



2015 EDITION

# factbook



**TOTAL**  
COMMITTED TO BETTER ENERGY

# SUMMARY

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### Abbreviations

b:	barrel
cf:	cubic feet
/d:	per day
/y:	per year
€:	euro
\$ and/or	
dollar:	U.S. dollar
t:	metric ton
boe:	barrel of oil equivalent
kboe/d:	thousand boe/d
kb/d:	thousand barrel/d
Btu:	British thermal unit
M:	million
B:	billion
MW:	megawatt
MWp:	megawatt peak (direct current)
TWh:	terawatt hour
AMF:	French Financial Markets Authority
API:	American Petroleum Institute
ERM:	European Refining Margin Indicator.

ERM is an indicator intended to represent the margin after variable costs for a hypothetical complex refinery located around Rotterdam in Northern Europe. The indicator margin may not be representative of the actual margins achieved by TOTAL in any period because of TOTAL's particular refinery configurations, product mix effects or other company-specific operating conditions.

FEED:	Front-End Engineering and Design
FPSO:	Floating Production Storage and Offloading
IFRS:	International Financial Reporting Standards
LNG:	liquefied natural gas
LPG:	liquefied petroleum gas
ROE:	Return on Equity
ROACE:	Return on Average Capital Employed
SAGD:	Steam Assisted Gravity Drainage
SEC:	United States Securities and Exchange Commission

### Conversion table

1 boe =	1 barrel of crude oil = approx. 5,390 cf of gas <sup>(1)</sup> in 2015
1 b/d =	approx. 50 t/y
1 t =	approx. 7.5 b (for a gravity of 37° API)
1 Bm <sup>3</sup> /y =	approx. 0.1 Bcf/d
1 m <sup>3</sup> =	approx. 35.3 cf
1 t of LNG =	approx. 48 kcf of gas
1 Mt/y of LNG =	approx. 131 Mcf/d

(1) This ratio is calculated based on the actual average equivalent energy content of TOTAL's natural gas reserves and is subject to change.

## PROFILE



## KEY FIGURES FOR 2015

9.4%

Upstream production growth

8 B\$

Downstream cash generation

10.5 B\$

adjusted net income

23 B\$

organic Capex

1.5 B\$

Opex savings

4 B\$

asset sales signed

### A GLOBAL ENERGY GROUP

With operations in more than 130 countries, TOTAL is engaged in every sector of the oil industry, including upstream (hydrocarbon exploration, development and production) and downstream (refining, petrochemicals, specialty chemicals, trading and shipping of crude oil and petroleum products and marketing). TOTAL also operates in the renewable energies and power generation sectors.

### STRATEGY

The Group's goal is to be a global, integrated energy company. TOTAL is a leading international oil and gas company, and is active in new energy sources, such as solar power and biomass. To achieve this goal, TOTAL leverages its integrated business model, which enables it to capture synergies between the different business segments of the Group. TOTAL stands out due to its operational excellence, its technological expertise and its capacity to manage complex projects. The Group's strategy is based on four main priorities:

- driving profitable, sustainable growth in Exploration & Production's hydrocarbon activities;
- developing competitive, top-tier refining and petrochemical complexes;
- responding to its customer needs by delivering innovative solutions and services that go beyond the supply of petroleum products; and

- consolidating its leadership in solar energy and continuing to develop biomass in order to offer the most appropriate energy solutions.

This strategy incorporates the challenges of climate change, using the International Energy Agency 2°C scenario (450 ppm) as a point of reference. TOTAL's approach is to contribute to satisfying the demand for energy of the world's growing population, while providing concrete solutions to limit the effects of climate change. To do so, the Group focuses its actions around several key points, including the development of gas and renewable energies.

At the core of TOTAL's strategy is a strong belief that energy is vital, drives progress and must be made available to everyone. Energy is a precious resource that must be used wisely. The Group is helping to produce the energy that people around the planet need to live and thrive, while ensuring that its operations deliver economic, societal and environmental benefits. TOTAL is meeting this challenge with and for its employees, its stakeholders and local communities.

Beyond safety, the values of respect, responsibility and exemplary conduct underpin TOTAL's Code of Conduct and accompany priority business principles in the realms of safety / security / health / the environment, integrity (preventing corruption, fraud and anti-competitive practices) and human rights. It is through strict adherence to these values and principles that TOTAL will be able to build strong and sustainable growth for the Group and its stakeholders and fulfill its motto: committed to better energy.



# 2015 HIGHLIGHTS



## JANUARY

### NORWAY – E&P

Start-up of oil production from the Eldfisk II project on the PL 018 license in the North Sea, in which Total owns a 39.9% interest. The project has a production capacity of 70,000 barrels of oil equivalent per day.

### NIGERIA – E&P

Completion of the flare out of the Ofon field on Oil Mining Lease (OML) 102 offshore Nigeria. **1**

### UK – E&P

Start-up of gas and condensate production from the West Franklin Phase 2 project, which is operated by Total (46.2%) in the Central Graben area of the UK North Sea. **2**

### ABU DHABI – E&P

Signature of a new 40-year onshore concession agreement with the Supreme Petroleum Council of the Emirate of Abu Dhabi (United Arab Emirates) and the Abu Dhabi National Oil Company (ADNOC), granting Total a 10% participating interest in the ADCO concession, effective January 1, 2015.

## MARCH

### NIGERIA – E&P

Completion of the divestment of Total's stake in onshore Oil Mining Lease (OML) 29 to Aiteo Eastern E&P, for \$569 million. Together with the completed divestments of OML 24 and OML 18, Total's share of sale proceeds from these three onshore Nigerian blocks amounts to over \$1 billion.

## APRIL

### FRANCE – R&C

Announcement of the French refining roadmap plan: an investment of €200 million to transform the La Mède refinery and create France's first biorefinery and an investment of €400 million to upgrade the Donges refinery to capture new markets with low-sulfur fuels. **3 4**

## MAY

### RUSSIA – E&P

Start-up of gas and condensate production from the onshore Termokarstovoye field, located in the Russian Federation, operated by Terneftegas, a joint venture between Total (49%) and Novatek (51%). The field will produce around 6.6 million cubic meters of gas and 20,000 barrels of condensate per day, with a combined production capacity of 65,000 barrels of oil equivalent per day. **5**

### ANGOLA – E&P

Achievement of the significant milestone of producing a cumulative two billion barrels from the Total-operated deep offshore Block 17 located 150 km off the coast of Angola. With the start-up of CLOV in June 2014, Block 17 has become Total's most prolific site with production of over 700,000 barrels per day.

## JUNE

### GERMANY – R&C

Sale of Total's 16.7% interest in the Schwedt refinery in northeastern Germany (Brandenburg) to Rosneft, which already indirectly held an 18.8% stake in the facility. The transaction is valued at \$300 million.

## JULY

### SINGAPORE – M&S

Start-up of Total's largest state-of-the-art lubricants oil blending plant in the world, located in Singapore. With an annual production capacity of 310,000 tonnes, this new major hub will boost Total's lubricant supply in the Asia-Pacific region, which already represents more than 25% of Total's lubricants sales. **6**

### ANGOLA – E&P

Start-up of production from Dalia Phase 1A, a new development on deep offshore operated Block 17, located 135 km off the coast of Angola. Block 17 is operated by Total (40%). Dalia Phase 1A will develop additional reserves of 51 million barrels and will contribute 30,000 barrels per day to the Block's production. **7**

### UK – E&P

Sale of 20% of Total's interests in the Laggan, Tormore, Edradour and Glenlivet fields, located in the West of Shetland area, to SSE E&P UK Limited Ltd for £565 million.

## AUGUST

### HOLDING

Completion of the sale of the 100% stake in Total Coal South Africa which was signed in 2014, confirming Total's exit from coal production and marketing.

### UK – E&P

Sale of all of Total's interests in the FUKA and SIRGE gas pipelines and the St. Fergus Gas Terminal to North Sea Midstream Partners for around £585 million.



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## SEPTEMBER

### TURKEY – M&S

Sale of Total's service station network and commercial sales, supply and logistics assets located in Turkey to Demirören for around \$356 million.

### CANADA – E&P

Start-up of production from the Surmont 2 oil sands project, in which the Group holds a 50% interest, located in the Athabasca region of Alberta, Canada.

Gross capacity for Surmont 1 and 2 is expected to reach 150,000 barrels of oil per day. <sup>8</sup>

### HOLDING

Sale of 50% in Géosel Manosque to a 50-50 consortium composed of EDF Invest and Ardian. Total's 53.4% stake in Géosel Manosque was valued at around \$320 million in January 2015 and the Group will remain a minority shareholder with an interest of 3.4%.

### CANADA – E&P

Sale of 10% interest in the Fort Hills oil sands mining project to the operating partner Suncor Energy for a consideration of around \$230 million.

## OCTOBER

### AUSTRALIA – E&P

First shipment of LNG from the Gladstone LNG project loaded and sent to North Korea. The plant at Curtis Island will produce 7.2 million tonnes of LNG per year once at full capacity. All production from the plant will be sold under long-term contracts to Asian buyers, notably in South Korea and in Malaysia. <sup>9</sup>

### NORWAY – E&P

Sale of a 15% interest in the Gina Krog field in Norway to Tellus Petroleum. Following the sale, Total retains a 15% interest in Gina Krog.

## DECEMBER

### CONGO – E&P

Start-up of Moho Phase 1b project, located 75 kilometers off the coast of Pointe-Noire in the Republic of the Congo. The project is operated by Total and has a production capacity of 40,000 barrels oil equivalent per day. <sup>10</sup>

### HOLDING

Total's Board of Directors elected Patrick Pouyanné, Chief Executive Officer of Total, Chairman of the Board of Directors. Mr. Pouyanné therefore becomes Chairman and Chief Executive Officer of Total, following the Board's decision to recombine the two roles.

## JANUARY

### RUSSIA – E&P

Transfer of Total's 20% interest in the Kharyaga Production Sharing Agreement together with operatorship to Zarubezhneft. Following the completion of the transaction Total retains a 20% interest in Kharyaga.

### DOMINICAN REPUBLIC – M&S

Acquisition of a majority 70% interest in the leading Dominican fuel retailer from Putney Capital Management. The transaction includes a well established network of 130 stations, along with significant commercial oil products and lubricants sales positions.

## FEBRUARY

### INDONESIA – GAS

Total has signed long-term LNG sale and purchase agreements with state-owned Indonesian company Pertamina for the supply of LNG volumes increasing from 0.4 to 1 million tonnes per year over a period of 15 years beginning 2020.

### CHINA – GAS

Signature of a binding Heads of Agreement with ENN LNG Trading for the delivery of 0.5 million tonnes per year of LNG for a period of 10 years. The deliveries will be sourced from Total's global LNG portfolio and are expected to begin in 2018 upon completion of ENN's Zhoushan LNG receiving terminal.

### UK – E&P

Start-up of production from the Laggan and Tormore gas and condensate fields, located in the West of Shetland area. The fields, which are operated by Total with a 60% interest, will produce 90,000 barrels of oil equivalent per day. <sup>11</sup>

### ARGENTINA – E&P

Start-up of production at the offshore Vega Pleyade gas and condensate field in the Tierra del Fuego region of Argentina. Operated by Total (37.5%), the project will have a production capacity of 10 million cubic meters of gas per day (70,000 barrels of oil equivalent per day). <sup>12</sup>

## MARCH

### HOLDING

Appointment of Momar Nguer as President, Marketing & Services and member of the Executive Committee of Total, replacing Philippe Boisseau.

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# CORPORATE



23 B\$  
Cash Flow<sup>(1)</sup>

10.5 B\$  
adjusted net  
income

4.5 \$  
adjusted  
fully-diluted  
earnings  
per share

2.44 €  
dividend  
per share<sup>(2)</sup>

(1) Cash flow from operations + net asset sales.

(2) Pending approval at the May 24, 2016 Annual Shareholders' Meeting.



## 2016 OUTLOOK

Lowering breakevens  
and capitalizing on the  
Group's market position

2016 Organic Capex target:

**19 B\$**

2016 Opex reduction target:

**2.4 B\$**

2016 net asset sales target:

**2 B\$**

2016 exploration budget:

**1.5 B\$**

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## NOTE ON FINANCIAL STATEMENTS

Effective January 1, 2014, Total changed the presentation currency of the Group's Consolidated Financial statements from the euro to the US dollar. Comparative 2013, 2012 and 2011 information has been restated.

## FINANCIAL HIGHLIGHTS

(in million dollars, except percent and per share amounts)	2015	2014	2013	2012	2011
<b>Sales</b>	<b>165,357</b>	<b>236,122</b>	<b>251,725</b>	<b>257,037</b>	<b>257,084</b>
Adjusted operating income from business segments <sup>(1)</sup>	12,672	21,604	27,618	31,946	34,044
<b>Adjusted net operating income from business segments<sup>(1)</sup></b>	<b>11,362</b>	<b>14,247</b>	<b>15,861</b>	<b>17,153</b>	<b>17,118</b>
Net income (Group share)	5,087	4,244	11,228	13,648	17,400
<b>Adjusted net income (Group share)<sup>(1)</sup></b>	<b>10,518</b>	<b>12,837</b>	<b>14,292</b>	<b>15,772</b>	<b>15,948</b>
Fully-diluted weighted-average number of shares	2,304,435,542	2,281,004,151	2,271,543,658	2,266,635,745	2,256,951,403
<b>Adjusted fully-diluted earnings per share (\$) <sup>(1) (2)</sup></b>	<b>4.51</b>	<b>5.63</b>	<b>6.29</b>	<b>6.96</b>	<b>7.07</b>
<b>Dividend per share (€) <sup>(2)</sup></b>	<b>2.44 <sup>(3)</sup></b>	<b>2.44</b>	<b>2.38</b>	<b>2.34</b>	<b>2.28</b>
<b>Dividend per ADR (\$) <sup>(2)</sup></b>	<b>2.67 <sup>(3) (4)</sup></b>	<b>2.93</b>	<b>3.24</b>	<b>3.05</b>	<b>2.97</b>
Net-debt-to-equity ratio (as of December 31)	28.3%	31.3%	23.3%	21.9%	23.4%
Return on Average Capital Employed (ROACE) <sup>(5)</sup>	9.4%	11.1%	13.0%	15.5%	17.0%
Return on Equity (ROE)	11.5%	13.5%	14.9%	17.7%	19.9%
<b>Cash flow from operating activities</b>	<b>19,946</b>	<b>25,608</b>	<b>28,513</b>	<b>28,858</b>	<b>27,193</b>
Gross investments <sup>(6)</sup>	28,033	30,509	34,431	29,475	34,161
Organic investments <sup>(7)</sup>	22,976	26,430	28,309	23,789	20,641
Divestments (at the sale price)	7,584	6,190	6,399	7,543	11,940

(1) Adjusted results are defined as income at replacement cost, excluding non-recurring items, and excluding the impact of fair value changes.

(2) Based on the fully-diluted weighted-average number of common shares outstanding during the period.

(3) 2015 dividend subject to approval at the May 24, 2016 Annual Shareholders' Meeting.

(4) 2015 estimated dividend in dollars includes the first quarterly interim ADR dividend of \$0.69 paid in October 2015 and the second quarterly interim ADR dividend of \$0.66 paid in January 2016, as well as the third quarterly interim ADR dividend of \$0.66 payable in April 2016 and the proposed final ADR dividend of \$0.66 payable in July 2016, both converted at a rate of \$1.09/€.

(5) Based on adjusted net operating income and average capital employed using replacement cost.

(6) Including acquisitions and increases in non-current loans.

(7) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.

## MARKET ENVIRONMENT

	2015	2014	2013	2012	2011
Year-end euro/dollar (€/\$)	1.09	1.21	1.38	1.32	1.29
Average euro/dollar (€/\$)	1.11	1.33	1.33	1.28	1.39
Year-end Brent price (\$/b)	37.3	57.3	110.3	110.0	107.4
Average Brent price (\$/b)	52.4	99.0	108.7	111.7	111.3
Average refining margins (\$/t) – ERMI <sup>(1)</sup>	48.5	18.7	17.9	36.0	17.4

(1) Total's European Refining Margin Indicator (ERMI); published quarterly by the Group.

## OPERATIONAL HIGHLIGHTS BY QUARTER

(in million dollars)

	2015 Full Year	2015 Quarters			
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
<b>Adjusted operating income from business segments<sup>(1)</sup></b>	<b>12,672</b>	<b>3,311</b>	<b>4,064</b>	<b>3,204</b>	<b>2,093</b>
Upstream	4,925	1,531	1,995	994	405
Refining & Chemicals	5,649	1,335	1,604	1,713	997
Marketing & Services	2,098	445	465	497	691
<b>Adjusted net operating income from business segments<sup>(1)</sup></b>	<b>11,362</b>	<b>2,780</b>	<b>3,334</b>	<b>2,963</b>	<b>2,285</b>
Upstream	4,774	1,359	1,560	1,107	748
Refining & Chemicals	4,889	1,100	1,349	1,433	1,007
Marketing & Services	1,699	321	425	423	530

(1) Adjusted results are defined as income at replacement cost, excluding non-recurring items, and excluding the impact of fair value changes.

## FINANCIAL HIGHLIGHTS BY QUARTER

(in million dollars, except percent,  
per share amounts and share buybacks)

	2015 Full Year	2015 Quarters			
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
<b>Adjusted net income (Group share)<sup>(1)</sup></b>	<b>10,518</b>	<b>2,602</b>	<b>3,085</b>	<b>2,756</b>	<b>2,075</b>
Adjusted fully diluted earnings per share (\$) <sup>(1)</sup>	4.51	1.13	1.34	1.17	0.88
<b>Net income (Group share)</b>	<b>5,087</b>	<b>2,663</b>	<b>2,971</b>	<b>1,079</b>	<b>(1,626)</b>
<b>Net-debt-to-equity ratio (as of end of period)</b>	<b>28.3%</b>	<b>28.2%</b>	<b>25.9%</b>	<b>26.6%</b>	<b>28.3%</b>
Shares outstanding (as of end of period)	2,440,057,883	2,385,555,781	2,396,360,090	2,415,089,789	2,440,057,883
Fully-diluted weighted-average number of shares	2,304,435,542	2,285,344,747	2,292,139,361	2,311,978,156	2,328,765,883
Number of shares bought back during the period	4,711,935	-	-	4,711,935	-
Share buybacks (B\$)	0.2	-	-	0.2	-

(in million dollars, except percent,  
per share amounts and share buybacks)

	2012 Full Year <sup>(2)</sup>	2012 Quarters			
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
<b>Adjusted net income (Group share)<sup>(1)</sup></b>	<b>15,772</b>	<b>4,037</b>	<b>3,576</b>	<b>4,206</b>	<b>3,943</b>
Adjusted fully diluted earnings per share (\$) <sup>(1)</sup>	6.96	1.78	1.58	1.85	1.74
<b>Net income (Group share)</b>	<b>13,648</b>	<b>4,808</b>	<b>1,945</b>	<b>3,853</b>	<b>3,036</b>
<b>Net-debt-to-equity ratio (as of end of period)</b>	<b>21.9%</b>	<b>22.6%</b>	<b>21.9%</b>	<b>21.2%</b>	<b>21.9%</b>
Shares outstanding (as of end of period)	2,365,933,146	2,364,545,977	2,364,546,966	2,365,919,246	2,365,933,146
Fully-diluted weighted-average number of shares	2,266,635,745	2,264,743,824	2,264,091,516	2,268,296,670	2,270,173,079
Number of shares bought back during the period	1,800,000	-	-	-	1,800,000
Share buybacks (B\$)	0.1	-	-	-	0.1

(1) Adjusted results are defined as income at replacement cost, excluding non-recurring items, and excluding the impact of fair value changes.

(2) Quarterly data for 2012 and 2011 have not been restated following the application of revised accounting standard IAS 19 effective January 1, 2013. Therefore, in the absence of such information, the sum of the quarters for these two years is not equal to the full year restated of IAS 19.

## MARKET ENVIRONMENT AND PRICE REALIZATIONS

	2015		2015 Quarters				2014		2014 Quarters			
	Full Year		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	Full Year		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
<b>Market environment</b>												
Average euro-dollar (\$/€)	1.11	1.13	1.11	1.11	1.10	1.10	1.33	1.37	1.37	1.33	1.33	1.25
Brent price (\$/b)	52.4	53.9	61.9	50.5	43.8	43.8	99.0	108.2	109.7	101.9	101.9	76.6
Average refining margins (\$/t) – ERMI <sup>(1)</sup>	48.5	47.1	54.1	54.8	38.1	38.1	18.7	6.6	10.9	29.9	29.9	27.6
<b>Price realizations<sup>(2)</sup></b>												
TOTAL average liquids price (\$/b) <sup>(3)</sup>	47.4	49.5	58.2	44.0	38.1	38.1	89.4	102.1	103.0	94.0	94.0	61.7
TOTAL average gas price (\$/MBtu)	4.75	5.38	4.67	4.47	4.45	4.45	6.57	7.06	6.52	6.40	6.40	6.29

(1) Total's European Refining Margin Indicator (ERMI); published quarterly by the Group.

(2) Consolidated subsidiaries excluding fixed margin and buy-back contracts. Beginning with the first quarter of 2012, includes hydrocarbon production overlifting/underlifting position valued at market price.

(3) Crude oil and natural gas liquids.

2014 Full Year	Quarters			
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
<b>21,604</b>	<b>6,182</b>	<b>5,583</b>	<b>6,134</b>	<b>3,705</b>
17,156	5,501	4,810	4,671	2,174
2,739	328	368	974	1,069
1,709	353	405	489	462
<b>14,247</b>	<b>3,699</b>	<b>3,824</b>	<b>3,927</b>	<b>2,797</b>
10,504	3,092	3,051	2,765	1,596
2,489	346	401	786	956
1,254	261	372	376	245

2014 Full Year	Quarters				2013 Full Year	Quarters			
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
<b>12,837</b>	<b>3,327</b>	<b>3,151</b>	<b>3,558</b>	<b>2,801</b>	<b>14,292</b>	<b>3,698</b>	<b>3,581</b>	<b>3,628</b>	<b>3,385</b>
5.63	1.46	1.38	1.56	1.22	6.29	1.63	1.57	1.59	1.49
<b>4,244</b>	<b>3,335</b>	<b>3,104</b>	<b>3,463</b>	<b>(5,658)</b>	<b>11,228</b>	<b>1,948</b>	<b>3,364</b>	<b>3,682</b>	<b>2,234</b>
<b>31.3%</b>	<b>23.5%</b>	<b>27.1%</b>	<b>27.8%</b>	<b>31.3%</b>	<b>23.3%</b>	<b>25.9%</b>	<b>27.6%</b>	<b>23.0%</b>	<b>23.3%</b>
2,385,267,525	2,378,259,685	2,382,870,577	2,384,527,055	2,385,267,525	2,377,678,160	2,365,933,626	2,376,735,991	2,377,196,179	2,377,678,160
2,281,004,151	2,276,773,146	2,281,218,870	2,284,596,468	2,286,737,894	2,271,543,658	2,269,007,119	2,274,457,002	2,274,700,388	2,275,542,248
4,386,300	-	-	4,386,300	-	4,414,200	-	-	4,414,200	-
0.3	-	-	0.3	-	0.2	-	-	0.2	-

2011 Full Year <sup>(2)</sup>	Quarters			
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
<b>15,948</b>	<b>4,246</b>	<b>4,021</b>	<b>3,957</b>	<b>3,674</b>
7.07	1.89	1.78	1.75	1.62
<b>17,400</b>	<b>5,398</b>	<b>3,923</b>	<b>4,682</b>	<b>3,087</b>
<b>23.4%</b>	<b>19.3%</b>	<b>24.3%</b>	<b>15.2%</b>	<b>23.4%</b>
2,363,767,313	2,351,139,024	2,361,390,509	2,363,752,941	2,363,767,313
2,256,951,403	2,251,135,143	2,255,537,890	2,260,966,547	2,263,503,634
-	-	-	-	-
-	-	-	-	-

2013 Full Year	Quarters				2012 Full Year	Quarters				2011 Full Year	Quarters			
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
1.33	1.32	1.31	1.32	1.36	1.28	1.31	1.28	1.25	1.30	1.39	1.37	1.44	1.41	1.35
108.7	112.6	102.4	110.3	109.2	111.7	118.6	108.3	109.5	110.1	111.3	105.4	117.0	113.4	109.3
17.9	26.9	24.1	10.6	10.1	36.0	20.9	38.2	51.0	33.9	17.4	24.6	16.3	13.4	15.1
103.3	106.7	96.6	107.2	102.5	107.7	115.2	101.6	107.6	106.4	105.0	99.5	110.6	106.8	104.3
7.12	7.31	6.62	7.18	7.36	6.74	7.16	7.10	6.00	6.94	6.53	6.19	6.60	6.56	6.79



## CONSOLIDATED STATEMENT OF INCOME

For the year ended December 31,  
(in million dollars, except per share amounts)

	2015	2014	2013	2012	2011
<b>Sales</b>	<b>165,357</b>	<b>236,122</b>	<b>251,725</b>	<b>257,037</b>	<b>257,084</b>
Excise taxes	(21,936)	(24,104)	(23,756)	(22,821)	(25,254)
Revenues from sales	143,421	212,018	227,969	234,216	231,830
Purchases, net of inventory variation	(96,671)	(152,975)	(160,849)	(162,908)	(158,533)
Other operating expenses	(24,345)	(28,349)	(28,764)	(29,273)	(27,549)
Exploration costs	(1,991)	(1,964)	(2,169)	(1,857)	(1,418)
Depreciation, depletion, and amortization of tangible assets and mineral interests	(17,720)	(19,656)	(11,994)	(12,237)	(10,448)
Other income	3,606	2,577	2,290	1,897	2,975
Other expense	(1,577)	(954)	(2,800)	(1,178)	(1,738)
Financial interest on debt	(967)	(748)	(889)	(863)	(992)
Financial income from marketable securities and cash equivalents	94	108	85	128	380
Cost of net debt	(873)	(640)	(804)	(735)	(612)
Other financial income	882	821	696	717	848
Other financial expense	(654)	(676)	(702)	(641)	(597)
Equity in income (loss) of affiliates	2,361	2,662	3,415	2,582	2,680
Income taxes	(1,653)	(8,614)	(14,767)	(16,747)	(19,614)
<b>Consolidated net income</b>	<b>4,786</b>	<b>4,250</b>	<b>11,521</b>	<b>13,836</b>	<b>17,824</b>
Group share	5,087	4,244	11,228	13,648	17,400
Minority interests	(301)	6	293	188	424
Earnings per share (\$)	2.17	1.87	4.96	6.05	7.74
Fully-diluted earnings per share (\$)	2.16	1.86	4.94	6.02	7.71
<b>Adjusted net income</b>	<b>10,518</b>	<b>12,837</b>	<b>14,292</b>	<b>15,772</b>	<b>15,948</b>
<b>Adjusted fully-diluted earnings per share (\$)</b>	<b>4.51</b>	<b>5.63</b>	<b>6.29</b>	<b>6.96</b>	<b>7.07</b>

## SALES

(in million dollars)	2015	2014	2013	2012	2011
<b>By business segment excluding inter-segment sales</b>					
Upstream	16,840	23,484	26,367	28,449	30,916
Refining & Chemicals	70,623	106,124	114,483	117,067	107,384
Marketing & Services	77,887	106,509	110,873	111,281	118,769
Corporate	7	5	2	240	15
<b>Total</b>	<b>165,357</b>	<b>236,122</b>	<b>251,725</b>	<b>257,037</b>	<b>257,084</b>
<b>By business segment including inter-segment sales</b>					
Upstream	34,767	52,667	64,017	68,947	68,918
Refining & Chemicals	97,417	151,074	166,758	174,201	169,016
Marketing & Services	78,798	108,124	113,032	112,251	119,890
Corporate	225	241	179	496	271
Inter-segment sales	(45,850)	(75,984)	(92,261)	(98,858)	(101,011)
<b>Total</b>	<b>165,357</b>	<b>236,122</b>	<b>251,725</b>	<b>257,037</b>	<b>257,084</b>
<b>By geographic area excluding inter-segment sales</b>					
France	36,536	51,471	57,650	59,077	59,333
Rest of Europe	79,463	114,747	128,661	133,439	113,379
North America	14,857	23,766	22,332	22,675	22,156
Africa	17,612	23,281	23,146	23,025	20,986
Rest of world	16,889	22,857	19,936	18,821	41,230
<b>Total</b>	<b>165,357</b>	<b>236,122</b>	<b>251,725</b>	<b>257,037</b>	<b>257,084</b>

## DEPRECIATION, DEPLETION & AMORTIZATION OF TANGIBLE ASSETS AND MINERAL INTEREST BY BUSINESS SEGMENT

As of December 31, (in million dollars)	2015	2014	2013	2012	2011
Upstream	(15,857)	(15,938)	(9,484)	(9,555)	(7,014)
Refining & Chemicals	(1,092)	(2,901)	(1,736)	(1,856)	(2,695)
Marketing & Services	(744)	(781)	(733)	(780)	(690)
Corporate	(27)	(36)	(41)	(46)	(49)
<b>Total</b>	<b>(17,720)</b>	<b>(19,656)</b>	<b>(11,994)</b>	<b>(12,237)</b>	<b>(10,448)</b>

## EQUITY IN INCOME/(LOSS) OF AFFILIATES BY BUSINESS SEGMENT

As of December 31, (in million dollars)	2015	2014	2013	2012	2011
Upstream	1,720	2,509	2,889	2,385	2,372
Refining & Chemicals	602	315	500	312	411
Marketing & Services	39	(162)	26	(115)	(104)
Corporate	-	-	-	-	1
<b>Total</b>	<b>2,361</b>	<b>2,662</b>	<b>3,415</b>	<b>2,582</b>	<b>2,680</b>

## INCOME TAXES

(in million dollars)	2015	2014	2013	2012	2011
Current income taxes	(4,552)	(10,904)	(13,607)	(15,970)	(17,392)
Deferred income taxes	2,899	2,290	(1,160)	(777)	(2,222)
Income taxes	(1,653)	(8,614)	(14,767)	(16,747)	(19,614)

## ADJUSTMENT ITEMS TO OPERATING INCOME BY BUSINESS SEGMENT

(in million dollars)

	Upstream	Refining & Chemicals	Marketing & Services	Corporate	Total
<b>Year 2015</b>					
Inventory valuation effect	-	(859)	(254)	-	(1,113)
Effect of changes in fair value	(16)	-	-	-	(16)
Restructuring charges	(43)	-	(5)	-	(48)
Impairments	(6,783)	(70)	(24)	-	(6,877)
Other	(1,024)	(176)	(57)	-	(1,257)
<b>Total</b>	<b>(7,866)</b>	<b>(1,105)</b>	<b>(340)</b>	<b>-</b>	<b>(9,311)</b>
<b>Year 2014</b>					
Inventory valuation effect	-	(2,944)	(525)	-	(3,469)
Effect of changes in fair value	31	-	-	-	31
Restructuring charges	-	-	-	-	-
Impairments	(6,529)	(1,450)	-	-	(7,979)
Other	(164)	(36)	(26)	-	(226)
<b>Total</b>	<b>(6,662)</b>	<b>(4,430)</b>	<b>(551)</b>	<b>-</b>	<b>(11,643)</b>
<b>Year 2013</b>					
Inventory valuation effect	-	(978)	(87)	-	(1,065)
Effect of changes in fair value	(74)	-	-	-	(74)
Restructuring charges	-	(373)	(3)	-	(376)
Impairments	(855)	(184)	(4)	-	(1,043)
Other	(113)	(54)	(44)	-	(211)
<b>Total</b>	<b>(1,042)</b>	<b>(1,589)</b>	<b>(138)</b>	<b>-</b>	<b>(2,769)</b>
<b>Year 2012</b>					
Inventory valuation effect	-	(230)	(71)	-	(301)
Effect of changes in fair value	(12)	-	-	-	(12)
Restructuring charges	-	(3)	-	-	(3)
Impairments	(1,538)	(266)	(87)	-	(1,891)
Other	(752)	(24)	(223)	(115)	(1,114)
<b>Total</b>	<b>(2,302)</b>	<b>(523)</b>	<b>(381)</b>	<b>(115)</b>	<b>(3,321)</b>
<b>Year 2011</b>					
Inventory valuation effect	-	1,292	399	-	1,691
Effect of changes in fair value	62	-	-	-	62
Restructuring charges	-	-	-	-	-
Impairments	(104)	(983)	-	-	(1,087)
Other	-	(104)	(23)	-	(127)
<b>Total</b>	<b>(42)</b>	<b>205</b>	<b>376</b>	<b>-</b>	<b>539</b>



## ADJUSTMENT ITEMS TO NET INCOME BY BUSINESS SEGMENT

(in million dollars)

	Upstream	Refining & Chemicals	Marketing & Services	Corporate	Total
<b>Year 2015</b>					
Inventory valuation effect	-	(590)	(157)	-	(747)
Effect of changes in fair value	(9)	-	-	-	(9)
Restructuring charges	(10)	(52)	(10)	-	(72)
Impairments	(5,249)	(59)	(127)	(12)	(5,447)
Gains (losses) on asset sales	162	1,288	360	-	1,810
Other	(516)	(257)	(193)	-	(966)
<b>Total</b>	<b>(5,622)</b>	<b>330</b>	<b>(127)</b>	<b>(12)</b>	<b>(5,431)</b>
<b>Year 2014</b>					
Inventory valuation effect	-	(2,114)	(339)	-	(2,453)
Effect of changes in fair value	25	-	-	-	25
Restructuring charges	-	(13)	(7)	-	(20)
Impairments	(5,514)	(1,409)	(140)	-	(7,063)
Gains (losses) on asset sales	1,314	(105)	-	-	1,209
Other	(193)	(58)	(40)	-	(291)
<b>Total</b>	<b>(4,368)</b>	<b>(3,699)</b>	<b>(526)</b>	<b>-</b>	<b>(8,593)</b>
<b>Year 2013</b>					
Inventory valuation effect	-	(656)	(72)	-	(728)
Effect of changes in fair value	(58)	-	-	-	(58)
Restructuring charges	-	(537)	(30)	-	(567)
Impairments	(581)	(183)	(9)	-	(773)
Gains (losses) on asset sales	(58)	(59)	-	-	(117)
Other	(113)	(676)	47	(79)	(821)
<b>Total</b>	<b>(810)</b>	<b>(2,111)</b>	<b>(64)</b>	<b>(79)</b>	<b>(3,064)</b>
<b>Year 2012</b>					
Inventory valuation effect	-	(149)	(52)	-	(201)
Effect of changes in fair value	(9)	-	-	-	(9)
Restructuring charges	-	(31)	(68)	-	(99)
Impairments	(985)	(247)	(155)	(39)	(1,426)
Gains (losses) on asset sales	326	-	-	438	764
Other	(491)	(57)	(140)	(465)	(1,153)
<b>Total</b>	<b>(1,159)</b>	<b>(484)</b>	<b>(415)</b>	<b>(66)</b>	<b>(2,124)</b>
<b>Year 2011</b>					
Inventory valuation effect	-	931	229	-	1,160
Effect of changes in fair value	45	-	-	-	45
Restructuring charges	-	(100)	(70)	-	(170)
Impairments	(104)	(663)	(644)	-	(1,411)
Gains (losses) on asset sales	1,213	700	391	103	2,407
Other	(248)	(157)	(85)	(89)	(579)
<b>Total</b>	<b>906</b>	<b>711</b>	<b>(179)</b>	<b>14</b>	<b>1,452</b>

## CONSOLIDATED BALANCE SHEET

As of December 31, (in million dollars)	2015	2014	2013	2012	2011
<b>ASSETS</b>					
<b>Non-current assets</b>					
Intangible assets, net	14,549	14,682	18,395	16,965	16,062
Property, plant and equipment, net	109,518	106,876	104,480	91,477	83,400
Equity affiliates: investments and loans	19,384	19,274	20,417	18,153	16,814
Other investments	1,241	1,399	1,666	1,571	4,755
Hedging instruments of non-current financial debt	1,219	1,319	1,418	2,145	2,557
Deferred income taxes	3,982	4,079	3,838	2,982	2,653
Other non-current assets	4,355	4,192	4,406	3,513	3,179
<b>Total non-current assets</b>	<b>154,248</b>	<b>151,821</b>	<b>154,620</b>	<b>136,806</b>	<b>129,420</b>
<b>Current assets</b>					
Inventories, net	13,116	15,196	22,097	22,954	23,447
Accounts receivable, net	10,629	15,704	23,422	25,339	25,941
Other current assets	15,843	15,702	14,892	13,307	13,932
Current financial instruments	6,190	1,293	739	2,061	906
Cash and cash equivalents	23,269	25,181	20,200	20,409	18,147
Assets classified as held for sale	1,189 <sup>(1)</sup>	4,901 <sup>(3)</sup>	3,253 <sup>(5)</sup>	5,010 <sup>(7)</sup>	-
<b>Total current assets</b>	<b>70,236</b>	<b>77,977</b>	<b>84,603</b>	<b>89,080</b>	<b>82,373</b>
<b>Total assets</b>	<b>224,484</b>	<b>229,798</b>	<b>239,223</b>	<b>225,886</b>	<b>211,793</b>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>					
<b>Shareholders' equity</b>					
Common shares	7,670	7,518	7,493	7,454	7,447
Paid-in surplus and retained earnings	101,528	94,646	98,254	92,485	86,461
Currency translation adjustment	(12,119)	(7,480)	(1,203)	(1,696)	(2,884)
Treasury shares	(4,585)	(4,354)	(4,303)	(4,274)	(4,357)
<b>Total shareholders' equity – Group share</b>	<b>92,494</b>	<b>90,330</b>	<b>100,241</b>	<b>93,969</b>	<b>86,667</b>
Non-controlling interests	2,915	3,201	3,138	1,689	1,749
<b>Total shareholders' equity</b>	<b>95,409</b>	<b>93,531</b>	<b>103,379</b>	<b>95,658</b>	<b>88,416</b>
<b>Non-current liabilities</b>					
Deferred income taxes	12,360	14,810	17,850	16,006	15,340
Employee benefits	3,774	4,758	4,235	4,939	4,380
Provisions and other non-current liabilities	17,502	17,545	17,517	15,285	14,114
Non-current financial debt	44,464	45,481	34,574	29,392	29,186
<b>Total non-current liabilities</b>	<b>78,100</b>	<b>82,594</b>	<b>74,176</b>	<b>65,622</b>	<b>63,020</b>
<b>Current liabilities</b>					
Accounts payable	20,928	24,150	30,282	28,563	28,577
Other creditors and accrued liabilities	16,884	16,641	18,948	19,316	19,045
Current borrowings	12,488	10,942	11,193	14,535	12,519
Other current financial liabilities	171	180	381	232	216
Liabilities directly associated with the assets classified as held for sale	504 <sup>(2)</sup>	1,760 <sup>(4)</sup>	864 <sup>(6)</sup>	1,960 <sup>(8)</sup>	-
<b>Total current liabilities</b>	<b>50,975</b>	<b>53,673</b>	<b>61,668</b>	<b>64,606</b>	<b>60,357</b>
<b>Total liabilities and shareholders' equity</b>	<b>224,484</b>	<b>229,798</b>	<b>239,223</b>	<b>225,886</b>	<b>211,793</b>

(1) \$497 million of Fuka in United Kingdom has been classified as "Assets classified as held for sale". \$458 million of Total Turkiye has been classified as "Assets classified as held for sale". \$234 million of Kharyaga in Russia has been classified as "Assets held for sale".

