1988 Annual Report



PETROBRAS

Relatório
Petrobras Ing.
1988

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1988 Annual Report

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Illustration of production systems used at the Campos Basin, Rio de Janeiro.

Letter from the President

As is widely known, the Brazilian economy confronted serious difficulties in 1988, with the country experiencing high inflation rates throughout the year.

Despite all the problems in the economy, PETROBRÁS set its entire productive and managerial capacity in motion and was thereby able to maintain operational results close to 1987 on the average.

PETROBRÁS' exploration work in 1988, carried out in nearly all Brazilian sedimentary basins, led to the discovery of new oil provinces as well as other deposits in regions already in production. The Company also focused its efforts prospecting little-known onshore basins such as Paraná and Amazonas for the first time, as well as deep-water extensions of various offshore basins.

In addition to new discoveries in the Campos Basin, further increasing its importance, the discovery of extremely high-quality oil at the Tubarão field in the Santos Basin was a striking event on the continental shelf. Onshore, a historic mark was registered in 1988: the start-up of commercial oil production in the Amazon.

New discoveries and extensions of previously located deposits led to a 10.1% increase in Brazilian oil and gas equivalent reserves, currently totaling 3.501 billion equivalent barrels of oil.

Although the average output for the year was 2.2% less than 1987 as the result of a temporary production shutdown at Enchova, PETROBRÁS set a new production record in 1988, pumping 625,539 barrels of oil on a single day in April.

Standing out among the Company's major ventures were the conclusion and installation of the seven fixed platforms composing the Campos Basin's Northeast Production Pole for which the equivalent of US$ 1.5 billion was invested, and construction of the Rio–São Paulo gas pipeline which entered operation in December.

Nationwide demand for oil products was completely met by PETROBRÁS although there continued to be many difficulties in refining. These problems were caused by disequilibriums in supply and demand primarily due to increased fuel alcohol consumption which has led to a drop in domestic gasoline sales. This decline in gasoline consumption forced the Company to exert a major trading effort in 1988 in order to place 56.7% of Brazilian production of this derivative on the foreign market.

Nearly US$ 1 billion in oil products were exported to various countries during the period while expenditures for oil imports dropped 17% compared to the preceding year. Around 21% of the oil imported was entailed to countertrade contracts, making exports possible of a considerable volume of goods and services produced by Brazilian companies.

Another indication of the way PETROBRÁS stimulates the nation's industries was shown by its purchases of material and equipment totaling Cz$ 874.2 billion (US$ 1.3 billion), with 92% acquired inside the country.

Internally, PETROBRÁS' efforts were focused on increasing its business efficiency at all levels via computerizing managerial procedures through development of human resources and in its strategic planning.

Along these same lines, PETROBRÁS prepared an Investment Plan for its field of activities with the basic aim of increasing the country's autonomy in energy by means of reaching a daily production of 1 million barrels of oil and 44 million cubic meters of natural gas by 1993, creating the means to achieve 1.5 million barrels of oil and 70 million cubic meters of natural gas by 1997.

The prospects outlined in this Investment Plan, backed by the experience, competence and dedication of the Company's employees, make it possible for us to present this annual report with complete confidence in a future full of increasingly outstanding accomplishments for PETROBRÁS.

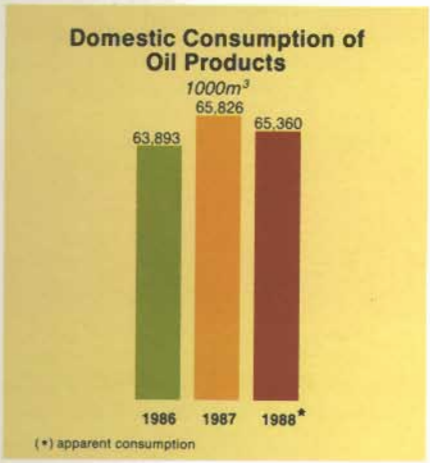


Orlando Galvão Filho
President



Natural gas processing plant at Atalaia, Sergipe.

Oil and the Economy



The International Oil Market

The performance by the international economy during 1988 was marked by a continuous expansion of the developed nations' economies, the United States and Japan above all. The 4.2% growth rate by the industrialized economies made possible an increase in the volume of international trade.

In contrast with the picture of growth for the industrialized nations, Latin America's foreign debt continued to be one of the most serious problems on the international scene, with the economies of these countries enjoying an expansion of only 0.5%.

The international oil market was characterized by declining prices and big stockpiles. Besides this, a surplus in offer prevailed even with the 4.8% increase in consumption by the industrialized countries whose demand reached 49.7 million barrels per day.

In view of this picture, the oil exporting countries — whether OPEC-members or not — attempted to prevent a repetition of the abrupt drops in quotations noted in 1986, proposing a coordinated reduction in production levels for this very purpose.

The price for Brent oil — currently considered the spot market's standard — ranged from US$ 17.50 per barrel at the beginning of the year down to US$ 11.23 during the final quarter.

The United Nations' resolution establishing a cease-fire in the Persian Gulf as of August 20, accepted by Iraq and Iran after eight years of conflict, made it possible for Iraq to be brought back into the OPEC quota system, receiving the same quota as Iran.

The Organization's production limit was reviewed during the same meeting of OPEC ministers at which the Iraq-Iran decision was reached, and a ceiling of 18.5 million barrels per day was set for the first half of 1989 while the reference price was established at US$ 18 per barrel. During 1988, the refining sector operated in the main international markets with high profit margins.

The Brazilian Economy

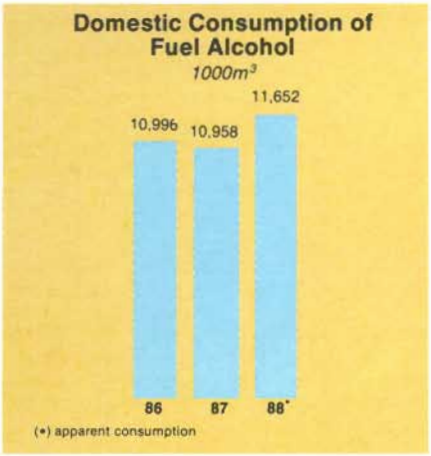
Expanded foreign trade, increased quotations for raw materials and the Government's supportive policies made it possible for Brazilian exports to reach US$ 33 billion, helping to partially offset the effects of a drop-off in the domestic market. There was a US$ 19 billion surplus on the trade balance which made it possible to pay interest on the foreign debt and increase the nation's foreign exchange reserves.

Despite this favorable behavior, the Brazilian economy faced serious difficulties with the worsening of inflationary pressures which even began to show the signs of imminent hyperinflation. The establishment of a social contract involving representatives from business, labor and government sought to prevent such an occurrence. Inflation during 1988 came in at 933.6% compared to 366% in 1987.

Economic activities remained practically at the same levels as the preceding year — the Gross National Product increased 0.04%. There was a 2.2% drop in industrial production and a 1.7% growth in output by the tertiary sector. Agricultural production stayed at the same level as the previous year.

Foreign Exchange Savings

The foreign exchange savings accounted for by PETROBRÁS came to around US$ 8.1 billion of which US$ 3.7 billion pertained to oil production, US$ 4.0 billion resulted from refining and some US$ 400 million corresponded to the Company's activities in maritime transport.



National Consumption of Oil Products, Natural Gas and Fuel Alcohol

The nation's apparent consumption of oil products came to 65,360,000 cubic meters, equivalent to 1,123,000 barrels of crude oil per day, standing for a 0.1% decline in consumption compared to 1987.

Gasoline showed a 5.0% drop compared to 1987 due to the aging and sluggish renovation of the fleet running on this fuel, considering that more than 90% of the Otto-cycle vehicles sold during past years have been alcohol powered.

Fuel alcohol — anhydrous and hydrated — showed a 6.4% increase in consumption, handling a 61.9% share of the demand for Otto-cycle fuels while in 1984, for example, it stood at 46.4%. The anhydrous alcohol-to-gasoline blend averaged around 21.8% in 1988. Overall consumption of Otto-cycle fuels — gasoline and alcohol — went up 1.8% from 1987 to 1988.

A 7.9% advance compared with the preceding year was noted in the consumption of liquefied petroleum gas (LPG). This behavior can be explained by the country's increasing degree of urbanization as well as by improper LPG usage, supplanting gasoline and diesel oil due to its relatively low price compared with the other two oil products.

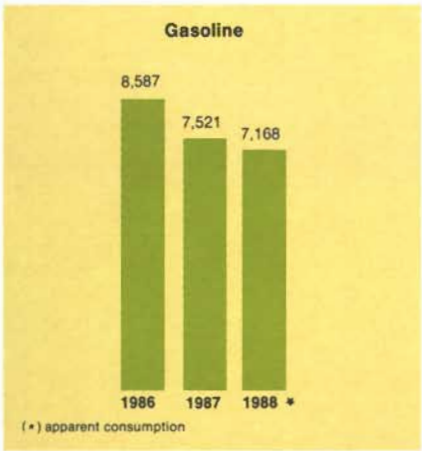
Diesel oil's share in the overall demand profile rose from 36.0% in

Brazilian Consumption of Main Oil Products and Fuel Alcohol

Product	1984		1985		1986		1987		1988 (1)	
	1 000 m³	%	1 000 m³	%	1 000 m³	%	1 000 m³	%	1 000 m³	%
Energy	46,661	84.0	47,924	82.8	53,291	83.4	54,716	83.1	54,710	83.7
LPG	6,032	10.9	6,552	11.3	7,106	11.1	7,675	11.7	8,285	12.7
Automotive Gasoline	7,812	14.1	7,622	13.2	8,588	13.4	7,539	11.4	7,168	11.0
Diesel Oil	18,922	34.1	20,175	34.8	22,384	35.0	23,722	36.0	24,423	37.4
Fuel Oils	10,596	19.1	9,864	17.1	11,501	18.0	11,839	18.0	11,141	17.0
Others	3,299	5.8	3,711	6.4	3,712	5.9	3,941	6.0	3,693	5.6
Nonenergy	10,054	18.1	11,155	19.2	11,570	18.1	12,055	18.3	11,493	17.6
Petrochemical Naphtha and Gas Oil	6,671	12.0	7,421	12.8	7,148	11.9	7,458	11.3	7,759	11.9
Others	3,383	6.1	3,734	6.4	4,422	6.2	4,597	7.0	3,734	5.7
Effluents	(1,177)	(2.1)	(1,165)	(2.0)	(968)	(1.5)	(945)	(1.4)	(843)	(1.3)
Total Market (excluding alcohol)	**55,538**	**100.0**	**57,914**	**100.0**	**63,893**	**100.0**	**65,826**	**100.0**	**65,360**	**100.0**
Fuel Alcohol	6,766	—	8,034	—	10,998	—	10,956	—	11,652	—
Anhydrous	2,082	—	2,121	—	2,442	—	2,136	—	1,999	—
Hydrated	4,684	—	5,913	—	8,556	—	8,820	—	9,653	—
Total Market (including alcohol)	**62,304**	—	**65,948**	—	**74,891**	—	**76,782**	—	**77,012**	—

(1) Excludes fuel gas. Data for apparent consumption in 1988.

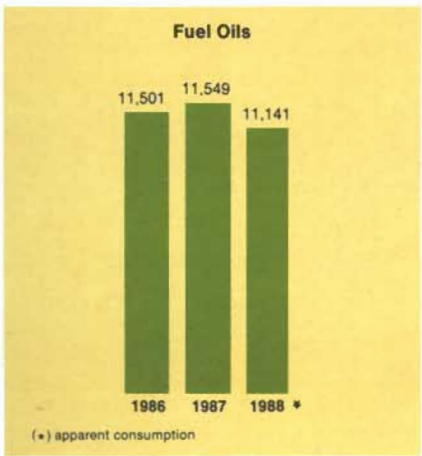
Domestic Consumption of the Principal Oil Energy Products
1000m³

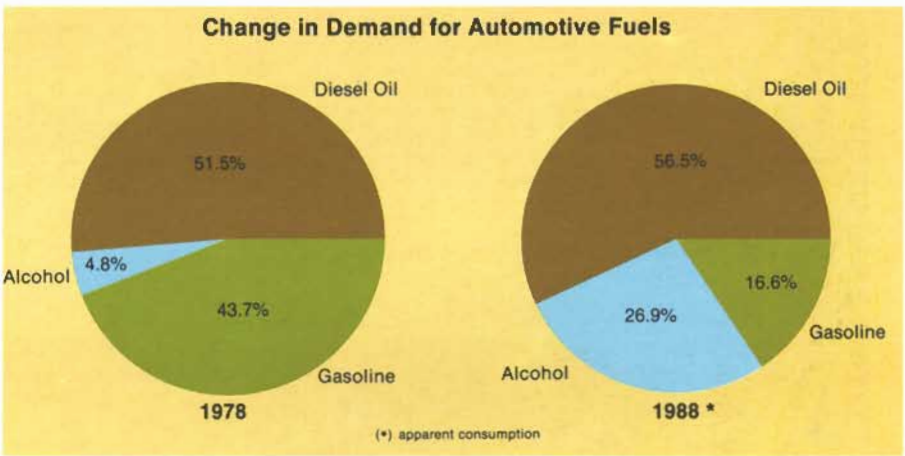


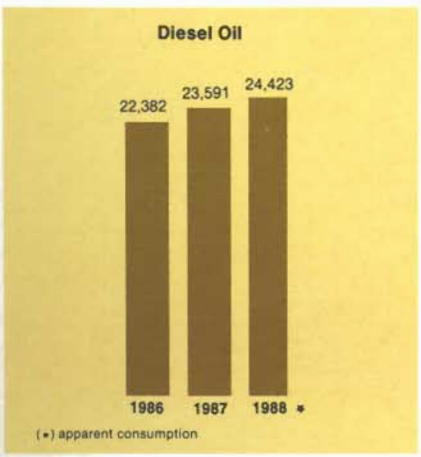
1987 to 37.4% in 1988, a 3.0% increase in consumption during the year.

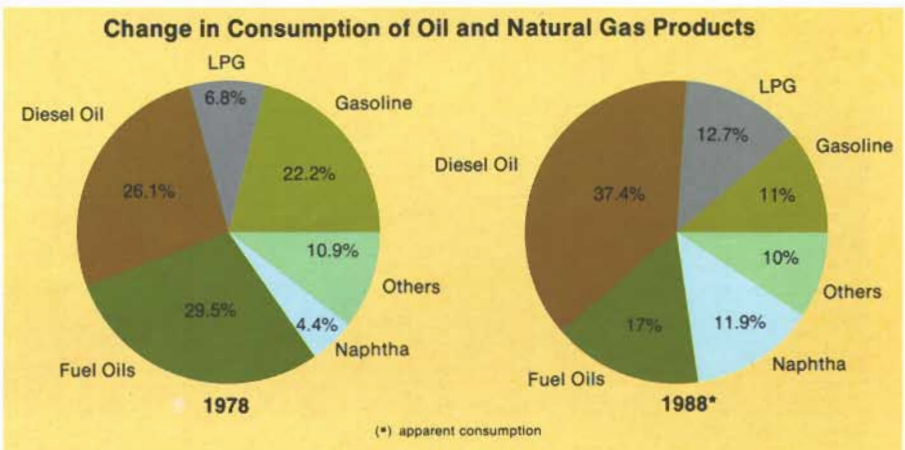
Consumption of nonenergy oil products declined 4.7%, while petrochemical naphtha and gas oil showed a 4.0% rise compared to 1987 since the sector operated above its nominal capacity during the entire year.

In terms of natural gas, consumption came in at 9.2 million cubic meters daily (around 61,000 equivalent barrels of oil per day), corresponding to a 7.8% decrease compared to 1987 caused by a reduction in supply due to the accident aboard the Enchova platform whose production is expected to return to normal this year.





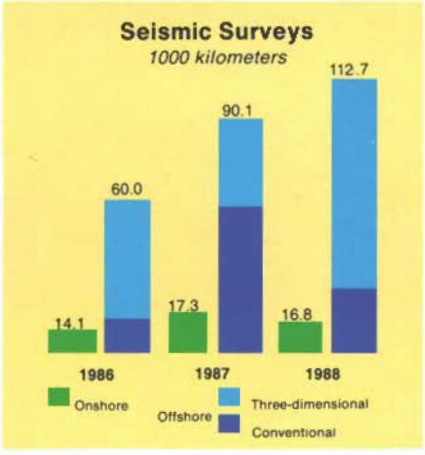




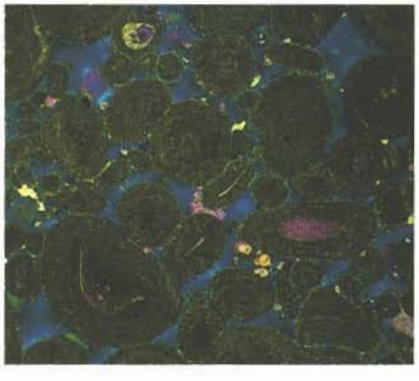


PETROBRÁS men and women overcome the toughest challenges in order to increase Brazilian oil reserves, shown here by a seismic survey team working deep in the Amazon jungle.

Exploration & Production



Microphoto of limestone in reservoir at the Tubarão field in the Santos Basin at a depth of 4784 meters. The oil-filled porous spaces show up in blue. (25X – NX blowup—quartz plate)



Exploration

PETROBRÁS sought to maintain its exploratory activities throughout most Brazilian sedimentary areas, discovering new accumulations in long-established producing basins, incorporating other oil-bearing provinces and carrying out initial efforts in little-known basins.

The results of exploration at the Solimões Basin in the state of Amazonas were quite promising, especially in the Urucu River region. Likewise, reconnaissance of likely structures in other regions of the same Basin also showed favorable signs, and the start-up of production in the Amazon was a landmark for Brazilian oil history.

The discoveries at the Solimões Basin encouraged the Company to resume exploration work in other Paleozoic basins. New seismic surveys in the Amazonas Basin made it possible to delineate structures for testing during 1989. Geophysical reconnaissance got under way at the Parnaíba Basin and the Paraná Basin Exploration Nucleus was created. The work carried out at the Proterozoic-age São Francisco Basin should also be mentioned. There, two wells drilled in the state of Minas Gerais showed traces of gas.

The most important results in the long-producing coastal regions were achieved at the Potiguar and Espírito Santo Basins.

