PETROBRAS - PETROLEO BRASILEIRO SA
Form 20-F
April 28, 2016

As filed with the Securities and Exchange Commission on April 27, 2016

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 20-F
ANNUAL REPORT
PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934

for the fiscal year ended December 31, 2015

Commission File Number 001-15106

Petróleo Brasileiro S.A.—Petrobras

(Exact name of registrant as specified in its charter)

Brazilian Petroleum Corporation—Petrobras

(Translation of registrant's name into English)

The Federative Republic of Brazil

(Jurisdiction of incorporation or organization)

Avenida República do Chile, 65

20031-912 – Rio de Janeiro – RJ – Brazil

(Address of principal executive offices)

Ivan de Souza Monteiro

Chief Financial Officer and Chief Investor Relations Officer

(55 21) 3224-2401 – ivanmonteiro@petrobras.com.br
Avenida República do Chile, 65 – 23rd Floor
20031-912 – Rio de Janeiro – RJ – Brazil

(Name, telephone, e-mail and/or facsimile number and address of company contact person)

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

Title of each class:	**Name of each exchange on which registered:**
Petrobras Common Shares, without par value*	New York Stock Exchange*
Petrobras American Depositary Shares, or ADSs (evidenced by American Depositary Receipts, or ADRs), each representing two Common Shares	New York Stock Exchange
Petrobras Preferred Shares, without par value*	New York Stock Exchange*
Petrobras American Depositary Shares (as evidenced by American Depositary Receipts), each representing two Preferred Shares	New York Stock Exchange
6.125% Global Notes due 2016, issued by PGF (successor to PifCo)	New York Stock Exchange
3.500% Global Notes due 2017, issued by PGF (successor to PifCo)	New York Stock Exchange
5.875% Global Notes due 2018, issued by PGF (successor to PifCo)	New York Stock Exchange
7.875% Global Notes due 2019, issued by PGF (successor to PifCo)	New York Stock Exchange
5.750% Global Notes due 2020, issued by PGF (successor to PifCo)	New York Stock Exchange
5.375% Global Notes due 2021, issued by PGF (successor to PifCo)	New York Stock Exchange
6.875% Global Notes due 2040, issued by PGF (successor to PifCo)	New York Stock Exchange
6.750% Global Notes due 2041, issued by PGF (successor to PifCo)	New York Stock Exchange
2.000% Global Notes due 2016, issued by PGF	New York Stock Exchange
3.000% Global Notes due 2019, issued by PGF	New York Stock Exchange
4.375% Global Notes due 2023, issued by PGF	New York Stock Exchange
5.625% Global Notes due 2043, issued by PGF	New York Stock Exchange
Floating Rate Global Notes due 2016, issued by PGF	New York Stock Exchange
Floating Rate Global Notes due 2019, issued by PGF	New York Stock Exchange
3.250% Global Notes due 2017, issued by PGF	New York Stock Exchange
4.875% Global Notes due 2020, issued by PGF	New York Stock Exchange
6.250% Global Notes due 2024, issued by PGF	New York Stock Exchange
7.250% Global Notes due 2044, issued by PGF	New York Stock Exchange
Floating Rate Global Notes due 2017, issued by PGF	New York Stock Exchange
Floating Rate Global Notes due 2020, issued by PGF	New York Stock Exchange
6.850% Global Notes due 2115, issued by PGF	New York Stock Exchange

* Not for trading, but only in connection with the registration of American Depositary Shares pursuant to the requirements of the New York Stock Exchange.

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

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

The number of outstanding shares of each class of stock as of December 31, 2015 was:

7,442,454,142 Petrobras Common Shares, without par value

5,602,042,788 Petrobras Preferred Shares, without par value

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined by Rule 405 of the Securities Act.

Yes R No £

If this report is an annual or transitional report, indicate by check mark if the registrant is not required to file reports pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes £ No R

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

Yes R No £

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes R No £

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer R Accelerated filer £ Non-accelerated filer £

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP £ International Financial Reporting Standards as issued by the International Accounting Standards Board R Other£

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17 £ Item 18 £

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes £ No R

TABLE OF CONTENTS

TABLE OF CONTENTS (cont.)

Table of Contents

FORWARD-LOOKING STATEMENTS

This annual report includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or Exchange Act, that are not based on historical facts and are not assurances of future results. The forward-looking statements contained in this annual report, which address our expected business and financial performance, among other matters, contain words such as “believe,” “expect,” “estimate,” “anticipate,” “intend,” “plan,” “aim,” “may,” “should,” “could,” “would,” “likely,” “potential” and similar expressions.

Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date on which they are made. There is no assurance that the expected events, trends or results will actually occur.

We have made forward-looking statements that address, among other things:

- our marketing and expansion strategy;
- our exploration and production activities, including drilling;
- our activities related to refining, import, export, transportation of oil, natural gas and oil products, petrochemicals, power generation, biofuels and other sources of renewable energy;
- our projected and targeted capital expenditures and other costs, commitments and revenues;
- our liquidity and sources of funding;
- our pricing strategy and development of additional revenue sources; and
- the impact, including cost, of acquisitions and divestments.

Our forward-looking statements are not guarantees of future performance and are subject to assumptions that may prove incorrect and to risks and uncertainties that are difficult to predict. Our actual results could differ materially from those expressed or forecast in any forward-looking statements as a result of a variety of assumptions and factors. These factors include, but are not limited to, the following:

- our ability to obtain financing;
- general economic and business conditions, including crude oil and other commodity prices, refining margins and prevailing exchange rates;
- global economic conditions;

- our ability to find, acquire or gain access to additional reserves and to develop our current reserves successfully;
- uncertainties inherent in making estimates of our oil and gas reserves, including recently discovered oil and gas reserves;
- competition;
- technical difficulties in the operation of our equipment and the provision of our services;

Table of Contents

- changes in, or failure to comply with, laws or regulations, including with respect to fraudulent activity, corruption and bribery;
- receipt of governmental approvals and licenses;
- international and Brazilian political, economic and social developments;
- natural disasters, accidents, military operations, acts of sabotage, wars or embargoes;
- the cost and availability of adequate insurance coverage;
- our ability to successfully implement assets sales under our divestment program;
- the outcome of ongoing corruption investigations and any new facts or information that may arise in relation to the Lava Jato investigation;
- the effectiveness of our risk management policies and procedures, including operational risk; and
- litigation, such as class actions or enforcement or other proceedings brought by governmental and regulatory agencies.

For additional information on factors that could cause our actual results to differ from expectations reflected in forward-looking statements, see “Risk Factors” in this annual report.

All forward-looking statements attributed to us or a person acting on our behalf are qualified in their entirety by this cautionary statement. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information or future events or for any other reason.

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

Table of Contents

GLOSSARY OF CERTAIN TERMS USED IN THIS ANNUAL REPORT

Unless the context indicates otherwise, the following terms have the meanings shown below:

ADR	American Depositary Receipt.
ADS	American Depositary Share.
AMS	Our heath care plan (*Assistência Multidisciplinar de Saúde*).
ANEEL	The *Agência Nacional de Energia Elétrica* (National Electrical Energy Agency), or ANEEL, is the federal agency that regulates the electricity industry in Brazil.
ANP	The *Agência Nacional de Petróleo, Gás Natural e Biocombustíveis* (National Petroleum, Natural Gas and Biofuels Agency), or ANP, is the federal agency that regulates the oil, natural gas and renewable fuels industry in Brazil.
API	Standard measure of oil density developed by the American Petroleum Institute.
Assignment Agreement	An agreement under which the Brazilian federal government assigned to us the right to explore and produce oil, natural gas and other fluid hydrocarbons in specified pre-salt areas in Brazil. See Item 10. “Additional Information—Material Contracts—Assignment Agreement.” Also referred to as the “Transfer of Rights Agreement.”
Bahiagás	Companhia de Gás da Bahia, the natural gas distribution company for the State of Bahia.
Banco do Brasil	Banco do Brasil S.A.
Bank of New York Mellon	The Bank of New York Mellon, which serves as depositary for both our common and preferred ADSs.
Barrels	Standard measure of crude oil volume.
BEAR	The Bear Insurance Company Ltd, our Bermudian subsidiary.
BMF&BOVESPA	The São Paulo Stock Exchange.
Braskem	Braskem S.A.
Brent Crude Oil	A major trading classification of light crude oil that serves as a major benchmark price for purchases of crude oil worldwide.
BNDES	The *Banco Nacional de Desenvolvimento Econômico e Social* (the Brazilian Development Bank).
BSR	Buoyancy supported riser.
Câmara de Arbitragem do Mercado	An arbitration chamber governed and maintained by the BM&FBOVESPA.

CCEE	The *Câmara de Comercialização de Energia Elétrica (*Electric Energy Trading Chamber).
CDB	The China Development Bank.
CEG Rio	Gas Natural Fenosa, the natural gas distribution company for the State of Rio de Janeiro.
Central Depositária	The *Central Depositária de Ativos e de Registro de Operações do Mercado,* which serves as the custodian of our common and preferred shares (including those represented by ADSs) on behalf of our shareholders.
CGDU	The *Controladoria Geral da União* (General Federal Inspector's Office), or CGDU, is an advisory body of the Brazilian Presidency, responsible for assisting in matters related to the protection of federal public property (*patrimônio público*) and the improvement of transparency in the Brazilian executive branch, through internal control activities, public audits, and the prevention and combat of corruption, among others.
CMN	The *Conselho Monetário Nacional* (National Monetary Council), or CMN, is the highest authority of the Brazilian financial system, responsible for the formulation of the Brazilian currency and credit policy.
CNODC	CNODC Brasil Petróleo e Gás Ltda.
CNOOC	CNOOC Petroleum Brasil Ltda.
Condensate	Light hydrocarbon substances produced with natural gas, which condense into liquid at normal temperature and pressure.
Comperj	The *Complexo Petroquímico do Rio de Janeiro – Comperj* (Petrochemical Complex of Rio de Janeiro).
CONAMA	The *Conselho Nacional do Meio Ambiente* (National Council for the Environment).
COSO	Committee of Sponsoring Organizations of the Treadway Commission.
COSO-ERM	Committee of Sponsoring Organizations of the Treadway Commission – Enterprise Risk Management Integrated Framework.
CNPE	The *Conselho Nacional de Política Energética* (National Energy Policy Council), or CNPE, is an advisory body of the President of the Republic assisting in the formulation of energy policies and guidelines.
CVM	The *Comissão de Valores Mobiliários* (Brazilian Securities and Exchange Commission), or CVM.
D&M	DeGolyer and MacNaughton.
Deep water	Between 300 and 1,500 meters (984 and 4,921 feet) deep.

Table of Contents

Distillation	A process by which liquids are separated or refined by vaporization followed by condensation.
DoJ	The U.S. Department of Justice.
Eletrobras	Centrais Elétricas Brasileiras S.A. – Eletrobras.
ERP	Enterprise Resource Planning.
EWT	Extended well test.
Exploration area	A region in Brazil under a regulatory contract without a known hydrocarbon accumulation or with a hydrocarbon accumulation that has not yet been declared commercial.
Fitch	Fitch Ratings Inc., a credit rating agency.
FPSO	Floating production, storage and offloading unit.
Gaspetro	Petrobras Gás S.A.
GSA	Long-term Gas Supply Agreement entered into with the Bolivian state-owned company Yacimientos Petroliferos Fiscales Bolivianos.
GTB	Gas Transboliviano S.A.
Heavy (crude) oil	Crude oil with API density less than or equal to 22°.
HSE	Health, Safety and Environmental.
IASB	International Accounting Standards Board.
IBAMA	The *Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis* (Brazilian Institute of the Environment and Renewable Natural Resources).
IBGC	The *Instituto Brasileiro de Governança Corporativa* (Brazilian Institute of Corporate Governance).
IBGE	The *Instituto Brasileiro de Geografia e Estatística* (Brazilian Institute of Geography and Statistics).
IOF	*Imposto sobre Operações Financeiras* (Brazilian taxes over financial transactions).
IPCA	The *Índice Nacional de Preços ao Consumidor Amplo (*National Consumer Price Index).
ISO	The International Organization for Standardization.
Intermediate (crude) oil	Crude oil with API density higher than 22° and less than or equal to 31°.

Table of Contents

Lava Jato investigation	See Item 3. “Key Information—Risk Factors—Compliance and Control Risks” and Item 8. “Financial Information—Legal Proceedings—Lava Jato Investigation.”
LFTs	*Letras Financeiras do Tesouro* (Brazilian federal government bonds).
Light (crude) oil	Crude oil with API density higher than 31°.
LNG	Liquefied natural gas.
LPG	Liquefied petroleum gas, which is a mixture of saturated and unsaturated hydrocarbons, with up to five carbon atoms, used as domestic fuel.
Mitsui	Mitsui Gás e Energia do Brasil Ltda.
MME	The *Ministério de Minas e Energia* (Ministry of Mines and Energy) of Brazil.
Moody’s	Moody’s Investors Service, Inc., a credit rating agency.
MPBM	The *Ministério do Planejamento, Orçamento e Gestão* (Ministry of Planning, Budget and Management) of Brazil.
NGLs	Natural gas liquids, which are light hydrocarbon substances produced with natural gas, which condense into liquid at normal temperature and pressure.
NYSE	The New York Stock Exchange.
OHSAS	Occupational Health and Safety Management Systems.
Oil	Crude oil, including NGLs and condensates.
ONS	The *Operador Nacional do Sistema Elétrico* (National Eletrictric System Operator) of Brazil.
OPEC	Organization of the Petroleum Exporting Countries.
OSRL	The Oil Spill Response Limited.
PDVSA	Petróleos de Venezuela S.A.
Pesa	Petrobras Argentina S.A.
Petros	Petrobras’s employee pension fund.
Petros 2	Petrobras’s sponsored pension plan.

PFC Energy	A global energy research and consultancy group.
PGF	Petrobras Global Finance B.V.
PifCo	Petrobras International Finance Company S.A.
PLSV	Pipe laying support vessel.
PO&G	Petrobras Oil & Gas.
Post-salt reservoir	A geological formation containing oil or natural gas deposits located above a salt layer.
PPSA	Pré-Sal Petróleo S.A.
Pre-salt reservoir	A geological formation containing oil or natural gas deposits located beneath a salt layer.
Proved reserves	Consistent with the definitions in Rule 4-10(a) of Regulation S-X, proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible – from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations. Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price is the average price during the 12-month period prior to December 31, 2015, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions. The project to extract the hydrocarbons must have commenced or we must be reasonably certain that we will commence the project within a reasonable time. Reserves which can be produced economically through application of improved recovery techniques (such as fluid injection) are included in the "proved" classification when successful testing by a pilot project, or the operation of an installed program in the reservoir, provides support for the engineering analysis on which the project or program was based.
Proved developed reserves	Reserves that can be expected to be recovered: (i) through existing wells with existing equipment and operating methods or for which the cost of the required equipment is relatively minor compared to the cost of a new well; and (ii) through installed extraction equipment and infrastructure operational at the time of the reserve estimate if the extraction is by means not involving a well.
Proved reserves	Consistent with the definitions in Rule 4-10(a) of Regulation S-X, proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible – from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations. Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be

	determined. The price is the average price during the 12-month period prior to December 31, 2015, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions. The project to extract the hydrocarbons must have commenced or we must be reasonably certain that we will commence the project within a reasonable time. Reserves which can be produced economically through application of improved recovery techniques (such as fluid injection) are included in the "proved" classification when successful testing by a pilot project, or the operation of an installed program in the reservoir, provides support for the engineering analysis on which the project or program was based.
Proved developed reserves	Reserves that can be expected to be recovered: (i) through existing wells with existing equipment and operating methods or for which the cost of the required equipment is relatively minor compared to the cost of a new well; and (ii) through installed extraction equipment and infrastructure operational at the time of the reserve estimate if the extraction is by means not involving a well.
Proved undeveloped reserves	Reserves that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required. Reserves on undrilled acreage are limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances. Undrilled locations are classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances justify a longer time. Proved undeveloped reserves do not include reserves attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir or by other evidence using reliable technology establishing reasonable certainty.

Table of Contents

PTAX	The reference exchange rate for the purchase and sale of U.S. dollars in Brazil, as published by the Brazilian Central Bank.
PwC	PricewaterhouseCoopers Auditores Independentes.
Rnest	The *Refinaria Abreu e Lima* (Abreu e Lima Refinery).
S&P	Standard & Poor’s Financial Services LLC, a credit rating agency.
SDNY	The United States District Court for the Southern District of New York.
SEC	The United States Securities and Exchange Commission.
SELIC	The Brazilian Central Bank base interest rate.
Sete Brasil	Sete Brasil Participações, S.A.
Suape Petrochemical Complex	The *Complexo Industrial Petroquímica Suape,* an industrial complex with facilities owned by Companhia Petroquímica de Pernambuco – PetroquímicaSuape and Companhia Integrada Têxtil de Pernanbuco – Citepe.
Shell	Shell Brasil Petróleo Ltda.
SPE	The Society of Petroleum Engineers.
SS	Semi-submersible unit.
Synthetic oil and synthetic gas	A mixture of hydrocarbons derived by upgrading (i.e., chemically altering) natural bitumen from oil sands, kerogen from oil shales, or processing of other substances such as natural gas or coal. Synthetic oil may contain sulfur or other non-hydrocarbon compounds and has many similarities to crude oil.
TCU	The *Tribunal de Contas da União* (Federal Auditor’s Office), or TCU, is an advisory body of the Brazilian Congress, responsible for assisting it in matters related to the supervision of the Brazilian executive branch with respect to accounting, finance, budget, operational and public property (*patrimônio público*) matters.
TBG	Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. (TBG).
TLWP	Tension Leg Wellhead Platform.
Total	Total E&P do Brasil Ltda.
Total depth	Total depth of a well, including vertical distance through water and below the mudline.

Table of Contents

Transpetro	Petrobras Transporte S.A.
Ultra-deep water	Over 1,500 meters (4,921 feet) deep.
YPFB	Yacimientos Petroliferos Fiscales Bolivianos.

CONVERSION TABLE

1 acre	=	43,560 square feet	=	0.004047 km^2
1 barrel	=	42 U.S. gallons	=	Approximately 0.13 t of oil
1 boe	=	1 barrel of crude oil equivalent	=	6,000 cf of natural gas
1 m^3 of natural gas	=	35.315 cf	=	0.0059 boe
1 km	=	0.6214 miles		
1 meter	=	3.2808 feet		
1 t of crude oil	=	1,000 kilograms of crude oil	=	Approximately 7.5 barrels of crude oil (assuming an atmospheric pressure index gravity of 37° API)

Table of Contents

ABBREVIATIONS

bbl	Barrels
bcf	Billion cubic feet
bn	Billion (thousand million)
bnbbl	Billion barrels
bncf	Billion cubic feet
bnm^3	Billion cubic meters
boe	Barrels of oil equivalent
bnboe	Billion barrels of oil equivalent
bbl/d	Barrels per day
cf	Cubic feet
GWh	One gigawatt of power supplied or demanded for one hour
km	Kilometer
km^2	Square kilometers
m^3	Cubic meter
mbbl	Thousand barrels
mbbl/d	Thousand barrels per day
mboe	Thousand barrels of oil equivalent
mboe/d	Thousand barrels of oil equivalent per day
mcf	Thousand cubic feet
mcf/d	Thousand cubic feet per day
mm^3	Thousand cubic meters
mm^3/d	Thousand cubic meters per day
mm^3/y	Thousand cubic meter per year
mmbbl	Million barrels
mmbbl/d	Million barrels per day
mmboe	Million barrels of oil equivalent
mmboe/d	Million barrels of oil equivalent per day
mmcf	Million cubic feet
mmcf/d	Million cubic feet per day
mmm^3	Million cubic meters
mmm^3/d	Million cubic meters per day
mmt	Million metric tons
mmt/y	Million metric tons per year
MW	Megawatts
MWavg	Amount of energy (in MWh) divided by the time (in hours) in which such energy is produced or consumed
MWh	One megawatt of power supplied or demanded for one hour
ppm	Parts per million
P$	Argentine pesos
R$	Brazilian *reais*
t	Metric ton
Tcf	Trillion cubic feet
US$	United States dollars

/d	Per day
/y	Per year

Table of Contents

PRESENTATION OF FINANCIAL AND OTHER INFORMATION

This is the annual report of Petróleo Brasileiro S.A.—Petrobras, or Petrobras. Unless the context otherwise requires, the terms "Petrobras," "we," "us," and "our" refer to Petróleo Brasileiro S.A.—Petrobras and its consolidated subsidiaries, joint operations and structured entities.

We currently issue notes in the international capital markets through our wholly-owned finance subsidiary Petrobras Global Finance B.V., or PGF, a private company with limited liability incorporated under the law of The Netherlands. We fully and unconditionally guarantee the notes issued by PGF. In the past, we used our former wholly-owned subsidiary, Petrobras International Finance Company S.A., or PifCo, as a vehicle to issue notes that we fully and unconditionally guaranteed. On December 29, 2014, PifCo merged into PGF, and PGF assumed PifCo's obligations under all outstanding notes originally issued by PifCo (together with the notes issued by PGF, the "PGF notes"), which continue to benefit from our full and unconditional guarantee. PGF is not required to file periodic reports with the U.S. Securities and Exchange Commission, or SEC. See Note 36 to our audited consolidated financial statements.

In this annual report, references to "*real*," "*reais*" or "R$" are to Brazilian *reais* and references to "U.S. dollars" or "US$" are to United States dollars. Certain figures included in this annual report have been subject to rounding adjustments; accordingly, figures shown as totals in certain tables may not be an exact arithmetic aggregation of the figures that precede them.

Our audited consolidated financial statements as of and for each of the three years ended December 31, 2015, 2014 and 2013 and the accompanying notes contained in this annual report have been presented in U.S. dollars and prepared in accordance with International Financial Reporting Standards, or IFRS, issued by the International Accounting Standards Board, or IASB. See Item 5. "Operating and Financial Review and Prospects" and Note 2 to our audited consolidated financial statements. Petrobras applies IFRS in its statutory financial statements prepared in accordance with Brazilian Corporate Law and regulations promulgated by the CVM.

Our IFRS financial statements filed with the CVM are presented in *reais*, while the presentation currency of the audited consolidated financial statements included herein is the U.S. dollar. The functional currency of Petrobras and all of its Brazilian subsidiaries is the *real.* The functional currency of Petrobras Argentina is the Argentine peso, and the functional currency of most of our other entities that operate internationally is the U.S. dollar. As described more fully in Note 2.2 to our audited consolidated financial statements, the U.S. dollar amounts for the periods presented have been translated from the *real* amounts in accordance with the criteria set forth in IAS 21 – "The effects of changes in foreign exchange rates." Based on IAS 21, we have translated all assets and liabilities into U.S. dollars at the exchange rate as of the date of the balance sheet and all accounts in the statement of income and statement of cash flows at the average rates prevailing during the corresponding year.

Unless the context otherwise indicates:

- data contained in this annual report regarding capital expenditures, investments and other expenditures during the corresponding year that were not derived from the audited consolidated financial statements have been translated from *reais* at the average rates prevailing during such corresponding year;

- historical data contained in this annual report regarding balances of investments, commitments or other related expenditures that were not derived from the audited consolidated financial statements have been translated from *reais* at the period-end exchange rate; and

Table of Contents

- forward-looking amounts, including estimated future capital expenditures and investments, have all been based on our 2015-2019 Business and Management Plan, as originally approved in June 2015 and further revised in January 2016 ("2015-2019 Plan"), and have been projected on a constant basis and have been translated from *reais* using an estimated average exchange rate of R$4.06 to US$1.00 for 2016, in accordance with our 2015-2019 Plan. In addition, in accordance with our 2015-2019 Plan, future calculations involving an assumed price of crude oil have been calculated using an average Brent crude oil price of US$45 per barrel for 2016.

PRESENTATION OF INFORMATION CONCERNING RESERVES

We apply the SEC rules for estimating and disclosing oil and natural gas reserve quantities included in this annual report. In accordance with those rules, we estimate reserve volumes using the average prices calculated as the unweighted arithmetic average of the first-day-of-the-month price for each month within the 12-month period prior to the end of the reporting period, except for reserves in certain fields for which volumes have been estimated using gas prices as set forth in our contractual arrangements for the sale of gas. Reserve volumes of non-traditional reserves, such as synthetic oil and gas, are also included in this annual report in accordance with SEC rules. In addition, the rules also utilize a reliable technology definition that permits reserves to be added based on field-tested technologies.

DeGolyer and MacNaughton (D&M) used our reserve estimates to conduct a reserves audit of 95.2% of our net proved crude oil, condensate and natural gas reserves as of December 31, 2015 in certain properties we own in Brazil. In addition, D&M used its own estimates of our reserves to conduct a reserves evaluation of 100% of the net proved crude oil, condensate, NGL and natural gas reserves as of December 31, 2015 from the properties we operate in Argentina. Furthermore, D&M used our reserve estimates to conduct a reserves audit of 100% of the net proved crude oil, condensate and natural gas reserves as of December 31, 2015 in properties we operate in the United States. The reserve estimates were prepared in accordance with the reserves definitions in Rule 4-10(a) of Regulation S-X. All reserve estimates involve some degree of uncertainty. See Item 3. "Key Information—Risk Factors—Risks Relating to Our Operations" for a description of the risks relating to our reserves and our reserve estimates.

On January 29, 2016, we filed proved reserve estimates for Brazil with the ANP, in accordance with Brazilian rules and regulations, totaling net volumes of 10.7 bnbbl of crude oil, condensate and synthetic oil and 13.1 tcf of natural gas and synthetic gas. The reserve estimates filed with the ANP were approximately 27% higher than those provided herein in terms of oil equivalent. This difference is due to: (i) the fact that the ANP permits the estimation of proved reserves through the technical-economical abandonment of production wells, as opposed to limiting reserve estimates to the life of the concession contracts as required by Rule 4-10 of Regulation S-X; and (ii) different technical criteria for booking proved reserves, including the use of future oil prices projected by Petrobras as opposed to the SEC requirement that the 12-month average price be used to determine the economic producibility of the reserves.

We also file reserve estimates from our international operations with various governmental agencies under the guidelines of the SPE. The aggregate reserve estimates from our international operations, under SPE guidelines, amounted to 0.2 bnbbl of crude oil, condensate and NGL and 0.9 tcf of natural gas as of December 31, 2015, which is approximately 6% higher than the reserve estimates calculated under Regulation S-X, as provided herein. This difference is due to different technical criteria for booking proved reserves, including the use of future oil prices projected by Petrobras as opposed to the SEC requirement that the 12-month average price be used to determine the economic producibility of the reserves.

Table of Contents

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

Selected Financial Data

This section contains selected consolidated financial data presented in U.S. dollars and prepared in accordance with IFRS as of and for each of the five years ended December 31, 2015, 2014, 2013, 2012 and 2011, derived from our audited consolidated financial statements, which were audited by PricewaterhouseCoopers Auditores Independentes–PwC for the years ended December 31, 2015, 2014, 2013 and 2012 and KPMG Auditores Independentes for the year ended December 31, 2011.

The information below should be read in conjunction with, and is qualified in its entirety by reference to, our audited consolidated financial statements and the accompanying notes and Item 5. "Operating and Financial Review and Prospects."

BALANCE SHEET DATA

IFRS Summary Financial Data

	As of December 31,				
	2015	**2014**	**2013**	**2012**	**2011**
	(US$ million)				
Assets:					
Cash and cash equivalents	25,058	16,655	15,868	13,520	19,057
Marketable securities	780	9,323	3,885	10,431	8,961
Trade and other receivables, net	5,803	7,969	9,670	11,099	11,756
Inventories	7,441	11,466	14,225	14,552	15,165
Assets classified as held for sale	152	5	2,407	143	–
Other current assets	4,194	5,414	6,600	8,049	9,653
Long-term receivables	19,177	18,863	18,782	18,856	18,962
Investments	3,527	5,753	6,666	6,106	6,530
Property, plant and equipment	161,297	218,730	227,901	204,901	182,918
Intangible assets	3,092	4,509	15,419	39,739	43,412
Total assets	230,521	298,687	321,423	327,396	316,414

Liabilities and shareholders' equity:					
Total current liabilities	28,573	31,118	35,226	34,070	36,364
Non-current liabilities(1)	24,411	30,373	30,839	42,976	34,744
Non-current finance debt(2)	111,482	120,218	106,235	88,484	72,718
Total liabilities	164,466	181,709	172,300	165,530	143,826
Shareholders' equity					
Share capital (net of share issuance costs)	107,101	107,101	107,092	107,083	107,076
Reserves and other comprehensive income (deficit)(3)	(41,865)	9,171	41,435	53,631	64,240
Shareholders' equity attributable to the shareholders of Petrobras	65,236	116,272	148,527	160,714	171,316
Non-controlling interests	819	706	596	1,152	1,272
Total shareholders' equity	66,055	116,978	149,123	161,866	172,588
Total liabilities and shareholders' equity	230,521	298,687	321,423	327,396	316,414

(1) Excludes non-current finance debt.

