscfd)		
Total sales annual average	978	862	717
Annual sales growth	13.4%	20.3%	29.2%

Commitments and Sales Contracts

*Take-or-pay commitments.* Under our contracts with YPF for the purchase of natural gas, we have agreed to purchase minimum volumes of natural gas from Bolivia at a formula price that varies with the price of fuel oil. We have purchased and paid in 2001, 2002 and 2003, approximately U.S.\$194 million, U.S.\$279 million and U.S.\$288 million, respectively. Set forth below are the minimum volumes we have agreed to under these contracts, together with an estimate of the amounts we are obligated to pay for such minimum volumes:

**NATURAL GAS TAKE-OR-PAY COMMITMENTS**

	Yearly Average					
	2004	2005	2006	2007	2008	after 2008(1)
Volume Obligation (Mmcmpd)	24	24	24	24	24	24
Volume Obligation (Mmcf)	850	850	850	850	850	850
Estimated Payments (U.S.\$ million)(2)	330	323	321	318	316	312

- (1) Commitments are pursuant to a 20-year term contract set to expire in 2019.
- (2) Price based on a formula that varies with the price of fuel oil. Amounts have been calculated based on an assumed Brent crude price of U.S.\$18.00/bbl in 2004 and U.S.\$15.00/bbl from 2005 forward. Actual amounts may vary.

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*Ship-or-pay commitments.* In order to support the financing for the Bolivia-Brazil pipeline, TBG's portion of which is consolidated in our balance sheet, we also have entered into unconditional ship-or-pay purchase obligations for the transportation of natural gas with GTB and TBG, the companies which own and operate the Bolivian and Brazilian portions of the pipeline. Our volume obligations under the ship-or-pay arrangements are generally designed to meet the take-or-pay obligations with respect to our gas purchase contracts with YPFB. The total capacity of 1,060 MMscfd (30 MMcmd) also includes a transportation capacity option (TCO) of 212 MMscfd (6 MMcmd), valid for a 40-year term. This transportation capacity option was granted to us in consideration for our agreed investment of approximately U.S.\$379 million in the Bolivia-Brazil gas pipeline. The total estimated project cost was U.S.\$1.9 billion. We have purchased and paid in 2001, 2002 and 2003, approximately U.S.\$189 million, U.S.\$232 million and U.S.\$623 million, respectively. Set forth below are the minimum volumes we have agreed to under the ship-or-pay arrangements, together with an estimate (assuming certain changes in the U.S. Consumer Price Index (CPI)) of the amounts we are obligated to pay for such minimum volumes:

**NATURAL GAS SHIP-OR-PAY COMMITMENTS**

	2004	2005	2006	2007	2008	Yearly Average after 2008(1)
Volume Commitment (Mmcmd)	28.6	28.6	28.6	28.6	28.6	28.6
Volume Commitment (Mmcfpd)	1006	1006	1006	1006	1006	1006
Estimated Payments (U.S.\$ million)(1)	650	650	650	650	650	650

(1) Commitments are pursuant to approximately 20-year term contracts set to expire in 2019.

(2) Based on a fixed tariff, escalated based on assumed changes in the U.S. CPI. Actual amounts may vary.

Additionally, PEPSA has a 15-year ship or pay agreement for 80,000 barrels per day through the OCP pipeline in Ecuador. Estimated payments respective to the commitment are approximately U.S.\$1,118 million.

*Natural gas sales contracts.* In light of these take-or-pay and ship-or-pay obligations, we have entered into or negotiated firm take-or-pay and ship-or-pay sale arrangements to sell our domestic and international natural gas to local gas distribution companies and thermoelectric plants, most of which we operate and in which we own a minority interest.

The arrangements with the thermoelectric plants are made through contracts with the local distribution companies, which in turn enter into back-to-back arrangements with the thermoelectric plants, and a portion of the gas buyer's payments is usually guaranteed to us by the parent companies of the thermoelectric companies or through financial guarantees. The sales for 2001, 2002 and 2003, were approximately U.S.\$574 million, U.S.\$897 million and U.S.\$1,320 million, respectively. The table below sets forth our commitments by local gas distribution companies and by thermal power plants to us for the firm purchase of volumes of natural gas beginning in 2004, together with an estimate of the amounts obligated to be paid for such volumes:

**NATURAL GAS SALES CONTRACTS(1)**

2004	2005	2006	2007	2008	Yearly Average
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after 2008(2)

	(in MMscfd)					
To Local Gas Distribution Companies						
Affiliated	473	541	551	563	579	612
Unaffiliated	557	604	644	694	774	830
To Power Generation Plants						
Affiliated	334	331	320	312	306	291
Unaffiliated(3)	343	343	343	343	343	343
<b>Total</b>	<b>1,707</b>	<b>1,819</b>	<b>1,858</b>	<b>1,912</b>	<b>2,002</b>	<b>2,076</b>
Estimated Contract Payments (U.S.\$ million)(4)	\$ 1,718	\$ 1,826	\$ 1,901	\$ 1,955	\$ 2,103	\$ 2,217

- (1) Includes both domestic and international natural gas. Sets forth take-or-pay and ship-or-pay obligations, not maximum sales.
- (2) Commitments are pursuant to contracts of various terms, expiring at intervals between 2006 through 2019.
- (3) Certain commitments are subject to the satisfaction of customary conditions precedent, which we expect to be fulfilled in the near term.
- (4) Price based on a formula which varies with the price of fuel oil. Amounts have been calculated based on an assumed Brent crude price of U.S.\$18.00/bbl in 2004 and U.S.\$15.00/bbl from 2005 forward. Actual amounts may vary.

*Pricing.* On June 1, 2001, the Brazilian government instituted a mechanism which allows a U.S. dollar indexed component of the natural gas pricing mechanism to be passed through to the thermoelectric plants for a period of 12 years, pursuant to *Portaria* No. 176 (a joint regulatory act issued by the Ministry of Mines and Energy and the Ministry of Finance), which was updated by *Portaria* No. 234 issued on July 22, 2002. See -Regulations of the Oil and Gas Industry in Brazil-Price Regulation-Natural Gas. This mechanism has enabled us to sell natural gas to a number of thermoelectric plants that were unwilling to purchase natural gas under the prior gas price regulation because it requires the buyer to take the intra-year exchange rate risk. Under the new formula, exchange rate variations are reflected in gas prices annually, while we will be remunerated at market based interest rates for any resulting delay in gas price adjustments.

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### *Renegotiation of the GSA*

As a result of lower-than-anticipated Brazilian market demand for natural gas, we have experienced losses on our commitments to purchase natural gas from YPFB. In accordance with a provision of the GSA that allows either party to request a renegotiation of certain terms of the agreement in the event of significant changes in market conditions, we had initiated a renegotiation with YPFB to achieve reductions in the volume and price of natural gas we are required to purchase under the GSA. The governments of Bolivia and Brazil decided to take over the renegotiation process and have conducted it since. The negotiations have taken longer than anticipated, however, as a result of the changes in the Brazilian government and the political instability in Bolivia in 2003.

In the event we do not agree to reductions in volumes and prices with YPFB, we estimate that, based on current forecasts of Brazilian natural gas consumption, we will incur losses of U.S.\$40 million in 2004 and U.S.\$20 million in 2005 with respect to our take-or-pay commitments.

Since November 2002, we have disputed the amounts charged by YPFB under our take-or-pay commitments. After the start of the renegotiation of the GSA, in January 2003, we indicated to YPFB that the resolution of disputed amounts should be treated as part of the overall renegotiation of the GSA. However, in March 2004, by request of the Brazilian government and as a goodwill gesture to YPFB and gas producers in Bolivia, we paid U.S.\$64.2 million, corresponding to part of the disputed amounts under our take-or-pay commitments for the years 2002 and 2003, which YPFB claims amount to U.S.\$220.5 million. We also have claims against YPFB for unpaid amounts under their delivery-or-pay commitments for 2001, 2002 and 2003 amounting to U.S.\$37.2 million.

*Incentives to Distribution Companies.* In order to accelerate the expansion of the natural gas market in Brazil, increase consumption and ultimately reduce the financial exposure from our ship-or-pay commitments, we announced in December 2003 a new program of discounts for natural gas distributors in certain regions of Brazil. Distributors in the states of São Paulo, Minas Gerais, Paraná, Santa Catarina, Rio Grande do Sul, and Mato Grosso do Sul will pay a discounted price for volumes sold in addition to contracted amounts. If actual amounts sold exceed 40% of contracted amounts, we will reduce the base price according to a progressive schedule.

### *Power*

Brazil currently has an installed electricity generation capacity of approximately 80,000 MW. More than 97% of this capacity is interconnected to form one single integrated system, with approximately 86% of the electricity supplied to that system coming from hydroelectric sources. Annual consumption of electricity grew annually at a rate of 4.5% during the 1990s. As a result of the rapid growth in electricity demand, combined with the limited investment in the sector during the last two decades and a high dependency on hydroelectric power (and consequently susceptibility to a prolonged drought), we believe substantial additional generation capacity needs to be developed in Brazil. In recognition of the need for such capacity and in order to promote the development of thermoelectric plants, the Brazilian government established the Thermoelectric Priority Program (PPT).

### History of the PPT

The PPT, as originally envisioned in February 2000, prioritized the development of 49 new thermoelectric plants to meet Brazil's growing electricity demand requirements. These PPT thermoelectric plants were to have increased Brazil's generation capacity by approximately 17,000 MW by 2003. Despite a number of incentives introduced by the Brazilian government to promote the PPT, those thermoelectric power plants

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under development have been slow to progress. Developers have faced numerous difficulties, including inability to pass on financial and operating costs in U.S. dollars following a devaluation of the Brazilian Real in each of 2001 and 2002, the reluctance of many distribution companies to sign power purchase agreements because of existing supply contracts and lower consumer demand for thermoelectric power as a result of excess supply of hydroelectric power. In light of these difficulties, the Brazilian government reviewed the PPT and reduced the program to 39 projects, representing a planned 13,500 MW of additional capacity.

In line with our strategies in this segment, we decided to participate in the PPT either as a minority shareholder, offtaker or both, in a number of strategically important thermoelectric plants. Initially, we were planning to participate in 26 of the PPT projects, with total capacity of approximately 10,500 MW, of which 4,500 MW corresponds to our purchase commitments at that time.

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### Current Status of PPT

Due to decreased rainfall in 2000 and 2001 in Brazil and the subsequent shortfall of hydroelectric power to meet Brazilian demand, the Brazilian government implemented a rationing program from the beginning of June of 2001 until the end of February 2002. This created a permanent reduction in demand of approximately 7%, according to recent Brazilian government estimates, resulting from the more rational use of electricity achieved during this period. Additionally, since the end of the rationing program, heavy rains have filled the main reservoirs of the country. As a result, in the short term, existing hydroelectric capacity is sufficient to meet the energy needs of the country. The combination of exceptional hydrological conditions and demand reduction has limited, in the short-term, the price and volume at which we can sell electricity from thermoelectric plants. However, in the medium term, we believe that expected growth in electricity demand combined with limited spare hydroelectric capacity available will create the need for some thermoelectric capacity in Brazil. In addition, electricity costs of thermoelectric plants are expected to be relatively competitive with projected incremental hydroelectric capacity.

At the end of 2003, the Lula administration announced a new regulatory model for the power sector. The New Industry Model Law was enacted on March 16, 2004, but because the new law remains subject to the enactment of decrees of the Brazilian government and implementing resolutions of ANEEL, many aspects of the regulatory environment for thermoelectric power remain uncertain.

### Status of our Investments

We believe our participation in the construction and development of thermoelectric plants has strategic benefits for our business for several reasons:

our participation in the power sector helps create a market for natural gas made available through our investments in the natural gas business, such as the construction of the Bolivia-Brazil pipeline and the development of reserves in Bolivia;

we are able to build inside the fence co-generation plants within our refineries and other facilities, which provide us with a reliable and inexpensive source of electricity for use in our own refineries; and

these co-generation plants also produce steam for use by our refineries and in onshore crude oil recovery enhancement projects. The production and consumption of steam reduces the overall costs of generating electricity, making such electricity cost competitive relative to other thermoelectric generation, including new hydroelectric developments.

In light of the uncertainties surrounding thermoelectric power, we have suspended all investment in thermoelectric power, except for the 11 plants under construction or operation. We do not intend to continue developing the thermoelectric plants still in the planning stage, or expand existing thermoelectric plants until the content and implications of the proposed new regulatory model for the Brazilian power sector become clearer. Although our Strategic Plan calls for an increase in capacity, our plans will ultimately depend upon the level of demand for electricity in general and the success of our electricity marketing efforts.

### Financial Exposure

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To encourage the development of some of the thermoelectric power plants in which we participate with an equity interest, or to which we sell our natural gas, we have entered into agreements to provide economic support. Our obligations under these agreements are either structured as:

contingent capacity payments, in the case of the merchant thermal power plants, in which we agree to cover any shortfalls if the plant is unable to satisfy certain revenue targets and to service capital and cover operating costs and taxes; or

tolling arrangements whereby we agree to provide each of the inputs to produce electricity and operate the plant, as well as off-take the electricity, remunerating the thermoelectric plant at a price that will service capital (equity and debt).

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We have only entered into tolling arrangements with thermoelectric plants in which we have an equity interest. Our power commitments under merchant and tolling agreements are as follows:

**POWER OFFTAKE PROJECTED COMMITMENTS(1)**

	2002	2003	2004	2005	2006	2007	Yearly Average after 2007
				(Average MW)			
NE Contingent Capacity Payments	90	240	240	240	240	240	
NE Tolling Arrangements	95	215	215	215	215	215	255
Total Northeast Region	185	455	455	455	455	455	255
S/SE Contingent Capacity Payments	1055	1190	1190	1190	893		
S/SE Tolling Arrangements(2)	310	640	1340	2000	2000	2160	2160
Total South and Southeast Region	1365	1830	2530	3190	2893	2160	2160
<b>Total Commitments</b>	<b>1550</b>	<b>2285</b>	<b>2985</b>	<b>3645</b>	<b>3348</b>	<b>2615</b>	<b>2415</b>

- (1) Under these contracts, in the event the thermoelectric plant has a revenue shortfall, we are required to make capacity payments in respect of the MW quantities set forth above. The amounts of the payments may vary based on a number of factors.
- (2) Includes thermoelectric power plants for which we are the sole investor and are therefore responsible for the sale of the power generated.

The total amount of electricity in respect of which we have tolling or capacity commitments, based upon commitments of projects under construction or in operation, is 3,645 MW as of the end of 2005, of which 2,215 MW come from firm tolling agreements and 1,430 MW from contingent capacity payments.

We expect that the electricity we purchase under tolling agreements will be partly used for consumption in our facilities, estimated to be approximately 300 MW per year, equally allocated between the Northeast and South/Southeast regions of Brazil, as well as firm power sales contracts to third party distributors and industrial consumers. Currently, we do not expect to enter into tolling or capacity arrangements with respect to future thermoelectric plants. Our strategy is to sell all of the other energy in respect of which we have purchase commitments through medium and long-term Power Purchase Agreements, or PPAs. However, as a result of current price levels, we have also negotiated certain shorter-term contracts. As of May 2004, PPAs included offtake commitments totaling 1,850 average MW for 2004, 2,370 average MW for 2005 and 1,630 average MW for 2006, including PPAs executed by merchant power plants. In order to further manage our power purchase commitments, we are continuing to implement an aggressive plan to negotiate medium and long-term PPAs with distributors, industrial consumers and trading companies.