There were new discoveries at the Campos Basin both in shallow water (the 1-RJS-405 well) and deep water. (It is expected that the 1-RJS-409, currently being evaluated, will confirm the southern leg of the trend in water levels deeper than 400 meters.) Discovery of the Tubarão field in the Santos Basin, bearing an excellent quality light oil, opened ample possibilities for this new province. A gas discovery along the coast of Espírito Santo and, in addition, the identification of various interesting prospects in the Potiguar, Sergipe-Alagoas, Ceará, Pelotas and Pará-Maranhão Basins (deep water) also provided good reasons for carrying on with exploratory studies.

As an immediate result of the exploratory drilling program which was carried out with an average of 20 rigs in usage, five offshore and 17 onshore accumulations were discovered in addition to extensions of various fields identified in preceding years. Of the 44 exploratory wells drilled at offshore basins, 13 proved to be producers; while 34 of the 106 wells at onshore basins were classified as producers, standing for success rates of 30.2% and 35.8% respectively.

The program for obtaining geophysical data operated with an average of 19 teams. There were 112,726 km of seismic lines laid (82,456 km using three-dimensional techniques) versus 16,783 km laid in onshore basins, and noteworthy in this respect was the first 3-D seismic survey performed onshore — at the Rio Urucu and Leste de Urucu fields in the state of Amazonas. In addition, 31,103 km of gravimetric and 125,247 km of magnetometric profiles of various basins were studied.

In the scientific data processing field, the necessary steps were taken to triple computational capacity at the head office and new data processing centers were set up at the Salvador, Aracaju, Natal and São Mateus districts. In all, 164,956 km of seismic lines were processed or reprocessed — 47,745 km in 3-D — accounting for a considerable increase compared with output in preceding years.

Risk Contracts

In terms of indirect exploration, the 38 risk contracts continued to be in effect. Exploratory activities were carried out by three foreign and two domestic operators who performed seismic and drilling work under the supervision and control of PETROBRÁS.

Funds on the order of US$ 44 million were applied in laying, processing

and geological-geophysical interpretation of 5,289 km of seismic lines and 3,705 km of gravimetric lines. In addition, ten wells were drilled with nine completed for a total of 31,119 meters of risk contract drilling.

Development work on the Serra Vermelha and Redonda fields in the Potiguar Basin in Rio Grande do Norte continued, producing 8,899 m^3 of oil (55,972 barrels). Reports on the commercial potential and development plans for the Redonda, Ponta do Mel and Noroeste do Morro Rosado fields, all located onshore in the Potiguar Basin, were prepared and presented to PETROBRAS.

Development of the Merluza field in the Santos Basin got under way, including jacket and deck manufacture as well as detail design of production and pipeline installations.



The Petrobrás X semisubmersible drilling platform is able to operate in water depths up to 500 meters.

Drilling

The Company drilled onshore in the states of Amazonas, Maranhão, Ceará, Rio Grande do Norte, Alagoas, Sergipe, Bahia, Minas Gerais and Espírito Santo. Offshore drilling took place along the coasts of Maranhão, Ceará, Rio Grande do Norte, Alagoas, Sergipe, Bahia, Espírito Santo, Rio de Janeiro and Paraná.

Around 866,836 meters were drilled in onshore areas during the year, with wildcat wells accounting for 202,051 meters and step-out wells adding up to 644,785 meters. The Company drilled 223,829 meters on the continental platform of which 131,007 meters were for wildcats and 92,822 meters for step-out wells. The overall total of 1,090,665 meters was achieved by drilling 786 wells of which 712 were onshore and 74 at sea.

There were 31 drilling rigs operating onshore at the end of the year (28 Company-owned and three under contract with domestic firms), and 14 offshore (nine Company-owned, three under domestic contract and two contracted from foreign companies).

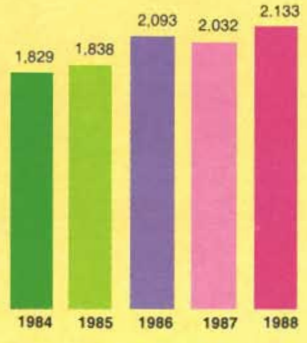
Average drilling output came to 2,133 meters/rig-month, 5% more than the preceding year. Onshore, the average output was 2,340 meters/rig-month and offshore, it was 1,589 meters/rig-month.

Deep-water work continued with the drilling of eight wells in water depths over 400 meters and it should be noted that four of these wells were in water deeper than 1000 meters.

A new final depth record was set by drilling the 3-TB-1-PRS at the Tubarão field in the Santos Basin which reached 5,740 meters.

Growth of Drilling Productivity

meters per rig-month



Meters Drilled – 1984-88

Type	Exploration	Development	Total
1984	**478,887**	**866,100**	**1,344,987**
Onshore	240,418	700,058	940,476
Offshore	238,469	166,042	404,511
1985	**486,982**	**1,111,998**	**1,598,980**
Onshore	242,874	805,686	1,048,560
Offshore	244,108	306,312	550,420
1986	**415,762**	**1,358,722**	**1,774,484**
Onshore	195,344	919,416	1,114,760
Offshore	220,418	439,306	659,724
1987	**418,464**	**980,667**	**1,399,131**
Onshore	212,319	729,233	941,552
Offshore	206,145	251,434	457,579
1988	**333,058**	**757,607**	**1,090,665**
Onshore	202,051	664,785	866,836
Offshore	131,007	92,822	223,829

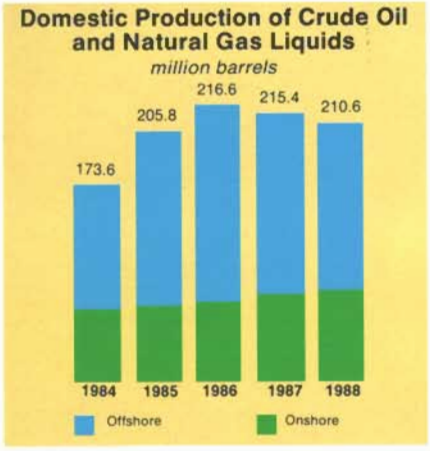
Wells Drilled – 1984-88

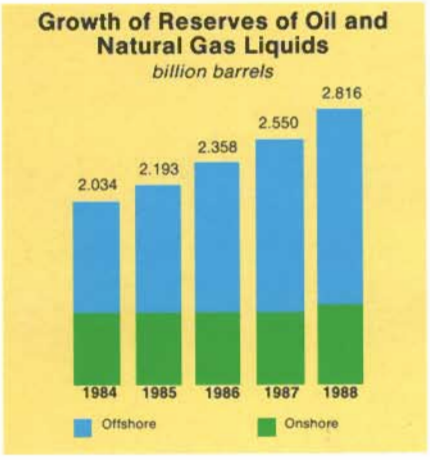
Type	Exploration	Development	Total
1984	**210**	**745**	**955**
Onshore	133	690	823
Offshore	77	55	132
1985	**205**	**849**	**1.054**
Onshore	128	759	887
Offshore	77	90	167
1986	**173**	**992**	**1.165**
Onshore	109	848	957
Offshore	64	144	208
1987	**158**	**776**	**934**
Onshore	103	687	790
Offshore	55	89	144
1988	**151**	**635**	**786**
Onshore	106	606	712
Offshore	45	29	74

Obs: 1) Excludes wells redrilled in same location
2) Special wells drilled in association with exploration or development work are included in those respective headings.



The twin Pargo 1A and Pargo 1B platforms at the Northeast Production Pole in the Campos Basin.





Production

Domestic production of oil and natural gas liquids averaged 577,047 barrels per day in 1988 (91,743 m^3), 2.2% less than the average attained in 1987. This decline was mainly due to the accident aboard the central platform at Enchova.

In February, the Company achieved its best ever monthly average, 615,979 barrels per day (97,933 m^3), and in April it set a new single-day production record, 625,539 barrels (99,452 m^3).

Of the year's total, 67% pertained to output from the continental shelves of the states of Rio de Janeiro, Espírito Santo, Bahia, Sergipe, Rio Grande do Norte and Ceará. The state of Rio de Janeiro maintained its position as the country's leading producer with 57% of the nation's total output and 85.5% of Brazil's production from its continental platform.

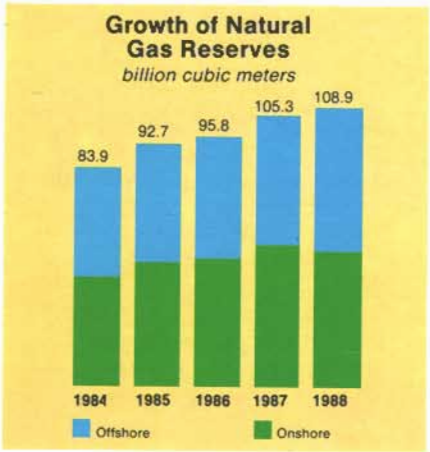
Espírito Santo and Rio Grande do Norte were the states with the biggest increases in production due to the discovery and development of a considerable number of onshore fields there.

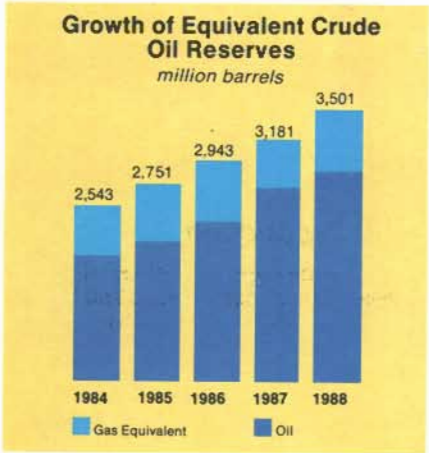
Efforts were sustained for producing in ever deeper water. The 3-RJS-376D in the Marimbá field went into operations at a water depth of 492 meters, and the Corvina, Piraúna, Marimbá and Albacora fields in the Campos Basin are all producing in water depths over 200 meters.

There were 5,511 oil wells in production at the end of the year of which 639 were offshore and 4,872 onshore, a 4.4% increase compared with yearend 1987. Offshore production was obtained by means of 59 fixed platforms, 10 floating platforms, two jack-ups and a processing ship.

Average Daily Crude Oil Production

States		1987	1988	Change 1987/1988 (%)	Share of 1988 Total (%)
AM	(m^3/day)	0	38	—	0.04
	(bpd)	0	239		
MA	(m^3/day)	5	1	-80	—
	(bpd)	31	6		
CE	(m^3/day)	2,846	2,719	- 4	2.96
	(bpd)	17,900	17,102		
RN	(m^3/day)	8,833	10,289	16	11.22
	(bpd)	55,558	64,716		
AL	(m^3/day)	1,615	1,582	- 2	1.72
	(bpd)	10,158	9,950		
SE	(m^3/day)	8,622	8,427	- 2	9.19
	(bpd)	54,231	53,004		
BA	(m^3/day)	13,560	13,302	- 2	14.50
	(bpd)	85,290	83,667		
ES	(m^3/day)	2,302	2,635	14	2.87
	(bpd)	14,479	16,573		
RJ	(m^3/day)	55,938	52,621	- 6	57.36
	(bpd)	351,839	330,978		
PR	(m^3/day)	120	129	8	0.14
	(bpd)	755	812		
TOTAL	(m^3/day)	93,841	91,743	- 2	100.00
	(bpd)	590,241	577,047		





Average natural gas production totaled 15,912,000 m³/day, a 2% decrease compared with output in 1987.

This reduction was the result of a lower demand for natural gas commercialized in the states of Bahia, Sergipe and Alagoas, and a drop in associated gas production from the Ceará Basin. In the state of Rio de Janeiro, average natural gas production remained almost unchanged compared with 1987 despite the accident at the Enchova platform, while there was an increase in output from Espírito Santo which was, however, unable to revert the downsiding noted in the other areas.

The production of nonassociated natural gas, accounting for around 15% of total output, came to 2,406,000 m³/day from 68 wells of which six are located on the continental platform.

The utilization rate for natural gas reached 82% of overall output because a major effort was made to increase usage of associated gas.

New installations were implemented throughout the country aiming at expanding natural gas utilization:

- in Bahia: gas gathering system at the Fazenda Bálsamo field and the Riacho São Pedro-Estação São Roque gas pipeline;
- in Sergipe and Alagoas: vapor recovery system at the Dourado platform (Sergipe); gathering system for casing gas in pumping wells at the Carmópolis field (Sergipe); and installation of compressors to make use of gas released in storage tanks at various locations;
- in Rio de Janeiro: underwater manifold system to re-establish natural gas flow from the Southern Production Pole in the Campos Basin (following the accident at Enchova) and compression systems at Linguado, Bicudo and Viola which also made it possible to utilize gas from the Trilha, Badejo, Piraúna and Marimbá fields;
- in Rio Grande do Norte: gathering, compression and flow system for gas produced at the Serraria field;
- in Espírito Santo: systems for utilizing natural gas in the fields at Fazenda Queimadas and the São Mateus region.



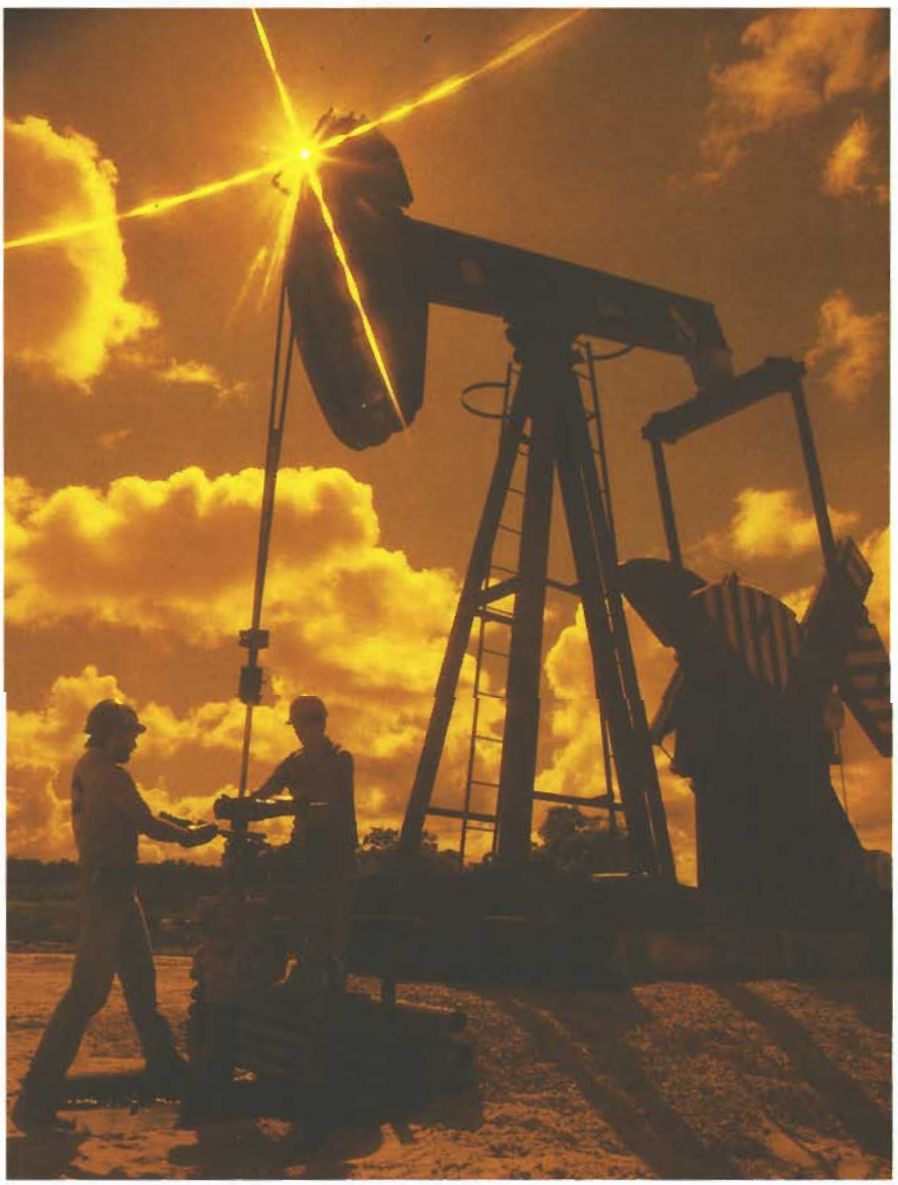
Production station at the Urucu River in the Amazon.

In June 1988, the Company's new Reserves Code was issued for the purpose of adopting the nomenclature and standards used internationally by the oil industry. The country's proven reserves at 12/31/1988 with the new Code came to 2.816 billion barrels of oil and 109 billion cubic meters of natural gas. These figures represent a 12% growth (297 million barrels) in oil reserves and 3.5% (3.6 billion cubic meters) in natural gas compared to 12/31/1987.

Besides proven reserves, the new Code identifies probable and possible reserves of 2.1 billion barrels of oil and 89 billion cubic meters of natural gas. In addition, the deposits of hydrocarbons in reservoirs located on the continental platform in water depths over 1000 meters are not computed in Brazilian proven reserves but are calculated to be 1.4 billion barrels of oil and 21.8 billion cubic meters of natural gas.

Development of the Marlim field was begun during 1988 by means of a pilot project intended to produce 50,000 barrels of oil per day by the second quarter of 1990 through a floating system and wells completed under water from 600 to 800 meters deep. This field is located in water ranging from 400 to 2000 meters in depth and is considered to be the biggest Brazilian field, with oil reserves estimated at 2.9 billion barrels, thereby ranking as a giant field.

Pumping unit at Carmópolis field, state of Sergipe.





Paulínia Refinery (Replan) at Paulínia, São Paulo.

Refining



Presidente Bernardes Refinery (RPBC) at Cubatão, São Paulo.

During the year, 1,176,000 barrels of oil were processed daily, the same volume as 1987.

The production lineup for oil derivatives in volumetric percentages was as follows: liquefied petroleum gas (LPG) — 7.5; gasoline — 15.9; diesel oil — 34.0; fuel oils — 16.9; and others — 25.7.

The constant advance in fuel alcohol consumption continues to imply an increased volume of exportable surpluses of gasoline. In 1988, a 46% share of automotive gasoline output was exported.