(2) Excludes current portion of long-term finance debt.

(3) Change in interest in subsidiaries, profit reserve and accumulated other comprehensive income (deficit).

Table of Contents

INCOME STATEMENT DATA

IFRS Summary Financial Data

	For the Year Ended December 31,				
	2015 (1)	**2014 (1)**	**2013**	**2012**	**2011**
	(US$ million, except for share and per share data)				
Sales revenues	97,314	143,657	141,462	144,103	145,915
Net income (loss) before finance income (expense), share of earnings in equity-accounted investments, profit sharing and income taxes	(1,130)	(6,963)	16,214	16,900	27,285
Net income (loss) attributable to the shareholders of Petrobras	(8,450)	(7,367)	11,094	11,034	20,121
Weighted average number of shares outstanding:					
Common	7,442,454,142	7,442,454,142	7,442,454,142	7,442,454,142	7,442,454,142
Preferred	5,602,042,788	5,602,042,788	5,602,042,788	5,602,042,788	5,602,042,788
Net income (loss) before financial results, profit sharing and income taxes per:					
Common and Preferred shares	(0.09)	(0.53)	1.24	1.30	2.09
Common and Preferred ADS	(0.18)	(1.06)	2.48	2.60	4.18
Basic and diluted earnings (losses) per:					
Common and Preferred shares	(0.65)	(0.56)	0.85	0.85	1.54
Common and Preferred ADS	(1.30)	(1.12)	1.70	1.70	3.08
Cash dividends per(2):					
Common shares	−	−	0.22	0.24	0.53
Preferred shares	−	−	0.41	0.48	0.53

Common ADS	——	0.44	0.48	1.06
Preferred ADS	——	0.82	0.96	1.06

(1) In 2014, we wrote-off US$2,527 million of overpayments incorrectly capitalized. In 2015 and 2014, we recognized impairment losses of US$12,299 million and US$16,823 million, respectively. See Notes 3 and 14 to our audited consolidated financial statements for further information.

(2) Pre-tax interest on capital and/or dividends proposed for the year. Amounts were translated from the original amounts in *reais* using the balance sheet date exchange rate.

Table of Contents

RISK FACTORS

Risks Relating to Our Operations

We have substantial liabilities and may be exposed to significant liquidity constraints in the near and medium term, which could materially and adversely affect our financial condition and results of operations, and which has required that we modify our business plan and strategy.

We have incurred a substantial amount of debt in order to finance the capital expenditures needed to meet our long-term objectives. As our cash flow from operations in recent years has not been sufficient to fund our capital expenditures and payment of interest, principal and dividends, our debt has significantly increased since 2010. Our total debt (including accrued interest) decreased by 4% to US$126,165 million as of December 31, 2015 from US$132,086 million as of December 31, 2014, and increased by 10% from US$114,236 million as of December 31, 2013. Our debt, net of cash, cash equivalents and marketable securities decreased by 5% to US$100,328 million as of December 31, 2015 compared to US$106,108 million as of December 31, 2014, and increased by 6% from US$94,483 million as of December 31, 2013. 33% of our existing debt (principal), or US$40.6 billion, will mature in the next three years. In order to develop our oil and natural gas reserves, maintain our ability to supply the Brazilian domestic market and service our debt, we will need to raise significant amounts of debt capital from a broad range of funding sources, as well as rely on the potential proceeds from assets sales under our divestment program.

To service our debt after providing for capital expenditures, we have relied upon, and may continue to rely upon, a combination of cash flows provided by our operations, divestments, additional debt facilities, and drawing down our cash and short-term financial investments balance.

We lost our Moody's, S&P and Fitch investment grade ratings for all of our credit ratings in February, September and December 2015, respectively, and have experienced further credit rating downgrades since then. Credit rating agencies continue to express concern regarding (i) liquidity pressures and our capacity to meet our principal and interest payment obligations maturing in the short- and medium-term, (ii) the total size of our debt, (iii) the increase in our indebtedness and leverage over the last few years, (iv) the significant decline in international crude oil prices, (v) the sharp devaluation of the *real* and (vi) the challenges involved in successfully implementing our divestment program.

The loss of our investment grade credit rating and any further lowering of our credit ratings has had, and may continue to have adverse consequences on our ability to obtain financing or may impact our cost of financing, also making it more difficult or costly to refinance maturing obligations. Our inability to obtain financing on favorable terms could have an adverse effect on our results of operations and financial condition. The loss of our investment grade credit rating resulted and may continue to result in a less liquid market for our debt and equity securities, because certain institutions are unable to purchase our securities, therefore reducing our investor base.

If, for any reason, we are faced with continued difficulties in accessing debt financing, this could impair our ability to timely meet our principal and interest payment obligations with our creditors, and hamper our ability to achieve our long-term objectives as our cash flow from operations is currently insufficient to fund both our debt service obligations and our planned capital expenditures. As a result of the above, we may not be able to make the capital expenditures in the amounts needed to maintain our long-term objectives, which may adversely affect our results of operations and financial condition.

If such constraints occur at a time when our cash flow from operations are less than the resources needed to fund our capital expenditures or to meet our principal and interest payments obligations, in order to provide additional liquidity to our operations, we could be forced to further reduce our planned capital expenditures and increase the numbers of assets to be sold under our divestment program. A reduction in our capital expenditure program or the sale of strategic assets under our divestment program could affect our results of operations and financial condition.

Table of Contents

Despite the fact that the Brazilian federal government (as our controlling shareholder) is not responsible or liable for any of our liabilities – including those derived from the bonds we issue in the international capital markets – our credit rating is sensitive to any change in the Brazilian federal government credit rating. The credit rating of the Brazilian federal government has been downgraded in 2015 and 2016, and is no longer investment grade. Any further lowering of the Brazilian federal government credit ratings may have additional adverse consequences on our ability to obtain financing or our cost of financing, and consequently, on our results of operations and financial condition.

We are vulnerable to increased debt service resulting from depreciation of the real in relation to the U.S. dollar and increases in prevailing market interest rates.

As of December 31, 2015, approximately 84% of our financial debt liabilities was denominated in currencies other than the *real* (74% of which was denominated in U.S. dollars). A substantial portion of our indebtedness is, and is expected to continue to be, denominated in or indexed to the U.S. dollar and other foreign currencies. A further depreciation of the *real* against these other currencies will increase our debt service in *reais*, as the amount of *reais* necessary to pay principal and interest on foreign currency debt will increase with this depreciation. Considering the average exchange rate of each year, from 2003 to 2011, the *real* appreciated against the U.S. dollar each year (by an average of 7% per year), except for 2009 (when it depreciated by 9%). In 2015, the *real* depreciated 41.8% against the U.S. dollar, compared to depreciation of 9.1% in 2014, 10.4% in 2013 and depreciation of 16.7% in 2012. Through April 22, 2016, the *real* has rebounded, appreciating by 8.2% compared to December 31, 2015.

This foreign exchange variation will have an immediate impact on our reported income, except for a portion of our obligations denominated in U.S. dollars that are subject to our hedge accounting policy. According to our hedge accounting policy, hedge designations are made to the extent that future exports are considered to be highly probable. On December 31, 2015, the average ratio of highly probable future exports to debt instruments for which a hedging relationship has been designated in the future periods was 60%. The average ratio for the period of 2016-2019 was 80%, while for the period of 2020-2026 was 55%. Future exports may cease to be considered highly probable or even expected, which will have an impact in our future results. See Item 5. "Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates—Cash Flow Hedge Accounting Involving our Future Exports."

Following a devaluation of the *real*, some of our operating expenses, capital expenditures, investments and import costs will increase. As most of our revenues are denominated in *reais*, unless we increase the prices of our products to reflect the depreciation of the *real*, our cash generation relative to our capacity to service debt may decline.

Additionally, we have debt maturities that amount to US$78.7 billion during the next five years, a portion of which may be refinanced by issuing new debt. The cost of any new indebtedness may be negatively affected by the recent loss of our investment grade credit rating by Moody's, S&P and Fitch and possible further downgrades. To the extent we refinance our maturing obligations with newly contracted debt, we may incur additional interest expense.

As of December 31, 2015, approximately 49% of our total indebtedness consisted of floating rate debt. We generally do not enter into derivative contracts or similar financial instruments or make other arrangements with third parties to hedge against the risk of an increase in interest rates. To the extent that such floating rates rise, we may incur additional expenses. Additionally, as we refinance our existing debt in the coming years, the mix of our indebtedness may change, specifically as it relates to the ratio of fixed to floating interest rates, the ratio of short-term to long-term debt, and the currencies in which our debt is denominated or to which it is indexed. Changes that affect the composition of our debt and cause rises in short- or long-term interest rates may increase our debt service payments, which could have an adverse effect on our results of operations and financial condition.

Our divestment program depends on external factors that could impede its successful implementation.

Our 2015-2019 Plan includes, among other initiatives, a divestment program that contemplates the sale of US$15.1 billion in assets for the period 2015-2016, with the goal of improving our short-term liquidity position (by increasing our cash balance) and allowing us to deleverage. External factors, such as the sustained decline in oil prices, exchange rate fluctuations, the deterioration of Brazilian and global economic conditions and the Brazilian political crisis, among other factors may reduce or hinder sales opportunities for our assets or affect the price at which we can sell our assets, and may force us to alter the terms of our divestment program. As of April 22, 2016, we had sold approximately US$700 million of assets under our divestment program for the 2015-2016 period. See Item 4. "Information on the Company—Overview of the Group" for further information about our divestment program. Additionally, our deleveraging efforts may have unintended consequences, including limiting our ability to maintain our long-term objectives and affecting our relationships with suppliers, customers and the local communities in which we operate.

If we are unable to successfully implement our divestment program, or if our deleveraging efforts lead to unintended consequences, this may have a material adverse effect on our business, results of operations and financial condition, including by potentially exposing us to significant liquidity constraints in the near and medium term. See "—Risks Relating to Our Operations—We have substantial liabilities and may be exposed to significant liquidity constraints in the near and medium term, which could materially and adversely affect our financial condition and results of operations, and which has required that we modify our business plan and strategy." In addition, the sale of strategic assets under our divestment program will result in a decrease in our cash flows from operations, which could negatively impact our long-term operating growth prospects and consequently our results of operations in the medium and long-term.

Maintaining our long-term objectives for oil production depends on our ability to successfully obtain and develop oil reserves.

Our ability to maintain our long-term objectives for oil production is highly dependent upon our ability to successfully develop our existing reserves, and to obtain additional reserves. The development of the sizable reservoirs in deep and ultra-deep waters, including the pre-salt reservoirs that have been licensed and granted to us by the Brazilian federal government, has demanded and will continue to demand significant capital investments. A primary operational challenge, particularly for the pre-salt reservoirs, will be (i) securing the critical resources that are necessary to meet our production targets, (ii) allocating our resources to build the necessary equipment and deploy such equipment at considerable distances from the shore and (iii) securing a qualified labor force and offshore oil services to develop reservoirs of such size and magnitude in a timely manner. Also, our long-term objectives for oil production are dependent upon our ability to secure financing necessary to meet the capital expenditures needed for oil exploration and production. We cannot guarantee that we will have or will be able to obtain, in the time frame that we expect, sufficient resources and financing necessary to exploit the reservoirs in deep and ultra-deep waters that have been licensed and granted to us, or that may be licensed and granted to us in the future.

Our ability to obtain additional reserves depends upon exploration activities, which exposes us to the inherent risks of drilling, and may not lead to the discovery of commercially productive crude oil or natural gas reserves. Drilling wells often yields uncertain results, and numerous factors beyond our control (such as unexpected drilling conditions, equipment failures or incidents, and shortages or delays in the availability of drilling rigs and the delivery of equipment) may cause drilling operations to be curtailed, delayed or cancelled. In addition, increased competition in the oil and gas sector in Brazil and our own capital constraints may make it more difficult or costly to obtain additional acreage in bidding rounds for new concessions and to explore existing concessions. These factors could impede us from participating in further bidding rounds in the future and limit future exploration. We may not be able to maintain our long-term objectives for oil production unless we conduct successful exploration and development activities of our large reservoirs in a timely manner.

Table of Contents

Also, our ability to maintain our long-term objectives for oil production partially rely on major projects and operations that are conducted in joint arrangements or in partnership with other oil and gas companies. If we or our partners fail or are unable to meet with respective payment obligations under applicable contractual arrangements, this may threaten the viability of a given project, and may result either in (i) a delay or cancellation of such project, which could bring regulatory sanctions to the relevant joint arrangement or partnership, (ii) an increase or dilution of our interest in such project or (iii) our withdrawal from such project, any of which could have a material adverse effect on our results of operations and financial condition.

International prices of crude oil, oil products and natural gas may affect us differently than our competitors and may cause our results to differ from our competitors in periods of higher international prices.

International prices for oil and oil products are volatile and have a significant effect on us. We may not adjust our prices for products sold in Brazil when the international prices of crude oil and oil products increase, or when the *real* depreciates in relation to the U.S. dollar, which could have a negative impact on our results of operations and financial condition.

Our pricing policy in Brazil takes into account domestic market conditions and seeks to align the price of oil and oil products with international prices over the long term, however we do not necessarily adjust our prices for diesel, gasoline and other products to reflect oil price volatility in the international markets or short-term volatility of the *real* vs. U.S dollar exchange rate. Based on the decisions of the Brazilian federal government, as our controlling shareholder, we have had, and may continue to have, periods during which our product prices will not be at parity with international product prices (See "—Risks Relating to Our Relationship with the Brazilian Federal Government—The Brazilian federal government, as our controlling shareholder, may pursue certain macroeconomic and social objectives through us that may have a material adverse effect on us.") As a result, when we are a net importer by volume of oil and oil products to meet Brazilian demand, increases in the price of crude oil and oil products in the international markets may have a negative impact on our costs of sales and margins, since the cost to acquire such oil and oil products may exceed the price at which we are able to sell these products in Brazil. A similar effect occurs when the *real* depreciates in relation to the U.S. dollar, as we sell oil and oil products in Brazil in *reais* and international prices for crude oil and oil products are set in U.S. dollars. A depreciation of the *real* increases our cost of imported oil and oil products, without a corresponding increase in our revenues unless we are able to increase the price at which we sell products in Brazil.

The majority of our revenue is derived primarily from sales in Brazil of crude oil and oil products and, to a lesser extent, natural gas. Changes in crude oil prices typically result in changes in prices for oil products and natural gas. Historically, international prices for crude oil, oil products and natural gas have fluctuated widely as a result of many global and regional factors. Volatility and uncertainty in international prices for crude oil, oil products and natural gas may continue. For instance, on September 1, 2014, the Brent crude oil price per barrel was US$101.37, while on May 5, 2015, the Brent crude oil price per barrel was US$66.37, and eight months later, on January 20, 2016, the Brent crude oil price per barrel was US$26.39. On

April 22, 2016, the Brent crude oil price per barrel was US$44.00.

Since the last quarter of 2015, we have not adjusted our prices for gasoline, diesel and other oil products, in order to avoid passing on to the domestic market short-term volatility in (i) international prices of crude oil and oil products, and (ii) the *real* vs. U.S. dollar exchange rate. Our pricing policy for this period also took into consideration domestic market conditions.

Substantial or extended declines in international crude oil prices may have a material adverse effect on our business, results of operations and financial condition, and may also affect the value of our proved reserves.

Table of Contents

We rely on key third-party suppliers and service providers to provide us with parts, components, services and critical resources that we need to operate our business and complete our major projects, which could be adversely affected by any failure or delay by such third parties in performing their obligations or any deterioration in the financial condition of such third parties.

Our ability to maintain our long-term objectives for oil production depends upon successful delivery of major exploration and production projects. Failure to successfully deliver such major projects, or delays in doing so, could adversely affect our results of operations and financial condition.

We rely upon various key third-party suppliers, vendors and service providers to provide us with parts, components, services and critical resources, which we need to operate and expand our business. If these key suppliers, vendors and service providers critically fail to deliver, or are delayed in delivering, equipment, service or critical resources to our major projects, we may not meet our operating targets in the time frame we expected. We may ultimately need to delay or suspend one or more of our major projects, which could have an adverse effect on our results of operations and financial condition.

We are susceptible to the risks of performance, product quality and financial condition of our key suppliers, vendors and service providers. For instance, their ability to adequately and timely provide us with parts, components, services and resources critical to our major projects may be affected if they are facing financial constraints or times of general financial stress and economic downturn. As a result of the ongoing Lava Jato investigation, a number of our Brazilian contractors and suppliers have been unable to secure financing and are currently facing liquidity and bankruptcy concerns that may affect their ability to continue as our key suppliers, vendors and service providers. Although we work closely with our key suppliers, vendors and service providers to avoid supply-related problems, there can be no assurance that we will not encounter supply disruptions in the future or that we will be able to timely replace such suppliers or service providers that are not able to meet our needs, which might adversely affect a timely and successful execution of our major projects, and consequently, our results of operations and financial condition.

In 2014, we temporarily suspended the ability of 32 companies belonging to 23 corporate groups to participate as suppliers and contractors in future bids for new contracts and services with us, while we and the Brazilian authorities analyzed the involvement and participation of these companies in alleged illegal conduct in connection with the Lava Jato investigation. In 2015, this suspension was extended to two other companies. Since then, three companies have met the requirements necessary for lifting the suspension, and 31 remain suspended. See Note 3 to our audited consolidated financial statements for further information about the Lava Jato investigation. A number of these suppliers and contractors have historically acted as key suppliers, vendors and service providers for our major projects. There can be no assurance that these companies will be permitted to participate in our future major projects or that we will be able to replace such key suppliers, vendors and service providers with others that would be able to meet our needs, which could affect the successful and timely delivery of our major future projects, and consequently our results of operations and financial condition.

We are also subject to Brazilian local content requirements arising out of our concession agreements, the Assignment Agreement and the Libra Production Sharing Agreement. As a result, we are required to acquire from domestic suppliers the majority of the parts, components, services and resources critical to our major projects. This mandatory acquisition of equipment and services from a limited number of suppliers may result in (i) higher acquisition costs and (ii) delays in the delivery of equipment. Additionally, these requirements, along with the temporary suspension of many of our local suppliers described above, could cause delays in some of our major projects if we are unable to timely replace Brazilian suppliers or service providers that fail to perform their obligations under our contracts. Unless ANP exempts us from complying with local content requirements, as to which there is no assurance, we could also face delays and fines in the execution of our current major exploration and production projects.

Table of Contents

We are exposed to the credit risks of certain of our customers and associated risks of default. Any material nonpayment or nonperformance by some of our customers could adversely affect our cash flow, results of operations and financial condition.

Some of our customers may experience financial constraints or liquidity issues that could have a significant negative effect on their creditworthiness. Severe financial issues encountered by our customers could limit our ability to collect amounts owed to us, or to enforce the performance of obligations owed to us under contractual arrangements.

For instance, as of December 31, 2015, certain subsidiaries of Centrais Elétricas Brasileiras S.A. – Eletrobras owed us approximately US$3.4 billion under energy supply agreements. In 2015 and 2014, we recognized an allowance for impairment of trade receivables from the isolated electricity sector in the Northern region of Brazil amounting to approximately US$1.2 billion and US$1.9 billion, respectively, mostly to cover certain trade receivables due by Eletrobras's subsidiaries. See Note 8.4 to our audited consolidated financial statements.

In addition, many of our customers finance their activities through their cash flows from operations, the incurrence of short- and long-term debt. Declining financial results and economic conditions in Brazil, and resulting decreased cash flows, combined with a lack of debt or equity financing for our customers may affect us, since many of our customers are Brazilian, and may have significantly reduced liquidity and limited ability to make payments or perform their obligations to us. As we have not obtained any other guarantees to minimize our customers' credit risk, their financial problems could result in a decrease in our cash flows from operations and may also reduce or curtail our customers' future demand for our products and services, which may have an adverse effect on our results of operations and financial condition.

Exploration and production of oil, particularly offshore, involves risks that could have a material adverse impact on our business.

Exploration and production of oil involves risks that are increased when carried out offshore. The majority of our exploration and production activities are carried out in deep and ultra-deep waters, and the proportion of our deep water activities will remain constant or increase due to the location of our pre-salt reservoirs. Our activities, particularly offshore, present several risks, such as the risk of oil spills, explosions on platforms and in drilling operations and natural disasters. The occurrence of any of these events or other incidents could result in personal injuries, casualties, severe environmental damage with the resulting containment, clean-up and repair expenses, equipment damage and liability in civil and administrative proceedings.

The majority of the projects in which we engage in order to explore and produce oil are large, long-term projects that involve a number of different phases. Each phase of these projects is susceptible to changes in market conditions, the prices of raw materials and commodities, foreign exchange variations, potential issues with suppliers and contractors and other possible factors that could impact the viability of the project. In addition, each of these projects is inter-dependent on other projects in our system, and a delay in, or decision not to proceed with, one project could have a material impact on one or more other projects.

Our insurance policies do not cover all liabilities, and insurance may not be available for all risks. There can be no assurance that incidents will not occur in the future, that insurance will adequately cover the entire scope or extent of our losses or that we will not be found liable in connection with claims arising from these and other events.

Table of Contents

Our crude oil and natural gas reserve estimates involve some degree of uncertainty, which could adversely affect our ability to generate income.

Our proved crude oil and natural gas reserves set forth in this annual report are the estimated quantities of crude oil, natural gas and NGLs that geological and engineering data demonstrate with reasonable certainty to be recoverable from known reservoirs under existing economic and operating conditions (i.e., prices and costs as of the date the estimate is made) according to applicable regulations. Our proved developed crude oil and natural gas reserves are reserves that can be expected to be recovered through existing wells with existing equipment and operating methods. There are uncertainties in estimating quantities of proved reserves related to prevailing crude oil and natural gas prices applicable to our production, which may lead us to make revisions to our reserve estimates. In 2015, our proved crude oil and natural gas reserve estimates declined 20% compared to our 2014 estimates, mainly as a result of the decrease in oil prices during 2015. Further downward revisions in our reserve estimates could lead to lower future production, which could have an adverse effect on our results of operations and financial condition.

We do not own any of the subsoil accumulations of crude oil and natural gas in Brazil.

Under Brazilian law, the Brazilian federal government owns all subsoil accumulations of crude oil and natural gas in Brazil and the concessionaire owns the oil and gas it produces from those subsoil accumulations pursuant to applicable agreements executed with the Brazilian federal government. We possess, as a concessionaire of certain oil and natural gas fields in Brazil, the exclusive right to develop the volumes of crude oil and natural gas included in our reserves pursuant to concession agreements, the Libra Production Sharing Agreement and the Assignment Agreement awarded to us by the Brazilian federal government, and except for the profit oil owed to the Brazilian federal government under the Libra Production Sharing Agreement, we own the hydrocarbons we produce under those contractual arrangements. Access to crude oil and natural gas reserves is essential to an oil and gas company's sustained production and generation of income, and our ability to generate income would be adversely affected if the Brazilian federal government were to restrict or prevent us from exploiting these crude oil and natural gas reserves. In addition, we may be subject to fines by the ANP and our concessions, the Libra Production Sharing Agreement and the Assignment Agreement may be revoked if we do not comply with our obligations under such contractual arrangements.

The Assignment Agreement we entered into with the Brazilian federal government is a related party transaction subject to future price readjustment.

The transfer to us of oil and gas exploration and production rights related to specific pre-salt areas, subject to a maximum production of five billion boe, is governed by Law No. 12,276/2010 and by the Assignment Agreement, which is a contract between the Brazilian federal government, our controlling shareholder, and us. The negotiation of the Assignment Agreement involved significant issues, including (1) the area covered by the assignment of rights, consisting of exploratory blocks; (2) the volume, on a barrel of oil equivalent basis, that we can extract from this area; (3) the price to be paid for the assignment of rights; (4) the terms of any subsequent revision of the contract price and volume; and (5) the terms of the reallocation of volumes among the exploratory blocks assigned to us.

The Assignment Agreement includes provisions for a subsequent revision of certain of its terms, including the price we paid for the rights we acquired. We are currently undergoing negotiations with the Brazilian federal government in accordance with the terms of the Assignment Agreement based on a number of factors, including assumptions regarding the timing of our oil and gas production, operating and investment costs, and crude oil international prices. There is no formal or official date for the conclusion of the revision process. See Item 4. “Information on the Company—Exploration and Production-Santos Basin—Assignment Agreement” and Item 10. “Material contracts—Assignment Agreement” for further information.

At the time the Assignment Agreement was negotiated, the initial contract price paid by us was based on an assumed Brent oil crude price of approximately US$80 per barrel. During the term of the Assignment Agreement, novel issues may arise in the implementation of the revision process and other provisions that could require further negotiations. Once the revision process is concluded pursuant to the terms of the Assignment Agreement, if the revised contract price is higher than the initial contract price, we will either make an additional payment to the Brazilian federal government or reduce the amount of barrels of oil equivalent subject to the Assignment Agreement.

Beginning June 2014, CNPE Resolution No. 01/2014 authorized the Brazilian federal government to directly engage Petrobras, under production sharing agreements, to produce oil, natural gas and fluid hydrocarbons in the Assignment Agreement areas at a volume exceeding the five bnboe maximum production originally agreed to under the Assignment Agreement. However, we have not initiated negotiations of the terms of these production sharing agreements and do not have an estimate of when these agreements may be executed, nor can we ensure that their terms would be favorable to us. See Item 10. "Material Contracts—Assignment Agreement— Additional Production in the Assignment Agreement Areas" and Note 12.3 to our audited consolidated financial statements.

We are subject to numerous environmental, health and safety regulations and industry standards that are becoming more stringent and may result in increased capital and operating expenditures and decreased production.

Our activities are subject to evolving industry standards and best practices, and a wide variety of federal, state and local laws, regulations and permit requirements relating to the protection of human health, safety and the environment, both in Brazil and in other jurisdictions in which we operate. Particularly in Brazil, our oil and gas business is subject to extensive regulation by several governmental agencies, including the ANP, ANEEL, *Agência Nacional de Transportes Aquaviários* (Brazilian Water Transportation Agency), or ANTAQ and *Agência Nacional de Transportes Terrestres* (Brazilian Land Transportation Agency), or ANTT. Failure to observe or comply with these laws and regulations could result in penalties that could adversely affect our operations. In Brazil, for example, we could be exposed to administrative and criminal sanctions, including warnings, fines and closure orders for non-compliance with these environmental, health and safety regulations, which, among other things, limit or prohibit emissions or spills of toxic substances produced in connection with our operations. Waste disposal and emissions regulations may also require us to clean up or retrofit our facilities at significant costs and could result in substantial liabilities. The *Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis* (Brazilian Institute of the Environment and Renewable Natural Resources), or IBAMA, the various Brazilian state environmental agencies and the ANP, among others, routinely inspect our facilities, and may impose fines, restrictions on operations, or other sanctions in connection with their inspections, including unexpected, temporary shutdowns and delays resulting in decreased production. In addition, we are subject to environmental laws that require us to incur significant costs to cover damage that a project may cause to the environment. These additional costs may have a negative impact on the profitability of the projects we intend to implement or may make such projects economically unfeasible.

As environmental, health and safety regulations become more stringent with evolving industry standards, and as new laws and regulations relating to climate change, including carbon controls, become applicable to us, it is possible that our capital expenditures and investments for compliance with such laws and regulations and industry standards will increase substantially in the future. In addition, if compliance with such laws, regulations and industry standards results in significant unplanned shutdowns, there could be a material adverse effect on our production. We also cannot guarantee that we will be able to maintain or renew our licenses and permits if they are revoked or if the applicable environmental authorities oppose or delay their issuance or renewal. Increased expenditures to comply with environmental, health and safety regulations to mitigate the environmental impact of our operations or to restore the biological and geological characteristics of the areas in which we operate may result in reductions in other strategic investments. Any substantial increase in expenditures for compliance with environmental, health or safety regulations or reduction in strategic investments and significant decreases in our production from unplanned shutdowns may have a material adverse effect on our results of operations and financial condition.