(2) \$82 million of Fuka in United Kingdom has been classified as "Liabilities directly associated with the assets classified as held for sale". \$258 million of Total Turkiye has been classified as "Liabilities directly associated with the assets classified as held for sale". \$164 million of Kharyaga in Russia has been classified as "Liabilities directly associated with the assets classified as held for sale".

(3) \$2,401 million of OML 138 in Nigeria has been classified as "Assets classified as held for sale". \$1,664 million of Bostik has been classified as "Assets classified as held for sale". \$469 million of TCSA has been classified as "Assets held for sale". \$367 million of Totalgaz has been classified as "Assets held for sale".

(4) \$831 million of OML 138 in Nigeria has been classified as "Liabilities directly associated with the assets classified as held for sale". \$606 million of Bostik has been classified as "Liabilities directly associated with the assets classified as held for sale". \$58 million of TCSA has been classified as "Liabilities directly associated with the assets classified as held for sale". \$265 million of Totalgaz has been classified as "Liabilities directly associated with the assets classified as held for sale".

(5) \$2,527 million of OML 138 in Nigeria has been classified as "Assets classified as held for sale". \$726 million of Block 15/06 in Angola has been classified as "Assets classified as held for sale".

(6) \$814 million of OML 138 in Nigeria has been classified as "Liabilities directly associated with the assets classified as held for sale". \$50 million of Block 15/06 in Angola has been classified as "Liabilities directly associated with the assets classified as held for sale".

(7) \$2,181 million of OML 138 in Nigeria has been classified as "Assets classified as held for sale". \$1,887 million of Transport et Infrastructures Gaz France (TIGF) including \$1,643 million tangible assets has been classified as "Assets classified as held for sale". \$614 million of Tempa Rossa has been classified as "Assets classified as held for sale". \$329 million of Upstream Trinidad & Tobago have been classified as "Assets classified as held for sale".

(8) \$662 million of OML 138 in Nigeria has been classified as "Liabilities directly associated with the assets classified as held for sale". \$1,167 million of Transport et Infrastructures Gaz France (TIGF) including \$1,046 million non current financial debt has been classified as "Liabilities directly associated with the assets classified as held for sale". \$131 million of Upstream Trinidad & Tobago have been classified as "Liabilities directly associated with the assets classified as held for sale".

## NET TANGIBLE & INTANGIBLE ASSETS BY BUSINESS SEGMENT

As of December 31, (in million dollars)	2015	2014	2013	2012	2011
<b>Upstream</b>					
Tangibles	95,086	92,262	87,548	75,386	67,930
Intangibles	13,132	13,011	16,119	14,742	13,909
<b>Refining &amp; Chemicals</b>					
Tangibles	8,631	8,798	10,991	10,840	10,515
Intangibles	686	714	1,416	1,327	1,178
<b>Marketing &amp; Services</b>					
Tangibles	5,595	5,580	5,676	5,034	4,735
Intangibles	628	863	765	814	878
<b>Corporate</b>					
Tangibles	206	236	265	217	220
Intangibles	103	94	95	82	97
<b>Total</b>	<b>124,067</b>	<b>121,558</b>	<b>122,875</b>	<b>108,442</b>	<b>99,642</b>

## PROPERTY, PLANT & EQUIPMENT

As of December 31, (in million dollars)	2015	2014	2013	2012	2011
Proved properties	58,687	52,968	51,089	39,668	38,342
Unproved properties	2,423	2,153	1,432	302	270
Work in progress	33,962	37,124	34,612	34,928	27,398
<b>Total Upstream properties</b>	<b>95,072</b>	<b>92,245</b>	<b>87,133</b>	<b>74,898</b>	<b>66,010</b>
Land	970	1,070	1,264	1,250	1,227
Machinery plant and equipment (including transportation equipment)	5,748	6,092	8,312	7,972	9,690
Buildings	2,637	2,850	3,180	3,057	2,730
Construction in progress	2,577	2,043	1,853	1,920	1,589
Other	2,514	2,576	2,738	2,380	2,154
<b>Other</b>	<b>14,446</b>	<b>14,631</b>	<b>17,347</b>	<b>16,579</b>	<b>17,390</b>
<b>Total <sup>(1)</sup></b>	<b>109,518</b>	<b>106,876</b>	<b>104,480</b>	<b>91,477</b>	<b>83,400</b>

(1) As of December 31, 2015, accumulated depreciation, depletion and amortization amounted to 131,497 M\$.

## NON-CURRENT ASSETS BY BUSINESS SEGMENT <sup>(1)</sup>

As of December 31, (in million dollars)	2015	2014	2013	2012	2011
Upstream	131,014	126,904	125,218	109,004	98,692
Refining & Chemicals	12,985	13,987	17,376	16,332	15,752
Marketing & Services	9,163	9,129	9,468	8,473	8,114
Corporate	(133)	482	1,140	852	4,305
<b>Total</b>	<b>153,029</b>	<b>150,502</b>	<b>153,202</b>	<b>134,661</b>	<b>126,863</b>

(1) Financial instruments held for hedging of non-current financial debt purposes are not included here.



## NON-CURRENT DEBT ANALYSIS

As of December 31, (in million dollars, except percent)	2015	%	2014	%	2013	%	2012	%	2011	%
<b>Loan repayment schedule <sup>(1)</sup></b>										
2011			-	-	-	-	-	-	-	-
2012			-	-	-	-	-	-	-	-
2013			-	-	-	-	-	-	5,812	22%
2014			-	-	-	-	5,056	19%	4,697	18%
2015			-	-	4,647	14%	4,572	17%	4,676	17%
2016			4,793	11%	4,528	14%	2,804	10%	1,965	7%
2017	4,602	11%	4,547	10%	4,159	12%	4,124	15%	9,479 <sup>(2)</sup>	36%
2018	4,420	10%	4,451	10%	4,361	13%	10,691 <sup>(3)</sup>	39%	-	-
2019	5,542	13%	4,765	11%	15,461 <sup>(4)</sup>	47%	-	-	-	-
2020	4,965	11%	25,606 <sup>(5)</sup>	58%	-	-	-	-	-	-
2021 and beyond	23,716	55%	-	-	-	-	-	-	-	-
<b>Total</b>	<b>43,245</b>	<b>100%</b>	<b>44,162</b>	<b>100%</b>	<b>33,156</b>	<b>100%</b>	<b>27,247</b>	<b>100%</b>	<b>26,629</b>	<b>100%</b>

(in million dollars, except percent)	2015	%	2014	%	2013	%	2012	%	2011	%
<b>Analysis by currency <sup>(1)</sup></b>										
U.S. Dollar	40,337	93%	41,369	94%	27,908	84%	18,060	66%	11,185	42%
Euro	1,681	4%	2,428	5%	4,885	15%	7,445	27%	12,398	47%
Norwegian Krone	907	2%	-	-	-	-	-	-	-	-
Other currencies	320	1%	365	1%	363	1%	1,742	7%	3,046	11%
<b>Total</b>	<b>43,245</b>	<b>100%</b>	<b>44,162</b>	<b>100%</b>	<b>33,156</b>	<b>100%</b>	<b>27,247</b>	<b>100%</b>	<b>26,629</b>	<b>100%</b>

(in million dollars, except percent)	2015	%	2014	%	2013	%	2012	%	2011	%
<b>Analysis by interest rate <sup>(1)</sup></b>										
Fixed rate	7,666	18%	6,944	16%	6,771	20%	6,710	25%	6,280	24%
Floating rates	35,579	82%	37,218	84%	26,385	80%	20,537	75%	20,349	76%
<b>Total</b>	<b>43,245</b>	<b>100%</b>	<b>44,162</b>	<b>100%</b>	<b>33,156</b>	<b>100%</b>	<b>27,247</b>	<b>100%</b>	<b>26,629</b>	<b>100%</b>

(1) These analyses are presented after the impact of interest rate and currency swaps.

(2) 2017 and after.

(3) 2018 and after.

(4) 2019 and after.

(5) 2020 and after.

## CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY – GROUP SHARE

(in million dollars)

	Common shares issued		Paid-in surplus and retained earnings	Cumulative translation adjustments	Treasury shares		Shareholders' equity
	Number	Amount			Number	Amount	
<b>As of January 1, 2012</b>	<b>2,363,767,313</b>	<b>7,447</b>	<b>86,461</b>	<b>(2,884)</b>	<b>(109,554,173)</b>	<b>(4,357)</b>	<b>86,667</b>
Dividend	-	-	(6,728)	-	-	-	(6,728)
Net income 2012	-	-	13,648	-	-	-	13,648
Other comprehensive income	-	-	(987)	1,187	-	-	200
Issuance of common shares	2,165,833	7	34	-	-	-	41
Purchase of treasury shares	-	-	-	-	(1,800,000)	(88)	(88)
Sales of treasury shares <sup>(1)</sup>	-	-	(171)	-	2,962,534	171	-
Share-based payments	-	-	188	-	-	-	188
Share cancellation	-	-	-	-	-	-	-
Other operations with minority interests	-	-	20	1	-	-	21
Other items	-	-	20	-	-	-	20
<b>As of December 31, 2012</b>	<b>2,365,933,146</b>	<b>7,454</b>	<b>92,485</b>	<b>(1,696)</b>	<b>(108,391,639)</b>	<b>(4,274)</b>	<b>93,969</b>
Dividend	-	-	(7,116)	-	-	-	(7,116)
Net income 2013	-	-	11,228	-	-	-	11,228
Other comprehensive income	-	-	473	492	-	-	965
Issuance of common shares	11,745,014	39	446	-	-	-	485
Purchase of treasury shares	-	-	-	-	(4,414,200)	(238)	(238)
Sales of treasury shares <sup>(1)</sup>	-	-	(209)	-	3,591,391	209	-
Share-based payments	-	-	189	-	-	-	189
Share cancellation	-	-	-	-	-	-	-
Other operations with minority interests	-	-	749	1	-	-	750
Other items	-	-	9	-	-	-	9
<b>As of December 31, 2013</b>	<b>2,377,678,160</b>	<b>7,493</b>	<b>98,254</b>	<b>(1,203)</b>	<b>(109,214,448)</b>	<b>(4,303)</b>	<b>100,241</b>
Dividend	-	-	(7,378)	-	-	-	(7,378)
Net income 2014	-	-	4,244	-	-	-	4,244
Other comprehensive income	-	-	(907)	(6,275)	-	-	(7,182)
Issuance of common shares	7,589,365	25	395	-	-	-	420
Purchase of treasury shares	-	-	-	-	(4,386,300)	(283)	(283)
Sales of treasury shares <sup>(1)</sup>	-	-	(232)	-	4,239,335	232	-
Share-based payments	-	-	114	-	-	-	114
Share cancellation	-	-	-	-	-	-	-
Other operations with minority interests	-	-	148	(2)	-	-	146
Other items	-	-	8	-	-	-	8
<b>As of December 31, 2014</b>	<b>2,385,267,525</b>	<b>7,518</b>	<b>94,646</b>	<b>(7,480)</b>	<b>(109,361,413)</b>	<b>(4,354)</b>	<b>90,330</b>
Dividend	-	-	(6,303)	-	-	-	(6,303)
Net income 2015	-	-	5,087	-	-	-	5,087
Other comprehensive income	-	-	185	(4,639)	-	-	(4,454)
Issuance of common shares	54,790,358	152	2,159	-	-	-	2,311
Purchase of treasury shares	-	-	-	-	(4,711,935)	(237)	(237)
Sales of treasury shares <sup>(1)</sup>	-	-	(6)	-	105,590	6	-
Share-based payments	-	-	101	-	-	-	101
Share cancellation	-	-	-	-	-	-	-
Issuance of perpetual subordinated notes	-	-	5,616	-	-	-	5,616
Payments on perpetual subordinated notes	-	-	(114)	-	-	-	(114)
Other operations with minority interests	-	-	23	-	-	-	23
Other items	-	-	134	-	-	-	134
<b>As of December 31, 2015</b>	<b>2,440,057,883</b>	<b>7,670</b>	<b>101,528</b>	<b>(12,119)</b>	<b>(113,967,758)</b>	<b>(4,585)</b>	<b>92,494</b>

(1) Treasury shares related to the restricted stock grants.

## NET-DEBT-TO-EQUITY RATIO

As of December 31, (in million dollars, except percent)	2015	2014	2013	2012	2011
Net financial debt	26,586	28,754	23,612	20,541	20,311
Shareholder's equity	93,864	91,845	101,471	93,901	86,748
<b>Net-debt-to-equity ratio</b>	<b>28.3%</b>	<b>31.3%</b>	<b>23.3%</b>	<b>21.9%</b>	<b>23.4%</b>

## CAPITAL EMPLOYED BASED ON REPLACEMENT COST BY BUSINESS SEGMENT

As of December 31, (in million dollars)	2015	2014	2013	2012	2011
Upstream	105,580	100,497	95,529	84,260	73,635
Refining & Chemicals	10,407	13,451	19,752	20,783	20,017
Marketing & Services	8,415	8,825	10,051	9,232	8,882
Corporate	(3,259)	(2,247)	(2,881)	(3,195)	990
<b>Total</b>	<b>121,143</b>	<b>120,526</b>	<b>122,451</b>	<b>111,080</b>	<b>103,534</b>

## CAPITAL EMPLOYED

As of December 31, (in million dollars)	2015	2014	2013	2012	2011
Non-current assets	153,029	150,502	153,202	134,661	126,863
Assets and liabilities classified as held for sale	826	3,085	2,210	4,047	-
Working capital	1,776	5,811	11,181	13,721	15,698
Long-term liabilities	(33,636)	(37,113)	(39,602)	(36,230)	(33,834)
<b>Capital employed</b>	<b>121,995</b>	<b>122,285</b>	<b>126,991</b>	<b>116,199</b>	<b>108,727</b>

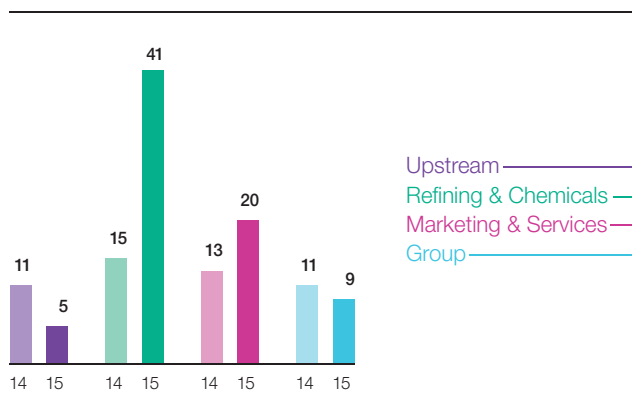


## ROACE BY BUSINESS SEGMENT

(in million dollars, except percent)	2015	2014	2013	2012
<b>Upstream</b>				
Adjusted net operating income	4,774	10,504	12,450	14,316
Average capital employed <sup>(1)</sup>	103,039	98,013	89,895	78,948
<b>ROACE</b>	<b>4.6%</b>	<b>10.7%</b>	<b>13.8%</b>	<b>18.1%</b>
<b>Refining &amp; Chemicals</b>				
Adjusted net operating income	4,889	2,489	1,857	1,768
Average capital employed <sup>(1)</sup>	11,929	16,602	20,268	20,400
<b>ROACE</b>	<b>41.0%</b>	<b>15.0%</b>	<b>9.2%</b>	<b>8.7%</b>
<b>Marketing &amp; Services</b>				
Adjusted net operating income	1,699	1,254	1,554	1,069
Average capital employed <sup>(1)</sup>	8,620	9,438	9,642	9,057
<b>ROACE</b>	<b>19.7%</b>	<b>13.3%</b>	<b>16.1%</b>	<b>11.8%</b>
<b>Corporate</b>				
Adjusted net operating income	38	(717)	(631)	(543)
Average capital employed <sup>(1)</sup>	(2,753)	(2,564)	(3,038)	(1,103)
<b>Group</b>				
Adjusted net operating income	11,400	13,530	15,230	16,610
Average capital employed <sup>(1)</sup>	120,835	121,489	116,766	107,302
<b>ROACE</b>	<b>9.4%</b>	<b>11.1%</b>	<b>13.0%</b>	<b>15.5%</b>

(1) At replacement cost (excluding after-tax inventory effect). Average Capital Employed = (Capital Employed beginning of the year + Capital Employed end of the year)/2.

### ROACE by business segment (%)



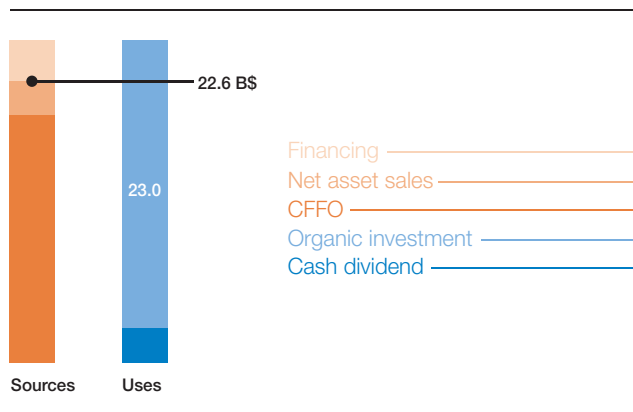
## CONSOLIDATED STATEMENT OF CASH FLOW

(in million dollars)	2015	2014	2013	2012	2011
<b>Cash flow from operating activities</b>					
Consolidated net income	4,786	4,250	11,521	13,836	17,824
Depreciation, depletion, and amortization	19,334	20,859	13,358	13,466	12,010
Non-current liabilities, valuation allowances, and deferred taxes	(2,563)	(1,980)	1,567	1,889	2,272
Impact of coverage of pension benefit plans	-	-	-	(465)	-
(Gains) losses on sales of assets	(2,459)	(1,979)	(80)	(1,715)	(2,479)
Undistributed affiliates' equity earnings	(311)	29	(775)	272	(149)
(Increase) decrease in working capital	1,683	4,480	2,525	1,392	(2,421)
Other changes, net	(524)	(51)	397	183	136
<b>Cash flow from operating activities</b>	<b>19,946</b>	<b>25,608</b>	<b>28,513</b>	<b>28,858</b>	<b>27,193</b>
<b>Cash flow used in investing activities</b>					
Intangible assets and property, plant, and equipment additions	(25,132)	(26,320)	(29,748)	(25,574)	(24,986)
Acquisition of subsidiaries, net of cash acquired	(128)	(471)	(21)	(245)	(1,189)
Investments in equity affiliates and other securities	(513)	(949)	(1,756)	(1,152)	(6,299)
Increase in non-current loans	(2,260)	(2,769)	(2,906)	(2,504)	(1,687)
<b>Total expenditures</b>	<b>(28,033)</b>	<b>(30,509)</b>	<b>(34,431)</b>	<b>(29,475)</b>	<b>(34,161)</b>
Proceeds from disposal of intangible assets, and property, plant and equipment	2,623	3,442	1,766	1,822	2,003
Proceeds from disposal of subsidiaries, net of cash sold	2,508	136	2,654	452	800
Proceeds from disposal of non-current investments	837	1,072	330	3,618	7,922
Repayment of non-current loans	1,616	1,540	1,649	1,651	1,215
<b>Total divestments</b>	<b>7,584</b>	<b>6,190</b>	<b>6,399</b>	<b>7,543</b>	<b>11,940</b>
<b>Cash flow used in investing activities</b>	<b>(20,449)</b>	<b>(24,319)</b>	<b>(28,032)</b>	<b>(21,932)</b>	<b>(22,221)</b>
<b>Cash flow (from)/used financing activities</b>					
Issuance (repayment) of shares:					
– Parent company shareholders	485	420	485	41	670
– Treasury shares	(237)	(289)	(238)	(88)	-
Cash dividend paid:					
– Parent company's shareholders	(2,845)	(7,308)	(7,128)	(6,660)	(7,155)
– Minority shareholders	(100)	(154)	(156)	(133)	(239)
Issuance of perpetual subordinated notes	5,616	-	-	-	-
Non controlling interest	89	179	2,153	-	(798)
Net issuance (repayment) of non-current debt	4,166	15,786	11,102	6,780	5,664
(Increase) decrease in current borrowings	(597)	(2,374)	(9,037)	(3,540)	(5,387)
(Increase) decrease in current financial assets and liabilities	(5,517)	(351)	1,298	(1,217)	1,247
<b>Cash flow used in financing activities</b>	<b>1,060</b>	<b>5,909</b>	<b>(1,521)</b>	<b>(4,817)</b>	<b>(5,998)</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>557</b>	<b>7,198</b>	<b>(1,040)</b>	<b>2,109</b>	<b>(1,026)</b>
Effect of exchange rates	(2,469)	(2,217)	831	153	(187)
Cash and cash equivalents at the beginning of the period	25,181	20,200	20,409	18,147	19,360
<b>Cash and cash equivalents at the end of the period</b>	<b>23,269</b>	<b>25,181</b>	<b>20,200</b>	<b>20,409</b>	<b>18,147</b>

## CASH FLOW FROM OPERATING ACTIVITIES

(in million dollars)	2015	2014	2013	2012	2011
<b>By business segment</b>					
Upstream	11,182	16,666	21,857	24,354	23,724
Refining & Chemicals	6,432	6,302	4,260	2,726	2,987
Marketing & Services	2,323	2,721	2,557	1,456	753
Corporate	9	(81)	(161)	322	(271)
<b>Total</b>	<b>19,946</b>	<b>25,608</b>	<b>28,513</b>	<b>28,858</b>	<b>27,193</b>

### 2015 Cash flow allocation (in B\$)



## GROSS INVESTMENTS <sup>(1)</sup>

(in million dollars)	2015	2014	2013	2012	2011
<b>By business segment</b>					
Upstream	24,270	26,520	29,750	25,200	28,761
Refining & Chemicals	1,843	2,022	2,708	2,502	2,659
Marketing & Services	1,841	1,818	1,814	1,671	2,553
Corporate	79	149	159	102	188
<b>Total</b>	<b>28,033</b>	<b>30,509</b>	<b>34,431</b>	<b>29,475</b>	<b>34,161</b>
<b>By geographic area</b>					
France	980	1,266	1,772	2,041	2,130
Rest of Europe	4,783	5,880	6,289	5,660	5,292
North America	3,493	3,658	4,157	4,045	7,301
Africa	9,154	9,798	10,705	9,346	7,328
Rest of world	9,623	9,907	11,508	8,383	12,110
<b>Total</b>	<b>28,033</b>	<b>30,509</b>	<b>34,431</b>	<b>29,475</b>	<b>34,161</b>

(1) Including acquisitions and increases in non-current loans.

## ORGANIC INVESTMENTS <sup>(2)</sup> BY BUSINESS SEGMENT

(in million dollars)	2015	2014	2013	2012	2011
Upstream	20,508	22,959	24,102	20,106	16,872
Refining & Chemicals	827	1,944	2,530	2,094	2,373
Marketing & Services	1,569	1,424	1,579	1,507	1,239
Corporate	72	104	97	82	156
<b>Total</b>	<b>22,976</b>	<b>26,430</b>	<b>28,309</b>	<b>23,789</b>	<b>20,641</b>

(2) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.

## DIVESTMENTS BY BUSINESS SEGMENT

(in million dollars)	2015	2014	2013	2012	2011
Upstream	3,215	5,764	5,786	3,595	3,607
Refining & Chemicals	3,488	192	365	392	3,492
Marketing & Services	856	163	186	196	2,721
Corporate	25	71	62	3,360	2,120
<b>Total</b>	<b>7,584</b>	<b>6,190</b>	<b>6,399</b>	<b>7,543</b>	<b>11,940</b>

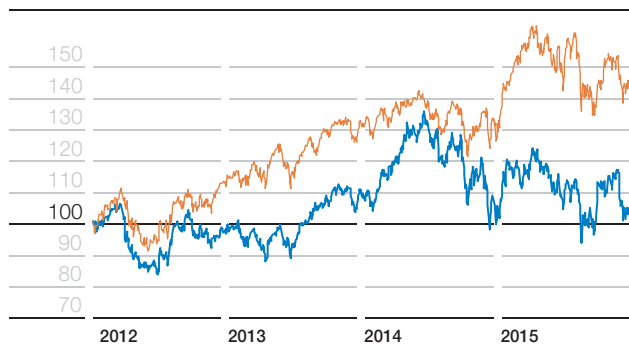
### 2015 Organic investments by business segment



Upstream — 89.3%  
 Marketing & Services — 6.8%  
 Refining & Chemicals — 3.6%  
 Corporate — 0.3%

## SHARE PERFORMANCE

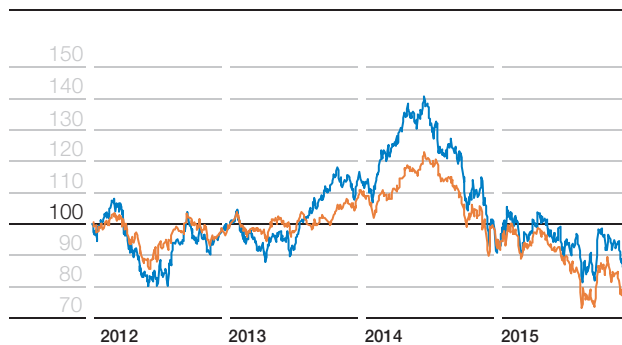
**Total share price in Paris (2012-2015)**  
(in euros)



TOTAL — CAC 40 —

Source: Bloomberg.  
Base 100 in 2012.

**Total ADR price in New York (2012-2015)**  
(in dollars)

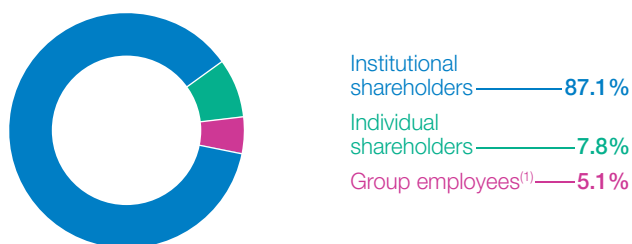


TOTAL US — Peer average<sup>(1)</sup> —

Source: Bloomberg.  
Base 100 in 2012.  
(1) BP, Chevron, ExxonMobil, Shell.

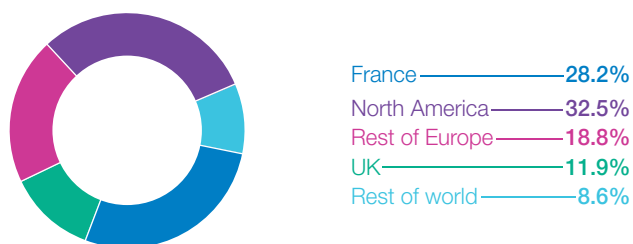
## SHAREHOLDING STRUCTURE ESTIMATE AS OF DECEMBER 31, 2015

**Distribution by shareholders by type**  
(excluding treasury shares)



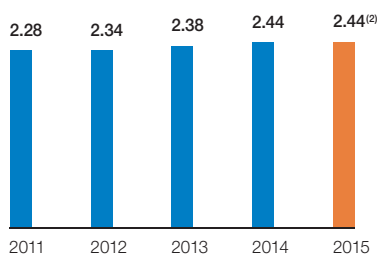
(1) Based on the definition of employees shareholding pursuant to Article L. 225-102 of the French Commercial Code, treasury shares excluded.

**Distribution by shareholders by geographic area**  
(excluding treasury shares)



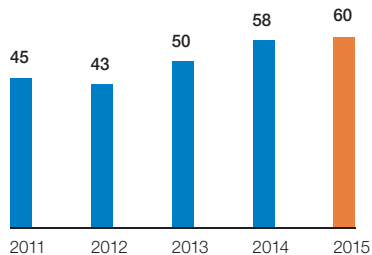
## DIVIDEND POLICY

**Dividend per share**  
(in euros)



(2) The 2015 dividend is subject to approval at the May 24, 2016 Annual Shareholders' meeting.

**Pay-out ratio**  
(%)





## SHARE INFORMATION

	2015	2014	2013	2012	2011
Shares outstanding (as of December 31)	2,440,057,883	2,385,267,525	2,377,678,160	2,365,933,146	2,363,767,313
Weighted-average number of fully-diluted shares <sup>(1)</sup>	2,304,435,542	2,281,004,151	2,271,543,658	2,266,635,745	2,256,951,403
Shares on a fully-diluted basis (as of December 31) <sup>(1)</sup>	2,336,295,758	2,285,476,721	2,275,897,116	2,270,350,218	2,263,790,054
Treasury Shares	113,967,758	109,361,413	109,214,448	108,391,639	109,554,173
<b>Price per share (€)</b>					
High	50.30	54.71	45.67	42.97	44.55
Low	36.92	38.25	35.18	33.42	29.40
Year-end	41.27	42.52	44.53	39.01	39.50
<b>Price per ADR (\$)</b>					
High	55.86	74.22	62.45	57.06	64.44
Low	40.93	48.43	45.93	41.75	40.00
Year-end	44.95	51.20	61.27	52.01	51.11
<b>Market capitalization at year-end, computed on shares outstanding</b>					
Billion €	100.7	101.4	105.9	92.3	93.4
Billion \$	109.7	122.1	145.7	123.1	120.8
<b>Trading volume (daily average)</b>					
Euronext Paris	7,412,179	5,519,597	4,439,725	5,622,504	6,565,732
New York Stock Exchange (number of ADRs)	1,853,669	1,277,433	1,371,780	3,291,705	4,245,743
Adjusted fully-diluted earnings per share (\$) <sup>(2)</sup>	4.51	5.63	6.29	6.96	7.07
Dividend per share (€)	2.44 <sup>(3)</sup>	2.44	2.38	2.34	2.28
Dividend per ADR (\$)	2.67 <sup>(3)(4)</sup>	2.93	3.24	3.05	2.97
Pay-out <sup>(5)</sup>	60%	58%	50%	43%	45%
Price-to-earning ratio <sup>(6)</sup>	10.1	10.1	9.4	7.2	7.8
Yield <sup>(7)</sup>	5.91%	5.74%	5.34%	6.00%	5.77%

(1) Excluding shares owned by the Group and cancelled in the Consolidated Balance Sheet under IFRS.

(2) Adjusted results are defined as income at replacement cost, excluding non-recurring items, and excluding the impact of fair value changes.

(3) Pending approval at the May 24, 2016 AGM. This amount includes the first two quarterly interim dividends of 0.61 € per share paid on October 21, 2015, January 14, 2016 and the third quarterly interim dividend of 0.61 € per share payable on April 12, 2016 and, the final dividend of 0.61 € per share payable on June 23, 2016.

(4) 2015 estimated dividend in dollars includes the first quarterly interim ADR dividend of \$0.69 paid in October 2015 and the second quarterly interim ADR dividend of \$0.66 paid in January 2016, as well as the third quarterly interim ADR dividend of \$0.66 payable in April 2016 and the proposed final ADR dividend of \$0.66 payable in July 2016, both converted at a rate of \$1.09/€.

(5) Dividend (€)/adjusted fully-diluted earnings per share.

(6) Share price at year-end (€)/adjusted fully-diluted earnings per share.

(7) Dividend (€)/share price at year-end.