The group of measures adopted in efforts to optimize refining made possible a 0.2% reduction in the overall amount of fuel oils used at refineries compared to 1987, with a consequent increase in distillate output. The coming on stream of systems for burning asphaltic residues at the Duque de Caxias Refinery in Rio de Janeiro and the Presidente Getúlio Vargas Refinery in Paraná were important events.

The quality of PETROBRÁS products has been a motive for special care, and considerable efforts were made aiming not only at meeting the requirements of the domestic market but also to keep the Company's oil products export programs constantly uptrending.

In the field of lubricants and paraffins, the Company sustained its program to modernize and expand existing complexes and is analyzing the possibility of utilizing a number of domestic crudes to make basic oils, especially naphthenics. Tests performed with Fazenda Belém oil from the state of Ceará resulted in the production of basic naphthenic light and medium oils with a higher quality than products currently being imported.

Work proceeded for the purpose of implementing new processing units to bring the refining setup further in line with demand and improve product quality. Deserving special note in this field were the seven hydrotreating units at five refineries which establish a new dimension in product quality, in addition to coking units at the Paulínia (São Paulo) and Gabriel Passos (Minas Gerais) Refineries.

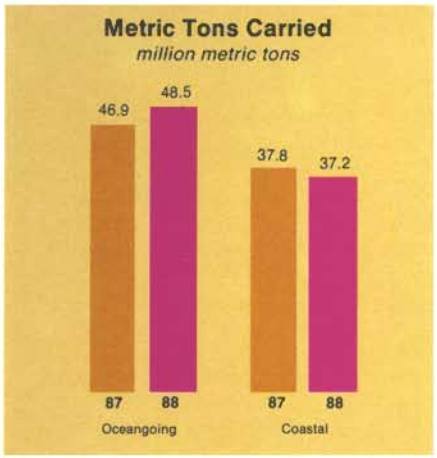
Expansion work continued at the Landulpho Alves (Bahia) and Alberto Pasqualini (Rio Grande do Sul) Refineries as well as efforts to resolve bottlenecks at the Henrique Lage (São Paulo) Refinery which reached its nominal capacity of 30,000 m^3/day.

Bearing in mind the overriding need to improve environmental quality, the Company made considerable efforts to bring product quality even closer to international specifications, with special emphasis on studies to eliminate tetraethyl lead from gasoline, a project to be implemented at the beginning of 1989.

The Irati Prototype Plant in Paraná produced 273,769 barrels of shale oil, 12,594 tons of fuel gas and 6,309 tons of sulfur, reaching a 91% operating level. Construction of the Industrial Module was over three-fourths completed, but its operational start-up was postponed until the beginning of 1990.

In the field of biomass utilization, work to consolidate the technology of briquetting charcoal fines, aiming at the export market, was continued at the Manaus Refinery (Amazonas).

Transport



The National Oil Tanker Fleet (FRONAPE) transported 77,269,000 metric tons of crude, oil products, alcohol and other products by means of its own and chartered ships of which 43,118,000 tons were oceangoing cargoes and 34,151,000 tons were coastal shipments. The Fleet's own vessels held a 52% share of the total cargoes transported, the same percentage as the preceding year.

Imported oil transport amounted to 28,659,000 tons, while coastal transport reached 21,759,000 tons. Alcohol transport came to a total of 1,344,000 tons.

FRONAPE closed out the year owning 67 ships, adding up to a total of 5,089,000 gross operating tons. There were no new vessels incorporated during the year although 19 ships and a barge were under construction, all at domestic shipyards. The construction of three 36,000-dwt ships for clear derivatives and basic lubricating oils; two 116,000-dwt ships for crude and dark derivatives; two 300,000-dwt crude tankers and two 26-ton static-traction tugs was being negotiated at the end of the year.

The average monthly chartered tonnage was 3,907,000 gross tons, adding up to US$ 236,223,000 in foreign exchange expenditures for charters.

The on- and offshore oil pipeline system added up to 3,963 km in 1988, and the gas pipeline system amounted to 3,988 km in 1988.

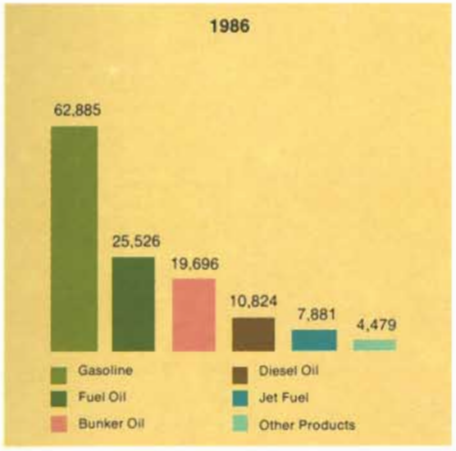
The nominal tankage capacity at the terminals was 8,918,000 m^3, with 5,148,000 m^3 for oil, 2,679,000 m^3 for derivatives, and 1,089,000 m^3 for alcohol.

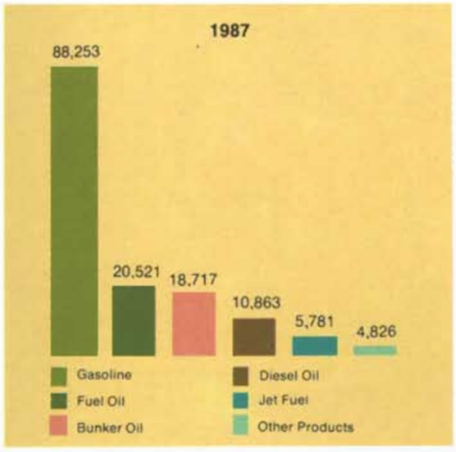


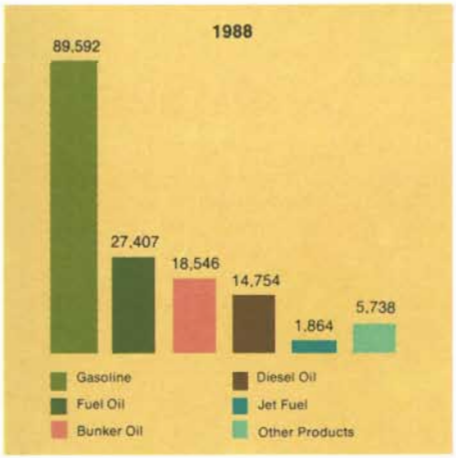
The Barão de Mauá, *one of 67 ships composing the PETROBRAS National Tanker Fleet.*

Commercialization

Exports of Oil Products
barrels per day







The same as in previous years, PETROBRÁS' commercial strategy aimed at linking its guarantee of the country's supply — assured by means of relationships with a substantial number of suppliers — to a reduction in the overall foreign exchange cost by seeking out suppliers competitive pricewise.

Countertrade or counterpart agreements were also emphasized with countries interested in entailing their oil sales to imports of Brazilian goods and services.
During the year, 234 million barrels of oil were imported (639,000 barrels/day), against 227 million barrels in 1987 (622,000 barrels/day). The value of these imports was US$ 3.2 billion FOB, or 83% of the cost of oil imports during the preceding year (US$ 3.9 billion). Net foreign exchange expenditures fell from US$ 3.1 billion in 1987 to US$ 2.6 billion in 1988.

Around 21% of this total was acquired through countertrade contracts with Angola, China, Algeria, Venezuela, Ecuador, Iraq and Iran, most noteworthy being the agreements with the latter two countries which accounted for the acquisition of 105 million barrels, equivalent to US$ 1.4 billion and made possible the export of US$ 553 million worth of Brazilian goods and services.

Exports of derivatives reached the sum of US$ 987 million of which US$ 102.1 million pertained to ship bunkering. Of the total volume exported (155,200 barrels/day), gasoline accounted for 59.4% of the revenues and 57.3% of the volume, averaging 88,900 barrels/day.

These exports were mainly sent to the North American market with the exception, however, of the start-up of gasoline shipments commercialized to the Far East as part of the philosophy of diversifying markets.

Concerning alcohol, PETROBRÁS' activities were of extreme importance in guaranteeing supply, especially for the North and Northeast where there was a shortfall in production with respect to demand, it being necessary for the Company to use the security stockpiles it maintains besides having to ship 250,000 m³ from São Paulo to those regions by means of coasters.

PETROBRÁS commercialized 6.7 million m³ of alcohol, corresponding in value to Cz$ 1.26 trillion. Of this volume, 5.8 million m³ went through its tankage, pipeline and shipping systems.

Out of the total natural gas produced (15,950,000 m³/day), an average 6,459,000 m³/day was sold to third parties and 6,557,000 m³/day was used by the PETROBRÁS System, with only 18% of production being flared. The utilization of natural gas made possible foreign exchange savings equivalent to US$ 358.1 million, corresponding to the substitution of around 65,388 oil equivalent barrels/day.

Of its total natural gas sales, a 57% portion was used as fuel, 21% for fertilizer production, 9% as a reducing agent in making steel, 7% for household usage and 5% as a raw material for the petrochemicals industry.

The Rio–São Paulo gas pipeline was opened at the end of the year, beginning the sales of natural gas from the Campos Basin to the São Paulo Gas Company. It is expected this supply will reach 1,700,000 m³/day during 1989.



Hoisting modules for the Vermelho platform, part of the Northeast Production Pole in the Campos Basin.

Support Activities



The reactor-regenerator for the 2nd fluid catalytic cracking unit will be the largest piece of equipment at the Paulínia Refinery, São Paulo, handling heavy charges to obtain light derivatives such as naphtha and LPG.

Engineering

PETROBRÁS concluded investment programs in the fields of production, transport and refining worth an overall Cz$ 696 billion (US$ 852 million) of which Cz$ 657 billion (US$ 804 million) were contracted out to domestic companies in the areas of material supplies, project engineering services, construction, maritime erection and installations, signifying a nationalization index of 94.4%.

Worthy of special note among the programs concluded are: the production system for the Bicudo field (with a daily production of 50,000 barrels of oil and 1,000,000 Nm^3 of natural gas); construction and installation of the Carapeba 1 & 2, Pargo 1 & 2, and Vermelho 2 platforms composing the Campos Basin's Northeast Production Pole; conclusion of the Volta Redonda–Mauá stretch of the Rio–São Paulo gas pipeline, running 325 km in length; an upstream pier for new port installations at the Manaus Refinery in Amazonas; a production and delivery system for the Atum 3 platform in Ceará; an oil gathering and processing system for the stations at São Mateus in Espírito Santo; a station to gather, tank, and transfer oil from the Alto do Rodrigues and Estreito fields in Rio Grande do Norte as well as desalination units for the Almirante Barroso Maritime Terminal and overhaul of the *BGL-1* pipeline-laying crane ship, making her fit to operate in water depths up to 200 meters.

Of the 107 programs being executed for an overall Cz$ 2.340 trillion (US$ 3.5 billion), special mention should be given: the Sergipe port terminal; a deasphalting unit at the Henrique Lage Refinery; the Petrobrás XVIII and XIX semisubmersible platforms whose construction is a first-time venture in Brazil; production systems for the Vermelho 1 and 3 fields composing the Campos Basin's Northeast Production Pole; the Guarulhos–Volta Redonda–Reduc multiphase pipeline and branches of the Rio–São Paulo gas pipeline.

In terms of works at refineries, also under way are: hydrotreatment units for the Duque de Caxias and Presidente Bernardes Refineries; an atmospheric distillation unit for the Alberto Pasqualini Refinery; expansion of the Landulpho Alves Refinery; supplementing the second fluid catalytic cracking unit at the Paulínia Refinery and construction of a coking unit at the Gabriel Passos Refinery.

In order to realize these programs, the companies under contract employ a monthly average of 20,000 persons in the fields of consulting, construction and erection.

Furthermore, the growing participation by PETROBRÁS Engineering in helping subsidiary and associated companies to implement their investment programs both inside the country and abroad should be emphasized.

Material Supplies

The Company applied Cz$ 817.5 billion (US$ 1.27 billion) to purchase material and equipment intended for its various activities, maintaining practically the same investment level as in 1987. Of the 1988 total, 54% was earmarked for the upstream areas of oil and natural gas exploration, drilling and production.

Demonstrating how the Company stimulates the nation's capital goods industry, the level of procurement inside the country amounted to 92%, that is, it remained practically the same as it was during the preceding three years.

PETROBRÁS continued its efforts to boost decision-making autonomy in terms of the material and equipment it requires, especially gear intended for deep-water prospecting and production.

In the field of quality, the Company's efforts toward inducing manufacturers to implement quality systems for their products have shown results: around 96% (by value) of purchases in the country were placed with manufacturers who have already set up such a system or are in an advanced stage of implementing one.



PETROBRÁS' advanced data processing program expanded the use of this technological auxiliary throughout all its spheres of activity.

Data Processing and Telecommunications

PETROBRÁS extended its data processing program, expanding employment of this technological auxiliary throughout various priority working areas.

Usage grew considerably in the upstream fields of exploration, drilling and production thanks to the supercomputer the Company has had available since the end of 1987 and also to the minicomputers installed at its operational units in Natal, Aracaju, Salvador and São Mateus during 1988. Reflecting this new capacity and the increased degree of decentralization, work was substantially benefited, with services processed abroad reduced to a minimum.

In addition to contracting an expansion of the first supercomputer, PETROBRÁS ordered other equipment for work in technological research and basic engineering. This equipment should go into operation at the beginning of 1989. Various refineries received superminis and distributed digital control and telemetry systems, the same thing taking place in derivatives transport and tankage.

The Company expanded the use of graphic computation for various activities and began developing its first smart systems, although still on a prototype basis.

It also focused on putting data processing to work for managerial procedures, expanding its central computers and installing others at the major regional units. Thanks to these new resources, various systems were developed and implemented, standing out among which are: refining operations management; crude oil and derivatives supply programming; operational control of maritime terminals; reliability engineering; integrated materials supply; accounts and office automation.

Performing in the most remote regions of the country with operations in the Amazon jungle and on the continental shelf often more than one hundred kilometers from the coast, PETROBRÁS has been fine-tuning the quality of its telecommunications systems year after year, recognizing the strategic importance of this field.

Working through a special entity focusing on telecommunications, the Company substantially increased its investments in the sector, earmarking Cz$ 7.5 billion (US$ 28.4 million) during 1988.

Important projects in telecommunications were begun, noteworthy among which being the completely automated message transfer system which will substitute the Company's present manual telegraphic network, and preparation of a master plan for integrating telecommunications-teleinformational services.

New switching centers have been implemented at several Company entities which make it possible for the user to quickly transmit data, texts and even videotapes in addition to regular telephone conversations without going through a switchboard operator.

A satellite communications system via the Brasilsat *helped interconnect platforms in the Campos Basin with PETROBRÁS' onshore installations.*





Human resources development is a constant concern at PETROBRÁS.

Human Resources

The human resources development program concerned carrying out 4,462 projects involving 38,053 participations by middle-level workers and 19,407 by upper-level employees, and the application of Cz$ 6.891 billion (US 22.7 million).

Materializing the philosophy of company-school integration, professional internships were granted to 1,846 middle-level and 890 upper-level students, and studies dealing with the administration of career and advancement programs currently being prepared will result in a management development model suited to the Company's characteristics.

PETROBRÁS' human resources development achieved its greatest effectiveness during the year by means of a considerable involvement with the Company's strategic planning process and through a constant search for alternatives aiming at providing the organization with human resources increasingly in tune with its business.

To meet future demands, the Provisional System for Human Resources Recruitment and Training was created, involving participation by the educational community represented by the Federal Universities of Rio de Janeiro and Bahia. In terms of specialization, the master's and doctor's degree training program was continued, likewise via working agreements with universities, and various new programs are being negotiated, including with the international academic community. Special emphasis has been placed on using human resources development technology and methodology suitable for the Company, including an improvement in the quality of teaching materials, using long-range teaching techniques such as TV-Executiva, publishing books and outlines written by employees and especially, training instructors.

There were especially difficult moments for the Company's industrial relations during the year, noteworthy being an increase in union activities motivated by various factors such as a speedup of inflation, increasingly restrictive legislation and publication of the new Federal Constitution.

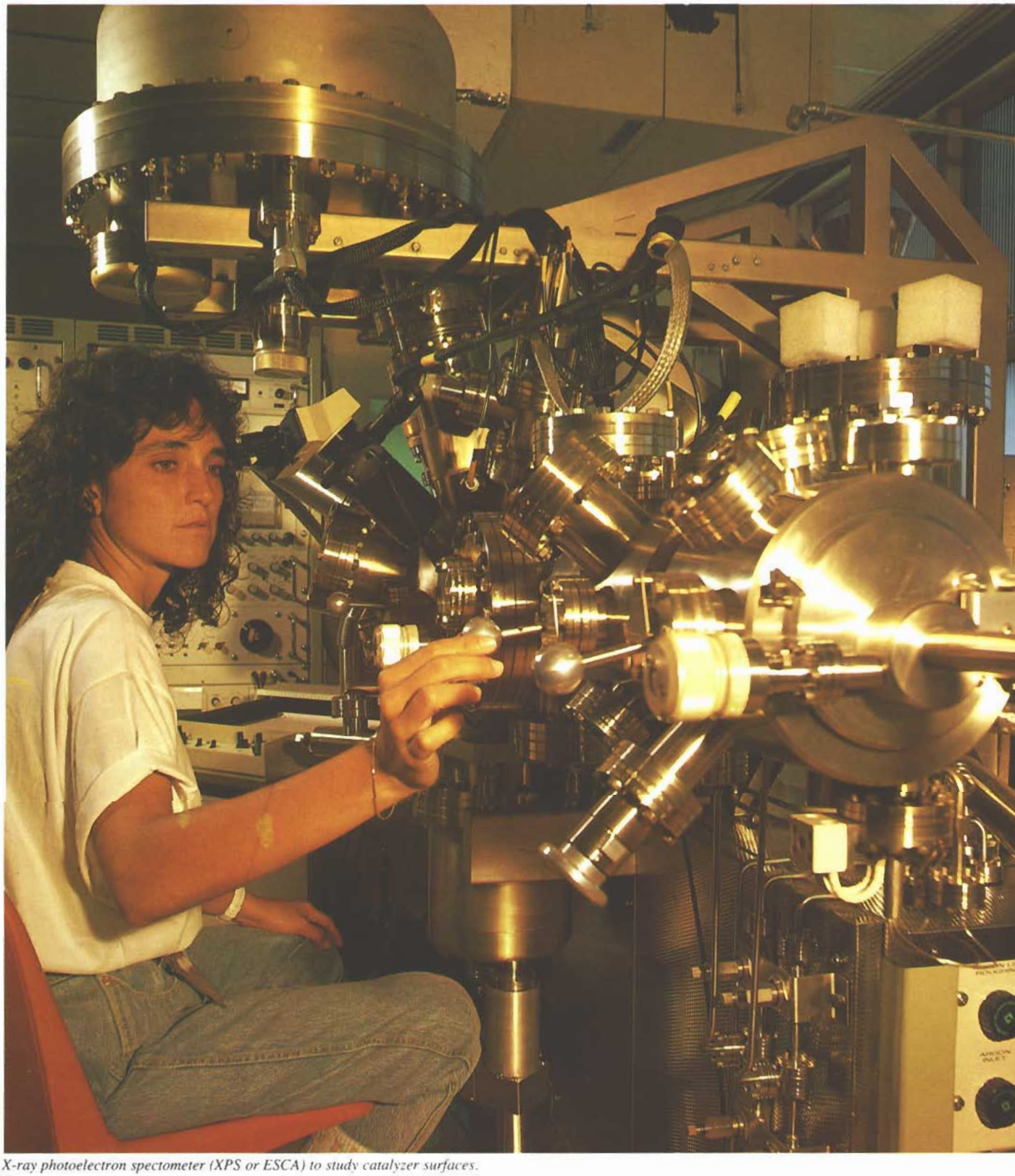
This period required a concentrated effort in industrial relations so that the Company's employee motivation and the harmony of its internal relations would make an even more significant contribution to help PETROBRÁS attain its goals in an adverse and unstable setting.