We may incur losses and spend time and financial resources defending pending litigations and arbitrations.

We are currently a party to numerous legal proceedings relating to civil, administrative, tax, labor, environmental and corporate claims filed against us. These claims involve substantial amounts of money and other remedies. Several individual disputes account for a significant part of the total amount of claims against us. See Item 8. “Financial Information—Legal Proceedings” and Note 30 to our audited consolidated financial statements included in this annual report for a description of the legal proceedings to which we are subject. In the event that claims involving a material amount and for which we have no provisions were to be decided against us, or in the event that the losses estimated turn out to be significantly higher than the provisions made, the aggregate cost of unfavorable decisions could have a material adverse effect on results of operations and financial condition. We may also be subject to litigation and administrative proceedings in connection with our concessions and other government authorizations, which could result in the revocation of such concessions and government authorizations. In addition, our management may be required to direct its time and attention to defending these claims, which could prevent them from focusing on our core business. Depending on the outcome, litigation could result in restrictions on our operations and have a material adverse effect on some of our businesses.

Differing interpretations of tax regulations or changes in tax policies could have an adverse effect on our financial condition and results of operations.

We are subject to tax rules and regulations that may be interpreted differently over time, or that may be interpreted differently by us and Brazilian tax authorities, both of which could have a financial impact on our business. For example, in the second and third quarters of 2015, we recognized material charges related to settlements of certain tax liabilities. Although unanticipated, these charges relate to the settlement of disputes relating to tax regulations that allowed for certain tax contingencies to be settled at a reduced value. In some cases, when we have exhausted all administrative appeals relating to a tax contingency, further appeals must be made in the judicial courts, which may require that, in order to appeal, we provide collateral to judicial courts, such as the deposit of amounts equal to the potential tax liability in addition to accrued interest and penalties. In certain of these cases, settlement of the matter may be a more favorable option for us.

In the future, we may be faced with similar situations in which our interpretation of a tax regulation may differ from that of tax authorities, or tax authorities may dispute our interpretation and we may eventually take unanticipated provisions and charges. In addition, the eventual settlement of one tax dispute may have a broader impact on other tax disputes. Changes in interpretation or differing interpretations as to tax regulations, as well as our decision to settle any claims relating to such regulations, could have a material adverse effect on our financial condition and results of operations.

Table of Contents

Changes in tax policies may also have an adverse effect on us. The Brazilian federal, state and municipal governments have in the past changed tax policies in manners that affect the oil and gas industry, and they may do so again in the future. These changes may include, among other things, the creation or the increase in tax rates affecting oil and gas companies. For instance, the State of Rio de Janeiro has recently enacted laws that impose domestic value-added taxes and inspection taxes over oil and gas production within the State of Rio Janeiro. Although challenges to the constitutionality of such laws have been filed before the Brazilian Supreme Court, we cannot predict whether such challenges will prevail.

We may face additional civil proceedings related to the Lava Jato investigation.

We are subject to a number of civil proceedings related to the Lava Jato investigation, including a putative securities class action lawsuit against us consolidated in the United States District Court for the Southern District of New York ("SDNY") on February 17, 2015. See Item 8. "Financial Information—Legal Proceedings" and Note 30.4 to our audited consolidated financial statements contained therein for a description of the U.S. securities class action litigation. In addition to the Consolidated Securities Class Action, to date, 29 lawsuits have been filed by individual investors before the same judge in the SDNY (two of which have been stayed), and one has been filed in the United States District Court for the Eastern District of Pennsylvania, consisting of allegations similar to those in the Consolidated Securities Class Action. The plaintiffs have not specified an amount of alleged damages in the actions. Because these actions are in their early stages, the possible loss or range of losses, if any, arising from the litigation cannot be estimated and consequently we have made no provisions with respect to this litigation. In the event that this litigation is decided against us, or we enter into an agreement to settle such matters, we may be required to pay substantial amounts. Depending on the outcome, such litigation could also result in restrictions on our operations and have a material adverse effect on our business. Petrobras has engaged a U.S. firm as legal counsel and intends to defend vigorously against the allegations made in the context of these actions. In addition, EIG Management Company filed a complaint against us on February 23, 2016 in connection with their investment in Sete Brasil Participações, S.A., or Sete Brasil. It is possible that additional complaints or claims might be filed in the United States, Brazil or elsewhere against us relating to the Lava Jato investigation in the future. Our management may be required to direct its time and attention to defending these claims, which could prevent them from focusing on our core business.

We are not insured against business interruption for our Brazilian operations, and most of our assets are not insured against war or sabotage.

We generally do not maintain insurance coverage for business interruptions of any nature for our Brazilian operations, including business interruptions caused by labor action. If, for instance, our workers or those of our key third-party suppliers, vendors and service providers were to strike, the resulting work stoppages could have an adverse effect on us. In addition, we do not insure most of our assets against war or sabotage. See "—Risks Relating to Our

Operations—Strikes, work stoppages or labor unrest by our employees or by the employees of our suppliers or contractors could adversely affect our results of operations and our business." Therefore, an attack or an operational incident causing an interruption of our business could have a material adverse effect on our results of operations and financial condition.

Developments in the oil and gas industry (such as the recent significant decline in international crude oil and gas prices) and other factors have resulted, and may result, in substantial write-downs of the carrying amount of certain of our assets, which could adversely affect our results of operations and financial condition.

We evaluate on an annual basis, or more frequently where the circumstances require, the carrying amount of our assets for possible impairment. Our impairment tests are performed by a comparison of the carrying amount of an individual asset or a cash-generating unit with its recoverable amount. Whenever the recoverable amount of an individual asset or cash-generating unit is less than its carrying amount, an impairment loss is recognized to reduce the carrying amount to the recoverable amount.

Table of Contents

Changes in the economic, regulatory, business or political environment in Brazil or other markets where we operate, such as the recent significant decline in international crude oil and gas prices, the devaluation of the *real* and lower projected economic growth in Brazil, as well as changes in financing conditions for such projects, among other factors, may affect the original profitability estimates of our projects and result in (i) projects being delayed or cancelled and (ii) the recognition of impairment charges in certain of our assets. For example, in 2015 and 2014, we recognized impairment charges of US$12,299 million and US$16,823 million, respectively, for certain of our property, plant and equipment, intangible assets and assets classified as held for sale. See Item 5. “Operating and Financial Review and Prospects—Results of Operations—2015 compared to 2014” and Item 5. “Operating and Financial Review and Prospects—Results of Operations—2014 compared to 2013”, Item 5. “Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates” and Notes 5.2 and 14 to our audited consolidated financial statements for further information about the impairment of certain of our assets.

Future developments in the economic environment, in the oil and gas industry and other factors could result in further substantial impairment charges, adversely affecting our operating results and financial condition.

Our commitment to meet the obligations of our pension plan (“Petros”) and health care benefits (“AMS”) may be higher than what is currently anticipated, and we may be required to make additional contributions of resources to Petros.

The criteria used for determining commitments relating to pension and health care plan benefits are based on actuarial and financial estimates and assumptions with respect to (i) the calculation of projected short-term and long-term cash flows and (ii) the application of internal and external regulatory rules. Therefore, there are uncertainties inherent in the use of estimates that may result in differences between the predicted value and the actual realized value.

In addition, the financial assets held by Petros to cover pension obligations are subject to risks inherent to investment management and such assets may not generate the necessary returns to cover the relevant liabilities. Further, Petros may be required to assume the payment of additional obligations arising from court decisions unfavorable to the plan. With respect to the results of Petros, under current Brazilian law, in the event of actuarial deficits in specific circumstances, an equalization plan may be necessary and, therefore, extraordinary contributions from us, as sponsor, and our employees, may be required. An eventual equalization plan for Petros that would require contributions from us may have a material adverse effect on our results of operations and financial condition.

With respect to AMS, the projected cash flows, as well as payments and actuarial liabilities, may also be impacted by (i) substantial increases in medical costs, (ii) additional demands for better benefits and (iii) the difficulty of adjusting the contributions of participants proportionally to medical cost increases.

These risks may result in an increase in our liabilities and adversely affect our results of operations and our business. See Note 22 to our audited consolidated financial statements for further information about our employee benefits, including pension and health care plans.

Table of Contents

Strikes, work stoppages or labor unrest by our employees or by the employees of our suppliers or contractors, as well as potential shortages of skilled personnel, could adversely affect our results of operations and our business.

Approximately 45% of our employees are represented by labor unions. Disagreements on issues involving divestments or changes in our business strategy, reductions in our personnel, as well as potential employee contributions to a Petros shortfall, could lead to labor unrest. In 2015, oil workers unions organized a series of protests, culminating in a strike lasting 27 days, which impacted our production levels in November 2015. This strike took place during negotiations over the social clauses of the collective bargaining agreement for 2015-2017. We cannot ensure that such strikes affecting our production levels will not occur during future negotiations. Strikes, work stoppages or other forms of labor unrest at any of our major suppliers, contractors or their facilities could impair our ability to complete major projects and impact our ability to achieve our long-term objectives.

In addition, we could experience potential shortages of skilled personnel. We recently announced a new voluntary separation incentive program open to all of our employees, and we estimate that approximately 12,000 employees will enroll in such program. If this voluntary separation incentive program is successfully implemented, and we are unable to timely replace key skilled personnel that decide to enroll in such program, this could adversely affect our results of operations and our business. See Item 6. “Directors, Senior Management and Employees—Employees and Labor Relations—Voluntary Separation Incentive Program-PIDV.” Our success also depends on our ability to continue to successfully train and qualify our personnel so they can assume qualified senior positions in the future. We cannot assure you that we will be able to properly train, qualify or retain senior management personnel, or do so without costs or delays, nor can we assure you that we will be able to find new qualified senior managers, should the need arise. Any such failure could adversely affect our results of operations and our business.

Compliance and Control Risks

We are exposed to behaviors incompatible with our ethics and compliance standards, and failure to timely detect or remedy any such behavior may have a material adverse effect on our results of operations and financial condition.

Our business, including relationships with third parties, is guided by ethical principles. We have adopted a Code of Ethics, a Conduct Guide and a number of internal policies designed to guide our management, employees and contractors and reinforce our principles and rules for ethical behavior and professional conduct. We offer an external whistleblower channel overseen by our General Ombudsman Office for employees, contractors and other third parties. See Item 6. “Directors, Senior Management and Employees—Ombudsman.”

We are subject to the risk that our employees, contractors or any person doing business with us may engage in fraudulent activity, corruption or bribery, circumvent or override our internal controls and procedures or misappropriate or manipulate our assets for their personal or business advantage to our detriment. This risk is heightened by the fact that we have a large number of complex, valuable contracts with local and foreign suppliers, as well as the geographic distribution of our operations and the wide variety of counterparties involved in our business. We have in place a number of systems for identifying, monitoring and mitigating these risks, but our systems may not be effective.

It is difficult for us to ensure that all of our employees and contractors, totaling over 236,000, will comply with our ethical principles. Any failure – real or perceived – to follow these principles or to comply with applicable governance or regulatory obligations could harm our reputation, limit our ability to obtain financing and otherwise have a material adverse effect on our results of operations and financial condition.

Table of Contents

Our management has identified material weaknesses in our internal control over financial reporting, and has concluded that our internal control over financial reporting was not effective at December 31, 2015, which may have a material adverse result on our results of operation and financial condition.

Our management identified a number of material weaknesses in our internal control over financial reporting in 2015, related to (i) management override of controls, (ii) controls related to property, plant and equipment (including deficiencies related to the review of changes in certain groupings of exploration and production assets as cash generating units and their compliance with IFRS, reclassification of certain assets for projects under construction to operating assets and the timely write-off of projects, need to write down payments advanced to contractors and suppliers that will not result in future economic benefits and recognition of termination costs of our contracts), (iii) the review and approval of manual journal entries, (iv) system access management and segregation of duties in business and information technology process, (v) provisions and contingent liabilities for legal proceedings and (vi) the calculation of actuarial liabilities. As a result , due to the identified material weaknesses, our management concluded that our internal control over financial reporting was not effective at December 31, 2015. A number of our current material weaknesses in our internal control over financial reporting were identified and reported by management at December 31, 2014. Although we have developed and implemented several measures to remedy these material weaknesses, we cannot be certain that there will be no other material weaknesses in our internal control over financial reporting in the future. For more information about these matters, see Item 15. “Controls and Procedures—Management’s Report on Internal Control over Financial Reporting.”

If our efforts to remediate the material weaknesses are not successful, we may be unable to report our results of operations for future periods accurately and in a timely manner and make our required filings with government authorities, including the SEC. There is also a risk that there could be accounting errors in our financial reporting, and we cannot be certain that in the future additional material weaknesses will not exist or otherwise be discovered. Any of these occurrences could adversely affect our business and operating results and could generate negative market reactions, potentially leading to a decline in the price of our shares, ADSs and debt securities.

Ongoing SEC and DoJ investigations regarding the possibility of non-compliance with the U.S. Foreign Corrupt Practices Act could adversely affect us. Violations of this or other laws may require us to pay fines and expose us and our employees to criminal sanctions and civil suits.

In November 2014, we received a subpoena from the SEC requesting certain documents and information about us relating to, among other things, the Lava Jato investigation and any allegations regarding a violation of the U.S. Foreign Corrupt Practices Act. The DoJ is conducting a similar inquiry, and we are voluntarily cooperating with both investigations. The internal investigation and related government inquiries concerning these matters remain ongoing, and it is still not possible to estimate the duration, scope or results of the internal investigation or related inquiries by relevant authorities. While we are cooperating fully with both investigations, adverse developments in connection with these investigations, including any expansion of the scope of the investigations, could negatively impact us and could divert the efforts and attention of our management team from our ordinary business operations. In connection with any SEC or DoJ investigation or any other investigation carried out by any other authority, there can be no assurance that we will not be required to pay penalties or provide other financial relief, or consent to injunctions or orders on future conduct or suffer other penalties, any of which could have a material adverse effect on us. See “Item 8. –Financial Information—Legal Proceedings.”

Our methodology to estimate the overpayments incorrectly capitalized, uncovered in the context of the Lava Jato investigation, involves some degree of uncertainty. If substantive additional information comes to light in the future that would make our estimate for the overstatements of our assets appear, in retrospect, to have been materially underestimated or overestimated, this could require a restatement of our financial statements and may have a material adverse effect on our results of operations and financial condition and affect the market value of our securities.

As a result of the findings of the Lava Jato investigation, in the third quarter of 2014, we wrote off US$2,527 million of capitalized costs representing amounts that Petrobras overpaid for the acquisition of property, plant and equipment in prior years.

Beginning in 2014, and over the course of 2015, the Brazilian Federal Prosecutor's Office focused part of its investigation on irregularities involving our contractors and suppliers and uncovered a broad payment scheme that involved a wide range of participants, including former Petrobras personnel. Based on the information available to us, the payment scheme involved a group of companies that, between 2004 and April 2012, colluded to obtain contracts with us, overcharging us under those contracts and using the overpayment received under the contracts to fund improper payments to political parties, elected officials or other public officials, individual contractor personnel, former Petrobras personnel and other individuals involved in the payment scheme. In addition to the payment scheme, the investigations identified several specific instances of other contractors and suppliers that allegedly overcharged Petrobras and used the overpayment received from their contracts with us to fund improper payments, unrelated to the payment scheme, to certain former Petrobras personnel. See Note 3 to our audited consolidated financial statements for further information about the Lava Jato investigation, the overpayments charged by certain contractors and suppliers to Petrobras and our methodology to estimate the overstatement of our assets.

We concluded that a portion of our costs incurred to build property, plant and equipment that resulted from contractors and suppliers in the cartel overcharging us to make improper payments should not have been capitalized in our historical costs of property, plant and equipment. As it is impracticable to identify the specific periods and amounts for the overpayments made by us, we considered all the available information to determine the impact of the overpayments charged to us. As a result, to account for these overpayments, we developed a methodology to estimate the aggregate amount that we overpaid under the payment scheme, in order to determine the amount of the write-off representing the overstatement of our assets resulting from overpayments used to fund improper payments.

The Lava Jato investigation is still ongoing and it could be a significant amount of time before the Brazilian federal prosecutors conclude their investigation. As a result of this investigation, substantive additional information might come to light in the future that would make our estimate for overpayments appear, in retrospect, to have been materially low or high, which may require us to restate our financial statements to further adjust the write-offs representing the overstatement of our assets recognized in our interim consolidated financial statements for the nine-month period ended September 30, 2014.

We believe that we have used the most appropriate methodology and assumptions to determine the amounts of overpayments incorrectly capitalized based on the information available to us, but our estimation methodology involves some degree of uncertainty. There can be no assurance that the write-offs representing the overstatement of our assets, determined using our estimation methodology, and recognized in our interim consolidated financial statements for the nine-month period ended September 30, 2014, are not underestimated or overestimated. In the event that we are required to write-off additional historical costs from our property, plant and equipment or to reverse write-offs previously recognized in our financial statements, this might impact the total value of our assets and we may be subject to negative publicity, credit rating downgrades, or other negative material events, which may have a material adverse effect on our results of operations and financial condition and affect the market value of our securities.

Table of Contents

Risks Relating to Our Relationship with the Brazilian Federal Government

The Brazilian federal government, as our controlling shareholder, may pursue certain macroeconomic and social objectives through us that may have a material adverse effect on us.

As our controlling shareholder, the Brazilian federal government may pursue certain of its macroeconomic and social objectives through us. Brazilian law requires that the Brazilian federal government own a majority of our voting stock, and so long as it does, the Brazilian federal government will have the power to elect a majority of the members of our board of directors and, through them, a majority of the executive officers who are responsible for our day-to-day management. As a result, we may engage in activities that give preference to the objectives of the Brazilian federal government rather than to our own economic and business objectives.

Accordingly, we may make investments, incur costs and engage in sales with parties or on terms that may have an adverse effect on our results of operations and financial condition. In particular, we continue to assist the Brazilian federal government in ensuring that the supply and pricing of crude oil and oil products in Brazil meets Brazilian consumption requirements. Prior to January 2002, prices for crude oil and oil products were regulated by the Brazilian federal government, occasionally set below prices prevailing in the world oil markets. We cannot assure you that price controls will not be reinstated in Brazil.

Our investment budget is subject to approval by the Brazilian federal government, and failure to obtain approval of our planned investments could adversely affect our results of operations and financial condition.

The Brazilian federal government maintains control over our investment budget and establishes limits on our investments and long-term debt. As a state-controlled entity, we must submit our proposed annual budgets to the MPBM and the MME. Following review by these governmental authorities, the Brazilian Congress must approve our budget. Our approved budget may reduce or alter our proposed investments and incurrence of new debt, and we may be unable to obtain financing that does not require Brazilian federal government approval. As a result, we may not be able to make all the investments we envision, including those we have agreed to make to expand and develop our crude oil and natural gas fields, which may adversely affect our results of operations and financial condition.

Risks Relating to Brazil

Brazilian political and economic conditions and investor perception of these conditions have a direct impact on our business and our access to capital, and may have a material adverse effect on us.

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

- exchange rate movements and volatility;
- inflation;
- financing of government fiscal deficits;
- price instability;
- interest rates;
- liquidity of domestic capital and lending markets;

- tax policy;

- regulatory policy for the oil and gas industry, including pricing policy;

- allegations of corruption against political parties, elected officials or other public officials, including allegations made in relation to the Lava Jato investigation; and

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

Uncertainty over whether the Brazilian federal government will implement changes in policy or regulations that may affect any of the factors mentioned above or other factors in the future may lead to economic uncertainty in Brazil and increase the volatility of the Brazilian securities market and securities issued abroad by Brazilian companies, which may have a material adverse effect on our results of operations and financial condition.

Historically, the country's political scenario has influenced the performance of the Brazilian economy and political crises have affected the confidence of investors and the general public, which resulted in economic downturn and heightened volatility in the securities issued abroad by Brazilian companies. Currently, Brazilian markets are experiencing heightened volatility attributable to (i) Brazil's loss of its investment-grade credit rating, (ii) political uncertainty and instability (as result of, among other factors, the ongoing impeachment proceeding against the President of Brazil) and (iii) the uncertainties derived from the ongoing Lava Jato investigation and its impacts on the Brazilian economy and political environment. Although Brazilian authorities have publicly described Petrobras as a victim of the alleged illegal conduct identified during the Lava Jato investigation, at this stage of the investigation, any developments in the Lava Jato investigation (foreseeable and unforeseeable) could have a material adverse effect on the Brazilian economy and on our results of operations and financial condition.

Additionally, since 2011, Brazil has been experiencing an economic slowdown culminating in a Gross Domestic Product, or GDP, decrease of 3.8% in 2015. GDP growth rates were, 0.1% in 2014, 2.7% in 2013, 1.8% in 2012 and 3.9% in 2011. Our results of operations and financial condition have been, and will continue to be, affected by the growth rate of GDP in Brazil because a substantial portion of our oil products are sold in Brazil. We cannot ensure that GDP will increase or remain stable in the future. Future developments in the Brazilian economy may affect Brazil's growth rates and, consequently, the consumption of our oil products. As a result, these developments could impair our results of operations and financial condition.

Allegations of political corruption against the Brazilian federal government and the Brazilian legislative branch could create economic and political instability.

In the past, members of the Brazilian federal government and the Brazilian legislative branch have faced allegations of political corruption. As a result, a number of politicians, including senior federal officials and congressmen, resigned or have been arrested. Currently, elected officials and other public officials in Brazil are being investigated for allegations of unethical and illegal conduct identified during the Lava Jato investigation being conducted by the Office of the Brazilian Federal Prosecutor. The potential outcome of these investigations is unknown, but they have already had an adverse impact on the image and reputation of the implicated companies (including Petrobras), in addition to the adverse impact on general market perception of the Brazilian economy. These proceedings, their conclusions or further allegations of illicit conduct could have additional adverse effects on the Brazilian economy. We cannot predict whether such allegations will lead to further instability or whether new allegations against Brazilian government officials will arise in the future. In addition, we cannot predict the outcome of any such allegations nor their effect on the Brazilian economy.

Table of Contents

Inflation, and the Brazilian government's measures to combat inflation, may contribute significantly to economic uncertainty in Brazil, and may have a material adverse effect on us.

Brazil has historically experienced high rates of inflation, particularly prior to 1995. Inflation, as well as government efforts to combat inflation, had significant negative effects on the Brazilian economy. More recently, inflation rates were 10.67% in 2015, 6.41% in 2014 and 5.91% in 2013, as measured by the IPCA, the National Consumer Price Index (*Índice Nacional de Preços ao Consumidor Amplo)*, compiled by IBGE (Brazilian Institute of Geography and Statistics).

Brazil may experience high levels of inflation in the future. The Brazilian government may introduce policies to reduce inflationary pressures, which could have the effect of reducing the overall performance of the Brazilian economy. Some of these policies may have an effect on our ability to access foreign capital or reduce our ability to execute our future business and management plans, particularly for those projects that rely on foreign partners.

The Brazilian government's measures to control inflation have often included maintaining a tight monetary policy with high real interest rates. These policies have contributed to limiting the size and attractiveness of the local debt markets, requiring borrowers like us to seek foreign currency funding in the international capital markets. To the extent that there is economic uncertainty in Brazil, which weakens our ability to obtain external financing on favorable terms, the local Brazilian market may be insufficient to meet our financing needs, which in turn may have a material adverse effect on us.

Risks Relating to Our Equity and Debt Securities

The size, volatility, liquidity or regulation of the Brazilian securities markets may curb the ability of holders of ADSs to sell the common or preferred shares underlying our ADSs.

Petrobras shares are among the most liquid traded on the São Paulo Stock Exchange, or BM&FBOVESPA, but overall, the Brazilian securities markets are smaller, more volatile and less liquid than the major securities markets in the United States and other jurisdictions, and may be regulated differently from the way in which U.S. investors are accustomed. Factors that may specifically affect the Brazilian equity markets may limit the ability of holders of ADSs to sell the common or preferred shares underlying our ADSs at the price and time they desire.

The market for PGF's debt securities may not be liquid.

Some of PGF's notes are not listed on any securities exchange and are not quoted through an automated quotation system. Most of PGF's notes are currently listed both on the New York Stock Exchange and the Luxembourg Stock Exchange and trade on the NYSE Euronext and

Euro MTF market, respectively, although most trading in PGF's notes occurs over-the-counter. PGF can issue new notes that can be listed in markets other than the New York Stock Exchange and the Luxembourg Stock Exchange and traded in markets other than the NYSE Euronext and the Euro MTF market. We can make no assurance as to the liquidity of or trading markets for PGF's notes. We cannot guarantee that the holders of PGF's notes will be able to sell their notes in the future. If a market for PGF's notes does not develop, holders of PGF's notes may not be able to resell the notes for an extended period of time, if at all.

Inflation, and the Brazilian government's measures to combat inflation, may contribute significantly to economic unc

Table of Contents

Holders of our ADSs may be unable to exercise preemptive rights with respect to the common or preferred shares underlying the ADSs.

Holders of ADSs who are residents of the United States may not be able to exercise the preemptive rights relating to the common or preferred shares underlying our ADSs unless a registration statement under the Securities Act is effective with respect to those rights or an exemption from the registration requirements of the Securities Act is available. We are not obligated to file a registration statement with respect to the common or preferred shares relating to these preemptive rights, and therefore we may not file any such registration statement. If a registration statement is not filed and an exemption from registration does not exist, The Bank of New York Mellon, as depositary, will attempt to sell the preemptive rights, and holders of ADSs will be entitled to receive the proceeds of the sale. However, the preemptive rights will expire if the depositary cannot sell them. For a more complete description of preemptive rights with respect to the common or preferred shares, see Item 10. "Additional Information—Memorandum and Articles of Incorporation—Preemptive Rights."

If holders of our ADSs exchange their ADSs for common or preferred shares, they risk losing the ability to timely remit foreign currency abroad and forfeiting Brazilian tax advantages.

The Brazilian custodian for our common or preferred shares underlying our ADSs must obtain a certificate of registration from the Central Bank of Brazil to be entitled to remit U.S. dollars abroad for payments of dividends and other distributions relating to our preferred and common shares or upon the disposition of the common or preferred shares. Such remittances under an ADR program are subject to a specific tax treatment in Brazil that may be more favorable to a foreign investor if compared to remitting gains originated from securities directly acquired by the investor in the Brazilian regulated stock markets. Therefore, an investor who opts to exchange ADSs for the underlying common or preferred share may be subject to less favorable tax treatment on gains with respect to these investments.

The conversion of ADSs directly into ownership of the underlying common or preferred shares is governed by CMN Resolution No. 4,373 and foreign investors who intend to do so are required to appoint a representative in Brazil for the purposes of Annex I of CMN Resolution No. 4,373, who will be in charge for keeping and updating the investors' certificates of registrations with the Central Bank of Brazil, which entitles registered foreign investors to buy and sell directly on the BM&FBOVESPA. Such arrangements may require additional expenses from the foreign investor. Moreover, if such representatives fail to obtain or update the relevant certificates of registration, investors may incur in additional expenses or be subject to operational delays which could affect their ability to receive dividends or distributions relating to the common or preferred shares or the return of their capital in a timely manner.

The custodian's certificate of registration or any foreign capital registration directly obtained by such holders may be affected by future legislative or regulatory changes, and we cannot assure such holders that additional restrictions applicable to them, the disposition of the underlying common or preferred shares, or the repatriation of the proceeds from the process will not be imposed in the future.

Inflation, and the Brazilian government’s measures to combat inflation, may contribute significantly to economic unc

Table of Contents

Holders of our ADSs may face difficulties in protecting their interests.