## PAYROLL <sup>(1)</sup>

For the year ended December 31, (in million dollars)	2015	2014	2013	2012	2011
Wages and salaries (including social charges)	8,088	9,690	9,424	9,167	9,158

(1) Personnel expenses and number of employees of fully-consolidated subsidiaries.

## NUMBER OF EMPLOYEES

As of December 31,	2015	2014	2013	2012	2011
<b>Number of employees by region <sup>(1)</sup></b>					
France	31.5%	32.5%	33.6%	36.0%	36.5%
Rest of Europe	24.5%	23.9%	23.4%	23.5%	23.4%
Rest of world	44.0%	43.6%	43.0%	40.5%	40.1%
<b>Total</b>	<b>96,019</b>	<b>100,307</b>	<b>98,799</b>	<b>97,126</b>	<b>96,104</b>

As of December 31,	2015	2014	2013	2012	2011
<b>Number of employees by business segment <sup>(1)</sup></b>					
Upstream	17.9%	18.3%	18.2%	18.6%	18.4%
Refining & Chemicals	50.2%	51.5%	52.1%	53.1%	52.4%
Marketing & Services	30.2%	28.6%	28.2%	26.8%	27.8%
Corporate	1.7%	1.6%	1.5%	1.5%	1.5%
<b>Total</b>	<b>96,019</b>	<b>100,307</b>	<b>98,799</b>	<b>97,126</b>	<b>96,104</b>

(1) Personnel expenses and number of employees of fully-consolidated subsidiaries.

### As of December 31, 2015

<b>Number of employees present by business segment <sup>(2)</sup></b>		
Upstream		
Exploration & Production		15,366
Gas & Power		915
Refining & Chemicals		
Refining & Chemicals		46,661
Trading & Shipping		563
Marketing & Services		
Marketing & Services		19,923
New Energies		8,475
Corporate		1,568

(2) Employees present: employees present are employees on the payroll of the consolidated scope, less employees who are not present, i.e., persons who are under suspended contract (sabbatical, business development leave, etc.), absent on long-term sick leave (more than six months), assigned to a company outside the Group, etc.

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# UPSTREAM

20.5 B\$  
organic  
investments<sup>(1)</sup>

11.2 B\$  
cash flow  
from  
operations

9  
start-ups  
in 2015

9.4%  
production growth  
in 2015

2.35 Mboe/d  
production

4.8 B\$  
adjusted net  
operating income

>13 years  
proved  
reserve life

16,281  
employees

<sup>(1)</sup> Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.

## The Upstream segment comprises...

### Exploration & Production

Presence in more than fifty countries with oil or gas production in approximately thirty countries.

### Gas

Conducts activities downstream from production related to natural gas, Liquefied Natural Gas (LNG) and Liquefied Petroleum Gas (LPG), as well as power generation and trading, and other activities.



5

major start-ups in 2016,  
2 already in production

4%

targeted production  
growth in 2016

Exploration budget

1.5 B\$

35%

reduction in E&P Opex  
per barrel (ASC 932) vs 2014



## FINANCIAL HIGHLIGHTS <sup>(1)</sup>

(in million dollars)	2015	2014	2013	2012	2011
Adjusted operating income <sup>(1)</sup>	4,925	17,156	23,700	28,333	31,525
Adjusted net operating income <sup>(1)</sup>	4,774	10,504	12,450	14,316	14,798
Gross investments <sup>(2)</sup>	24,270	26,520	29,750	25,200	28,761
Organic investments <sup>(3)</sup>	20,508	22,959	24,102	20,106	16,872
Divestments	3,215	5,764	5,786	3,595	3,607
Cash flow from operations	11,182	16,666	21,857	24,354	23,724

(1) Adjusted results are defined as income at replacement cost, excluding non-recurring items, and excluding the impact of fair value changes.

(2) Including acquisitions and increases in non current-loans.

(3) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.

## PRODUCTION

	2015	2014	2013	2012	2011
Liquids (Kb/d) <sup>(1)</sup>	1,237	1,034	1,167	1,220	1,226
Gas (Mcf/d)	6,054	6,063	6,184	5,880	6,098
<b>Combined production (Kboe/d)</b>	<b>2,347</b>	<b>2,146</b>	<b>2,299</b>	<b>2,300</b>	<b>2,346</b>

(1) Including bitumen.

## PROVED RESERVES <sup>(1)</sup>

	2015	2014	2013	2012	2011
Liquids (Mb) <sup>(2)</sup>	5,605	5,303	5,413	5,686	5,784
Gas (Bcf)	32,026	33,590	33,026	30,877	30,717
<b>Total (Mboe)</b>	<b>11,580</b>	<b>11,523</b>	<b>11,526</b>	<b>11,368</b>	<b>11,423</b>

(1) Proved reserves are calculated in accordance with the United States Securities and Exchange Commission regulations.

(2) Including bitumen.

### 2015 Proved reserves by geographical area: 11,580 Mboe



Asia-CIS — 3,811 Mboe  
 Africa — 2,134 Mboe  
 Americas — 1,977 Mboe  
 Middle East — 2,386 Mboe  
 Europe — 1,272 Mboe

## KEY OPERATING RATIOS ON PROVED RESERVES – GROUP

(three-year average)	2013-2015	2012-2014	2011-2013	2010-2012	2009-2011
Finding costs (\$/boe) <sup>(1)</sup>	4.2	5.5	7.9	8.1	6.6
Reserve replacement costs (\$/boe) <sup>(2)</sup>	23.2	24.8	21.4	17.9	16.1
Reserve replacement rate (%) <sup>(3) (4)</sup>	109	104	133	134	138
Organic reserve replacement rate (%) <sup>(4) (5)</sup>	121	107	89	79	80
(in years)	2015	2014	2013	2012	2011
Reserve life <sup>(6)</sup>	13.5	14.7	13.7	13.5	13.3

(1) (Exploration costs + unproved property acquisition)/(revisions + extensions and discoveries).

(2) Total costs incurred/(revisions + extensions, discoveries + acquisitions). Revision of historical costs incurred since 2011 triggering a revision in reserve replacement costs.

(3) (Revisions + extensions, discoveries + acquisitions – sales of reserves)/production for the period.

(4) Including the mechanical effect of changes in oil prices at year-end.

(5) (Revisions + extensions, discoveries)/production for the period; excluding acquisitions and sales of reserves.

(6) Reserves at year-end/production of the year.

## KEY OPERATING RATIOS ON PROVED RESERVES – CONSOLIDATED SUBSIDIARIES

(in dollars per barrel of oil equivalent)	2013-2015	2012-2014	2011-2013	2010-2012	2009-2011
Finding costs <sup>(1)</sup>	6.5	10.3	10.3	8.0	6.3
Reserve replacement costs <sup>(2)</sup>	36.5	47.4	34.3	21.6	18.4
(in dollars per barrel of oil equivalent)	2015	2014	2013	2012	2011
Operating costs	7.4	9.9	8.9	7.9	7.0
Exploration costs	2.4	3.4	3.7	3.0	2.2
DD&A <sup>(3)</sup>	13.2	15.0	13.5	11.9	9.7
Technical costs <sup>(4)</sup>	23.0	28.3	26.1	22.8	18.9

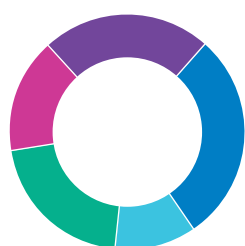
(1) (Exploration costs + unproved property acquisition)/(revisions + extensions, discoveries).

(2) Total costs incurred/(revisions + extensions, discoveries + acquisitions). Revision of historical costs incurred since 2011 triggering a revision in reserve replacement costs.

(3) Excluding non-recurring items.

(4) (Production costs + exploration expenses + DD&A)/production of the year.

Total production for 2015: 2,347 kboe/d



Asia-CIS — 548 kboe/d  
 Africa — 678 kboe/d  
 Americas — 255 kboe/d  
 Middle East — 492 kboe/d  
 Europe — 374 kboe/d

## COMBINED LIQUIDS AND GAS PRODUCTION <sup>(1)</sup>

(in thousands of barrels of oil equivalent per day)	2015	2014	2013	2012	2011
<b>Africa</b>	<b>678</b>	<b>657</b>	<b>670</b>	<b>713</b>	<b>659</b>
Algeria	25	20	21	23	33
Angola	248	200	186	179	135
Cameroon	-	-	-	-	3
Gabon	59	58	59	57	58
Libya	14	27	50	62	20
Nigeria	245	257	261	279	287
The Congo, Republic of	87	95	93	113	123
<b>North America</b>	<b>103</b>	<b>90</b>	<b>73</b>	<b>69</b>	<b>67</b>
Canada <sup>(2)</sup>	14	12	13	12	11
United States	89	78	60	57	56
<b>South America</b>	<b>152</b>	<b>157</b>	<b>166</b>	<b>182</b>	<b>188</b>
Argentina	72	75	78	83	86
Bolivia	28	30	28	27	25
Colombia	-	-	-	6	11
Trinidad & Tobago	-	-	12	16	12
Venezuela	52	52	48	50	54
<b>Asia – Pacific</b>	<b>258</b>	<b>238</b>	<b>235</b>	<b>221</b>	<b>231</b>
Australia	4	4	4	5	4
Brunei	15	15	13	12	13
China	11	12	8	1	-
Indonesia	147	130	131	132	158
Myanmar	19	17	16	16	15
Thailand	62	60	63	55	41
<b>Commonwealth of Independent States</b>	<b>290</b>	<b>249</b>	<b>227</b>	<b>195</b>	<b>119</b>
Azerbaijan	-	14	20	16	14
Russia	290	235	207	179	105
<b>Europe</b>	<b>374</b>	<b>364</b>	<b>392</b>	<b>427</b>	<b>512</b>
France	-	2	9	13	18
Netherlands	28	31	35	33	38
Norway	239	242	243	275	287
United Kingdom	107	89	105	106	169
<b>Middle East</b>	<b>492</b>	<b>391</b>	<b>536</b>	<b>493</b>	<b>570</b>
U.A.E.	287	127	260	246	240
Iraq	18	12	7	6	-
Oman	36	36	37	37	36
Qatar	134	132	137	139	155
Syria	-	-	-	-	53
Yemen	17	84	95	65	86
<b>Total production</b>	<b>2,347</b>	<b>2,146</b>	<b>2,299</b>	<b>2,300</b>	<b>2,346</b>
<b>Including share of equity affiliates</b>	<b>559</b>	<b>571</b>	<b>687</b>	<b>611</b>	<b>571</b>
Algeria	-	-	-	-	10
Angola	-	2	3	-	-
Colombia	-	-	-	-	4
Venezuela	37	38	37	40	45
U.A.E.	116	118	253	237	231
Oman	34	34	35	34	34
Qatar	77	77	78	74	78
Yemen	15	75	84	55	74
Russia	280	227	197	171	95

(1) Including fuel gas (435 Mcf/d in 2015, 426 Mcf/d in 2014, 415 Mcf/d in 2013, 394 Mcf/d in 2012).

(2) The Group's production in Canada consists of bitumen only. All of the Group's bitumen production is in Canada.

## LIQUIDS PRODUCTION

(in thousands of barrels per day)

	2015	2014	2013	2012	2011
<b>Africa</b>	<b>542</b>	<b>522</b>	<b>531</b>	<b>574</b>	<b>517</b>
Algeria	7	5	5	6	16
Angola	238	191	175	172	128
Cameroon	-	-	-	-	2
Gabon	55	55	55	54	55
Libya	14	27	50	62	20
Nigeria	147	156	158	173	179
The Congo, Republic of	81	88	88	107	117
<b>North America</b>	<b>48</b>	<b>39</b>	<b>28</b>	<b>25</b>	<b>27</b>
Canada <sup>(1)</sup>	14	12	13	12	11
United States	34	27	15	13	16
<b>South America</b>	<b>47</b>	<b>50</b>	<b>54</b>	<b>59</b>	<b>71</b>
Argentina	8	9	13	12	14
Bolivia	3	4	4	3	3
Colombia	-	-	-	1	5
Trinidad & Tobago	-	-	2	4	4
Venezuela	36	37	35	39	45
<b>Asia – Pacific</b>	<b>34</b>	<b>30</b>	<b>30</b>	<b>27</b>	<b>27</b>
Brunei	3	2	2	2	2
Indonesia	22	18	17	16	18
Thailand	9	10	11	9	7
<b>Commonwealth of Independent States</b>	<b>54</b>	<b>36</b>	<b>32</b>	<b>27</b>	<b>22</b>
Azerbaijan	-	3	5	4	4
Russia	54	33	27	23	18
<b>Europe</b>	<b>161</b>	<b>165</b>	<b>168</b>	<b>197</b>	<b>245</b>
France	-	-	1	2	5
Netherlands	1	1	1	1	1
Norway	125	135	136	159	172
United Kingdom	35	29	30	35	67
<b>Middle East</b>	<b>351</b>	<b>192</b>	<b>324</b>	<b>311</b>	<b>317</b>
U.A.E.	274	115	247	233	226
Iraq	18	12	7	6	-
Oman	25	24	24	24	24
Qatar	32	32	36	38	44
Syria	-	-	-	-	11
Yemen	2	9	10	10	12
<b>Total production</b>	<b>1,237</b>	<b>1,034</b>	<b>1,167</b>	<b>1,220</b>	<b>1,226</b>
<b>Including share of equity affiliates</b>	<b>219</b>	<b>200</b>	<b>325</b>	<b>308</b>	<b>316</b>
Algeria	-	-	-	-	10
Colombia	-	-	-	-	4
Venezuela	36	37	35	38	44
U.A.E.	107	109	240	225	219
Oman	24	23	23	23	22
Qatar	7	7	8	7	8
Russia	45	24	19	15	9

(1) The Group's production in Canada consists of bitumen only. All of the Group's bitumen production is in Canada.

## GAS PRODUCTION <sup>(1)</sup>

(in millions of cubic feet per day)

	2015	2014	2013	2012	2011
<b>Africa</b>	<b>677</b>	<b>693</b>	<b>699</b>	<b>705</b>	<b>715</b>
Algeria	96	79	82	90	94
Angola	49	54	62	44	39
Cameroon	-	-	-	-	1
Gabon	15	14	16	19	17
Nigeria	487	511	511	521	534
The Congo, Republic of	30	35	28	31	30
<b>North America</b>	<b>308</b>	<b>285</b>	<b>256</b>	<b>246</b>	<b>227</b>
United States	308	285	256	246	227
<b>South America</b>	<b>588</b>	<b>599</b>	<b>627</b>	<b>682</b>	<b>648</b>
Argentina	354	367	366	394	397
Bolivia	133	139	129	124	118
Colombia	-	-	-	23	27
Trinidad & Tobago	-	-	52	70	47
Venezuela	101	93	80	71	59
<b>Asia – Pacific</b>	<b>1,290</b>	<b>1,178</b>	<b>1,170</b>	<b>1,089</b>	<b>1,160</b>
Australia	28	23	25	29	25
Brunei	62	66	59	54	56
China	59	63	46	7	-
Indonesia	676	594	605	605	757
Myanmar	153	135	129	127	119
Thailand	312	297	306	267	203
<b>Commonwealth of Independent States</b>	<b>1,252</b>	<b>1,135</b>	<b>1,046</b>	<b>909</b>	<b>525</b>
Azerbaijan	-	59	82	64	57
Russia	1,252	1,076	964	845	468
<b>Europe</b>	<b>1,161</b>	<b>1,089</b>	<b>1,231</b>	<b>1,259</b>	<b>1,453</b>
France	-	9	45	58	69
Netherlands	158	171	195	184	214
Norway	614	576	575	622	619
United Kingdom	389	333	416	395	551
<b>Middle East</b>	<b>778</b>	<b>1,084</b>	<b>1,155</b>	<b>990</b>	<b>1,370</b>
U.A.E.	66	61	71	70	72
Iraq	1	1	1	-	-
Oman	58	61	66	61	62
Qatar	573	555	558	560	616
Syria	-	-	-	-	218
Yemen	80	406	459	299	402
<b>Total production</b>	<b>6,054</b>	<b>6,063</b>	<b>6,184</b>	<b>5,880</b>	<b>6,098</b>
<b>Including share of equity affiliates</b>	<b>1,828</b>	<b>1,988</b>	<b>1,955</b>	<b>1,635</b>	<b>1,383</b>
Algeria	-	-	-	-	3
Angola	-	10	16	-	-
Venezuela	7	6	7	7	7
U.A.E.	50	51	61	61	62
Oman	58	61	66	60	62
Qatar	383	381	385	364	382
Yemen	80	404	458	299	402
Russia	1,250	1,075	962	844	465

(1) Including fuel gas (435 Mcf/d in 2015, 426 Mcf/d in 2014, 415 Mcf/d in 2013, 394 Mcf/d in 2012).



## CHANGES IN OIL, BITUMEN AND GAS RESERVES

The following tables present, for oil, bitumen and gas reserves, an estimate of the Group's oil, bitumen and gas quantities by geographic areas as of December 31, 2015, 2014, 2013, 2012 and 2011.

Quantities shown concern proved developed and undeveloped reserves together with changes in quantities for 2015, 2014, 2013, 2012 and 2011.

The definitions used for proved, proved developed and proved undeveloped oil and gas reserves are in accordance with the revised Rule 4-10 of SEC Regulation S-X.

All references in the following tables to reserves or production are to the Group's entire share of such reserves or production.

TOTAL's worldwide proved reserves include the proved reserves of its consolidated subsidiaries as well as its proportionate share of the proved reserves of equity affiliates.

(in millions of barrels of oil equivalent)

Consolidated subsidiaries

Proved developed and undeveloped reserves	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>Balance as of December 31, 2010</b>	<b>1,706</b>	<b>3,371</b>	<b>1,540</b>	<b>574</b>	<b>1,069</b>	<b>30</b>	<b>8,290</b>
Revisions of previous estimates	117	(61)	(36)	(68)	(16)	(3)	(67)
Extensions, discoveries and other	57	6	-	-	588	-	651
Acquisitions of reserves in place	44	-	309	-	2	-	355
Sales of reserves in place	-	(65)	-	-	-	-	(65)
Production for the year	(187)	(237)	(75)	(56)	(90)	(3)	(648)
<b>Balance as of December 31, 2011</b>	<b>1,737</b>	<b>3,014</b>	<b>1,738</b>	<b>450</b>	<b>1,553</b>	<b>24</b>	<b>8,516</b>
Revisions of previous estimates	64	65	7	(23)	9	6	128
Extensions, discoveries and other	67	173	110	29	40	3	422
Acquisitions of reserves in place	32	-	-	-	-	-	32
Sales of reserves in place	(38)	(71)	(8)	-	-	-	(117)
Production for the year	(156)	(261)	(77)	(34)	(87)	(3)	(618)
<b>Balance as of December 31, 2012</b>	<b>1,706</b>	<b>2,920</b>	<b>1,770</b>	<b>422</b>	<b>1,515</b>	<b>30</b>	<b>8,363</b>
Revisions of previous estimates	18	(97)	44	11	48	-	24
Extensions, discoveries and other	12	20	135	2	226	1	396
Acquisitions of reserves in place	-	-	-	-	132	-	132
Sales of reserves in place	(51)	-	(51)	-	-	-	(102)
Production for the year	(143)	(243)	(74)	(31)	(94)	(3)	(588)
<b>Balance as of December 31, 2013</b>	<b>1,542</b>	<b>2,600</b>	<b>1,824</b>	<b>404</b>	<b>1,827</b>	<b>28</b>	<b>8,225</b>
Revisions of previous estimates	31	48	(11)	7	21	4	100
Extensions, discoveries and other	21	111	151	3	29	-	315
Acquisitions of reserves in place	1	-	-	-	-	-	1
Sales of reserves in place	(26)	(21)	-	-	(206)	-	(253)
Production for the year	(133)	(240)	(76)	(32)	(91)	(3)	(575)
<b>Balance as of December 31, 2014</b>	<b>1,436</b>	<b>2,498</b>	<b>1,888</b>	<b>382</b>	<b>1,580</b>	<b>29</b>	<b>7,813</b>
Revisions of previous estimates	(10)	(121)	144	110	73	-	196
Extensions, discoveries and other	11	9	6	864	7	-	897
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	(28)	(76)	(160)	-	-	-	(264)
Production for the year	(137)	(247)	(79)	(91)	(94)	(4)	(652)
<b>Balance as of December 31, 2015</b>	<b>1,272</b>	<b>2,063</b>	<b>1,799</b>	<b>1,265</b>	<b>1,566</b>	<b>25</b>	<b>7,990</b>

Minority interest in proved developed and undeveloped reserves as of

December 31, 2011	-	98	-	-	-	-	98
December 31, 2012	-	99	-	-	-	-	99
December 31, 2013	-	159	-	-	-	-	159
December 31, 2014	-	146	-	-	-	-	146
<b>December 31, 2015</b>	<b>-</b>	<b>128</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>128</b>

(in millions of barrels of oil equivalent)

Equity affiliates

Proved developed and undeveloped reserves	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>Balance as of December 31, 2010</b>	-	107	486	1,812	-	-	2,405
Revisions of previous estimates	-	(1)	(8)	(20)	-	-	(29)
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	-	-	-	-	779	779
Sales of reserves in place	-	(24)	(4)	(11)	-	-	(39)
Production for the year	-	(4)	(18)	(152)	-	(35)	(209)
<b>Balance as of December 31, 2011</b>	-	78	456	1,629	-	744	2,907
Revisions of previous estimates	-	2	(39)	5	-	78	46
Extensions, discoveries and other	-	-	-	-	-	158	158
Acquisitions of reserves in place	-	-	-	-	-	118	118
Sales of reserves in place	-	-	-	-	-	-	-
Production for the year	-	-	(15)	(146)	-	(63)	(224)
<b>Balance as of December 31, 2012</b>	-	80	402	1,488	-	1,035	3,005
Revisions of previous estimates	-	(3)	(141)	(3)	-	33	(114)
Extensions, discoveries and other	-	-	-	14	-	622	636
Acquisitions of reserves in place	-	-	-	-	-	117	117
Sales of reserves in place	-	-	-	-	-	(92)	(92)
Production for the year	-	(1)	(13)	(164)	-	(73)	(251)
<b>Balance as of December 31, 2013</b>	-	76	248	1,335	-	1,642	3,301
Revisions of previous estimates	-	(2)	2	(8)	-	6	(2)
Extensions, discoveries and other	-	-	-	2	-	516	518
Acquisitions of reserves in place	-	-	-	-	-	107	107
Sales of reserves in place	-	-	-	-	-	(6)	(6)
Production for the year	-	(1)	(14)	(110)	-	(83)	(208)
<b>Balance as of December 31, 2014</b>	-	73	236	1,219	-	2,182	3,710
Revisions of previous estimates	-	(2)	(44)	(10)	-	96	40
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	-	-	-	-	56	56
Sales of reserves in place	-	-	-	-	-	(12)	(12)
Production for the year	-	-	(14)	(88)	-	(102)	(204)
<b>Balance as of December 31, 2015</b>	-	71	178	1,121	-	2,220	3,590

## CHANGES IN OIL, BITUMEN AND GAS RESERVES

(in millions of barrels of oil equivalent)

Consolidated subsidiaries and equity affiliates

	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>As of December 31, 2011</b>							
<b>Proved developed and undeveloped reserves</b>	<b>1,737</b>	<b>3,092</b>	<b>2,194</b>	<b>2,079</b>	<b>1,553</b>	<b>768</b>	<b>11,423</b>
Consolidated subsidiaries	1,737	3,014	1,738	450	1,553	24	8,516
Equity affiliates	-	78	456	1,629	-	744	2,907
<b>Proved developed reserves</b>	<b>894</b>	<b>1,660</b>	<b>647</b>	<b>1,869</b>	<b>302</b>	<b>674</b>	<b>6,046</b>
Consolidated subsidiaries	894	1,639	524	371	302	19	3,749
Equity affiliates	-	21	123	1,498	-	655	2,297
<b>Proved undeveloped reserves</b>	<b>843</b>	<b>1,432</b>	<b>1,547</b>	<b>210</b>	<b>1,251</b>	<b>94</b>	<b>5,377</b>
Consolidated subsidiaries	843	1,375	1,214	79	1,251	5	4,767
Equity affiliates	-	57	333	131	-	89	610
<b>As of December 31, 2012</b>							
<b>Proved developed and undeveloped reserves</b>	<b>1,706</b>	<b>3,000</b>	<b>2,172</b>	<b>1,910</b>	<b>1,515</b>	<b>1,065</b>	<b>11,368</b>
Consolidated subsidiaries	1,706	2,920	1,770	422	1,515	30	8,363
Equity affiliates	-	80	402	1,488	-	1,035	3,005
<b>Proved developed reserves</b>	<b>827</b>	<b>1,584</b>	<b>616</b>	<b>1,718</b>	<b>290</b>	<b>754</b>	<b>5,789</b>
Consolidated subsidiaries	827	1,563	475	349	290	23	3,527
Equity affiliates	-	21	141	1,369	-	731	2,262
<b>Proved undeveloped reserves</b>	<b>879</b>	<b>1,416</b>	<b>1,556</b>	<b>192</b>	<b>1,225</b>	<b>311</b>	<b>5,579</b>
Consolidated subsidiaries	879	1,357	1,295	73	1,225	7	4,836
Equity affiliates	-	59	261	119	-	304	743

(in millions of barrels of oil equivalent)

## Consolidated subsidiaries and equity affiliates

	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>As of December 31, 2013</b>							
<b>Proved developed and undeveloped reserves</b>	<b>1,542</b>	<b>2,676</b>	<b>2,072</b>	<b>1,739</b>	<b>1,827</b>	<b>1,670</b>	<b>11,526</b>
Consolidated subsidiaries	1,542	2,600	1,824	404	1,827	28	8,225
Equity affiliates	-	76	248	1,335	-	1,642	3,301
<b>Proved developed reserves</b>	<b>766</b>	<b>1,469</b>	<b>540</b>	<b>1,577</b>	<b>539</b>	<b>783</b>	<b>5,674</b>
Consolidated subsidiaries	766	1,452	452	330	539	21	3,560
Equity affiliates	-	17	88	1,247	-	762	2,114
<b>Proved undeveloped reserves</b>	<b>776</b>	<b>1,207</b>	<b>1,532</b>	<b>162</b>	<b>1,288</b>	<b>887</b>	<b>5,852</b>
Consolidated subsidiaries	776	1,148	1,372	74	1,288	7	4,665
Equity affiliates	-	59	160	88	-	880	1,187
<b>As of December 31, 2014</b>							
<b>Proved developed and undeveloped reserves</b>	<b>1,436</b>	<b>2,571</b>	<b>2,124</b>	<b>1,601</b>	<b>1,580</b>	<b>2,211</b>	<b>11,523</b>
Consolidated subsidiaries	1,436	2,498	1,888	382	1,580	29	7,813
Equity affiliates	-	73	236	1,219	-	2,182	3,710
<b>Proved developed reserves</b>	<b>737</b>	<b>1,472</b>	<b>535</b>	<b>1,442</b>	<b>453</b>	<b>1,067</b>	<b>5,706</b>
Consolidated subsidiaries	737	1,455	450	316	453	18	3,429
Equity affiliates	-	17	85	1,126	-	1,049	2,277
<b>Proved undeveloped reserves</b>	<b>699</b>	<b>1,099</b>	<b>1,589</b>	<b>159</b>	<b>1,127</b>	<b>1,144</b>	<b>5,817</b>
Consolidated subsidiaries	699	1,043	1,438	66	1,127	11	4,384
Equity affiliates	-	56	151	93	-	1,133	1,433
<b>As of December 31, 2015</b>							
<b>Proved developed and undeveloped reserves</b>	<b>1,272</b>	<b>2,134</b>	<b>1,977</b>	<b>2,386</b>	<b>1,566</b>	<b>2,245</b>	<b>11,580</b>
Consolidated subsidiaries	1,272	2,063	1,799	1,265	1,566	25	7,990
Equity affiliates	-	71	178	1,121	-	2,220	3,590
<b>Proved developed reserves</b>	<b>756</b>	<b>1,215</b>	<b>626</b>	<b>2,020</b>	<b>499</b>	<b>1,070</b>	<b>6,186</b>
Consolidated subsidiaries	756	1,203	549	1,028	499	16	4,051
Equity affiliates	-	12	77	992	-	1,054	2,135
<b>Proved undeveloped reserves</b>	<b>516</b>	<b>919</b>	<b>1,351</b>	<b>366</b>	<b>1,067</b>	<b>1,175</b>	<b>5,394</b>
Consolidated subsidiaries	516	860	1,250	237	1,067	9	3,939
Equity affiliates	-	59	101	129	-	1,166	1,455

## CHANGES IN OIL RESERVES

Oil reserves include crude oil, condensates and natural gas liquids reserves.

(in millions of barrels)

Consolidated subsidiaries

Proved developed and undeveloped reserves	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>Balance as of December 31, 2010</b>	<b>792</b>	<b>2,350</b>	<b>79</b>	<b>239</b>	<b>528</b>	<b>26</b>	<b>4,014</b>
Revisions of previous estimates	49	(19)	9	(33)	(21)	(3)	(18)
Extensions, discoveries and other	17	6	-	-	58	-	81
Acquisitions of reserves in place	42	-	-	-	-	-	42
Sales of reserves in place	-	(57)	-	-	-	-	(57)
Production for the year	(88)	(185)	(15)	(25)	(12)	(3)	(328)
<b>Balance as of December 31, 2011</b>	<b>812</b>	<b>2,095</b>	<b>73</b>	<b>181</b>	<b>553</b>	<b>20</b>	<b>3,734</b>
Revisions of previous estimates	20	61	10	2	3	7	103
Extensions, discoveries and other	27	148	8	28	3	3	217
Acquisitions of reserves in place	7	-	-	-	-	-	7
Sales of reserves in place	(32)	(45)	(2)	-	-	-	(79)
Production for the year	(72)	(210)	(12)	(21)	(11)	(3)	(329)
<b>Balance as of December 31, 2012</b>	<b>762</b>	<b>2,049</b>	<b>77</b>	<b>190</b>	<b>548</b>	<b>27</b>	<b>3,653</b>
Revisions of previous estimates	19	50	7	7	75	-	158
Extensions, discoveries and other	6	19	20	2	20	1	68
Acquisitions of reserves in place	-	-	-	-	34	-	34
Sales of reserves in place	(49)	-	(6)	-	-	-	(55)
Production for the year	(60)	(194)	(12)	(20)	(13)	(3)	(302)
<b>Balance as of December 31, 2013</b>	<b>678</b>	<b>1,924</b>	<b>86</b>	<b>179</b>	<b>664</b>	<b>25</b>	<b>3,556</b>
Revisions of previous estimates	8	33	3	5	10	4	63
Extensions, discoveries and other	3	101	14	3	2	-	123
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	(11)	(20)	-	-	(32)	-	(63)
Production for the year	(60)	(191)	(15)	(19)	(12)	(3)	(300)
<b>Balance as of December 31, 2014</b>	<b>618</b>	<b>1,847</b>	<b>88</b>	<b>168</b>	<b>632</b>	<b>26</b>	<b>3,379</b>
Revisions of previous estimates	(18)	(120)	27	76	20	-	(15)
Extensions, discoveries and other	4	8	2	856	-	-	870
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	(4)	(57)	-	-	-	-	(61)
Production for the year	(60)	(198)	(16)	(78)	(12)	(3)	(367)
<b>Balance as of December 31, 2015</b>	<b>540</b>	<b>1,480</b>	<b>101</b>	<b>1,022</b>	<b>640</b>	<b>23</b>	<b>3,806</b>
<b>Minority interest in proved developed and undeveloped reserves as of</b>							
December 31, 2011	-	88	-	-	-	-	88
December 31, 2012	-	87	-	-	-	-	87
December 31, 2013	-	140	-	-	-	-	140
December 31, 2014	-	128	-	-	-	-	128
<b>December 31, 2015</b>	<b>-</b>	<b>115</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>115</b>



(in millions of barrels)

Equity affiliates

Proved developed and undeveloped reserves	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>Balance as of December 31, 2010</b>	-	<b>34</b>	<b>470</b>	<b>680</b>	-	-	<b>1,184</b>
Revisions of previous estimates	-	2	(6)	(12)	-	-	(16)
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	-	-	-	-	51	51
Sales of reserves in place	-	(22)	(4)	(12)	-	-	(38)
Production for the year	-	(4)	(17)	(91)	-	(3)	(115)
<b>Balance as of December 31, 2011</b>	-	<b>10</b>	<b>443</b>	<b>565</b>	-	<b>48</b>	<b>1,066</b>
Revisions of previous estimates	-	5	(40)	5	-	9	(21)
Extensions, discoveries and other	-	-	-	-	-	51	51
Acquisitions of reserves in place	-	-	-	-	-	11	11
Sales of reserves in place	-	-	-	-	-	-	-
Production for the year	-	-	(15)	(93)	-	(5)	(113)
<b>Balance as of December 31, 2012</b>	-	<b>15</b>	<b>388</b>	<b>477</b>	-	<b>114</b>	<b>994</b>
Revisions of previous estimates	-	(3)	(138)	(6)	-	(4)	(151)
Extensions, discoveries and other	-	-	-	-	-	32	32
Acquisitions of reserves in place	-	-	-	-	-	13	13
Sales of reserves in place	-	-	-	-	-	-	-
Production for the year	-	-	(13)	(99)	-	(7)	(119)
<b>Balance as of December 31, 2013</b>	-	<b>12</b>	<b>237</b>	<b>372</b>	-	<b>148</b>	<b>769</b>
Revisions of previous estimates	-	(5)	2	(3)	-	(3)	(9)
Extensions, discoveries and other	-	-	-	3	-	81	84
Acquisitions of reserves in place	-	-	-	-	-	9	9
Sales of reserves in place	-	-	-	-	-	(1)	(1)
Production for the year	-	-	(13)	(51)	-	(9)	(73)
<b>Balance as of December 31, 2014</b>	-	<b>7</b>	<b>226</b>	<b>321</b>	-	<b>225</b>	<b>779</b>
Revisions of previous estimates	-	6	(42)	(11)	-	34	(13)
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	-	-	-	-	6	6
Sales of reserves in place	-	-	-	-	-	(2)	(2)
Production for the year	-	-	(14)	(50)	-	(17)	(81)
<b>Balance as of December 31, 2015</b>	-	<b>13</b>	<b>170</b>	<b>260</b>	-	<b>246</b>	<b>689</b>

## CHANGES IN OIL RESERVES

(in millions of barrels of oil equivalent)