Noteworthy among the studies prepared were: outlines of proposals for personnel working in continuous shifts; a study of the climate from the viewpoint of union relations; preparation of the occupational health policy; guidelines for the Social Service's activities; a proposal for a continuous employee integration model; repercussions of the new Constitution on the industrial relations field; and a revision of the job classification and evaluation plan.

PETROBRÁS closed out the year with 59,210 employees compared with 60,290 in 1987, a reduction of 1.5%. The turnover rate also underwent a drop, going from 4.4% to 3.2%.

In terms of educational levels, the following is the distribution of Company employees according to their degree of schooling:

Schooling	No. of Employees	%
1. Up through Primary	17,406	29.4
2. Secondary	28,383	47.9
3. College	13,093	22.1
4. Postgraduate	328	0.6
5. TOTAL	59,210	100.0



X-ray photoelectron spectometer (XPS or ESCA) to study catalyzer surfaces.

Research & Development



The fluids handling laboratory was built to permit studies in terms of mono- and multiphase flow, simulating oil and gas production and transport systems.

The Technological Capability Program for Deep Water Production (Procap) showed considerable gains in 1988 working in collaboration with around 50 of the nation's institutions (industries, engineering firms, technology centers and universities) and 30 international organizations to develop 78 capability projects.

Noteworthy among the results obtained are: a survey of meteoro-oceanographic environmental data from the Albacora field; performing tests at sea with mooring lines made of Kevlar; drilling a well with a 553-meter horizontal stretch; transferring technology for the manufacture of synthetic foam-based floats to domestic companies; the development in Brazil of high-tensile steel for application in maritime structures; and delivery of the first two remote operated vehicles, designed and built with domestic technology, to go into operation after being submitted to a rigorous period of testing.

In addition to Procap, other achievements by PETROBRÁS in the field of research and development deserve mention:

Exploration: the BASS system was developed, a computational tool for deriving models of such natural processes as hydrocarbon generation, migration and accumulation in sedimentary basins;

Reservoir Geology: worthy of note was the project for analyzing reservoirs, and mapping heterogeneity in outcroppings and reservoirs similar to those producing in the giant Marlim and Albacora fields;

Reservoir Engineering: a project involving the use of polymers to modify the injectivity profile of wells at the Carmópolis field was concluded, helping to increase their oil recovery factor;

Drilling: a project for optimizing casing strings made possible a reduction in operational costs on the order of US$ 30 million per year;

Production: a project to determine the causes of reservoir damage and methods for restoring productive capacity was concluded;

Industrial: the Catalyst Manufacturing Prototype Plant went into operation at PETROBRÁS' Research and Development Center (Cenpes), an important step in conjunction with the Carioca Catalyst Factory (FCC); as part of efforts to match the refining setup with the oil products demand structure, studies on recracking and extracting aromatics from cracking naphtha were prepared, aiming to obtain higher octane gasoline and boost diesel oil output;

Product Development: the approval abroad of domestic lubricating oil for aviation use was of special importance;

Fertilizer Production: the process for manufacturing phosphoric acid starting with the filtration of domestic phosphate rock was modified;

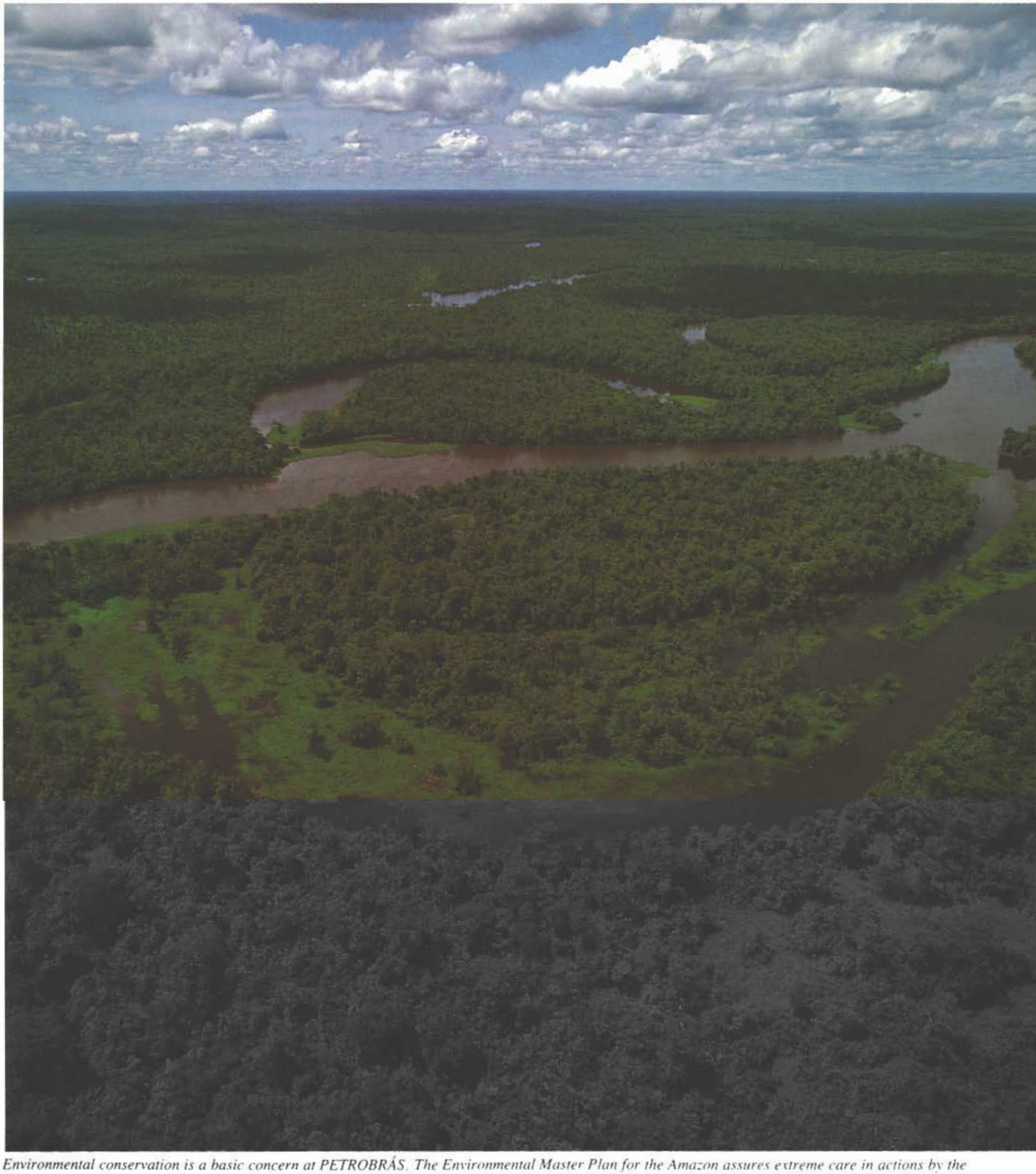
Petrochemicals: a process to obtain paradiethylbenzene was developed, among other accomplishments;

Maritime Exploitation Installations Engineering: basic engineering projects went ahead on underwater template-manifold production systems for the Albacora field; floating production systems for the Marlim and Marimbá fields; semisubmersible units for deep-water production; and the Enchova-Oeste and Enchova fixed platforms;

Process Engineering: basic engineering projects were concluded for atmospheric and vacuum distillation units as well as units for unstable products and aviation kerosene hydrotreatment which are to be incorporated into the Company's refineries, in addition to a natural gas processing unit for the Lagoa Parda field.

The basic engineering designs for the Northeast Production Pole in the Campos Basin were carried out by Cenpes.





Environmental conservation is a basic concern at PETROBRÁS. The Environmental Master Plan for the Amazon assures extreme care in actions by the Company so as to preserve these ecosystems.

Social Responsibility

Environment & Industrial Safety

Among efforts made in the field of conservation, noteworthy were the studies on environmental impact involving not only projects to be realized (oil pipelines, industrial plants, etc.) but also installations in operation, including the industrial complexes. As a result of increased oil activities at the Urucu River region in the Amazon, various preventive measures are being implemented intended to avoid harming the environment.

It should be noted that the entire effort is being realized working in close cooperation with the appropriate governmental agencies as well as the scientific community.

Various courses were given at the Model Center for the Prevention, Control and Combat of Pollution at Sea (Cempol), substantially increasing the Company's capability to control any eventual oil spills at sea. A number of Pollution Control Centers (Centropol) are being set up together with the construction and acquisition of vessels and equipment for controlling pollution at sea and on inland waterways.

Programs are under way to technically certify chemical dispersants and their manufacturers, in addition to a program to develop domestically manufactured oil absorbents.

In the industrial safety field, activities to control sources of ionizing radiation were continued, with special note for the normalization of services in industrial radiography.

One of the most striking events in 1988 was the fire aboard the central platform at Enchova in the Campos Basin. Fire-fighting activities and operations on wells required around 30 days, the time needed to drill two directional wells in order to inject 100,000 barrels of water per day into the reservoir and put out the fire. The field's reserves were saved, and it should be noted there were no victims despite the operation's size and risk.

Fire-fighting and life-saving training aboard offshore units was continued, and an increased use of risk analysis techniques jointly with development of the Company's human resources to properly utilize these techniques deserved special attention.

Teams to fight pollution at sea and on rivers are ready to go into action anywhere in the country.





PETROBRÁS sponsors cultural events to encourage young talent.

Company-Community Relations

During the year in which the Company celebrated its 35th anniversary, PETROBRÁS promoted numerous events related to culture, sports and the environment, seeking an ever greater integration with the community.

Among its community projects, a Plant-and-Harvest School promoted in 12 cities through which 250 school gardens and 50 community gardens were created, directly benefiting 100,000 students, was especially noteworthy.

Likewise focusing on the student public, a Discover Petroleum project was organized for the purpose of updating teachers in municipal and state school systems with regard to the theme of petroleum. The project reached 500,000 primary and secondary students and 1600 teachers in 1300 schools .

The Permanent Oil Expositions in various cities were another way to familiarize a student public with PETROBRÁS and the oil industry by means of visits promoted jointly with the schools involved.

In sports, the Beginners Sports Program in 19 cities reached 15,000 low-income youngsters with no access to sports clubs or associations.

The PETROBRÁS Exhibit of New Artists, involving ten showings during the year with participation by 24 artists, and a Grand Exposition celebrating the Company's anniversary stood out in the cultural field.

Among other events receiving PETROBRÁS' support, noteworthy were: the 7th Concourse of Young Brazilian Concert Artists; the 10th School Marathon involving participation by students from public and private secondary school systems throughout the country; and the 5th National Inventors Concourse.

In terms of community environmental conservation programs, PETROBRÁS continued its backing for the Program to Protect the Sea Turtle along the Brazilian Coast through an agreement with the Brazilian Foundation for the Conservation of Nature, in addition to cosponsoring the National Ecology Award for technical work on this subject.



Recently-hatched turtles at Praia do Forte, Bahia, protected by the Marine Turtle Preservation Program sponsored by PETROBRÁS.

Social Contribution

Because of its size and the ties it has with numerous sectors turning out goods and services, PETROBRÁS continued to make an important contribution toward the country's socio-economic development during 1988.

Although it has a contingent of less than 60,000 employees, the Company has been directly and indirectly assuring the generation of thousands of other jobs in various related activities. It is estimated that more than 1,000,000 jobs existing on the Brazilian labor market are directly or indirectly related to PETROBRÁS, whether in fields depending on the supply of its products or working for companies providing it with services, material and equipment. Because of the very nature of its activities, PETROBRÁS generates jobs in the most varied regions, thereby contributing toward an improved distribution of income in the country.

Considering PETROBRÁS' gross sales amounted to the equivalent of US$ 13 billion in 1988, calculations indicate that this figure represented the incorporation of US$ 8.0 billion by the Brazilian Gross National Product. This sum stands for an estimated 2.2% share in the creation of GNP. According to preliminary data, more than 10% of Brazilian GNP is directly or indirectly related to PETROBRÁS' activities.

Another indicator of the Company's contribution toward national and regional development is the volume of taxes, social security contributions and assessments paid. This volume reached the equivalent of US$ 2.732 billion within the federal scope during 1988, corresponding to 21% of its gross sales and 5.8 times the year's net profits. It should be noted here that the sum paid in royalties for producing oil on- and offshore is extremely important for the development of regional economies and totaled US$ 164 million in 1988.





PETROBRÁS' activities lead to the creation of thousands of jobs throughout the country.



With nearly 6000 service stations, Petrobrás Distribuidora — BR maintains its leadership in the competitive oil products market.

Other Activities in the Country

Distribution

Created in 1971, Petrobrás Distribuidora S.A. — BR is the country's largest oil products and hydrated alcohol distribution company, holding more than a third of the market. Its network of 5,839 service stations is the only one to reach all states and territories. It has 4,157 employees and indirectly generates around 100,000 jobs represented by a huge network of retailers, truckers, suppliers and contractors.

Petrobrás Distribuidora's gross sales of oil derivative products, hydrated alcohol and services came to Cz$ 3.498 trillion (US$ 4.624 billion), 17.2% higher in real terms than 1987.

The paid-up capital of Petrobrás Distribuidora at 12/31/1988 reached Cz$ 150.404 billion (US$ 199 million) and net profits were Cz$ 30.424 billion (US$ 40 million), denoting a 39.6% increase compared with the preceding year.

Consumption of oil products and hydrated alcohol in a competitive marketplace reached 57,954,000 m^3, a 1.8% increase over the volume commercialized during 1987.

Petrobrás Distribuidora's sales of these products came to 22,328,000 m^3, a 3.1% increase compared to the volume commercialized in 1987. BR's share of this market grew to 38.3%.

The floating service stations in the Amazon region are a demonstration of BR's scope, reaching out to the most remote points in Brazil.





BR products: more than 300 items available for consumers.

The substantial increases in hydrated alcohol sales, adding up to 2,686,000 m^3 — 12.7% more than 1987, deserve special note as do diesel oil sales which exceeded the preceding year by 7.0%, reaching 8,117,000 m^3. In terms of commercializing lubricating oils and greases, a segment with a long-established and heavy competition by international trademarks, Petrobrás Distribuidora continued to maintain market leadership with a volume of 211,000 m^3.

Sales of special products (sulfur, paraffins, extender oil, green coke, oil for agricultural sprays and aromatic residue) came to 167,000 m^3, 5.5% off the preceding year's volume.

In line with the policy of developing alternative energy sources, the Natural Gas Program continued in expansion with 1,620,000 m^3 commercialized, corresponding to an average consumption of 5400 m^3/day, a 238.8% increase over 1987 as the result of an association with the programs of a number of companies in the cities of Natal, Aracaju and Rio de Janeiro.

The Company's total tankage capacity added up to 1,548,000 m^3, 4.6% more than 1987, with a joint-ownership share in installations and acquisition of seven tanks by the Parent Company being computed in this total.

In harmony with the Federal Government's economic policy, investments were limited to programs indispensable for maintaining the Company's operational capacity, with resources totaling Cz$ 28.238 billion (US$ 27 million) being applied.

The market for oil products and hydrated alcohol suffered the direct effects of high inflation rates as did all other sectors of the nation's economy.

Activities in the retail field were oriented toward handling customers better and to improve the image of PETROBRÁS service stations.

There were 338 new service stations added to the list of client-retailers, thereby expanding the network to 5,839 stations. As a result of this performance, the Company's share of the retail market for lubricants and greases grew 3% compared with 1987, going to 15.5%.

The picture was not favorable in the consumer area (industry, transport, services, agriculture and governmental entities) which showed a 1.3% drop in sales compared with 1987, especially due to a reduced volume of fuel oils sold. This fact was linked to a decline in consumption by thermoelectric plants. At the same time, sales efforts in the trucker-retailer field led to improvements, with diesel oil sales 36.2% higher than the preceding year's, as well as in exports of lubricants and greases which showed an increase of 142.6%.

Noteworthy in the industrial field was the certification within international standards of Arbrax MP-100 and Arbrax AD-120 aviation lubricating oils formulated from basic domestic crudes which will substitute imports of similar foreign oils, as well as the Lubrax MD-400 Extra-Turbo formulation, a lubricating oil meeting the most up-to-date requirements by automotive diesel engine manufacturers.

Petrochemicals

Petrobrás Química S.A. — PETROQUISA was created in 1967 in order to invest in chemical and petrochemical projects which were then predominantly being executed in the country by foreign companies. Since that time, its investments in these sectors have not only helped reduce imports but have also stimulated the rise and consolidation of various domestic private-sector groups operating in this field. PETROQUISA currently has a direct share in the capital of 34 companies of which four are subsidiaries and the others are affiliates.