Our corporate affairs are governed by our bylaws and Brazilian Corporate Law, which differ from the legal principles that would apply if we were incorporated in a jurisdiction in the United States or elsewhere outside Brazil. In addition, the rights of an ADS holder, which are derivative of the rights of holders of our common or preferred shares, as the case may be, to protect their interests against actions by our board of directors are different under Brazilian Corporate Law than under the laws of other jurisdictions. Rules against insider trading and self-dealing and the preservation of shareholder interests may also be different in Brazil than in the United States. In addition, the structure of a class action in Brazil is different from that in the US, and under Brazilian law, shareholders in Brazilian companies do not have standing to bring a class action, and under Petrobras's by-laws must, generally with respect to disputes concerning rules regarding the operation of the capital markets, arbitrate any such disputes. See Item 10. "Additional Information—Memorandum and Articles of Incorporation—Dispute Resolution."

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

Holders of our ADSs do not have the same voting rights as our shareholders. In addition, holders of ADSs representing preferred shares do not have voting rights.

Holders of our ADSs do not have the same voting rights as holders of our shares. Holders of our ADSs are entitled to the contractual rights set forth for their benefit under the deposit agreements. ADS holders exercise voting rights by providing instructions to the depositary, as opposed to attending shareholders meetings or voting by other means available to shareholders. In practice, the ability of a holder of ADSs to instruct the depositary as to voting will depend on the timing and procedures for providing instructions to the depositary, either directly or through the holder's custodian and clearing system.

In addition, a portion of our ADSs represents our preferred shares. Under Brazilian law and our bylaws, holders of preferred shares do not have the right to vote in shareholders' meetings. This means, among other things, that holders of ADSs representing preferred shares are not entitled to vote on important corporate transactions or decisions. See Item 10. "Additional Information—Memorandum and Articles of Incorporation—Voting Rights."

Inflation, and the Brazilian government's measures to combat inflation, may contribute significantly to economic unc

We would be required to pay judgments of Brazilian courts enforcing our obligations under the guaranty relating to PGF's notes only in **reais.**

If proceedings were brought in Brazil seeking to enforce our obligations in respect of the guaranty relating to PGF's notes, we would be required to discharge our obligations only in *reais*. Under Brazilian exchange controls, an obligation to pay amounts denominated in a currency other than *reais*, which is payable in Brazil pursuant to a decision of a Brazilian court, may be satisfied in *reais* at the rate of exchange, as determined by the Central Bank of Brazil, in effect on the date of payment.

Inflation, and the Brazilian government's measures to combat inflation, may contribute significantly to economic unc

Table of Contents

A finding that we are subject to U.S. bankruptcy laws and that the guaranty executed by us was a fraudulent conveyance could result in PGF noteholders losing their legal claim against us.

PGF's obligation to make payments on the PGF notes is supported by our obligation under the corresponding guaranty. We have been advised by our external U.S. counsel that the guaranty is valid and enforceable in accordance with the laws of the State of New York and the United States. In addition, we have been advised by our general counsel that the laws of Brazil do not prevent the guaranty from being valid, binding and enforceable against us in accordance with its terms. In the event that U.S. federal fraudulent conveyance or similar laws are applied to the guaranty, and we, at the time we entered into the relevant guaranty:

- were or are insolvent or rendered insolvent by reason of our entry into such guaranty;

- were or are engaged in business or transactions for which the assets remaining with us constituted unreasonably small capital; or

- intended to incur or incurred, or believed or believe that we would incur, debts beyond our ability to pay such debts as they mature; and

- in each case, intended to receive or received less than reasonably equivalent value or fair consideration therefor,

then our obligations under the guaranty could be avoided, or claims with respect to that agreement could be subordinated to the claims of other creditors. Among other things, a legal challenge to the guaranty on fraudulent conveyance grounds may focus on the benefits, if any, realized by us as a result of the issuance of the PGF notes. To the extent that the guaranty is held to be a fraudulent conveyance or unenforceable for any other reason, the holders of the PGF notes would not have a claim against us under the relevant guaranty and would solely have a claim against PGF. We cannot ensure that, after providing for all prior claims, there will be sufficient assets to satisfy the claims of the PGF noteholders relating to any avoided portion of the guaranty.

Holders resident in the European Union may not receive payment of gross-up amounts for withholding pursuant to the European Council Directive 2014/107 on the taxation of savings income.

Austria has opted out of certain exchange of information provisions of the European Council Directive 2003/48/EC on the taxation of savings income (which opt out has been confirmed by current applicable European Council Directive 2014/107 (the Directive) after repeal of Directive 2003/4860/EC) and is instead, during a transitional period, applying a withholding tax on payments of interest, at a rate of up to 35%, made by a paying agent within Austria to, or collected by such a paying agent for, an individual beneficial owner resident in other member states of the European Union (EU Member States) or to certain limited types of entities established in other Member States unless the beneficial owner of the interest payments opts for exchange of information as required under the Directive. Neither we nor the paying agent (nor any other person) would be required to pay additional amounts in respect of the notes as a result of the imposition of such withholding tax by Austria. For more information, see Item 10. "Additional Information—Taxation Relating to PGF's Notes—European Union Council Directive 2014/107." An investor should consult a tax adviser to determine the tax consequences of holding PGF's notes for such investor.

Inflation, and the Brazilian government's measures to combat inflation, may contribute significantly to economic unc

Table of Contents

Item 4. Information on the Company

History and Development

Petróleo Brasileiro S.A.—Petrobras was incorporated in 1953 as the exclusive agent to conduct the Brazilian federal government's hydrocarbon activities. We began operations in 1954 and since then have been carrying out crude oil and natural gas production and refining activities in Brazil on behalf of the government. As of December 31, 2015, the Brazilian federal government owned 28.67% of our outstanding capital stock and 50.26% of our voting shares. See Item 7. "Major Shareholders and Related Party Transactions—Major Shareholders." Our common and preferred shares have been traded on the BM&FBOVESPA since 1968 and on the NYSE in the form of ADSs since 2000.

We lost our exclusive right to carry out oil and gas activities in Brazil when the Brazilian Congress amended the Brazilian Constitution, and subsequently passed Law No. 9,478/1997 in 1997. Enacted as part of a comprehensive reform of the oil and gas regulatory system, this law authorized the Brazilian federal government to contract with any state or privately-owned company to carry out all activities related to oil, natural gas and their respective products. This new law established a concession-based regulatory framework, ended our exclusive right to carry out oil and gas activities, and allowed open competition in all aspects of the oil and gas industry in Brazil. The law also created an independent regulatory agency, the ANP, to regulate the oil, natural gas and renewable fuel industry in Brazil and to create a competitive environment in the oil and gas sector. See Item 4. "Information on the Company—Regulation of the Oil and Gas Industry in Brazil—Price Regulation."

Following the discovery of large pre-salt reservoirs offshore Brazil, Congress passed in 2010 additional laws intended to regulate exploration and production activities in the pre-salt area, as well as other potentially strategic areas not already under concession. Under these new laws, we acquired from the Brazilian federal government through an Assignment Agreement the right to explore and produce up to five bnboe of oil, natural gas and other fluid hydrocarbons in specified pre-salt areas. Additionally, on December 2, 2013, based on these laws enacted in 2010, we executed our first agreement with the Brazilian federal government under a production sharing regime for the Libra field. Under the law governing production sharing regime for the pre-salt area, we are currently required to be operator, with a minimum 30% participation. See Item 4. "Information on the Company—Regulation of the Oil and Gas Industry in Brazil", Item 10. "Additional Information—Material Contracts—Assignment Agreement" and Item 10. "Additional Information—Material Contracts—Production Sharing Agreement."

We operate through subsidiaries, joint ventures, joint operations and associated companies established in Brazil and many other countries. Our principal executive office is located at Avenida República do Chile 65, 20031-912 Rio de Janeiro, RJ, Brazil, our telephone number is (55-21) 3224-4477 and our web-site is www.petrobras.com.br. The information on our website, which might be accessible through a hyperlink resulting from this URL, is not and shall not be deemed to be incorporated into this annual report.

Overview of the Group

We are one of the world's largest integrated oil and gas companies, operating principally in Brazil where we are the dominant participant. As a result of our legacy as Brazil's former sole producer and supplier of crude oil and oil products and our strong and continuous commitment to find and develop oil fields in Brazil, we have a large base of proved reserves and operate and produce most of Brazil's oil and gas production. In 2015, our average domestic daily oil production was 2,128 mbbl/d, which represents more than 90% of Brazil's total oil production. Most of our domestic proved reserves are located in the adjacent offshore Campos and Santos Basins in southeast Brazil. Their proximity allows us to optimize our infrastructure and limit our costs of development and production for our new discoveries. Additionally, we have developed special expertise in deep water exploration and production from 47 years of developing Brazil's offshore basins. We are applying the technical expertise we gained through developing the Campos Basin to the Santos Basin, which is expected to be the principal source of our future growth in proved reserves and oil production.

Table of Contents

As of December 31, 2015, we had proved developed oil and gas reserves of 5,161.7 mmboe and proved undeveloped reserves of 4,988.9 mmboe in Brazil. The development of this large reserve base and the exploration of pre-salt areas has demanded, and will continue to demand, significant investments and the growth of our operations.

We operate substantially all of the refining capacity in Brazil. Most of our refineries are located in southeastern Brazil, within the country's most populated and industrialized markets and adjacent to the source of most of our crude oil in the Campos Basin. Our current domestic crude distillation capacity is 2,176 mbbl/d and our domestic refining throughput in 2015 was 1,976 mbbl/d. We meet the demand for oil products in Brazil through a planned combination of oil products imports and domestic refining of crude oil, which seeks to optimize our margins, taking advantage of price differentials existing between the cost to refine crude oil in Brazil and the cost to import oil products. We are also involved in the production of petrochemicals. We distribute oil products through our own retail network and to wholesalers.

We participate in most aspects of the Brazilian natural gas market, including the logistics and processing of natural gas. To meet our domestic demand, we process natural gas derived from our onshore and offshore (mainly from fields in the Campos, Espírito Santo and Santos Basins) production, import natural gas from Bolivia, and to the extent necessary, import LNG through our regasification terminals. We also participate in the domestic power market primarily through our investments in gas-fired thermoelectric power plants and in renewable energy. In addition, we participate in the fertilizer business, which is another important natural gas market.

Outside of Brazil, we operate in 12 countries. In Latin America, our operations extend from exploration and production to refining, marketing, retail services, natural gas and electricity power plants. In North America, we produce oil and gas and have refining operations in the United States. In Africa, through a joint venture, we produce oil in Nigeria and have oil and gas exploration in other countries.

Comprehensive information and tables on reserves and production is presented at the end of Item 4. See "Information on the Company—Additional Reserves and Production Information."

In the fourth quarter of 2015, we changed our reportable business segments to reflect the reallocation of our international activities into the business segment to which the underlying activities correspond, thus reducing our reportable business segments from six to five. Our activities are currently organized into five business segments:

- **Exploration and Production**: this business segment covers exploration, development and production of crude oil, NGL (natural gas liquid) and natural gas in Brazil and abroad, for the primary purpose of supplying our domestic refineries and the sale of surplus crude oil and oil products produced in our natural gas processing plants to the domestic and foreign markets. Our exploration and production segment also operates through partnerships with other companies;

- **Refining, Transportation and Marketing**: this business segment covers refining, logistics, transportation and trading of crude oil and oil products in Brazil and abroad, exporting of ethanol, extraction and processing of shale, as well as holding equity interest in petrochemical companies in Brazil;

- **Gas and Power**: this business segment covers transportation, trading of natural gas produced in Brazil and abroad, imported natural gas, transportation and trading of LNG (liquid natural gas), generation and trading of electricity, as well as holding equity interest in (i) transporters and distributors of natural gas and (ii) thermoelectric power plants in Brazil, in addition to being responsible for our fertilizer business;

Table of Contents

- **Distribution:** this business segment covers activities of Petrobras Distribuidora S.A., which operates through its own retail network and wholesale channels to sell oil products, ethanol and vehicle natural gas in Brazil to retail, commercial and industrial customers, as well as other fuel wholesalers. This segment also includes distribution of oil products operations abroad (South America); and

- **Biofuel**: this business segment covers production of biodiesel and its co-products, as well as ethanol-related activities such as equity investments, production and trading of ethanol, sugar and the surplus electric power generated from sugarcane bagasse.

Additionally, we have a Corporate segment that has activities that are not attributed to the other segments, notably those related to corporate financial management, corporate overhead and other expenses, including actuarial expenses related to the pension and medical benefits for retired employees and their dependents. For further information regarding our business segments, see Note 4.2. to our audited consolidated financial statements.

The following table sets forth key information for each business segment in 2015:

	Key Information by Business Segment, 2015						
	Exploration and Production	Refining, Transportation and Marketing	Gas and Power	Biofuel	Distribution	Corporate	Eliminatio
				(US$ million)			
ues	35,680	74,321	13,145	229	33,406	–	(59,4
s) before income taxes	(3,683)	8,459	518	(317)	(219)	(14,961)	4
at December 31	123,796	45,492	19,469	482	5,271	39,455	(3,4
enditures and investments	19,131	2,534	793	43	255	302	

As part of our 2015-2019 Plan, we also announced a divestment program in order to improve operating efficiencies, returns on capital, and generate additional cash to service our debt. This divestment program contemplates the sale of minority, majority or entire positions in certain of our subsidiaries, affiliates, and assets to strategic or financial investors or through public offerings. Based on our internal valuation of assets that are considered for sale pursuant to the divestment program for the period 2015-2016, we expect to receive proceeds of approximately US$15.1 billion. During 2015, we received proceeds from the sale of assets under our divestment program amounting to approximately US$700 million, mainly resulting from the sale of (i) a 49% interest in Petrobras Gás S.A. (Gaspetro) to Mitsui Gás e Energia do Brasil Ltda. – Mitsui and (ii) all of our exploration and production assets in the Austral Basin, in Argentina to Compañia General de Combustibles S.A, among others.

Recently, our board of directors has approved changes to our organizational structure and our governance and management model, which resulted in the elimination of 43% of all management functions in non-operational units, which we expect will lead to cost savings amounting to R$1.8 billion (US$443 million) per year. This new model seeks to align our management and structure to our 2015-2019 Plan and our current business environment, promote cost savings and strengthen compliance and internal controls processes. It also involves the integration of activities among our business and corporate segments, and the combination of areas to enhance accountability for business results.

Inflation, and the Brazilian government's measures to combat inflation, may contribute significantly to economic unc

Table of Contents

Exploration and Production

	Exploration and Production Key Statistics		
	2015	2014	2013
	(US$ million)		
Exploration and Production:			
Sales revenues	35,680	68,611	72,345
Income (loss) before income taxes	(3,683)	21,850	31,812
Property, plant and equipment	109,724	140,582	133,309
Capital expenditures and investments	19,131	25,500	29,692

Our oil and gas exploration and production activities are the largest components of our investment portfolio. In 2015, our oil and gas worldwide production averaged 2,576 mboe/d, a 3.3% increase compared to the previous year (2,493 mboe/d) and our oil worldwide production averaged 2,228 mbbl/d, a 3.6% increase compared to the previous year (2,150 mbbl/d).

According to SEC technical criteria for booking proved reserves, as of December 31, 2015, our worldwide net proved oil, condensate and natural gas reserves, including synthetic oil and gas, was 10.5 bnboe, a 20% reduction compared to our proved reserves of 13.1 bnboe as of December 31, 2014. This reduction was mainly attributable to the drop in oil prices during the fiscal year of 2015.

Within Brazil, our activities are concentrated in deep water oil reservoirs. Our domestic activities represented 93% of our worldwide production in 2015 and accounted for 97% of our worldwide reserves as of December 31, 2015. Over the last five years, approximately 90% of our total Brazilian oil equivalent production has been oil, and the remainder natural gas. In 2015, we installed two additional offshore units, and connected 73 new wells (47 production and 26 injection wells) in our production systems.

Brazil's richest oil fields are located offshore, most of them in deep waters. We have been conducting offshore exploration and production activities in these waters since 1971, when we started exploration in the Campos Basin, and our major discoveries were made in deep and ultra-deep waters. Our technology and expertise have created a competitive advantage for us and we have become globally recognized as innovators in the technology required to explore and produce hydrocarbons in deep and ultra-deep waters. In 2015, offshore production accounted for 91% of our production in Brazil and deep-water production accounted for 80% of our production in Brazil. According to production data from PFC Energy, we operate more production (on a boe basis) from fields in deep and ultra-deep water than any other company.

Historically, we focused our offshore exploration and production activities on sandstone turbidite reservoirs, located primarily in the Campos Basin. In 2006, we were successful in drilling through a massive salt layer off the Brazilian coast that stretches from the Campos to the Santos Basin. The oil that was formed prior to the formation of the salt layer was trapped and well preserved in a number of large carbonate reservoirs (which we refer to as the pre-salt reservoirs), leading to a number of important discoveries. This pre-salt province occupies an area of approximately 149,000 km² (36.8 million acres), of which we have rights to produce from 17% of the total area (around 25,600 km² or 6.3 million acres), through acreage assigned to us under Concession Agreements, the Assignment Agreement and a Production Sharing Agreement.

The pre-salt reservoirs we have discovered are located in ultra-deep waters at total depths of up to 7,000 meters (22,965 feet). The southern part of the pre-salt province consists of the Santos Basin, where the salt layer is approximately two kilometers thick. In the northern part of the pre-salt province, the salt is thinner and much of the oil has migrated through the salt to the post-salt sandstone reservoirs of the Campos Basin. While some of the oil that formed has migrated, we still have made important discoveries in pre-salt reservoirs in the Campos Basin, as we drilled through the salt layers. Most of our current and future capital will be committed to developing the oil found in the pre-salt province, with an emphasis on the Santos Basin, given the size of its reservoirs and their potential.

Table of Contents

The map below shows the location of our pre-salt reservoirs:

Outside Brazil, we have long been active in South America, Gulf of Mexico and West Africa. We focus on opportunities to leverage the deep water expertise we have developed in Brazil. Since 2012, we have been substantially reducing our international activities through the sale of assets to meet our announced divestment targets.

Inflation, and the Brazilian government’s measures to combat inflation, may contribute significantly to economic unc

Our activities by region

Activities in Brazil

Exploration and Production Regimes

We have historically conducted exploration, development and production activities in Brazil through concession agreements, which we have obtained through participation in bid rounds conducted by the ANP. Some of our existing concessions were granted by the ANP without an auction in 1998, as provided by Law No. 9,478/1997. These are known as the "Round Zero" concession agreements. Since then, except for the 13th. bid round held on October 2015, we have participated in all of the auction rounds conducted by the ANP, including the first production-sharing regime auction round held on October 21, 2013.

Currently, we operate under three different exploration and production regimes:

- **Concession Agreements:** ANP grants rights, from time to time, through public auctions open to qualified operators, to explore and produce crude oil and gas reserves in Brazil under concession agreements for the blocks offered in each auction. These concession agreements have a term of 27 years following the declaration of commerciality, with the possibility of extension by the ANP. In 2016, the Brazilian federal government authorized the ANP to permit the extension of the terms of Round Zero concession agreements for up to an additional 27 years. These negotiations are currently on going.

- **Assignment Agreement (*Contrato de Cessão Onerosa*):** On September 3, 2010, we entered into an agreement with the Brazilian federal government, under which it assigned to us the right to conduct activities for the exploration and production of oil, natural gas and other fluid hydrocarbons in specified pre-salt areas. The agreement is subject to a maximum production of five bnboe over 40 years (extendable for five additional years), and we have already declared commerciality for this entire volume in the areas of Franco (Búzios), Sul de Tupi (Sul de Lula), Florim (Itapu), Nordeste de Tupi (Sépia), Sul de Guará (Sul de Sapinhoá) and Entorno de Iara (Norte de Berbigão, Sul de Berbigão, Norte de Sururu, Sul de Sururu and Atapu). See Item 10. "Additional Information—Material Contracts—Assignment Agreement."

- **Production Sharing Agreement (*Contrato de Partilha de Produção*):** Under this regime, exploration and production licenses are awarded through a public auction to the consortium that offers the highest share of profit oil to the government and Petrobras must currently be the operator and have at least a 30% participation in the block awarded under this regime. At a public auction held on October 21, 2013, a consortium including Petrobras was awarded the rights and obligations to operate and explore a strategic pre-salt block (known as Libra – which has an estimated recoverable volume of between 8 and 12 bnboe according to the ANP) located in the Santos Basin. On December 2, 2013, we executed the first agreement under this regime. We have a 40% interest in the Libra block and are its exclusive operator. This agreement has a term of 35 years. Although a 2014 CNPE Resolution would permit the Brazilian federal government to enter into a production sharing agreement with Petrobras to produce volumes of oil, natural gas and fluid hydrocarbons in excess of the maximum production originally agreed for certain designated areas under the Assignment Agreement, the TCU has suspended such negotiations for the time being pending completion of the negotiation of all parameters for the revision process under the Assignment Agreement. See Item 10. “Additional Information—Material Contracts—Assignment Agreement—Additional Production in the Assignment Agreement Areas.”

Inflation, and the Brazilian government’s measures to combat inflation, may contribute significantly to economic unc

Table of Contents

The following map shows our exploration and production areas in Brazil as of December 2015.

Production activities in Brazil

The table below reflects our production by our principal basins in Brazil:

	Oil (mbbl/d)			Gas (mmcf/d)			Total (mboe/d)			Stationary production units		
Production	**2015**	**2014**	**2013**	**2015**	**2014**	**2013**	**2015**	**2014**	**2013**	**2015**	**2014**	**2013**
Brazil	**2,128**	**2,034**	**1,931**	**1,544**	**1,500**	**1,406**	**2,386**	**2,284**	**2,166**	**120**	**122**	**126**
Campos Basin	1,488	1,526	1,531	577	548	554	1,584	1,617	1,623	56	56	56
Santos Basin	395	247	137	487	413	281	477	316	184	12	11	11

Other Basins	245	262	263	479	539	571	325	352	359	52	55	59

Our domestic oil production in 2015 averaged 2,128 mmbbl/d in 2015 and was 4.6% higher than our average production in 2014. Our total domestic production, including our natural gas output that grew by 2.9% over the year before, averaged 2.386 mmboe/d in 2015. This growth represents a 4.4% increase compared to the 2.284mmboe/d average recorded in 2014. For 2016, we expect to produce 2,145 mbbl/d of oil in Brazil (0.8% above our average in 2015), as a result of three new unit start-ups (FPSO Cidade de Maricá, FPSO Cidade de Saquarema and FPSO Cidade de Caraguatatuba) and the continuing ramp-up of recently installed systems.

Table of Contents

Pre-salt production will gradually become a larger share of our total production, as new production units dedicated to pre-salt reservoirs located in the Santos Basin are brought on-stream. Our operated production from pre-salt reservoirs averaged 767 mbbl/d in 2015, as compare to an average of 491 mbbl/d operated during 2014. Our highest daily pre-salt operated production ever occurred on December 14, 2015, when total production reached 942 mbbl/d of oil. This record production occurred with only 48 producing wells. Of these wells, 25 are located in the Santos Basin and were responsible for 71% of that production (666 mbbl/d). Post-salt reservoirs are already largely developed, and the focus now for these reservoirs will be to minimize the natural decline.

Since 2013, we have installed several major systems in the pre-salt area of the Santos Basin and in the Campos Basin, which helped mitigate the basin's natural decline. In 2015, we installed the FPSO Cidade de Itaguaí in the Iracema area of Lula field, and the P-61 TLWP. The table below presents the units that have most contributed to the growth of our production in Brazil since 2013:

Start Up (year)	Basin	Field/Area	Unit Type	Production Unit	Crude Oil Nominal Capacity (bbl/d)	Natural Gas Nominal Capacity (mmcf/d)	Water Depth (meters)	Notes
2016	Santos	Lula Alto	FPSO	Cidade de Maricá	150,000	211.9	2,100	Pre-salt
2015	Santos	Lula	FPSO	Cidade de Itaguaí	150,000	282.5	2,240	Pre-salt
2015	Campos	Papa-Terra–Module 1	TLWP	P-61	–	–	1,180	Post-salt
2014	Campos	Roncador–Module 4	FPSO	P-62	180,000	211.9	1,600	Post-Salt
2014	Campos	Parque das Baleias	FPSO	P-58	180,000	211.9	1,399	Both
2014	Santos	Iracema Sul	FPSO	Cid. de Mangaratiba	150,000	282.5	2,220	Pre-salt
2014	Santos	Sapinhoá Norte	FPSO	Cidade de Ihabela	150,000	211.9	2,140	Pre-salt
2013	Campos	Roncador–Module 3	SS	P-55	180,000	211.9	1,795	Post-salt
2013	Campos	Papa-Terra–Module 2	FPSO	P-63	140,000	35.3	1,200	Post-salt
2013	Santos	Sapinhoá	FPSO	Cidade de São Paulo	120,000	176.6	2,140	Pre-salt
2013	Santos	Lula NE	FPSO	Cidade de Paraty	120,000	176.6	2,140	Pre-salt
2013	Santos	Baúna	FPSO	Cidade de Itajaí	80,000	70.6	275	Post-salt

(1)

Production from the P-61 TLWP is processed by the FPSO P-63 in the Papa-Terra field.

We recognized impairment losses for the fiscal year ended December 31, 2015 of US$8.7 billion with respect to our domestic exploration and production producing properties due to the impact of the decline in international crude oil prices on the price assumptions for certain of our domestic crude oil and natural gas producing properties, including Papa-Terra, Centro Sul group, Uruguá group, Espadarte, among others, the use of a higher discount rate (reflecting an increase in Brazil's risk premium), as well as the geological revision of Papa-Terra reservoir. We have also recognized impairment losses for the fiscal year ended December 31, 2015 of US$0.5 billion with respect to oil and gas production and drilling equipment, unrelated to producing properties in Brazil. These impairment losses are mainly related to the idle capacity of two drilling rigs in the future and to the use of a higher discount rate (reflecting an increase in Brazil's risk premium). For further information, see Note 14 to our audited consolidated financial statements.

For the fiscal year ended December 31, 2014, we previously recognized impairment losses of US$1.6 billion with respect to our domestic exploration and production operations due to the impact of the decline in international crude oil prices on the price assumptions for certain of our crude oil and natural gas producing properties located in Brazil, including Frade, Pirapitanga, Tambuatá, Carapicu and Piracucá. We also previously recognized impairment losses for the fiscal year ended December 31, 2014 of US$536 million with respect to oil and gas production and drilling equipment located in Brazil, unrelated to crude oil and natural gas producing properties.

Table of Contents

Systems to be installed by 2018

We currently have 11 major systems to be installed by 2018 and one major system has been installed in 2016 (FPSO Cidade de Maricá). The Lula and Búzios fields will be particularly important to support our production growth. Production from these fields will be brought online through 7 FPSOs. We will also install a new post salt unit in the Tartaruga Verde Field by 2017. The table below lists our upcoming system start-ups:

Projected Start Up (year)	Basin	Field/Area	Unit Type	Crude Oil Nominal Capacity (bbl/d)	Natural Gas Nominal Capacity (mmcf/d)	Water Depth (meters)	E&P Regime
2016	Santos	Lula Central	FPSO	150,000	211.9	2,100	Pre-salt Concession
2016	Santos	Lapa	FPSO	100,000	176.6	2,100	Pre-salt Concession
2017	Santos	Lula Sul	FPSO	150,000	211.9	2,100	Pre-salt Concession
2017	Santos	Lula Extremo Sul	FPSO	150,000	211.9	2,100	Pre-salt Concession
2017	Campos	Tartaruga Verde	FPSO	150,000	176,6	765	Post-salt Concession
2018	Santos	Búzios 1	FPSO	150,000	247.2	2,100	Assignment Agreement
2018	Santos	Búzios 2	FPSO	150,000	247.2	2,100	Assignment Agreement
2018	Santos	Búzios 3	FPSO	150,000	247.2	2,100	Assignment Agreement
2018	Santos	Berbigão	FPSO	150,000	211.9	2,100	Pre-salt Concession
2018	Santos	Atapu Sul	FPSO	150,000	211.9	2,100	Assignment Agreement
2018	Santos	Lula Norte	FPSO	150,000	211.9	2,100	Pre-salt Concession

Primary Domestic Basins in which Petrobras Has Activities

Campos Basin

The Campos Basin, which covers approximately 115,000 km^2 (28.4 million acres), continues to be our largest oil and gas basin in Brazil in terms of proved hydrocarbon reserves and annual production. Since we began exploring this area in 1971, over 60 hydrocarbon accumulations have been discovered, including eight large oil fields in deep and ultra-deep waters.