We continue to have contractual commitments related to our energy operations which would be payable to third parties. These contractual commitments include the purchase of energy, supply of natural gas and reimbursement of operating expenses of thermoelectric power plants. These commitments were incurred in connection with the PPT. Our energy commitments include the following:

a commitment to make contingent payments for the Macaé Merchant, Eletrobolt and Termoceará thermoelectric power plants, for the purpose of reimbursing operating expenses, taxes and the opportunity cost on capital invested if the revenues earned on the sales of

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energy from these plants are insufficient to cover such costs and expenses. On December 31, 2003, the maximum amount of these future operating payments was approximately U.S.\$1,108 million for the period from 2004 to 2008; and

a commitment to supply natural gas for the production of energy at the Termorio, Termobahia, Ibiritermo, Três Lagoas, UTE Canoas and Nova Piratininga thermoelectric power plants, and to purchase part or all the energy generated by TermoBahia and Ibiritermo at a price that remunerates invested capital. At December 31, 2003, the maximum future amount related to the supply agreement was approximately U.S.\$519 million for the period from 2004 to 2023.

Employing a discount rate of 12.0% per year, the net present value of the maximum financial exposure of the energy segment is approximately U.S.\$1,419 million at December 31, 2003.

In January 2003, Companhia Paranaense de Energia - COPEL ceased making its monthly capacity payments to UEG Araucária Ltda. - UEGA (an independent power producer that initiated operations in September 2002 and which is 60% owned by El Paso, 20% by Copel and 20% by us). In April 2003, UEGA initiated arbitration proceedings before the ICC International Court of Arbitration to recover damages from COPEL's default under the PPA entered into between the two parties. As of December 2003, the capacity payments would have totaled approximately U.S.\$72 million if the PPA had remained in effect.

TermoRio S.A. is an independent power producer under construction. We own 50% of TermoRio S.A., as does NRG. In April 2002, NRG exercised a put option requesting us to buy its shares and credits in TermoRio S.A. In May 2002, a court granted an injunction against NRG suspending the effects of the put option pending a final award by an arbitral tribunal. The final award was granted on March 8, 2004, holding that the amount that we must pay to NRG for its shares and credits in TermoRio S.A. totaled approximately U.S.\$80 million. We are taking the necessary steps to implement the arbitral award in conjunction with NRG.

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### ***International***

#### *Summary and Strategy*

In 2003, approximately 6.8% of our net revenues were generated outside Brazil. We seek to evolve from a dominant integrated oil and gas company in Brazil into an energy industry leader in Latin America and internationally. Currently, we plan to focus our non-Brazilian exploration, development and production activities regionally, in areas where we can successfully exploit our competitive advantages, such as deepwater drilling. We particularly intend to drill off the west coast of Africa and the Gulf of Mexico and onshore in South America. Additionally, we are integrating our natural gas activities in Brazil with natural gas production in Bolivia and Argentina. We are also increasing our downstream operations in South America and have acquired refineries and service stations in Argentina and Bolivia.

We have budgeted U.S.\$6.1 billion in capital expenditures for the period 2004-2008 for all of our international investments.

Our main strategies in the international segment are to:

seek a leadership position as an integrated energy company throughout Latin America;

expand exploration and production operations, in the Gulf of Mexico and Western Africa.

accelerate monetization of our natural gas reserves;

expand our international opportunities to grow and diversify our portfolio of international activities;

broaden the recognition and increase the value of the Petrobras brand name outside of Brazil; and

add value to the production of Petrobras heavy oil.

Our international results are reflected in the International segment in our audited consolidated financial statements.

#### *Exploration and Production*

During 2003 we conducted significant international exploration activities in Angola, Argentina, Bolivia, Colombia, Nigeria, the United States and Trinidad & Tobago and Venezuela. In addition, we are currently performing studies to evaluate blocks where we hold interests in Angola, Argentina, Colombia, Mexico, Nigeria and the United States. Production activities were conducted in Angola, Argentina, Bolivia, Colombia, Ecuador, Peru, the United States and Venezuela. Collectively, these activities represented approximately 6.5% of our total capital expenditures

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for crude oil and natural gas exploration and production. Our capital expenditures for international exploration and development were U.S.\$428 million for 2003, U.S.\$224 million for 2002 and U.S.\$318 million for 2001. The following table provides information about the allocation of such expenditures for each of 2003, 2002 and 2001:

### DISTRIBUTION OF INTERNATIONAL EXPLORATION ACTIVITIES

	2003	2002	2001
Argentina	5.6%	3.7%	0.2%
Bolivia	0.7	12.6	7.6
Colombia	4.4	11.8	13.1
PESA(1)	28.7		
<hr style="border: none; border-top: 1px solid black;"/>			
South America	39.4	28.1	20.9
West Coast of Africa	15.6	41.6	45.8
Gulf of Mexico	42.5	24.4	24.7
North Sea(2)	0.0	0.0	1.7
Others	2.5	5.9	6.9
<hr style="border: none; border-top: 1px solid black;"/>			
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<hr style="border: none; border-top: 3px double black;"/>			

- (1) Includes Argentina, Ecuador and Venezuela.  
(2) We sold our interests in the North Sea in 2001.

#### *Development*

Over the past three years, we have participated in the development of a number of fields internationally, including three in Argentina (Aguarague, Campo Duran & El Tordillo), two in Bolivia (San Alberto and San Antonio), five in Colombia (Guando, Rio Ceiba, Yaguara, Venganza e Revancha), and one in the United States (GB 200).

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In 2003, our net production outside of Brazil averaged 160,864 barrels per day of crude oil and NGLs and 85,015 barrels of oil equivalent of natural gas per day at an average lifting cost of U.S.\$2.46 per barrel. The following table provides information on the allocation of our international development activities for each of 2003, 2002 and 2001.

**ALLOCATION OF INTERNATIONAL DEVELOPMENT ACTIVITIES**

	<u>2003</u>	<u>2002</u>	<u>2001</u>
South America	83.8%	74.0%	70.0%
Argentina	62.2	7.1	5.9
Bolivia	7.1	45.8	28.7
Colombia	14.3	21.1	35.4
West Coast of Africa	14.7	23.1	16.8
Gulf of Mexico	1.5	2.9	11.0
North Sea(1)	0.0	0.0	2.2
<b>Total</b>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

(1) We sold our interests in the North Sea in 2001.

*Argentine Activities*

With our acquisition of PEPSA (formerly Perez Companc) in 2002, we reinforced our position as an exploration and production leader in South America, especially in Argentina, where we already maintained activities. As of December 31, 2003, our combined crude oil and natural gas proved reserves in Argentina were approximately 410.63 million barrels of oil equivalent, approximately 65.56% of which were proved developed reserves and approximately 34.44% of which were proved undeveloped reserves.

PEPSA's production in the country is concentrated in the Neuquén and Austral Basins. PEPSA owns 579 thousand net acres under production concessions in the Neuquén Basin and 2,632 thousand net acres under production concessions in the Austral Basin. Our gross production acreage in Argentina amounted to 4,027 thousand acres (3,211 thousand net), and we have a total of 2,536 gross productive wells (1,498 thousand net). For the year ended December 31, 2003, our combined crude oil and natural gas production in Argentina averaged 121 thousand barrels per day.

We also participate in the retail sector in Argentina, where we currently own 681 retail service stations that operate under a number of brand names, including Petrobras, Eg3 and San Lorenzo.

We own a 34% participation in the MEGA project (representing a total investment of U.S.\$728 million), a joint venture among us, Repsol-YPF and Dow Chemical to fractionate natural gas liquids. The project consists of a natural gas processing plant in Loma La Lata (Province of Neuquén), a 600 km extension pipeline and a separating plant in Bahía Blanca (Province of Buenos Aires).

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We are obligated under an off-take contract to take minimum volumes of LPG and natural gasoline, if delivered, at market prices. The sponsors financed approximately 70% of the project costs with a U.S.\$472 loan from commercial banks and other institutional lenders. The loan was structured to be non-recourse to the sponsors following the termination of sponsor completion guarantees to the lenders during the construction period for their respective shares in the project (Repsol-YPF 38%, Petrobras 34%, and Dow Chemical 28%). The guarantees were originally set to expire on December 31, 2001, but were subsequently extended to December 31, 2003.

While the MEGA project reached mechanical completion and met or exceeded the performance tests established for the release of the sponsors guarantees, the lenders maintained that other conditions required for the release were not met. The sponsors agreed in December of 2003 to extend their guarantees until December 31, 2005 and to permit all lenders the right to put their MEGA notes to the sponsors immediately prior to the guarantees' expiration. In addition, the sponsors granted MEGA's fixed rate noteholders the right to exercise their put immediately. On January 15, 2004, all fixed rate noteholders exercised this right. As a result of these events, we purchased our respective share of MEGA's fixed rate notes (U.S.\$58 million), and currently guarantee our share of MEGA's floating rate notes (U.S.\$76 million).

We are also a shareholder in TGS, which owns a 7,400 km extension pipeline with a transport capacity of 62 MMcmd and a gas processing plant located in Bahía Blanca, with a processing capacity of 42 million MMcmd.

Our electricity assets in Argentina cover the entire productive chain. We account for 6.5% of the country's electricity generation through our ownership interests in three generation plants—two hydroelectric (Piedra Del Águila and Pichi Picún Leufú) and one thermoelectric (Genelba). We also have an interest in Transener, Argentina's largest transmission company and owner of 95% of Argentina's high-tension network through our subsidiary PESA. PESA also maintains an important presence in the central area of Buenos Aires, an area with more than 2.1 million customers, through Edesur, Argentina's largest energy distribution company by volume.

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### *Bolivian Activities*

As of December 31, 2003, our combined crude oil and natural gas proved reserves in Bolivia were approximately 339.42 million barrels of oil equivalent, approximately 96.36% of which were proved developed reserves and approximately 3.64% of which were proved undeveloped reserves. Approximately 89.58% of our proved developed reserves in Bolivia are natural gas reserves.

We have a 35% interest in the San Alberto and San Antonio gas fields (the other partners are Petrolífera Andina (50%) and Total Bolivia (15%)). For the year ended December 31, 2003, our combined crude oil and natural gas production in Bolivia averaged 31 thousand barrels per day.

We own 44.5% of the shares of Transierra S.A, the owner and operator of the Yacuiba-Rio Grande gas pipeline (GASYRG), a pipeline in Bolivia that connects the gas fields in the south of Bolivia to the Bolivia-Brazil pipeline. Presently the pipeline has a capacity of 17 MMcmd, and installation of another compression unit will increase the capacity to 23 MMcmd. Investment for this project totaled more than U.S.\$375 million. We also provided all the capital for the San Marcos pipeline, which transports natural gas to the city of Puerto Suárez (Bolivia), on the Brazilian border.

We acquired an interest in a natural gas compression plant in Rio Grande, Bolivia, which has a capacity to compress up to 1,546 million cubic feet per day.

We have a 100% interest in Empresa Boliviana de Refino (EBR). EBR owns two Bolivian refineries located in Cochabamba and Santa Cruz de la Sierra, with an estimated maximum production capacity of 48,000 barrels of crude oil per day. EBR wholly owns Empresa Boliviana de Distribución, a company with a network of 72 gas stations.

### *Venezuelan Activities*

PEPSA's exploration and production rights in Venezuela are held under operating service contracts. In 1994 Petróleos de Venezuela S.A. (PDVSA) awarded our first contract at the Oritupano-Leona field. As of December 31, 2003, PEPSA's combined crude oil and natural gas proved reserves in Venezuela were approximately 304.56 million barrels of oil equivalent, approximately 40.52 % of which were proved developed reserves and approximately 59.48 % of which were proved undeveloped reserves.

As of December of 2003, PEPSA had four production fields in the country. PEPSA's gross production acreage in Venezuela amounted to 585 thousand acres (379 thousand net), and PEPSA has a total of 667 gross productive wells (430 thousand net). For the year ended December 31, 2003, PEPSA's combined crude oil and natural gas production in Venezuela averaged 43 thousand barrels per day.

### *Ecuadorian Activities*

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PEPSA owns a 70% interest in Block 18 situated in the Oriente Basin of Ecuador. Block 18 is a field covering 197 thousand acres with a significant potential for production of 28° to 33° API light crude oil reserves. The concession for production activities in Block 18 is for an initial 20-year term starting from October 2002. Once this term expires, the Ecuadorian hydrocarbons law provides for the possibility of an additional five-year extension.

Block 18 has eight productive wells, one of which is located at the Pata field and six of which are located at the Palo Azul field. In addition, the area has early production facilities which can handle a daily gross production of 20 thousand barrels of crude oil.

PEPSA also holds a 100% interest in Block 31. This block is located in a highly sensitive ecological area of the Amazon jungle in the central part of the eastern border of the upper Amazon basin and covers an area of 494 thousand net acres. For the development of the block, investments totaling approximately U.S.\$800 million will be required, with initial investments in the amount of approximately U.S.\$200 million.

In addition to conducting seismic work in Block 31, PEPSA has drilled four exploratory wells in Apaika, Obe, Nenke and Minta. All the wells were successful and led to the discovery of the Apaika, Obe, Nenke and Minta fields. According to the block's production sharing agreement, Petroecuador is entitled to a crude oil production take of about 15% to 17%, depending on the field's daily crude oil production ranges and crude oil gravity.

Future oil production in Block 31 will be shipped through a heavy crude oil pipeline known as OCP in which PEPSA currently has an 8.96% interest. PEPSA has entered into a 15-year ship-or-pay transportation contract under which OCP has committed to provide it with a shipping capacity of 80,000 barrels per day.

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### *Peruvian Activities*

Through PEPSA, we have the rights to oil and gas production in Lote X, a 116 thousand acre block in Peru's Talara Basin. As of December 2003, Lote X had 2,366 production wells. PEPSA has entered into a long-term sales contract under which Petroperú (the Peruvian state-owned company) is obligated to purchase all of the production from Lote X at market prices. The sales contract expires in 2006.

### *Colombian Activities*

During 2003, we signed three new contracts in Colombia, acquiring interests in Espinal Profundo (50%), Boqueron Profundo (60%) and Rio Aipe (50%). We drilled one wildcat well, Espino-1, which is currently under evaluation.

In the Guando Field, we drilled 31 wells, 27 oil producers and four water injectors. We started to operate the main oil pipeline (Guando - Chicoral pipeline) that exports the oil produced in the field to the OAM pipeline.

### *African Activities*

In December 2001, we entered into three joint ventures for crude oil exploration and production in deepwater blocks, two off the coast of Nigeria (resulting from the 2000 license bidding round) and one off the coast of Angola. In one of these blocks in Nigeria, in which we were awarded a 75% interest and are the operator, we farmed out in 2003 half of our interests (37.5%), in order to lower our overall risk. We are currently appraising Agbami and Akpo, two fields previously discovered in the Niger Delta Basin.

Our Angolan branch of our wholly-owned subsidiary, Petrobras International Braspetro B.V., has continued to perform as a non-operating partner in two licenses under petroleum sharing agreements.