The monetarily indexed paid-up capital of PETROQUISA totaled Cz$ 328.653 billion (US$ 434 million) with net profits for 1988 of Cz$ 198.095 billion (US$ 262 million), a 54% increase over the preceding year. Financial applications in subsidiary and affiliated companies totaled Cz$ 23.287 billion (US$ 35.1 million). Gross sales by all companies composing the PETROQUISA System, including those in which the Company participates indirectly, came to Cz$ 1.694 trillion (US$ 6.465 billion).

The System's industrial units jointly showed a plant capacity factor averaging around 98%. This high operational level was the result of increased exports, especially thermoplastics, up 5.5% from the preceding year. The domestic market behaved as it had during the previous two years, absorbing around 70% of basic petrochemical production and 80% of final products.

Exports reached 1.3 million tons, generating overall foreign exchange revenues on the order of US$ 950 million. The average price paid for these exports was 49.3% higher than 1987.

The following events deserve highlighting:

— creation of a Superintendency for the Rio de Janeiro Petrochemical Complex;
— work toward implementing the Petroquisa Technology Center (Centep);
— establishment of the affiliate Poliderivados S.A. — Tecnologia de Polimeros, a result of the partial splitting up of Polibrasil S.A. — Indústria e Comércio;
— beginning the process of privatizing Petroquímica União S.A. and Álcalis do Rio Grande do Norte — Alcanorte.

The following industrial units went into operation during 1988:

— monovinyl chloride unit at CQA — Companhia Química de Alagoas with a 210,000-tons/year capacity involving a total investment of US$ 108 million;
— polyvinyl chloride unit at CPC — Companhia Petroquímica de Alagoas with a capacity of 130,000 tons/year and fixed investments of US$ 122 million;
— epichlorohydrin unit at Alclor Química de Alagoas S.A. with a capacity of 12,000 tons/year and fixed investments of US$ 59 million;
— polyisobutylene unit at Polibutenos S.A. with a 12,000-tons/year capacity at a total investment of US$ 18 million;
— ethylene-propylene terpolymer unit at Nitriflex S.A. with a capacity of 10,000 tons/year and investments totaling US$ 55 million;
— ethylene-from-alcohol unit at *Coperbo — Companhia* Pernambucana de Borracha Sintética with a 36,000-tons/year capacity and overall investments of US$ 9 million;
— methylene di-*p*-phenylene isocyanate unit at CBP — Companhia Brasileira de Poliuretanos with a capacity of 10,000 tons/year and fixed investments of US$ 27 million.

In addition, the project to expand the nominal production capacity of the ethylene unit at Copesul — Companhia Petroquímica do Sul to 561,000 tons/year was concluded in 1988.

The companies in the PETROQUISA System worked at nearly full capacity, making it possible to handle the domestic market and leading to the record result of US$ 1 billion worth of petrochemical products exported.



Fertilizers

The objective of Petrobrás Fertilizantes S.A. — PETROFÉRTIL is the production and commerce of fertilizers, their raw materials and related products. It was created in 1976 to make ventures by the PETROBRÁS System in this sector more dynamic. In 12 years, the PETROFÉRTIL Group, currently composed of five subsidiaries and four affiliates, has made it possible for the country to stop being a heavy importer, becoming able to handle nearly all domestic demand for nitrogen fertilizers.

At the beginning of 1988, sales projections for the fertilizer market painted a rosy picture due to the high quotations being obtained by the main agricultural products. This expectation, however, did not materialize and the sector built up considerable stocks as a result of imports realized.

The seasonal nature of fertilizer sales continued, with 35% sold during the first half of the year and 65% during the second, while the volume of deliveries was slightly higher than 1987, reaching approximately 9.8 million tons. Participation by the PETROFÉRTIL Group in handling overall raw materials consumption was approximately 98% of ammonia, 48% of phosphate rock, and 58% of phosphoric acid consumption. In the fertilizer sector, this share came in at around 67% for nitrogenates and 27% for phosphates.

PETROFÉRTIL handled 67% of the demand for nitrogen fertilizers.

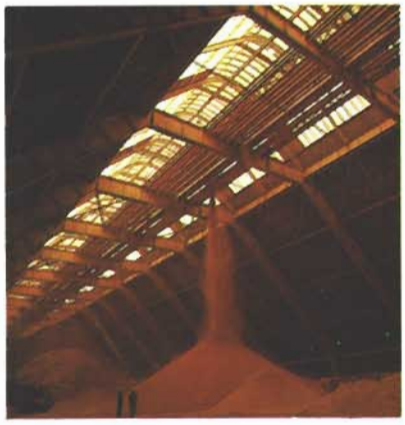


The PETROFÉRTIL Group's sales volume during the year amounted to approximately 939,000 tons of nitrogenates (including raw materials) and 756,000 tons of phosphates (likewise including raw materials), an overall increase on the order of 5.4% compared with 1987 volumes.

The Group obtained favorable financial results because of the following factors: reduction of its companies' indebtedness; recovery of its products' prices; adoption of a financial strategy optimizing application of available resources; implementation of commercial guidelines permitting sales to be financed; and a smoothing out of deliveries during the year, diminishing seasonal effects and thereby cutting stock and handling costs; reducing costs as a result of generating its own resources and using them for investments; implementing measures for administrative rationality and to reduce operational costs.

The PETROFÉRTIL Group's gross sales came to Cz$ 477.520 billion (US$ 631 million) which made investments possible on the order of Cz$ 62.848 billion (US$ 84 million), with net profits of Cz$ 2.507 billion (US$ 3.3 million). The monetarily indexed paid-up capital of PETROFÉRTIL is Cz$ 429.062 billion (US$ 567 million).

The PETROFÉRTIL Group paid special attention to the examination of new projects. Along these lines, the studies for expanding the Uberaba Industrial Complex, exploitation of a phosphate rock deposit at Anitápolis, Santa Catarina, verticalizing Goiasfértil and ICC, and implementing a new ammonia and urea unit were of special note.



Warehouse for storing potassium chloride fertilizers produced at the Taquari–Vassouras Industrial Complex in Sergipe.

Mining

An evaluation of the mineral potential in the country's sedimentary basins is the prime objective of Petrobrás Mineração S.A. — PETROMISA, a subsidiary created in 1977. Its most important project, the Taquari-Vassouras Industrial Complex in Sergipe, is scheduled to handle around 25% of the domestic demand for potassium chloride fertilizer, a basic input and one with no substitute in agriculture.

PETROMISA invested Cz$ 55.443 billion (US$ 73 million) in 1988, for the most part on the Taquari-Vassouras Industrial Complex in Sergipe which is getting ready to reach its maximum production level as scheduled in its basic project: 500,000 tons/year of potassium chloride fertilizer in 1990. This goal depends upon the import, currently being concluded, of special supplementary equipment worth US$ 13.7 million to be used in excavating and hauling ore from the mine at a depth of 500 meters, in addition to investments in domestic currency which are expected to reach the equivalent of US$ 43.4 million.

Around 720,000 tons of sylvitic rock were excavated from mine lodes and brought up to the surface, of which 620,000 tons went through the processing unit, making possible the production of 93,000 tons of potassium chloride with the same characteristics as the best imported product.

The success attained at Taquari-Vassouras in making use of rock salt (sodium chloride), once considered a mere waste product in the process of purifying potassium chloride, deserves special note. In 1988, 275,000 tons were commercialized and contracts have been signed for 1989 which will assure placing at least 500,000 tons, emphasizing its use as a raw material in the manufacture of barilla and a component in preparing drilling muds for PETROBRÁS wells. It is also scheduled for use at the Sergipe Chlorochemical Complex to be implemented within the next few years when all sodium chloride production, on the order of 1.5 million tons/year as of 1990, will be earmarked for industries to be set up there.

The advances observed in the project for making use of barite deposits discovered at Aramari, a municipality 130 km from Salvador, Bahia, should also be highlighted as well as the basic engineering project for exploiting deposits of carnallite, a hydrous potassium-magnesium chloride, in the Sergipe Basin via a joint effort with the French state-owned company, Mines de Potasse d'Alsace S.A. — MDPA.

After carrying out 13,000 meters of drilling, PETROMISA concluded the geological assay of an important rock salt deposit with reserves of 20 billion tons at a depth of around 1200 meters in the Conceição da Barra region of the state of Espírito Santo. The deposit has special importance due to its location nearby the major consuming centers.

At the same time, PETROMISA continued its efforts to evaluate the potential of Brazilian sedimentary basins, with emphasis on researching sulfur and metallic sulfides in addition to other substances also of economic interest to the country.

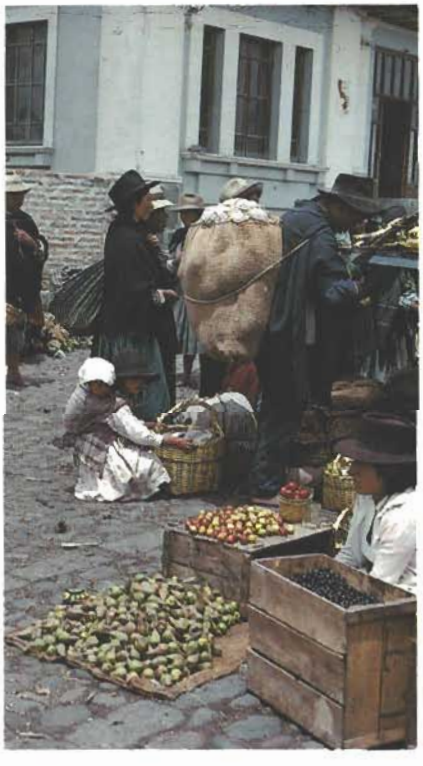
Ship Repair

The Empresa Brasileira de Reparos Navais S.A. — RENAVE in which PETROBRÁS holds 16.3% of the voting capital performed repairs on 98 ships versus 87 during the preceding year. Of the total, 53 were domestic vessels and 45 foreign-flag, this work making billings possible of Cz$ 6.762 billion (US$ 10.5 million), a figure exceeding that attained in 1987.



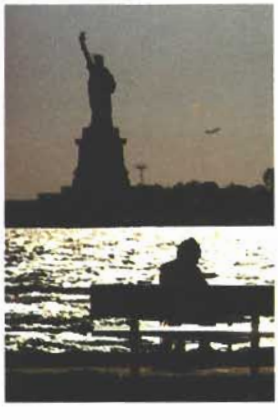












The PETROBRÁS flag is flown in a number of countries including England, Angola, Ecuador, Colombia, Norway and the United States.

International Activities



Petrobrás XI jack-up

Exploration, Production and Services

Created in 1972 for the purpose of locating its own sources of oil supplies abroad, Petrobrás Internacional S.A. — BRASPETRO has worked up its activities by performing in the field of rendering services and technical assistance for the various subdivisions of the oil industry.

In 1988, Petrobrás Internacional S.A. — BRASPETRO continued its strategy of participating in exploration, production and service sales in countries where state-of-the-art oil technology is being applied.

In this regard, the subsidiary company Petrobrás Norge A.S., operating on the Norwegian side of the North Sea, tendered offers in the 12th bidding round promoted by the Government of Norway aiming to obtain areas for oil exploration and production. A 10% participation in Blocks 35/9 and 36/7 was acquired in Part A of this bidding. Part B was being judged at the end of the year, with Petrobrás Norge having tendered bids for four new licenses.

Petrobrás América Inc., constituted in 1987, held 12 contracts at the end of 1988 in various associations for offshore Gulf of Mexico and onshore Texas sections. This subsidiary has already brought in an oil discovery (Titan-1), currently being tested commercially, and a natural gas strike (Frederick-1) whose production start-up is scheduled for 1989.



Seismic survey in Block 14, Ecuador

In the United Kingdom, the subsidiary Braspetro Oil Services Co. — BRASOIL signed an agreement with British Petroleum for acquisition of a 2.5% interest in Production License number 193 on the British side of the North Sea where the Magnus field, currently in full production, is located.

BRASPETRO has also sought to increase its rights to reserves, implementing an acquisitions policy as a way to more quickly obtain resources for investments. It was possible to apply this policy in Angola during 1988, with the Company augmenting its share of Block 2 from 17.5% to 27.5%. A new oil discovery (Raia-1) was made in this block whose annual output rose to 12 million barrels with the production start-up of the Sulele Sul field, thereby improving prospects for upcoming years.

In Ecuador, BRASPETRO continued its work in Block 17 where it is an operator, surveying and processing seismic data. In Block 14 where it holds a 35% share of rights, drilling the first well got under way and the prospects for discovering hydrocarbons there are quite favorable.

The exploration contract for the Sogamoso Block in Colombia was extended for another year, the time needed to carry out negotiations to work out new contracts.

An association with other international companies for the joint evaluation of the exploratory potential of onshore basins in the People's Republic of China remained in effect.

A significant event in the services field was the acquisition of a 67% interest in the stockholding control of Pag-O-Flex, a German company manufacturing flexible pipe intended for offshore oil and gas production, by Brasnor A.S., a Norwegian affiliate.

Also in the field of services was the performance in Angola by the Petrobrás VI and XI drilling platforms under contract to Texaco and Elf respectively, and the Amazonas rig in Libya under contract to Veba Oil (formerly Mobil), all operated by BRASOIL.

The continuation in carrying out a contract for Sarir and Tazerbo in Libya which involves drilling 318 wells as part of a project called the Great Man-made River, likewise should be mentioned.
BRASPETRO also worked in Ghana, Trinidade and Tobago, and in Angola rendering technical assistance.

The studies and opening of negotiations for the purchase and operation of a petrochemical complex at Sines, Portugal, and for project management and operation of a refinery and petrochemical complex at the Shenzen Trade Zone of the People's Republic of China were of great importance for the Company.

The completely paid-up share capital of BRASPETRO at 12/31/1988 came to Cz$ 69.588 billion (US$ 92 million). Gross sales by BRASPETRO and its subsidiaries during 1988 amounted to US$ 202 million, of which US$ 73 million came from oil sales operations and US$ 129 million from sales of services, platform charters and technical assistance.

Operations by BRASPETRO and its subsidiaries in 1988 led to a loss of Cz$ 18.587 billion (US$ 27 million) due to a conservative accounting policy by which the total investments made in oil exploration during the year are charged off to expenses until the commercial success of such ventures is established.



Rendering services and technical assistance are fields where BRASPETRO plays a very important role.



International Trade

Petrobrás Comércio Internacional S.A. — INTERBRÁS emerged in 1976 for the purpose of capitalizing on the bargaining power of the PETROBRÁS System due to its being one of the world's single largest oil buyers. Whether directly or by means of its subsidiaries, the trading company opened new markets for products long established on the list of Brazilian exports in addition to promoting the commercialization of services rendered by private Brazilian companies.

International trade has traced an irresistible course heading toward the formation of major economic blocs and transnational companies. These trends mean that the size of companies operating in international trade is of fundamental importance for their degree of competitiveness not only in terms of their presence in markets but also with respect to guaranteeing product supply. In view of this, INTERBRÁS continued its policy of performing on a large-scale basis, reaching more than 60 countries, operating with the most varied types of products, seizing opportunities opened up because of the Company's size, the confidence it has won abroad as well as its role in the PETROBRÁS System.

With an increase of around 130% over the results for 1987, INTERBRÁS closed out 1988 with net profits of Cz$ 7.186 billion (US$ 9 million).

These results were mainly due to an increase in marketing four product lines: oil and derivatives with revenues of US$ 1.163 billion; chemical and petrochemical products with US$ 391 million; soybean complex (basically due to a larger harvest) with US$ 236 million; and steel products with US$ 151 million. Aluminum exports added up to US$ 95 million while sugar shipments amounted to US$ 93 million, beef US$ 92 million and coffee beans US$ 54.5 million.

Exports during the past 12 months reached a total of US$ 2.2 billion, a 10% increase compared with the preceding year.

Sales during 1988 resulting from imports and exports added up to US$ 2.466 billion, exceeding the total registered in 1987 by 5.5%. INTERBRÁS' share capital is Cz$ 80.791 billion.

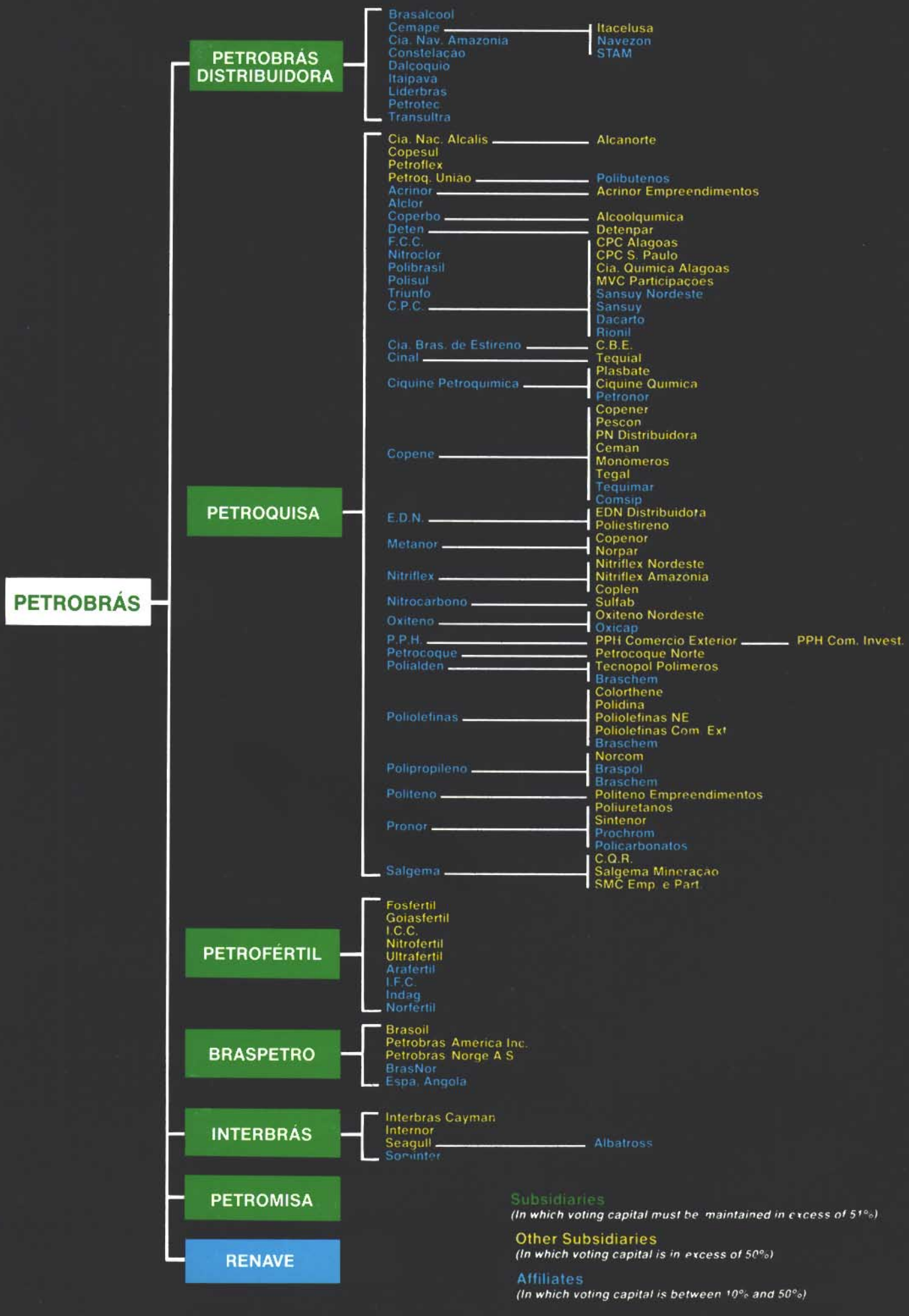
The most important markets for INTERBRÁS continued to be the United States, a big gasoline buyer, with US$ 1 billion, Iraq and Iran with US$ 269 million and US$ 221 million respectively.