Consolidated subsidiaries and equity affiliates

	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>As of December 31, 2011</b>							
<b>Proved developed and undeveloped reserves</b>	<b>812</b>	<b>2,105</b>	<b>516</b>	<b>746</b>	<b>553</b>	<b>68</b>	<b>4,800</b>
Consolidated subsidiaries	812	2,095	73	181	553	20	3,734
Equity affiliates	-	10	443	565	-	48	1,066
<b>Proved developed reserves</b>	<b>351</b>	<b>1,206</b>	<b>165</b>	<b>565</b>	<b>33</b>	<b>58</b>	<b>2,378</b>
Consolidated subsidiaries	351	1,202	48	116	33	17	1,767
Equity affiliates	-	4	117	449	-	41	611
<b>Proved undeveloped reserves</b>	<b>461</b>	<b>899</b>	<b>351</b>	<b>181</b>	<b>520</b>	<b>10</b>	<b>2,422</b>
Consolidated subsidiaries	461	893	25	65	520	3	1,967
Equity affiliates	-	6	326	116	-	7	455
<b>As of December 31, 2012</b>							
<b>Proved developed and undeveloped reserves</b>	<b>762</b>	<b>2,064</b>	<b>465</b>	<b>667</b>	<b>548</b>	<b>141</b>	<b>4,647</b>
Consolidated subsidiaries	762	2,049	77	190	548	27	3,653
Equity affiliates	-	15	388	477	-	114	994
<b>Proved developed reserves</b>	<b>289</b>	<b>1,145</b>	<b>179</b>	<b>506</b>	<b>34</b>	<b>76</b>	<b>2,229</b>
Consolidated subsidiaries	289	1,139	44	133	34	21	1,660
Equity affiliates	-	6	135	373	-	55	569
<b>Proved undeveloped reserves</b>	<b>473</b>	<b>919</b>	<b>286</b>	<b>161</b>	<b>514</b>	<b>65</b>	<b>2,418</b>
Consolidated subsidiaries	473	910	33	57	514	6	1,993
Equity affiliates	-	9	253	104	-	59	425

(in millions of barrels of oil equivalent)

## Consolidated subsidiaries and equity affiliates

	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>As of December 31, 2013</b>							
<b>Proved developed and undeveloped reserves</b>	<b>678</b>	<b>1,936</b>	<b>323</b>	<b>551</b>	<b>664</b>	<b>173</b>	<b>4,325</b>
Consolidated subsidiaries	678	1,924	86	179	664	25	3,556
Equity affiliates	-	12	237	372	-	148	769
<b>Proved developed reserves</b>	<b>274</b>	<b>1,068</b>	<b>128</b>	<b>419</b>	<b>216</b>	<b>88</b>	<b>2,193</b>
Consolidated subsidiaries	274	1,064	45	119	216	19	1,737
Equity affiliates	-	4	83	300	-	69	456
<b>Proved undeveloped reserves</b>	<b>404</b>	<b>868</b>	<b>195</b>	<b>132</b>	<b>448</b>	<b>85</b>	<b>2,132</b>
Consolidated subsidiaries	404	860	41	60	448	6	1,819
Equity affiliates	-	8	154	72	-	79	313
<b>As of December 31, 2014</b>							
<b>Proved developed and undeveloped reserves</b>	<b>618</b>	<b>1,854</b>	<b>314</b>	<b>489</b>	<b>632</b>	<b>251</b>	<b>4,158</b>
Consolidated subsidiaries	618	1,847	88	168	632	26	3,379
Equity affiliates	-	7	226	321	-	225	779
<b>Proved developed reserves</b>	<b>263</b>	<b>1,069</b>	<b>136</b>	<b>377</b>	<b>200</b>	<b>136</b>	<b>2,181</b>
Consolidated subsidiaries	263	1,065	54	117	200	16	1,715
Equity affiliates	-	4	82	260	-	120	466
<b>Proved undeveloped reserves</b>	<b>355</b>	<b>785</b>	<b>178</b>	<b>112</b>	<b>432</b>	<b>115</b>	<b>1,977</b>
Consolidated subsidiaries	355	782	34	51	432	10	1,664
Equity affiliates	-	3	144	61	-	105	313
<b>As of December 31, 2015</b>							
<b>Proved developed and undeveloped reserves</b>	<b>540</b>	<b>1,493</b>	<b>271</b>	<b>1,282</b>	<b>640</b>	<b>269</b>	<b>4,495</b>
Consolidated subsidiaries	540	1,480	101	1,022	640	23	3,806
Equity affiliates	-	13	170	260	-	246	689
<b>Proved developed reserves</b>	<b>262</b>	<b>865</b>	<b>145</b>	<b>1,032</b>	<b>200</b>	<b>151</b>	<b>2,655</b>
Consolidated subsidiaries	262	862	71	817	200	15	2,227
Equity affiliates	-	3	74	215	-	136	428
<b>Proved undeveloped reserves</b>	<b>278</b>	<b>628</b>	<b>126</b>	<b>250</b>	<b>440</b>	<b>118</b>	<b>1,840</b>
Consolidated subsidiaries	278	618	30	205	440	8	1,579
Equity affiliates	-	10	96	45	-	110	261

## CHANGES IN BITUMEN RESERVES

(in millions of barrels)

Consolidated subsidiaries

Proved developed and undeveloped reserves	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>Balance as of December 31, 2010</b>	-	-	789	-	-	-	789
Revisions of previous estimates	-	-	(109)	-	-	-	(109)
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	-	308	-	-	-	308
Sales of reserves in place	-	-	-	-	-	-	-
Production for the year	-	-	(4)	-	-	-	(4)
<b>Balance as of December 31, 2011</b>	-	-	984	-	-	-	984
Revisions of previous estimates	-	-	43	-	-	-	43
Extensions, discoveries and other	-	-	15	-	-	-	15
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	-	-	-	-	-	-	-
Production for the year	-	-	(4)	-	-	-	(4)
<b>Balance as of December 31, 2012</b>	-	-	1,038	-	-	-	1,038
Revisions of previous estimates	-	-	2	-	-	-	2
Extensions, discoveries and other	-	-	53	-	-	-	53
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	-	-	-	-	-	-	-
Production for the year	-	-	(5)	-	-	-	(5)
<b>Balance as of December 31, 2013</b>	-	-	1,088	-	-	-	1,088
Revisions of previous estimates	-	-	(25)	-	-	-	(25)
Extensions, discoveries and other	-	-	87	-	-	-	87
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	-	-	-	-	-	-	-
Production for the year	-	-	(5)	-	-	-	(5)
<b>Balance as of December 31, 2014</b>	-	-	1,145	-	-	-	1,145
Revisions of previous estimates	-	-	130	-	-	-	130
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	-	-	(160)	-	-	-	(160)
Production for the year	-	-	(5)	-	-	-	(5)
<b>Balance as of December 31, 2015</b>	-	-	1,110	-	-	-	1,110
<b>Proved developed reserves as of</b>							
December 31, 2011	-	-	21	-	-	-	21
December 31, 2012	-	-	18	-	-	-	18
December 31, 2013	-	-	15	-	-	-	15
December 31, 2014	-	-	17	-	-	-	17
<b>December 31, 2015</b>	-	-	100	-	-	-	100
<b>Proved undeveloped reserves as of</b>							
December 31, 2011	-	-	963	-	-	-	963
December 31, 2012	-	-	1,020	-	-	-	1,020
December 31, 2013	-	-	1,073	-	-	-	1,073
December 31, 2014	-	-	1,128	-	-	-	1,128
<b>December 31, 2015</b>	-	-	1,010	-	-	-	1,010

There are no bitumen reserves for equity affiliates.

There are no minority interests for bitumen reserves.

## CHANGES IN GAS RESERVES

(in billion cubic feet)

Consolidated subsidiaries

Proved developed and undeveloped reserves	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>Balance as of December 31, 2010</b>	<b>4,962</b>	<b>5,314</b>	<b>3,806</b>	<b>1,867</b>	<b>3,176</b>	<b>18</b>	<b>19,143</b>
Revisions of previous estimates	358	(216)	367	(180)	-	1	330
Extensions, discoveries and other	211	-	-	-	2,824	-	3,035
Acquisitions of reserves in place	11	-	7	-	13	-	31
Sales of reserves in place	-	(46)	-	-	-	-	(46)
Production for the year	(528)	(259)	(317)	(169)	(444)	(1)	(1,718)
<b>Balance as of December 31, 2011</b>	<b>5,014</b>	<b>4,793</b>	<b>3,863</b>	<b>1,518</b>	<b>5,569</b>	<b>18</b>	<b>20,775</b>
Revisions of previous estimates	268	31	(278)	(132)	15	-	(96)
Extensions, discoveries and other	216	127	478	6	195	-	1,022
Acquisitions of reserves in place	138	-	-	-	-	-	138
Sales of reserves in place	(30)	(173)	(35)	-	-	-	(238)
Production for the year	(462)	(257)	(337)	(75)	(432)	(1)	(1,564)
<b>Balance as of December 31, 2012</b>	<b>5,144</b>	<b>4,521</b>	<b>3,691</b>	<b>1,317</b>	<b>5,347</b>	<b>17</b>	<b>20,037</b>
Revisions of previous estimates	(6)	(887)	199	29	(186)	-	(851)
Extensions, discoveries and other	27	12	336	-	1,074	-	1,449
Acquisitions of reserves in place	1	-	-	-	506	-	507
Sales of reserves in place	(13)	-	(243)	-	-	-	(256)
Production for the year	(450)	(248)	(320)	(68)	(457)	(1)	(1,544)
<b>Balance as of December 31, 2013</b>	<b>4,703</b>	<b>3,398</b>	<b>3,663</b>	<b>1,278</b>	<b>6,284</b>	<b>16</b>	<b>19,342</b>
Revisions of previous estimates	129	86	54	7	69	-	345
Extensions, discoveries and other	99	56	296	1	154	-	606
Acquisitions of reserves in place	6	-	-	-	-	-	6
Sales of reserves in place	(97)	(6)	-	-	(941)	-	(1,044)
Production for the year	(398)	(250)	(320)	(68)	(451)	(1)	(1,488)
<b>Balance as of December 31, 2014</b>	<b>4,442</b>	<b>3,284</b>	<b>3,693</b>	<b>1,218</b>	<b>5,115</b>	<b>15</b>	<b>17,767</b>
Revisions of previous estimates	46	(33)	(92)	174	304	1	400
Extensions, discoveries and other	40	7	24	42	38	-	151
Acquisitions of reserves in place	-	-	-	-	-	-	-
Sales of reserves in place	(135)	(93)	-	-	-	-	(228)
Production for the year	(424)	(247)	(324)	(75)	(471)	(1)	(1,542)
<b>Balance as of December 31, 2015</b>	<b>3,969</b>	<b>2,918</b>	<b>3,301</b>	<b>1,359</b>	<b>4,986</b>	<b>15</b>	<b>16,548</b>
<b>Minority interest in proved developed and undeveloped reserves as of</b>							
December 31, 2011	-	62	-	-	-	-	62
December 31, 2012	-	57	-	-	-	-	57
December 31, 2013	-	87	-	-	-	-	87
December 31, 2014	-	91	-	-	-	-	91
<b>December 31, 2015</b>	<b>-</b>	<b>64</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>64</b>

## CHANGES IN GAS RESERVES

(in billion cubic feet)

Equity affiliates

Proved developed and undeveloped reserves	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>Balance as of December 31, 2010</b>	-	<b>390</b>	<b>91</b>	<b>6,164</b>	-	-	<b>6,645</b>
Revisions of previous estimates	-	(16)	(10)	(31)	-	-	(57)
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	-	-	-	-	3,865	3,865
Sales of reserves in place	-	(10)	-	-	-	-	(10)
Production for the year	-	(1)	(2)	(331)	-	(167)	(501)
<b>Balance as of December 31, 2011</b>	-	<b>363</b>	<b>79</b>	<b>5,802</b>	-	<b>3,698</b>	<b>9,942</b>
Revisions of previous estimates	-	(21)	5	(4)	-	366	346
Extensions, discoveries and other	-	-	-	-	-	578	578
Acquisitions of reserves in place	-	-	-	-	-	568	568
Sales of reserves in place	-	-	-	-	-	-	-
Production for the year	-	(1)	(2)	(287)	-	(304)	(594)
<b>Balance as of December 31, 2012</b>	-	<b>341</b>	<b>82</b>	<b>5,511</b>	-	<b>4,906</b>	<b>10,840</b>
Revisions of previous estimates	-	8	(18)	16	-	191	197
Extensions, discoveries and other	-	-	-	77	-	3,209	3,286
Acquisitions of reserves in place	-	-	-	-	-	553	553
Sales of reserves in place	-	-	-	-	-	(485)	(485)
Production for the year	-	(6)	(2)	(354)	-	(345)	(707)
<b>Balance as of December 31, 2013</b>	-	<b>343</b>	<b>62</b>	<b>5,250</b>	-	<b>8,029</b>	<b>13,684</b>
Revisions of previous estimates	-	17	2	(25)	-	50	44
Extensions, discoveries and other	-	-	-	-	-	2,328	2,328
Acquisitions of reserves in place	-	-	-	-	-	521	521
Sales of reserves in place	-	-	-	-	-	(28)	(28)
Production for the year	-	(4)	(2)	(328)	-	(392)	(726)
<b>Balance as of December 31, 2014</b>	-	<b>356</b>	<b>62</b>	<b>4,897</b>	-	<b>10,508</b>	<b>15,823</b>
Revisions of previous estimates	-	(45)	(11)	6	-	337	287
Extensions, discoveries and other	-	-	-	-	-	-	-
Acquisitions of reserves in place	-	-	-	-	-	267	267
Sales of reserves in place	-	-	-	-	-	(52)	(52)
Production for the year	-	-	(3)	(208)	-	(456)	(667)
<b>Balance as of December 31, 2015</b>	-	<b>311</b>	<b>48</b>	<b>4,695</b>	-	<b>10,604</b>	<b>15,658</b>



(in billion cubic feet)

## Consolidated subsidiaries and equity affiliates

	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>As of December 31, 2011</b>							
<b>Proved developed and undeveloped reserves</b>	<b>5,014</b>	<b>5,156</b>	<b>3,942</b>	<b>7,320</b>	<b>5,569</b>	<b>3,716</b>	<b>30,717</b>
Consolidated subsidiaries	5,014	4,793	3,863	1,518	5,569	18	20,775
Equity affiliates	-	363	79	5,802	-	3,698	9,942
<b>Proved developed reserves</b>	<b>2,943</b>	<b>2,308</b>	<b>2,600</b>	<b>7,170</b>	<b>1,582</b>	<b>3,272</b>	<b>19,875</b>
Consolidated subsidiaries	2,943	2,216	2,567	1,450	1,582	12	10,770
Equity affiliates	-	92	33	5,720	-	3,260	9,105
<b>Proved undeveloped reserves</b>	<b>2,071</b>	<b>2,848</b>	<b>1,342</b>	<b>150</b>	<b>3,987</b>	<b>444</b>	<b>10,842</b>
Consolidated subsidiaries	2,071	2,577	1,296	68	3,987	6	10,005
Equity affiliates	-	271	46	82	-	438	837
<b>As of December 31, 2012</b>							
<b>Proved developed and undeveloped reserves</b>	<b>5,144</b>	<b>4,862</b>	<b>3,773</b>	<b>6,828</b>	<b>5,347</b>	<b>4,923</b>	<b>30,877</b>
Consolidated subsidiaries	5,144	4,521	3,691	1,317	5,347	17	20,037
Equity affiliates	-	341	82	5,511	-	4,906	10,840
<b>Proved developed reserves</b>	<b>2,927</b>	<b>2,192</b>	<b>2,356</b>	<b>6,656</b>	<b>1,513</b>	<b>3,602</b>	<b>19,246</b>
Consolidated subsidiaries	2,927	2,110	2,316	1,240	1,513	13	10,119
Equity affiliates	-	82	40	5,416	-	3,589	9,127
<b>Proved undeveloped reserves</b>	<b>2,217</b>	<b>2,670</b>	<b>1,417</b>	<b>172</b>	<b>3,834</b>	<b>1,321</b>	<b>11,631</b>
Consolidated subsidiaries	2,217	2,411	1,375	77	3,834	4	9,918
Equity affiliates	-	259	42	95	-	1,317	1,713

## CHANGES IN GAS RESERVES

(in billion cubic feet)

Consolidated subsidiaries and equity affiliates

	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>As of December 31, 2013</b>							
<b>Proved developed and undeveloped reserves</b>	<b>4,703</b>	<b>3,741</b>	<b>3,725</b>	<b>6,528</b>	<b>6,284</b>	<b>8,045</b>	<b>33,026</b>
Consolidated subsidiaries	4,703	3,398	3,663	1,278	6,284	16	19,342
Equity affiliates	-	343	62	5,250	-	8,029	13,684
<b>Proved developed reserves</b>	<b>2,687</b>	<b>2,009</b>	<b>2,240</b>	<b>6,366</b>	<b>1,821</b>	<b>3,693</b>	<b>18,816</b>
Consolidated subsidiaries	2,687	1,937	2,210	1,210	1,821	13	9,878
Equity affiliates	-	72	30	5,156	-	3,680	8,938
<b>Proved undeveloped reserves</b>	<b>2,016</b>	<b>1,732</b>	<b>1,485</b>	<b>162</b>	<b>4,463</b>	<b>4,352</b>	<b>14,210</b>
Consolidated subsidiaries	2,016	1,461	1,453	68	4,463	3	9,464
Equity affiliates	-	271	32	94	-	4,349	4,746
<b>As of December 31, 2014</b>							
<b>Proved developed and undeveloped reserves</b>	<b>4,442</b>	<b>3,640</b>	<b>3,755</b>	<b>6,115</b>	<b>5,115</b>	<b>10,523</b>	<b>33,590</b>
Consolidated subsidiaries	4,442	3,284	3,693	1,218	5,115	15	17,767
Equity affiliates	-	356	62	4,897	-	10,508	15,823
<b>Proved developed reserves</b>	<b>2,578</b>	<b>2,019</b>	<b>2,167</b>	<b>5,866</b>	<b>1,444</b>	<b>4,959</b>	<b>19,033</b>
Consolidated subsidiaries	2,578	1,952	2,145	1,144	1,444	9	9,272
Equity affiliates	-	67	22	4,722	-	4,950	9,761
<b>Proved undeveloped reserves</b>	<b>1,864</b>	<b>1,621</b>	<b>1,588</b>	<b>249</b>	<b>3,671</b>	<b>5,564</b>	<b>14,557</b>
Consolidated subsidiaries	1,864	1,332	1,548	74	3,671	6	8,495
Equity affiliates	-	289	40	175	-	5,558	6,062
<b>As of December 31, 2015</b>							
<b>Proved developed and undeveloped reserves</b>	<b>3,969</b>	<b>3,229</b>	<b>3,349</b>	<b>6,054</b>	<b>4,986</b>	<b>10,619</b>	<b>32,206</b>
Consolidated subsidiaries	3,969	2,918	3,301	1,359	4,986	15	16,548
Equity affiliates	-	311	48	4,695	-	10,604	15,658
<b>Proved developed reserves</b>	<b>2,682</b>	<b>1,726</b>	<b>2,153</b>	<b>5,442</b>	<b>1,717</b>	<b>4,890</b>	<b>18,610</b>
Consolidated subsidiaries	2,682	1,680	2,133	1,207	1,717	6	9,425
Equity affiliates	-	46	20	4,235	-	4,884	9,185
<b>Proved undeveloped reserves</b>	<b>1,287</b>	<b>1,503</b>	<b>1,196</b>	<b>612</b>	<b>3,269</b>	<b>5,729</b>	<b>13,596</b>
Consolidated subsidiaries	1,287	1,238	1,168	152	3,269	9	7,123
Equity affiliates	-	265	28	460	-	5,720	6,473

## RESULTS OF OPERATIONS FOR OIL AND GAS PRODUCING ACTIVITIES

The following tables do not include revenues and expenses related to oil and gas transportation activities and LNG liquefaction and transportation.

(in million dollars)

Consolidated subsidiaries

	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>2011</b>							
Revenues Non-Group sales	4,337	4,438	1,080	1,613	4,456	-	15,924
Revenues Group sales	9,823	15,819	1,063	1,026	681	310	28,722
<b>Total Revenues</b>	<b>14,160</b>	<b>20,257</b>	<b>2,143</b>	<b>2,639</b>	<b>5,137</b>	<b>310</b>	<b>44,646</b>
Production costs	(1,720)	(1,641)	(347)	(398)	(388)	(35)	(4,529)
Exploration expenses	(477)	(449)	(67)	(15)	(407)	(3)	(1,418)
Depreciation, depletion and amortization and valuation allowances	(1,858)	(2,568)	(490)	(387)	(1,039)	(62)	(6,404)
Other expenses <sup>(1)</sup>	(428)	(1,644)	(382)	(384)	(103)	(29)	(2,970)
<b>Pre-tax income from producing activities</b>	<b>9,677</b>	<b>13,955</b>	<b>857</b>	<b>1,455</b>	<b>3,200</b>	<b>181</b>	<b>29,325</b>
Income tax	(7,042)	(9,027)	(407)	(647)	(1,720)	(92)	(18,935)
<b>Results of oil and gas producing activities</b>	<b>2,635</b>	<b>4,928</b>	<b>450</b>	<b>808</b>	<b>1,480</b>	<b>89</b>	<b>10,390</b>
<b>2012</b>							
Revenues Non-Group sales	2,552	5,638	1,244	929	4,508	-	14,871
Revenues Group sales	8,809	17,268	820	1,298	750	265	29,210
<b>Total Revenues</b>	<b>11,361</b>	<b>22,906</b>	<b>2,064</b>	<b>2,227</b>	<b>5,258</b>	<b>265</b>	<b>44,081</b>
Production costs	(1,693)	(1,853)	(381)	(437)	(469)	(39)	(4,872)
Exploration expenses	(620)	(469)	(436)	(23)	(306)	(3)	(1,857)
Depreciation, depletion and amortization and valuation allowances	(2,551)	(3,308)	(2,002)	(588)	(1,130)	(75)	(9,654)
Other expenses <sup>(1)</sup>	(419)	(1,742)	(496)	(204)	(133)	(31)	(3,025)
<b>Pre-tax income from producing activities</b>	<b>6,078</b>	<b>15,534</b>	<b>(1,251)</b>	<b>975</b>	<b>3,220</b>	<b>117</b>	<b>24,673</b>
Income tax	(4,469)	(9,485)	291	(496)	(1,572)	(53)	(15,784)
<b>Results of oil and gas producing activities</b>	<b>1,609</b>	<b>6,049</b>	<b>(960)</b>	<b>479</b>	<b>1,648</b>	<b>64</b>	<b>8,889</b>
<b>2013</b>							
Revenues Non-Group sales	2,170	4,575	1,331	1,079	4,626	-	13,781
Revenues Group sales	7,749	16,072	808	901	742	268	26,540
<b>Total Revenues</b>	<b>9,919</b>	<b>20,647</b>	<b>2,139</b>	<b>1,980</b>	<b>5,368</b>	<b>268</b>	<b>40,321</b>
Production costs	(1,762)	(1,974)	(415)	(498)	(546)	(39)	(5,234)
Exploration expenses	(483)	(583)	(539)	(165)	(395)	(4)	(2,169)
Depreciation, depletion and amortization and valuation allowances	(1,817)	(3,433)	(1,214)	(725)	(1,607)	(85)	(8,881)
Other expenses <sup>(1)</sup>	(493)	(1,578)	(434)	(106)	(149)	(33)	(2,793)
<b>Pre-tax income from producing activities</b>	<b>5,364</b>	<b>13,079</b>	<b>(463)</b>	<b>486</b>	<b>2,671</b>	<b>107</b>	<b>21,244</b>
Income tax	(3,621)	(8,281)	56	(419)	(1,362)	(46)	(13,673)
<b>Results of oil and gas producing activities</b>	<b>1,743</b>	<b>4,798</b>	<b>(407)</b>	<b>67</b>	<b>1,309</b>	<b>61</b>	<b>7,571</b>

(1) Included production taxes and accretion expense as provided for by IAS 37 (\$470 million in 2011, \$502 million in 2012, \$566 million in 2013).

## RESULTS OF OPERATIONS FOR OIL AND GAS PRODUCING ACTIVITIES

(in million dollars)

Consolidated subsidiaries

	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>2014</b>							
Revenues Non-Group sales	2,073	3,561	1,195	804	4,423	-	12,056
Revenues Group sales	5,966	13,386	971	972	742	236	22,273
<b>Total Revenues</b>	<b>8,039</b>	<b>16,947</b>	<b>2,166</b>	<b>1,776</b>	<b>5,165</b>	<b>236</b>	<b>34,329</b>
Production costs	(1,729)	(2,221)	(466)	(503)	(738)	(44)	(5,701)
Exploration expenses	(617)	(631)	(183)	(144)	(381)	(9)	(1,965)
Depreciation, depletion and amortization and valuation allowances	(1,988)	(4,750)	(5,717)	(545)	(2,058)	(97)	(15,155)
Other expenses <sup>(1)</sup>	(419)	(1,375)	(402)	(114)	(167)	(29)	(2,506)
<b>Pre-tax income from producing activities</b>	<b>3,286</b>	<b>7,970</b>	<b>(4,602)</b>	<b>470</b>	<b>1,821</b>	<b>57</b>	<b>9,002</b>
Income tax	(1,683)	(6,066)	882	(334)	(1,159)	(32)	(8,392)
<b>Results of oil and gas producing activities</b>	<b>1,603</b>	<b>1,904</b>	<b>(3,720)</b>	<b>136</b>	<b>662</b>	<b>25</b>	<b>610</b>
<b>2015</b>							
Revenues Non-Group sales	1,343	1,191	970	2,138	3,015	-	8,657
Revenues Group sales	3,821	7,959	271	1,715	351	129	14,246
<b>Total Revenues</b>	<b>5,164</b>	<b>9,150</b>	<b>1,241</b>	<b>3,853</b>	<b>3,366</b>	<b>129</b>	<b>22,903</b>
Production costs	(1,485)	(1,847)	(497)	(591)	(492)	(34)	(4,946)
Exploration expenses	(572)	(694)	(114)	(147)	(461)	(3)	(1,991)
Depreciation, depletion and amortization and valuation allowances	(2,335)	(6,941)	(1,548)	(558)	(3,563)	(203)	(15,148)
Other expenses <sup>(1)</sup>	(350)	(841)	(280)	(2,637)	(121)	(16)	(4,245)
<b>Pre-tax income from producing activities</b>	<b>422</b>	<b>(1,173)</b>	<b>(1,198)</b>	<b>(80)</b>	<b>(1,271)</b>	<b>(127)</b>	<b>(3,427)</b>
Income tax	443	(242)	210	(101)	(158)	(4)	148
<b>Results of oil and gas producing activities</b>	<b>865</b>	<b>(1,415)</b>	<b>(988)</b>	<b>(181)</b>	<b>(1,429)</b>	<b>(131)</b>	<b>(3,279)</b>

(1) Included production taxes and accretion expense as provided for by IAS 37 (\$526 million in 2014 and \$497 million in 2015).

(in million dollars)

Equity affiliates

Group's share of results of oil and gas producing activities	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
2011	-	17	152	1,424	-	61	1,654
2012	-	-	299	1,438	-	44	1,781
2013	-	-	105	1,867	-	223	2,195
2014	-	(21)	(69)	1,838	-	410	2,158
<b>2015</b>							
Revenues Non-Group sales	-	-	380	812	-	670	1,862
Revenues Group sales	-	-	10	2,404	-	-	2,414
<b>Total Revenues</b>	<b>-</b>	<b>-</b>	<b>390</b>	<b>3,216</b>	<b>-</b>	<b>670</b>	<b>4,276</b>
Production costs	-	-	(54)	(295)	-	(127)	(476)
Exploration expenses	-	-	-	-	-	(1)	(1)
Depreciation, depletion and amortization and valuation allowances	-	-	(98)	(400)	-	(58)	(556)
Other expenses	-	-	(170)	(1,638)	-	(134)	(1,942)
<b>Pre-tax income from producing activities</b>	<b>-</b>	<b>-</b>	<b>68</b>	<b>883</b>	<b>-</b>	<b>350</b>	<b>1,301</b>
Income tax	-	-	(36)	(184)	-	(65)	(285)
<b>Results of oil and gas producing activities</b>	<b>-</b>	<b>-</b>	<b>32</b>	<b>699</b>	<b>-</b>	<b>285</b>	<b>1,016</b>

## COST INCURRED

The following tables set forth the costs incurred in the Group's oil and gas property acquisition, exploration and development activities, including both capitalized and expensed amounts. They do not include costs incurred related to oil and gas transportation and LNG liquefaction and transportation activities.

(in million dollars)

Consolidated subsidiaries

	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia) <sup>(2)</sup>	Russia	Total
<b>2011</b>							
Proved property acquisition	415	13	574	3	350	-	1,355
Unproved property acquisition	1	553	2,355	4	20	-	2,933
Exploration costs	703	535	354	24	578	3	2,197
Development costs <sup>(1)</sup>	3,274	5,422	1,828	457	3,643	131	14,755
<b>Total cost incurred</b>	<b>4,393</b>	<b>6,523</b>	<b>5,111</b>	<b>488</b>	<b>4,591</b>	<b>134</b>	<b>21,240</b>
<b>2012</b>							
Proved property acquisition	259	35	-	-	16	-	310
Unproved property acquisition	52	1,749	494	226	33	-	2,554
Exploration costs	768	742	734	45	434	3	2,726
Development costs <sup>(1)</sup>	4,090	5,563	2,351	394	3,337	107	15,842
<b>Total cost incurred</b>	<b>5,169</b>	<b>8,089</b>	<b>3,579</b>	<b>665</b>	<b>3,820</b>	<b>110</b>	<b>21,432</b>
<b>2013</b>							
Proved property acquisition	-	175	-	3	487	-	665
Unproved property acquisition	17	512	2,105	85	85	-	2,804
Exploration costs	679	889	585	231	538	4	2,926
Development costs <sup>(1)</sup>	5,239	8,545	3,191	464	4,395	147	21,981
<b>Total cost incurred</b>	<b>5,935</b>	<b>10,121</b>	<b>5,881</b>	<b>783</b>	<b>5,505</b>	<b>151</b>	<b>28,376</b>
<b>2014</b>							
Proved property acquisition	57	17	-	(1)	32	-	105
Unproved property acquisition	17	69	544	7	66	-	703
Exploration costs	466	1,057	375	228	485	9	2,620
Development costs <sup>(1)</sup>	4,495	8,126	3,468	478	3,680	116	20,363
<b>Total cost incurred</b>	<b>5,035</b>	<b>9,269</b>	<b>4,387</b>	<b>712</b>	<b>4,263</b>	<b>125</b>	<b>23,791</b>
<b>2015</b>							
Proved property acquisition	37	59	-	1,039	30	-	1,165
Unproved property acquisition	-	29	199	1,202	4	4	1,438
Exploration costs	563	321	515	229	316	3	1,947
Development costs <sup>(1)</sup>	3,987	7,686	3,143	496	3,129	97	18,538
<b>Total cost incurred</b>	<b>4,587</b>	<b>8,095</b>	<b>3,857</b>	<b>2,966</b>	<b>3,479</b>	<b>104</b>	<b>23,088</b>

(in million dollars)

Equity affiliates

Group's share of costs of property acquisition exploration and development	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
2011	-	3	150	438	-	6,606	7,197
2012	-	-	214	488	-	537	1,239
2013	-	-	170	458	-	734	1,362
2014	-	-	195	500	-	970	1,665
<b>2015</b>							
Proved property acquisition	-	-	-	-	-	218	218
Unproved property acquisition	-	-	-	-	-	14	14
Exploration costs	-	-	-	8	-	-	8
Development costs <sup>(1)</sup>	-	-	83	398	-	405	886
<b>Total cost incurred</b>	<b>-</b>	<b>-</b>	<b>83</b>	<b>406</b>	<b>-</b>	<b>637</b>	<b>1,126</b>

(1) Including asset retirement costs capitalized during the year and any gains or losses recognized upon settlement of asset retirement obligation during the year.

(2) Revision of historical costs out of ASC932 perimeter.

## CAPITALIZED COST RELATED TO OIL AND GAS PRODUCING ACTIVITIES

Capitalized costs represent the amount of capitalized proved and unproved property costs, including support equipment and facilities, along with the related accumulated depreciation, depletion and amortization. The following tables do not include capitalized costs related to oil and gas transportation and LNG liquefaction and transportation activities.

(in million dollars)

Consolidated subsidiaries

	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia) <sup>(1)</sup>	Russia	Total
<b>As of December 31, 2011</b>							
Proved properties	44,391	47,916	11,402	8,060	20,359	696	132,824
Unproved properties	596	2,539	5,407	79	1,179	-	9,800
<b>Total capitalized costs</b>	<b>44,987</b>	<b>50,455</b>	<b>16,809</b>	<b>8,139</b>	<b>21,538</b>	<b>696</b>	<b>142,624</b>
Accumulated depreciation, depletion and amortization	(31,115)	(24,121)	(2,968)	(5,530)	(6,316)	(239)	(70,289)
<b>Net capitalized costs</b>	<b>13,872</b>	<b>26,334</b>	<b>13,841</b>	<b>2,609</b>	<b>15,222</b>	<b>457</b>	<b>72,335</b>
<b>As of December 31, 2012</b>							
Proved properties	46,781	53,517	13,336	8,455	23,336	803	146,228
Unproved properties	717	4,200	5,706	327	808	-	11,758
<b>Total capitalized costs</b>	<b>47,498</b>	<b>57,717</b>	<b>19,042</b>	<b>8,782</b>	<b>24,144</b>	<b>803</b>	<b>157,986</b>
Accumulated depreciation, depletion and amortization	(31,217)	(26,868)	(4,247)	(6,133)	(7,433)	(314)	(76,212)
<b>Net capitalized costs</b>	<b>16,281</b>	<b>30,849</b>	<b>14,795</b>	<b>2,649</b>	<b>16,711</b>	<b>489</b>	<b>81,774</b>
<b>As of December 31, 2013</b>							
Proved properties	50,313	61,728	15,002	8,941	28,047	950	164,981
Unproved properties	888	5,049	7,881	481	1,123	-	15,422
<b>Total capitalized costs</b>	<b>51,201</b>	<b>66,777</b>	<b>22,883</b>	<b>9,422</b>	<b>29,170</b>	<b>950</b>	<b>180,403</b>
Accumulated depreciation, depletion and amortization	(32,208)	(30,278)	(5,259)	(6,842)	(9,040)	(399)	(84,026)
<b>Net capitalized costs</b>	<b>18,993</b>	<b>36,499</b>	<b>17,624</b>	<b>2,580</b>	<b>20,130</b>	<b>551</b>	<b>96,377</b>
<b>As of December 31, 2014</b>							
Proved properties	46,444	69,277	17,774	8,115	30,622	1,066	173,298
Unproved properties	628	5,045	8,309	566	1,730	-	16,278
<b>Total capitalized costs</b>	<b>47,072</b>	<b>74,322</b>	<b>26,083</b>	<b>8,681</b>	<b>32,352</b>	<b>1,066</b>	<b>189,576</b>
Accumulated depreciation, depletion and amortization	(28,748)	(34,438)	(10,657)	(6,304)	(11,005)	(496)	(91,648)
<b>Net capitalized costs</b>	<b>18,324</b>	<b>39,884</b>	<b>15,426</b>	<b>2,377</b>	<b>21,347</b>	<b>570</b>	<b>97,928</b>
<b>As of December 31, 2015</b>							
Proved properties	44,104	77,032	19,630	9,626	33,832	1,163	185,387
Unproved properties	524	4,573	8,915	1,847	1,491	4	17,354
<b>Total capitalized costs</b>	<b>44,628</b>	<b>81,605</b>	<b>28,545</b>	<b>11,473</b>	<b>35,323</b>	<b>1,167</b>	<b>202,741</b>
Accumulated depreciation, depletion and amortization	(28,064)	(41,737)	(11,488)	(6,805)	(13,924)	(699)	(102,717)
<b>Net capitalized costs</b>	<b>16,564</b>	<b>39,868</b>	<b>17,057</b>	<b>4,668</b>	<b>21,399</b>	<b>468</b>	<b>100,024</b>

(1) Revision of historical costs out of ASC932 perimeter.