### *Gulf of Mexico Activities*

Petrobras America, Inc. (PAI), our wholly-owned subsidiary, continues to expand its activities in the Gulf of Mexico's deep and ultra-deepwaters through farm-in agreements (by which PAI, rather than obtaining an interest directly from the relevant government authorities, acquires an interest from a party who has already obtained such interest), and participation in leases and sales conducted by the United States Minerals Management Service. As of December 31, 2003, PAI held participations in 115 offshore blocks in the Gulf of Mexico, of which about 94 were located in deep and ultra-deep waters.

In 2003, PAI participated in the drilling of three exploration wells which resulted in the discoveries of Coulomb, Chinook and St. Malo, with 33.3%, 30% and 25% of participation, respectively. Together with the previous Cascade discovery, these accumulations confirm the potential of the ultra deepwaters of the Gulf of Mexico. Additionally, PAI has obtained a participation in several other similar prospects, along the same

geologic features, with similar potential, which will be drilled in 2004 and 2005.

Also, in 2003, as part of the bidding launched by Petróleos Mexicanos (PEMEX) for the operation of areas under multiple service contracts, contracts for the Cuervito and Fronterizo blocks were awarded to a joint venture composed of us (45% interest), the Japanese company Teikoku (40%) and the Mexican company Diavaz (15%). There are 12 gas discoveries in this block which will be developed with a total expenditures of U.S.\$510 million.

### **Organizational Structure**

All of our 14 direct subsidiaries are incorporated under the laws of Brazil, except PIFCo, Petrobras International Braspetro B.V. (PIB BV), Braspetro Oil Company (BOC), Braspetro Oil Services Company (Brasoil) and Petrobras Netherlands B.V. (PNBV), which are incorporated abroad. We own at least 99.9% of the common shares of those subsidiaries and at least 98% of the preferred shares of Petroquisa, Gaspetro and BR. PIFCo, Petrobras International Braspetro B.V. (PIB BV), Braspetro Oil Company (BOC), Braspetro Oil Services Company (Brasoil), Petrobras Netherlands B.V. (PNBV), Transpetro, Downstream Participações S.A., Petrobras Negócios Eletrônicos S.A. (E-Petro) Petrobras Energia Ltda., VTE Piratininga and Termor do not have preferred shares. In May 2002, we created Petrobras Energia Ltda., a wholly owned subsidiary, which will act as a power trader and conduct various activities related to Petrobras investments in the Brazilian power sector.

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The following diagram sets forth our significant consolidated subsidiaries:

### **Property, Plants and Equipment**

Under Brazilian law, the Brazilian government owns all crude oil and natural gas reserves within Brazil, and we have certain rights to exploit those reserves pursuant to concessions. Substantially all of our property, consisting of refineries and storage, production, manufacturing and transportation facilities, is located in Brazil. See Item 4 Information on the Company for a description of our reserves, sources of crude oil and natural gas and material plans for expansion and improvements in our facilities.

### **Health, Safety and Environmental Matters**

The protection of human health and the environment is one of our primary concerns, and is essential to our success as an integrated oil, gas and energy company. In order to address and prioritize health and safety concerns and ensure compliance with environmental regulations, we have:

developed the PEGASO program to upgrade our pipelines and other equipment, implement new technologies, improve our emergency response readiness, reduce emissions and residues and prevent environmental accidents. From January 1, 2000 to December 31, 2003, we spent approximately U.S.\$2.4 billion under this program, including through the *Programa de Integridade de Dutos* (Pipeline Integrity Program) through which we conduct inspections of, and improvements to, our pipelines. In 2003, we spent approximately U.S.\$766 million in connection with the PEGASO program;

proposed the execution of, or entered into, environmental commitment agreements with several environmental protection agencies and/or the federal or state public ministries, in which we agree to undertake certain measures in order to complete the environmental licensing for several of our operating facilities;

integrated our corporate health department into the already existing corporate environment and safety department, thereby facilitating the development of systematic, company-wide procedures to handle health, safety and environmental ( HSE ) concerns;

established our new HSE policy and corporate guidelines, which focus on principles of sustainable development, compliance with legislation and the availability and use of environmental performance indicators;

undertaken capital investments to reduce the HSE risk of our operations, including making improvements to our refineries and transportation facilities and developing and implementing oil pollution prevention guidelines;

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built environmental protection centers and advanced bases for oil spill prevention, control and response, established local and regional onshore and offshore contingency plans to deal with hazardous oil spills and chartered dedicated vessels fully equipped for oil spill control and fire fighting;

received integrated HSE certificates for all our operating units. By December 2003, 57 operating units, 33 in Brazil and 24 abroad, had been certified by the management systems standards ISO 14001 (environment), and BS 8800 or OHSAS 18001 (health and safety), and the *Frota Nacional de Petroleiros* (National Fleet of Vessels) has been fully certified by the IMO International Management Code for Safe Operation of Ships and for Pollution Prevention (ISM Code) since December 1997);

initiated the implementation of the *Programa de Segurança de Processo* (Process Safety Program) to implement standardized, company-wide guidelines of HSE, effectively investigate environmental incidents and strengthen our institutional commitment to HSE through employee training.

In addition, we conduct environmental impact studies for new projects as required by Brazilian environmental legislation, and our HSE department evaluates each and every project with a budget exceeding U.S.\$25 million to confirm its compliance with all HSE requirements.

We will continue to evaluate and develop initiatives to address HSE concerns and to reduce our exposure to HSE risks.

See below and Item 8 Financial Information and Item 5 Environmental Proceedings and Liabilities for additional information.

## **Environmental Liabilities**

In the period between 2000 to 2003, we experienced several accidents, some of them leading to significant oil spills: 73,000 gallons in 2003, 52,000 gallons in 2002, 691,000 gallons in 2001 and 1,580,000 gallons in 2000. As a result of certain of these accidents, we remain subject to several administrative, civil and criminal investigations and proceedings. We cannot predict whether additional litigation will result from those accidents or whether any such additional proceedings would have a material adverse effect on us. See Note 22(d) to our audited consolidated financial statements.

On January 18, 2000, a pipeline connecting one of our terminals to a refinery in Guanabara Bay ruptured, causing a release of approximately 341,000 gallons of crude oil into the bay. We undertook action to control the spill in an effort to prevent the oil from threatening additional areas. We have spent approximately R\$104 million in connection with the clean-up efforts and fines imposed by IBAMA in connection with this spill, and are subject to several proceedings as a result of this spill, including:

a criminal proceeding instituted on January 24, 2001 by the Public Ministry of the State of Rio de Janeiro. The initial ruling declared the proceeding invalid by virtue of the Federal Constitution of Brazil, which permits only physical persons to be held criminally liable;

a criminal complaint filed against us, our former president and nine other employees by the Federal Public Ministry in São João de Meriti. On April 30, 2002, the judge determined that we could not appear as a defendant in this criminal proceeding as a result of an injunction we obtained from the court, although the decision is still subject to appeal. The local federal tribunal dismissed the complaint against our former president, and this dismissal is not subject to appeal;

262 individual lawsuits filed by fishermen of the State of Rio de Janeiro claiming damages in an aggregate amount of approximately R\$41 million. Approximately half of the cases brought so far have been decided against us; and

a lawsuit filed by the Federation of Fishermen of the State of Rio de Janeiro claiming damages of approximately R\$537 million. On February 7, 2002, the judge hearing this matter found that damages were due, but not in the amount claimed. Both parties appealed this decision. On October 8, 2002, the Court of Appeals of the State of Rio de Janeiro denied the appeal filed by the plaintiff and dismissed the claim with respect to all fishermen who had already settled their claims against us or who had already filed individual lawsuits against us, and also with respect to certain other fishermen. These dismissals dramatically reduced the number of plaintiffs who could possibly be entitled to damages. We have filed additional appeals and are awaiting a final decision.

On July 16, 2000, an oil spill occurred at our President Getúlio Vargas refinery, located approximately 15 miles (24 kilometers) from Curitiba, capital of the State of Paraná, releasing approximately 1.06 million gallons of crude oil into the surrounding area. We spent approximately R\$74 million on the clean-up effort and fines imposed by the State of Paraná authorities. In addition, in relation to this spill:

on August 1, 2000, IBAMA imposed fines in the amount of R\$168 million. We contested these fines, but IBAMA subsequently upheld them. On February 3, 2003, we filed a lawsuit in order to challenge these fines and obtained an injunction that allows us to do so without posting a bond in the amount of the fines. We are currently awaiting a final disposition of this case;

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several civil actions have been filed against us, the most important of which is a civil action filed on January 1, 2001 by the Federal Public Ministry and the Paraná State Public Ministry seeking damages of approximately R\$2,300 million. On April 4, 2001, we filed our response and are still awaiting a decision; and

the Federal Public Ministry instituted a criminal action against us, our former president and our former superintendent of the REPAR refinery. A habeas corpus petition has currently suspended the action in favor of us, our former president and our former superintendent of the REPAR refinery. We await a final decision on the merits.

On February 16, 2001, our Araucária-Paranaguá pipeline ruptured as a result of an unusual movement of the soil and spilled approximately 15,059 gallons of fuel oil into several rivers located in the State of Paraná. On February 20, 2001, we finalized the cleaning of the river surfaces, recovering approximately 13,738 gallons of fuel oil. As a result of the accident:

the Instituto Ambiental do Paraná (IAP) fined us approximately R\$150 million. We contested this fine, and IAP reduced the fine to R\$90 million. We are contesting this reduced fine;

the Federal Public Ministry and the Paraná State Public Ministry filed a public civil action against us seeking damages of approximately R\$3,700 million and to oblige us to take certain remedial steps to prevent future accidents. On July 19, 2002, we filed our response and are currently awaiting a decision; and

the State of Paraná is currently conducting a criminal investigation, which is in its initial stages.

On March 15, 2001, a gas explosion inside one of the columns of the P-36 production platform, located in the Roncador field (75 miles off the Brazilian coast) led to the death of 11 employees and eventual sinking of the platform. The accident also caused 396,300 gallons of oil to spill into the ocean. As a result of the accident:

the Federal Public Ministry filed a lawsuit on January 23, 2002 seeking the payment of R\$100 million as environmental damages, among other demands. We have presented our defense to these claims and are awaiting a decision; and

IBAMA fined us approximately R\$7 million, the basis of which we are contesting through administrative proceedings.

On October 13, 2002, a power blackout in FPSO P-34, which is located in the Barracuda-Caratinga fields, affected the ship's water balance system and caused water to move from storage tanks located in one side of the ship to the tanks located in the opposite side, causing the FPSO to roll up to an angle of 40 degrees. Four days later, the stability of the ship had been restored, without casualties or spill of oil into the sea. As a result of the investigation of this accident, several measures to prevent similar accidents were incorporated into our *Programa de Excelência Operacional-PEO* (Operational Excellence Program). In connection with the accident:

we executed a *Termo de Ajustamento de Conduta* (Agreement for Regularization of Conduct), or TAC, with IBAMA, relating to our production activities in the Campos Basin, pursuant to a Presidential Decree enacted on December 12, 2002. Under the TAC, we agreed to conduct certain actions in the Campos Basin to reduce the risk of environmental damage; and

on January 16, 2003, the Federal Public Ministry filed a motion for a protective order with a request for an injunction against us, IBAMA and *Agência Nacional do Petróleo* (National Petroleum Agency, or ANP), in order to challenge the validity of the letter of intent and of the TAC and prevent us from obtaining from IBAMA new licenses for our platforms located in the Campos Basin. The

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trial judge partially accepted the plaintiff's request for an injunction. A Chamber of the Brazilian Federal Court of Appeals for the Second Circuit suspended the injunction, upholding the validity of the TAC, which is not subject to appeal. The proceedings at the trial court will continue until the trial judge makes a final decision on the merits of the complaint, which decision would be subject to further appeals.

On January 15, 1986, the Public Ministry of the State of São Paulo and the *União dos Defensores da Terra* (Union for Defense of the Earth), filed a public civil action against us and 23 other companies in the State Court of São Paulo for alleged damages caused by pollution. This lawsuit is entering the discovery phase. Although the plaintiffs alleged damages of U.S.\$89,500 in an initial pleading filed with the Court, the Public Ministry of the State of São Paulo has publicly stated that U.S.\$800 million will be ultimately required to remedy the alleged environmental damage. The Court refused to assert joint and several liability of the defendants, and we believe that it will be difficult to determine the environmental damage attributable to each defendant.

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### **Regulation of the Oil and Gas Industry in Brazil**

#### *Regulatory Framework*

Under Brazilian law, the Brazilian government owns all crude oil and natural gas reserves in Brazil. Additionally, Article 1 of Law No. 2,004 of 1953 granted the Brazilian government a monopoly over the research, exploration, production, refining and transportation of crude oil and oil products in Brazil and its continental shelf, subject only to the right of companies engaged in crude oil refining and the distribution of oil products at that time to continue those activities. Under Article 2 of Law No. 2,004, the Brazilian government made us its exclusive agent for purposes of exploiting the Brazilian government's monopoly. In 1988, when it adopted the Brazilian Constitution, the Brazilian Congress incorporated Article 1 of Law No. 2,004 into the Constitution and included within the scope of the Brazilian government's monopoly the importation and exportation of crude oil and oil products.

Beginning in 1995, the Brazilian government undertook a comprehensive reform of the country's oil and gas regulatory system. On November 9, 1995, the Brazilian Congress amended the Brazilian Constitution to authorize the Brazilian government to contract with any state or privately-owned company to carry out the activities related to the upstream and downstream segments of the Brazilian oil and gas sector. Accordingly, this amendment eliminated our government-granted monopoly. The amendment was implemented by the adoption of the Oil Law, which revoked Law No. 2,004.

The Oil Law provided for the establishment of a new regulatory framework, ending our exclusive agency and enabling competition in all aspects of the oil and gas industry in Brazil. As a result of this constitutional amendment and the subsequent and ongoing implementation of the changes under the Oil Law, its amendments and related regulations, we have been operating in an environment of gradual deregulation and increasing competition.

The Oil Law also created an independent regulatory agency, the ANP. The ANP's function is to regulate the oil and natural gas industry in Brazil. A primary objective of the ANP is to create a competitive environment for oil and gas activities in Brazil that will lead to the lowest price and best services for consumers. Among its principal responsibilities is to regulate concession terms for upstream development and award new exploration concessions. See Item 10 Additional Information-Material Contracts-Concession Agreements with the ANP.

The Oil Law granted us the exclusive right to exploit the crude oil reserves in all fields where we had previously commenced production, in accordance with the concession agreement entered into with the ANP on August 6, 1998. For each concession area, we were granted an exclusivity period of 27 years as of the date the field was declared to be commercially profitable. The Oil Law also established a procedural framework for us to claim exclusive exploratory and, in case of drilling success, development rights for a period of up to three years with respect to areas where we could demonstrate that we had established prospects prior to the enactment of the Oil Law. In order to perfect our claim to explore and develop these areas, we had to demonstrate that we had the required financial capacity to carry out these activities, either alone or through other cooperative arrangements.

Each year we are required to submit our budget for the following fiscal year to the Ministry of Planning, Budget and Management and the Ministry of Mines and Energy. Once reviewed by those offices, the budget is then submitted to the Brazilian Congress for approval. As a result of this process, the total level of our capital expenditures for each fiscal year is regulated, although the specific application of funds is left to our discretion. Since mid-1991, we have obtained substantial amounts of our financing from the international capital markets, mainly through the issuance of commercial paper and short, medium and long-term notes, and have increasingly been able to raise long-term funds for large capital expenditure items such as rigs and platforms.