Imports totaled US$ 257 million, a 21% drop compared with 1987. Oil to supply domestic demand for derivatives and other products the Federal Government uses as a regulatory stock for the domestic market stood out on the list of imports.

INTERBRÁS opened new markets for Brazilian products.



PETROBRÁS Group



Financial Analysis

Financial Statements

Financial Highlights

	Unit	1988 Per integral correction	1988 Per corporate legislation
Gross operating revenue	Cz$ million	12.472.516	4.913.616
	US$ million	16,486	16,486
Net operating revenue	Cz$ million	9.811.909	3.884.988
	US$ million	12,969	12,969
Net income	Cz$ million	200.715	200.715
	US$ million	265	265
Shares			
• Number of shares			
•• Ordinary — ON	Million	584	584
•• Preferred — PP/PN	Million	422	422
		1.006	1.006
Net income per share	Cz$	199,45	199,45
• Nominal value	Cz$	2.290,19	250,00
• Equity value	Cz$	5.302,94	5.302,94
Stockholders' equity	Cz$ million	5.336.647	5.336,647
	US$ million	7,054	7,054
Equity/debt ratio adjusted		61/39	61/39
Capital expenditures during the year	Cz$ million	1.643.495	692.091
	US$ million	2,560	2,560
Investments, property, plant and equipment and deferred charges	Cz$ million	6.479.285	6.479,285
	US$ million	8,564	8,564

Comments:

The U.S. dollar figures have been calculated by applying the year-end bank selling rate of Cz$ 756,55 to US$ 1 to the financial statements and all other cruzado figures in the Financial Analysis.

Net income

The consolidated net income of PETROBRÁS and its subsidiaries, after deducting the minority stockholders' interest in net income in 1988, as detailed below, was Cz$ 200.715 million (US$ 265 million), which shows an effective increase of 325.7% in cruzados (increase of 182% in U.S. dollars) as compared with 1987.

A breakdown of the consolidated 1988 net income, by company, follows:

	Expressed in millions	
	Cz$	US$
• Petróleo Brasileiro S.A. — PETROBRÁS	**356.595**	**471**
• Petrobrás Química S.A. — PETROQUISA — consolidated		
Petrobrás Química S.A. — PETROQUISA	198.095	261
PETROFLEX Indústria e Comércio S.A.	18.881	25
Petroquímica União S.A.	31.450	42
COPESUL — Cia. Petroquímica do Sul	27.928	37
CNA — Cia. Nacional de Álcalis	(15.778)	(21)
Eliminations and adjustments	(49.641)	(66)
Minority interests	(13.192)	(17)
	197.743	**261**
• Petrobrás Distribuidora S.A. — BR	**30.424**	**40**
• Petrobrás Internacional S.A. — BRASPETRO — consolidated		
Petrobrás Internacional S.A. — BRASPETRO	(18.587)	(24)
Braspetro Oil Services Company — BRASOIL	(13.785)	(18)
Petrobrás Norge A/S	(1.664)	(2)
Petrobrás América Inc.	(2.311)	(3)
Eliminations and adjustments	17.760	23
	(18.587)	**(24)**
• Petrobrás Comércio Internacional S.A. — INTERBRÁS — consolidated		
Petrobrás Comércio Internacional S.A. — INTERBRÁS	7.186	9
Seagull Trading Company	1.890	2
Interbrás Cayman Company	9.709	13
Internor Trade Inc.	2.813	4
Interbrás France S.A.	(182)	—
Eliminations and adjustments	(14.230)	(19)
	7.186	**9**
• Petrobrás Fertilizantes S.A. — PETROFÉRTIL — consolidated		
Petrobrás Fertilizantes S.A. — PETROFÉRTIL	2.843	3
Fertilizantes Nitrogenados do Nordeste S.A. — NITROFÉRTIL	4.264	6
ULTRAFÉRTIL S.A. Ind. e Com. de Fertilizantes	5.576	7
Fertilizantes Fosfatados S.A. — FOSFÉRTIL	749	1
Indústria Carboquímica Catarinense — ICC	640	1
Goiás Fertilizantes S.A. — GOIASFÉRTIL	605	1
Eliminations and adjustments	(11.560)	(15)
Minority interest	(610)	(1)
	2.507	**3**
Eliminations and adjustments	**(375.153)**	**(495)**
Consolidated net income	**200.715**	**265**

Revenue

The amount of Cz$ 2.660.607 million (US$ 3,517 million) was deducted relating to sales deductions, resulting in net operating revenue of Cz$ 9.811.909 million (US$ 12,969 million) broken down as follows:

	Expressed in millions		
	Cz$	US$	%
• PETROBRÁS	7.946.844	10,504	81.0
• PETROQUISA and subsidiaries	750.577	992	7.6
• DISTRIBUIDORA — BR	3.195.257	4,223	32.6
• BRASPETRO and subsidiaries	152.987	202	1.6
• INTERBRÁS and subsidiaries	1.805.570	2,387	18.4
• PETROFÉRTIL and subsidiaries	460.735	609	4.7
• Inter-company sales	(4.500.061)	(5,948)	(45.9)
	9.811.909	**12,969**	**100.0**

In relation to PETROBRÁS, responsible for 81.0% of consolidated net operating revenue, it is worth noting that the denominated "average sales price" of its products increased 764.7% in 1988, below the economic indexes directly associated with the question of prices; the U.S. dollar, the OTN (Government Treasury Bond), IPC and IGP (price level) indexes, increased 967.2%, 816.1%, 933.6% and 1,037.6%, respectively.

Financial expenses

Net financial expenses of PETROBRÁS and its subsidiaries were Cz$ 277.817 million (US$ 367 million), the main part of which were related to foreign credits for crude oil purchases.

The net current financing comprising that part not deposited with the Brazilian Central Bank was the equivalent of US$ 1,646 million at December 31, 1988. The non-current portion of such financing was about US$ 1,191 million and was substantially reduced by the prepayment of eleven financing contracts for the construction of vessels, as a result of the renegotiation carried out on December 22, 1988 with the National Economic and Social Development Bank (BNDES), whereby the contracts, which were previously readjusted based upon the devaluation of the cruzado, will be subsequently readjusted based upon the OTN index.

Cost of research and development

In 1988, the costs of crude oil prospecting and drilling in Brazil were Cz$ 867.658 million (US$ 1,147 million), and were absorbed against the accrual set up for this purpose (Decree-law 1807/80).

As a result of the crude oil prospecting and drilling activity carried out in the exterior by BRASPETRO, these costs amounted to Cz$ 79.554 million (US$ 105 million), of which Cz$ 7.378 million (US$ 10 million) were charged to consolidated income and Cz$ 72.176 million (US$ 95 million) were deferred, for future amortization.

The cost of research and technological development, including industrialization of bituminous oil shale of Cz$ 40.732 million (US$ 54 million), was absorbed against the consolidated income of the year.

Extraordinary item

During 1988, PETROBRÁS presented net revenues of Cz$ 111.268 million (US$ 147 million) due to the difference between the amount received on account of the insurance claim for the explosion on the Enchova Central Offshore Platform and the net book value of the platform, together with the disbursements incurred to extinguish the fire and others. This revenue is demonstrated as an "extraordinary item" in consolidated results for the year.

National Petroleum Council (CNP)

The consolidated position with CNP, directly related to alcohol and to the importation of petroleum resulted in a balance in PETROBRÁS' favor of Cz$ 108.733 million (US$ 144 million).

The schedule below summarizes the actual situation:

	Expressed in millions	
	Cz$	US$
1 — Alcohol fund	(165.190)	(218)
2 — Petroleum account		
• CIF variations on importations	457.074	604
• Exchange variations on importations	(400.617)	(530)
	56.457	74
3 — Consolidated CNP balance	**108.733**	**144**

The Company's working capital at December 31, 1988, included credits to equalize petroleum product prices, payable to distributors and to PETROBRÁS, in the amount of Cz$ 177.128 million (US$ 234 million).

Accounts receivable — trade

The receivables from companies which form part of the electricity sector, the Federal Railroad, the National Department of Highways and other past due debtors amounted to Cz$ 455.889 million (US$ 603 million).

As a result of these past due receivables, PETROBRÁS faced the situation of delaying the payment to the National Development Fund of the extinguished compulsory loans on fuel,which adjusted amount payable at December 31, 1988 was Cz$ 459.577 million (US$ 607 million).

Consolidated capital expenditure

Consolidated capital expenditure amounted to Cz$ 1.643.495 million (US$ 2,172 million).

These expenditures related to the various activities maintained by PETROBRÁS and its subsidiaries, with the emphasis on drilling, exploration and production of crude oil, including that abroad, which totaled Cz$ 1.043.242 million (US$ 1,379 million), as demonstrated below:

	Expressed in millions		
	Cz$	US$	%
• Exploration and Production	1.043.242	1,379	63.5
• Refining	130.946	173	7.9
• Transportation	196.738	260	12.0
• Mining	55.443	73	3.4
• Petrochemicals	78.674	104	4.8
• Fertilizers	62.840	83	3.8
• Affiliated companies	23.287	31	1.4
• Other	52.325	69	3.2
	1.643.495	**2,172**	**100.0**

Stockholders' equity and dividend

The consolidated stockholders' equity at December 31, 1988 totaled Cz$ 5.336.647 million (US$ 7,054 million), equivalent to an equity value of Cz$ 5.304,82 per share.

In relation to the dividend for 1988, the Administration of PETROBRÁS is proposing to distribute to the stockholders a dividend, which represents Cz$ 120,00 per share, equivalent to 27.2% of the base income for calculation of dividend, subject to approval by the stockholders' meeting to be realized on March 22, 1989.

In 1988, in addition to the payment of the dividend relating to 1987, PETROBRÁS paid the balance of the 1986 dividend, recorded as a special reserve, in the amount of Cz$ 51.324 million (US$ 68 million).

According to the 1989 investment program prepared by PETROBRÁS, in order to carry out the plans determined by the Federal Government and approved by the Secretariat of Control and Budget of State Companies — SEST, of the Secretariat of Planning and Coordination of the President of the Republic, direct investments are scheduled of approximately US$ 2,970 million, the majority of which is designated to exploration and development activity for the production of petroleum.

In this manner, considering that internally generated funds constitute the principal source of financing of the Company's investments, the balance of the 1988 net income amounting to Cz$ 122.313 million (US$ 162 million) will be reinvested, as well as the reserves recorded in prior years in the amount of Cz$ 189.648 million (US$ 250 million) and reversed to retained earnings.

Consequently the Administrative Council is proposing that the amount of Cz$ 311.961 million (US$ 412 million) should be maintained in stockholders' equity, recorded in the Reserve for Retention of Earnings.

Capital stock

The stockholders' meetings realized on March 22, 1988 approved:

The restatement of PETROBRÁS capital stock from Cz$ 2.017.474 million (US$ 2,666,676 thousand) to Cz$ 2.304.754 million (US$ 3,046,400 thousand), through the capitalization of the annual monetary correction and other reserves.

The Administrative Council of PETROBRÁS is proposing to the stockholders' meeting to be held on March 22, 1989 an increase in the Company's capital from Cz$ 2.304.754 million (US$ 3,046,400 thousand) to Cz$ 3.019.072 million (US$ 3,990,580 thousand) through the capitalization of reserves without issuing new shares.

This capital increase is subject to approval by the President of the Republic, by Decree.

The Federal Government is the major stockholder of Petróleo Brasileiro S.A. — PETROBRÁS and holds 81.389% of the voting capital. The paid-up capital stock is held as follows:

	Interest	
	Number of shares	%
Stockholder		
• Federal Government	513,242,181	51.0
• National Development Fund — FND	32,391,401	3.2
• BNDES — National Economic and Social Development Bank	158,957,317	15,8
• States and Federal District	8,978,289	0.9
• Municipalities and Fernando de Noronha	7,988,281	0.8
• Other public entities	12,137,596	1.2
• Individuals and private legal entities	272,662,132	27.1
	1,006,357,197	**100.0**

Report of Independent Accountants



Arthur Young

Arthur Young Auditores Associados S/C

"A free translation from Portuguese into English of the report of independent public accountants on financial statements prepared in accordance with accounting principles generally accepted in Brazil and supplemented by U.S. dollar equivalents as described in Note 2(a)".

To the Administrative Council
Petróleo Brasileiro S.A. — PETROBRÁS

1. We have examined the accompanying consolidated balance sheet of Petróleo Brasileiro S.A. — PETROBRÁS and its subsidiaries at December 31, 1988, presented under the heading "Per Corporate Legislation" and the related consolidated statements of income and changes in financial position for the year then ended, expressed in cruzados. Our examination was made in accordance with generally accepted auditing standards in Brazil and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. The examination of the consolidated financial statements at December 31, 1988 of the subsidiaries identified in Note 1, included in the consolidated financial statements of PETROBRÁS and its subsidiaries, were principally carried out by other independent accountants.

2. The Company, which exercises the Federal Government monopoly over the search, exploration, production, refining, importation and transportation of petroleum, is subject to specific legislation. The effects on the financial statements of the differences between generally accepted accounting principles and the accounting practices followed by the Company are described in Note 2 — (d) ii.

3. In our opinion, based upon our examination and on the reports of other independent accountants, except for the matter mentioned in paragraph 2, the financial statements mentioned in paragraph 1 above, present fairly the consolidated financial position of Petróleo Brasileiro S.A. — PETROBRÁS and its subsidiaries at December 31, 1988 and the consolidated results of operations and changes in financial position for the year then ended, in conformity with generally accepted accounting principles in Brazil, applied on a basis consistent with that of the preceding year.

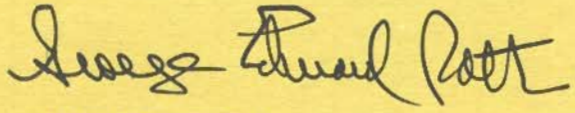
4. In addition, it is our opinion that the statements mentioned in paragraph 1 above, present fairly the consolidated financial position of Petróleo Brasileiro S.A. — PETROBRÁS at December 31, 1988 and the consolidated results of operations and changes in financial position for the year then ended, in conformity with accounting practices defined by specific legislation for the petroleum industry, applied on a basis consistent with that of the preceding year.

5. The complementary consolidated financial statements, expressed in the currency of constant purchasing power and presented under the heading "Per Integral Correction" relating to the year ended December 31, 1988, were subjected to the additional audit procedures as we considered necessary in the circumstances. In our opinion, the complementary consolidated financial statements present fairly the financial position of Petróleo Brasileiro S.A. — PETROBRÁS at December 31, 1988, the consolidated results of operations and changes in financial position for the year then ended, in conformity with accounting principles which support the financial statements in the currency of constant purchasing power, applied according to the norms issued by the Brazilian Securities and Exchange Commission (Note 2j), in order to present the effects of inflation on the financial statements.

6. We have also examined the translation of the consolidated financial statements into United States dollars. In our opinion, they have been translated on the basis described in Note 2 (a).

Rio de Janeiro, January 27, 1989

ARTHUR YOUNG AUDITORES ASSOCIADOS S/C
CRC-SP 8284 "S" RJ



George Edward Roth
Contador CRC-MG 24922 "S" RJ

"A free translation from Portuguese Into English of financial statements prepared in accordance with accounting principles generally accepted in Brazil and supplemented by U.S. dollar equivalents as described in Note 2(a)."