As of December 31, 2015, 56% and 36% of our total proved crude oil and natural gas reserves in Brazil, respectively, came from the Campos Basin. During 2015, 66% of our total domestic production came from Campos. During 2015, we operated 56 stationary production units in water depths from 80 to 1,886 meters (262 to 6,188 feet) in the Campos Basin. The average API gravity of the oil in the Campos Basin is 23.2°.

Our activities in the basin began in 1971 and we are now focused on maintaining our production in relatively mature fields. We have been able to mitigate the natural decline of this basin by installing new production systems, tapping pre-salt reservoirs with both new and existing production units and improving operational efficiency. Pre-salt production has become an important factor in maintaining Campos Basin production. We first began pre-salt oil production in 2008 in the Jubarte field located in the Parque das Baleias region. In 2015, the Campos Basin pre-salt area average production of oil we operated was 243 mbbl/d, which represents an increase of 8.5% compared to 2014. Virtually all of our production in the Campos Basin is pursuant to concession agreements. See "—Regulation of the Oil and Gas Industry in Brazil."

During 2015, production in the Campos Basis was supported by the ramp up of the P-55 and P-62 units in the Roncador Field and the Papa Terra Modules, as well as production maintenance projects in our mature fields:

- The new units in Roncador (our largest single producing field on average in 2015) enabled the field to record its highest ever volume of more than 400 mbbl/d in July 2015.

- Recently we installed a major platform in this basin, the P-58, which operates in the Parque das Baleias area. This unit produces both pre-salt and post-salt reservoirs and it has increased its production from 54 mbbl/d in 2014 to 93 mbbl/d in 2015.

• Due to increased maintenance efforts, annual output from the Marlim field in the Campos Basin, which did not have any new units installed in the last three years, has remained steady at a level of almost 200 mbbl/d during the last three years.

As we have now largely developed the Campos Basin, the 2015-2019 Plan projects only one new unit for the Campos Basin, the Tartaruga Verde FPSO currently under construction with 150,000 bbl/d (176MMcf gas) of capacity and scheduled to initiate production in 2017.

Santos Basin

The Santos Basin, which covers approximately 348,900 km^2 (86 million acres) and is located adjacent to and southwest of the Campos Basin, is one of the most promising offshore exploration and production areas in the world. Our first discovery in the Santos Basin was in 1979 in the Merluza field. Since the discovery of the pre-salt fields in 2006, we have increased our focus on producing from the pre-salt. Since first production in 2009, monthly oil operated production from the Santos Basin pre-salt area has grown to 614 mbbl/d by year-end 2015 (which represents an increase of 51% compared to December 2014).

As of December 31, 2015, 38% and 48% of our total proved crude oil and natural gas reserves in Brazil, respectively, came from the Santos Basin. During 2015, 20% of our total domestic production came from the Santos Basin. During 2015, we operated 12 floating production systems in water depths generally exceeding 2,000 meters (6,188 feet). The average API gravity of the oil in the Santos Basin is 30.7°.

Our activities in the Santos Basin increased with the acquisition of eight blocks through public auction under concession agreements in 2000 and 2001. In 2010, we entered into the Assignment Agreement with the Brazilian federal government, under which we were granted exclusive rights to explore and produce five billion boe in six pre-salt blocks in the Santos Basin. In 2013, a consortium led by Petrobras (with 40% interest and acting as exclusive operator of the area), Shell (20% interest), Total (20% interest), CNODC (10% interest) and CNOOC (10% interest) were awarded the Libra block in the ultra-deep waters of the Santos Basin under the first production-sharing regime auction ever held in Brazil. Today all of our pre-salt Santos Basin production is being produced pursuant to the concession agreements. We expect that the first units subject to the terms of the Assignment Agreement will begin production next year, while production under the production sharing regime (excluding EWT's and pilot systems) is still in the planning stage.

Over the last five years, we have substantially reduced the cost of pre-salt development projects. These cost reductions have largely occurred in well construction, which represents approximately 55% of total development costs. Up to 2010 , the time required to drill and complete a well averaged more than 310 days, while in 2015 we reduced that average time to 129 days. In addition, due to the high productivity of the wells, we have been able to reach full capacity of the platforms with fewer wells, and in doing so, the total investments required have decreased.

During 2015, production growth in the Santos Basis was supported by the ramp up of FPSO Cidade de Mangaratiba, which achieved first oil production in late 2014. The early start-up of the FPSO Cidade de Itaguaí in July of 2015 also contributed to production growth during the year. In August 2015, the Lula Field became the largest producing field in Brazil.

Other Basins

In Brazil, we also produce from another 9 basins: Alagoas, Camamu, Ceará, Espírito Santo, Potiguar, Reconcavo, Sergipe, Solimões e Tucano Sul. In 2015, those basins produced in total an average of 325 mboe/d and as of December 31, 2015, had proved crude oil and natural gas reserves of 0.825 bnboe.

Table of Contents

Activities Abroad

Production

Oil production abroad averaged 99.2 mbbl/d in 2015, a 14.4% decrease from the 115.9 mbbl/d recorded in 2014, primarily due to the conclusion of asset sales in Colombia and Peru in 2014 and in Argentina in March 2015. The impact of the sales of these operations was partially offset by the start-up of production in the Saint Malo and Lucius fields in the United States in December 2014 and January 2015, respectively. Gas production abroad averaged 543.0 mmcf/d in 2015, a 3.1% decrease from the 560.3 mmcf/d recorded in the previous year.

Our average production per region as of December 31, 2015, December 31, 2014 and December 31, 2013 is summarized in the table below:

	Oil (mbbl/d)			Gas (mmcf/d)			Total (mboe/d)		
International Production	**2015**	**2014**	**2013**	**2015**	**2014**	**2013**	**2015**	**2014**	**2013**
South America (excluding Brazil)	38.6	57.3	70.9	474.9	545.9	532.0	117.8	148.3	159.6
North America	30.6	27.3	11.8	67.2	12.8	12.1	41.8	29.5	13.9
Africa	0.0	0.0	26.4	−	−	−	0.0	0.0	26.4
Total International	**69.2**	**84.7**	**109.1**	**542.1**	**558.7**	**544.1**	**159.6**	**177.8**	**199.9**
Equity and non-consolidated affiliates:									
South America (excluding Brazil)	3.4	4.6	5.5	0.9	1.6	1.7	3.5	4.9	5.7
Africa	26.6	26.6	13.9	0.0	0.0	0.0	26.6	26.6	13.9
Worldwide production (except Brazil)	**99.2**	**115.9**	**128.5**	**543.0**	**560.3**	**545.8**	**189.7**	**209.3**	**219.5**

For the fiscal year ended December 31, 2015, we have recognized impairment losses of US$0.6 billion with respect to our international exploration and production operations. These impairment losses were in the Cascade and Chinook fields, located in the United States (US$0.43 billion) and in San Alberto, San Antonio, Itau and Colpa Caranda fields, located in Bolívia (US$0.17 billion). For further information, see Note 14 to our audited consolidated financial statements. For the fiscal year ended December 31, 2014, we previously recognized impairment losses of US$1.7 billion with respect to our international exploration and production operations. These impairment losses were mainly in the Cascade and Chinook fields, located in the United States (US$1.6 billion).

Activities Abroad by Region

South America

We conduct exploration and production activities in Argentina, Bolivia, Colombia and Venezuela.

• In **Argentina**: We participate across the energy value chain, primarily through our 67.2% interest in Petrobras Argentina S.A., or PESA. Our oil production is concentrated in the Medanito and Entre Lomas fields in the Neuquén Basin and the El Tordillo fields in the Golfo de San Jorge Basin, and our gas production is concentrated in the El Mangrullo, Río Neuquén and Sierra Chata fields in the Neuquén Basin.

• In **Bolivia**, our oil and gas production comes principally from the San Alberto and San Antonio fields, which are operated mainly to supply gas to Brazil and Bolivia.

• In **Colombia**, our portfolio includes the Tayrona offshore exploration block and the Villarica Norte onshore exploration block.

• In **Venezuela**, through PESA, we hold minority interests in four joint ventures with subsidiaries of Petróleos de Venezuela S.A., or PDVSA, which hold production rights. PDVSA is the majority holder and operator.

Table of Contents

North America

- In the **United States**, we focus on deep water fields in the Gulf of Mexico. Our production in the United States during 2015 originated mainly from the Cascade, Chinook, Saint Malo, Lucius, Hadrian South and Cottonwood fields. The Cascade and Chinook development project were the first in the Gulf of Mexico to use an FPSO.

- In **Mexico,** we have held non-risk service contracts through our joint venture with PTD Servicios Multiplos SRL for the Cuervito and Fronterizo onshore blocks in the Burgos Basin since 2003. Under these service contracts, we receive fees for our services, but any production is transferred to the Mexican national oil company Petróleos Mexicanos.

Africa

We explore oil and gas opportunities in Africa exclusively through our 50% interest in a joint venture with BTG Pactual E&P BV (a subsidiary of Banco BTG Pactual S.A.), Petrobras Oil & Gas (PO&G). The assets of our joint venture with BTG Pactual E&P BV include:

- In **Gabon**, the Ntsina Marin and Mbeli Marin offshore blocks, which are in an exploratory phase;

- In **Nigeria**, the Agbami and Akpo fields, which are both producing oil. PO&G also has a 16% interest in the Egina field project, currently in its development stage while the Preowei and Egina South discoveries are under appraisal; and

- In **Tanzania**, PO&G has initiated the relinquishing process for the remaining Block 8 following an exploratory phase that revealed dry results.

Reserves

According to SEC technical criteria for booking proved reserves, as of December 31, 2015, our worldwide net proved oil, condensate and natural gas reserves, including synthetic oil and gas, reached 10,516 mmboe, a 20% reduction compared to our proved reserves of 13,141 mmboe as of December 31, 2014. This reduction was mainly attributable to the drop in oil prices during the fiscal year of 2015 and production-driven natural depletion of oil fields.

Our worldwide proved reserves as of December 31, 2015, December 31, 2014 and December 31, 2013 are summarized in the table below:

Proved Reserves	**Oil (mmbbl)**			**Gas (bcf)**			**Total (mmboe)**		
(SEC criteria)(1)	**2015**	**2014**	**2013**	**2015**	**2014**	**2013**	**2015**	**2014**	**2013**
Brazil	8,551.1	10,858.8	10,667.2	9,597.0	11,180.9	11,303.5	10,150.6	12,722.2	12,551.1
Campos Basin	4,778.8	7,202.8	7,642.3	3,407.5	4,578.4	4,662.4	5,346.7	7,965.9	8,419.4
Santos Basin	3,216.0	2,917.4	2,209.8	4,579.7	4,339.7	3,935.4	3,979.3	3,640.7	2,865.7

Other Basins	556.3	738.6	815.1	1,609.8	2,262.8	2,705.7	824.6	1,115.7	1,266.0
Other S. America	66.9	84.6	187.3	697.4	758.3	1,099.8	183.1	211.0	370.6
North America	90.6	120.1	123.2	138.5	180.0	133.0	113.7	150.1	145.4
Africa	65.8	54.1	63.2	16.6	19.3	20.6	68.6	57.3	66.7
Total	**8,774.4**	**11,117.6**	**11,040.9**	**10,449.5**	**12,138.5**	**12,556.9**	**10,515.9**	**13,140.6**	**13,133.8**

(1) These figures include synthetic oil and gas.

48

Table of Contents

There has been a net decrease of 2,625 mmboe in our proved reserves in 2015 mainly as a result of revisions of previous estimates. See "—Additional Reserves and Production Information—Changes in Proved Reserves" for further information about changes in our proved reserves. The table below summarizes the changes in our reserves in the last three years, expressed In millions of barrels of oil equivalent, including synthetic oil and gas.

Proved reserves (SEC criteria)(mmboe)	**2015**	**2014**	**2013**
Proved reserves, beginning of year	**13,141**	**13,134**	**12,895**
Discoveries and extensions	494	316	1,050
Improved recovery	22	2	277
Revisions of previous estimates	(2,186)	718	(109)
Sales of proved reserves	(22)	(163)	(118)
Purchases of proved reserves	0	31	0
Production	(932)	(898)	(862)
Proved Reserves, end of year	**10,516**	**13,141**	**13,134**

Our reserves-to-production ratio was 11.3 years worldwide and 11.5 years in Brazil and the ratio between our developed and total proved reserves was 51.1% as of December 31, 2015.

Capital Expenditures

In 2015, due to the recent decline of international crude oil prices and the depreciation of the *real* against the U.S. dollar, as well as our revised 2015-2019 Plan, we decreased capital expenditures in exploration and production activities and shifted our focus from exploration to the development of projects that are already underway in the Santos pre-salt area.

Our US$19.1 billion capital expenditures in exploration and production activities in 2015 (in Brazil and abroad) represent a US$6.4 billion decrease when compared to capital expenditures amounting to US$25.5 billion for the fiscal year ended December 31, 2014 and a US$10.6 billion decrease when compared to US$29.7 billion for the fiscal year ended December 31, 2013, mainly attributable to a reduction of exploration activities, projects optimization and the depreciation of the *real* against the U.S. dollar. Brazil represented 94% of our exploration and production investments in 2015.

Exploration

As of December 31, 2015, we had 43 evaluation plans underway, including 40 in exploratory areas and three in ring fence areas. We are exclusively responsible for conducting exploration activities under 68 exploratory agreements. In the Campos Basin, our exploration efforts focus on the pre-salt level. In the Santos Basin, the Libra Consortium has achieved significant progress in the exploration of the Libra block, with recent developments pointing to a 300-meter column of 28° API grade oil in the sixth well drilled in the Northeast area of the Libra Field.

In 2015, in addition to the relevant oil discoveries in the Libra block, we also had successful results in the Sergipe Offshore Basin - thus confirming its potential - and in the El Mangrullo field, on the Neuquina Basin in Argentina. We also declared the commerciality of Sépia Leste in the Santos Basin and the Jandaia Sul Field, onshore in the Reconcavo Basin.

As of December 31, 2015, we had exploration partnerships with 19 foreign and domestic companies, on 74 exploratory agreements, in 43 of which we are the operator. We hold interest ranging from 30% to 100% in the exploration areas under concession or assigned to us.

Table of Contents

In 2015, we invested a total of US$2.3 billion in exploration activities.

	Net Exploratory Area (km^2)			Exploratory Blocks			Evaluation Plans			Wells Drilled		
	2015	2014	2013	2015	2014	2013	2015	2014	2013	2015	2014	2013
Brazil	**55,366**	**63,789**	**54,210**	**146**	**158**	**96**	**43**	**46**	**51**	**51**	**74**	**76**
Campos Basin	1,798	3,398	4,493	7	8	5	9	9	7	4	10	5
Santos Basin	3,378	6,322	11,952	6	9	8	5	8	11	5	8	12
Other Basins	50,190	54,069	37,765	133	141	83	29	48	33	42	56	59
Other S. America	**12,702**	**12,702**	**44,337**	**7**	**7**	**15**	**1**	**1**	**1**	**6**	**9**	**5**
North America	**787**	**1,877**	**1,886**	**52**	**110**	**112**	**0**	**0**	**0**	**2**	**1**	**2**
Africa	**3,679**	**6,057**	**9,583**	**3**	**6**	**9**	**2**	**2**	**2**	**0**	**4**	**0**
Total	**72,534**	**84,425**	**110,016**	**208**	**281**	**232**	**46**	**49**	**54**	**59**	**88**	**83**

Critical Resources in Exploration and Production

We seek to develop and retain the critical resources that are necessary to meet our production targets. Drilling rigs are an important resource for our exploration and production operations and substantial lead-time is required in fleet expansion. When we discovered the pre-salt reservoirs, in 2006, our activities as operators were constrained by a lack of rigs. Whereas in 2008 we only had three rigs capable of drilling in waters with depth greater than 2,000 meters (6,560 feet), we expanded our fleet to 40 rigs by 2013. Due to the reduction in the time needed to complete pre-salt wells and to project optimization leading to the need of fewer wells, we are now able to reduce our rig fleet.

As of December 31, 2015, there were 18 onshore and 46 offshore rig platforms in our fleet, of which 30 units operated in ultra-deep waters in Brazil. Reductions in our rig platform fleet are expected due to the experience and knowledge we acquired with respect to drilling operations and to the postponement of certain projects.

We are also substantially reducing both our mid-water fleet (from 1,000 to 1,999 meters) and the number of our onshore rigs, since our projects in these areas have been largely completed. Reduced exploration activities will further reduce our need for floating drilling rigs.

Drilling Units in Use in Brazil by Exploration and Production on December 31 of Each Year

	2015		2014		2013	
	Leased	Owned	Leased	Owned	Leased	Owned
Onshore	**10**	**8**	**16**	**10**	**12**	**10**
	40	**6**	**55**	**6**	**61**	**7**

Offshore, by water depth (WD)						
Jack-up rigs	–	2	–	2	–	3
Floating rigs:	40	4	55	4	61	4
500 to 999 meters WD	2	2	2	2	4	2
1000 to 1999 meters WD	8	2	14	2	17	2
2000 to 3200 meters WD	30	0	39	–	40	–

Drilling Units in Use outside Brazil by Exploration and Production on December 31 of Each Year

	2015		**2014**		**2013**	
	Leased	**Owned**	**Leased**	**Owned**	**Leased**	**Owned**
Onshore	**8**	–	**6**	–	**7**	–
Offshore, by water depth (WD)	**1**	–	**2**	–	**2**	–
Jack-up rigs	–	–	–	–	–	–
Floating rigs:	–	–	–	–	–	–
500 to 999 meters WD	–	–	–	–	–	–
1000 to 1999 meters WD	–	–	–	–	–	–
2000 to 3200 meters WD	1	–	2	–	2	–

In order to achieve our production goals, we must secure a number of specialized vessels to connect wells to production systems. In 2015, specialized vessels were sufficient to meet our needs.

Refining, Transportation and Marketing

Refining, Transportation and Marketing Key Statistics

	2015	2014	2013
		(US$ million)	
Refining, Transportation and Marketing:			
Sales revenues	74,321	114,431	114,331
Income (loss) before income taxes	8,459	(23,527)	(12,413)
Property, plant and equipment	33,032	50,273	67,297
Capital expenditures and investments	2,534	7,882	14,399

We are one of the world's largest refiners. We own and operate 13 refineries in Brazil, with a total net crude distillation capacity of 2,176 mbbl/d. As of December 31, 2015, we operated substantially all of Brazil's total refining capacity. We supplied almost all of the refined product needs of third-party wholesalers, exporters and petrochemical companies, in addition to the needs of our Distribution segment. We operate a large and complex infrastructure of pipelines, terminals and a shipping fleet to transport oil products and crude oil to domestic and export markets. Most of our refineries are located near our crude oil pipelines, storage facilities, refined product pipelines and major petrochemical facilities, facilitating access to crude oil supplies and end-users.

Our Refining, Transportation and Marketing segment also includes (i) petrochemical operations that add value to the hydrocarbons we produce, (ii) extraction and processing of shale and (iii) international refining activities.

Refining Capacity in Brazil

Our crude distillation capacity in Brazil as of December 31, 2015, was 2,176 mbbl/d and our average throughput during 2015 was 1,976 mbbl/d. We have also gradually increased the production of low sulfur diesel, from 144 mbbl/d in 2014 to 201 mbbl/d in 2015, meeting the market demand for a more environmentally friendly transportation fuel.

The following table shows the installed capacity of our Brazilian refineries as of December 31, 2015, and the average daily throughputs of our refineries in Brazil in 2015, 2014 and 2013.

Capacity and Average Throughput of Refineries

Name (Alternative Name)	Location	Average Throughput*

		Crude Distillation Capacity at December 31, 2015 (mbbl/d)	2015	2014	2013
				(mbbl/d)	
LUBNOR	Fortaleza (CE)	8	8	9	8
RECAP (Capuava)	Capuava (SP)	53	40	54	53
REDUC (Duque de Caxias)	Duque de Caxias (RJ)	239	235	271	282
REFAP (Alberto Pasqualini)	Canoas (RS)	201	174	192	197
REGAP (Gabriel Passos)	Betim (MG)	157	152	158	150
REMAN (Isaac Sabbá)	Manaus (AM)	46	38	44	42
REPAR (Presidente Getúlio Vargas)	Araucária (PR)	208	197	204	194
REPLAN (Paulínia)	Paulinia (SP)	415	391	408	421
REVAP (Henrique Lage)	São Jose dos Campos (SP)	252	249	262	234
RLAM (Landulpho Alves)	Mataripe (BA)	315	248	287	279
RPBC (Presidente Bernardes)	Cubatão (SP)	170	157	177	177
RPCC (Potiguar Clara Camarão)	Guamaré (RN)	38	34	38	37
RNEST (Abreu e Lima)	Ipojuca (PE)	74	53	3	–
Average crude oil throughput		2,176	1,936	2,065	2,029
Average NGL throughput		–	40	41	45
Average throughput		2,176	1,976	2,106	2,074

* Considers oil and NGLs processing (fresh feedstock)

51

Table of Contents

Refinery Investments

We initiated the construction of two new refineries - Abreu e Lima Refinery – RNEST in northeastern Brazil and Petrochemical Complex of Rio de Janeiro (Complexo Petroquímico do Rio de Janeiro – Comperj) to process our domestically produced heavy oil for oil products that were most in demand in the Brazilian market and for which there was a growing shortage.

The first refining unit of RNEST began producing oil products in December of 2014. Designed to process 115 mbbl/d of crude oil into low sulfur diesel (10 ppm) and other products, this unit is currently operating with a partial capacity of 74 mbbl/d. Reaching full capacity for the unit will require the completion of a sulfur emissions reduction unit (SNOX), which we expect will be completed in 2017. Construction of the second refining unit of RNEST, which will increase the refinery's capacity to 230 mbbl/d, is expected to be completed by 2018, according to our 2015-2019 Plan.

With respect to Comperj, we are currently building a business model to restart the construction of this project, which includes partnerships with parties willing to fund and complete the construction of its first refining unit. Construction in the utilities center of the complex in order to support the start-up of its natural gas processing plant is ongoing.

We recognized impairment losses for the fiscal year ended December 31, 2015 of US$1.35 billion with respect to Comperj due to the use of a higher discount rate (reflecting an increase in Brazil's risk premium) and the delay in expected future cash inflows resulting from the further postponement of the project. For further information, see Note 14 to our audited consolidated financial statements and Item 5. "Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates—Impairment Testing of Refining Assets." We previously recognized impairment losses for the fiscal year ended December 31, 2014 of US$11.7 billion with respect to Comperj and RNEST and of US$129 million with respect to the Nansei Sekiyu K.K. refinery in Okinawa.

In addition to constructing new refineries, over the past ten years, we made substantial investments in our existing refineries to increase our capacity to economically process heavier Brazilian crude oil, improve the quality of our oil products to meet stricter regulatory standards, modernize our refineries, and reduce the environmental impact of our refining operations. These investments in our existing refineries have been largely completed.

As a result of either completing or temporarily suspending work on our refinery projects, our capital expenditures and investments in refining activities totaled US$1.7 billion in 2015, as compared to capital expenditures and investments amounting to US$6.3 billion for the fiscal year ended December 31, 2014 and US$11.8 billion for the fiscal year ended December 31, 2013. Continued recent changes in our business model prompted a review of our future prospects and ultimately led to a reduction in the pace of our projected capital expenditures, which is reflected in our 2015-2019 Plan.

52

Table of Contents

Domestic Output of Oil Products and Domestic Sales Volumes

The following tables summarize our domestic output of oil products and sales by product for the last three years.

Domestic Output of Oil Products: Refining and marketing operations, mbbl/d(1)

	2015	**2014**	**2013**
Diesel	848	853	850
Gasoline	435	494	491
Fuel oil	250	286	255
Naphtha	78	85	90
LPG	127	130	137
Jet fuel	98	105	96
Others	190	217	206
Total domestic output of oil products	**2,026**	**2,170**	**2,124**
Installed capacity(2)	2,176	2,176	2,102
Crude distillation utilization (%)(3)	89	98	97
Domestic crude oil as % of total feedstock processed	86	82	82

(1) Output volumes are larger than throughput volumes as a result of gains during the refining process.

(2) Installed capacity as of December 31, 2015, 2014 and 2013.

(3) Crude distillation utilization considers average installed capacity as of December 31, 2015, 2014 and 2013.

Our total domestic output of oil products decreased to 2,026 mbbl/d in 2015 from 2,170 mbbl/d in 2014, as a result of lower demand for oil products in the domestic market and maintenance stoppages. In 2015, diesel represented 42% of our domestic output of oil products, as compared to 39% in 2014 and there was a higher participation of domestic crude oil in our total domestic feedstock processed (86% as compared to 82% in 2014.)

Domestic Sales Volumes and Exports from Brazil, mbbl/d

	2015	**2014**	**2013**
Diesel	923	1,001	984
Gasoline	553	620	590
Fuel oil	104	119	98
Naphtha	133	163	171
LPG	232	235	231
Jet fuel	110	110	106
Others	179	210	203

Total oil products	**2,234**	**2,458**	**2,383**
Ethanol, nitrogen fertilizers, renewables and other products	123	99	91
Natural gas	432	446	409
Total domestic market	**2,789**	**3,003**	**2,883**
Exports	510	393	395
Total domestic market and exports	**3,299**	**3,396**	**3,278**

The Brazilian domestic market grew rapidly from 2010 to 2012, in parallel with Brazil's economic expansion and the increase of average income, increasing by an average of 7.9% annually. In 2013 and 2014, as a result of the Brazilian economic slowdown, the domestic growth rate in consumption of oil products, particularly diesel, decreased as compared to the higher rates of growth experienced in prior years.

Our total domestic sales volumes for oil products were 2,234 mbbl/d in 2015, a reduction of 9% compared to 2014. In 2015, our sales of oil products declined as a result of a 3.8% reduction in the Brazilian GDP, an increase in imports of diesel and gasoline from other participants in the Brazilian market, a reduction in the consumption of gasoline as a result of greater ethanol use, and a decrease in the sale of fuel oil due to decreased thermoelectric consumption.

Table of Contents

Imports and Exports

Our import and export of oil products depend on our refinery output and Brazilian demand levels. Much of the crude oil we produce in Brazil is heavy or intermediate. We import some light crude to balance the slate for our refineries, and export heavy and intermediate crude oil from our production in Brazil. We also continue to import oil products to balance any shortfall between production from our Brazilian refineries and the market demand for each product, despite the domestic market retraction in 2015 and to take advantage of price differentials existing between the cost to refine crude oil in Brazil and the cost to import oil products.

We export oil products that our refineries produce in excess of Brazilian market demand, which is largely fuel oil.

The table below shows our exports and imports of crude oil and oil products in 2015, 2014 and 2013:

Exports and Imports of Crude Oil and Oil Products, mbbl/d

	2015	**2014**	**2013**
Exports			
Crude oil	360	232	207
Fuel oil (including bunker fuel)	125	128	151
Gasoline	3	0	0
Others	21	30	35
Total exports	**509**	**390**	**393**
Imports			
Crude oil	277	392	404
Diesel	78	185	174
LPG	67	70	63
Gasoline	28	41	32
Naphtha	51	88	83
Others	32	29	37
Total imports	**533**	**805**	**793**

Delivery Commitments

We sell crude oil through long-term and spot-market contracts. Our long-term contracts specify the delivery of fixed and determinable quantities, subject to a price negotiation with third parties on a delivery-by-delivery basis. We are committed through long-term contracts to deliver a total of approximately 266 mbbl/d of crude oil in 2016. We believe our domestic proved reserves will be sufficient to allow us to continue to deliver all contracted volumes. For 2016, approximately 30% of our domestic exported crude oil will be committed to meeting our contractual delivery commitments to third parties.

Logistics and Infrastructure for Oil and Oil Products

We own and operate an extensive network of crude oil and oil product pipelines in Brazil that connect our terminals, refineries and other primary distribution points. As of December 31, 2015, our onshore and offshore, crude oil and oil products pipelines extended over 7,517 km (4,670 miles). We operate 28 marine storage terminals and 21 other tank farms with nominal aggregate storage capacity of 67 mmbbl. Our marine terminals handle an average of 10,336 tankers and oil barges annually.