Our strategic objectives and planning are subject to supervision by the Ministry of Planning, Budget and Management. Our activities are also subject to regulation by the Ministry of Finance and the Ministry of Mines and Energy, among others. In addition, since our common and preferred shares are traded on the São Paulo Stock Exchange, we are also regulated by the *Comissão de Valores Mobiliários* (Brazilian Securities Commission, or the CVM).

Brazil is not a member of OPEC, but we have been invited to attend OPEC meetings as an observer. Therefore, neither Brazil nor we are bound by OPEC guidelines. However, to the extent that OPEC influences international crude oil prices, our prices are affected, as our prices are linked to international crude oil prices.

#### *Price Regulation*

Until the passage of the Oil Law in 1997, the Brazilian government had the power to regulate all aspects of the pricing of crude oil, oil products, fuel alcohol and other energy sources in Brazil, including natural gas and energy. Following the implementation of the Oil Law through December 31, 2001, the Brazilian oil and gas sector was significantly deregulated and the Brazilian government changed its price regulation policies. Under these regulations, the Brazilian government:

introduced a new methodology for determining the price of oil products designed to track prevailing international prices and the Real/U.S. dollar exchange rate;

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eliminated regulation of the cost at which we could record imported crude oil and oil products in our cost of sales;

gradually eliminated controls on wholesale prices at which we could sell our oil products, except for diesel, gasoline and LPG;

eliminated transportation cost equalization subsidies known as *Frete para Uniformização de Preços* (Freight for the Uniformity of Prices, or FUP), in the case of transportation subsidies for oil products, and *Frete para Uniformização de Preços do Álcool* (Freight for the Uniformity of Prices of Alcohol, or FUPA), in the case of transportation subsidies for fuel alcohol effective after July 28, 1998; and

continued to require that we act as the Brazilian government's administrator for the fuel alcohol program.

As set forth below, pursuant to Law No. 9,990, on January 2, 2002, the Brazilian government eliminated price controls for crude oil and oil products, except for the natural gas sold for qualifying thermoelectric plants. This led to increased competition and further price adjustments, as other companies were allowed to participate in the Brazilian market and import and export crude oil, oil products and natural gas to and from Brazil.

Prices remain regulated, however, for certain natural gas sales contracts and electricity.

To permit the taxation of all imported crude oil, oil products and natural gas in conjunction with the opening of the market to all participants, the Brazilian government established an excise tax to be applied with respect to the sale and import of crude oil, oil products and natural gas products (*Contribuição de Intervenção no Domínio Econômico*, Contribution for Intervention in the Economic Sector, or CIDE). As of May 1, 2004, important changes were made regarding the taxation of oil products sales. The PIS/PASEP tax and the COFINS tax, previously ad valorem taxes, were converted into specific value taxes at the following rates:

Gasoline	\$ R261.60
Diesel	148.00
Jet Fuel	71.20
LPG	167.70
-	

Reais/m3 (except LPG/metric ton)

The specific tax rates for CIDE, and the amounts paid which could be used as credits against PIS/PASEP and COFINS amounts also changed and are now the following:

	<u>CIDE (R\$/m3)</u>	<u>PIS/COFINS Deduction</u>
Gasoline	280.0	
Diesel	70.0	
Jet Fuel		
Fuel Oil		

#### Crude Oil and Refined Oil Products

Until enactment of the Oil Law, the Brazilian government regulated all aspects of the pricing of crude oil and oil products in Brazil, from the cost of crude oil imported for use in our refineries, to the price of refined oil products charged to the consumer.

Pursuant to the Oil Law and subsequent legislation, the oil and gas markets in Brazil were deregulated beginning January 2, 2002. As part of this action:

the Brazilian government deregulated sales prices for crude oil and oil products; and

the Brazilian government established the CIDE, an excise tax payable to the Brazilian government required to be paid by producers, blenders and importers upon sales and purchases of specified oil and fuel products at a set amount for different products based on the unit of measurement typically used for such products.

#### Natural Gas

We continue to comply with a number of rules relating to the natural gas industry, including *Portaria* No. 3 (relating to the sale of domestic natural gas), *Portaria* No. 176 (relating to the maximum price for natural gas sold to certain PPT thermoelectric plants) and *Portaria* No. 45 (relating to the transportation price for domestic natural gas sold to local gas distribution companies).

On June 1, 2001, the Ministry of Mines and Energy and the Ministry of Finance adopted *Portaria* No. 176, establishing a ceiling price for natural gas to be sold to certain of the thermoelectric plants that are part of the PPT, to be applicable for a twelve-year period. Each qualifying thermoelectric plant will have the right to purchase natural gas at prices that are determined as described below.

For the initial consecutive twelve-month period starting on the date the gas consumption begins, a fixed price in Reais will be set based on the reference price in United States dollars per MMBTU, initially set at U.S.\$2.58 per MMBTU, converted into Reais based on the exchange rate in effect on that date. For subsequent consecutive twelve-month periods, the ceiling price will be

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adjusted annually for changes in the United States producer price index and the U.S. dollar exchange rate with respect to the portion of the ceiling price relating to imported natural gas (set by the regulation at 80%) and for changes in the IGP-M with respect to the portion of the ceiling price relating to domestic natural gas (set by the regulation at 20%), reflecting the current mix of natural gas supplied to these qualifying thermoelectric plants. The annual adjustment in the ceiling price related to imported gas is based on the previous twelve-month period rate and the projected volume of natural gas to be sold to the qualifying thermoelectric plant during the succeeding twelve-month period. The price will be adjusted to reimburse the natural gas supplier, on a per invoice basis, for any shortfalls caused by a Real devaluation. Similarly, the qualifying thermoelectric plant will be reimbursed for overpayments, calculated on a per invoice basis, resulting from a Real appreciation during the period.

The applicable interest rate on the net shortfall or overpayment amount with respect to each qualifying thermoelectric plant will be the SELIC rate, the interest rate applicable to certain Brazilian government securities. In addition, interest projected to be accrued during the immediately succeeding twelve-month period on the net shortfall or overpayment amount will be added. Any portion of the shortfall or overpayment amount that is not reimbursed through these adjustments in the ceiling price will be included in the adjustment to the ceiling price for subsequent consecutive twelve-month periods until reimbursed in full.

The PPT allows qualifying thermoelectric plants to pass on to their customers any increases in pricing resulting from these adjustments.

### The Petroleum and Alcohol Account

Prior to 2002, the Petroleum and Alcohol Account was a special account that reflected the impact on us of the Brazilian government's regulatory policies for the Brazilian oil industry and its fuel alcohol program.

Prior to July 29, 1998, this account recorded the difference between the cost established by the Brazilian government and our actual cost for imported crude oil and oil products, as well as the net effects on us of the administration of the FUP and FUPA subsidies and all of the related regulations (the FUP/FUPA programs).

From July 29, 1998 until December 31, 2001, the Petroleum and Alcohol Account was required to be adjusted by the PPE and certain fuel transportation and other reimbursable costs that had not been phased out. The net impact on us of our fuel alcohol activities was also recorded in the Petroleum and Alcohol Account.

Article 74 of the Oil Law required settlement of the Petroleum and Alcohol Account by the Brazilian government on or before full implementation of price deregulation was completed. This deregulation was phased in over several years and was implemented in full on January 2, 2002. To facilitate the required settlement, on June 30, 1998, the Brazilian government issued National Treasury Bonds-Series H in our name, which were placed with a federal depository to support the balance of this account. These bonds are not tradable and are redeemable only at their maturity in 2004. The Series H bonds have been cancelled from time to time by the depository, pursuant to our authorization, as the balance of the Petroleum and Alcohol Account decreased. We have no other rights to use, withdraw or transfer the Series H bonds before maturity in 2004.

The value of the outstanding Series H bonds was U.S.\$59 million as of December 31, 2003, U.S.\$46 million as of December 31, 2002 and U.S.\$92 million as of December 31, 2001.

Certification of the Petroleum and Alcohol Account

The changes in the Petroleum and Alcohol Account in the period from July 1, 1998 to December 20, 2002 are subject to audits by the ANP. The results of the audit will be the basis for settlement of the account with the Brazilian government. The term for settlement of the Petroleum and Alcohol Account has been extended to June 30, 2004, thereby extending the term for certification of the outstanding balance in the Petroleum and Alcohol Account.

In accordance with the applicable laws and regulations, and subject to our approval, the settlement of the Petroleum and Alcohol Account may be in the form of:

a transfer to us of an amount of Series H bonds equal to the balance of the Petroleum and Alcohol Account on the settlement date;

issuance of new instruments (the types and terms of which will be determined by the Brazilian government at or before the time of settlement, subject to our approval) in an amount equal to the balance of the Petroleum and Alcohol Account on the settlement date;

offset of the remaining balance of the Petroleum and Alcohol Account on the settlement date against other amounts owed by us to the Brazilian government, such as federal taxes payable; or

a combination of the foregoing.

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The following table summarizes the changes in the Petroleum and Alcohol Account for 2003, 2002 and 2001:

	For the Year Ended		
	December 31,		
	2003	2002	2001
	(in millions of U.S. dollars)		
Opening balance	\$ 182	\$ 81	\$ 1,509
Advances (Collections)-PPE		(6)	(969)
Reimbursements to third parties:			
Subsidies paid to fuel alcohol producers	5	235	45
Others		24	17
<b>Total reimbursements to third parties</b>	<b>5</b>	<b>259</b>	<b>62</b>
Reimbursements to Petrobras:			
Transport of oil products		(6)	45
Net result of fuel alcohol commercialization activities(1)			68
<b>Total reimbursements to Petrobras</b>		<b>(6)</b>	<b>113</b>
<b>Total reimbursements</b>	<b>5</b>	<b>253</b>	<b>175</b>
Financial income	10	2	16
Results of certification/audit process conducted by the Brazilian government(2)		(29)	(405)
Translation gain (loss)(3)	42	(119)	(245)
<b>Ending balance</b>	<b>\$ 239</b>	<b>\$ 182</b>	<b>\$ 81</b>

(1) Recorded as a component of cost of sales.

(2) For 2002, U.S.\$29 million and for 2001, U.S.\$405 million was recorded as a component of other expenses, net.

(3) Translation gains (losses) are recorded as a component of cumulative translation adjustments.

The U.S.\$57 million increase in the balance of the Petroleum and Alcohol Account during 2003 was primarily a result of the effect of the 18.2% appreciation of the Real against the U.S. dollar during the year.

*Exploration and Development Regulation*

During the time we had a government-granted monopoly in Brazil for oil and gas operations, we had the right to exploit all production, exploration and development areas in Brazil. When our government-granted monopoly was terminated, the Brazilian government was allowed to contract with any state or privately owned company for the development of the upstream and downstream segments of the Brazilian oil and gas

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sector. Before establishing bidding rounds for concessions, the Brazilian government granted us the exclusive right to exploit crude oil reserves where we had previously commenced operations. In 1998, the ANP started to conduct bidding rounds to grant concessions for production, exploration and development areas, and we were required to compete for concessions.

With the effectiveness of the Oil Law and the regulations promulgated by the ANP thereunder, concessionaires were required to pay the government the following:

signature bonuses;

rentals for the occupation or retention of areas;

special participation; and

royalties.

The minimum signature bonuses are published in the bidding rules for the concessions being auctioned, but the actual amount is based on the amount of the winning bid and must be paid upon the execution of the concession agreement.

The rentals for the occupation and retention of the concession areas are provided for in the related bidding rules and are payable annually. For purposes of calculating rentals, the ANP takes into consideration factors such as the location and size of the relevant concession block, the sedimentary basin and its geological characteristics.

Special participation is an extraordinary charge we must pay in the event of high production volumes and/or profitability from our fields, according to criteria established by applicable regulation, and is payable on a quarterly basis for each field from the date on which extraordinary production occurs. This participation rate, whenever it is due, varies between 0% and 40% depending on:

volume of production; and

whether the block is onshore or offshore and, if offshore, whether it is shallow or deep water.

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Under the Oil Law and applicable regulations, the special participation is calculated based upon quarterly net revenues of each field, which consist of gross revenues less:

royalties paid;

investment in exploration;

operational costs; and

depreciation adjustments and applicable taxes.

The ANP is also responsible for determining monthly royalties payable with respect to production. Royalties generally correspond to a percentage ranging between 5% and 10% applied to reference prices for oil or natural gas, as established in the relevant bidding guidelines (*edital de licitação*) and concession contract (*contrato de concessão*). Virtually all of our production currently pays the maximum 10% rate. In determining the royalties applicable to a particular concession block, the ANP takes into consideration, among other factors, the geological risks involved and the production levels expected.

The Oil Law also requires concessionaires of onshore fields to pay to the owner of the land a special participation fee that varies between 0.5% and 1.0% of the net operating revenues derived from the production of the field.

### *Environmental Regulations*

All phases of the crude oil and natural gas business present environmental risks and hazards. Our facilities in Brazil are subject to a wide range of federal, state and local laws, regulations and permit requirements relating to the protection of human health and the environment. At the federal level, we are subject to the administrative authority of the Brazilian Institute for the Environment and Renewable Natural Resources, or IBAMA, and to the regulatory authority of the *Conselho Nacional do Meio Ambiente* (National Council for the Environment), which issues operating or drilling licenses. Maintenance of the licenses requires the submission of reports, including safety and pollution monitoring reports (IOPP) to IBAMA. Onshore environmental, health and safety conditions are controlled at the state rather than federal level. Law No. 6,938 of August 31, 1981, and subsequent regulations and decrees established strict liability for environmental damage, mechanisms for enforcement of environmental standards and licensing requirements for polluting activities.

CONAMA's Resolution No. 23 of 1994 requires us to conduct environmental impact studies in connection with certain of our activities. We must eliminate, mitigate, or compensate the relevant parties for, the adverse environmental effects identified through these studies.

On December 27, 2000, Law No. 10,165, modifying Law No. 6,938, created the *Taxa de Controle e Fiscalização Ambiental* (Environmental and Fiscalization Control Tax, or TCFA). The law empowers IBAMA to collect, on a quarterly basis, certain fees from us and other companies that meet a minimum revenue threshold, are engaged in potentially environmentally damaging activities and/or are exploiting natural resources within Brazil. At present, we do not consider this fee imposed by IBAMA to be material. The *Confederação Nacional da Indústria* (Brazilian Industry Confederation, or CNI), is currently contesting these fees as unconstitutional.

Brazilian environmental laws and regulations provide for restrictions and prohibitions on spills and releases or emissions of various hazardous substances produced in association with our operations. Brazilian environmental laws and regulations also govern the operation, maintenance, abandonment and reclamation of wells, refineries, terminals, service stations and other facilities. Compliance with these laws and regulations can require significant expenditures, and violations may result in fines and penalties, some of which may be material. In addition, operations and undertakings that have a significant environmental impact, especially the drilling of new wells and expansion of refineries, require us to apply for environmental impact assessments in accordance with federal and state licensing procedures. In accordance with Brazilian environmental laws, we have proposed the execution of, or we have entered into, environmental commitment agreements with the environmental protection agencies and/or the federal or state public ministries, in which we agree to undertake certain measures in order to complete the environmental licensing for several of our operating facilities.