Petróleo Brasileiro S.A. – PETROBRÁS and its subsidiaries

Consolidated Balance Sheet

Year ended December 31, 1988
(Expressed in millions of cruzados and in thousands of U.S. dollars)

Assets

	Cz$	US$
	Per integral correction and corporate legislation	
Current Assets:		
Cash	100.082	132,287
Money market investments	38.232	50,535
	138.314	182,822
Marketable securities	391.490	517,467
Accounts receivable:		
Trade	1.183.887	1,564,850
Affiliated companies	49.775	65,792
	1.233.662	1,630,642
Allowance for doubtful accounts	(12.108)	(16,004)
Discounted	(7.324)	(9,681)
	1.214.230	1,604,957
National Petroleum Council (CNP) (Note 3)	108.733	143,722
Other accounts receivable	122.952	162,517
	1.445.915	1,911,196
Inventories (Note 4)	1.473.182	1,947,237
Other	107.603	142,228
Total current assets	3.556.504	4,700,950
Non-current assets:		
Trade installments receivable	166.228	219,719
Accounts receivable	88.288	116,698
Affiliated companies	33.868	44,767
Compulsory loans and readjustable securities issued by the Federal Power Company (Eletrobrás) (Note 5)	10.464	13,831
Other	23.715	31,346
	322.563	426,361
Investments:		
Affiliated companies (Note 6)	1.070.695	1,415,234
Other	52.090	68,852
	1.122.785	1,484,086
Property, plant and equipment (Note 7)	4.932.387	6,519,578
Deferred Charges	424.113	560,588
	10.358.352	**13,691,563**

Liabilities and stockholders' equity

	Cz$	US$
	Per integral correction and corporate legislation	
Current Liabilities:		
Financing (Note 8)	2.084.179	2,754,846
Foreign currency deposits — Brazilian Central Bank	(838.931)	(1,108,890)
	1.245.248	1,645,956
Accounts payable — trade	648.422	857,078
Taxes payable	190.491	251,789
National Petroleum Council (Note 3)	5.879	7,771
Credits to equalize petroleum product prices	177.128	234,126
Proposed dividends:		
PETROBRÁS stockholders	120.762	159.622
Minority stockholders in subsidiaries	3.033	4,009
Accrual for crude oil prospecting and drilling costs in Brazil — DL. nº 1.807/80 (Note 2.d.ii)	460.500	608,684
Compulsory loans payable — DL. nº 2.288/86	459.577	607,464
Social security contributions	91.976	121,573
Affiliated companies	15.622	20,649
Other	315.286	416,741
Total current liabilities	3.733.924	4,935,462
Non-current liabilities:		
Financing (Note 8)	1.051.343	1,389,654
Foreign currency deposits — Brazilian Central Bank	(150.490)	(198,916)
	900.853	1,190,738
Affiliated companies	83.150	109,907
Federal Government credits for future capital increase	10.037	13,267
Other	87.424	115,556
	1.081.464	1,429,468
Minority stockholders' interest in subsidiaries:		
In capital	130.736	172,806
In reserves	75.581	99,902
	206.317	272,708
Stockholders' equity (Note 9):		
Capital stock	2.304.754	3,046,400
Capital reserves	64.416	85,145
Revaluation reserve	793.367	1,048,664
Revenue reserves	2.174.110	2,873,716
	5.336.647	7,053,925
	10.358.352	**13,691,563**

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated Statement of Changes in Financial Position

Year ended December 31, 1988

(Expressed in millions of cruzados and in thousands of U.S. dollars)

	Cz$		US$
	Per integral correction	Per corporate legislation	
Financial resources were provided by:			
Operations:			
Net income for the year (before loss on translation)	200.715	200.715	265,303
Minority interest in income	13.918	13.918	18,397
Participation in the increase in the net underlying assets of affiliated companies	(160.825)	(160.825)	(212,576)
Dividends from affiliated companies	71.454	23.477	94,447
Depreciation and amortization	484.958	200.483	641,012
Price-level restatement of balance sheet accounts		(618.014)	
Monetary and exchange adjustments of non-current financing		868.755	
Excess of exchange adjustments on monetary gains on long-term financing	12.122		16,023
Net book value of property, plant and equipment disposals	159.791	91.513	211,210
Transactions with PETROBRÁS Group companies	88.940	82.933	117,560
Provision for losses on investments in oil exploration and production abroad	7.378	3.797	9,752
Net loss on monetary items	200.787		265,398
Other sources	3.804	(160)	5,028
	1.083.042	706.592	1,431,554
Other sources:			
Financing	252.883	119.519	334,258
Increase in other non-current liabilities	37.135	170.772	49,085
Credits and subsidies for investments	12.006	5.164	15,869
Other origins	10.896	815	14,402
	312.920	296.270	413,614
Total funds provided before gain on translation	1.395.962	1.002.862	1,845,168
Financial Resources were used for:			
Investments	26.791	15.642	35,412
Property, plant and equipment	952.375	397.392	1,258,839
Deferred charges	152.343	63.202	201,365
Financing transferred to current liabilities	387.534	215.494	512,238
Dividends	243.270	169.178	321,552
Increase in non-current assets	98.776	251.231	130,561
Other	63.845	106.520	84,391
Total funds applied before loss on translation	1.924.934	1.218.659	2,544,358
Increase (decrease) in working capital	**(528.972)**	**(215.797)**	**(699,190)**
Changes in working capital:			
Current Assets:			
At beginning of year	4.047.645	441.855	5,350,135
At end of year	3.556.504	3.556.504	4,700,950
	(491.141)	3.114.649	(649,185)
Current Liabilities:			
At beginning of year	3.696.093	403.478	4,885,457
At end of year	3.733.924	3.733.924	4,935,462
	37.831	3.330.446	50,005
Increase (decrease) in working capital	**(528.972)**	**(215.797)**	**(699,190)**

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated Statement of Income

Year ended December 31, 1988

(Expressed in millions of cruzados and in thousands of U.S. dollars)

	Cz$		US$
	Per integral correction	Per corporate legislation	
Gross operating revenue:			
Sales:			
Products and merchandise	12.348.318	4.852.009	16,321,879
Services, mainly freight	124.198	61.607	164,164
	12.472.516	4.913.616	16,486,043
Sales deductions	(2.660.607)	(1.028.628)	(3,516,763)
Net operating revenue	9.811.909	3.884.988	12,969,280
Cost of products and services sold	(8.866.302)	(2.570.696)	(11,719,386)
Gross profit	**945.607**	**1.314.292**	**1,249,894**
Operating expenses:			
Selling	(228.761)	(97.969)	(302,374)
Financial expenses	(278.585)	(881.432)	(368,231)
Financial income	768	353.092	1,015
Administrative and general:			
Directors' and Administrative Council fees:			
PETROBRÁS	(334)	(141)	(441)
Subsidiaries	(2.422)	(1.172)	(3,201)
Administrative	(470.962)	(231.602)	(622,513)
Taxes	(41.845)	(17.653)	(55,310)
Provision for losses on investments in oil exploration and production abroad (Note 2-h)	(7.937)	(3.797)	(10,491)
Cost of research and technological development	(40.732)	(17.484)	(53,839)
Cost of crude oil prospecting and drilling in Brazil:			
Cost incurred	(867.658)	(364.193)	(1,146,861)
Accrual — DL nº 1.807/80	867.658	364.193	1,146,861
Social contribution — Law nº 7.689/88	(23.060)	(23.060)	(30,480)
Gains and losses on monetary items without remuneration (Note 10)	155.019		204,902
Other income (expenses), net	(42.538)	(1.969)	(56,227)
	(981.389)	(923.187)	(1,297,190)
Participation in the increase in the net underlying assets of affiliated companies (Notes 5 and 9-b)	175.387	175.387	231,824
Operating income, before price-level restatements and monetary and exchange adjustments	139.605	566.492	184,528
Price-level restatements and monetary and exchange adjustments:			
Price-level restatement of balance sheet accounts:			
Stockholders' equity		(4.636.524)	
Investments, property, plant and equipment and deferred charges		5.254.538	
		618.014	
Monetary and exchange adjustments on financing of property, plant and equipment (Note 8)		(982.873)	
		(364.859)	
Operating income	139.605	201.633	184,528
Extraordinary item:			
Net result of the Enchova Central Platform claim (Note 7)	111.268	68.894	147,073
Non-operating income (expenses):			
Miscellaneous income	3.999	1.653	5,286
Exchange gains (losses) on investments abroad	23.356	12.265	30,872
Capital losses in affiliated companies	(14.562)	(14.562)	(19,248)
Others, net	8.166	1.949	10,794
	20.959	1.305	27,704
Income before income tax and minority interest	271.832	271.832	359,305
Income tax (Note 2-c)	(57.199)	(57.199)	(75,605)
Income before minority interest	214.633	214.633	283,700
Minority interest	(13.918)	(13.918)	(18,397)
Net income for the year: (Cz$ 199,45 per share, based on fully paid-up capital at year-end)	**200.715**	**200.715**	**265,303**

Notes to Consolidated Financial Statements

December 31, 1988

1. Principles of consolidation

The consolidated financial statements at December 31, 1988 were prepared in accordance with standards and procedures established by the Brazilian Securities and Exchange Commission (CVM) and include the financial statements of Petróleo Brasileiro S.A. — PETROBRÁS and of the following subsidiaries which PETROBRÁS controls either directly or indirectly.

	Interest in capital (%)	
	Subscribed and fully paid	Voting
Petrobrás Química S.A. — PETROQUISA and its subsidiaries	**99.99**	**99.99**
• Companhia Nacional de Álcalis	92.50	92.50
• Petroquímica União S.A.	67.79	67.79
• COPESUL — Companhia Petroquímica do Sul	67.22	67.22
• Petroflex Indústria e Comércio S.A.	100.00	100.00
Petrobrás Distribuidora S.A. — BR	**99.64**	**99.86**
Petrobrás Internacional S.A. — BRASPETRO and its subsidiaries	**99.99**	**99.99**
• Braspetro Oil Services Company — BRASOIL(1)	99.99	99.99
• Petrobrás Norge A/S (1)	100.00	100.00
• Petrobrás América Inc. (1)	100.00	100.00
Petrobrás Comércio Internacional S.A. — INTERBRÁS and its subsidiaries	**99.99**	**99.99**
• Interbrás Cayman Co. (1)	100.00	100.00
• Seagull Trading Co. (1)	100.00	100.00
• Interbrás France S.A. (1)	100.00	100.00
• Internor Trade Inc. (1)	100.00	100.00
Petrobrás Fertilizantes S.A. — PETROFÉRTIL and its subsidiaries	**99.91**	**99.99**
• Fertilizantes Nitrogenados do Nordeste S.A. — NITROFÉRTIL	92.23	99.85
• ULTRAFÉRTIL S.A. — Indústria e Comércio de Fertilizantes	100.00	100.00
• Indústria Carboquímica Catarinense S.A. — ICC	98.34	100.00
• Goiás Fertilizantes S.A. — GOIASFÉRTIL	82.32	82.32
• Fertilizantes Fosfatados S.A. — FOSFÉRTIL	76.22	77.77
Petrobrás Mineração S.A. — PETROMISA	**99.99**	**99.99**

(1) Companies located overseas, with financial statements prepared in the currency of the country of origin.

The consolidated financial statements of the subsidiaries at December 31, 1988 were examined by other independent accountants, except for the financial statements of BRASPETRO, which were examined by the independent accountants of PETROBRÁS. The portion of the consolidated assets examined by the independent accountants of PETROBRÁS amounted to Cz$ 7.016.582 million — US$ 9,274 million in 1988.

The financial statements of the aforementioned companies at December 31, 1988 were consolidated on a line-by-line basis and all significant intercompany transactions were eliminated.

A comparison between the unconsolidated stockholders' equity and the net income of Petróleo Brasileiro S.A. — PETROBRÁS, and the corresponding consolidated equity and net income is shown below:

	Millions of cruzados		Thousands of U.S. dollars	
	Stockholders' equity	Net income for the year	Stockholders' equity	Net income for the year
As per PETROBRÁS unconsolidated financial statements	5.520.837	356.595	7,297,385	471,344
Financial income eliminated against deferred charges of subsidiaries in the preoperating stage	(142.144)	(115.898)	(187,884)	(153,193)
Profit on intercompany sales in inventories at year-end, net of income tax	(42.046)	(39.982)	(55,576)	(52,848)
As per PETROBRÁS consolidated financial statements	**5.336.647**	**200.715**	**7,053,925**	**265,303**

2. Significant accounting policies

a) Translation from cruzados into U.S. dollars

The United States dollar figures have been calculated by applying the year-end bank selling rate of Cz$756,55 to US$1 to the consolidated balance sheet, the consolidated statements of income and changes in financial position and corresponding figures in the notes to the consolidated financial statements, all based upon the headings "Per integral correction" (Note 2.j).

The United States dollar amounts are included solely for convenience. This translation should not be construed as a representation that the cruzado amounts actually represent or have been or could be converted to United States dollars.

b) Recognition of income and current and non-current assets and liabilities

Income is recorded on an accrual basis and includes the net credit arising on the price-level restatements of investments, property, plant and equipment, deferred charges and stockholders' equity at official indexes, income, charges and monetary or exchange adjustments (based on official indexes or rates) relating to current and non-current assets and liabilities, as well as, where applicable, adjustment of assets to market or net realizable values. Income tax is deducted in determining net income.

c) Income tax

PETROBRÁS holds a monopoly granted by the Brazilian Federal Government for the research, exploration, production, refining, importation and transportation of crude oil and oil products and related activities. Therefore, it is subject to specific legislation and that part of its income deemed to arise from these monopolistic operations is exempt from income tax.

At December 31, 1988, the Company did not record an income tax provision on income for the year, due to the existence of tax loss carry forwards, in the approximate amount of Cz$81.200 million monetarily corrected — US$107,300 thousand relating to 1987.

After the partial compensation of this tax loss carry forward with the taxable income for 1988, PETROBRÁS will maintain in the appropriate income tax register ("LALUR") Cz$31.300 million — US$41,370 thousand, to be compensated against income generated in the three following years.

Consolidated income tax was computed on the taxable income of subsidiaries and affiliates.

d) Inventories

(i) Basic accounting policies

Inventories of crude oil are stated at average import and production cost, which does not exceed market value. (Imported crude oil is recorded at the "CIF structure" price fixed by the National Petroleum Council (CNP) and the differences between the actual cost and the "CIF structure" price are passed on to CNP).

The inventories of oil products and fuel alcohol are stated at average refining or purchase cost, which does not exceed realizable value. The results of operations with fuel alcohol are allocated by the Parent Company to the CNP account and it earns 2% of the purchase price of fuel alcohol in order to offset its administrative expenses with these operations, without any other direct impact on results of its operations.

Other inventories are stated at average purchase or production cost, which does not exceed replacement cost or realizable value. Imports in transit are stated at identified cost and advances at the amount effectively disbursed.

(ii) Price adjustments

Up to December 20, 1988, when the National Petroleum Council (CNP) readjusted the sales prices of oil products as a result of changes in the average cost of crude oil included in the price structure, inventories of crude oil and oil products on hand with PETROBRÁS on the dates of these readjustments, were obligatorily increased by the corresponding price adjustments, in conformity with Decree-law no. 1807/80. The corresponding credit was made to the "accrual for crude oil prospecting and drilling costs in Brazil", in order to absorb the cost of prospecting and drilling during the year. Should the balance accrued be insufficient, this cost would be charged directly to results for the year.

Had the Company not been obligated to follow this Decree-law, the realized price adjustments and the cost of prospecting and drilling for crude oil, would have been recognized in income for the year, in function of the realization of inventories.

During the year ended December 31, 1988, price adjustments of Cz$2.107.793 million — US$2,786,059 thousand were credited by the Parent Company to this accrual account, with the following impact on the consolidated financial statements:

	Millions of cruzados and thousands of U.S. dollars Overstated (understated)	
	Cz$	US$
Current assets (inventories)	214.398	283,389
Current liabilities (accrual)	460.500	608,684
Stockholders' equity	(246.102)	(325,295)
Net income for the year	(221.074)	(292,227)

Beginning on December 20, 1988, Law no. 7.693 turned optional the adoption of the above procedure, if expressly authorized by the Ministry of Mines and Energy. The outstanding balance of the accrual is to be progressively utilized to absorb the costs of prospecting and drilling of crude oil.

e) Cost of crude oil prospecting and drilling in Brazil

The costs incurred during 1988 of Cz$ 867.658 million — US$ 1,146,861 thousand, were totally offset against the accrual set up under the terms of Decree-law no. 1.807/80, which did not result in a direct charge against income.

f) Investments in affiliated companies and other

These investments are subject to price-level restatements; those in affiliated companies are also adjusted using the equity method. Exchange gains or losses from investments abroad are shown as operating or non-operating income or expenses, as applicable.

g) Property, plant and equipment and deferred charges

These assets are stated at cost plus price-level restatements.

Depreciation is provided by the straight-line method at rates which take into account the estimated economic useful lives of the assets (see Note 7) and is charged, principally, to cost of production of crude oil and products, to cost of research, exploration and drilling, to deferred charges and directly to income, as applicable.

h) Investments in oil exploration and production abroad (included with deferred charges)

Funds transferred to branches abroad by BRASPETRO, including those still to be applied, are treated as investments in oil exploration and production abroad. The effective utilization of such funds is controlled through the accounting records at each location. The net amount of financial charges resulting from transactions related to the costs of such investments, up to the start of production is allocated to these investments. On a conservative basis, a total or partial provision for risks is made for costs incurred in areas where projects are in progress until such time as an evaluation of oil discoveries shows a possibility of a recovery of the investments in these areas; the allowance would then be reversed to income.

The amortization of these investments in oil exploration and production abroad is provided based on a factor of production related to the known reserves of the oil fields. The basis of the computation of the amortization includes, in addition to the capitalized costs, net of the respective amortization, the future estimated costs to develop the proven and probable reserves and to abandon demobilized productive areas. The amount of the amortization is recognized as oil inventory and reflected in results when realized, as cost of sales.

i) Costs of research and technological development

Costs with research and technological development, including those resulting from the industrialization of bituminous oil shale, are absorbed against income in the year in which they are incurred.

j) Price-level restatement

(i) Financial statements, "Per corporate legislation"

The financial statements presented under the heading "Per corporate legislaton", are prepared in conformity with corporate legislation, with complementary instructions of the Brazilian Securities and Exchange Commission (CVM) and with the above accounting policies.

Brazilian legislation requires companies to restate the carrying value of property, plant, and equipment and related accumulated depreciation, long-term investments, certain other assets and stockholders' equity, based upon the official Federal Treasury Bond quotation coefficients. The net result of this restatement is charged or credited to income.

(ii) Complementary financial statements, "Per integral correction"

As instructed by the CVM, the Company, beginning in 1988, presents complementary financial statements, adjusted by the effects of inflation, under the heading "Per integral correction". These complementary statements are prepared based upon the financial statements "Per corporate legislation", according to the rules of the CVM, with the objective of increasing the information available to the users.

The following criteria were utilized to prepare these complementary financial statements:

Balance sheet

The balances of the permanent assets and stockholders' equity at December 31, 1988, were adjusted to that date. The other accounts were maintained at their original values because they were in accordance with the purchasing power of the currency at December 31, 1988 or because they presented formation or realization periods inferior to 90 days, with the exception of alcohol of the Parent Company, which was not adjusted, in function of the specific federal legislation determining that the results obtained on its sale should be transferred in total to the National Petroleum Council (CNP) not affecting directly the global results of operations of the Company.

For these reasons, the assets and liabilities at December 31, 1988, as "Per corporate legislation" are the same as "Per integral correction".