We operate a fleet of owned and chartered vessels. These provide shuttle services between our producing basins offshore Brazil and the Brazilian mainland, and shipping to other parts of South America and internationally. We are increasing our fleet of owned vessels to replace older vessels and decrease our dependency on chartered vessels. Upgrades will include replacing vessels nearing the end of their 25-year useful life. Our long-term strategy continues to focus on the flexibility afforded by operating a combination of owned and chartered vessels.

Table of Contents

Also, three new oil tankers and one LPG carrier were delivered to Transpetro in 2015. We plan to have another five vessels delivered to us during 2016 and up to 18 vessels in the following years, all of which will be built in Brazilian shipyards. In 2015, as a result of our 2015-2019 Plan, as well as issues with our counter-parties under many of the contracts for the construction or delivery of vessels, we canceled purchase contracts for the delivery of 10 additional vessels.

The table below shows our operating fleet and vessels under contract as of December 31, 2015.

Owned and Chartered Vessels in Operation and Under Construction Contracts at December 31, 2015

	In Operation		**Under Contract/Construction**	
	Number	**Tons Deadweight Capacity**	**Number**	**Tons Deadweight Capacity**
Owned fleet:				
Tankers	48	4,415,178	18	2,199,800
LPG tankers	6	40,732	5	21,300
Anchor Handling Tug Supply (AHTS)	1	1,920	–	
Total	55	4,457,830	23	2,221,100
Chartered vessels:				
Tankers	105	11,238,426	–	–
LPG tankers	21	452,373	–	–
Total	126	11,690,799	–	–

A reduction in the number of chartered vessels in 2015 is mainly attributable to the significant reduction in imports of oil products. Despite this reduction in the number of chartered vessels, the volume of oil and oil products transported in 2015 was equivalent to the volume transported in 2014 due to the increase in oil exports, which use larger vessels.

Petrochemicals

Our petrochemicals operations provide an outlet for our growing production volumes of gas and other refined products, which increase their value and provide substitute for products that are otherwise imported. Our strategy is to operate in an integrated manner with the other businesses of Petrobras, preferably through partnerships with other companies.

Table of Contents

We engage in our petrochemicals operations through the following subsidiaries, joint ventures, joint operations and associated companies:

	mmt/y (nominal capacity)	Petrobras interest (%
Braskem(1):		
Ethylene	3.95	
Polyethylene	3.05	36.20
Polypropylene	3.99	
DETEN Química S.A.:		
LAB(1)	0.22	27.88
LABSA(1)	0.12	
METANOR S.A./COPENOR S.A.(2):		
Methanol	0.08	
Formaldehyde	0.09	34.54
Hexamine	0.01	
FCC Fábrica Carioca de Catalisadores S.A.:		
Catalysts	0.04	50.00
Additives	0.01	
PETROQUÍMICASUAPE COMPLEX(3):		
Purified Terephthalic Acid - PTA	0.70	
Polyethylene Terephthalate - PET	0.45	100.00
Polymer and polyester filament textiles	0.24	
PETROCOQUE S.A.:		
Calcined petroleum coke	0.50	50.00

(1) Feedstock for the production of biodegradable detergents.
(2) Copernor S.A. is a Metanor S.A. subsidiary.
(3) The PTA unit started operations in January 2013 and the PET unit started operations in August 2014.

Our investments in petrochemical companies amount to US$850 million and the largest investment is in Braskem S.A. (Braskem), Brazil’s largest petrochemical company.

We recognized impairment losses for the fiscal year ended December 31, 2015 of US$200 million with respect to the Suape Petrochemical Complex (*Complexo Industrial Petroquímica Suape*) due to changes in market and price assumptions resulting from a decrease in economic activity in Brazil, a reduction in the spread for petrochemical products in the international market and the use of a higher discount rate (reflecting an increase in Brazil’s risk premium). For further information, see Note 14 to our audited consolidated financial statements. We previously recognized impairment losses for the fiscal year ended December 31, 2014 of US$1.1 billion with respect to the Suape Petrochemical Complex.

56

Table of Contents

Refining Capacity Abroad

Our international crude distillation capacity as of December 31, 2015 was 230.5 mbbl/d and the utilization factor for our international consolidated refining facilities was 58%.

The following table shows the installed capacity of our international refineries as of December 31, 2015, and the average daily throughputs in 2015, 2014 and 2013, respectively.

Capacity and Average Throughput of Refineries

Name (Alternative Name)	Location	Crude Distillation Capacity at December 31, 2015 (mbbl/d)	Average Throughput* 2015	2014 (mbbl/d)	2013
Pasadena Refining System Inc.	Texas (USA)	100.0	99.5	100.3	101.8
Nansei Sekiyu Kabushiki Kaisha	Okinawa (JP)	100.0	10.2	35.9	38.6
Ricardo Eliçabe Refinery	Bahía Blanca (AR)	30.5	28.7	27.2	29.0
Total average crude oil throughput		230.5	132.8	158.9	160.8
Average external intermediate throughput		12.0	5.6	4.5	8.6
Total average throughput		242.5	138.4	163.4	169.4

* Consider oil (fresh feedstock) and external processed intermediate oil products.

The following table shows the total average output of oil products of our international refineries in 2015, 2014 and 2013.

International Average Output of Oil Products

	2015	2014 (mbbl/d)	2013
Total average output	149	175	185

We also participate in the refining sector in other South American countries and in North America. See below our international refining activities by region:

South America

We conduct refining and transportation activities in Argentina through our interest in PESA. We own the Bahia Blanca Refinery, with a capacity of 30.5 mbbl/d, and own interests in the Refinor refinery in Campo Duran and in two petrochemical plants in Puerto General San Martín and Zárate.

North America

In the United States, we own 100% of the Pasadena Refining System Inc., and 100% of its related trading company, PRSI Trading, LLC.

Asia

In Japan, we own the Nansei Sekiyu Kabushiki Kaisha refinery in Okinawa. In first quarter of 2015, we decided to begin winding down the operations of this refinery and the refinery stopped processing crude oil in April 2015. This winding down plan involves continuing its activities as a maritime terminal. All stakeholders have been advised about this change in the business model, including local authorities.

Table of Contents

Sales Volumes Abroad

Sales Volumes Abroad, mbbl/d	2015	2014	2013
International Sales	546	**571**	**514**

Distribution

Distribution Key Statistics

	2015	2014	2013
		(US$ million)	
Distribution:			
Sales revenues	33,406	46,893	45,244
Income (loss) before income taxes	(219)	860	1,411
Property, plant and equipment	1,868	2,685	2,790
Capital expenditures and investments	255	487	566

Domestic Distribution

We are Brazil's leading oil products distributor, operating through our own retail network, through our own wholesale channels, and by supplying other fuel wholesalers and retailers. Our Distribution segment sells oil products that are primarily produced by our Refining, Transportation and Marketing segment, or RTM, and works to expand the domestic market for these oil products and for other fuels, including LPG, natural gas, ethanol and biodiesel.

The primary focus of our Distribution segment is to be the benchmark in the distribution of oil products and biofuels in Brazil, by innovating and providing value to our business, while promoting safe operations and environmental and social responsibility, strengthening the Petrobras brand.

We supply and operate Petrobras Distribuidora, which accounts for 35.1% of the total Brazilian retail and wholesale distribution market. Petrobras Distribuidora distributes oil products, ethanol, biodiesel and natural gas to retail, commercial and industrial customers. In 2015, Petrobras Distribuidora sold the equivalent of 919.8 mbbl/d of oil products and other fuels to wholesale and retail customers, of which the largest portion (39.9%) was diesel.

At December 31, 2015, our Petrobras Distribuidora branded service station network was Brazil's leading retail marketer, with 8,176 service stations, or 19.7% of the stations in Brazil. Petrobras Distribuidora owned and franchised stations that represented 27.6% of Brazil's retail sales of diesel, gasoline, ethanol, vehicular natural gas and lubricants in 2015.

Most Petrobras Distribuidora service stations are owned by franchisees that use the Petrobras Distribuidora brand name under license and purchase exclusively from us; we also provide franchisees with technical support, training and advertising. We own 632 of the Petrobras Distribuidora service stations and are required by law to subcontract the operation of these owned stations to third parties. We believe that our market share position is supported by a strong Petrobras Distribuidora brand image and by the remodeling of service stations and addition of lubrication centers and convenience stores.

Our wholesale distribution of oil products and biofuels under the Petrobras Distribuidora brand to commercial and industrial customers accounts for 53.8% of the total Brazilian wholesale market. Our customers include aviation, transportation and industrial companies, as well as utilities and government entities.

Table of Contents

Our LPG distribution business – Liquigas Distribuidora – held a 22.7% market share and ranked second in LPG sales in Brazil in 2015, according to the ANP.

Distribution Abroad

We also participate in the retail sector in other South American countries. See below our international distribution activities by region:

South America

We conduct distribution activities in Argentina, Chile, Colombia, Paraguay and Uruguay:

- In **Argentina**, through PESA, our operations include 265 retail service stations;
- In **Chile**, our operations include 279 service stations, the distribution and sales of fuel at airports and a lubricant plant;
- In **Colombia**, our operations include 115 service stations and a lubricant plant;
- In **Paraguay**, our operations include 180 service stations, the distribution and sales of fuel at three airports and an LPG refueling plant; and
- In **Uruguay**, we have downstream operations in the country, including 87 service stations and gas segment assets.

Gas and Power

Gas and Power Key Statistics

	2015	2014	2013
		(US$ million)	
Gas and Power:			
Sales revenues	13,145	18,373	14,572
Income (loss) before income taxes	518	(466)	991
Property, plant and equipment	14,674	22,237	21,011
Capital expenditures and investments	793	2,571	2,742

Our Gas and Power segment comprises gas transmission and distribution, LNG regasification, the manufacture of nitrogen-based fertilizers, gas-fired and flex-fuel power generation, and power generation from renewable sources, including solar and wind sources.

The primary focus of our Gas and Power segment is to:

- Monetize our natural gas resources;

- Assure flexibility and reliability in the supply of natural gas;

- Consolidate our electric energy business, exploring synergies between our natural gas supply and power generation capacities, along with the expansion of our electric energy commercialization activities; and

- Chemically process our natural gas to increase its value, prioritizing nitrogen fertilizers and other value- added products.

Table of Contents

Domestic Gas and Power

For more than two decades, we have actively worked to simultaneously develop Brazil's natural gas reserves and develop important infrastructure in order to assure flexibility and reliability in the supply of natural gas. As a result of this multi-year development program, we now have an integrated system centered around two main interlinked pipeline networks, a gas pipeline connection with Bolivia and an isolated pipeline in the northern region of Brazil (all together spanning over 9,190 km). This network allows us to deliver to our customers natural gas processed in our gas facilities arriving from our onshore and offshore natural gas producing fields, mainly from Santos, Campos and Espírito Santo Basins, as well as the natural gas from our three LNG terminals, and from Bolivia. As a result of our efforts to develop this market, natural gas in 2014 supplied 13.5% of Brazil's total energy needs, compared to 3.7% in 1998.

Natural Gas

Our principal markets for natural gas are:

- Industrial, commercial and retail customers;
- Thermoelectric generation; and
- Consumption by our refineries and fertilizer plants.

The table below shows the sources of our natural gas supply, our sales and internal consumption of natural gas, and revenues in our local gas distribution operations for each of the past three years.

Supply and Sales of Natural Gas in Brazil, mmm^3/d

	2015	**2014**	**2013**
Sources of natural gas supply			
Domestic production	44.9	43.2	40.8
Imported from Bolivia	32.1	32.9	30.5
LNG	18.0	20.0	14.5
Total natural gas supply	95.0	96.1	85.9
Sales of natural gas			
Sales to local gas distribution companies(1)	37.5	38.9	38.6
Sales to gas-fired power plants	31.1	31.6	26.0
Total sales of natural gas	68.6	70.5	64.6
Internal consumption (refineries, fertilizer and gas-fired power plants)(2)	26.4	25.6	21.3
Revenues (US$ billion)(3)	8.3	9.8	9.0

(1)	Includes sales to local gas distribution companies in which we have an equity interest.
(2)	Includes gas used in the transport system.
(3)	Includes natural gas sales revenues from the Natural Gas segment to other operating segments, service and other revenues from natural gas companies.

Our volume of natural gas sales to industrial, gas-fired electric power generation, commercial and retail customers in 2015 was 68.6 mmm^3/d, representing a decrease of 2.7% compared to 2014. This decrease is attributable to the reduction of our industrial activities from 2014 to 2015. Natural gas consumption by refineries and fertilizer plants increased by 10%.

Table of Contents

Currently, our main focus is to provide transportation and processing solutions for our planned natural gas production from the pre-salt fields. In 2015, we invested US$513.9 million in our natural gas infrastructure, and in 2016, we plan to continue to invest in (i) the construction of two gas offshore export pipelines connecting our pre-salt natural gas producing fields to the Cabiúnas Terminal and Comperj's processing plant; (ii) the expansion of the natural gas processing capacity of the Cabiúnas Terminal in order to process up to 459 mmcf/d (13 mmm^3/d) with the expectation of increasing the associated natural gas production from the pre-salt reservoirs in the Santos Basin, and (iii) the development of a natural gas processing plant with a capacity of 742 mmcf/d (21 mmm^3/d), located at the future Comperj's petrochemical complex, also associated with the pre-salt reservoirs in the Santos Basin. The Cabiúnas Terminal expansion became fully operational in March 2016 and Comperj's natural gas processing plant is scheduled to begin operations by 2019.

We also own and operate three LNG flexible terminals using three FSRUs (Floating Storage and Regasification Units), one in Guanabara Bay (State of Rio de Janeiro) with a send-out capacity of 706 mmcf/d (20 mmm^3/d), another in Pecém (State of Ceará) in Northeastern Brazil with a send-out capacity of 247 mmcf/d (7 mmm^3/d) and the last one located in the Todos os Santos Bay (State of Bahia), with a send-out capacity of 494 mmcf/d (14 mmm^3/d).

In 2015, we received 79 liquid natural gas (LNG) cargos in Brazil, as compared to 99 in 2014.

We also own and operate four natural gas processing facilities. Two of them, Sul Capixaba and Cacimbas, located in the State of Espírito Santo, have the capacity to process 2.5 mmm^3/d and 16 mmm^3/d of natural gas, respectively, and are designated to process natural gas from the Campos Basin. Caraguatatuba plant, located in the State of São Paulo, has the capacity to process 20 mmm^3/d of natural gas, and is designated to process natural gas from the Santos Basin post-salt and pre-salt areas. The TECAB plant, located in State of Rio de Janeiro, has the capacity to process 24 mmm^3/d of natural gas from the Campos Basin and the Santos Basin pre-salt.

The map below shows our gas pipeline networks, LNG terminals and natural gas processing plants.

Through Gaspetro, we hold interests ranging from 23.5% to 100% in nineteen of twenty seven state natural gas distributors in Brazil. On December 28, 2015, we concluded the sale of a 49% interest in Gaspetro to Mitsui for R$1.93 billion, approximately US$495 million. See Note 10 to our audited consolidated financial statements.

The three most significant distributors in our portfolio (by volume) are CEG Rio, Bahiagás (both held through Gaspetro) and Petrobras Distribuidora (operating in the Espirito Santo state) and their combined averaged gas sales volumes in 2015 amounted to 17.514 mmm3/d, representing 54% of our averaged gas sales volumes during 2015.

Long-Term Natural Gas Commitments

When we began construction of the Bolivia-Brazil pipeline in 1996, we entered into a long-term Gas Supply Agreement, or GSA, with the Bolivian state-owned company Yacimientos Petroliferos Fiscales Bolivianos, or YPFB, to purchase certain minimum volumes of natural gas at prices linked to the international fuel oil price through 2019, after which the agreement may be extended until all contracted volume has been delivered.

Table of Contents

Our volume obligations under the ship-or-pay arrangements entered into with Gas Transboliviano S.A. (GTB) and Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. (TBG) were generally designed to match our gas purchase obligations under the GSA through 2020. The tables below show our contractual commitments under these agreements for the five-year period from 2016 through 2020.

	2016	**2017**	**2018**	**2019**	**2020**
Purchase commitments to YPFB					
Volume obligation (mmm^3/d)(1)	24.06	24.06	24.06	24.06	24.06
Volume obligation (mmcf/d)(1)	850.00	850.00	850.00	850.00	850.00
Brent crude oil projection (US$)(2)	45.00	59.43	60.57	63.68	67.14
Estimated payments (US$ million)(3)	1,037.70	1,185.14	1,407.65	1,505.76	1,605.96
Ship-or-pay contract with GTB					
Volume commitment (mmm^3/d)	30.08	30.08	30.08	30.08	6.00
Volume commitment (mmcf/d)	1,062.26	1,062.26	1,062.26	1,062.26	211.89
Estimated payments (US$ million)(5)	112.91	113.17	113.72	114.30	0
Ship-or-pay contract with TBG					
Volume commitment (mmm^3/d)(4)	35.28	35.28	35.28	35.28	17.20
Volume commitment (mmcf/d)	1,246.09	1,246.09	1,246.09	1,246.09	607.50
Estimated payments (US$ million)(5)	519	523	526	527	144

(1) 25.3% of contracted volume supplied by Petrobras Bolivia.

(2) Brent crude oil price forecast based on our 2030 Strategic Plan, which is currently under review by our management.

(3) Estimated payments are calculated using gas prices expected for each year based on our Brent crude oil price forecast. Gas prices may be adjusted in the future based on contract clauses and amounts of natural gas purchased by Petrobras may vary annually.

(4) Includes ship-or-pay contracts relating to TBG's capacity increase.

(5) Amounts calculated based on current prices defined in natural gas transport contracts.

Natural Gas Sales Contracts

We sell our gas primarily to local gas distribution companies and to gas fired plants generally based on standard take-or-pay, long-term supply contracts. This represents 70% of our total sale volumes, and the price formulas under these contracts are mainly indexed to an international fuel oil basket. In order to restore the competitiveness of our natural gas in the Brazilian market, in 2015 we ceased discounting the prices we charge under some of our natural gas sales contracts. Additionally, we have a variety of sales contracts designed to create flexibility in matching customer demand with our gas supply capabilities. These include flexible and interruptible long-term gas sales contracts, auction mechanisms for short-term contracts, weekly electronic auctions and a type of gas sales contract that consists of a seller delivery option that helps balance natural gas sales in case of low demand for natural gas from gas-fired power plants. In this circumstance, the excess natural gas volumes are offered to end consumers who ordinarily use energy sources other than natural gas.

In 2015, we continued to renegotiate some existing long-term natural gas sales contracts with local distribution companies of natural gas in order to promote adjustments tailored to specific market demands, encompassing term extensions for some contracts and prolonging our natural gas sales portfolio.

Table of Contents

The table below shows our future gas supply commitments from 2016 to 2020, including sales to both local gas distribution companies and gas-fired power plants:

Future Commitments under Natural Gas Sales Contracts, mmm³/d	**2016**	**2017**	**2018**	**2019**	**2020**
To local gas distribution companies:					
Related parties(1)	17.92	18.05	18.27	18.85	16.88
Third parties	20.20	20.36	20.82	17.60	17.60
To gas-fired power plants:					
Related parties(1)	5.70	2.24	1.83	1.30	1.54
Third parties	11.32	10.48	10.26	10.11	10.15
Total(2)	55.13	51.13	51.18	47.86	46.16
Estimated amounts to be invoiced (US$ billion)(3)(4)	4.6	4.7	4.7	4.4	4.2

(1) For purposes of this table, "related parties" include all local gas distribution companies and power generation plants in which we have an equity interest and "third parties" refer to those in which we do not have an equity interest.

(2) Estimated volumes are based on "take or pay" agreements in our contracts, expected volumes and contracts under negotiation (including renewals of existing contracts), not maximum sales.

(3) Estimates are based on outside sales and do not include internal consumption or transfers.

(4) Prices may be adjusted in the future and actual amounts may vary.

Power

Brazilian electricity needs are mainly supplied by hydroelectric power plants (91,602 MW of installed capacity), which account for 65% of Brazil's generation capacity. Hydroelectric power plants are dependent on the annual level of rainfall; in the years where rainfall is abundant, Brazilian hydroelectric power plants will generate more electricity and consequently less generation from thermoelectric power plants will be demanded. The total installed capacity of the Brazilian National Interconnected Power Grid (*Sistema Interligado Nacional*) in 2015 was 140,639 MW. Of this total, 6,148 MW (or 4%) was available from 20 thermoelectric plants we operate. These plants are designed to supplement power from the hydroelectric power plants.

In 2015, hydroelectric power plants in Brazil generated 43,591 MWavg, which corresponded to 68% of Brazil's total electricity needs (63,966 MWavg). Hydroelectric generation capacity is supplemented by other sources of energy (wind, coal, nuclear, fuel oil, diesel oil, natural gas, and others). Total electricity generated by these sources averaged 20,374 MW in 2015, of which our thermoelectric power plants contributed 4,646 MWavg, as compared to 4,761 MWAvg in 2014 and 4,043 MWavg in 2013. In 2015, we invested US$146.7 million in our power business segment.

Electricity Sales and Commitments for Future Generation Capacity

Under Brazil's power pricing regime, a thermoelectric power plant may sell only electricity that is certified by the MME and which corresponds to a fraction of its installed capacity. This certificate is granted to ensure a constant sale of commercial capacity over the course of years to each power plant, given its role within Brazil's system to supplement hydroelectricity power during periods of unfavorable rainfall. The amount of certified capacity for each power plant is determined by its expected capacity to generate energy over time.

The total capacity certified by the MME (*garantia física)* may be sold through long-term contracts in auctions to power distribution companies (standby availability), sold through bilateral contracts executed with free customers and used to attend the energy needs of our own facilities.

In exchange for selling this certified capacity, the thermoelectric power plants shall produce energy whenever requested by the national operator (ONS). In addition to a capacity payment, thermoelectric power plants also receive from the Electric Energy Trading Chamber (*Câmara de Comercialização de Energia Elétrica*, or CCEE) reimbursement for its variable costs (previously declared to MME to calculate its commercial certified capacity) incurred whenever they are requested to generate electricity.

In 2015, the commercial capacity certified by MME for all thermoelectric power plants controlled by us was 4,307 MWavg, although our total generating capacity was 6,148 MWavg. Of the total 4,554 MWavg of commercial capacity available (*capacidade comercial disponível* or *lastro*) for sale in 2015, approximately 69% was sold as standby availability in public auctions in the regulated market (compared to 53% in 2014) and approximately 30% was committed under bilateral contracts and self-production (i.e. sales to related parties) (compared to 35% in 2014).

In 2015, public auctions on the regulated market were the main channel used by our thermoelectric generation business to sell energy that had not been previously contracted. Distribution companies must purchase, through a public auction process on the regulated market, their expected electricity requirements for their captive customers. The public auction process is administered by ANEEL, either directly or through the *Câmara de Comercialização de Energia Elétrica (*Electric Energy Trading Chamber), or CCEE, under certain guidelines provided by the MME.

Existing power generators (such as our thermoelectric power plants) can hold auctions (i) in the year before the initial delivery date (“A-1 Auctions”), (ii) every year, for the delivery of energy for up to the following 15 years (“A Auctions”) and (iii) every year for the delivery of energy for up to the following 2 years (“Adjustment Auctions”). Electricity auctions for new generation projects are held (i) in the fifth year before the initial delivery date of electricity (“A-5 Auctions”), and (ii) in the third year before the commencement of commercial operation (“A-3 Auctions”).

To benefit from attractive sale prices for energy that has not been previously contracted, for the delivery of energy starting in 2014, we sold some of our remaining certified commercial capacity as standby capacity under public auctions on the electricity regulated market as follows: 574 MWavg per month in an A Auction held on April 30, 2014 for the sale of energy between May 1, 2014 to December 31, 2019. For the delivery of energy starting in 2015, we sold (i) 270 MWavg per month in an A-1 Auction held on December 5, 2014 for the sale of energy between January 1, 2015 to December 31, 2017 and (ii) 205 MWavg per month in the 18th Adjustment Auction held on January 15, 2015 for the sale of energy between January 1st to June 30, 2015. For the delivery of energy starting in 2016, we sold 114 MWavg per month in an A-1/2015 Auction, held on December 11, 2015 for the sale of energy between January 1, 2016, to December 31, 2016. With these sales, we can now better predict our revenues to be derived from the sale of electricity for the next 3 years.

Under the terms of standby availability contracts, we are paid a fixed amount whether or not we generate any power. Additionally, whenever we have to deliver energy under these contracts, we receive an additional payment for the energy delivered that is set on the auction date and is revised monthly or annually based on inflation-adjusted international fuel price indexes.

Our future commitments under bilateral contracts and self-production are of 1,317 MWavg in 2016, 1,232 MWavg in 2017 and 1,265 MWavg in 2018. The agreements expire gradually, with the last contract expiring in 2028. As existing bilateral contracts expire, we will sell our remaining certified commercial capacity under contracts in new auctions to be conducted by MME or through the execution of new bilateral contracts.

Table of Contents

The table below shows the evolution of our installed thermoelectric power plants' capacity, our purchases in the free market and the associated certificated commercial capacity.

	2016	**2015**	**2014**
Installed power capacity and utilization			
Installed capacity (MW)	6,148	6,148	6,402
Certified commercial capacity (MWavg)	4,191	4,307	4,222
Purchases in the free market (MWavg)	335	247	320
Commercial capacity available (*Lastro*) (MWavg)	4,526	4,554	4,542

The table below shows the allocation of our sales volume between our customers and our revenues for each of the past three years:

Volumes of Electricity Sold (MWavg)

	2015	**2014**	**2013**
Total sale commitments	**4,451**	**4,036**	**4,235**
Bilateral contracts	854	1,183	2,021
Self-production	437	428	416
Public auctions to distribution companies	3,160	2,425	1,798
Generation volume	**4,646**	**4,761**	**4,043**
Revenues (US$ million)(1)	**4,410**	**7,693**	**5,173**

(1) Includes electricity sales revenues from the Power segment to other operating segments, service and other revenues from electricity companies.

Fertilizers

Our fertilizer plants in Bahia, Sergipe and Paraná produce ammonia and urea for the Brazilian market. The units in Bahia and Paraná also produce automotive liquid reducing agents (ARLA-32) and the unit in Sergipe also produces ammonium sulfate. The combined production capacity of these plants is 1,852,000 t/y of urea, 1,406,000 t/y of ammonia, 300,000 t/y of ammonium sulfate and 800,000 t/y of ARLA-32. Most of our ammonia production is used to produce urea, and the excess production is mainly sold in the Brazilian market. In 2015, we improved the utilization rate of these plants yielding to a 27% increase in production volume compared to 2014.

The table below shows our ammonia and urea sales, and revenues for each of the past three years:

Ammonia and Urea (t/y)	2015	2014	2013
Ammonia	240,620	234,339	205,029
Urea	1,283,673	1,046,004	1,071,827
Revenues (US$ million)(1)	676	663	621

(1) Includes nitrogenous fertilizers sales revenues from the Fertilizer segment to other operating segments, services and other revenues from fertilizers companies.

Due to major changes in our business context, in 2015, we suspended investments in the following fertilizer projects:

- UFN III, with the capacity to produce 1.2 mmt/y of urea and 70 mt/y of ammonia from 2.2 mmm3/d of natural gas; and

- UFN V, with the capacity to produce 519,000 t/y of ammonia from 1.3 mmm^3/d of natural gas.

Table of Contents

In 2015, we decided to cancel the UFN V fertilizing project, while the UFN III fertilizing project remains under suspension. We recognized impairment losses for the fiscal year ended December 31, 2015 of US$501 million with respect to the UFN III fertilizer facility due to the use of a higher discount rate (reflecting an increase in Brazil's risk premium) and the delay in expected future cash inflows resulting from postponement of the project and of US$190 million with respect to the UFN V fertilizer facility due to our decision to cancel the project. For further information, see Note 14 to our audited consolidated financial statements. We previously recognized impairment losses for the fiscal year ended December 31, 2014 of US$116 million with respect to the Araucária fertilizer facility.