Under Law No. 9,605 of February 12, 1998, individuals or entities whose conduct or activities cause harm to the environment are subject to criminal and administrative sanctions, as well as any costs to repair the actual damages resulting from such harm. Individuals or legal entities that commit a crime against the environment are subject to penalties and sanctions that range from fines to imprisonment, for individuals, or, for legal entities, suspension or interruption of activities or prohibition to enter into any contracts with governmental bodies for up to ten years. The government environmental protection agencies may also impose administrative sanctions on those who do not comply with the environmental laws and regulations, including, among others:

fines;

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partial or total suspension of activities;

obligations to fund recovery works and environmental projects;

forfeiture or restriction of tax incentives or benefits;

closing of the establishments or undertakings; and

forfeiture or suspension of participation in credit lines with official credit establishments.

Under Law No. 9,966 of 2000, entities operating organized ports and port installations and owners or operators of platforms and its support installations must perform independent environmental audits every two years, with a view to evaluating the environmental management and control systems in their units. We are in full compliance with this law.

Law No. 9,985 establishes an environmental compensation of at least 0.5% of the value of a project relating to activities that have a negative environmental impact that cannot be mitigated. This compensation may only be applied in conservation units. Environmental agencies are still implementing this law, but they may attempt to apply it in a retroactive manner.

In 2003, we invested approximately U.S.\$750 million in environmental projects as compared to approximately U.S.\$466 million in 2002. These investments were primarily directed at reducing emissions and wastes resulting from industrial processes, obtaining oil collectors for our environmental protection centers and other new equipment to improve our response to emergency situations, implementing new environmental technologies and upgrading our pipelines.

## **Competition**

As a result of the deregulation of the oil and gas industry in Brazil, we expect to face increasing competition both in our downstream and upstream operations.

In our exploration and production segment, the Brazilian government's auction process for new exploratory areas has enabled multinational and regional oil and gas companies to begin exploring for crude oil in Brazil. If these companies discover crude oil in commercial quantities and are able to develop it economically, we expect that competition with our own production will increase.

In the past, we have faced little competition as a result of the prevailing laws that effectively gave us a monopoly. With the end of this monopoly and full deregulation, other participants may now transport and distribute products in Brazil. As a result, some participants have already begun importing refined oil products, which will compete with oil products from our Brazilian refineries, as well as the oil products we currently import. We now have to compete with global imports at international prices. We expect that this additional competition may affect the prices we can charge for our oil products, which in turn will affect the profit we can make.

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We also expect continued competition in our distribution segment, where we currently face the most significant competition of any of our business segments. In particular, we face competition from small distributors, many of which have been able, and may continue to be able, to avoid paying sales taxes and mix their gasoline with inexpensive solvents, enabling them to sell gasoline at prices below ours.

In our natural gas and power segment, we expect competition from new entrants that are acquiring interests in natural gas distribution and thermoelectric generation companies, and existing competitors that are expanding operations in order to consolidate their position in Brazil.

In our international segment, we are planning to expand our operations, although we expect to face continuing competition in the areas in which we are already active, including the Gulf of Mexico, Africa and the Southern Cone.

### **Insurance**

Our insurance programs principally focus on the concentration of risks and the importance and replacement value of assets. Under our risk management policy, risks associated with our principal assets, such as refineries, tankers and offshore production and drilling platforms, are insured for their replacement value with third-party Brazilian insurers. Although the policies are issued in Brazil, most of our policies are reinsured abroad with reinsurers rated BBB+ or higher by Standard & Poor's rating agency or B++ or higher by A.M. Best. Other assets, such as small auxiliary boats, certain storage facilities, and some administrative installations, are self-insured. We do not maintain coverage for business interruption. Since November 2000, we maintain coverage for operational third-party liability with respect to our onshore and offshore activities, including oil spills. Although we do not insure the entire value of our pipelines, we have insurance against damage or loss resulting from specific incidents, as well as oil spills from our pipelines.

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The premiums we paid in 2003 were distributed as follows: 29.0% to coverage of our offshore assets, 25.8% to coverage of our onshore assets, 9.9% to coverage of third-party liability, 2.2% to coverage of risks associated with transportation, 4.5% to hull and machinery risk coverage and 24.1% to coverage for other risks. Over 16.0% of our annual insurance coverage relates to the domestic and international transportation of crude oil, products and materials. All projects and installations under construction are insured in compliance with the terms of the relevant financing agreements, usually through a performance bond in connection with completion of the contract and/or other damage and liability insurance.

In November 2003, we signed a one-year general risk insurance contract that covers environmental risk. The insurance policy covers any damage resulting from either our or our affiliates' activities, with the exception of our international activities, which has its own insurance and is therefore not included in this policy. Under our insurance policy, the total covered amount of onshore and offshore risk is up to U.S.\$250 million per incident and in the aggregate. This insurance policy, however, does not cover any fines that may be imposed on us or our affiliates. Although we believe that we are currently in compliance in all material respects with all applicable environmental laws, regulations and requirements, future environmental costs, including those related to past operations, may have a material adverse effect on our financial condition or results of operations.

The premium for renewing our general risk insurance policy for a 12-month period commencing June 2004 was U.S.\$23.1 million, net of taxes. This represented a decrease of 21% over the preceding 12-month period. The decrease was primarily due to changes in the way we buy insurance, our risk management, our health, safety and environmental policies and market conditions.

Following the sinking of Platform P-36 and the September 11, 2001 terrorist attacks in the United States and as a result of the risks inherent in our operations, deductibles have increased and may increase up to U.S.\$20 million per accident for our platforms and refineries.

Following the terrorist attacks in the United States, the insurance premiums charged for war risk and terrorism coverage increased significantly and may increase further prior to renewal, or the coverage may be unavailable in the future. We received a notice of cancellation of our war risk and terrorism insurance in December 2001. We subsequently were able to purchase war risk and terrorism insurance covering our assets in Brazil that are the subject of our project financings, when required by the terms of those agreements.

## **ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS**

*You should read the following discussion of our financial condition and results of operations together with our audited consolidated financial statements and the accompanying notes beginning on page F-2 of this annual report.*

### **Overview**

We earn income from:

domestic sales, which mainly consists of sales of oil products (such as gasoline, diesel fuel, jet fuel, fuel oil, naphtha and liquefied petroleum gas), natural gas and petrochemical products;

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export sales, which consist primarily of sales of crude oil and oil products;

international sales (excluding export sales), which consist of sales of crude oil, natural gas and oil products that are produced and refined abroad; and

other sources, including services, investment income and foreign exchange gains.

Our operating expenses include:

costs of sales (which is comprised of labor expenses, costs of operating and purchases of crude oil and oil products); maintaining and repairing property, plants and equipment; depreciation and amortization of fixed assets and depletion of oil fields; and costs of exploration;

selling (which include expenses for transportation and distribution of our products), general and administrative expenses; and

interest expense and foreign exchange losses.

Year to year fluctuations in our income are the result of a combination of factors, including:

the volume of crude oil, oil products and natural gas we produce and sell;

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changes in international prices of crude oil and oil products, which are denominated in U.S. dollars;

related changes in domestic prices of crude oil and oil products, which are denominated in Reais;

Brazilian inflation;

fluctuations in the Real/U.S. dollar and Argentine Peso/U.S. dollar exchange rates; and

the amount of taxes and duties that we are required to pay with respect to our operations, by virtue of our status as a Brazilian company and our involvement in the oil and gas industry.

## **Sales Volumes and Prices**

The profitability of our operations in any particular accounting period is related to the sales volume of, and prices for, the crude oil, oil products and natural gas that we sell. Our consolidated net sales in 2003 totaled approximately 923,481 million barrels of crude oil equivalent, representing U.S.\$30,797 million in net operating revenues, as compared to approximately 911,817 million barrels of crude oil equivalent and U.S.\$22,612 million in net operating revenues in 2002 and approximately 862,009 million barrels of crude oil equivalent and U.S.\$24,549 million in net operating revenues in 2001.

As a vertically integrated company, we process most of our crude oil production in our refineries and sell the refined oil products primarily in the Brazilian domestic market. Therefore, it is oil product prices, rather than crude oil prices, that most directly affect our financial results.

Oil product prices vary over time as the result of many factors, including the price of crude oil. The average prices of Brent crude, an international benchmark oil, were approximately U.S.\$28.84 per barrel for 2003, U.S.\$25.02 per barrel for 2002 and U.S.\$24.44 per barrel for 2001. For December 2003, Brent crude oil prices averaged U.S.\$29.87 per barrel, but during 2004 (through June 15), Brent crude oil prices have increased, averaging U.S.\$33.63 per barrel. This increase in average crude oil prices also affected international prices for oil products.

### *Domestic Sales Volumes and Prices*

During 2003, approximately 73.9% of our net operating revenues were derived from sales of crude oil and oil products in Brazil, as compared to 76.0% in 2002 and 84.3% in 2001. As export volumes of crude oil and oil products have increased, domestic sales as a percentage of net operating revenues have declined.

Our revenues are principally derived from sales in Brazil. The following table sets forth our domestic sales by volume of oil products, natural gas and fuel alcohol for each of 2003, 2002 and 2001:

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For the Year Ended December 31,

	2003			2002			2001		
	Net Average Volume (Mbbbl, except as otherwise noted)	Net Operating Price (U.S.\$)(1)	Net Revenues (U.S.\$ in millions)	Net Average Volume (Mbbbl, except as otherwise noted)	Net Operating Price (U.S.\$)(1)	Net Revenues (U.S.\$ in millions)	Net Average Volume (Mbbbl, except as otherwise noted)	Net Operating Price (U.S.\$)(1)	Net Revenues (U.S.\$ in millions)
<b>Energy products:</b>									
Automotive gasoline	94,364	\$ 38.28	\$ 3,612	97,642	\$ 26.94	\$ 2,630	98,061	\$ 35.99	\$ 3,529
Diesel	219,622	40.64	8,925	228,626	28.01	6,404	226,516	32.56	7,376
Fuel oil	43,475	27.92	1,214	48,069	20.12	967	55,250	19.55	1,080
Liquid petroleum gas	73,575	27.07	1,992	77,522	19.80	1,535	80,270	27.30	2,191
<b>Total energy products</b>	<b>431,036</b>		<b>15,743</b>	<b>451,859</b>		<b>11,536</b>	<b>460,097</b>		<b>14,176</b>
<b>Non-energy products:</b>									
<b>Petrochemical</b>									
naphtha	57,291	32.03	1,835	58,587	23.09	1,353	83,537	24.40	2,038
Others	73,901	33.69	2,490	90,686	24.87	2,255	88,774	27.12	2,408
<b>Total non-energy products</b>	<b>131,192</b>		<b>4,325</b>	<b>149,273</b>		<b>3,608</b>	<b>172,311</b>		<b>4,446</b>
Fuel alcohol	458	39.30	18	2,082	29.30	61	1,245	45.78	57
Natural gas (BOE)	64,517	18.94	1,222	56,876	12.92	735	48,748	13.89	677
<b>Sub-total</b>	<b>627,203</b>	<b>33.97</b>	<b>21,308</b>	<b>660,090</b>	<b>24.15</b>	<b>15,940</b>	<b>682,401</b>	<b>28.36</b>	<b>19,356</b>
Distribution net sales	158,635	50.39	7,994	170,609	38.35	6,543	169,936	40.32	6,851
Intercompany net sales	(143,339)	45.63	(6,541)	(158,041)	33.55	(5,302)	(158,667)	34.68	(5,503)
<b>Total domestic market</b>	<b>642,498</b>	<b>35.43</b>	<b>22,761</b>	<b>672,658</b>	<b>25.54</b>	<b>17,181</b>	<b>693,670</b>	<b>29.85</b>	<b>20,704</b>
Export net sales	192,545	27.71	5,335	202,003	22.82	4,610	125,261	21.61	2,707
<b>International net sales</b>	<b>65,241</b>	<b>30.26</b>	<b>1,974</b>	<b>28,787</b>	<b>20.42</b>	<b>588</b>	<b>40,511</b>	<b>25.52</b>	<b>1,034</b>
Others	23,197	28.84	669	8,370	19.71	165	2,566	21.82	56
<b>Sub-Total</b>	<b>280,983</b>	<b>28.39</b>	<b>7,978</b>	<b>239,159</b>	<b>22.43</b>	<b>5,363</b>	<b>168,339</b>	<b>22.55</b>	<b>3,797</b>
Services			57			68			48
<b>Consolidated net sales</b>	<b>923,481</b>		<b>\$ 30,797</b>	<b>911,817</b>		<b>\$ 22,612</b>	<b>862,009</b>		<b>\$ 24,549</b>

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(1) Net average price calculated by dividing net sales price by the volume for the year.

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On June 15, 2004, we announced an increase in gasoline and diesel prices due to the elevated prices of crude oil on the international market. The price increase in the chart below reflect the increases in billing at Petrobras refineries, without ICMS:

	Percentage Increase in Price	
	(without CIDE and PIS/COFINS taxes)	(with CIDE and PIS/COFINS taxes)
Gasoline	10.8%	6.1%
Diesel	10.6%	8.2%

The increase returns gasoline and diesel prices at the Petrobras refineries to the nominal values that were in effect during the entire first quarter of 2003 and up to April 30, 2003.

*Export Sales Volumes and Prices*

While our principal market is the Brazilian market, as our domestic production of crude oil has increased, we have begun to export greater amounts of crude oil and oil products that exceed Brazilian demand. We also export increased volumes of domestically produced heavy crude oil that our refineries are unable to process operationally or economically. See Item 4 Information on the Company-Refining, Transportation and Marketing. Our export volumes of crude oil and oil products totaled 192,545 million barrels of crude oil equivalent in 2003, as compared to 202,003 million barrels of crude oil equivalent in 2002 and 125,261 million barrels of crude oil equivalent in 2001. We base our crude oil export prices on international prices, as adjusted to reflect specific market conditions. We determine export prices of our oil products and natural gas by reference to market conditions, as well as direct negotiations with our clients. As a result of our increased volume of exports, as well as to an increase in average prices for export sales of crude oil and oil products, the total value of our crude oil and oil product exports (measured on a free-on-board basis) in 2003 was U.S.\$5,335 million, as compared to U.S.\$4,610 million in 2002 and U.S.\$2,707 million in 2001. See Item 4 Information on the Company-Refining, Transportation and Marketing-Exports.

*International Volumes and Prices*

We produce, refine, transport, distribute and market crude oil and natural gas internationally. Sales from production outside Brazil to sources outside Brazil were U.S.\$1,974 million in 2003, U.S.\$588 million in 2002 and U.S.\$1,034 million in 2001. We expect our international sales to continue growing as our international production continues to grow and we increase our refining and distribution capacity abroad. See Item 4 Information on the Company-International.

*Import Purchase Volumes and Prices*

In spite of the growth in our domestic production, we continue to import lighter crude oil for blending in our own refineries, as well as smaller quantities of diesel, liquefied petroleum gas, naphtha and other oil products, which are sold in the Brazilian retail market. As we have produced more domestic crude oil capable of being processed in our Brazilian refineries and have upgraded our refineries to handle heavier crude oil, we have reduced our purchases of imported crude oil and oil products. This has positively affected the margin between our net operating revenues and cost of goods sold, since it is less expensive to produce crude oil domestically than it is to import crude oil. As we further upgrade our refineries to handle larger quantities of our heavy crude oil, we expect our level of imports to continue to decrease. We imported a total of 116.1 million barrels of crude oil in 2003, as compared to 117.6 million barrels of crude oil in 2002 and 128.8 million barrels of crude oil in 2001.