(in million dollars)

Equity affiliates

Group's share of net capitalized costs	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
As of December 31, 2011	-	-	821	1,500	-	6,349	8,670
As of December 31, 2012	-	-	1,150	1,447	-	6,247	8,844
As of December 31, 2013	-	-	1,007	1,418	-	7,096	9,521
As of December 31, 2014	-	-	1,101	1,152	-	4,607	6,860
<b>As of December 31, 2015</b>							
Proved properties	-	-	1,500	4,323	-	4,573	10,396
Unproved properties	-	-	-	-	-	202	202
<b>Total capitalized costs</b>	-	-	<b>1,500</b>	<b>4,323</b>	-	<b>4,775</b>	<b>10,598</b>
Accumulated depreciation, depletion and amortization	-	-	(403)	(3,192)	-	(655)	(4,250)
<b>Net capitalized costs</b>	-	-	<b>1,097</b>	<b>1,131</b>	-	<b>4,120</b>	<b>6,348</b>



## STANDARDIZED MEASURE OF DISCOUNTED FUTURE NET CASH FLOWS (EXCLUDING TRANSPORTATION)

The standardized measure of discounted future net cash flows relating to proved oil and gas reserve quantities was developed as follows:

1. Estimates of proved reserves and the corresponding production profiles are based on current technical and economic conditions;
2. The estimated future cash flows are determined based on prices used in estimating the Group's proved oil and gas reserves;
3. The future cash flows incorporate estimated production costs (including production taxes), future development costs and asset retirement costs. All cost estimates are based on year-end technical and economic conditions;
4. Future income taxes are computed by applying the year-end statutory tax rate to future net cash flows after consideration of permanent differences and future income tax credits; and

5. Future net cash flows are discounted at a standard discount rate of 10 percent.

These principles applied are those required by ASC 932 and do not reflect the expectations of real revenues from these reserves, nor their present value; hence, they do not constitute criteria for investment decisions.

An estimate of the fair value of reserves should also take into account, among other things, the recovery of reserves not presently classified as proved, anticipated future changes in prices and costs and a discount factor more representative of the time value of money and the risks inherent in reserve estimates.

(in million dollars)

Consolidated subsidiaries

	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>As of December 31, 2011</b>							
Future cash inflows	120,398	234,532	75,078	20,035	93,292	1,810	545,145
Future production costs	(26,326)	(44,478)	(31,828)	(5,552)	(16,942)	(779)	(125,905)
Future development costs	(30,312)	(31,917)	(16,182)	(4,358)	(15,130)	(344)	(98,243)
Future income taxes	(39,341)	(99,561)	(6,110)	(3,915)	(17,905)	(261)	(167,093)
<b>Future net cash flows, after income taxes</b>	<b>24,419</b>	<b>58,576</b>	<b>20,958</b>	<b>6,210</b>	<b>43,315</b>	<b>426</b>	<b>153,904</b>
Discount at 10%	(13,209)	(24,928)	(17,233)	(3,064)	(28,857)	(173)	(87,464)
<b>Standardized measure of discounted future net cash flows</b>	<b>11,210</b>	<b>33,648</b>	<b>3,725</b>	<b>3,146</b>	<b>14,458</b>	<b>253</b>	<b>66,440</b>
<b>As of December 31, 2012</b>							
Future cash inflows	120,136	228,622	74,932	21,231	88,907	2,578	536,406
Future production costs	(26,210)	(50,380)	(33,282)	(6,719)	(17,980)	(1,633)	(136,204)
Future development costs	(31,563)	(37,242)	(16,689)	(4,906)	(13,504)	(613)	(104,517)
Future income taxes	(35,305)	(87,660)	(5,743)	(3,521)	(16,054)	(237)	(148,520)
<b>Future net cash flows, after income taxes</b>	<b>27,058</b>	<b>53,340</b>	<b>19,218</b>	<b>6,085</b>	<b>41,369</b>	<b>95</b>	<b>147,165</b>
Discount at 10%	(13,596)	(22,851)	(14,960)	(2,870)	(25,743)	7	(80,013)
<b>Standardized measure of discounted future net cash flows</b>	<b>13,462</b>	<b>30,489</b>	<b>4,258</b>	<b>3,215</b>	<b>15,626</b>	<b>102</b>	<b>67,152</b>
<b>As of December 31, 2013</b>							
Future cash inflows	106,968	205,741	78,813	19,413	93,404	2,332	506,671
Future production costs	(24,973)	(50,531)	(36,172)	(6,950)	(18,548)	(1,456)	(138,630)
Future development costs	(30,534)	(34,364)	(18,844)	(4,282)	(16,570)	(526)	(105,120)
Future income taxes	(27,307)	(73,232)	(5,190)	(3,030)	(14,946)	(219)	(123,924)
<b>Future net cash flows, after income taxes</b>	<b>24,154</b>	<b>47,614</b>	<b>18,607</b>	<b>5,151</b>	<b>43,340</b>	<b>131</b>	<b>138,997</b>
Discount at 10%	(10,813)	(19,397)	(15,304)	(2,490)	(27,670)	(49)	(75,723)
<b>Standardized measure of discounted future net cash flows</b>	<b>13,341</b>	<b>28,217</b>	<b>3,303</b>	<b>2,661</b>	<b>15,670</b>	<b>82</b>	<b>63,274</b>

(in million dollars)

## Consolidated subsidiaries

	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
<b>As of December 31, 2014</b>							
Future cash inflows	87,950	184,975	87,965	17,214	86,184	2,294	466,582
Future production costs	(23,722)	(49,796)	(38,776)	(6,240)	(16,700)	(1,255)	(136,489)
Future development costs	(28,529)	(35,683)	(16,728)	(3,534)	(12,177)	(780)	(97,431)
Future income taxes	(15,363)	(59,063)	(5,891)	(2,881)	(13,475)	(172)	(96,845)
<b>Future net cash flows, after income taxes</b>	<b>20,336</b>	<b>40,433</b>	<b>26,570</b>	<b>4,559</b>	<b>43,832</b>	<b>87</b>	<b>135,817</b>
Discount at 10%	(7,928)	(16,026)	(19,489)	(2,173)	(29,422)	(5)	(75,043)
<b>Standardized measure of discounted future net cash flows</b>	<b>12,408</b>	<b>24,407</b>	<b>7,081</b>	<b>2,386</b>	<b>14,410</b>	<b>82</b>	<b>60,774</b>
<b>As of December 31, 2015</b>							
Future cash inflows	46,490	76,719	40,866	55,819	49,825	1,045	270,764
Future production costs	(14,787)	(28,159)	(24,103)	(45,806)	(13,831)	(512)	(127,198)
Future development costs	(17,956)	(25,035)	(11,104)	(4,907)	(8,751)	(495)	(68,248)
Future income taxes	(6,720)	(12,479)	(1,105)	(1,409)	(3,843)	(28)	(25,584)
<b>Future net cash flows, after income taxes</b>	<b>7,027</b>	<b>11,046</b>	<b>4,554</b>	<b>3,697</b>	<b>23,400</b>	<b>10</b>	<b>49,734</b>
Discount at 10%	(887)	(3,550)	(4,014)	(2,095)	(15,195)	18	(25,723)
<b>Standardized measure of discounted future net cash flows</b>	<b>6,140</b>	<b>7,496</b>	<b>540</b>	<b>1,602</b>	<b>8,205</b>	<b>28</b>	<b>24,011</b>
<b>Minority interests in future net cash flows as of</b>							
December 31, 2011	-	782	-	-	-	-	782
December 31, 2012	-	646	-	-	-	-	646
December 31, 2013	-	808	-	-	-	-	808
December 31, 2014	-	1,103	-	-	-	-	1,103
<b>December 31, 2015</b>	<b>-</b>	<b>448</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>448</b>

(in million dollars)

## Equity affiliates

Group's share of equity affiliates' future net cash flows as of	Europe	Africa	Americas	Middle East	Asia-CIS (excl. Russia)	Russia	Total
December 31, 2011	-	70	2,595	12,148	-	924	15,737
December 31, 2012	-	676	1,930	12,491	-	794	15,891
December 31, 2013	-	215	1,304	12,834	-	1,066	15,419
December 31, 2014	-	361	1,728	11,591	-	5,413	19,093
<b>December 31, 2015</b>							
Future cash inflows	-	52	7,736	36,231	-	21,779	65,798
Future production costs	-	-	(2,884)	(16,814)	-	(7,973)	(27,671)
Future development costs	-	(28)	(547)	(2,638)	-	(1,146)	(4,359)
Future income taxes	-	(29)	(918)	(2,818)	-	(3,540)	(7,305)
<b>Future net cash flows, after income taxes</b>	<b>-</b>	<b>(5)</b>	<b>3,387</b>	<b>13,961</b>	<b>-</b>	<b>9,120</b>	<b>26,463</b>
Discount at 10%	-	(98)	(1,759)	(7,009)	-	(8,116)	(16,982)
<b>Standardized measure of discounted future net cash flows</b>	<b>-</b>	<b>(103)</b>	<b>1,628</b>	<b>6,952</b>	<b>-</b>	<b>1,004</b>	<b>9,481</b>

## CHANGES IN THE STANDARDIZED MEASURE OF DISCOUNTED FUTURE NET CASH FLOWS

### Consolidated subsidiaries

(in million dollars)

	2015	2014	2013	2012	2011
<b>Beginning of year</b>	<b>60,774</b>	<b>63,274</b>	<b>67,152</b>	<b>66,440</b>	<b>47,955</b>
Sales and transfers, net of production costs	(14,209)	(26,647)	(32,860)	(36,685)	(37,617)
Net change in sales and transfer prices and in production costs and other expenses	(88,615)	(16,703)	(8,007)	3,532	64,638
Extensions, discoveries and improved recovery	933	1,912	1,106	1,749	2,354
Changes in estimated future development costs	4,412	(5,407)	(10,803)	(8,381)	(6,724)
Previously estimated development costs incurred during the year	19,694	21,484	18,218	15,220	13,338
Revisions of previous quantity estimates	(4,800)	(1,505)	1,511	3,504	1,805
Accretion of discount	6,077	6,327	6,715	6,644	4,795
Net change in income taxes	42,252	20,116	20,178	18,034	(23,717)
Purchases of reserves in place	-	26	1,459	385	1,240
Sales of reserves in place	(2,507)	(2,103)	(1,395)	(3,290)	(1,627)
<b>End of year</b>	<b>24,011</b>	<b>60,774</b>	<b>63,274</b>	<b>67,152</b>	<b>66,440</b>

### Equity affiliates

(in million dollars)

	2015	2014	2013	2012	2011
<b>Beginning of year</b>	<b>19,093</b>	<b>15,419</b>	<b>15,891</b>	<b>15,737</b>	<b>12,289</b>
Sales and transfers, net of production costs	(1,860)	(3,639)	(3,723)	(3,074)	(2,772)
Net change in sales and transfer prices and in production costs and other expenses	(14,821)	(1,546)	(1,056)	(1,702)	5,901
Extensions, discoveries and improved recovery	-	4,444	4,980	(32)	-
Changes in estimated future development costs	1,572	190	540	(638)	(536)
Previously estimated development costs incurred during the year	1,272	1,330	1,101	1,042	890
Revisions of previous quantity estimates	315	19	(5,020)	1,268	(1,050)
Accretion of discount	1,909	1,542	1,589	1,574	1,229
Net change in income taxes	1,881	834	1,107	1,693	(1,879)
Purchases of reserves in place	186	543	520	23	2,539
Sales of reserves in place	(66)	(43)	(510)	-	(874)
<b>End of year</b>	<b>9,481</b>	<b>19,093</b>	<b>15,419</b>	<b>15,891</b>	<b>15,737</b>

## OIL AND GAS ACREAGE

As of December 31,  
(in thousands of acres)

		2015		2014		2013	
		Undeveloped acreage <sup>(1)</sup>	Developed acreage	Undeveloped acreage <sup>(1)</sup>	Developed acreage	Undeveloped acreage <sup>(1)</sup>	Developed acreage
Europe	Gross	9,585	703	10,601	692	10,804	722
	Net	4,518	149	5,197	143	5,305	163
Africa	Gross	93,306	1,313	122,385	1,306	134,157	1,266
	Net	53,154	346	79,562	350	86,493	341
Americas	Gross	23,881	984	25,081	962	19,790	960
	Net	9,186	304	11,375	299	9,391	286
Middle East	Gross	28,032	2,189	34,375	1,215	33,242	1,482
	Net	3,241	227	9,908	129	4,534	192
Asia-CIS (incl. Russia)	Gross	56,255	1,254	53,495	2,075	55,980	1,064
	Net	29,078	356	28,264	468	29,880	309
<b>Total</b>	<b>Gross</b>	<b>211,059</b>	<b>6,443</b>	<b>245,937</b>	<b>6,250</b>	<b>253,973</b>	<b>5,494</b>
	<b>Net<sup>(2)</sup></b>	<b>99,177</b>	<b>1,382</b>	<b>134,306</b>	<b>1,389</b>	<b>135,603</b>	<b>1,291</b>

As of December 31,  
(in thousands of acres)

		2012		2011	
		Undeveloped acreage <sup>(1)</sup>	Developed acreage	Undeveloped acreage <sup>(1)</sup>	Developed acreage
Europe	Gross	10,015	724	6,478	781
	Net	6,882	176	3,497	185
Africa	Gross	135,610	1,256	110,346	1,229
	Net	88,457	337	65,391	333
Americas	Gross	16,604	1,705	15,454	1,028
	Net	6,800	330	5,349	329
Middle East	Gross	32,369	1,896	31,671	1,461
	Net	3,082	256	2,707	217
Asia-CIS (incl. Russia)	Gross	37,208	955	40,552	930
	Net	18,184	270	19,591	255
<b>Total</b>	<b>Gross</b>	<b>231,806</b>	<b>6,536</b>	<b>204,501</b>	<b>5,429</b>
	<b>Net<sup>(2)</sup></b>	<b>123,405</b>	<b>1,369</b>	<b>96,535</b>	<b>1,319</b>

(1) Undeveloped acreage includes leases and concessions.

(2) Net acreage equals the sum of the Group's equity stakes in gross acreage.

## NUMBER OF PRODUCTIVE WELLS

As of December 31, (number of wells)		2015		2014		2013	
		Gross productive wells	Net productive wells <sup>(1)</sup>	Gross productive wells	Net productive wells <sup>(1)</sup>	Gross productive wells	Net productive wells <sup>(1)</sup>
Europe	Oil	386	105	370	101	403	106
	Gas	283	88	279	82	286	87
Africa	Oil	2,532	624	2,297	619	2,269	615
	Gas	177	49	158	49	156	48
Americas	Oil	1,092	349	961	295	868	266
	Gas	3,903	795	3,817	782	3,311	634
Middle East	Oil	7,625	510	5,540	355	6,283	441
	Gas	80	16	107	20	295	36
Asia-CIS (incl. Russia)	Oil	347	99	277	88	229	81
	Gas	2,885	895	2,473	799	2,306	741
<b>Total</b>	<b>Oil</b>	<b>11,982</b>	<b>1,687</b>	<b>9,445</b>	<b>1,458</b>	<b>10,052</b>	<b>1,509</b>
	<b>Gas</b>	<b>7,328</b>	<b>1,843</b>	<b>6,834</b>	<b>1,732</b>	<b>6,354</b>	<b>1,546</b>

As of December 31, (number of wells)		2012		2011	
		Gross productive wells	Net productive wells <sup>(1)</sup>	Gross productive wells	Net productive wells <sup>(1)</sup>
Europe	Oil	410	111	576	151
	Gas	330	117	358	125
Africa	Oil	2,216	593	2,275	576
	Gas	156	48	157	44
Americas	Oil	898	258	877	247
	Gas	2,892	546	2,707	526
Middle East	Oil	6,488	462	7,829	721
	Gas	371	49	372	49
Asia-CIS (incl. Russia)	Oil	206	75	209	75
	Gas	1,912	578	1,589	498
<b>Total</b>	<b>Oil</b>	<b>10,218</b>	<b>1,499</b>	<b>11,766</b>	<b>1,770</b>
	<b>Gas</b>	<b>5,661</b>	<b>1,338</b>	<b>5,183</b>	<b>1,242</b>

(1) Net wells equal the sum of the Group's equity stakes in gross wells.

## NUMBER OF NET PRODUCTIVE AND DRY WELLS DRILLED

As of December 31, (number of wells)	2015			2014			2013		
	Net productive wells drilled <sup>(1)(2)</sup>	Net dry wells drilled <sup>(1)(3)</sup>	Net total wells drilled <sup>(1)(3)</sup>	Net productive wells drilled <sup>(1)(2)</sup>	Net dry wells drilled <sup>(1)(3)</sup>	Net total wells drilled <sup>(1)(3)</sup>	Net productive wells drilled <sup>(1)(2)</sup>	Net dry wells drilled <sup>(1)(3)</sup>	Net total wells drilled <sup>(1)(3)</sup>
<b>Exploratory</b>									
Europe	1.0	3.6	4.6	1.4	0.2	1.6	1.5	0.2	1.7
Africa	0.2	2.1	2.3	2.0	3.3	5.3	1.5	5.1	6.6
Americas	1.4	0.6	2.0	2.1	0.3	2.4	2.9	1.4	4.3
Middle East	0.3	0.5	0.8	0.3	0.3	0.6	0.6	0.7	1.3
Asia-CIS (incl. Russia)	2.0	1.9	3.9	1.2	1.4	2.6	1.6	4.3	5.9
<b>Subtotal</b>	<b>4.9</b>	<b>8.7</b>	<b>13.6</b>	<b>7.0</b>	<b>5.5</b>	<b>12.5</b>	<b>8.1</b>	<b>11.7</b>	<b>19.8</b>
<b>Development</b>									
Europe	14.0	0.4	14.4	8.8	-	8.8	6.9	0.3	7.2
Africa	21.4	-	21.4	24.6	1.0	25.6	19.7	0.4	20.1
Americas	60.6	0.1	60.7	128.1	0.2	128.3	98.0	-	98.0
Middle East	36.6	0.6	37.2	36.1	0.2	36.3	42.7	0.3	43.0
Asia-CIS (incl. Russia)	111.5	-	111.5	135.0	1.3	136.3	198.0	-	198.0
<b>Subtotal</b>	<b>244.1</b>	<b>1.1</b>	<b>245.2</b>	<b>332.6</b>	<b>2.7</b>	<b>335.3</b>	<b>365.3</b>	<b>1.0</b>	<b>366.3</b>
<b>Total</b>	<b>249.0</b>	<b>9.8</b>	<b>258.8</b>	<b>339.6</b>	<b>8.2</b>	<b>347.8</b>	<b>373.4</b>	<b>12.7</b>	<b>386.1</b>

As of December 31, (number of wells)	2012			2011		
	Net productive wells drilled <sup>(1)(2)</sup>	Net dry wells drilled <sup>(1)(3)</sup>	Net total wells drilled <sup>(1)(3)</sup>	Net productive wells drilled <sup>(1)(2)</sup>	Net dry wells drilled <sup>(1)(3)</sup>	Net total wells drilled <sup>(1)(3)</sup>
<b>Exploratory</b>						
Europe	0.9	3.3	4.2	1.5	1.7	3.2
Africa	4.9	2.8	7.7	2.9	1.5	4.4
Americas	3.9	0.6	4.5	1.2	1.3	2.5
Middle East	-	-	-	1.2	0.8	2.0
Asia-CIS (incl. Russia)	2.4	1.4	3.8	2.1	3.7	5.8
<b>Subtotal</b>	<b>12.1</b>	<b>8.1</b>	<b>20.2</b>	<b>8.9</b>	<b>9.0</b>	<b>17.9</b>
<b>Development</b>						
Europe	6.0	0.7	6.7	7.5	-	7.5
Africa	22.7	-	22.7	24.7	-	24.7
Americas	70.6	-	70.6	113.1	-	113.1
Middle East	43.3	-	43.3	32.6	2.6	35.2
Asia-CIS (incl. Russia)	127.8	-	127.8	118.4	-	118.4
<b>Subtotal</b>	<b>270.4</b>	<b>0.7</b>	<b>271.1</b>	<b>296.3</b>	<b>2.6</b>	<b>298.9</b>
<b>Total</b>	<b>282.5</b>	<b>8.8</b>	<b>291.3</b>	<b>305.2</b>	<b>11.6</b>	<b>316.8</b>

(1) Net wells equal the sum of the Company's fractional interest in gross wells.

(2) Includes certain exploratory wells that were abandoned but which would have been capable of producing oil in sufficient quantities to justify completion.

(3) For information: service wells and stratigraphic wells drilled within oil sands operations in Canada are not reported in this table (34.8 wells in 2015, 90.0 wells in 2014, 86.2 wells in 2013, 131.7 in 2012 and 82.2 in 2011).

## WELLS IN THE PROCESS OF BEING DRILLED (INCLUDING WELLS TEMPORARILY SUSPENDED)

As of December 31, (number of wells)	2015		2014		2013	
	Gross	Net <sup>(1)</sup>	Gross	Net <sup>(1)</sup>	Gross	Net <sup>(1)</sup>
<b>Exploratory</b>						
Europe	5	1.6	6	2.1	2	1.5
Africa	25	7.3	32	9.6	31	9.8
Americas	14	4.6	12	4.0	15	6.7
Middle East	8	2.5	13	4.2	10	3.6
Asia-CIS (incl. Russia)	11	3.4	12	3.4	15	5.7
<b>Subtotal</b>	<b>63</b>	<b>19.4</b>	<b>75</b>	<b>23.3</b>	<b>73</b>	<b>27.3</b>
<b>Other wells<sup>(2)</sup></b>						
Europe	38	13.6	36	13.9	35	13.4
Africa	56	14.9	47	12.6	27	7.7
Americas	63	22.4	370	159.3	348	120.7
Middle East	158	20.5	128	14.0	129	15.8
Asia-CIS (incl. Russia)	755	209.1	1,000	238.9	821	246.1
<b>Subtotal</b>	<b>1,070</b>	<b>280.5</b>	<b>1,581</b>	<b>438.7</b>	<b>1,360</b>	<b>403.7</b>
<b>Total</b>	<b>1,133</b>	<b>299.9</b>	<b>1,656</b>	<b>462.0</b>	<b>1,433</b>	<b>431.0</b>

As of December 31, (number of wells)	2012		2011	
	Gross	Net <sup>(1)</sup>	Gross	Net <sup>(1)</sup>
<b>Exploratory</b>				
Europe	1	1.0	2	2.0
Africa	4	1.3	2	0.8
Americas	7	3.4	3	1.0
Middle East	2	1.1	-	-
Asia-CIS (incl. Russia)	2	1.3	1	0.6
<b>Subtotal</b>	<b>16</b>	<b>8.1</b>	<b>8</b>	<b>4.4</b>
<b>Other wells<sup>(2)</sup></b>				
Europe	23	6.2	21	4.5
Africa	25	6.4	31	11.3
Americas	29	8.2	22	5.7
Middle East	93	6.1	26	3.5
Asia-CIS (incl. Russia)	171	49.2	11	5.1
<b>Subtotal</b>	<b>341</b>	<b>76.1</b>	<b>111</b>	<b>30.1</b>
<b>Total</b>	<b>357</b>	<b>84.2</b>	<b>119</b>	<b>34.5</b>

(1) Net wells equal the sum of the Group's equity stakes in gross wells. From 2013, includes wells for which surface facilities permitting production have not yet been constructed. Such wells are also reported in the table "Number of net productive and dry wells drilled", for the year in which they were drilled.

(2) Other wells are development wells, service wells, stratigraphic wells and extension wells.



## LNG POSITIONS AS OF DECEMBER 31, 2015



(1) TOTAL has an indirect stake via Oman LNG's stake in Qalhat LNG.

(2) The State of Papua New Guinea retains the right to enter the license (when the final investment decision is made) at a maximum level of 22.5%. In this case, TOTAL's stake would be reduced to 31.1%.

(3) Direct stake in the project.

## LIQUEFIED NATURAL GAS (LNG) SALES<sup>(1)</sup>

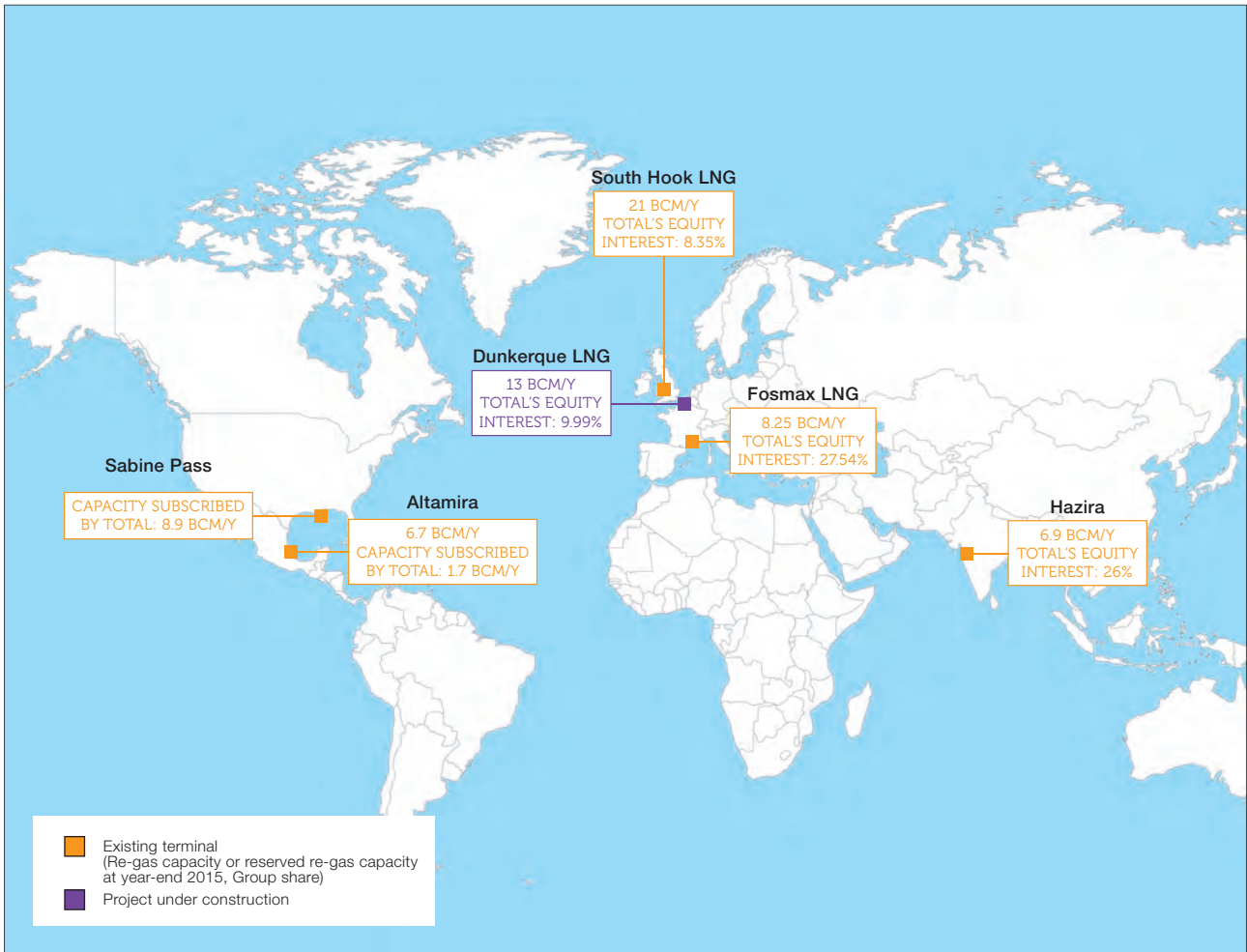
(kt/y)	2015	2014	2013	2012	2011
Nigeria (NLNG)	3,068	3,105	2,731	3,198	3,162
Indonesia (Bontang) <sup>(2)</sup>	2,990	2,901	3,022	2,975	3,888
Qatar (Qatargas II)	1,237	1,277	1,308	1,168	1,310
Qatar (Qatargas I)	932	937	952	921	969
Norway (Snøhvit)	731	658	567	631	521
Yemen LNG	529	2,590	2,983	1,900	2,686
Oman <sup>(3)</sup>	336	344	378	358	369
Abu Dhabi (Adgas)	289	290	272	268	287
Gladstone LNG	103	-	-	-	-
Angola LNG	-	44	43	-	-
<b>Total</b>	<b>10,216</b>	<b>12,146</b>	<b>12,257</b>	<b>11,418</b>	<b>13,192</b>

(1) Group share, excluding trading.

(2) From 2007, TOTAL's actual net supply to LNG plant applied to Bontang sales.

(3) Includes both Oman LNG & Qalhat LNG.

## RE-GASIFICATION TERMINALS AS OF DECEMBER 31, 2015



GLNG.

## GAS & POWER ACTIVITIES IN EUROPE AS OF DECEMBER 31, 2015



(1) Asset sale was closed in the first quarter of 2016.



Ichthys.



## GAS & POWER ACTIVITIES IN NORTH AND SOUTH AMERICA AS OF DECEMBER 31, 2015



(1) Asset sale was closed in the first quarter of 2016.

## INTERESTS IN PIPELINES

The table below sets forth interests of the Group's entities<sup>(1)</sup> in oil and gas pipelines.

As of December 31, 2015

Pipeline(s)	Origin	Destination	% interest	Operator	Liquids	Gas
<b>Europe</b>						
<b>Norway</b>						
Frostpipe (inhibited)	Lille-Frigg, Froy	Oseberg	36.25		x	
Heimdal to Brae Condensate Line	Heimdal	Brae	16.76		x	
Kvitebjorn pipeline	Kvitebjorn	Mongstad	5.00		x	
Norpipe Oil	Ekofisk Treatment center	Teeside (UK)	34.93		x	
Oseberg Transport System	Oseberg, Brage and Veslefrikk	Sture	12.98		x	
Sleipner East Condensate Pipe	Sleipner East	Karsto	10.00		x	
Troll Oil Pipeline I and II	Troll B and C	Vestprosess (Mongstad Refinery)	3.71		x	
Vestprosess	Kollsnes (Area E)	Vestprocess (Mongstad Refinery)	5.00		x	
Polarled	Asta Hansteen/Linnorm	Nyhamna	5.11			x
<b>The Netherlands</b>						
Nogat pipeline	F3-FB	Den Helder	5.00			x
WGT K13-Den Helder	K13A	Den Helder	4.66			x
WGT K13-Extension	Markham	K13 (via K4/K5)	23.00			x
<b>United Kingdom</b>						
Alwyn Liquid Export Line	Alwyn North	Cormorant	100.00	x	x	
Bruce Liquid Export Line	Bruce	Forties (Unity)	43.25		x	
Central Graben Liquid Export Line (LEP)	Elgin-Franklin	ETAP	15.89		x	
Frigg System: UK line	Alwyn North, Bruce and others	St.Fergus (Scotland)	100.00	x		x
Ninian Pipeline System	Ninian	Sullom Voe	16.00		x	
Shearwater Elgin Area Line (SEAL)	Elgin-Franklin, Shearwater	Bacton	25.73			x
SEAL to Interconnector Link (SILK)	Bacton	Interconnector	54.66	x		x
<b>Africa</b>						
<b>Gabon</b>						
Mandji Pipes	Mandji fields	Cap Lopez Terminal	100.00 <sup>(a)</sup>	x	x	
Rabi Pipes	Rabi fields	Cap Lopez Terminal	100.00 <sup>(a)</sup>	x	x	
<b>Americas</b>						
<b>Argentina</b>						
TGN	Network (Northern Argentina)		15.38			x
TGM	TGN	Uruguayana (Brazil)	32.68			x
<b>Brazil</b>						
TBG	Bolivia-Brazil border	Porto Alegre via São Paulo	9.67			x
TSB	Argentina-Brazil border (TGM)	Uruguayana (Brazil)	25.00			x
	Porto Alegre	Canoas				
<b>Asia-Pacific</b>						
<b>Australia</b>						
Gladstone LNG	Fairview, Roma, Scotia, Arcadia	GLNG (Curtis Island)	27.50			x
<b>Myanmar</b>						
Yadana	Yadana	Ban-I Tong (Thai border)	31.24	x		x
<b>Rest of world</b>						
BTC	Baku (Azerbaijan)	Ceyhan (Turkey, Mediterranean)	5.00		x	
Dolphin	North Field (Qatar)	Taweelah-Fujairah-AI Ain (United Arab Emirates)	24.50			x

(a) Interest of Total Gabon. The Group has a financial interest of 58.3% in Total Gabon.

(1) Excluding equity affiliates, except for the Yadana and Dolphin pipelines.

## PIPELINE GAS SALES <sup>(1)</sup>

(Mcf/d)	2015	2014	2013	2012	2011
France	-	9	37	53	61
United Kingdom	370	313	395	379	526
Norway	469	465	463	491	481
The Netherlands	149	155	186	176	204
Africa	13	63	56	112	64
Azerbaijan	-	147	81	64	56
Brunei	62	65	58	54	56
Qatar	173	155	154	178	217
Syria	-	-	-	-	215
China	59	63	45	7	-
Indonesia <sup>(2)</sup>	119	94	92	123	115
Myanmar	150	131	126	125	118
Thailand	301	286	296	257	197
United States	306	286	252	239	222
Argentina	341	351	347	375	376
Colombia	-	-	-	14	18
Bolivia	130	136	127	124	118
Venezuela	93	87	73	64	52
Australia	25	21	23	29	21
Trinidad & Tobago	-	-	51	67	47
<b>Total</b>	<b>2,760</b>	<b>2,827</b>	<b>2,862</b>	<b>2,931</b>	<b>3,164</b>

(1) Consolidated entities.

(2) Domestic sales.

## POWER GENERATION FACILITIES

	Status	Interest	Capacity <sup>(1)</sup>	Technology
<b>Abu Dhabi</b>				
Taweelah A1	In operation	20.00%	1,600 MW	Gas
<b>Nigeria</b>				
Afam VI	In operation	10.00%	630 MW	Gas
<b>Thailand</b>				
Bang Bo	In operation	28.00%	350 MW	Gas

(1) Capacity stated at 100%.

## EUROPE ACREAGE

In 2015, TOTAL's  
production  
in Europe was

**374 kboe/d**

Representing  
**16%**  
of the Group's  
overall production



## PRODUCTION

	2015	2014	2013	2012	2011
Liquids production (Kb/d)	161	165	168	197	245
Gas production (Mcf/d)	1,161	1,089	1,231	1,259	1,453
<b>Total (Kboe/d)</b>	<b>374</b>	<b>364</b>	<b>392</b>	<b>427</b>	<b>512</b>

## MAIN START-UPS

Start-up	Projects	Type	Capacity (kboe/d)	Share	Op. Country
2015	Eldfisk II	Liq/gas	70	39.9%	Norway
	West Franklin Ph.2	Gas/Cond.	40	46.2%	x UK
2016	Laggan-Tormore	Deep off.	90	60%	x UK
2017+	Tempa Rossa	Heavy oil	55	50%	x Italy
	Martin Linge	Liq/gas	80	51%	x Norway



## TOTAL'S PRODUCING ASSETS AS OF DECEMBER 31, 2015<sup>(1)</sup>

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)
<b>Europe</b>			
<b>Norway</b>	<b>1965</b>	Atla (40.00%) Skirne (40.00%)	
			Åsgard (7.68%)
			Ekofisk (39.90%)
			Ekofisk South (39.90%)
			Eldfisk (39.90%)
			Embla (39.90%)
			Gimle (4.90%)
			Gungne (10.00%)
			Heimdal (16.76%)
			Huldra (24.33%)
			Islay (5.51%) <sup>(2)</sup>
			Kristin (6.00%)
			Kvitebjørn (5.00%)
			Mikkell (7.65%)
			Oseberg (14.70%)
			Oseberg East (14.70%)
			Oseberg South (14.70%)
			Sleipner East (10.00%)
			Sleipner West (9.41%)
			Snøhvit (18.40%)
			Stjerne (14.70%)
			Tor (48.20%)
			Troll I (3.69%)
			Troll II (3.69%)
			Tune (10.00%)
			Tyrihans (23.15%)
			Visund (7.70%)
			Visund South (7.70%)
			Visund North (7.70%)

(1) The Group's interest in the local entity is approximately 100%.