Renewable Energy

We have invested, alone and in partnership with other companies, in renewable power generation sources in Brazil, including wind. We currently hold minority equity interests in four wind power plants (Mangue Seco 1, 2, 3 and 4) and two small hydroelectric power plants (Areia and Água Limpa), and we hold an 100% equity interest in a wind power plant (Macau) and a solar power plant (UFVAR). The power generation capacity we have (alone and through the equity interests we hold in renewable energy companies) is equivalent to 25.4 MW of hydroelectric capacity, 1.1 MW of solar capacity and 105.8 MW of wind capacity. We and our partners sell energy from these plants directly to the Brazilian federal government via its renewable energies incentive program and the 2009 "reserve energy" auctions.

Gas and Power Abroad

We also participate in the gas and power sector in other South American countries. See below our international activities by region:

South America

We conduct gas and power activities in Argentina, Bolivia and in Uruguay.

- In **Argentina**, through Pesa, we own four electric power plants, Pichi Picún Leufú (hydrogeneration), Genelba (gas powered combined cycle), Genelba Plus (gas powered) and EcoEnergia (Cogeneration), and we hold an interest in two other electric power plants, Central Termelétrica José de San Martín S.A. and Central Termelétrica Manuel Belgrano S.A. and we also have a stake in a natural gas transportation company called TGS (Transportadora Gas del Sur). Through Petrobras International Braspetro B.V. – PIB BV (Netherlands), we have an interest in Mega Company, a natural gas separation facility.

- In **Bolivia**, we hold an 11% interest in GTB, owner of the Bolivian section of the Bolivia-to-Brazil (BTB) pipeline that transports natural gas we produce in Bolivia to the Brazilian market. We also hold a 21% interest in the Rio Grande Compression Unit, where the Bolivia-Brasil Gas Pipeline starts.

• In **Uruguay**, we participate in the two companies that are responsible for the distribution of natural gas by pipelines in the country: (i) Distribuidora de Gás Montevideo S.A., a company 100% owned by Petrobras, that supplies natural gas to the Montevideo area; and (ii) Conecta S.A., a company in which we hold a 55% equity interest (the remaining 45% belong to ANCAP, Uruguay’s state oil company), that supplies natural gas to the rest of country.

Table of Contents

Biofuels

Biofuels Key Statistics

	2015	**2014**	**2013**
		(US$ million)	
Biofuel:			
Sales revenues	229	266	388
Income (loss) before income taxes	(317)	(166)	(166)
Property, plant and equipment	91	205	222
Capital expenditures	43	112	143

Brazil is a global leader in the use and production of biofuels. In 2015, 88.6% of new light vehicles sold in Brazil had flexfuel capability, and service stations offered a choice of 100% ethanol and an ethanol/gasoline blend. Starting in March 2015, the Brazilian federal government increased the anhydrous ethanol content requirement for the gasoline sold in Brazil from 25% to 27%.

We recognized impairment losses for the fiscal year ended December 31, 2015 of US$185 million (including US$139 million of impairment losses on equity-method investments) with respect to our biofuel segment, mainly attributable to an increase in the post-tax discount rate (reflecting an increase in Brazil’s risk premium) and the postponement of biofuel projects for an extended period of time. For further information, see Note 14 to our audited consolidated financial statements.

Biodiesel

Since November 2014, all diesel fuel sold in Brazil is required to have at least 7% biodiesel. In 2015, we supplied 17.4% of Brazil’s biodiesel (assuming 100% of BSBIOS Sul Brasil production), ranking us as the main biodiesel supplier in Brazil, and we act as a market catalyst by securing and blending biodiesel supplies and furnishing these to smaller distributors as well as our own service stations. We directly own three biodiesel plants and, through our 50% interest in BSBIOS Indústria e Comércio de Biodiesel Sul Brasil S.A. (BSBIOS Sul Brasil), we own two additional plants. The biodiesel production capacity of these five plants totals 15.6 mbbl/d.

Ethanol

Due to our ownership interest in Guarani S.A. (Guarani), Brazil’s fifth largest sugarcane processor, Nova Fronteira Bioenergia S.A. (Nova Fronteira) and Bambuí Bioenergia S.A. (Bambuí Bioenergia), we also have a presence in the whole ethanol and sugar production chain and we also sell the exceeding electricity generated from sugarcane bagasse burn. We have all the necessary infrastructure for the distribution and export of ethanol. On January 5, 2016, we increased our equity interest in Guarani S.A. from 42.95% to 45.97%.

Through our associated companies Bambuí Bioenergia, Nova Fronteira and Guarani, we own ethanol plants situated in the States of Minas Gerais, Goiás and São Paulo and in Mozambique, Africa. These associated companies’ total milling in the 2015/2016 harvest amounted to 26.2 mmt of sugarcane, corresponding to an ethanol and sugar production of 20.3 mbbl/d and 1.5 mmt respectively compared to 21.3 mbbl/d and 1.6 mmt respectively in the 2014/2015 harvest. These associated entities sold 1.2 GWh of exceeding electricity generated during the 2015/2016 harvest.

Corporate

Corporate Key Statistics

	2015	2014	2013
		(US$ million)	
Corporate:			
Income (loss) before income taxes	(14,961)	(8,047)	(8,141)
Property, plant and equipment	1,949	2,811	3,345
Capital expenditures and investments	302	452	555

Table of Contents

Our Corporate segment comprises activities that cannot be attributed to other segments, including corporate financial management, central administrative overhead and actuarial expenses related to our pension and medical benefits for retired employees and their dependents.

Organizational Structure

As of December 31, 2015, we had 24 direct subsidiaries and two direct joint operations as listed below. Twenty-one are entities incorporated under the laws of Brazil and three are incorporated abroad. We also have indirect subsidiaries (including Petrobras Argentina S.A. and PGF). See Exhibit 8.1 for a complete list of our subsidiaries and joint operations, including their full names, jurisdictions of incorporation and our percentage of equity interest.

PETROBRAS

BRAZIL	ABROAD
Petrobras Distribuidora S.A. - BR	Petrobras Netherlands B.V. - PNBV
Petrobras Transporte S.A. - Transpetro	Petrobras International Braspetro - PIB BV
Petrobras Logística de Exploração e Produção S.A. - PB-LOG	Braspetro Oil Services Company - Brasoil
Transportadora Associada de Gás S.A. - TAG	
Petrobras Gás S.A. - Gaspetro	
Petrobras Biocombustível S.A. - PBIO	
Petrobras Logística de Gás - Logigás	
Liquigás Distribuidora S.A.	
Araucária Nitrogenados S.A.	
Termomacaé Ltda.	
Breitener Energética S.A.	
Companhia Integrada Têxtil de Pernambuco - Citepe	

Termobahia S.A.

Companhia Petroquímica de Pernambuco - PetroquímicaSuape

Baixada Santista Energia S.A.

Petrobras Comercializadora de Energia Ltda. - PBEN

Fundo de Investimento Imobiliário RB Logística - FII

Petrobras Negócios Eletrônicos S.A. - E-Petro

Termomacaé Comercializadora de Energia Ltda

5283 Participações Ltda.

Downstream Participações Ltda.

Fábrica Carioca de Catalizadores S.A. - FCC (*)

Ibiritermo S.A. (*)

(*) Joint operations.

69

Property, Plant and Equipment

Our most important tangible assets are wells, platforms, refining facilities, pipelines, vessels, other transportation assets, power plants as well as fertilizers and biodiesels plants. Most of these are located in Brazil. We own and lease our facilities and some owned facilities are subject to liens, although the value of encumbered assets is not material.

We have the right to exploit crude oil and gas reserves in Brazil under concession agreements, but the reserves themselves are the property of the government under Brazilian law. Item 4. "Information on the Company" includes a description of our reserves and sources of crude oil and natural gas, key tangible assets, and material plans to expand and improve our facilities.

As of December 31, 2015, our property, plant and equipment included US$19,158 million (US$28,164 million as of December 31, 2014) related to the Assignment Agreement (see Item 10. "Additional Information—Material Contracts—Assignment Agreement.") On December 29, 2014, we submitted the last declaration of commerciality of crude oil and natural gas accumulations, located in the Entorno de Iara block, to the ANP, which prompted the initiation pursuant the revision process of the Assignment Agreement. Currently, all areas subject to the Assignment Agreement (Franco, Florim, Nordeste de Tupi, Entorno de Iara, Sul de Guará and Sul de Tupi blocks) are being reviewed for purposes of a revision of the terms of the Assignment Agreement. This process includes the preparation of reports by independent experts engaged by us and by the ANP and related discussions with the Brazilian federal government. The revision process, for all the areas subject to the Assignment Agreement, is currently ongoing and there is no formal or official date for its conclusion.

We also recognized impairment charges of US$12,299 million in 2015 (US$16,823 million in 2014) for certain property, plant and equipment, intangible assets and assets classified as held for sale. Further information about impairment of our assets is provided in Note 14 to our audited consolidated financial statements.

Regulation of the Oil and Gas Industry in Brazil

Concession Regime for Oil and Gas

Under Brazilian law, the Brazilian federal government owns all crude oil and natural gas subsoil accumulations in Brazil. The Brazilian federal government holds a monopoly over the exploration, production, refining and transportation of crude oil and oil products in Brazil and its continental shelf, with the exception that companies that were engaged in refining and distribution in 1953 were permitted to continue those activities. Between 1953 and 1997, we were the Brazilian federal government's exclusive agent for exploiting its monopoly, including the importation and exportation of crude oil and oil products.

As part of a comprehensive reform of the oil and gas regulatory system, the Brazilian Congress amended the Brazilian Constitution in 1995 to authorize the Brazilian federal government to contract with any state or privately-owned company to carry out upstream, oil refining, cross-border commercialization and transportation activities in Brazil of oil, natural gas and their respective products. On August 6, 1997, Brazil enacted Law No. 9,478, which established a concession-based regulatory framework, ended our exclusive right to carry out oil and gas activities, and allowed competition in all aspects of the oil and gas industry in Brazil. Since that time, we have been operating in an increasingly deregulated and competitive environment. Law No. 9,478/1997 also created an independent regulatory agency, the ANP, to regulate the oil, natural gas and renewable fuel industry in Brazil, and to create a competitive environment in the oil and gas sector. Effective January 2, 2002, Brazil deregulated prices for crude oil, oil products and natural gas.

Law No. 9,478/1997 established a concession-based regulatory framework and granted us the exclusive right to exploit crude oil reserves in each of our producing fields under the existing concession contracts for an initial term of 27 years from the date when they were declared commercially profitable. These are known as the “Round Zero” concession contracts. This initial 27-year period for production can be extended at the request of the concessionaire and subject to approval from the ANP. Law No. 9,478/1997 also established a procedural framework for us to claim exclusive exploratory rights for a period of up to three years, later extended to five years, to areas where we could demonstrate that we had made commercial discoveries or exploration investments prior to the enactment of the Law No. 9,478/1997. In order to perfect our claim to explore and develop these areas, we had to demonstrate that we had the financial capacity to carry out these activities, either alone or through other cooperative arrangements. Starting in 1999, all areas not already subject to concessions became available for public bidding conducted by the ANP. All the concessions that we have obtained since then were obtained through participation in public bidding rounds.

Taxation under Concession Regime for Oil and Gas

According to the Law No. 9,478/1997 and under our concession agreements for exploration and production activities with ANP, we are required to pay the government the following:

- Signing bonuses paid upon the execution of the concession agreement, which are based on the amount of the winning bid, subject to the minimum signing bonuses published in the relevant bidding guidelines (*edital de licitação*);

- Annual retention bonuses for the occupation or retention of areas available for exploration and production, at a rate established by the ANP in the relevant bidding guidelines based on the size, location and geological characteristics of the concession block;

- Special participation charges at a rate ranging from 0 to 40% of the net income derived from the production of fields that reach high production volumes or profitability, according to the criteria established in the applicable legislation. Net revenues are gross revenues less royalties paid, investments in exploration, operational costs and depreciation adjustments and applicable taxes. The Special Participation Tax uses as a reference international oil prices converted to *reais* at the current exchange rate. In 2015, we paid this tax on 21 of our fields, namely Albacora, Albacora Leste, Baleia Azul, Baleia Franca, Barracuda, Baúna, Cachalote, Canto do Amaro, Caratinga, Carmópolis, Jubarte, Leste do Urucu, Lula, Manati, Marlim, Marlim Leste, Marlim Sul, Mexilhão, Rio Urucu, Roncador and Sapinhoá; and

- Royalties, to be established in the concession contracts at a rate ranging between 5% and 10% of gross revenues from production, based on reference prices for crude oil or natural gas established by Decree No. 2,705 and ANP regulatory acts. In establishing royalty rates in the concession contracts, the ANP also takes into account the geological risks and expected productivity levels for each concession. Most of our crude oil production is currently taxed at the maximum royalty rate.

Law No. 9,478/1997 also requires concessionaires of onshore fields to pay to the owner of the land a participation fee that varies between 0.5% and 1.0% of the sales revenues derived from the production of the field.

Production-Sharing Contract Regime for Unlicensed Pre-Salt and Potentially Strategic Areas

Discoveries of large oil and natural gas reserves in the pre-salt areas of the Campos and Santos Basins prompted a change in the legislation regarding oil and gas exploration and production activities.

In 2010, three new laws were enacted to regulate exploration and production activities in pre-salt and other potentially strategic areas not subject to existing concessions: Law No. 12,351, Law No. 12,304, and Law No. 12,276. The enacted legislation does not impact the existing pre-salt concession contracts, which cover approximately 28% of the pre-salt areas.

Law No. 12,351/2010 regulates production-sharing contracts for oil and gas exploration and production in pre-salt areas not under concession and in potentially strategic areas to be defined by the CNPE. Under the production-sharing regime, we will be the exclusive operator of all blocks. The exploration and production rights for these blocks can either be granted to us on an exclusive basis or, in the case where they are not awarded to us on an exclusive basis, they will be offered under public bids. If offered under public bids, we would still be required to participate as the operator, with a minimum interest to be established by the CNPE that would not be less than 30%, with the additional right, at our discretion, to participate in the bidding process to increase our interest in those areas. Under the production-sharing regime, the winner of the bid will be the company that offers to the Brazilian federal government the highest percentage of “profit oil,” which is the production of a certain field after deduction of royalties and “cost oil,” which is the cost associated with oil production. According to Law No. 12,351, we must accept the economic terms of the winning bid.

On February 2016, the Brazilian Senate approved a bill of law that proposes to lift the requirement that we must necessarily act as the exclusive operator and hold a minimum 30% interest in pre-salt areas not under concession and in potentially strategic areas to be offered in future public bids. At this stage, there is no estimate as to when and if this bill of law will have its terms substantially amended or if this bill of law will be passed into law by the Brazilian House of Representatives and ratified by the Brazilian President.

Law No. 12,734 became partially effective on November 30, 2012, and amended Law 12,351, establishing a royalty rate of 15% applicable to the gross production of oil and natural gas under future production sharing contracts.

Law No. 12,304/2010, authorized the incorporation of a new state-run non-operating company that will represent the interests of the Brazilian federal government in the production-sharing contracts and will manage the commercialization contracts related to the Brazilian federal government's share of the "profit oil." This new state-owned company was incorporated on August 1, 2013, named Pré-Sal Petróleo S.A. – PPSA, and will participate in operational committees, with a casting vote and veto powers, as defined in the contract, and will manage and control costs arising from production-sharing contracts. Where production-sharing contracts are concerned, PPSA will exercise its specific legal activities alongside the ANP, the independent regulatory agency that regulates and oversees oil and gas activities under all exploration and production regimes, and the CNPE, the entity that sets the guidelines to be applied to the oil and gas sector, including with respect to the new regulatory model.

Assignment Agreement (Cessão Onerosa) and Global Offering

Pursuant to Law No. 12,276/2010, we entered into an agreement with the Brazilian federal government on September 3, 2010 (Assignment Agreement), under which the government assigned to us the right to conduct activities for the exploration and production of oil, natural gas and other fluid hydrocarbons in specified pre-salt areas, subject to a maximum production of five bnboe. The initial contract price for our rights under the Assignment Agreement was R$74,807,616,407, which was equivalent to US$42,533,327,500 as of September 1, 2010. See Item 10. "Additional Information—Material Contracts—Assignment Agreement."

Table of Contents

Natural Gas Law of 2009

In March 2009, the Brazilian Congress enacted Law No. 11,909, or Gas Law, regulating activities in the gas industry, including transport, processing, storage, liquefaction, regasification and commercialization. The Gas Law created a concession regime for the construction and operation of new pipelines to transport natural gas, while maintaining an authorization regime for pipelines subject to international agreements. According to the Gas Law, after a certain exclusivity period, operators *(transportadores)* will be required to grant access to transport pipelines and maritime terminals, except LNG terminals, to third parties in order to maximize utilization of capacity.

The Gas Law authorized the ANP to regulate prices for the use of gas transport pipelines subject to the new concession regime, based on a procedure defined in the Gas Law as a "*chamada pública*," and to approve prices submitted by carriers *(carregadores)*, according to previously established criteria, for the use of new gas transport pipelines subject to the authorization regime.

Authorizations previously issued by the ANP for natural gas transport will remain valid for 30 years from the date of publication of the Gas Law, and initial carriers (*carregadores iniciais*) were granted exclusivity in these pipelines for 10 years. All pipelines that Petrobras's subsidiaries currently own and operate in Brazil are subject to an authorization regime. The ANP will issue regulations governing third-party access and carrier compensation if no agreement is reached between the parties.

The Gas Law also authorized certain consumers, who can purchase natural gas on the open market or obtain their own supplies of natural gas, to construct facilities and pipelines for their own use in the event local gas distributors controlled by the states, which have monopoly over local gas distribution, do not meet their distribution needs. These consumers are required to delegate the operation and maintenance of the facilities and pipelines to local gas distributors, but they are not required to sign gas supply agreements with the local gas distributors.

In December 2010, Decree No. 7,382 was enacted in order to regulate Chapter I to VI and VIII of the Gas Law as it relates to activities in the gas industry, including transportation and commercialization. Since the publication of this decree, a number of administrative regulations were enacted by the ANP and the MME in order to regulate various issues in the Gas Law and Decree No. 7,382 that needed to be further clarified. Among those is ANP Resolution No. 51/2013, which prevents a carrier from holding any equity interest in concessionaires of gas transport pipelines. Resolution No. 51/2013 applies only to the concessions granted after its publication, not affecting, therefore, the transportation of Petrobras's natural gas production through pipelines operated by its subsidiaries and subject to the previous authorization regime.

Price Regulation

Until the passage of Law No. 9,478 in 1997, the Brazilian federal government had the power to regulate all aspects of the pricing of crude oil, oil products, ethanol, natural gas, electric power and other energy sources. In 2002, the government eliminated price controls for crude oil and oil products, although it retained regulation over certain natural gas sales contracts and electricity. Concurrently, the Brazilian federal government has periodically created and adjusted taxes applicable to crude oil, oil and natural gas products, which have been used as a tool to maintain price stability to end consumers and also to increase its tax revenues.

Environmental Regulations

All phases of the crude oil and natural gas business present environmental risks and hazards. Our facilities in Brazil are subject to a wide range of federal, state and local laws, regulations and permit requirements relating to the protection of human health and the environment, and they fall under the regulatory authority of the *Conselho Nacional do Meio Ambiente* (National Council for the Environment, or CONAMA).

Our offshore activities are subject to the administrative authority of IBAMA, which issues operating and drilling licenses. We are required to submit reports, including safety and pollution monitoring reports to IBAMA in order to maintain our licenses.

Most of the onshore environmental, health and safety conditions are controlled either at the federal or the state level depending on the localization of our facilities, the type of activity under development and other criteria to be set forth in regulation that is still pending. However, it is also possible for these conditions to be controlled on a local basis whenever the activities generate a local impact or are established in a county conservation unit. Under Brazilian law, there is strict and joint liability for environmental damage, mechanisms for enforcement of environmental standards and licensing requirements for polluting activities.

Individuals or entities whose conduct or activities cause harm to the environment are subject to criminal and administrative sanctions. Government environmental protection agencies may also impose administrative sanctions for noncompliance with environmental laws and regulations, including:

- Fines;
- Partial or total suspension of activities;
- Requirements to fund reclamation and environmental projects;
- Forfeiture or restriction of tax incentives or benefits;
- Closing of establishments or operations; and
- Forfeiture or suspension of participation in credit lines with official credit establishments.

We are subject to a number of administrative and legal proceedings relating to environmental matters. For more information about these proceedings, see Item 8. “Financial Information—Legal Proceedings.” and Note 30 to our audited consolidated financial statements included in this annual report.

In 2015, we invested US$1.1 billion in environmental projects, compared to US$1.4 billion in 2014 and US$1.5 billion in 2013. These investments continued to be primarily directed at reducing emissions and wastes from industrial processes, managing water use and effluents, remedying impacted areas, implementing new environmental technologies, upgrading our pipelines and improving our ability to respond to emergencies.

Health, Safety and Environmental Initiatives

The protection of human health and the environment is one of our primary concerns, and is essential to our success as an integrated energy company.

We have a Health, Safety and Environmental (HSE) Committee (*Comitê de Segurança, Meio Ambiente e Saúde*) composed of three members of our board of directors who are responsible for assisting our board in the following matters:

- Definition of strategic goals in relation to HSE matters;

- Establishment of global policies related to the strategic management of HSE matters within Petrobras's group of companies;

- Assessment of the conformity of Petrobras's Strategic Plan to its global HSE policies, among others.

Table of Contents

Our efforts to address health, safety and environmental concerns and ensure compliance with environmental regulations (which in 2015 totaled an investment of R$6.9 billion, or US$2.07 billion) involve the management of environmental costs related to production and operations, pollution control equipment and systems, projects to rehabilitate degraded areas, safety procedures and initiatives for emergency prevention and control, health and safety programs as well as:

- An HSE management system that seeks to minimize the impacts of operations and products on health, safety and the environment, reduce the use of natural resources and pollution and prevent accidents;

- ISO 14001 (environment) and OHSAS 18001 (health and safety) certification of our operating units. All the oil refined in Brazil was processed by certified units. The *Frota Nacional de Petroleiros* (National Fleet of Vessels) has been fully certified by the International Maritime Organization (IMO) International Management Code for Safe Operation of Ships and for Pollution Prevention (ISM Code) since December 1997;

- Regular and active engagement with the MME and IBAMA, in order to discuss environmental issues related to new oil and gas production and other transportation and logistical aspects of our operations;

- A strategic goal to reduce the intensity of greenhouse gas emissions, along with a set of performance indicators with targets to monitor progress with respect to this goal; and

- We evaluate each of our operational projects to identify risks and to ensure compliance with all of our HSE requirements and the adoption of the best HSE practices throughout a project’s life cycle. In addition, we conduct more extensive environmental studies for new projects when required by applicable environmental legislation.

In 2015, our emissions decreased by 3.7% compared to 2014, mainly due to higher recovery of associated gas, reduction of fuel oil and diesel use in thermoelectric power plants and reduction of emissions in shipping operations. We are committed to reducing the intensity of greenhouse gas emissions from our processes and products through several initiatives, including reduction of gas flaring, energy efficiency measures and operational improvements.

Eliminating fatal accidents and achieving performance levels comparable to the best international oil and gas operators when it comes to the prevention of injuries to our employees and third parties are the two most important goals set by our safety management. Although we develop prevention programs in all of our operating units, we recorded 16 fatalities involving our own and contractors’ employees in 2015 (compared to 10 in 2014), mainly attributable to an accident at FPSO Cidade de São Mateus in February 2015, which caused nine fatalities. We investigate all accidents reported in order to identify their causes and then take preventive and corrective actions, which are regularly monitored once they are adopted. In cases of serious accidents, we send out company-wide alerts to enable other operating units to assess the probability of similar events occurring in their own operations.

Table of Contents

Environmental Remediation Plans and Procedures

As part of our environmental plans, procedures and efforts, we maintain detailed response and remediation contingency plans to be implemented in the event of an oil spill or leak from our offshore operations. In order to respond to these events, Petrobras has 36 dedicated oil spill recovery vessels fully equipped for oil spill control and firefighting, 113 support boats and other vehicles, 270 additional support and recovery boats available to fight offshore oil spills and leaks, around 92 km of containment booms and 118 km of absorbent booms and around 113,000 liters of oil dispersants, among others. These resources are distributed in 12 environmental protection centers in strategic areas in which we operate throughout Brazil and in emergency response centers (distributed over 21 cities) in order to ensure rapid and coordinated response to onshore or offshore oil spills. Our regional facilities are supported by 11 local advanced bases dedicated to oil spill prevention, control and response.

We have more than 500 trained workers available to respond to oil spills 24 hours a day, seven days a week, and we can mobilize additional trained workers for shoreline cleanups on short notice from a large group of trained environmental agents in the country. While these workers are located in Brazil, they are also available to respond to an offshore oil spill outside of Brazil.

Since 2012, Petrobras has been a participating member of the Oil Spill Response Limited – OSRL, an international organization that brings together over 160 corporations, including oil major, national/independent oil companies, energy related companies as well as other companies operating elsewhere in the oil supply chain. OSRL participates in the Global Response Network, an organization composed of several other companies dedicated to fighting oil spills. As a member of the OSRL, Petrobras has access to all resources available through that network, and we also subscribe to their Subsea Well Intervention Services, which provides swift international deployment of response-ready capping and containment equipment. The capping equipment is stored and maintained at bases worldwide, including Brazil. An OSRL Brazilian base opened in March 2014 and is now operational.

In 2015, we conducted 22 emergency drills of regional scope with the Brazilian navy, the civil defense, firefighters, the military police, environmental organizations and local governmental and community entities.

We set up a Zero Spill Plan, aiming at optimizing management and reducing the risk of oil spills in our operations. This plan encompasses investments to improve the management of processes and to ensure the integrity of our equipment and installations. Additionally, Petrobras has a model of communication, processing and recording of oil spills that permits the daily monitoring of these incidents, their impacts and mitigation measures.

The oil spill level in our upstream operations in 2015 was kept below 0.5 m^3 per mmbbl produced. Data for 2012 compiled by the International Association of Oil & Gas Producers indicates that the industry average was 0.76 m^3 of oil spilled per mmbbl produced. We continue to evaluate and develop initiatives to address HSE concerns and to reduce our exposure to HSE risks. In 2015, we had oil spills totaling 450.5 barrels of crude oil, compared to 437.1 barrels of crude oil in 2014 and 1,176 barrels of crude oil in 2013.

Insurance

Our insurance programs focus principally on the evaluation of risks and the replacement value of assets, which is customary for our industry. Under our risk management policy, risks associated with our principal assets, such as refineries, tankers and offshore production units and drilling rigs, are insured for their replacement value with third-party Brazilian insurers. Although some policies are issued in Brazil, most of our policies are reinsured abroad with reinsurers rated A- or higher by Standard & Poor's rating agency or B+ or higher by A.M. Best. Part of our international operations are insured or reinsured by our Bermudian subsidiary BEAR following the same rating criteria.

Table of Contents

Less valuable assets, including but not limited to small auxiliary boats, certain storage facilities, and some administrative installations, are self-insured. We do not maintain coverage for business interruption, except for a minority of our international operations and a few specific assets in Brazil. We generally do not maintain coverage for our wells for all of our Brazilian operations, except when required by a joint operating agreement. Although we do not insure most of our pipelines, we have insurance against damage or loss to third parties resulting from specific incidents, such as unexpected seepage and oil pollution. We also maintain coverage for risks associated with cargo, hull and machinery. All projects and installations under construction that have an estimated maximum loss above US$80 million are covered by a construction insurance policy.

We have operations in 12 countries outside Brazil and maintain varying levels of third-party liability insurance for our domestic and international operations as a result of a variety of factors, including our country risk assessments, whether we have onshore and offshore operations or legal requirements imposed by the particular country in which we operate. We maintain insurance coverage for operational third-party liability with respect to our onshore and offshore activities, including losses to third parties resulting from environmental risks such as oil spills, in Brazil up to an aggregate policy limit of US$250 million. We also maintain additional protection and indemnity (P&I) marine insurance against third-party liability related to our domestic offshore operations up to an aggregate policy limit of up to US$500 million for a period of 12 months. In the event of an explosion or similar event at one of our offshore rigs in Brazil, these policies can provide combined third-party liability coverage of up to US$750 million.

Our domestic and international operational third-party liability policies cover claims made against us by or on behalf of individuals who are not our employees in the event of property damage, personal injury or death, subject to the policy limits set forth above. As a general rule, our service providers are required to indemnify us for a claim we pay directly to a third party as a result of a court decision holding us liable for the actions of that service provider. Our operational third-party liability policies also cover environmental damage from oil spills (including liability arising from an explosion or similar sudden and accidental event at one of our offshore rigs) as well as litigation and clean-up and remediation costs, but do not cover governmental fines or punitive damages.