Prior to December 31, 2001, we were the only company permitted to import oil products to supply the Brazilian market's demand for these products. Now that other parties are permitted by law to supply the market, we continue to reevaluate our import strategy and may further reduce our level of imports to the extent profitable. We imported a total of 44.5 million barrels of oil products in 2003, as compared to 78.5 million barrels in 2002 and 119.8 million barrels in 2001. See Item 4 Information on the Company-Refining, Transportation and Marketing-Imports.

## **Effect of Taxes on our Income**

### *General*

In addition to collecting sales and value-added taxes, such as the *Imposto sobre Circulação de Mercadorias e Serviços*, or ICMS, on behalf of federal and state governments, we pay three principal taxes on our oil producing activities in Brazil:

Royalties, which generally correspond to a percentage between 5% and 10% of production, are calculated based on a reference price for crude oil or natural gas, and will thus vary with the international price of crude oil. The ANP also takes into account the geological risks involved, and productivity levels expected, with respect to a particular concession. Virtually all of our crude oil production is currently taxed at the maximum royalty rate.

Special Participation Tax, which applies to our larger, more profitable fields, and ranges from 0% to 40% depending on the volumes of crude oil produced in the fields, the location of the fields (including whether they are onshore or

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offshore), water depth and number of years that the field has been in production. In 2003, the tax was charged on 13 of our fields, including Marlim, Albacora, Roncador, Leste do Urucu, Rio Urucu, Canto do Amaro, Marimbá, Rio Urucu, Canto do Amaro and Barracuda. The tax is based on net revenues of a field, which consists of gross revenues less royalties paid, investments in exploration, operational costs and depreciation adjustments and applicable taxes. The Special Participation Tax uses as a reference international oil prices converted to Reais at the current exchange rate.

Rental Tax, which is a tax payable on those concessions that are available for exploration and production, and is calculated at a rate established by the ANP, taking into consideration factors such as the location and size of the relevant concession block, the sedimentary basin and its geological characteristics.

These taxes imposed by the Brazilian government are included in our cost of goods sold, and therefore have a significant effect on our total lifting costs. Additionally, we are subject to tax on our income at an effective rate of 25% and a social contribution tax at an effective rate of 9%, the standard corporate tax rate in Brazil. See Note 4 to our audited consolidated financial statements.

### *Potential Change in ICMS Legislation*

In June 2003, the governor of the State of Rio de Janeiro enacted a law that would have increased the amount of ICMS that we are required to pay by approximately R\$5.4 billion (U.S.\$1.9 billion) per year. Although the law is technically in force, the government of the State of Rio de Janeiro has yet to apply it. Currently, the ICMS is assessed at the refinery level at the point of sale of refined products, but not at the wellhead level. As a result, the tax is mainly collected in the eight states where our refineries are located (Rio de Janeiro, São Paulo, Rio Grande do Sul, Paraná, Minas Gerais, Amazonas, Ceará and Bahia). The new law changes the point of collection of a portion of the ICMS from the refinery level to the wellhead level of production in the State of Rio de Janeiro. As a result, we would be unable to utilize part of the taxes imposed at the wellhead level in Rio de Janeiro to offset taxes that are imposed at the refinery level in other states, and therefore would have paid taxes on the same oil products at both production and refining levels.

On February 3, 2004, the governor of Rio de Janeiro issued a decree implementing the collection of the ICMS tax under the guidelines of the new law. However, that decree was revoked the following day by a subsequent decree. Nevertheless, the State of Rio de Janeiro may choose to enforce the law at any time.

The attorney general has filed a lawsuit with the Brazilian Supreme Court challenging the constitutionality of the ICMS legislation. We believe that the law is in fact unconstitutional and are awaiting a judicial ruling on the issue.

## **Financial Income and Expense**

We derive financial income primarily from interest on cash and cash equivalents. The bulk of our cash equivalents are short-term Brazilian government securities, including securities indexed to the U.S. dollar. We also hold substantial balances in U.S. dollar deposits.

Our financial income was U.S.\$602 million in 2003, U.S.\$1,142 million in 2002 and U.S.\$1,375 million in 2001.

We incur financial expenses from short and long-term debt denominated in U.S. dollars, Reais and other currencies. Our financial expenses were U.S.\$1,247 million in 2003, U.S.\$774 million in 2002 and U.S.\$808 million in 2001. In addition, we capitalized U.S.\$188 million in interest in 2003, as compared to U.S.\$139 million in 2002 and U.S.\$123 million in 2001.

### **Inflation and Exchange Rate Variation**

#### *Inflation*

Since the introduction of the Real as the new Brazilian currency in July 1994, inflation in Brazil has remained relatively limited, although it increased markedly in 2002. Inflation was 7.7% in 2003, 26.4% in 2002 and 10.4% in 2001, as measured by the IGP-DI, a general price index. Inflation has had, and may continue to have, effects on our financial condition and results of operations. A large percentage of our total costs are in Reais, and our suppliers and service providers generally attempt to increase their prices to reflect Brazilian inflation. These increases are counteracted by an appreciation of the U.S. dollar against the Real.

#### *Exchange Rate Variation*

Since we adopted the Real as our functional currency in 1998, fluctuations in the value of the Real against the U.S. dollar, particularly devaluations of the Real, have had, and will continue to have, multiple effects on our results of operations. Our reporting currency for all periods is the U.S. dollar. We maintain our financial records in Reais, and translate our statements of operations into U.S. dollars at the average rate for the period. The amounts reported in our statements of operations in any given period will be reduced at the same rate as the Real has devalued in relation to the U.S. dollar during that period. During 2003, there was a 18.2% appreciation of the Real against the U.S. dollar, as compared to a 52.3% devaluation in 2002 and a 18.7% devaluation in 2001.

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Virtually all of our sales are of crude oil or oil products, which generally trade freely in the international markets at prices expressed in U.S. dollars. From July 1998 through the end of 2001, our net operating revenues reflected changes in the U.S. dollar/Real exchange rate, with a one month delay, because the formula used by the government to set realization prices for crude oil and oil products included adjustments based on exchange rate variations. See Item 4 Information on the Company-Regulation of the Oil and Gas Industry in Brazil-Price Regulation. Since January 2, 2002, when prices were deregulated, we have been free to establish prices for our products based on market conditions. As a result, although substantially all of our revenues are in Reais, they have been, and continue to be, linked to U.S. dollar-based international prices. When the Real depreciates against the U.S. dollar, assuming international prices remain constant in U.S. dollars, we may increase the prices for our products in Reais, in which case our net operating revenues in Reais increase. An increase in our Reais net operating revenue, however, is not reflected in our net operating revenue when reported in U.S. dollars. In periods of sharp devaluations or high international prices, however, we may not be able to adjust our prices in Reais sufficiently to maintain parity with international prices, and may therefore not realize the higher operating revenues in Reais that result from an increase in prices.

Another effect of devaluation is that our operating costs and expenses when expressed in U.S. dollars tend to decline. This happens primarily due to the fact that a substantial portion of our costs and operating expenses is denominated in Reais. Prior to 2003, our Reais-denominated costs increased at a rate slower than the devaluation. Accordingly, the effect was to decrease costs of locally supplied products and services when reported in U.S. dollars.

In recent periods, the exchange rate variation has had the following additional effects, among others, on our financial condition and results of operations:

We record the remeasurement effects of our non-Reais denominated assets and liabilities held in Brazil (e.g. cash, cash equivalents and financial obligations) in our statements of income. Primarily because of our substantial liabilities denominated in foreign currency, we recorded a U.S.\$2,433 million net foreign exchange gain in our 2003 statement of income, compared to a U.S.\$2,156 million net foreign exchange loss in 2002 and a U.S.\$976 million net foreign exchange loss in 2001. To the extent these losses are not recognized in a transaction (such as the repayment of the debt in the period in which there is a devaluation), the foreign exchange gain is added back for purposes of determining our cash flow;

Our other assets and liabilities in Brazil, primarily accounts receivable, inventories and property, plant and equipment, cash and cash equivalents and government securities, pension plan liabilities, health care benefits and deferred income taxes, are all translated into U.S. dollars. Therefore, any depreciation (appreciation) of the Real against the U.S. dollar will be reflected as a reduction (gain) in the U.S. dollar value of those assets and liabilities, charged directly to shareholders' equity. These currency translation effects are beyond our control. Accordingly, we recorded a U.S.\$2,856 million credit directly to shareholders' equity in our statement of changes in shareholders' equity for 2003, without affecting net income, to reflect the appreciation of the Real against the U.S. dollar of approximately 18.2%, as compared to a charge of U.S.\$5,452 million in 2002 to reflect the devaluation of 52.3% and a charge of U.S.\$2,695 million in 2001 to reflect the devaluation of 18.7%.

Foreign currency translation adjustments reflecting a devaluation have the greatest impact on the balance sheet of a company such as ours, whose assets are primarily denominated in Reais, but whose liabilities are primarily denominated in foreign currencies. The reductions in our asset values charged to shareholders' equity, however, do not necessarily affect our cash flows, since our revenues and cash earnings are to a large degree linked to the U.S. dollar, and a portion of our operating expenses are linked to the Real.

The exchange rate variation also impacts the amount of retained earnings available for distribution by us when measured in U.S. dollars. Amounts reported as available for distribution in our statutory accounting records prepared in accordance with Brazilian accounting principles decrease or increase when measured in U.S. dollars as the Real depreciates or appreciates against the U.S. dollar. In addition, the exchange rate variation creates foreign exchange gains and losses that are included in our results of operations determined in accordance with Brazilian accounting principles and that affect the amount of our unretained earnings available for distribution.



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The differences in our operating results from year to year occur as a result of a combination of factors, including primarily: the volume of crude oil, oil products and natural gas we produce and sell, the price at which we sell our crude oil and oil products and the differential between the Brazilian inflation rate and the depreciation or appreciation of the Real against the U.S. dollar. The table below shows the amount by which each of these variables has changed during the last three years:

	<u>2003</u>	<u>2002</u>	<u>2001</u>
<b>Crude Oil and NGL Production (Mbpd)</b>			
Brazil	1,540	1,500	1,336
International	161	35	43
Total Crude Oil and NGL Production	1,701	1,535	1,379
Change in Crude Oil and NGL Production	10.8%	11.3%	4.2%
<b>Average Sales Price for Crude (bpd in U.S.\$)</b>			
Brazil	\$ 27.01	\$ 22.30	\$ 19.89
International	\$ 23.77	\$ 23.00	\$ 22.32
<b>Natural Gas Production (Mmcfd)</b>			
Brazil	1,500	1,512	1,392
International	510	138	150
Total Natural Gas Production	2,010	1,650	1,542
Change in Natural Gas Production (sold only)	21.8%	7.0%	6.2%
<b>Average Sales Price for Natural Gas (Mcf in U.S.\$)</b>			
Brazil	1.79	1.22	1.39
International	1.26	1.34	2.35
Year End Exchange Rate	2.89	3.53	2.32
Appreciation (Devaluation) during the year	18.2%	(52.3)%	(18.7)%
Inflation Rate (IGP-DI)	7.7%	26.4%	10.4%

*Results of Operations for the year ended December 31, 2003 ( 2003 ) compared to the year ended December 31, 2002 ( 2002 ).*

The comparison between our results of operations has been impacted by the Real's devaluation against the U.S. dollar, due to the fact that the average Real/U.S. dollar exchange rate for 2003 was 5.2% higher than the average exchange rate for 2002.

**Revenues**

Net operating revenues increased 36.2% to U.S.\$30,797 million for 2003, as compared to net operating revenues of U.S.\$22,612 million for 2002. This increase was primarily attributable to the alignment of prices of certain oil products in the Brazilian market with international prices of such products at the end of 2002. The increase in net operating revenues was also attributable, to a lesser extent, to an increase in sales volume outside Brazil (international sales), which includes sales conducted by PEPSA and PELSA. This increase was partially offset by a 4.4% reduction in sales volume in the domestic market, primarily due to a decrease in Brazilian consumer demand. See -Sales Volumes and Prices-Domestic Sales Volumes and Prices.

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Our consolidated sales of products and services increased 29.4% to U.S.\$42,690 million for 2003, as compared to U.S.\$32,987 million for 2002.

Included in sales of products and services are the following amounts which we collected on behalf of the federal or state governments:

Value-added and other taxes on sales of products and services and social security contributions. These taxes increased 21.1% to U.S.\$6,348 million for 2003, as compared to U.S.\$5,241 million for 2002, primarily due to the increase in sales of products and services; and

CIDE, an excise tax payable to the federal government, which increased 8.0% to U.S.\$5,545 million in 2003, as compared to U.S.\$5,134 million in 2002. This increase was primarily attributable to an increase in the CIDE rate charged on certain oil products. The increase was partially offset by the effect of the 5.2% decrease in the value of the Real against the U.S. dollar in 2003, as compared to 2002.

### Cost of sales

Cost of sales for 2003 increased 34.0% to U.S.\$15,416 million, as compared to U.S.\$11,506 million for 2002. This increase was principally a result of:

an increase in taxes and charges imposed by the Brazilian government, which amounted to U.S.\$3,081 million in 2003 as compared to U.S.\$2,014 million in 2002. These taxes and charges included the special participation charge (an

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additional charge payable in the event of high production and/or profitability from our fields), which increased to U.S.\$1,625 million in 2003, as compared to U.S.\$917 million in 2002, as a result of our increased production of crude oil during 2003, the inclusion of the Canto do Amaro and Roncador fields as fields subject to the special participation tax and the increase in domestic reference prices for domestic crude oil;

a net increase in cost of sales outside Brazil, excluding PEPSA and PELSA, of approximately U.S.\$800 million, attributable to an increase in our sales volume, lifting costs and prices in the international markets;

a net increase of U.S.\$634 million attributable to increased consumption of materials and maintenance services at ocean terminals, higher expenses associated with oil transport lines, including equipment and installation that provide operational support for these activities, and salaries, benefits and charges incurred in connection with salary readjustments for our larger workforce;

a U.S.\$561 million increase in the cost of imports primarily attributable to the increase of crude oil and oil product prices in the international markets; and

a U.S.\$431 million increase in costs associated with the consolidation of PEPSA and PELSA.

These increases were partially offset by:

a decrease of approximately U.S.\$379 million in cost of sales related to the 4.4% reduction in our domestic sales volumes; and

a decrease of U.S.\$39 million in costs of sales as expressed in U.S. dollars caused by the 5.2% decrease in the value of the Real against the U.S. dollar in 2003, as compared to 2002.