Statement of income

The components of the statement of income are monetarily corrected, from the month they are recorded, based upon the monthly variation of the OTN and adjusted and complemented, in relation to the following aspects:

- The inflationary losses computed based upon the variation of the OTN relating to inventories, were added to cost of sales.

- The depreciation, amortization and exhaustion expenses and the equity participation are controlled in subsidiary ledgers maintained in OTN's and converted into cruzados at the OTN rate at December 31, 1988.

- The inflationary gains and losses, computed based upon the variation of the OTN, relating to the opening balances of the monetary assets and liabilities, which generate financial expenses and income, are deducted from the respective income statement accounts.

- The inflationary gains and losses, computed based upon the variation of the OTN, relating to the opening balances of the other monetary items, are considered in specific operating result accounts, under the heading: "Gains and losses on monetary items without remuneration, net", except for the gains on the opening balances of the provision for the costs of prospecting and drilling for oil of the Parent Company, demonstrated in current liabilities, which was deducted from cost of sales.

Statement of changes in financial position

The amounts in this statement for 1988 are presented in the currency at December 31, 1988.

3. National Petroleum Council — accounts receivable and payable

Receivables and payables with the National Petroleum Council (CNP) arising from operations related to the monopolistic activities with crude oil, its products and the marketing of fuel alcohol, are recorded in accounts receivable or payable, as applicable, and are liquidated in varying periods being adjusted during 1988, in accordance with the variation of the Federal Treasury Bond index (OTN).

4. Inventories

	Millions of cruzados and thousands of U.S. dollars	
	Cz$	US$
Products:		
Oil products	382.170	505,148
Fuel alcohol	140.078	185,154
For export	27.447	36,279
Fertilizers	41.344	54,648
	591.039	781,229
Raw materials, mainly crude oil (including imports in transit)	697.584	922,059
Materials and supplies for maintenance	171.510	226,700
Imports of materials and supplies for maintenance in transit	9.538	12,607
Other	3.511	4,642
	1.473.182	**1,947,237**

5. Compulsory loans and readjustable securities Issued by the Federal Power Company (ELETROBRÁS)

According to the minutes of the stockholders' meeting of ELETROBRÁS which was held on March 29, 1988, the stockholders approved, based upon Decree-law no. 1.512/72, the conversion of the compulsory loans relating to 1978 to 1985, utilizing as the conversion factor the net book value of the ELETROBRÁS shares at December 31, 1987.

Considering that the market value of these shares at December 31, 1988 approximated the reference value of the conversion, no provision for losses was recorded object of Circular no. 025/88 and Decision no. 70, dated January 10, 1989 of the Brazilian Securities and Exchange Commission. The same procedure was applied to the compulsory loans subsequent to 1986.

6. Investments in affiliated companies

These investments, detailing the more relevant ones, can be summarized as follows:

	% Participation in paid-in capital	Millions of cruzados: Adjusted stockholders' equity	Millions of cruzados: Net income (loss) for the year	Millions of cruzados: Carrying value of investments	Thousands of U.S. dollars: Carrying value of investments
Of PETROQUISA:					
COPENE — Petroquímica do Nordeste S.A.	36.01	1.126.735	88.320	441.301	543,653
Salgema Indústrias Químicas S.A. (1)	34.12	292.299	17.646	91.095	120,408
CIQUINE — Companhia Petroquímica	39.07	167.599	3.806	57.699	76,266
EDN — Estireno do Nordeste S.A.	27.74	158.104	16.791	50.950	67,345
OXITENO S.A. — Indústria e Comércio	23.66	126.667	21.901	29.969	39,613
COPERBO — Companhia Pernambucana de Borracha Sintética	27.89	102.635	(611)	28.630	37,843
Pronor Petroquímica S.A.	33.04	141.130	12.008	52.221	69,025
POLIOLEFINAS S.A.	28.85	188.280	31.634	54.319	71,799
				776.184	1,025,952
Other affiliated companies				260.773	344,687
				1.036.957	1,370,639
Of PETROFÉRTIL, BR and others				33.738	44,595
				1.070.695	**1,415,234**

(1) Audited by our independent public accountants.

7. Property, plant and equipment

	Depreciation rate %	Millions of cruzados and thousands of U.S. dollars: Cz$	Millions of cruzados and thousands of U.S. dollars: US$
Buildings and improvements	4	497.340	657,379
Equipment:			
Exploration and production	10 to 15	1.924.713	2,544,066
Refining	10	1.229.905	1,625,676
Distribution	10 to 40	104.922	138,685
Transportation	7.5;20;25	1.266.219	1,673,675
Petrochemical production	10 and 20	982.852	1,299,124
Fertilizer production	6.7 to 20	391.781	517,852
Mining	10;12;20	11.294	14,928
Other	10 and 20	129.832	171,611
Rights and concessions	10 and 20	13.229	17,486
		6.552.087	*8,660,482*
Accumulated depreciation and amortization		(3.720.981)	(4,918,354)
		2.831.106	3,742,128
Land		151.439	200,171
Materials		121.668	160,820
Advances to suppliers, contractors and others		27.915	36,898
Expansion projects — construction in progress:			
Exploration and production		719.590	951,147
Refining		226.827	299,818
Distribution		5.634	7,447
Transportation		446.456	590,121
Petrochemical production		82.861	109,525
Fertilizer production		87.604	115,794
Mining		230.814	305,088
Other		473	621
		1.800.259	2,379,561
		4.932.387	**6,519,578**

During 1988, an explosion occurred on the Enchova Central Offshore Platform, in the Campos Basin. As a result of an agreement carried out through the Brazilian Reinsurance Institute (IRB), with the international insurance companies, PETROBRÁS received a lump sum payment of Cz$ 141.104 million — US$ 325,000 thousand, recorded in result of operations, with offsetting entries for the respective carrying value of the platform and costs incurred with the explosion.

The net result increased income by Cz$ 111.268 million — US$ 147,073 thousand and is presented as an extraordinary item, under the heading "net result of the Enchova Central Platform claim".

Depreciation and amortization for the year amounted to Cz$ 484.958 million — US$ 641,012 thousand of which Cz$ 422.653 million — US$ 558,658 thousand were charged to cost of production and cost of research, exploration, drilling and other, Cz$ 5.481 million — US$ 7,245 thousand were deferred and Cz$ 56.824 million — US$ 75,109 thousand were charged directly to consolidated income.

The funds available, in the name of PETROBRÁS, to invest in the future acquisition, expansion or repair of its fleet of vessels, arising from the surcharge levied on freight for the renewal of the Brazilian Merchant Marine (AFRMM) at December 31, 1988 amounted to Cz$ 1.080 million — US$ 1,428 thousand.

As part of its program to increase domestic crude oil production, PETROBRÁS has signed service contracts with risk clauses with qualified companies. The risk contracts provide, in general terms, that the contracted companies will bear all the costs incurred with exploration and production development. In case the explored areas are not considered commercially viable, the respective costs are not reimbursed by PETROBRÁS, which receives, however, the respective assets. Up to December 31, 1988, the contracted companies spent on exploration Cz$ 1.149.956 million — US$ 1,520,000 thousand, which will not be reimbursed.

On the other hand, if production is considered to be commercially viable, the costs incurred are reimbursed by PETROBRÁS to the contracted companies, with funds provided exclusively with net revenue from production carried out by PETROBRÁS in the respective area, in the following manner:

(i) costs incurred during the exploration phase will be reimbursed without any increase; and
(ii) costs incurred during the development phase will be reimbursed with contractual interest.

In addition, the contractors will have a contractually predetermined financial remuneration on the crude oil produced, in the respective area, also paid exclusively with the funds from the above mentioned net revenue. Up to December 31, 1988, the contracts in force presented the following position:

1. Areas where oil was discovered:
a) in the production phase: the Redondo and Serra Vermelha fields, both in the Potiguar Basin;
b) preparation of the development plan: the Nordeste do Morro do Rosado and Ponta do Mel fields, also in the Potiguar Basin.

2. Area of gas discovery:
In the development phase: the Merluza maritime field in the Santos Basin.

3. Area of exploration:
In the Marajó and Middle Amazonas Basins.

8. Financing

	Millions of cruzados and thousands of U.S. dollars			
	Current		Non-current	
	Cz$	US$	Cz$	US$
Foreign financial institutions:				
Financing subject to annual fixed or fluctuating interest of between 1% and 12.5%; fluctuating rates adjusted to changes in the prime rate or the Eurodollar market rate; repayable by 2007:				
United States dollars	1.781.354	2,354,575	337.981	446,741
Other currencies expressed in United States dollars	87.667	115,877	360.338	476,291
Bearer bonds issued in the German market, subject to annual interest of between 7% and 8%, redeemable by 1989; German marks — DM 25 million	10.815	14,295	—	
Foreign suppliers, subject to annual interest of between 5.88% and 10% repayable by 1993:				
United States dollars	39.801	52,609	11.434	15,113
Other currencies expressed in United States dollars	17.362	22,949	47.702	63,052
National Economic and Social Development Bank (BNDES):				
Financing renegotiated in 1988; subject to adjustments to changes in OTN value and interest of 6% to 8.5% per year; repayable by 1996	1.322	1,747	44.995	59,474
Financing subject to annual interest of between 1% and 12% plus adjustments to changes in OTN values; repayable by 2002	39.564	52,295	238.892	315,765
Bank of Brazil S.A.:				
Loans for imports, not subject to financial charges	22.574	29,838	—	—
Other	83.720	110,661	10.001	13,218
	2.084.179	**2,754,846**	**1.051.343**	**1,389,654**

Financing relates mainly to purchases of raw materials, alcohol, development of production facilities, construction of offshore drilling and production platforms, construction of vessels, as well as the expansion of industrial plants.

Financial institutions abroad do not require guarantees from PETROBRÁS. The financing granted by BNDES — National Economic and Social Development Bank is guaranteed by a lien on the assets being financed (vessels).

Certain subsidiaries granted in special cases guarantees on financing obtained by their affiliated companies. At December 31, 1988, these guarantees amounted to approximately Cz$ 91.900 million — US$ 121,470 thousand.

As of December 31, 1988 US$ 1,308 million (US$ 1,384 million in 1987) equivalent to Cz$ 989.421 million (Cz$ 99.241 million in 1987) were on deposit with the Brazilian Central Bank (Resolution nº 479 and Circular nº 349). Financial charges (interest and exchange adjustments) related to the periods of time elapsed between the dates of these deposits and those of the redemption and/or payment of the loans on their due dates are for the account of the Brazilian Central Bank.

On December 22, 1988, PETROBRÁS and BNDES — National Economic and Social Development Bank, according to Decree-Law nº 2.414/88 regulated by Resolution nº 211/88, of the Ministry of Transport and approved by the National Congress, according to Decree nº 26/88, signed a renegotiation agreement for part of the financing contracts for the construction of vessels. This renegotiation had as an objective to change the method of readjustment of the balance due of these contracts, computed up to September 22, 1988 by the devaluation of the cruzado in relation to the U.S. dollar and which began to be computed by the variation of the nominal value of the OTN (Federal Treasury Bond), retroactively to the original dates of the signing of the contracts. The respective credits due to the repayments already made, were offset against the future installments due of the same contracts.

Considering the December OTN, the gross effect of this renegotiation on results for the year was to increase income by Cz$ 197.190 million — US$ 260,640 thousand.

9. Stockholders' equity

a) Capital stock

The Company's subscribed and fully paid capital stock at December 31, 1988 consists of 583,970,228 ordinary and 422,386,969 preferred shares with a nominal value of Cz$ 250 each.

The preferred shares do not have any voting rights and are not convertible into ordinary shares. Ordinary shares may not be converted into preferred shares. Preferred stockholders have priority in the return of capital and in the receipt of a minimum dividend of 5%, calculated on the nominal value of their shares, monetarily corrected at the end of the year.

The Administrative Council of PETROBRÁS is proposing to the general assembly of stockholders to be held on March 22, 1989 the increase in the Company's capital from Cz$ 2.304.754 million — US$ 3,046,400 thousand to Cz$ 3.019.072 million — US$ 3,990,580 thousand, through the capitalization of reserves and the consequent increase in the nominal value of the shares to Cz$ 3.000.

b) Reserves

Reserve account balances are as follows:

	Millions of cruzados and thousands of U.S. dollars	
	Cz$	US$
Capital reserves:		
Subsidies — AFRMM	30.418	40,206
Other	33.998	44,939
	64.416	85,145
Revaluation reserve	793.367	1,048,664
Revenue reserves:		
Legal	138.037	182,456
Unrealized earnings	84.182	111,271
Retention of earnings	1.920.451	2,538,432
Special - retention of dividends	–	
Other	31.440	41,557
	2.174.110	**2,873,716**

Subsidies reserve — AFRMM

Is provided as required by legislation, through freight surcharges levied for the renewal of the Merchant Marine (AFRMM). These funds are used to purchase, enlarge or repair vessels of the fleet.

Revaluation reserve

Is established by PETROBRÁS in the amount of the revaluation increments of property, plant and equipment recorded by subsidiaries and/or affiliated companies based on appraisals by independent experts. During 1988, certain subsidiary and affiliated companies carried out revaluations of plant and equipment in the approximate amount of Cz$ 345.638 million — US$ 458,860 thousand.

As permitted by the Brazilian Securities and Exchange Commission (CVM) Decision No. 27, of January 5, 1986, the realization of this reserve, proportional to the depreciation of the revaluated assets was: (i) credited to consolidated income, classified in the account "Participation in the increase in the net underlying assets of affiliated companies" in the amount of Cz$ 65.464 million — US$ 86,530 thousand and (ii) transferred to retained earnings in the amount of Cz$ 27.323 million — US$ 36,115 thousand for reserves constituted after that date.

Legal reserve

Is provided through an appropriation of 5% of net income for the year as required by article 193 of the Brazilian Corporation Law nº 6.404/76.

Reserve for unrealized earnings

As permitted by article 196 of the Brazilian Corporation Law nº 6.404/76, was constituted in an amount equivalent to the net increase of the PETROBRÁS interest in the net equity of its subsidiaries and affiliated companies. This reserve serves the purpose of postponing the payment of dividends related to profits which exist in economic terms but which have not been realized in financial terms; when realized, such profits are transferred to retained earnings and are included for the purpose of calculating dividends.

Statutory reserve

Included with other revenue reserves, in the amount of Cz$ 31.440 million — US$ 41,557 thousand, is provided through an appropriation of net income for the year in an amount equivalent to a minimum of 0.5% of subscribed and fully paid capital restated at the year-end. The reserve is used to fund some of the costs incurred with research and technological development. The accumulated balance of this reserve can not exceed 5% of the capital stock, according to article 80 of the Company's bylaws.

Retention of earnings reserve

Destined to fund working capital requirements and, in compliance with Federal Government directives, to invest funds in the area of exploration and development of petroleum production, based upon article 196 of Brazilian Corporation Law nº 6.404/76.

Special reserve

Arises from the partial retention of dividends for the year 1986 set up in accordance with Corporate Law nº 6.404/76, for future distribution to stockholders. The respective dividends were paid during 1988.

c) Dividends

Under the Company's bylaws, stockholders are entitled to a compulsory dividend of at least 25% of adjusted net income for the year, calculated in accordance with Brazilian Corporation Law No. 6.404/76. The dividend for 1988, proposed by the Administrative Council of PETROBRÁS and subject to the approval of the stockholders, amounts to Cz$ 120.762 million — US$ 159,622 thousand, and is calculated as follows:

	Millions of cruzados and thousands of U.S. dollars	
	Cz$	US$
Net income for the year	356.595	471,344
Appropriations to:		
Legal reserve	(17.830)	(23,568)
Reserve for unrealized earnings	(84.182)	(111,271)
	254.583	336,505
Reversal of reserves including price-level restatements:		
Unrealized earnings	162.325	214,560
Contingencies		
Revaluation reserve	27.323	36,115
Base income for calculation of dividend	444.231	587,180
Proposed dividend (equivalent to 27.2% of the base income — Cz$ 120 per share) to be paid within 60 days of the date on which the dividend is declared	120.762	159,622

10. Gains and losses on monetary items without remuneration

	Millions of cruzados and thousands of U.S. dollars	
	Cz$	US$
Cash	(116.171)	(153,554)
Accounts receivable	(1.119.090)	(1,479,202)
Operations with affiliated companies	(383.160)	(506,457)
Accounts payable — trade	955.383	1,262,815
Social security contributions	155.810	205,948
Dividends	134.589	177,898
Taxes	333.484	440,796
Other accounts payable, net	194.174	256,658
	155.019	**204,902**

11. Insurance

The Company and its subsidiaries adopt insurance programs which take into consideration, principally, the concentration of risks, the relevance and the replacement value of assets. The principal data on the insurance coverage is summarized below:

	Millions of cruzados and thousands of U.S. dollars		
	Type of	Value of Coverage	
Assets	coverage	Cz$	US$
Installations, equipment and inventories	Fire	507.432	670,718
	Sundry risks	44.297	58,551
Oil products and materials in general imported and exported	Transport	1.586.058	2,096,435
Materials and products in transit in Brazil	Transport	1.023.709	1,353,128
Tankers, offshore exploration and production equipment and auxiliary vessels	Hulls	1.571.524	2,077,224

12. Petrobrás Pension Fund — Petros

Petros has as its principal objectives the complementing of the social security pension benefits of the employees of PETROBRÁS, and the majority of companies in the PETROBRÁS group and Petros itself, and the management of other social programs promoted by its sponsors. In order to meet these objectives, Petros receives monthly contributions from the companies and participants involved, based on the monthly remuneration of its employees. Contributions for the year from PETROBRÁS and its subsidiaries amounted to Cz$ 119.024 million — US$ 157,325 thousand and were charged to cost of production, research, exploration, drilling and other.

In accordance with Brazilian legislation, an annual evaluation of the Petros pension plan is made by an independent actuary.

13. Subsequent events

On January 15, 1989, the Brazilian Government introduced changes in the Brazilian economy, including a general price freeze, a devaluation of currency of 16.38% and the revocation of the procedure of monetary correction of the balance sheet.

The changes resulting from these measures should produce effects on the financial statements, which amounts are being quantified by the Company to be disclosed subsequently.

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President

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Councillor and Director

Carlos Sant'Anna
Councillor and Director

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