(2) The field of Islay extends partially in Norway. Total E&P UK holds a 94.49% stake and Total E&P Norge 5.51%.

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)	
<b>The Netherlands</b>	<b>1964</b>	F6a (gas) (55.66%)		
		F6a (oil) (65.68%)		
		F15a Jurassic (38.20%)		
		F15a/F15d Triassic (32.47%)		
		F15d (32.47%)		
		J3a (30.00%)		
		K1a (40.10%)		
		K1b/K2a (60.00%)		
		K2c (60.00%)		
		K3b (56.16%)		
		K3d (56.16%)		
		K4a (50.00%)		
		K4b/K5a (36.31%)		
		K5b (50.00%)		
		K6/L7 (56.16%)		
		L1a (60.00%)		
		L1d (60.00%)		
		L1e (55.66%)		
		L1f (55.66%)		
		L4a (55.66%)		
L4d (55.66%)				
		E16a (16.92%)		
		E17a/E17b (14.10%)		
		J3b/J6 (25.00%)		
		K9ab-A (22.46%)		
		Q16a (6.49%)		
<b>United Kingdom</b>	<b>1962</b>	Alwyn North (100.00%)		
		Dunbar (100.00%)		
		Ellon (100.00%)		
		Forvie North (100.00%)		
		Grant (100.00%)		
		Jura (100.00%)		
		Nuggets (100.00%)		
		Elgin-Franklin (46.17%)		
		West Franklin (46.17%)		
		Glenelg (58.73%)		
		Islay (94.49%) <sup>(1)</sup>		
				Bruce (43.25%)
				Markham unitized field (7.35%)
		Keith (25.00%)		

(1) The field of Islay extends partially in Norway. Total E&P UK holds a 94.49% stake and Total E&P Norge 5.51%.

**NORWAY**

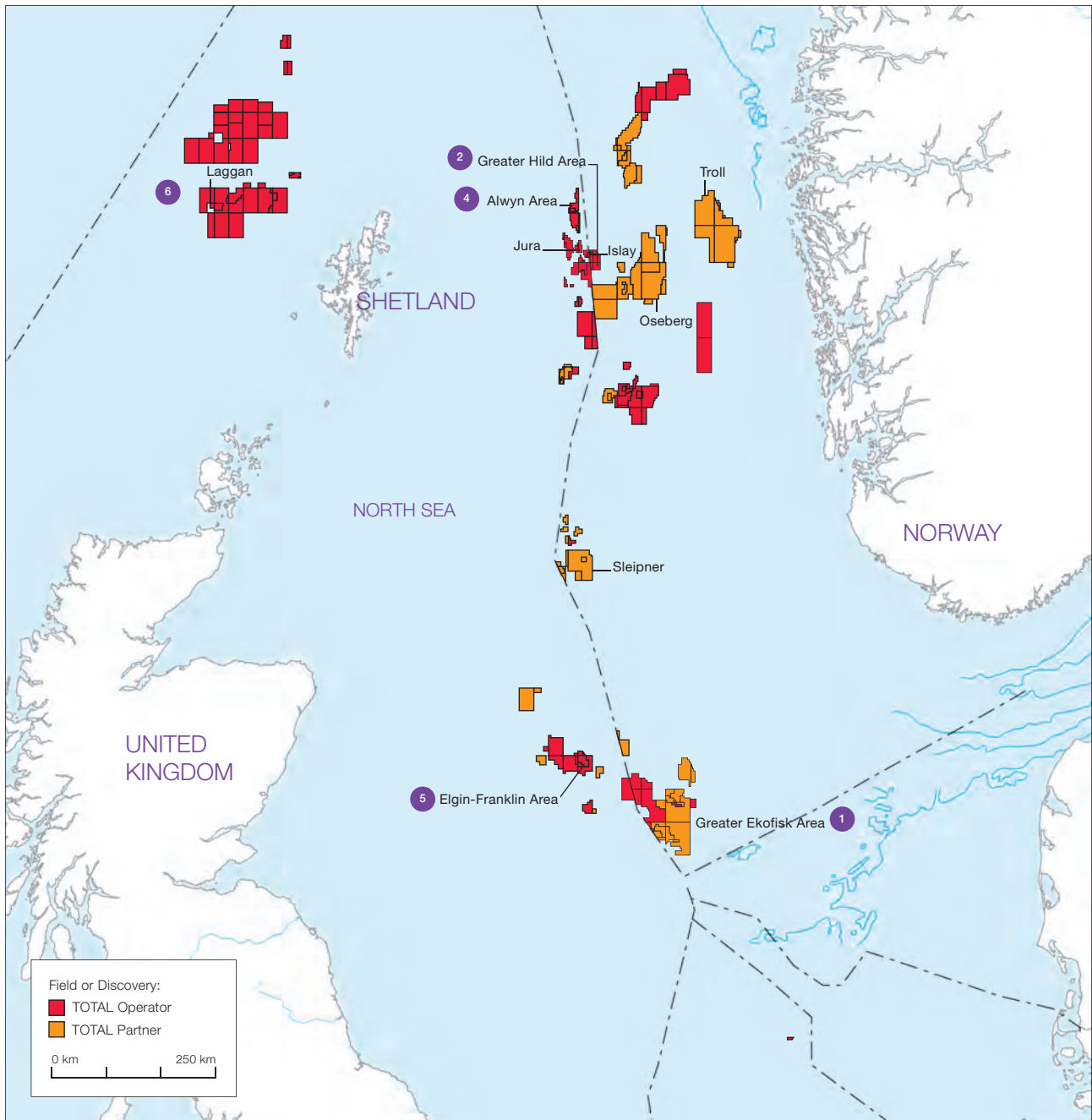
TOTAL has equity stakes in 97 production licenses on the Norwegian maritime continental shelf, 31 of which it operates.

The Group's production in 2015 was 239 kboe/d compared to 242 kboe/d in 2014 and 243 kboe/d in 2013.

- In the Greater Ekofisk area ❶ (map page 69), the Group holds a 39.9% stake in the Ekofisk and Eldfisk fields. Production at Ekofisk South started in 2013 and at Eldfisk II in January 2015 (capacity of 70 kboe/d each).
- In the Sleipner area, development of the Gina Krog field located in the north of Sleipner and approved in 2013 is underway. The Group's stake, currently 30% (after the sale of 8% in 2014), is expected to be reduced to 15% after the finalization of the sale of 15% announced in October 2015.
- In the Greater Hild area ❷ (map page 69), the Martin Linge field (51%, operator, estimated capacity 80 kboe/d) is currently being developed.
- In the Haltenbanken region, the first submarine compression train in the world was commissioned on the Åsgard project (7.7%) in September 2015.
- In the Barents Sea, the Group holds an 18.4% stake in the gas liquefaction plant of Snøhvit ❸ (capacity of 4.2 Mt/y). This plant is supplied with gas from the Snøhvit, Albatross and Askeladd fields.



Eldfisk.



## UNITED KINGDOM

The Group's production was 107 kboe/d in 2015 compared to 89 kboe/d in 2014 and 105 kboe/d in 2013. Approximately 90% of this production comes from operated fields in two main areas: the Alwyn area in the northern North Sea, and the Elgin/Franklin area in the Central Graben.

- In the Alwyn area ④ (100%), production from the Alwyn and Dunbar fields represents 20% and 25% of production, respectively. The rest of the production comes from satellites:

- 1) linked to Alwyn by subsea tieback: the Forvie gas and condensates field joined by the Jura and Islay fields and the Nuggets gas field network, which started to produce in cyclic mode at the end of 2015;
- 2) linked to Dunbar: the Ellon (oil and gas) and the Grant (gas and condensates) fields.

The natural decline of the Alwyn field's production was partially compensated by the start-up of new reservoir compartments. A system for improving recovery, the concentric gas lift, was installed in three Alwyn wells in 2014.

On the Dunbar field (100%), a new development phase (Dunbar phase IV) is underway, which includes three well work-overs and the drilling of six new wells. Drilling on the first well, D14, started in April 2015.

- In Central Graben, TOTAL holds stakes in the Elgin, Franklin and West Franklin fields ⑥ (46.2%, operator). A redevelopment project involving the drilling of five new infill wells on Elgin and Franklin started in July 2013. The first well is currently being drilled. In addition, the West Franklin Phase II development project continued with the start-up of production of two new wells in 2015.

- A third area, West of Shetland (map page 69), is currently under development. This includes the fields of Laggan, Tormore, Edradour and Glenlivet (operator with 60%, following the sale of 20% of its interests carried out in 2015) and the P967 license, including the discovery of gas at Tobermory (30%, operator). Production of the Laggan and Tormore fields started in February 2016. Production of the Edradour and Glenlivet fields is expected to start in 2017 and 2018, respectively, with an expected total capacity of 90 kboe/d.

In 2014, TOTAL acquired a 40% stake in two onshore shale gas exploration and production licenses (PEDL 139 and 140) located in the Gainsborough Trough basin of the East Midlands, and signed an agreement enabling the Group to acquire a 50% stake in the PEDL 209 license located in the same area. A 3D seismic survey was performed on the PEDL 139 and 140 licenses.

In August 2015, an agreement was signed for the sale of interests held by Total E&P UK in transport pipelines (FUKA and SIRGE) and the St. Fergus terminal. The transfer was closed in March 2016.



Laggan-Tormore.



West Franklin.

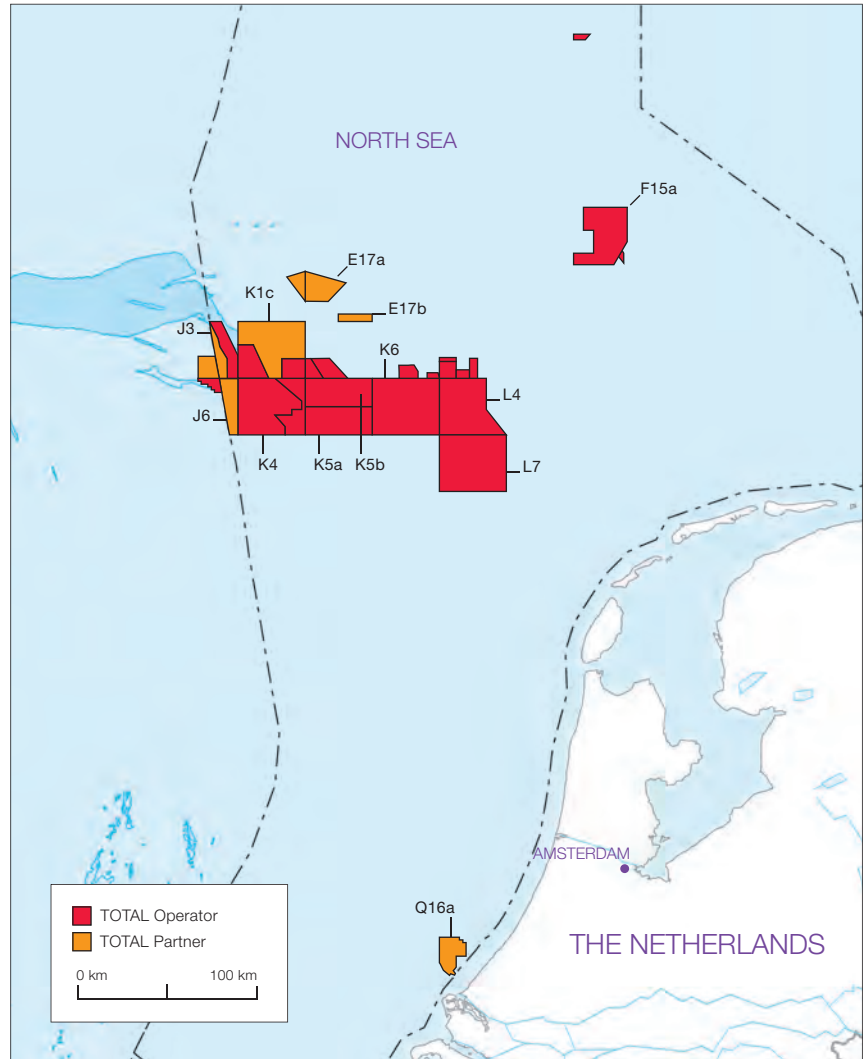


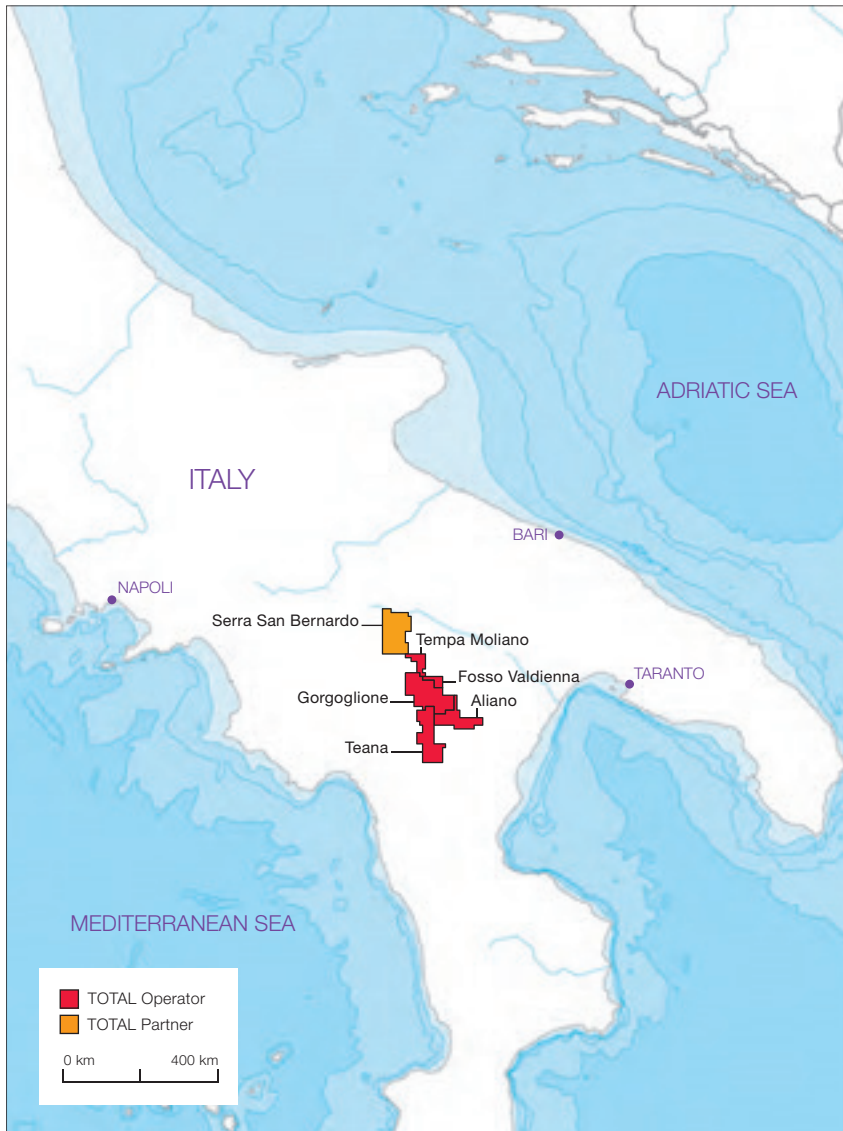
**NETHERLANDS**

TOTAL currently holds interests in 24 offshore production licenses, including 20 that it operates, and 2 offshore exploration licenses, E17c (16.92%) and K1c (30%). In 2015, the Group's production was 28 kboe/d compared to 31 kboe/d in 2014 and 35 kboe/d in 2013.

**FRANCE**

The Group's production ended with the sale in October 2014 of the Lacq concessions to Geopetrol. Production in 2014 was 2 kboe/d compared to 9 kboe/d in 2013. The Montélimar exclusive research license granted to TOTAL in 2010 for evaluating the shale gas potential of this area was repealed by the government in 2011. In January 2016, following the appeal filed in 2011, the administrative court canceled the revocation of the license deciding the Group had fulfilled its obligations.





### DENMARK

TOTAL (80%, operator) acquired two shale gas exploration licenses in 2010 in order to assess their potential. On the 1/10 (Nordjylland) license, a vertical exploration well without hydraulic fracturing drilled in 2015 revealed the presence of gas, but the quantities were not sufficient to consider economically viable production. The Group is moving forward with restoration works on the drilling site, which will be rehabilitated in compliance with environmental obligations as required by Danish law. The 2/10 (Nordsjaelland) license was relinquished in July 2015 due to lower than expected estimated potential for the Group.

### ITALY

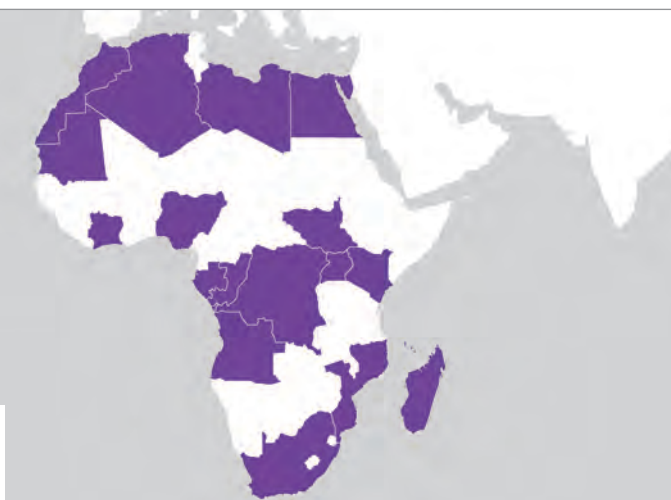
TOTAL holds a stake in two exploration licenses and in the Tempa Rossa field (50%, operator), discovered in 1989 and located on the Gorgoglione concession (Basilicate region). Development of the Tempa Rossa project is underway.

### REST OF EUROPE

TOTAL also holds interests in exploration licenses in Bulgaria and Cyprus.



## AFRICA ACREAGE



In 2015, TOTAL's production in Africa was

**678 kboe/d**

Representing **29%** of the Group's overall production

## PRODUCTION

	2015	2014	2013	2012	2011
Liquids production (Kb/d)	542	522	531	574	517
Gas production (Mcf/d)	677	693	699	705	715
<b>Total (Kboe/d)</b>	<b>678</b>	<b>657</b>	<b>670</b>	<b>713</b>	<b>659</b>

## MAIN START-UPS

Start-up	Projects	Type	Capacity (kboe/d)	Share	Op. Country
2015	Ofon 2	Liq/gas	70	40%	x Nigeria
	Dalia 1A	Deep off.	30	40%	x Angola
	Lianzi	Deep off.	40	36.75%	Congo <sup>(1)</sup>
	Moho Ph. 1b	Deep off.	40	53.5%	x Congo
2016	Angola LNG	LNG	175	13.6%	Angola
2017+	Moho North	Deep off.	100	53.5%	x Congo
	Kaombo	Deep off.	230	30%	x Angola
	Egina	Deep off.	200	24%	x Nigeria

(1) Offshore unitization area between Republic of Congo and Angola.

## TOTAL'S PRODUCING ASSETS AS OF DECEMBER 31, 2015<sup>(1)</sup>

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)
<b>Africa</b>			
<b>Algeria</b>	1952		Tin Fouye Tabankort (35.00%)
<b>Angola</b>	1953	Girassol, Jasmim, Rosa, Dalia, Pazflor, CLOV (Block 17) (40.00%)	Cabinda Block 0 (10.00%) Kuito, BBLT, Tombua-Landana (Block 14) (20.00%) <sup>(2)</sup> Lianzi (Block 14K) (10.00%) <sup>(2)</sup> Angola LNG (13.60%)
<b>Gabon</b>	1928	Anguille (100.00%) Anguille Nord Est (100.00%) Anguille Sud-Est (100.00%) Atora (40.00%) Avocette (57.50%) Baliste (50.00%) Barbier (100.00%) Baudroie Marine (50.00%) Baudroie Nord Marine (50.00%) Coucal (57.50%) Girelle (100.00%) Gonelle (100.00%) Grand Anguille Marine (100.00%) Grondin (100.00%) Hylia Marine (75.00%) Lopez Nord (100.00%) Mandaros (100.00%) M'Boukou (57.50%) M'Boumba (100.00%) Mérrou Sardine Sud (50.00%) Port Gentil Océan (100.00%) Tchengue (100.00%) Torpille (100.00%) Torpille Nord Est (100.00%)	Rabi Kounga (47.50%)
<b>Libya</b>	1959		Zones 15, 16 & 32 (75.00%) <sup>(3)</sup>
<b>Nigeria</b>	1962	OML 58 (40.00%) OML 99 Amenam-Kpono (30.40%) OML 100 (40.00%) OML 102 (40.00%) OML 130 (24.00%)	OML 102 – Ekanga (40.00%) Shell Petroleum Development Company (SPDC) 10.00%) OML 118 – Bonga (12.50%) OML 138 (20.00%)
<b>The Congo, Republic of</b>	1968	Kombi-Likalala-Libondo (65.00%) Moho Bilondo (including Moho phase 1b) (53.50%) Nkossa (53.50%) Nsoko (53.50%) Sendji (55.25%) Tchendo (65.00%), Tchibeli-Litanzi-Loussima (65.00%), Tchibouela (65.00%), Yanga (55.25%)	Lianzi (26.75%), Loango (42.50%), Zatchi (29.75%)

(1) The Group's interest in the local entity is approximately 100% in all cases except for Total Gabon (58.28%) and Total E&P Congo (85.00%).

(2) Stake in the company Angola Block 14 BV (TOTAL 50.01%).

(3) TOTAL's stake in the foreign consortium.

**NIGERIA**

The Group's production, primarily offshore, was 245 kboe/d in 2015, compared to 257 kboe/d in 2014 and 261 kboe/d in 2013. This decrease is explained mainly by the sale of interests in certain licenses of the Shell Petroleum Development Company (SPDC) joint venture as well as by an upsurge of oil bunkering activities since 2013. This has negatively affected onshore production and has had an impact on the integrity of the SPDC joint venture facilities as well as on the local environment.

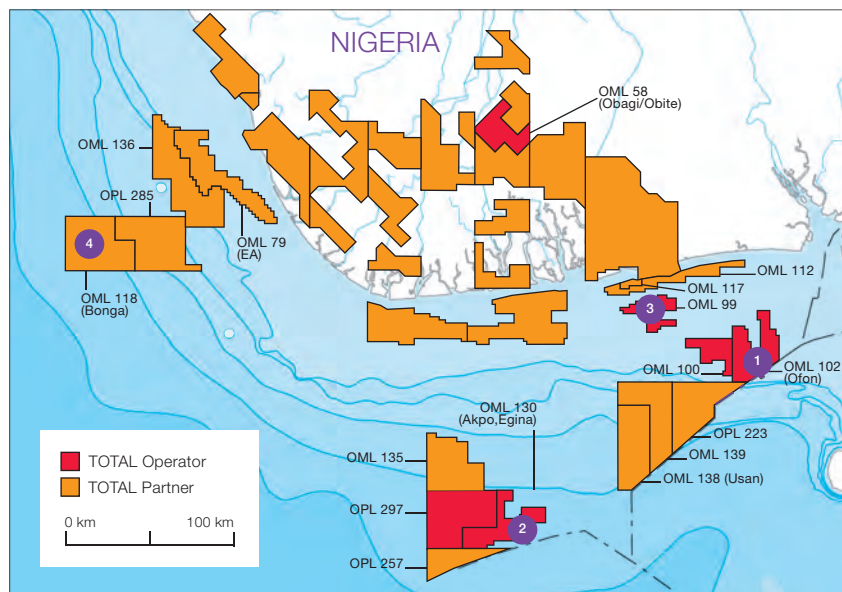
TOTAL operates 5 of the 31 oil mining leases (OML) in which it has interests and also holds interests in 4 oil prospecting licenses (OPL).

Regarding the principal variations in TOTAL's permits since 2013:

- TOTAL was granted approval by the authorities in 2013 to increase its stake in OPL 285 from 26.67% to 60% and it drilled the Ekpeyi-1 exploration well in 2015;
- In 2013, TOTAL was granted approval by the authorities for the renewal of OMLs 99, 100 and 102 for a period of 20 years;
- On OML 138 (20%), the production of the offshore field Usan reached 130 kboe/d in 2013. In 2014, two exploration wells, Ukot South-2B and Ukot South-3, and an exploration well in 2015, Ukot South-4, led to three oil discoveries. The sale process, launched in November 2012, could not be closed. This asset is no longer accounted under "assets classified as held for sale". TOTAL has ceased to be the operator of OML 138 since February 2014;
- TOTAL sold its 10% interest in OMLs 18 and 29 (in 2015) and OML 24 (in 2014), operated via the SPDC joint venture. In addition, the sale process is underway for OML 25.

TOTAL continues to develop its operated assets, in particular:

- OML 58 (40%, operator, onshore): in the scope of its joint venture with the Nigerian National Petroleum Corporation (NNPC), TOTAL has finalized the increase of the gas production capacity from 370 Mcf/d to 550 Mcf/d;
- OML 102 ❶ (40%, operator): in December 2014, TOTAL stopped routine flaring on the Ofon field (Ofon phase 2



project). The gas associated with the production of oil is now compressed and evacuated to shore and monetized via the Nigeria LNG plant;

- OML 130 ❷ (24%, operator): the development of the Egina field (200 kboe/d capacity) launched in 2013 is underway. The drilling campaign for 44 wells started at the end of 2014;
- OML 99 ❸ (40%, operator): additional studies are underway for the development of the Ikike field.

TOTAL is also developing LNG activities with a 15% stake in the Nigeria LNG Ltd company, which owns a liquefaction plant with a 22 Mt/year total capacity. Assessments are underway for the installation of an additional capacity of approximately 8.5 Mt/year. In an effort to

focus its activities, TOTAL is currently re-evaluating its participation in the Brass LNG project, in which it holds a 20.48% interest.

The Group's non-operated production in Nigeria comes mostly from the SPDC joint venture in which TOTAL holds a 10% stake. TOTAL also holds an interest in deep offshore OML 118 ❹ (12.5%). On this lease in 2015, the Bonga field has contributed 19 kboe/d to the Group's production. A unitization agreement for the Bonga South West/Aparo discovery (10%) was submitted to the authorities in 2015.

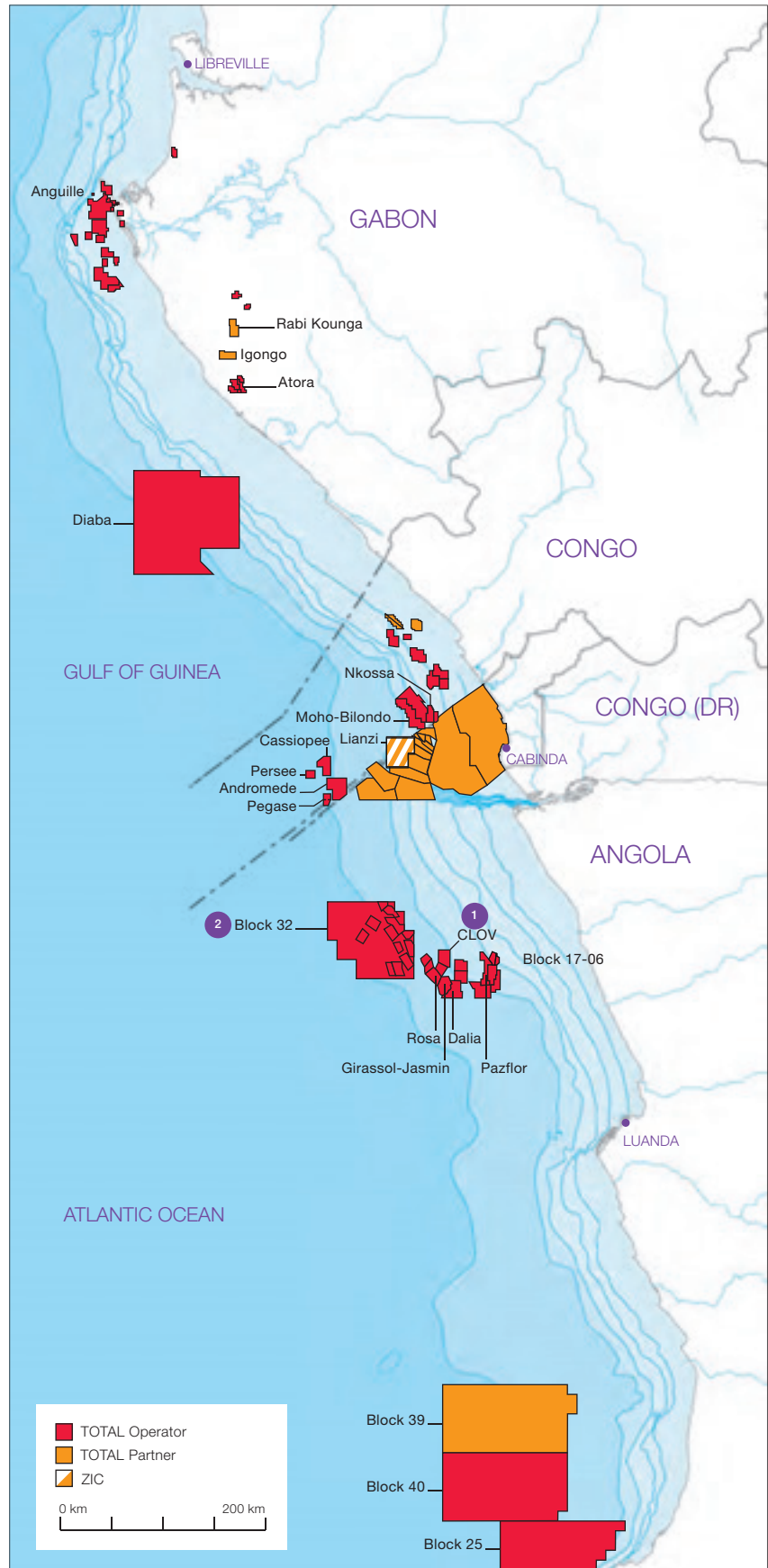


Egina.

## ANGOLA

In Angola, where TOTAL is the leading oil operator in the country<sup>(1)</sup>, the Group's production was 248 kboe/d in 2015 compared to 200 kboe/d in 2014 and 186 kboe/d in 2013. This production comes from Blocks 17, 14 and 0.

- Deep offshore Block 17 (40%, operator) is TOTAL's main asset in Angola. It is composed of four major producing hubs: Girassol, Dalia, Pazflor and CLOV. The latest greenfield project, CLOV, started production in June 2014 ① and, since September 2014, its production plateau of 160 kboe/d has been maintained. In June 2015, Dalia Phase 1A, a new development in the Dalia field, started production.
- On the ultra-deep offshore Block 32 ② (30%, operator), the Kaombo project was launched in April 2014 to develop the discoveries in the southeast part of the block via two FPSOs (Floating Production Storage and Offloading facilities) with a capacity of 115 kb/d each. The drilling campaign of 59 wells began in October 2015 and production start-up is planned for 2017. The exploration and delineation of the center and north parts of the block (outside Kaombo) is ongoing.
- On Block 14 (20%)<sup>(2)</sup>, production comes from the Tombua-Landana and Kuito fields as well as the BBLT project, comprising the Benguela, Belize, Lobito and Tomboco fields.
- Block 14K (36.75%) is the offshore unitization zone between Angola (Block 14) and the Republic of the Congo (Haute Mer license). The Lianzi field, which was connected to the existing BBLT platform (Block 14), started production at the end of October 2015. The project is expected to reach a production plateau of 40 kb/d. TOTAL's interest in the unitized Block region is held 10% through Angola Block 14 BV and 26.75% through Total E&P Congo.
- On Block 0 (10%), the development of Mafumeira Sul was approved by the partners and authorities in 2012. This project constitutes the second development phase of the Mafumeira field and is expected to start production by the end of 2016.



(1) Company data.

(2) Stake held by the company Angola Block 14 BV (TOTAL 50.01%).



## AFRICA ACREAGE

Nigeria  
Angola  
Republic  
of the Congo

Gabon  
Algeria  
Libya  
Uganda

Morocco  
Rest of Africa

- In April 2014, TOTAL sold its entire stake in Block 15/06 (15%). In the Bas-Congo basin, TOTAL is the operator of exploration Block 17/06 (30%). The Group relinquished Block 33 (58.67%, operator) in November 2014.

In the Kwanza basin, deep offshore, TOTAL is also operator of Blocks 25 (35%), and 40 (40%) and holds an interest in Block 39 (7.5% following the finalization of the sale of half of its stake in March 2015). TOTAL is also developing its LNG activities through the Angola LNG project (13.6%), which includes a gas liquefaction plant near Soyo supplied by gas associated with production from Blocks 0, 14, 15, 17 and 18. LNG production started in June 2013, but various technical incidents required the extended shutdown of the plant. LNG production is expected to resume in 2016.

### REPUBLIC OF THE CONGO

The Group's production was 87 kboe/d in 2015 compared to 95 kboe/d in 2014 and 93 kboe/d in 2013. In December 2013, Qatar Petroleum International Upstream (QPI) purchased a 15% stake in the capital of Total E&P Congo, via a share capital increase of the subsidiary.

- On the offshore field Moho Bilondo (53.5%, operator), phase 1b project (estimated capacity: 40 kboe/d) started production in December 2015. Production of the Moho Nord project (estimated capacity: 100 kboe/d) is expected to start by the first half of 2017.
- Block 14K (36.75%) corresponds to the offshore unitization area between the Republic of the Congo (Haute Mer license) and Angola (Block 14 located in Angola). The production of the Lianzi field started at the end of October 2015. TOTAL's interests in the unitization area are 26.75% held by Total E&P Congo and 10% by Angola Block 14 BV.
- Since 2013, as part of the renewal of licenses, the stakes held by the Group have been 42.5% on the Loango license and 29.75% on the Zatchi license.
- Total E&P Congo is operator of Djéno (63%), the sole oil terminal in the country.

### GABON

The Group's production in 2015 was 59 kboe/d compared to 58 kboe/d in 2014 and 59 kboe/d in 2013. The Group's exploration and production activities in

Gabon were primarily carried out by Total Gabon<sup>(1)</sup>.