We maintain separate “control-of-well” insurance policies at our international operations to cover liability arising from the uncontrolled eruption of oil, gas, water or drilling fluid, as well as to cover claims for environmental damage from well blow-outs and similar events as well as related clean-up costs, with aggregate policy limits up to US$540 million for a period of 18 months depending on the country. In the U.S. Gulf of Mexico, for example, we maintain third-party liability coverage up to an aggregate policy limit of US$250 million, and control-of-well liability insurance up to US$540 million. Depending on the particular circumstances, either of these policies could apply in the event of an explosion or similar event at one of our offshore rigs in the U.S. Gulf of Mexico.

We generally do not maintain control-of-well insurance for our domestic operations onshore and offshore Brazil, except when required by a joint operating agreement. As a result, we would bear the costs of clean-up, decontamination and any proceedings arising out of a control-of-well incident. Any loss of hydrocarbon containment from our domestic operations onshore and offshore that is not attributable to a control-of-well issue would be covered by either our Protection & Indemnity (P&I) insurance, with coverage of up to US$500 million for our mobile offshore units, or our onshore-offshore liability policy, with coverage of up to US$250 million.

The premium for renewing our domestic property risk insurance policy for an 18-month period beginning May 2015 was US$79.8 million. This represented a nominal decrease of 12% over the prior 18-month period. The insured value of our assets, in the same period, increased by 13.6% to US$182.5 billion. Since 2001, our risk retention for operational risks has been US$25 million while for engineering risks it may reach US$80 million in certain circumstances.

Table of Contents

Additional Reserves and Production Information

During 2015, our oil and gas production in Brazil averaged 2,386 mboe/d, of which 89% was oil and 11% was natural gas. The Campos Basin is one of Brazil's main and most prolific oil and gas offshore basins, with over 60 hydrocarbon fields discovered, eight large oil fields and a total area of approximately 115,000 km^2 (28.4 million acres). In 2015, the Campos Basin produced an average 1,488 mbbl/d of oil and 577 mmcf/d (15 mmm^3/d) of natural gas, comprising 66% of our total production from Brazil. We also carry out limited oil shale mining operations in São Mateus do Sul, in the Paraná Basin of Brazil, and convert the kerogen (solid organic matter) from these deposits into synthetic oil and gas. This operation is conducted in an integrated facility and its final products are fuel gas, LPG, shale naphtha and shale fuel oil. Our business unit does not utilize the fracking method or the hydraulic fracturing method for oil production, since they are not appropriate in the context of our operations. Also, we do not inject any water or chemicals in the soil in connection with our open pit oil shale mining operations. Our process consists of crushing, screening and subsequently heating all the shale at high temperatures (pyrolysis) and we have in place a proper segregation process for the by-products derived from such process.

On December 31, 2015, our estimated proved reserves in Brazil totaled 10.2 bnbbl of oil equivalent, including 8.6 bnbbl of crude oil, condensate and synthetic oil and 254.3 bnm^3 (9.6 tcf) of natural gas and synthetic gas. As of December 31, 2015, our domestic proved developed crude oil, condensate and synthetic oil reserves represented 50% of our total domestic proved crude oil, condensate and synthetic oil reserves, and our domestic proved developed natural gas and synthetic gas reserves represented 55.5% of our total domestic proved natural gas and synthetic gas reserves.

We calculate reserves based on forecasts of field production, which depend on a number of technical parameters, such as seismic interpretation, geological maps, well tests, reservoir engineering studies and economic data. All reserve estimates involve some degree of uncertainty. The uncertainty depends primarily on the amount of reliable geological and engineering data available at the time of the estimate and the interpretation of that data. Our estimates are thus made using the most reliable data and technology at the time of the estimate, in accordance with the best practices in the oil and gas industry and regulations promulgated by the SEC.

Internal Controls over Proved Reserves

The reserve estimation process begins with an initial evaluation of our assets by geophysicists, geologists and engineers. Corporate Reserves Coordinators (*Coordenadores de Reservas Corporativos*, or CRCs) safeguard the integrity and objectivity of our reserve estimates by supervising and providing technical support to Regional Reserves Coordinators (*Coordenadores de Reservas Regionais*, or CRRs) who are responsible for preparing the reserve estimates. Our CRRs and CRCs have degrees in geology, engineering and accounting and are trained internally and abroad in international reserve estimates seminars. CRCs are responsible for compliance with SEC rules and regulations, consolidating and auditing the reserve estimation process. The technical person primarily responsible for overseeing the preparation of our domestic reserves has 27 years of experience in the field and has been with Petrobras for over 32 years. The technical person primarily responsible for overseeing the preparation of our international reserves has 26 years of experience in the field and has been with Petrobras for 33 years. Our reserve estimates are approved by our board of executive officers, which then informs our board of directors of its approval.

Table of Contents

DeGolyer and MacNaughton (D&M) used our reserve estimates to conduct a reserve audit of 95.2% of the net proved crude oil, condensate and natural gas reserves as of December 31, 2015 from certain properties we own in Brazil. In addition, D&M used its own estimates of our reserves to conduct a reserves evaluation of 100% of the net proved crude oil, condensate, NGL and natural gas reserves as of December 31, 2015 from the properties we operate in Argentina. Furthermore, D&M used our reserve estimates to conduct a reserves audit of 100% of the net proved crude oil, condensate and natural gas reserves as of December 31, 2015 in properties we operate in the United States. The reserve estimates were prepared in accordance with the reserves definitions of Rule 4-10(a) of Regulation S-X of the SEC. For further information about our proved reserves, see "Supplementary Information on Oil and Gas Exploration and Production" beginning on page F-94. For disclosure describing the qualification of D&M's technical person primarily responsible for overseeing our reserves audit and reserves evaluation, see Exhibit 99.1.

Changes in Proved Reserves

In 2015, our proved reserves decreased by 2,186 mmboe due to revisions of previous estimates, mostly as result of the decrease in oil prices during fiscal year of 2015, and decreased by 22 mmboe due to sales of proved reserves. This decrease was partially offset by the incorporation of 494 mmboe of proved reserves from discoveries of new accumulations and extensions in Brazil, specifically in the Santos, Campos and Espírito Santo Basins, and in Argentina, in the Neuquina Basin, and the incorporation of 22 mmboe due to improved recovery. The net result (excluding production) was a decrease of 1,692 mmboe in our proved reserves in 2015. Considering a production of 932 mmboe in 2015, our net decrease of proved reserves was 2,625 mmboe. This volume production does not take into account the production of Extended Well Tests (EWTs) in exploratory blocks in Brazil, and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves.

At year-end 2015 compared to year-end 2014, our proved undeveloped reserves company-wide increased by a net total of 368.5 mmboe. Thus, we had a total of 5,141.6 mmboe of proved undeveloped reserves company-wide at December 31, 2015, compared to 4,773.2 mmboe of proved undeveloped reserves company-wide at December 31, 2014.

In Brazil, the net increase in our proved undeveloped reserves in 2015 compared to 2014 is mostly derived from extensions and discoveries, amounting to 408.4 mmboe, mainly in the pre-salt areas of Santos Basins. In addition, our domestic proved undeveloped reserves were increased by 243.2 mmboe due to revisions to previous estimates, and were increased by 0.5 mmboe due to improved recovery. This net increase was partially offset by the conversion of some of our proved undeveloped reserves to proved developed reserves, mainly attributable to the drilling of wells in existing production fields, amounting to 262.9 mmboe.

All reserve volumes described above are “net” to the extent that they only include Petrobras’s proportional participation in reserve volumes and exclude reserves attributed to our partners.

Table of Contents

In 2015, we invested a total of US$16.8 billion in development projects, of which 92% (US$15.5 billion) was invested in Brazil, and converted a total of 296.5 mmboe of proved undeveloped reserves to proved developed reserves, approximately 89% (262.9 mmboe) of which were Brazilian reserves.

Most of our investments relate to long-term development projects, which are developed in phases due to the large volumes, and extensions involved, the deep and ultra-deep water infrastructure and the production resources complexity. In these cases, the full development of the reserves related to these investments can exceed five years.

We had a total of 5,141.6 mmboe of proved undeveloped reserves company-wide at year-end 2015, approximately 8.9% (455.9 mmboe) of which have remained undeveloped for five years or more as a result of several factors affecting development and production, including the inherent complexity of ultra-deep water development projects, particularly in Brazil, and constraints in the capacity of our existing infrastructure.

The majority of the 455.9 mmboe of our proved undeveloped reserves that have remained undeveloped for five years or more consist of reserves in the Santos Basin and in the Campos Basin, in which we are making investments to develop necessary infrastructure.

Table of Contents

The following tables set forth our production of crude oil, natural gas, synthetic oil and synthetic gas by geographic area in 2015, 2014 and 2013:

	2015				
	Oil (mbbl/d) (4)	Synthetic Oil (mbbl/d) (3)	Nat. Gas (mmcf/d) (1)	Synthetic Gas (mmcf/d) (1)(3)	Total (mboe/d)
Brazil*	2,125.5	2.8	1,542.7	0.9	2,386.5
International:					
South America (outside of Brazil)	38.6	–	474.9	–	117.8
North America	30.6	–	67.2	–	41.8
Africa	–	–	–	–	
Total International	69.2	–	542.1	–	159.6
Total consolidated production	2,194.7	2.8	2,084.8	–	2,546.1
Equity and non-consolidated affiliates(2):				–	
South America (outside of Brazil)	3.4	–	0.9	–	3.5
Africa	26.6	–		–	26.6
Worldwide production	2,224.7	2.8	2,085.7	0.9	2,576.2

* Roncador field no longer represents more than 15% of our total proved reserves.

(1) Natural gas production figures are the production volumes of natural gas available for sale, excluding flared and reinjected gas and gas consumed in operations.

(2) Equity-accounted investees.

(3) We produce synthetic oil and synthetic gas from oil shale deposits in São Mateus do Sul, in the Paraná Basin of Brazil.

(4) Oil production includes LNG and production from extended well tests.

Table of Contents

The following table sets forth our estimated net proved developed and undeveloped reserves of crude oil and natural gas by region as of December 31, 2015.

	Estimated Net Proved Developed and Undeveloped Reserves			
Reserves category				Reserve
	Oil	Natural gas	Total oil and natural gas	Synthetic oil
	(mmbbl)	(bncf)	(mmboe)	(mmbbl)(1
Proved developed:				
Brazil	4,266.5	5,320.5	5,153.2	6.
International				
South America (outside of Brazil)	39.7	366.3	100.8	
North America	53.6	122.5	74.0	
Total International	93.4	488.8	174.9	
Total consolidated proved developed reserves	4,359.8	5,809.3	5,328.1	6.
Equity and non-consolidated affiliates				
South America (outside of Brazil)	6.6	8.0	7.9	
Africa	28.0	10.4	29.8	
Total non-consolidated proved developed reserves	34.7	18.4	37.7	
Total proved developed reserves	4,394.5	5,827.7	5,365.8	6.
Proved undeveloped:				
Brazil	4,277.7	4,267.2	4,988.9	
International				
South America (outside of Brazil)	12.5	314.2	64.9	
North America	37.0	16.0	39.7	
Total International	49.5	330.3	104.6	
Total consolidated proved undeveloped reserves	4,327.2	4,597.5	5,093.4	
Equity and non-consolidated affiliates				
South America (outside of Brazil)	7.9	8.9	9.4	
Africa	37.8	6.2	38.8	
Total non-consolidated proved undeveloped reserves	45.7	15.1	48.2	
Total proved undeveloped reserves	4,372.9	4,612.6	5,141.6	
Total proved reserves (developed and undeveloped)	**8,767.4**	**10,440.3**	**10,507.4**	**6.**

(1) Volumes of synthetic oil and synthetic gas from oil shale deposits in the Paraná Basin in Brazil have been included in our proved reserves in accordance with the SEC rules for estimating and disclosing reserve quantities.

Table of Contents

The table below summarizes information about the changes in total proved reserves of our consolidated entities for 2015, 2014 and 2013:

Total Proved Developed and Undeveloped Reserves (consolidated entities only)(1)

	Oil (mmbbl)	Natural gas (bncf)	Total oil and natural gas (mmboe)	Synthetic oil (mmbbl)	Synthetic gas (bncf)
formation for the year ended December 31, 2015					
	11,037.5	12,081.0	13,051.0	7.9	10.6
stimates	(1,990.8)	(1,178.3)	(2,187.2)	0.1	0.2
	1.1	27.9	5.8	–	
serves	–	–	–	–	
eries	411.9	492.2	494.0	–	
	(766.0)	(924.5)	(920.1)	(1.0)	(1.4
es	(6.8)	(91.4)	(22.0)	–	
	8,687.0	10,406.8	10,421.5	6.9	9.3
formation for the year ended December 31, 2014					
	10,947.7	12,483.2	13,028.3	8.8	11.8
stimates	631.4	539.6	721.4	0.2	0.1
	0.5	10.8	2.3	–	
serves	22.9	47.1	30.8	–	
eries	272.3	264.0	316.3	–	
	(732.9)	(911.8)	(884.8)	(1.1)	(1.4
es	(104.5)	(351.9)	(163.1)	–	
	11,037.5	12,081.0	13,051.0	7.9	10.6
formation for the year ended December 31, 2013					
	10,928.5	11,541.2	12,852.1	8.3	13.3
sets with loss of control(2)	(65.0)	(22.5)	(68.8)	–	
stimates	(74.7)	(213.3)	(110.2)	1.3	(0.1
	124.2	916.0	276.8	–	
serves	0.0	0.4	0.1	–	
eries	851.4	1,193.5	1,050.3	–	
	(707.5)	(878.5)	(853.9)	(0.8)	(1.4
es	(109.2)	(53.5)	(118.1)	–	
	10,947.7	12,483.2	13,028.3	8.8	11.8

(1) Natural gas production volumes used in this table are the net volumes withdrawn from Petrobras's proved reserves, including flared gas consumed in

operations and excluding reinjected gas. Oil production volumes used in this table are net volumes withdrawn from Petrobras's proved reserves and exclude LNG and production from extended well tests. As a result, the oil and natural gas production volumes in this table are different from those shown in the production table above, which shows the production volumes of natural gas available for sale.

(2) This line represents the amount of proved reserves excluded from our consolidated total proved reserves due to the implementation of our joint venture with BTG Pactual E&P BV to jointly explore oil and gas opportunities in Africa. Since July 2013, we no longer hold the corporate control of the entities incorporated in Nigeria directly responsible for our operations in such country. As such, we no longer consolidate the Nigeria reserves held by Brasoil Oil Services Company (Nigeria) Ltd., Petroleo Brasileiro Nigeria Ltd into our consolidated reserves.

Table of Contents

We do not have any material acreage expiring before 2025.

The following tables show the number of gross and net productive oil and natural gas wells and total gross and net developed and undeveloped oil and natural gas acreage in which Petrobras had interests as of December 31, 2015.

Gross and Net Productive Wells and Gross and Net Developed and Undeveloped Acreage

	As of December 31, 2015						
	Oil		Natural gas		Synthetic oil		Synth ga
ss and net productive wells(1):	**Gross**	**Net**	**Gross**	**Net**	**Gross**	**Net**	**Gross**
solidated subsidiaries							
zil	7,877	7,863	212	208	–	–	
rnational					–	–	
h America (outside of Brazil)	2,145	1,594	317.0	233.5	–	–	
h America	15	6.77	7.0	3.72	–	–	
al international	2,160	1,600.77	324.0	237.22	–	–	
al consolidated	10,037	9,463.77	536	445.22	–	–	
ity and non-consolidated affiliates:							
h America (outside of Brazil)	83	23	8.0	3.0	–	–	
a	40	4.96	0	0	–	–	
al gross and net productive wells	10,160	9,491.73	544	448.22	–	–	

	As of December 31, 2015						
	Oil		Natural gas (in acres)		Synthetic oil		Synth ga
ss and net developed acreage:	**Gross**	**Net**	**Gross**	**Net**	**Gross**	**Net**	**Gross**
zil	4,596,389.1	4,268,729.3	351,066.0	329,136.6	1,346.0	1,346.0	
rnational							
h America (outside of Brazil)	505,826.9	317,991.5	616,221.6	265,871.6	–	–	
h America	16,866.2	11,958.8	7,438.4	3,123.0	–	–	
al international	522,693.2	329,950.3	623,660.0	268,994.6	–	–	
al consolidated	5,119,082.3	4,598,679.6	974,725.9	598,131.3	1,346.0	1,346.0	
ity and non-consolidated affiliates:							
h America (outside of Brazil)	228,856.0	56,106.0	19,740.6	6,441.1	–	–	
a	416,989.9	33,069.2	–	–	–	–	
al non-consolidated	645,845.8	89,175.2	19,740.6	6,441.1	–	–	
al gross and net developed acreage	5,764,928 .1	4,687,854.8	994,466.5	604,572.4	1,346.0	1,346.0	

84

Table of Contents

	As of December 31, 2015							
	Oil		Natural gas (in acres)		Synthetic oil		Synthet gas	
ross and net undeveloped acreage:	**Gross**	**Net**	**Gross**	**Net**	**Gross**	**Net**	**Gross**	**N**
razil	923,281.5	783,005.5	244,796.6	240,656.3	–	–	–	
ternational					–	–	–	
uth America (outside of Brazil)	132,067.4	86,833.0	261,381.4	160,203.9	–	–	–	
orth America	6,660.9	2,277.2	616.9	115.7	–	–	–	
otal international	138,728.3	89,110.2	261,998.3	160,319.5	–	–	–	
otal consolidated	1,062,009.9	872,115.7	506,794.9	400,975.8	–	–	–	
quity and non-consolidated affiliates:								
uth America (outside of Brazil)	304,298.4	77,462.4	21,713.9	7,284.1	–	–	–	
rica	227,584.5	18,606.1	0.0	0.0	–	–	–	
otal non-consolidated	531,883.0	96,068.5	21,713.9	7,284.1	–	–	–	
otal gross and net undeveloped acreage	1,593,892.8	968,184.2	528,508.8	408,259.9	–	–	–	

(1) A “gross” well or acre is a well or acre in which a working interest is owned, while the number of “net” wells or acres is the sum of fractional working interests in gross wells or acres.

Table of Contents

The following table sets forth the number of net productive and dry exploratory and development wells drilled for the last three years.

Net Productive and Dry Exploratory and Development Wells

	2015	2014	2013
Net productive exploratory wells drilled:			
Consolidated subsidiaries:			
Brazil	41.07	48.3	67.55
South America (outside of Brazil)	3.7	4.7	3.5
North America	0.1	0.4	–
Africa	–	–	–
Other	–	–	–
Total consolidated subsidiaries	44.87	53.4	71.05
Equity and non-consolidated affiliates:			
South America (outside of Brazil)	–	–	–
Africa	–	–	–
Total productive exploratory wells drilled	44.87	53.4	71.05
Net dry exploratory wells drilled:			
Consolidated subsidiaries:			
Brazil	14.85	19.15	16.75
South America (outside of Brazil)	–	1.1	0.8
North America	0.5	–	0.9
Africa	–	–	–
Other	–	–	–
Total consolidated subsidiaries	15.35	20.25	18.45
Equity and non-consolidated affiliates:			
South America (outside of Brazil)	–	–	0.5
Africa	–	0.9	–
Total dry exploratory wells drilled	15.35	21.15	18.95
Total number of net exploratory wells drilled	60.22	74.55	90.0
Net productive development wells drilled:			
Consolidated subsidiaries:			
Brazil	523.525	397.97	399.73
South America (outside of Brazil)	70.9	41.8	57.7
North America	0.66	–	2.5
Africa	–	–	–
Other	–	–	–
Total consolidated subsidiaries	595.085	439.77	459.93
Equity and non-consolidated affiliates:			

South America (outside of Brazil)	0.7	0.4	1.5
Africa	0	0.7	0.6
Total productive development wells drilled	595.785	440.87	462.03
Net dry development wells drilled:			
Consolidated subsidiaries:			
Brazil	3.0	12.65	6
South America (outside of Brazil)	0.5	–	–
North America	–	–	–
Africa	–	–	–
Other	–	–	–
Total consolidated subsidiaries	3.5	12.65	6.0
Equity and non-consolidated affiliates:			
South America (outside of Brazil)	–	–	–
Africa	–	0.1	–
Total dry development wells drilled	3.5	12.75	6.0
Total number of net development wells drilled	599.285	453.62	468.03

Table of Contents

The following table summarizes the number of wells in the process of being drilled as of December 31, 2015. For more information about our ongoing exploration and production activities in Brazil, see "—Exploration and Production—Activities in Brazil." Our present exploration and production activities outside of Brazil are described in "—Exploration and Production—Activities Abroad." Also, see Note 15 to our audited consolidated financial statements for further information about our capitalized exploration costs and the unaudited supplementary information on oil and gas exploration and production contained in our audited consolidated financial statements.

Number of Wells Being Drilled as of December 31, 2015

	Year-end 2015	
	Gross	**Net**
Wells Drilling		
Consolidated Subsidiaries:		
Brazil	34	29.375
International:		
South America (outside of Brazil)	9	5.6
North America	–	–
Africa	–	–
Others	–	–
Total International	9	5.6
Total consolidated	43	34.975
Equity and non-consolidated affiliates:		
South America (outside of Brazil)	1	0.4
Africa	–	–
Total wells drilling	44	35.375

The following table sets forth our average sales prices and average production costs by geographic area and by product type for the last three years.

	Brazil	**South America (outside of Brazil)**	**North America**	**Africa**	**Total**	**Equity and non-consolidated affiliates(2)**
				(US$)		
During 2015						
Average sales prices						
Oil, per barrel	42.16	65.96	45.31	–	42.60	51.77
Natural gas, per thousand cubic feet(1)	6.04	3.97	2.75	–	5.77	–
Synthetic oil, per barrel	48.20	–	–	–	48.20	
Synthetic gas, per thousand cubic feet	5.68	–	–	–	5.68	–

Average production costs, per barrel – total	12.97	8.80	3.16	–	12.61	32.16
During 2014						
Average sales prices						
Oil, per barrel	87.84	79.28	90.31	–	87.64	100.62
Natural gas, per thousand cubic feet(1)	7.99	3.50	4.77	–	7.45	–
Synthetic oil, per barrel	92.63	–	–	–	92.63	–
Synthetic gas, per thousand cubic feet	9.68	–	–	–	9.68	–
Average production costs, per barrel – total	16.89	12.32	6.23	–	16.49	32.45
During 2013						
Average sales prices						
Oil, per barrel	98.19	82.82	99.29	107.88	97.72	108.75
Natural gas, per thousand cubic feet(1)	7.95	3.88	3.97	–	7.40	–
Synthetic oil, per barrel	99.54	–	–	–	99.54	–
Synthetic gas, per thousand cubic feet	8.24	–	–	–	8.24	–
Average production costs, per barrel – total	15.26	17.29	30.79	6.93	15.40	9.40

(1) The volumes of natural gas used in the calculation of this table are the production volumes of natural gas available for sale and are also shown in the production table above. Natural gas amounts were converted from bbl to cubic feet in accordance with the following scale: 1 bbl = 6 cubic feet.

(2) Operations in Venezuela and in Africa-PO&G (2014 and 2013).

Table of Contents

Item 4A. Unresolved Staff Comments

None.

Item 5. Operating and Financial Review and Prospects

Management's Discussion and Analysis of Financial Condition and Results of Operations

The information derived from our financial statements as of and for the years ended December 31, 2015, 2014 and 2013 has been prepared in accordance with IFRS issued by the IASB. For more information, see "Presentation of Financial and Other Information" and Notes 2, 4 and 5 to our audited consolidated financial statements.

You should read the following discussion of our financial condition and results of operations together with our audited consolidated financial statements and the accompanying notes beginning on page F-3 of this annual report.

Overview

We earn income from:

- domestic sales, which consist of sales of oil products (including diesel, gasoline, jet fuel, naphtha, fuel oil and liquefied petroleum gas), natural gas, ethanol, electricity and petrochemical products;

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

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

- other sources, including services, interest income from investments, share of earnings in equity-accounted investees, foreign exchange variation gains and inflation indexation gains on financial instruments.

Our expenses include:

- costs of sales (comprised of direct labor costs, operating costs and purchases of crude oil and oil products); property, plant and equipment maintenance and repairs; depreciation, depletion and amortization of property, plant and equipment, oil fields and signing bonuses (acquisition costs); and oil and gas exploration costs;

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

- research and development;

- impairment of assets and other operating expenses; and

- interest expense, inflation indexation and foreign exchange variation losses on debt and other financial instruments.

Fluctuations in our financial condition and results of operations are driven by a combination of factors, including:

Table of Contents

- the volume of crude oil, oil products and natural gas we produce and sell;
- changes in international prices of crude oil and oil products (denominated in U.S. dollars);
- changes in the domestic prices of crude oil and oil products (denominated in *reais)*;
- fluctuations in the *real* vs. U.S. dollar exchange rates and other currencies, as set out in Note 33.2(c) to our audited consolidated financial statements;
- the demand for oil products in Brazil and the amount of imports required to meet the domestic demand;
- the recoverable amounts of assets for impairment testing purposes; and
- the amount of production taxes from our operations that we are required to pay.

Sales Volumes and Prices

The profitability of our operations in any particular accounting period is related to the sales prices and volumes of the crude oil, oil products, natural gas and biofuels that we sell and the relationship between these prices and international prices. Our consolidated net sales in 2015 totaled 1,402,739 mboe, representing US$97,314 million in sales revenues, compared to 1,447,912 mboe, representing US$143,657 million in sales revenues in 2014 and compared to 1,384,616 mboe, representing US$141,462 million in sales revenues in 2013.

As a vertically integrated company, we process most of our crude oil production in our refineries and sell the refined oil products primarily in the Brazilian domestic market. Therefore, the price of oil products in Brazil has a more significant impact on our financial results than crude oil prices. International oil product prices vary over time as the result of many factors, including the price of crude oil. Over the long term, we intend to sell our products in Brazil at parity with international product prices. However, because we do not adjust our prices for gasoline, diesel and certain other oil products to reflect short-term volatility in the international markets, our downstream margins may be significantly different than those of other integrated international oil companies within a given financial reporting period due to significant rapid or sustained increases or decreases in the international prices of crude oil and oil products, or in the *real* vs. U.S. dollar exchange rate.

The average price of Brent crude oil, an international benchmark oil, was US$52.46 per barrel in 2015, US$98.99 per barrel in 2014 and US$108.66 per barrel in 2013. In December 2015, Brent crude oil prices averaged US$37.91 per barrel. Despite the sharp devaluation of the *real* throughout 2015, the average price of the Brent crude oil, when expressed in *reais*, also decreased to R$172.65 per barrel during 2015 from R$231.30 per barrel during 2014.

In 2013, we announced price increases at the refinery gate, totaling 10.9% for gasoline and 19.6% for diesel compared to December 31, 2012 prices. In November 2014, we announced further price increases at the refinery gate totaling 3% for gasoline and 5% for diesel compared to December 31, 2013 prices and in September 2015 we announced further price increases at the refinery gate totaling 6% for gasoline and 4% for diesel compared to December 31, 2014.

During 2015, 78% of our sales revenues were derived from sales of oil products, natural gas and other products in Brazil, compared to 77.7% in 2014 and 75.3% in 2013.

	For the Year Ended December 31,								
	2015			2014			2013		
	Volume (mbbl, except as otherwise noted)	Net Average Price (US$)(1)	Sales Revenues (US$ million)	Volume (mbbl, except as otherwise noted)	Net Average Price (US$)(1)	Sales Revenues (US$ million)	Volume (mbbl, except as otherwise noted)	Net Average Price (US$)(1)	Sales Revenu (US$ million
esel	336,723	90.70	30,532	365,510	116.50	42,586	359,266	115.30	41,4
tomotive soline	201,821	80.90	16,320	226,230	104.80	23,702	215,419	109.00	23,4
el oil cluding nker el)	37,880	60.60	2,297	43,494	127.90	5,562	35,588	156.00	5,5
phtha	48,404	53.60	2,594	59,443	62.70	3,729	62,520	63.30	