### Depreciation, depletion and amortization

Depreciation, depletion and amortization relating to exploration and production assets are calculated on the basis of the units of production method. Depreciation, depletion and amortization expenses decreased 7.5% to U.S.\$1,785 million for 2003, as compared to U.S.\$1,930 million for 2002. This decrease was primarily attributable to the 5.2% decrease in the value of the Real against the U.S. dollar in 2003, as compared to 2002, and to the effect of the adoption of SFAS 143 in 2003. In 2002, U.S. \$ 284 million in abandonment costs were recognized as depreciation, depletion and amortization in accordance with SFAS 19. In 2003, as a result of the adoption of SFAS 143, depreciation on the asset retirement obligation was recorded under depreciation, depletion and amortization, while accretion expense was recorded under exploration, including exploratory dry holes. See -Impact of New Accounting Standards-SFAS 143. This change resulted in U.S.\$21 million in abandonment costs being recognized as depreciation, depletion and amortization in 2003. The decrease in depreciation, depletion and amortization, was partially offset by an increase of depreciation, depletion and amortization expenses of approximately U.S.\$182 million incurred in connection with the activities of PEPSA and PELSA.

### Exploration, including exploratory dry holes

Exploration costs, including exploratory dry holes increased 17.7% to U.S.\$512 million for 2003 as compared to U.S.\$435 million for 2002. This increase was primarily attributable to the increase of approximately U.S.\$49 million in exploration costs, including exploratory dry holes in

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connection with the consolidation of PEPSA and PELSAs and U.S.\$43 million in abandonment costs recognized. The increase in exploration costs, including exploratory dry holes, was partially offset by the effect of the 5.2% decrease in the value of the Real against the U.S. dollar in 2003, as compared to 2002.

### Impairment of oil and gas properties

For 2003, we recorded an impairment charge of U.S.\$70 million, as compared to an impairment charge of U.S.\$75 million for 2002. In 2003, the impairment charge was related to certain of our oil and gas producing properties in Brazil, Colombia and Angola. In 2002, the impairment charge was related to certain of our oil and gas producing properties in Brazil and Angola. These charges were recorded based upon our annual assessment of our fields using prices consistent with those used in our overall strategic plan and discounted at a rate of 13%.

### Selling, general and administrative expenses

Selling, general and administrative expenses increased 20.1% to U.S.\$2,091 million for 2003, as compared to U.S.\$1,741 million for 2002.

Selling expenses increased 5.6% to U.S.\$1,020 million for 2003, as compared to U.S.\$966 million for 2002. This increase was primarily attributable to the consolidation of PEPSA and PELSAs, which resulted in a U.S.\$37 million increase in our 2003 selling expenses.

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General and administrative expenses increased 38.2% to U.S.\$ 1,071 million for 2003, as compared to U.S.\$ 775 million for 2002. This increase was primarily attributable to an increase of U.S.\$ 65 million in expenses related to technical consulting services from our increased outsourcing of selected non-core general and administrative activities, an increase of U.S.\$ 41 million in expenses related to our profit sharing program, an increase of U.S.\$ 43 million in expenses related to employee training, an increase of U.S.\$ 57 million in general and administrative expenses recognized in connection with the consolidation of PEPSA and PELSA and an increase of U.S.\$ 40 million in connection with our interests in three thermoelectric power plants, which were consolidated in accordance with FIN 46. This increase in general and administrative expenses was partially offset by the effect of the 5.2% decrease in the value of the Real against the U.S. dollar in 2003, as compared to 2002.

### Research and development expenses

Research and development expenses increased 36.7% to U.S.\$201 million for 2003, as compared to U.S.\$147 million for 2002. This increase was primarily related to our additional investments in programs for environmental safety, deepwater and refining technologies of approximately U.S.\$62 million, and was partially offset by the effect of the 5.2% decrease in the value of the Real against the U.S. dollar in 2003, as compared to 2002.

### Equity in results of non-consolidated companies

Equity in results of non-consolidated companies registered a gain of U.S.\$141 million for 2003, as compared to a loss of U.S.\$178 million for 2002. This increase was primarily attributable to:

a gain of U.S.\$62 million for 2003 from our investments in natural gas distribution and petrochemical companies, as compared to a gain of U.S.\$14 million for 2002;

a gain of U.S.\$59 million for 2003, as compared to a loss of U.S.\$95 million for 2002, from our equity investments in Compañía Mega, an Argentine company that is engaged in natural gas activities, and which was adversely affected by the devaluation of the Argentine Peso against the U.S. dollar in 2002; and

a gain of U.S.\$21 million for 2003, as compared to a loss of U.S.\$94 million for 2002, from our investments in thermoelectric power plants. The equity results for 2003 do not include our interests in three thermoelectric power plants that were consolidated in accordance with FIN 46.

### Financial income

We derive financial income from several sources, including:

interest on cash and cash equivalents. The majority of our cash equivalents are short-term Brazilian government securities, including securities indexed to the U.S. dollar. We also hold balances in U.S. dollar deposits;

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long-term Brazilian government securities we acquired in connection with the privatization of our petrochemical assets; and

Government receivables, primarily the Petroleum and Alcohol Account.

Financial income decreased 47.3% to U.S.\$602 million for 2003, as compared to U.S.\$1,142 million for 2002. This decrease was primarily attributable to a reduction in financial interest income from short-term investments, which declined 79.4% to U.S.\$163 million for 2003, as compared to U.S.\$793 million for 2002. The reduction in financial income was also attributable to the 5.2% decrease in the value of the Real against the U.S. dollar for 2003, as compared to 2002. This decrease was partially offset by an increase of financial income of approximately U.S.\$80 million resulting from the consolidation of PEPSA and PELSA in our 2003 financial results.

### Financial expense

Financial expense increased 61.1% to U.S.\$1,247 million for 2003, as compared to U.S.\$774 million for 2002. This increase was primarily attributable to our additional debt and an increase of approximately U.S.\$194 million in financial expenses resulting from the consolidation of PEPSA and PELSA in our 2003 financial results.

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### Monetary and exchange variation on monetary assets and liabilities, net

Monetary and exchange variation on monetary assets and liabilities, net registered a gain of U.S.\$ 509 million for 2003, as compared to a loss of U.S.\$ 2,068 million for 2002. Approximately 90% of our long-term indebtedness was denominated in foreign currencies during each of 2003 and 2002. The fluctuation in monetary and exchange variation on monetary assets and liabilities, net was primarily attributable to the effect of the 18.2% appreciation of the Real against the U.S. dollar during 2003, as compared to a 52.3% depreciation of the Real against the U.S. dollar during 2002.

### Employee benefits expense

Employee benefit expense consists of financial costs associated with pension and health care budgets. Our employee benefit expense increased 31.9% to U.S.\$595 million for 2003, as compared to U.S.\$451 million for 2002. This rise in costs was attributable to an increase of U.S.\$166 million from the annual actuarial calculation of our pension and health care plan liability. The increase was partially offset by the effect of the 5.2% decrease in the value of the Real against the U.S. dollar in 2003, as compared to 2002.

### Other taxes

Other taxes, consisting of miscellaneous value-added, transaction and sales taxes, decreased 7.5% to U.S.\$333 million for 2003, as compared to U.S.\$360 million for 2002. This decrease was primarily attributable to the 5.2% decrease in the value of the Real against the U.S. dollar in 2003, as compared to 2002, and the decrease of U.S.\$61 million in the PASEP/COFINS taxes payable in respect of foreign exchange gains on assets, resulting from transactions with affiliates with assets denominated in foreign currencies.

### Other expenses, net

Other expenses, net are primarily composed of gains and losses recorded on sales of fixed assets, general advertising and marketing expenses and certain nonrecurring charges. Other expenses, net for 2003 increased to an expense of U.S.\$1,026 million, as compared to an expense of U.S.\$857 million for 2002. The most significant charges were:

a U.S.\$183 million losses related to our investments in certain thermoelectric power plants resulting from our contractual obligations with certain power plants to cover losses when decreased demand for power and electricity lead to lower prices;

a U.S.\$198 million expense for general advertising and marketing expenses unrelated to direct revenues;

a U.S.\$173 million expense for unscheduled stoppages of plant and equipment;

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a U.S.\$130 million expense for legal liability and contingencies related to pending lawsuits. Please see Note 22 to our consolidated financial statements;

a U.S.\$114 million expense for a lower of cost or market adjustment with respect to turbines we originally expected to use in connection with our thermoelectric projects, but which we no longer intend to use for such projects;

a U.S.\$97 million provision for expected losses on the sale of property, plant and equipment related to off-shore production;

a U.S.\$56 million increase in impairment losses with respect to investments in Ecuador; and

a U.S.\$55 million provision for tax assessments received from the *Instituto Nacional de Seguridade Social* (National Social Security Institute, or INSS). Please see Item 8 Financial Information-Legal Proceedings.

The most significant charges for 2002 were:

a U.S.\$459 million provision for losses related to our investments in certain thermoelectric power plants;

a U.S.\$111 million expense for unscheduled stoppages of plant and equipment;

a U.S.\$105 million provision for notifications of tax assessments received from the INSS;

a U.S.\$96 million expense for general advertising and marketing expenses unrelated to direct revenues; and

a U.S.\$29 million expense for regularization of the Petroleum and Alcohol Account.

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### Income tax (expense) benefit

Income before income taxes, minority interest and accounting changes increased from U.S.\$ 8,773 million for 2003 to U.S.\$ 3,232 million for 2002. As a result, we recorded an income tax expense of U.S.\$ 2,663 million for 2003, as compared to an expense of U.S.\$ 1,153 million for 2002.

The reconciliation between the tax calculated based upon statutory tax rates to income tax expense and effective rates is discussed in Note 4 to our consolidated financial statements as of December 31, 2003.

*Results of Operations for the year ended December 31, 2002 ( 2002 ) compared to the year ended December 31, 2001 ( 2001 ).*

The comparison between our results of operations for 2002 and 2001 was significantly impacted by the Real's devaluation against the U.S. dollar, due to the fact that the average Real/U.S. dollar exchange rate for 2002 was 24.2% higher than the average exchange rate for 2001.

### Revenues

Net operating revenues decreased 7.9% to U.S.\$22,612 million for 2002, as compared to net operating revenues of U.S.\$24,549 million for 2001. This decrease was primarily attributable to the 52.3% devaluation of the Real against the U.S. dollar in 2002, as we were unable to increase prices for oil products in the domestic market sufficiently to offset the effect of the devaluation. To a lesser extent, this decrease was a result of a 3.0% decrease in the domestic sales volumes. This decrease in net operating revenues was partially offset by an increase of 42.1% in sales volumes outside Brazil during 2002.

Our consolidated sales of products and services decreased 3.4% to U.S.\$32,987 million for 2002, as compared to U.S.\$34,145 million for 2001.

Included in sales of products and services are the following amounts which we collected on behalf of the federal or state governments:

Value-added and other taxes on sales of products and services and social security contributions. These taxes decreased to U.S.\$5,241 million for 2002, as compared to U.S.\$8,627 million for 2001, primarily due to the decrease in sales of products and services and to the reduction in value-added taxes collected on behalf of the state government from distributors (PASEP/COFINS) during 2002, since the amounts paid as CIDE are permitted to be deducted from the amount over which the PASEP and COFINS are calculated;

CIDE, which amounted to U.S.\$5,134 million for 2002; and

PPE, which represented the Specific Parcel Price or difference between the mandated price for an oil product by the government and the realization price allowed by the government, and which amounted to an expense of U.S.\$969 million for 2001 and which was

eliminated at the end of 2001, and therefore did not affect our results in 2002.

#### Cost of sales

Cost of sales for 2002 decreased 10.2% to U.S.\$11,506 million, as compared to U.S.\$12,807 million for 2001. This decrease was principally a result of:

a decrease in imports of crude oil and oil products principally as a result of the elimination of our legal obligation to import naphtha, which resulted in a decrease to cost of sales of approximately U.S.\$1,078 million;

the effect of the devaluation of the Real against the U.S. dollar on our cost of sales as expressed in U.S. dollars, which resulted in a decrease to cost of sales of approximately U.S.\$604 million (since approximately 37.1% of our cost of sales is denominated in Reais); and

a decrease of approximately U.S.\$297 million related to the 3% reduction in domestic sales volumes.

These decreases were partially offset by:

a net increase in cost of sales outside Brazil of approximately U.S.\$635 million, attributable to an increase in our sales volume outside Brazil, which includes both international sales and exports; and

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an increase in taxes and charges imposed by the Brazilian government, which amounted to U.S.\$2,014 million for 2002, as compared to U.S.\$1,809 million for 2001. These taxes and charges increased by approximately U.S.\$205 million and included the special participation tax payable, which increased to U.S.\$917 million for 2002, as compared to U.S.\$753 million for 2001. This increase in the special participation tax payable was attributable primarily to an increase in production of crude oil and oil products and increases in the applicable tax rates.

### Depreciation, depletion and amortization

Depreciation, depletion and amortization expenses increased 11.6% to U.S.\$1,930 million for 2002, as compared to U.S.\$1,729 million for 2001. This increase was primarily attributable to a 12.3% increase in production of crude oil, NGL and natural gas, primarily in the Campos Basin, and an increase in abandonment costs as a result of increased production and a revision in our estimates of abandonment costs. These increases were partially offset by the effect of the devaluation of the Real against the U.S. dollar in 2002.

### Exploration, including exploratory dry holes

Exploration costs, including costs related to exploratory dry holes increased 7.7% to U.S.\$435 million for 2002, as compared to U.S.\$404 million for 2001.

This increase was primarily attributable to an increase of approximately U.S.\$38 million in dry holes expenses and U.S.\$58 million in geological and geophysical expenses, and was partially offset by the effect of the devaluation of the Real against the U.S. dollar.

### Impairment of oil and gas properties

For 2002, we recorded an impairment charge of U.S.\$75 million, as compared to an impairment charge of U.S.\$145 million for 2001. In 2002, the impairment charge was related to certain of our producing oil and gas properties in Brazil and Angola. In 2001, the impairment charge was related to certain of our producing oil and gas properties in Brazil, Colombia and the United States. These charges were recorded based upon our annual assessment of our fields using prices consistent with those used in our overall Strategic Plan and discounted at a rate of 10%.

### Selling, general and administrative expenses

Selling, general and administrative expenses decreased 0.6% to U.S.\$1,741 million for 2002, as compared to U.S.\$1,751 million for 2001.

Selling expenses increased 0.5% to U.S.\$966 million for 2002, as compared to U.S.\$961 million for 2001. Although largely offset by the effect of the devaluation of the Real on these expenses when expressed in U.S. dollars, this increase was primarily attributable to the following:

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a U.S.\$74 million charge for doubtful accounts and gas station improvements;

U.S.\$11 million in expenses of Eg3, our oil product marketing subsidiary operating in Argentina; and

an increase of U.S.\$76 million in expenses related to technical consulting services in connection with our increased outsourcing of selected non-core activities.

General and administrative expenses decreased 1.9% to U.S.\$775 million for 2002, as compared to U.S.\$790 million for 2001. This decrease was primarily attributable to the effect of the 52.3% devaluation of the Real against the U.S. dollar, and was partially offset by an increase of U.S.\$62 million in expenses related to technical consulting services in connection with our increased outsourcing of selected non-core general and administrative activities.

### Research and development expenses

Research and development expenses increased 11.4% to U.S.\$147 million for 2002, as compared to U.S.\$132 million for 2001. This increase was primarily related to our additional investments in programs for environmental safety and deepwater and refining technologies of approximately U.S.\$41 million, and was partially offset by the effect of the devaluation of the Real against the U.S. dollar.