- On the Anguille field (100%, operator), production of phase 3 of the redevelopment project (production capacity estimated at 20 kboe/d) from the AGM Nord platform started in 2013 and 18 wells are operational today.
- On the Torpille field (100%, operator), the data acquired during the 3D seismic survey performed in 2014 is now being processed.
- On the deep-offshore Diaba license (42.5%, operator), an exploration well (Diaman-1B), drilled in 2013, showed an accumulation of gas and condensates. Additional seismic data acquired at the end of 2014 on the western part of the license is being processed and is expected to generate a full inventory of the license's prospectivity.
- On the Nziembou (20%) license, the Igongo-1X well (which revealed a multilayer accumulation of oil and gas) was commissioned by connecting to the facilities of the Echira field in June 2015.

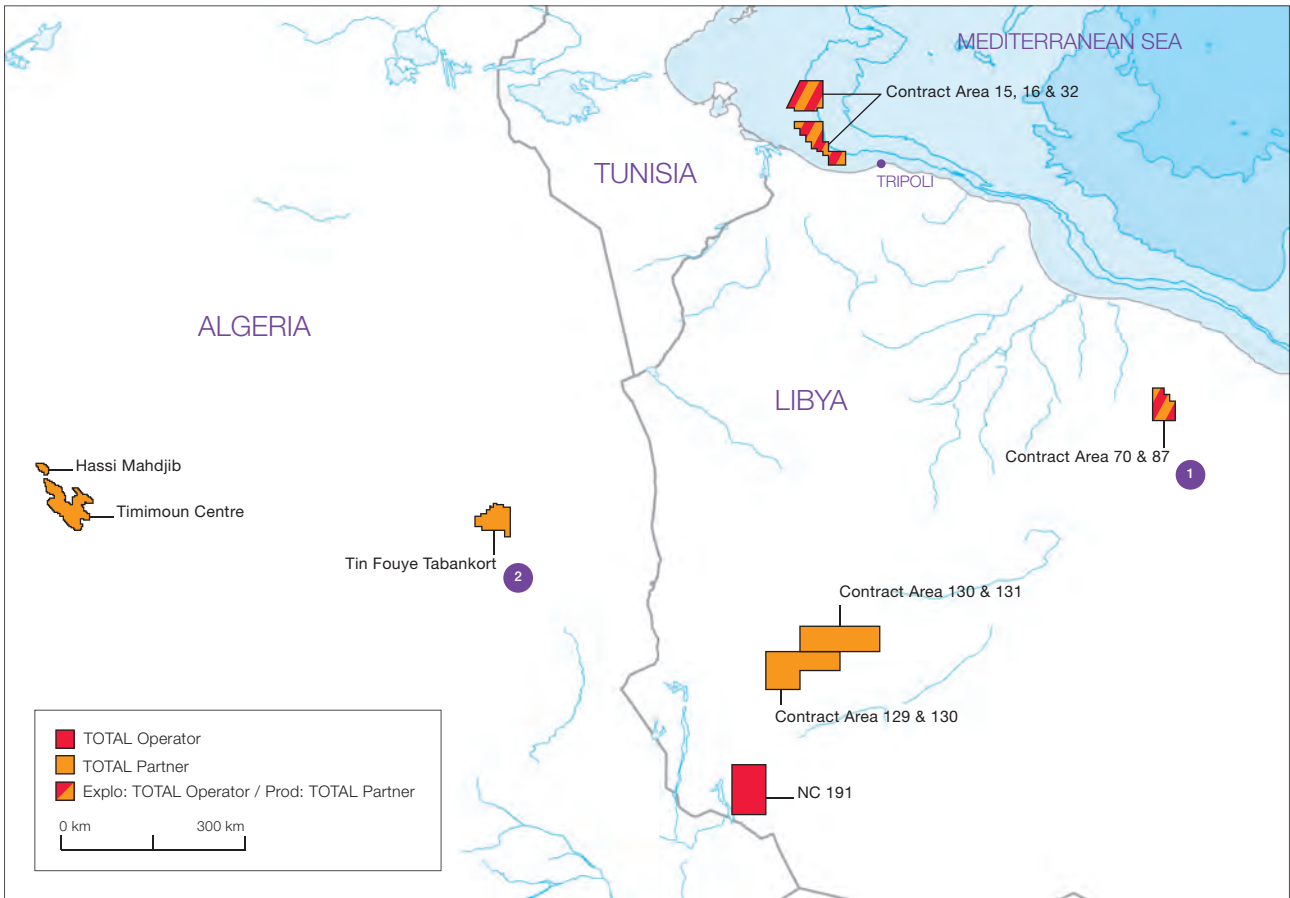


Kaombo.



Moho.

(1) Total Gabon is a company under Gabonese law listed on Euronext Paris. TOTAL holds 58.28%, the Republic of Gabon holds 25% and the public float is 16.72%.



**ALGERIA**

TOTAL's production was 25 kboe/d during 2015, compared to 20 kboe/d in 2014 and 21 kboe/d in 2013. All of the Group's production in Algeria comes from the Tin Fouyé Tabankort (TFT) field (35%) ②. TOTAL also has a 37.75% stake in the Timimoun gas development project.

The development of the Timimoun field continued in 2015 with engineering activities, the start of plant construction and the drilling preparation.

**LIBYA**

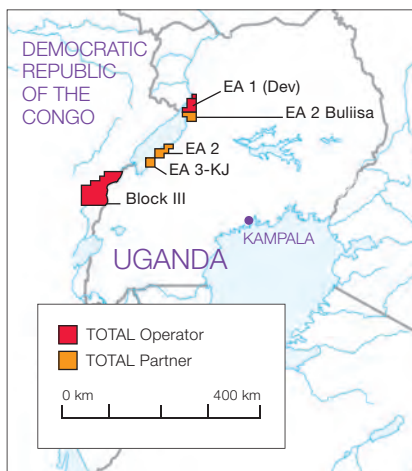
In Libya, where the security context remains unstable, the Group's production was 14 kb/d in 2015 compared to 27 kb/d in 2014 and 50 kb/d in 2013. This production comes from blocks located on offshore areas 15, 16 and 32 (Al Jurf, 75%<sup>(1)</sup>), which have not been affected by the security issues. Since the fourth quarter of 2014, production as well as exploration activities have been stopped on Mabruk – onshore areas 70 and 87 ① (75%<sup>(1)</sup>) – and on El Sharara – onshore areas 129, 130 (30%<sup>(1)</sup>), and 130 and 131 (24%<sup>(1)</sup>).

(1) TOTAL's stake in the foreign consortium.

## UGANDA

In Uganda, a growth area for the Group and where TOTAL has been present in the upstream since 2012, the Group has a 33.33% stake in the EA-1, EA-1A and EA-2 licenses and 28.33% in the EA-3 license located in the region of Lake Albert. TOTAL is the operator of licenses EA-1 and EA-1A and partner on the other licenses.

- On the EA-1 license, a drilling campaign, production tests and 3D seismic acquisition survey were carried out between 2012 and mid-2014. As of the end of 2014, five development plans had been submitted to the authorities. In 2015, discussions for the obtaining of production licenses were continued, and development optimization studies were conducted in order to start the project phase.
- The EA-1A license expired in 2013 at the end of a drilling campaign that resulted in one discovery (Lyec). With the exception of the area relating to this discovery, the license was relinquished to the authorities.
- On the EA-2 license, the drilling campaign and production tests started in 2012 were completed in 2014. Two development plans were submitted to the authorities in 2013. In 2015, discussions continued for the obtaining of production licenses.
- The development plan for Kingfisher field, located on the EA-3 production license, was approved by the authorities in 2013 and the work to develop the field continues.
- In 2015, discussions were continued with the authorities of Uganda in order to assess the best option for the layout for the crude oil export pipeline to the Indian Ocean.



## MOROCCO

The 3D seismic processing and interpretation studies acquired in 2013 in the south of the Block continued in the scope of the recognition authorization of Anzarane offshore, which covers an ocean region of 100,000 km<sup>2</sup> and was allocated in December 2011 to TOTAL by the ONHYM (National Office of Hydrocarbons and Mines). The results of geological studies having not been encouraging, the recognition authorization, which had been extended until December 2015, was not transformed into an exploration license.

## REST OF AFRICA

TOTAL also holds interests in exploration licenses in South Africa, Côte d'Ivoire, Egypt, Kenya, Madagascar, Mauritania, Mozambique and the Democratic Republic of the Congo, and is negotiating with the authorities with the view to resume exploration activities in the Republic of South Sudan.



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## COMMONWEALTH OF INDEPENDENT STATES

In 2015, TOTAL's production in CIS was

**290 kboe/d**

Representing **12%** of the Group's overall production



### PRODUCTION

	2015	2014	2013	2012	2011
Liquids production (Kb/d)	54	36	32	27	22
Gas production (Mcf/d)	1,252	1,135	1,046	909	525
<b>Total (Kboe/d)</b>	<b>290</b>	<b>249</b>	<b>227</b>	<b>195</b>	<b>119</b>

### MAIN START-UPS

Start-up	Projects	Type	Capacity (kboe/d)	Share	Op. Country
2015	Termokarstovoye	Gas/Cond.	65	49% <sup>(1)</sup>	Russia
2016	Kashagan	Liquids	370	16.81%	Kazakhstan
2017+	Yamal LNG	LNG	450	20% <sup>(1)</sup>	Russia

(1) Direct stake only.

### TOTAL'S PRODUCING ASSETS AS OF DECEMBER 31, 2015<sup>(1)</sup>

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)
<b>Commonwealth of Independent States</b>			
<b>Kazakhstan</b>	<b>1992</b>		Kashagan (16.81%)
<b>Russia</b>	<b>1991</b>	Kharyaga (40.00%)	Termokastovoye (49.00%) <sup>(2)</sup> Several fields through the participation in Novatek (18.90%)

(1) The Group's interest in the local entity is approximately 100%.

(2) TOTAL's interest in the joint venture with Novatek.

## RUSSIA

In Russia, where, as of December 31, 2015, the Group holds 19% of its proved reserves, the Group's production was 290 kboe/d in 2015 compared to 235 kboe/d in 2014 and 207 kboe/d in 2013. This production comes from the Kharyaga and Termokarstovoye fields and TOTAL's stake in OAO Novatek (18.9% as of December 31, 2015). In 2015, Russia became the leading contributor to the Group's production.

In 2014, international economic sanctions associated with the situation in Ukraine were adopted by the United States, the European Union and other countries. TOTAL complies with sanctions applicable to its activities.

On the Kharyaga ❶ (40%, operator) project, the works relating to the development plan of phases 3 and 4 are ongoing though they slowed in 2015 after a dispute with the main contractor, which was settled at the end of 2015. In addition,

in January 2016, TOTAL signed an agreement for the sale of 20% interest and the transfer of operatorship of the field. This sale is expected to take effect in the second quarter of 2016, subject to the approval of the authorities.

In addition to its shareholding in Novatek, TOTAL currently participates via a direct stake in two projects with Novatek:

- Termokarstovoye ❷ (an onshore gas and condensates field, located in the Yamalo-Nenets region): the development and production license of Termokarstovoye field is held by ZAO Terneftegas, a joint venture between Novatek (51%) and TOTAL (49%). This field, which started production in May 2015, reached its capacity of 65 kboe/d in September 2015; and
- Yamal LNG: in December 2013 the company OAO Yamal LNG<sup>(1)</sup> launched the project, aimed at developing the onshore field of South Tambey ❸ (gas and condensates) located on the Yamal peninsula and at building a three-train

gas liquefaction plant with total LNG capacity of 16.5 Mt/y. The financing plan for the Yamal LNG project is being reviewed, and the project's partners are engaged in efforts to develop a financing plan in compliance with the applicable regulations. In 2015, the project advanced satisfactorily according to schedule.

The exploration project on the Bazhenov field (shale oil) in the Kanthy Mansiysk region has been suspended since 2014. In 2015, TOTAL transferred all of its rights in the awarded licenses to a subsidiary of the partner of the project.



(1) The OAO Yamal LNG company is owned by Novatek (60%), Total E&P Yamal (20%), and CNODC (20%), a subsidiary of China National Petroleum Corporation. Novatek's investment in the company OAO Yamal LNG is to be reduced to 50.1% following an agreement signed in September 2015 for the entry of the Silk Road Fund (9.9%). This agreement is expected to be approved by the authorities in 2016.

## KAZAKHSTAN

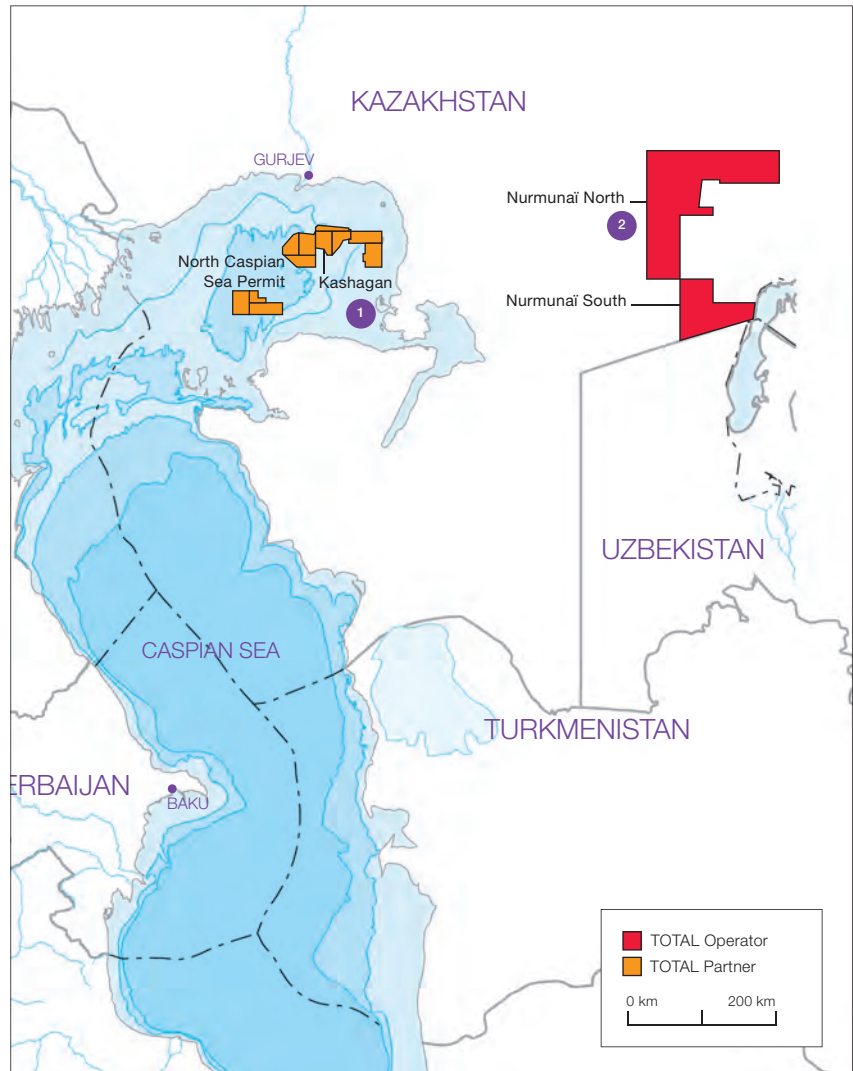
TOTAL holds a stake in the North Caspian license (16.81%), which covers the Kashagan field ①.

The production of the first phase of the Kashagan project (300 kb/d), started in September 2013, was halted in October 2013 due to leaks detected in the gas export pipeline. The two gas and oil export pipelines are being replaced by the operator. The works progress according to plan and production is expected to resume in December 2016.

TOTAL is the operator of the Nurmunaï North and South onshore exploration licenses ② (51.1%, after the sale of 23.9% of interests in February 2015) located in the southwest of the country. The drilling of two exploration wells (the first on the Nurmunaï North license and the second on the Nurmunaï South license) was performed between February and October 2015. The results are being analyzed.

## REST OF CIS

TOTAL also holds interests in exploration licenses in Azerbaijan and Tajikistan.



## MIDDLE EAST ACREAGE

In 2015, TOTAL's production in Middle East was **492 kboe/d**

Representing **21%** of the Group's overall production



## PRODUCTION

	2015	2014	2013	2012	2011
Liquids production (Kb/d)	351	192	324	311	317
Gas production (Mcf/d)	778	1,084	1,155	990	1,370
<b>Total (Kboe/d)</b>	<b>492</b>	<b>391</b>	<b>536</b>	<b>493</b>	<b>570</b>

## TOTAL'S PRODUCING ASSETS AS OF DECEMBER 31, 2015<sup>(1)</sup>

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)
<b>Middle East</b>			
<b>U.A.E.</b>	<b>1939</b>	Abu Dhabi-Abu Al Bu Khoosh (75.00%)	ADCO (10.00%) Abu Dhabi offshore (13.33%) <sup>(2)</sup> GASCO (15.00%) ADGAS (5.00%)
<b>Iraq</b>	<b>1920</b>		Halfaya (22.5%) <sup>(3)</sup>
<b>Oman</b>	<b>1937</b>		Various fields onshore (Block 6) (4.00%) <sup>(4)</sup> Mukhaizna field (Block 53) (2.00%) <sup>(5)</sup>
<b>Qatar</b>	<b>1936</b>	Al Khalij (40.00%)	North Field-Bloc NF Dolphin (24.50%) North Field-Qatargas 1 Downstream (10.00%) North Field-Qatargas 1 Upstream (20.00%) North Field-Qatargas 2 Train 5 (16.70%)
<b>Yemen</b>	<b>1987</b>	Kharir/Atuf (Block 10) (28.57%)	Various fields onshore (Block 5) (15.00%)

(1) The Group's interest in the local entity is approximately 100% in all cases except certain entities in Abu Dhabi and Oman (see notes (2) through (5) below).

(2) Via Abu Dhabi Marine Areas Limited (equity affiliate), TOTAL holds a 13.33% stake in the Abu Dhabi Marine Areas (ADMA) concession operated by ADMA-OPCO.

(3) TOTAL's interest in the joint venture.

(4) TOTAL's indirect interest (4.00%) in the concession, via its 10% interest in Private Oil Holdings Oman Ltd. TOTAL also has a direct interest (5.54%) in the Oman LNG facility (trains 1 and 2), and an indirect participation (2.04%) through OLANG in Qalhat LNG (train 3).

(5) TOTAL's direct interest in Block 53.

## UNITED ARAB EMIRATES

The Group's production was 287 kboe/d in 2015 compared to 127 kboe/d in 2014 and 260 kboe/d in 2013. Since January 1, 2015 the Group has held a 10% stake in the Abu Dhabi Company for Onshore Petroleum Operations Ltd. Concession (ADCO) for a period of 40 years, which follows a previous onshore concession. This concession covers the 15 main onshore fields of Abu Dhabi and represents more than half of the Emirate's production.

TOTAL holds a 75% stake (operator) in the Abu Al Bukhoosh field and a 13.3% stake

in Abu Dhabi Marine Operating Company (ADMA-OPCO), which operates two fields offshore Abu Dhabi. TOTAL also holds a 15% stake in Abu Dhabi Gas Industries (GASCO), which produces NGL and condensates from the associated gas produced by ADCO. In addition, TOTAL holds 5% of the Abu Dhabi Gas Liquefaction Company (ADGAS), which processes the associated gas produced by ADMA-OPCO in order to produce LNG, NGL and condensates, and 5% of National Gas Shipping Company (NGSCO), which owns eight LNG tankers and exports the LNG produced by ADGAS.

The Group holds a 24.5% stake in Dolphin Energy Ltd. in partnership with Mubadala, a company owned by the government of Abu Dhabi, in order to market gas produced in Qatar primarily to the United Arab Emirates.

The Group also owns 33.33% of Ruwais Fertilizer Industries (FERTIL), which produces urea. The FERTIL 2 project commenced operations in 2013, enabling FERTIL to increase its production capacity to 2 Mt/y.



ADCO.



**QATAR**

The Group's production was 134 kboe/d in 2015 compared to 132 kboe/d in 2014 and 137 kboe/d in 2013.

The Group operates the Al Khalij field (40% operator) and participates in the production, processing and exporting of gas from the North Field due to investments in the LNG Qatargas 1 and Qatargas 2 plants and in Dolphin Energy.

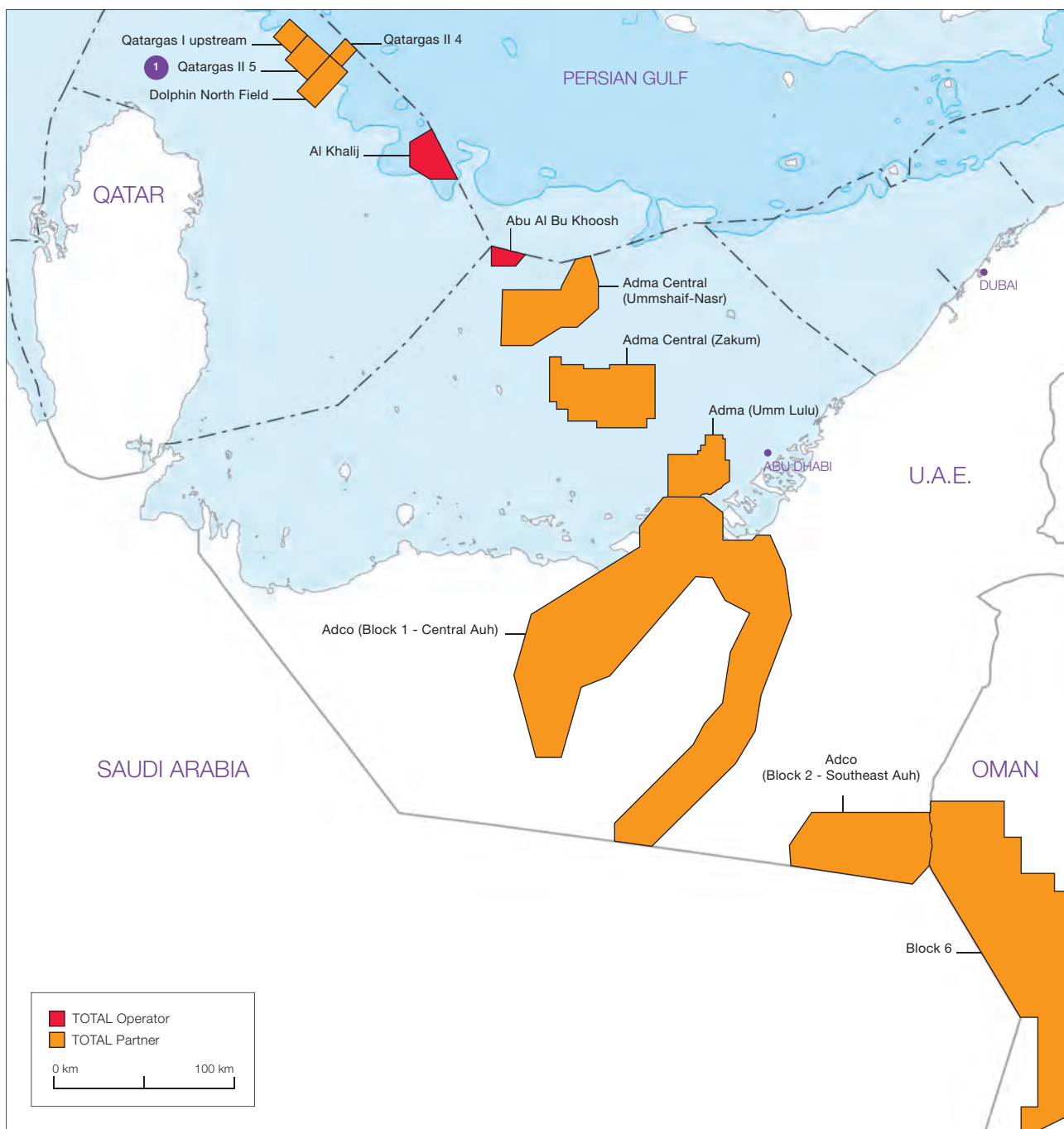
- Qatargas 2 (16.7%): the production capacity of train 5 of Qatargas 2 stood at 8 Mt/y. TOTAL offtakes part of the LNG produced under the 2006 contracts

that provide for the purchase of 5.2 Mt/y of LNG by the Group. In addition, the Group holds a stake in the Qatargas 1 liquefaction plant (10%) as well as a stake in the corresponding Upstream Block NFB (20%).

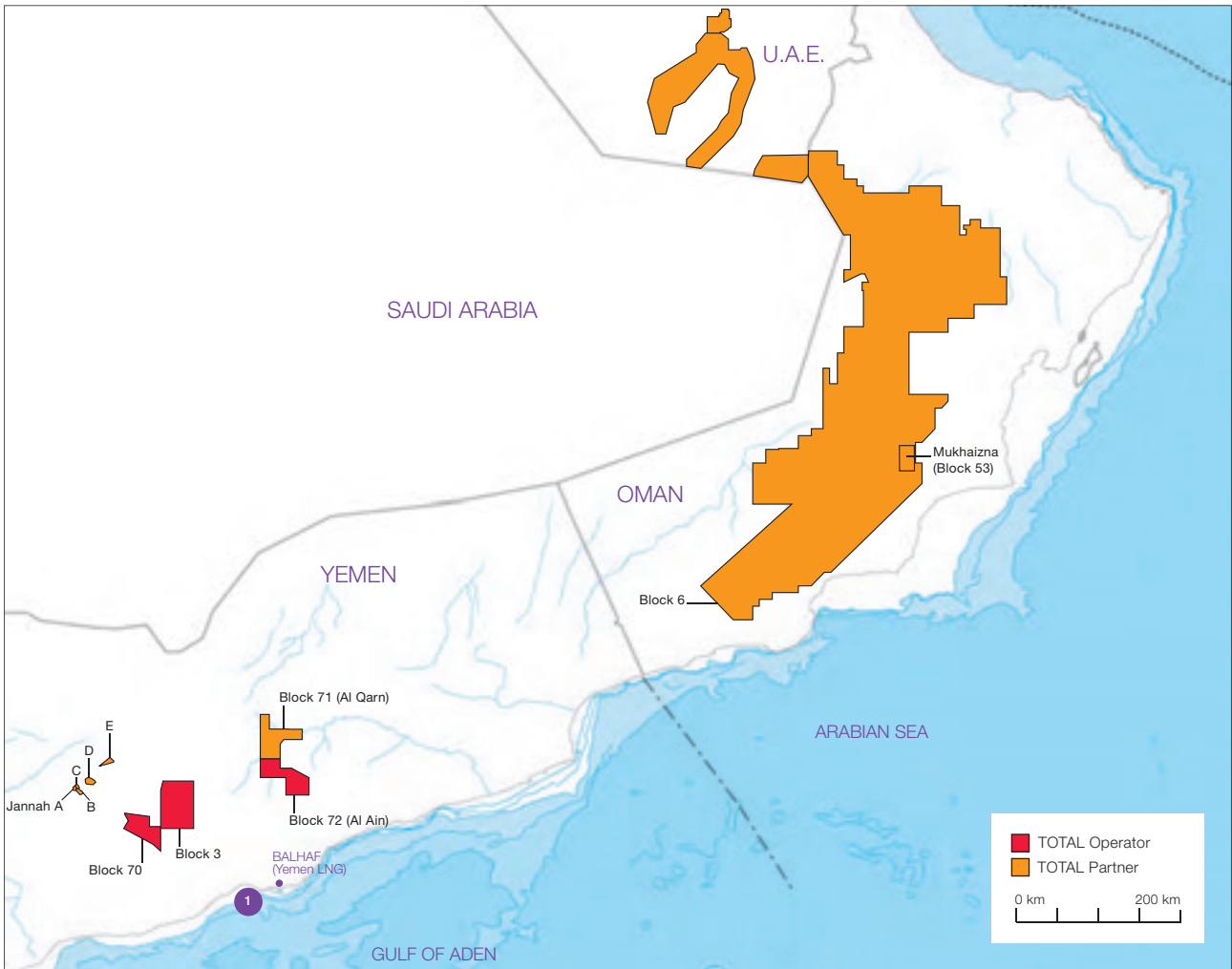
- Dolphin Energy (24.5%): the production contract for the Dolphin gas project, signed in 2001 with Qatar Petroleum, provides for the sale of 2 Bcf/d of gas from the North Field for a 25-year period. The gas is processed in the Dolphin plant in Ras Laffan and exported to the United Arab Emirates through a 360 km gas pipeline.

**OMAN**

The Group's production in 2015 was 36 kboe/d, stable compared to 2014 and 2013. TOTAL participates in the production of oil principally in Block 6 (4%)<sup>(1)</sup>, but also in Block 53 (2%). The Group also produces LNG through its investments in the Oman LNG (5.54%)/Qalhat LNG (2.04%)<sup>(2)</sup> liquefaction complex, with an overall capacity of 10.5 Mt/y. The ultra-deep offshore Block 41 license, obtained in 2013, was relinquished in February 2015 following disappointing results.



(1) TOTAL holds an indirect 4% stake in Petroleum Development Oman LLC, operator of Block 6, via its 10% stake in Private Oil Holdings Oman Ltd.  
 (2) TOTAL has an indirect stake via Oman LNG's stake in Qalhat LNG.



**YEMEN**

The Group's production was 17 kboe/d in 2015 compared to 84 kboe/d in 2014 and 95 kboe/d in 2013.

Due to the further deterioration in the security situation in the vicinity of its Balhaf site, the company Yemen LNG ①, in which the Group holds a 39.62% stake, decided to stop its commercial LNG production and export activities. The plant is in a preservation mode. As

a consequence of this situation, Yemen LNG declared *force majeure* to its various stakeholders in early April 2015.

The PSA of Block 10 (Masila Basin, East Shabwa permit, 28.57%, operator) expired in late December 2015, the license was returned to the Yemeni authorities. TOTAL is a partner in Block 5 (Marib basin, Jannah license, 15%) and holds various stakes in four onshore exploration licenses.



**IRAQ**

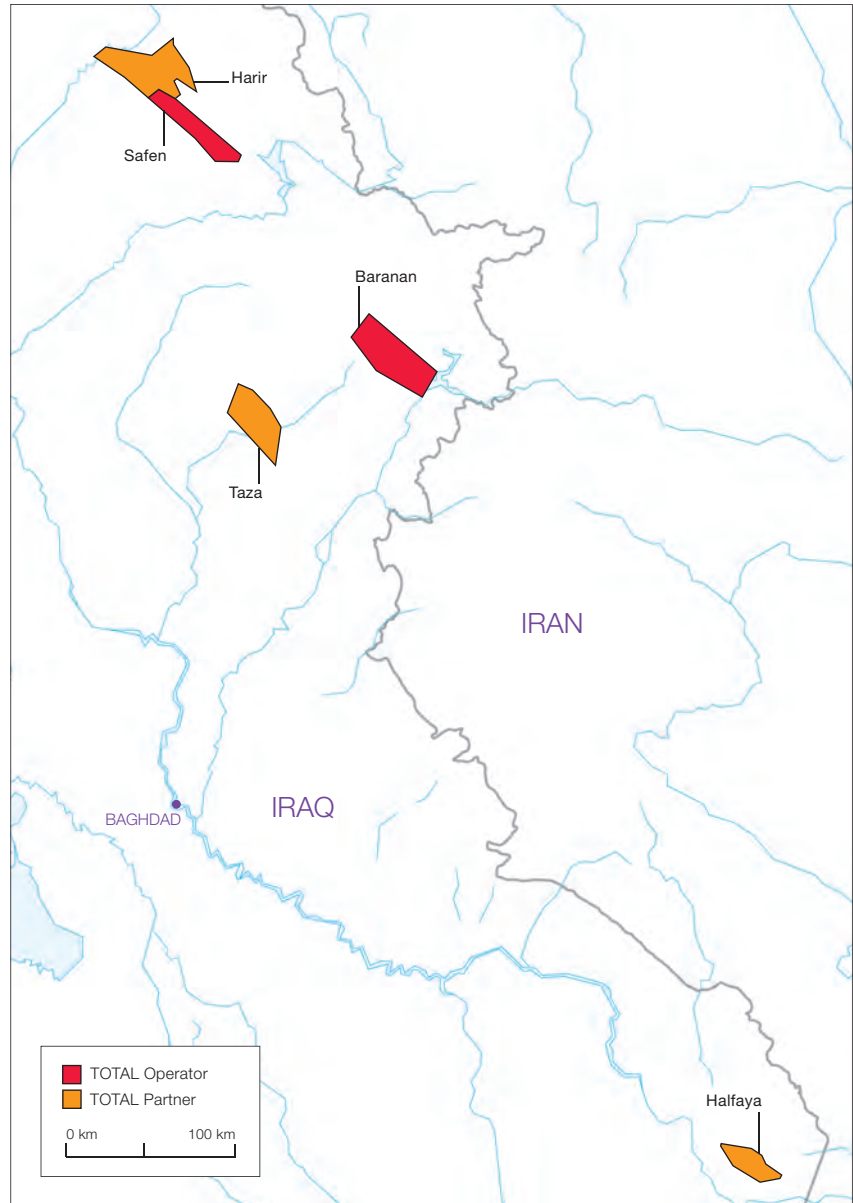
The Group's production in 2015 was 18 kboe/d compared to 12 kboe/d in 2014 and 7 kboe/d in 2013.

On the Halfaya field in Missan province, following the completion of a negotiation in October 2014, TOTAL's stake increased from 18.75% to 22.5% in the consortium that was awarded the development and production contract. Production of phase 1 of the project started in 2012 and phase 2 started in 2014, enabling production to reach 200 kb/d in the second half of 2014. In 2015, amid low barrel prices, the commencement of EPCC contracts (engineering, procurement, construction and commissioning) of phase 3 of the project (to increase production to 400 kb/d) was postponed.

In Iraqi Kurdistan, TOTAL holds stakes in several exploration blocks.

**SYRIA**

TOTAL has a 100% stake in the Deir Ez Zor license, which is operated by the joint venture company DEZPC in which TOTAL and the state-owned company SPC each have a 50% share. Additionally, TOTAL is holder of the Tabiyeh contract which came into effect in 2009. The Group has had no production in the country since December 2011, when TOTAL suspended its hydrocarbon production activities in Syria in compliance with the EU's regulations regarding this country.