### Equity in results of non-consolidated companies

Equity in results of non-consolidated companies decreased to a loss of U.S.\$178 million for 2002, as compared to a loss of U.S.\$8 million for 2001. This decrease was mainly attributable to:

a loss of U.S.\$95 million in 2002 related to the effect of the devaluation of the Argentine Peso against the U.S. dollar, as compared to a loss of U.S.\$44 million in 2001, which devaluation negatively impacted the result of our equity investments in Compañía MEGA, an Argentine company which is engaged in natural gas activities;

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a loss of U.S.\$94 million in 2002, related to our investments in thermoelectric power plants; and

a decrease of U.S.\$17 million in income from our investments in petrochemical companies in 2002, as compared to 2001.

Financial income

Financial income decreased 16.9% to U.S.\$1,142 million for 2002, as compared to U.S.\$1,375 million for 2001. This decrease was primarily attributable to:

a reduction in financial interest income from short-term investments, which declined 10.5% to U.S.\$793 million for 2002, as compared to U.S.\$886 million for 2001, primarily due to the fact that the average exchange rate for 2002 was 24.2% higher than the average exchange rate for 2001 and the reduction in our cash position as a result of the acquisitions of PEPSA, PELSA and Petrolera Santa Fe; and

a reduction in financial interest income from Brazilian government securities (National Treasury Bonds), which were transferred last year to PETROS, our pension plan for employees, to reduce our pension liability, which decreased 83.5% to U.S.\$40 million for 2002, as compared to U.S.\$243 million for 2001.

Financial expense

Financial expense decreased 4.2% to U.S.\$774 million for 2002, as compared to U.S.\$808 million for 2001. This decrease was primarily attributable to a reduction in LIBOR and our replacing of current maturities of long-term debt with newly contracted long-term obligations at lower interest rates.

Monetary and exchange variation on monetary assets and liabilities, net

Monetary and exchange variation on monetary assets and liabilities, net increased 126% to an expense of U.S.\$2,068 million for 2002, as compared to an expense of U.S.\$915 million for 2001. Approximately 87% of our indebtedness was denominated in foreign currencies during each of 2002 and 2001. The expense increase is therefore primarily related to the effect of the 52.3% devaluation of the Real against the U.S. dollar during 2002 as compared to a 18.7% devaluation of the Real against the U.S. dollar during 2001.

Employee benefits expense

Employee benefits expense decreased 24.1% to U.S.\$451 million for 2002, as compared to U.S.\$594 million for 2001. This decrease was primarily attributable to a decrease in the provision of U.S.\$78 million for the annual actuarial calculation of the pension plan liability and by the effect of the devaluation of the Real against the U.S. dollar.

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The decreases were partially offset by an expense of U.S.\$34 million related to the migration process to our new pension plan and administrative fees in the amount of U.S.\$16 million charged by PETROS in respect of the transfer of Series B Bonds to PETROS.

### Other taxes

Other taxes increased 22% to U.S.\$360 million for 2002, as compared to U.S.\$295 million for 2001. This increase is primarily attributable to an increase of U.S.\$79 million in the PASEP/COFINS taxes payable in respect of foreign exchange gains on assets, resulting from transactions with affiliates with assets denominated in foreign currencies, and was partially offset by the effect of the 18.7% devaluation of the Real against the U.S. dollar.

### Other expenses, net

Other expenses, net for 2002 increased 92.6% to U.S.\$857 million, as compared to an expense of U.S.\$445 million for 2001. The most significant non-recurring charges for 2002 were:

a U.S.\$258 million charge for non-reimbursable contractual contingency payments incurred during the year related to our investments in thermoelectric power plants resulting from decreased demand and lower prices for energy;

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a U.S.\$201 million provision for losses related to our commitments to supply natural gas for the production of energy to certain thermoelectric power plants (despite decreased demand and low energy prices, we have contractual obligations with certain power plants to cover losses when demand for power and electricity prices decrease);

a U.S.\$105 million provision for notifications of tax assessments received from the INSS;

a U.S.\$111 million expense for unscheduled stoppages of plant and equipment;

a U.S.\$96 million expense for general advertising and marketing expense unrelated to direct revenues; and

a U.S.\$29 million expense for Petroleum and Alcohol Account regularization.

The most significant non-recurring charges for 2001 were:

a U.S.\$405 million expense relating to the reduction in the balance of the Petroleum and Alcohol Account resulting from the completion of the certification of the balance of the account by the federal government for the period from April 1, 1992 to June 30, 1998;

a U.S.\$394 million provision for losses on uncollectable accounts in connection with the construction/conversion of platforms P-36, P-37, P-38 and P-40;

a U.S.\$155 million loss, net of insurance proceeds, recorded in respect of the sinking of platform P-36; and

a U.S.\$137 million expense for general advertising and marketing expenses unrelated to direct revenues.

The losses for the year ending December 31, 2001 were partially offset by:

a U.S.\$89 million gain related to the sale of Petrobras U.K.; and

a U.S.\$500 million gain related to the assets which we sold in our business combination with Repsol-YPF.

Income tax (expense) benefit

Income before income taxes and minority interest decreased 32.6% to U.S.\$3,232 million for 2002, as compared to U.S.\$4,792 million for 2001. As a result, we recorded an income tax expense of U.S.\$1,153 million for 2002, a 17.0% decrease from an expense of U.S.\$1,389 million recorded for 2001. The most significant factors that influenced this decrease were:

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a U.S.\$111 million gain recorded in 2001 related to the reversal of a tax provision established in previous years in connection with the privatization of our Petroquisa subsidiary; and

a U.S.\$204 million valuation allowance as of December 31, 2002, as compared to a valuation allowance of U.S.\$38 million as of December 31, 2001.

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Set forth below is selected financial data by segment for 2003, 2002 and 2001:

**SELECTED FINANCIAL DATA BY SEGMENT**

	<b>For the Year Ended December 31,</b>		
	<b>2003</b>	<b>2002</b>	<b>2001</b>
	(In millions of U.S. dollars)		
<b>Exploration, Development and Production (Exploration and Development Segment)</b>			
Net revenues to third parties(1)	\$ 2,369	\$ 2,346	\$ 308
Intersegment net revenues	13,329	10,700	9,796
<b>Total net operating revenues</b>	<b>15,698</b>	<b>13,046</b>	<b>10,104</b>
Depreciation, depletion and amortization	(955)	(1,378)	(1,228)
Net income	5,504	3,413	2,439
Capital expenditures	3,658	3,156	2,866
Property, plant and equipment, net	16,742	11,611	12,133
<b>Refining, Transportation and Marketing (Supply Segment)</b>			
Net revenues to third parties(1)	\$ 17,024	\$ 12,073	\$ 15,969
Intersegment net revenues	6,695	5,269	5,757
<b>Total net operating revenues</b>	<b>23,719</b>	<b>17,342</b>	<b>21,726</b>
Depreciation, depletion and amortization	(397)	(358)	(301)
Net income	1,738	711	2,538
Capital expenditures	1,451	945	642
Property, plant and equipment, net	4,980	3,186	4,026
<b>Distribution (Distribution Segment)</b>			
Net revenues to third parties(1)	\$ 7,877	\$ 6,460	\$ 6,836
Intersegment net revenues	138	102	100
<b>Total net operating revenues</b>	<b>8,015</b>	<b>6,562</b>	<b>6,936</b>
Depreciation, depletion and amortization	(29)	(24)	(28)
Net income	138	91	78
Capital expenditures	106	139	86
Property, plant and equipment, net	442	296	309
<b>Natural Gas and Power (Gas and Energy Segment)</b>			
Net revenues to third parties(2)	\$ 1,229	\$ 747	\$ 659
Intersegment net revenues	250	170	177
<b>Total net operating revenues</b>	<b>1,479</b>	<b>917</b>	<b>836</b>
Depreciation, depletion and amortization	(87)	(45)	(62)
Net loss	(196)	(190)	(54)
Capital expenditures	694	268	192
Property, plant and equipment, net	4,174	1,881	1,373
<b>International (International Segment)(2)</b>			
Net revenues to third parties(1)	\$ 2,298	\$ 986	\$ 777

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Intersegment net revenues	<u>129</u>	<u>99</u>	<u>71</u>
Total net operating revenues	2,427	1,085	848
Depreciation, depletion and amortization	(288)	(106)	(101)
Net income	101	(114)	24
Capital expenditures	480	241	326
Property, plant and equipment, net	4,181	1,024	1,080

- (1) As a vertically integrated company, not all of our segments have significant third-party revenues. For example, our exploration and production segment accounts for a large part of our economic activity and capital expenditures, but has little third party revenues.
- (2) In periods prior to January 1, 2002, revenue and net income from the gas and energy activities of the international segment were added to revenue and net income from the exploration and production activities of the international segment, as our management did not separate our gas and energy operations abroad. Beginning in 2002, gas and energy activities of the international segment are recorded under our Natural Gas and Power segment. In addition, the changes in our accounting systems adopted in connection with our new business segment reporting does not permit the practicable separation of revenue and cost information for those prior periods. We do not believe this classification of the gas and energy revenue and net income information materially changes the overall segment presentation provided in this annual report.

### 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 with internally generated funds, short-term debt, long-term debt, project financings and sale and lease back agreements. We believe these sources of funds, together with our strong cash and cash equivalents on hand, will continue to allow us to meet our currently anticipated capital requirements. In 2004, our major cash needs include announced capital expenditures of U.S.\$8,262 million, announced dividends of U.S.\$1,955 million and payments of U.S.\$1,145 million on our long-term debt obligations.

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### *Financing Strategy*

The objective of our financing strategy is to help us achieve the targets set forth in our Strategic Plan, which provides for capital expenditures of U.S.\$53.6 billion from 2004 to 2010. We plan to meet our budgeted capital expenditures primarily through internally generated cash and issuances in the international capital markets.

Our internally generated cash flows are sensitive to a number of factors, including international oil prices, domestic oil product prices and the Real/U.S. dollar exchange rate. Fluctuations in these factors can cause material variations between actual and projected annual cash flows. Our financing strategy is designed to maintain adequate liquidity to meet our debt obligations and to fulfill our capital spending plans, notwithstanding any unexpected decreases in our cash flows. To maintain liquidity, we exercise a series of precautions, including:

internally projected cash flows that are based on conservative oil prices both in the short term and the long term;

preserving a cushion of unused debt capacity on our balance sheet should we have to increase borrowings to cover a shortfall in cash generation; and

the maintenance of a balanced amortization schedule for our cumulative borrowings, avoiding a concentration of maturities in any one year.

We also aim to increase the average life of our debt portfolio and reduce our cost of capital through a variety of medium and long-term financing arrangements, including supplier financing, project financing, bank financing, securitizations and the issuances of debt and equity securities. To that end, we took advantage of market conditions in 2003 to extend our maturity profile and capture decreased financing costs. We went from issuing a 5-year note bearing an interest rate of 9.0% in the beginning of the year to issuing a 15-year note with a 8.375% coupon on December 10, 2003. At the time of the issuance, the 15-year maturity was a record for Brazilian corporations.

### *Government Regulation*

The Ministry of Planning, Budget and Management controls the total amount of medium and long-term debt that Petrobras and its Brazilian subsidiaries are allowed to incur through the annual budget approval process (*Plano de Dispêndio Global*, or PDG). Before issuing medium and long-term debt, Petrobras and its Brazilian subsidiaries must also obtain the approval of the National Treasury shortly before issuance.

In accordance with Senate Resolution N° 96/89 the level of our borrowings is subject to an annual maximum amount, exclusive of certain permitted commercial obligations, based on stockholders' equity, debt service expense and other factors as of the prior year and subject to certain ongoing quarterly adjustments. For 2003, the maximum level of debt that Petrobras and its Brazilian subsidiaries could incur was set at U.S.\$932 million. The maximum level was set at U.S.\$824 million for 2002 and U.S.\$1,211 million for 2001.

All of the foreign currency denominated debt of Petrobras and its Brazilian subsidiaries requires registration with the Central Bank. The issuance of debt by our international subsidiaries, however, is not subject to registration with the Central Bank or approval by the National Treasury. In addition, all issuances of medium and long-term notes and debentures require the approval of our board of directors. Borrowings that exceed the

approved budget amount for any year also require approval from the Brazilian Senate.

*Sources of Funds*

Our Cash Flow

At December 31, 2003, we had cash and cash equivalents of U.S.\$9,610 million compared to U.S.\$3,301 million at December 31, 2002. This increase in cash was primarily a result of:

the proceeds from the issuance of greater amounts of debt in the international capital markets; and

the adoption of FIN 46, which resulted in an increase in cash and cash equivalents of U.S.\$1,049 million.

Operating activities provided net cash flows of U.S.\$8,569 million in 2003, as compared to U.S.\$6,287 million in 2002. This increase was due primarily to a 36.2% increase in net operating revenues.

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Financing activities provided net cash flows of U.S.\$2,376 million for 2003, as compared to U.S.\$1,614 million in net cash used in 2002. This increase was due primarily to net issuances of short and long-term debt, which was partially offset by an increase in our repayments of short and long-term debt.

Net cash used in investing activities decreased to U.S.\$5,519 million in 2003, as compared to U.S.\$6,656 million in 2002. This decrease was due primarily to our adoption of FIN 46, which required us to consolidate certain special purpose entities in which we have investment interests.

**Short-Term Debt**

Our outstanding short-term debt serves mainly to support our imports of crude oil and oil products, and is provided almost completely by international banks and under our commercial paper program. At December 31, 2003, our short-term debt (excluding current portions of long-term obligations) increased to U.S.\$1,329 million as compared to U.S.\$671 million at December 31, 2002. This increase was due to the inclusion of PEPSA's short term debt in our consolidated balance sheets and our increased use of short-term credit facilities. Our short-term debt is denominated principally in U.S. dollars.

**Long-Term Debt**

Our total outstanding consolidated long-term debt consists primarily of the issuance of securities in the international capital markets and debentures in the domestic capital markets and amounts outstanding under facilities guaranteed by export credit agencies and multilateral agencies, as well as financing from the *Banco Nacional de Desenvolvimento Econômico e Social* (the National Bank for Economic and Social Development, or BNDES) and other financial institutions. Outstanding long-term debt, plus the current portion of our long-term debt, totaled U.S.\$13,033 million at December 31, 2003, as compared to U.S.\$7,714 million at December 31, 2002. Included in these figures at December 31, 2003 are the following international debt issues:

<u>Notes</u>	<u>Principal Amount</u>
9.00% Notes due 2004(1)	EUR 91 million
10.00% Notes due 2006	U.S.\$ 250 million
6.625% Step Down Notes due 2007(1)	EUR 134 million
9.125% Notes due 2007(2)	U.S.\$ 500 million
9.875% Notes due 2008(2)	U.S.\$ 450 million
6.750% Senior Trust Certificates due 2010(3)	U.S.\$ 95 million
Floating Rate Senior Trust Certificates due 2010(3)	U.S.\$ 55 million
9.750% Notes due 2011(2)	U.S.\$ 600 million
6.600% Senior Trust Certificates due 2011(3)	U.S.\$ 300 million
Floating Rate Senior Trust Certificates due 2013(3)	U.S.\$ 300 million
4.750% Senior Exchangeable Notes due 2007(4)	U.S.\$ 338 million
Global Step-up Notes due 2008(5)	U.S.\$ 400 million