## ASIA-PACIFIC ACREAGE

In 2015, TOTAL's production in Asia-Pacific was **258 kboe/d**

Representing **11%** of the Group's overall production



## PRODUCTION

	2015	2014	2013	2012	2011
Liquids production (Kb/d)	34	30	30	27	27
Gas production (Mcf/d)	1,290	1,178	1,170	1,089	1,160
<b>Total (Kboe/d)</b>	<b>258</b>	<b>238</b>	<b>235</b>	<b>221</b>	<b>231</b>

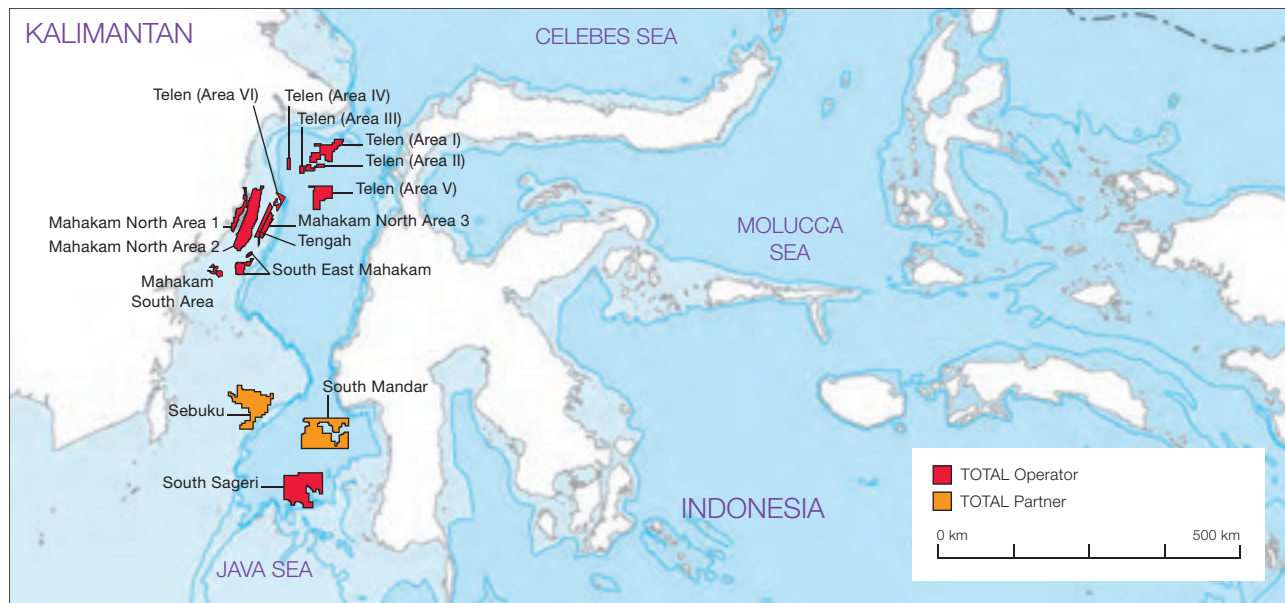
## MAIN START-UPS

Start-up	Projects	Type	Capacity (kboe/d)	Share	Op. Country
2015	Gladstone LNG	LNG	150	27.5%	Australia
2017+	Ichthys LNG	LNG	344	30%	Australia

## TOTAL'S PRODUCING ASSETS AS OF DECEMBER 31, 2015<sup>(1)</sup>

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)
<b>Asia-Pacific</b>			
<b>Australia</b>	2005		Various fields in UJV GLNG (27.50%) <sup>(2)</sup>
<b>Brunei</b>	1986	Maharaja Lela Jamalulalam (37.50%)	
<b>China</b>	2006		South Sulige (49.00%)
<b>Indonesia</b>	1968	Bekapai (50.00%) Handil (50.00%) Peciko (50.00%) Sisi-Nubi (47.90%) South Mahakam (50.00%) Tambora (50.00%) Tunu (50.00%)	Badak (1.05%) Nilam-gas and condensates (9.29%) Nilam-oil (10.58%) Ruby-gas and condensates (15.00%)
<b>Myanmar</b>	1992	Yadana (31.24%)	
<b>Thailand</b>	1990		Bongkot (33.33%)

(1) The Group's interest in the local entity is approximately 100%.  
(2) TOTAL's interest in the unincorporated joint venture.



**INDONESIA**

The Group’s production was 147 kboe/d in 2015 compared to 130 kboe/d in 2014 and 131 kboe/d in 2013.

TOTAL’s operations in Indonesia are primarily concentrated on the Mahakam license (50%, operator), which in particular includes the Peciko and Tunu gas fields. TOTAL also has a stake in the Sisi-Nubi gas field (47.9%, operator). The Mahakam license expires in December 2017. The Indonesian government has decided to allocate 100% of the participating interest to Pertamina (operator) from January 1, 2018 onwards, while giving Pertamina the possibility to farm-out a maximum interest of 30% to TOTAL and its current partner, INPEX. The Group delivers most of its natural gas production to the Bontang LNG plant. These volumes of gas represented approximately 80% of the Botang plant’s supply in 2015. To this gas

production was added the operated production of oil and condensates from the Handil and Bekapai fields.

- On the Mahakam license, the works aimed at maintaining production on the Tunu, Peciko, South Mahakam, Sisi-Nubi and Bekapai fields are ongoing.
- On the Sebuk (15%) license, production start-up of the Ruby gas field took place in 2013, with a production capacity of approximately 100 Mcf/d. Production is routed via pipeline for processing and separation at the Senipah terminal (operated by TOTAL).
- TOTAL also holds stakes in two exploration blocks: Mentawai (80%, operator) and Telen (100%).
- In addition, the Group holds stakes in blocks with no activity: Sadang (30%), Sageri (50%), Arafura Sea (24.5%), Amborip VI (24.5%), South Mandar (49.3%), South West Bird’s Head (90%,

operator) and South East Mahakam (50%, operator).

- Early in 2015, the Group sold its stake in the two coal bed methane (CBM) blocks located in the East Kalimantan province, Kutai II (18.4%) and Kutai Timur (50%).

**THAILAND**

The Group’s production was 62 kboe/d in 2015 compared to 60 kboe/d in 2014 and 63 kboe/d in 2013. This comes from the offshore gas and condensates field of Bongkot (33.33%). PTT (Thai state-owned company) purchases all of the natural gas and condensates production. New investments are underway for maintaining the plateau and responding to gas demand.

## MYANMAR

The Group's production was 19 kboe/d in 2015 compared to 17 kboe/d in 2014 and 16 kboe/d in 2013.

The Yadana field (31.2%, operator), located on the offshore Blocks M5 and M6, primarily produces gas for delivery to PTT (Thai state-owned company) for use in Thai power plants. The Yadana field also supplies the domestic market via two pipelines built and operated by MOGE, a Myanmar state-owned company. The LCP-Badamyar project, which includes the installation of the Badamyar field compression and development platform connected to the Yadana facilities, was launched in September 2014.

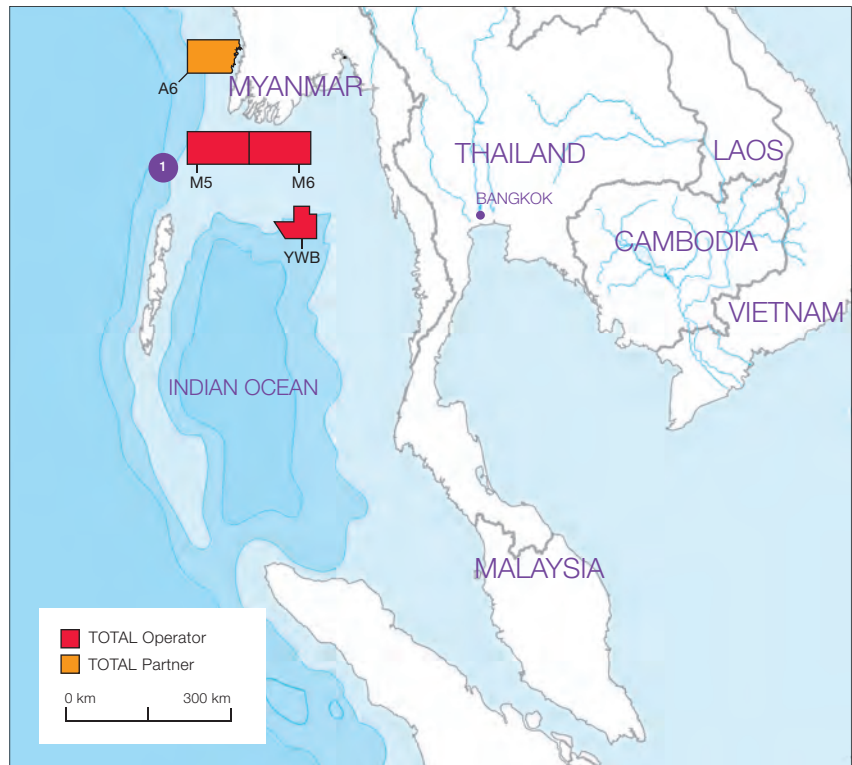
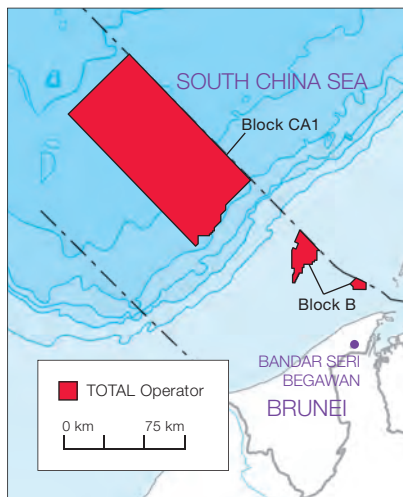
In 2014, the Group was awarded the deep offshore Block YWB (100%, operator) during the offshore round launched by the local authorities. The PSC was signed in February 2015.

In October 2015, the Group sold its stake in the offshore Block M11 (47.06%) and entered in exploration license A6 (40%) in the deep offshore area west of Myanmar. A first well was drilled in December 2015 on which a natural gas discovery has been made and is currently under evaluation.

## BRUNEI

TOTAL operates the offshore Maharaja Lela Jamalulalam gas and condensates field located on Block B (37.5%). The Group's production was 15 kboe/d in 2015 as in 2014 and compared to 13 kboe/d in 2013. The gas is delivered to the Brunei LNG liquefaction plant.

A study regarding the additional development of the southern part of the



gas field (Maharaja Lela South) was completed in 2013. The project was launched in early 2014 with the signature of the majority of the contracts and the 20-year extension on the existing license. Onshore, a first debottlenecking phase for the production processing plant was completed in 2015, increasing production by 20%. Offshore, the installation of a third platform was completed at the end of 2015 and the drilling campaign started in February 2016. The first wells are expected to be put into production in 2016.

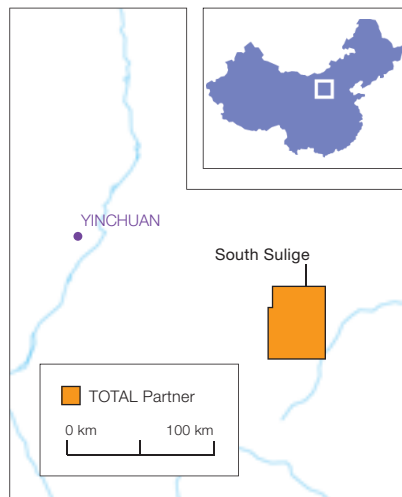
Studies are currently being conducted to reassess the potential of the deep offshore exploration Block CA1 (where TOTAL is operator), which includes the Jagus East

discovery. Following the decision of two partners to sell their interest in the block, TOTAL decided to exercise its preemptive right, bringing its stake from 54% to 86.9%. A well was drilled in November 2015, and has confirmed the connection of the Jagus East field with the Gumusut-Kakap reservoirs in Malaysia. Discussions of the terms of the unitization are underway between the two countries and an agreement should be reached in 2016.

## CHINA

TOTAL has been active since 2006 on the South Sulige Block, located in the Ordos Basin in the Inner Mongolia province. The Group's production was 11 kboe/d in 2015 compared to 12 kboe/d in 2014 and 8 kboe/d in 2013. Following appraisal work by TOTAL, China National Petroleum Corporation (CNPC) and TOTAL agreed to a development plan under which CNPC is the operator and TOTAL holds a 49% stake. This development plan was approved by the authorities in 2014. The drilling of development wells is ongoing.

In 2013, TOTAL signed a joint study agreement with Sinopec for potential shale gas on the Xuancheng license (4,000 km<sup>2</sup>) near Nanjing. A 2D seismic survey was performed in 2014 and the drilling of an exploration well was done in 2015.





**AUSTRALIA**

In Australia, where TOTAL has had mining rights since 2005, the Group's production was 4 kboe/d in 2015, 2014 and 2013.

- The Ichthys project (30%) involves the development of a gas and condensates field located in the Browse Basin. This development will include a floating platform designed for the production, processing and exportation of gas (CPF, Central Processing Facility), an FPSO (with condensate processing capacity of 100 kb/d) to stabilize and export the condensate, an 889 km gas pipeline and an onshore liquefaction plant (with 8.9 Mt/y LNG and 1.6 Mt/y LPG capacities) at Darwin. The LNG has already been sold mainly to Asian buyers under long-term contracts. Production is expected to start in 2017.
- Gladstone LNG (GLNG) (27.5%) is an integrated gas production, transportation and liquefaction project of 7.2 Mt/y based on the development of coal seam gas from the Fairview, Roma, Scotia and Arcadia fields. The development of a first upstream phase was completed with the start of production of Fairview 3 and 4 and Roma 2. Train 1 (3.6 Mt/y capacity) started production in September 2015 and the first LNG cargo left GLNG for South Korea in October 2015. The development of the liquefaction plant continues with the construction of train 2, which is expected to start production in 2016.



- The WA-492 and WA-493 licenses, located in the Carnarvon basin, were awarded to TOTAL (100%, operator) in 2013. A 2D seismic regional campaign began in January 2015.
- In 2012, TOTAL signed an agreement to enter into three shale gas exploration licenses located in the South Georgina basin in the center of the country. In 2013, a 2D seismic survey was acquired on three licenses and a drilling campaign began in 2014 with two wells. Technical studies are ongoing.

**PAPUA NEW GUINEA**

In Papua New Guinea, where TOTAL has been active since 2012, the Group acquired in March 2014 a stake in Block PRL-15 (40.1%). TOTAL became the

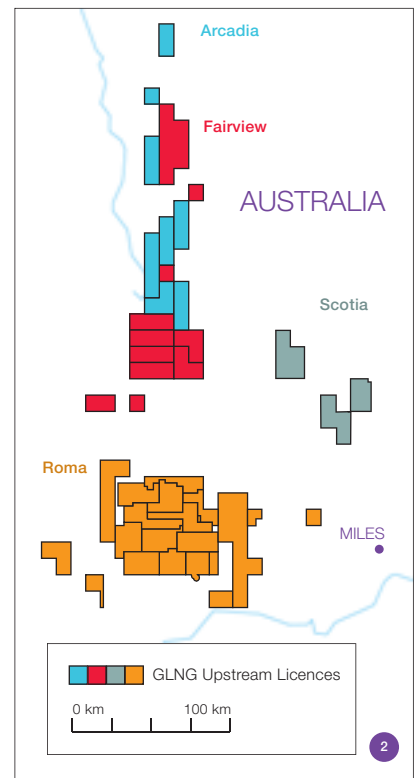
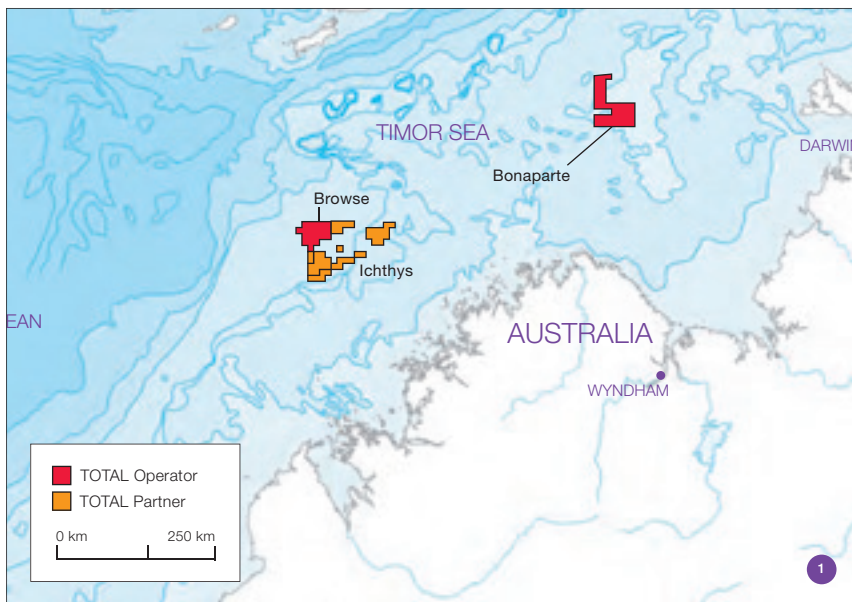
operator in August 2015. The State of Papua New Guinea retains the right to enter on the license (when the final investment decision is made) at a maximum level of 22.5%. In this case, TOTAL's stake would be reduced to 31.1%.

Block PRL-15 includes the two discoveries Elk and Antelope, growth areas for the Group. A delineation program of these discoveries is underway. The results of the first wells drilled have confirmed the level of resources in the Elk and Antelope fields. TOTAL has also started development studies in the Elk and Antelope fields, including on the construction of an onshore gas liquefaction plant. In July 2015, the location of the various production sites was announced to the authorities.



**REST OF ASIA**

TOTAL also holds interests exploration licenses in Malaysia and the Philippines.



## SOUTH AMERICA ACREAGE



In 2015, TOTAL's production in South America was **152 kboe/d**

Representing **7%** of the Group's overall production

### PRODUCTION

	2015	2014	2013	2012	2011
Liquids production (Kb/d)	47	50	54	59	71
Gas production (Mcf/d)	588	599	627	682	648
<b>Total (Kboe/d)</b>	<b>152</b>	<b>157</b>	<b>166</b>	<b>182</b>	<b>188</b>

### MAIN START-UPS

Start-up	Projects	Type	Capacity (kboe/d)	Share	Op.	Country
2016	Vega Pleyade	Gas	70	37.5%	x	Argentina
	Incahuasi	Gas	50	60%	x	Bolivia
2017+	Libra EWT	Deep off.	50	20%		Brazil

### TOTAL'S PRODUCING ASSETS AS OF DECEMBER 31, 2015<sup>(1)</sup>

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)
<b>South America</b>			
<b>Argentina</b>	<b>1978</b>	Aguada Pichana (27.27%)	
		Aguada San Roque (24.71%)	
		Aries (37.50%)	
		Cañadon Alfa Complex (37.50%)	
		Carina (37.50%)	
		Hidra (37.50%)	
		Kaus (37.50%)	
		Rincón de Aranda (45.00%)	
		Sierra Chata (2.51%)	
<b>Bolivia</b>	<b>1995</b>		San Alberto (15.00%)
			San Antonio (15.00%)
			Itaú (41.00%)
<b>Venezuela</b>	<b>1980</b>		PetroCedeño (30.32%)
			Yúcal Placer (69.50%)

(1) The Group's interest in the local entity is approximately 100%.



**ARGENTINA**

In Argentina, TOTAL operated approximately 30%<sup>(1)</sup> of the country's gas production in 2015. The Group's production was 72 kboe/d in 2015 compared to 75 kboe/d in 2014 and 78 kboe/d in 2013. From 2012, the Argentinean government concluded gas price agreements with various producers under which the government guarantees the price of gas for quantities above a fixed production level in exchange for compliance with defined production targets and applicable penalties (i.e., "deliver or pay"). In 2013, TOTAL signed an agreement of this type for a period of five years with retroactive effect from December 1, 2012.

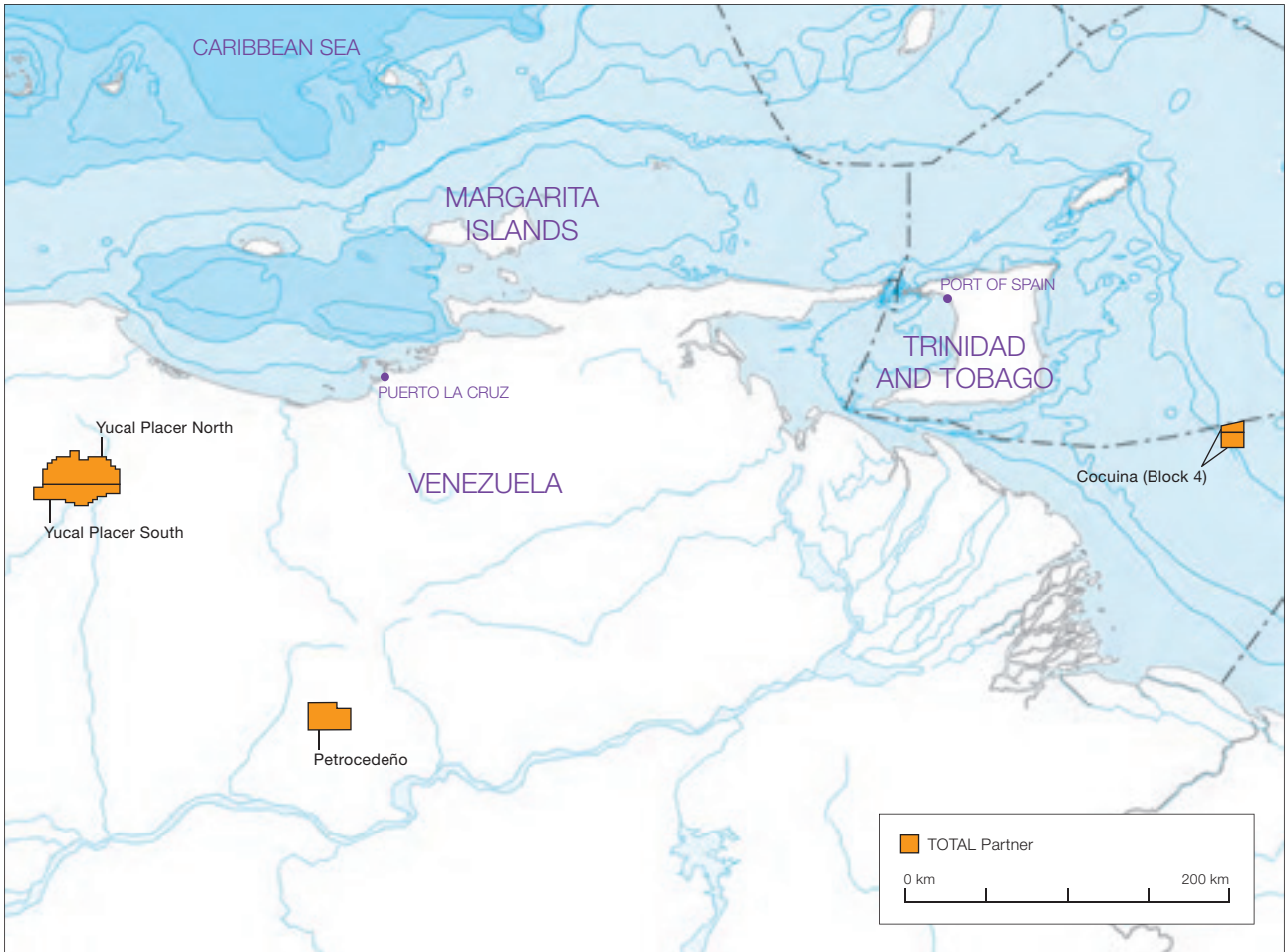
- In Tierra del Fuego, the Group operates the Carina and Aries offshore fields (37.5%). A drilling campaign for two additional wells off the existing platform was completed in 2015. The Vega Pleyade field ❶ (37.5%, operator), where development work was launched in 2013 (with a production capacity of 350 Mcf/d), started production in February 2016.
- In the Neuquén basin, two pilot projects were launched following positive initial results of the drilling campaign on its mining licenses in order to assess its gas and shale oil potential: one on the Aguada Pichana Block ❷ (27.3%, operator) where production started mid-2015, and the other on the Rincón la Ceniza Block (42.5%, operator).

(1) Source: Department of Federal Planning, Public Investment and Services, Energy Secretariat.





Vega Pleyade.



**VENEZUELA**

In Venezuela, where TOTAL has been active since 1980, the Group’s production was 52 kboe/d in 2015 as in 2014 and compared to 48 kboe/d in 2013. TOTAL has stakes in PetroCedeño (30.3%) and Yucal Placer (69.5%) as well as the offshore exploration Block 4 of Plataforma Deltana (49%).

Development of the extra heavy oil field of PetroCedeño continues in the southern area as in the main area (47 production wells were drilled in 2015 compared to 86 in 2014 and 43 in 2013), as well as the debottlenecking project for the water separation and treatment facilities.

In the Yucal Placer field, following the signature of an amendment to the gas sale contract, a new development phase was

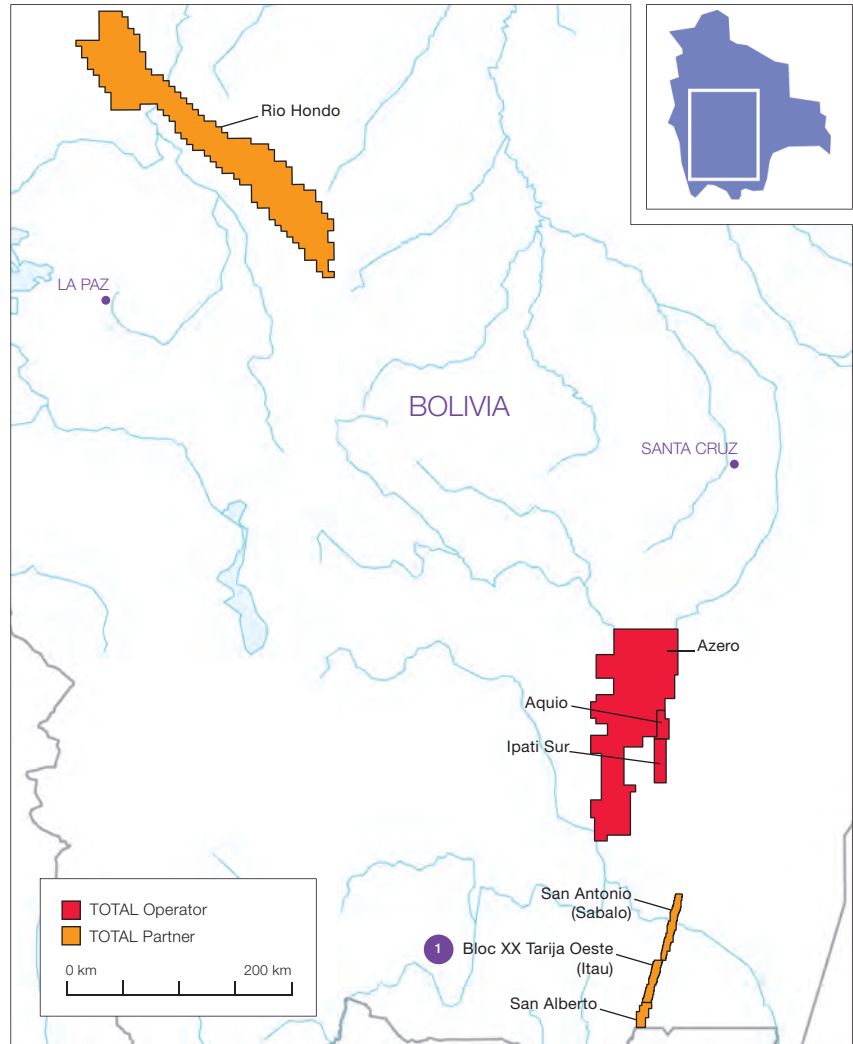
launched in 2012. In April 2014, the production field has increased following the commissioning of new clusters and the debottlenecking of the existing gas processing train (production capacity of 150 Mcf/d in 2015).

**BOLIVIA**

The Group's production, mainly gas, was 28 kboe/d in 2015 compared to 30 kboe/d in 2014 and 28 kboe/d in 2013.

TOTAL is active on seven licenses: three production licenses at San Alberto (15%), San Antonio (15%) and Block XX Tarija Oeste (41%); two licenses in development phase ①, Aquio and Ipati (60%, operator); and two exploration phase licenses, Rio Hondo (50%) and Azero (50%, operator of the exploration phase).

- Following the discovery of the Incahuasi gas field, located in the Ipati Block, TOTAL was granted approval by the authorities to launch the first development phase of the project, including the connection of three wells already drilled in a 6.5 Mm³/d capacity processing plant. The project is expected to start production mid-2016. In mid-2014, TOTAL reduced its stake in Aquio and Ipati from 80% to 60%.
- In 2013, TOTAL acquired a 50% stake in the Azero exploration license located in the Andean foothills, which extends over an area of 7,800 km². The exploration period began in June 2014.



Incahuasi.



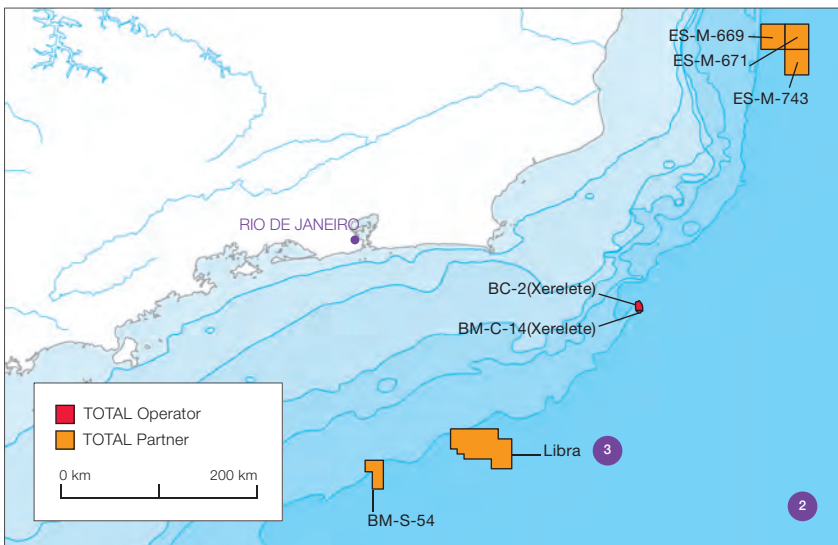


**BRAZIL**

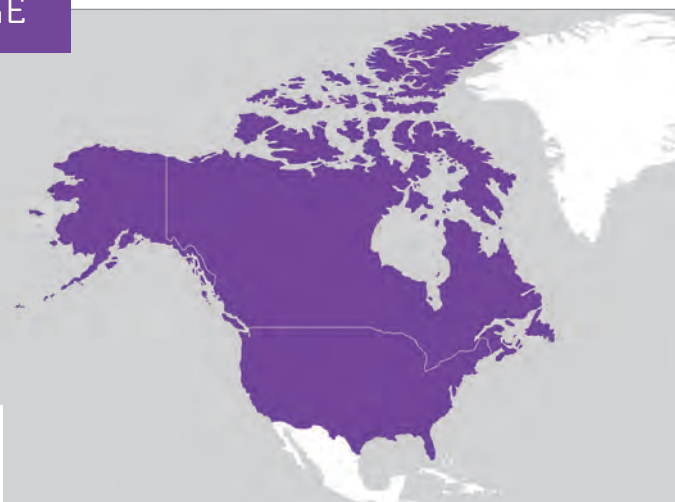
In Brazil, a growth area for the Group, TOTAL acquired in 2013 a 20% stake in the Libra field, located in the Santos basin. The field is located in the ultra-deep offshore (2,000 m) approximately 170 km off the coast of Rio de Janeiro and covers an area of 1,550 km<sup>2</sup>. In 2014, a 50 kb/d capacity boat was reserved for long duration production testing. In 2015, the drilling of two wells was completed and one of two others started in the northwest and center of the field. The Group also holds stakes in 18 exploration licenses, following the 2015 acquisition of a 50% stake in Blocks P-M 1269, 1271, 1351 and 1353 in the Pelotas basin.

**REST OF SOUTH AMERICA**

TOTAL also holds interests in exploration licenses in Aruba, Columbia, French Guiana and Uruguay.



## NORTH AMERICA ACREAGE



In 2015, TOTAL's production in North America was **103 kboe/d**

Representing **4%** of the Group's overall production

## PRODUCTION

	2015	2014	2013	2012	2011
Liquids production (Kb/d)	48	39	28	25	27
Gas production (Mcf/d)	308	285	256	246	227
<b>Total (Kboe/d)</b>	<b>103</b>	<b>90</b>	<b>73</b>	<b>69</b>	<b>67</b>

## MAIN START-UPS

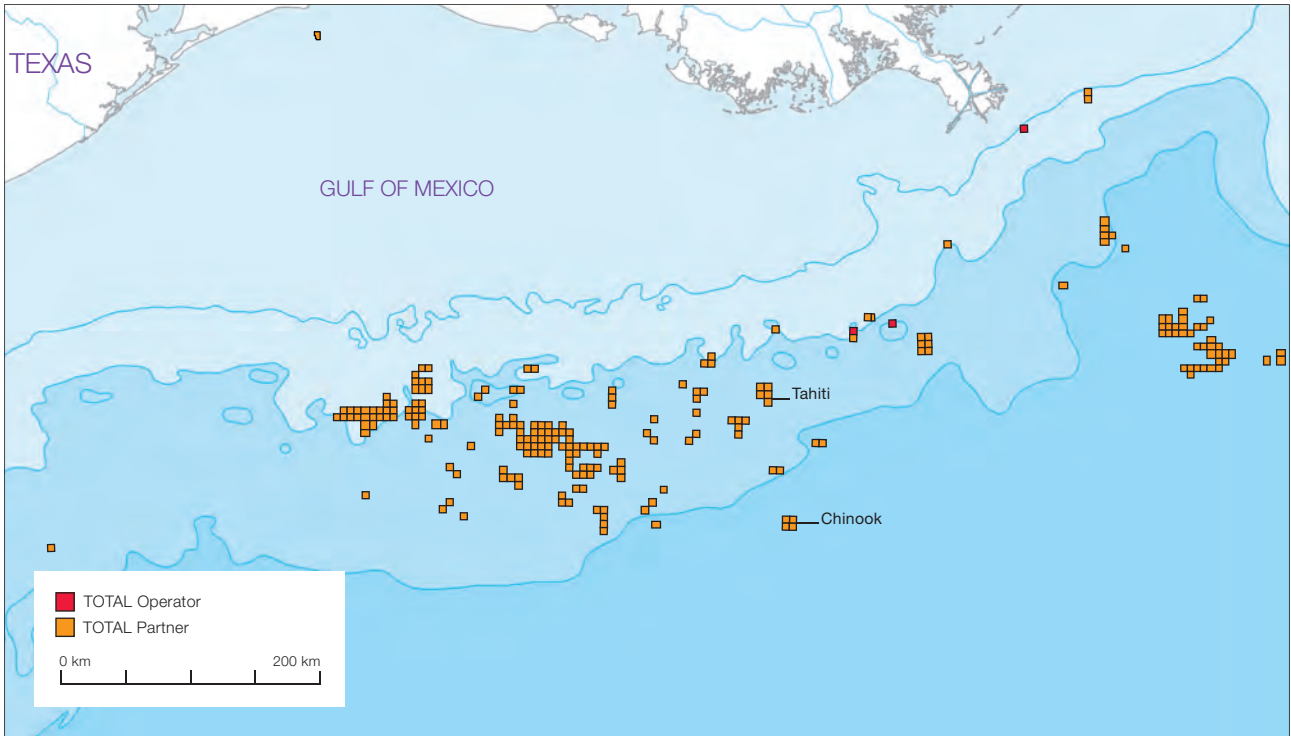
Start-up	Projects	Type	Capacity (kboe/d)	Share	Op. Country
2015	Surmont Ph. 2	Heavy oil	118	50%	Canada
2017+	Fort Hills	Heavy oil	180	29.2%	Canada

## TOTAL'S PRODUCING ASSETS AS OF DECEMBER 31, 2015<sup>(1)</sup>

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)
<b>North America</b>			
<b>Canada</b>	<b>1999</b>		Surmont (50.00%)
<b>United States</b>	<b>1957</b>		Several assets in the Barnett Shale area (25.00%) <sup>(2)</sup> Several assets in the Utica Shale area (25.00%) <sup>(2)</sup> Chinook (33.33%), Tahiti (17.00%)

(1) Group's interest in the local entity is approximately 100%.

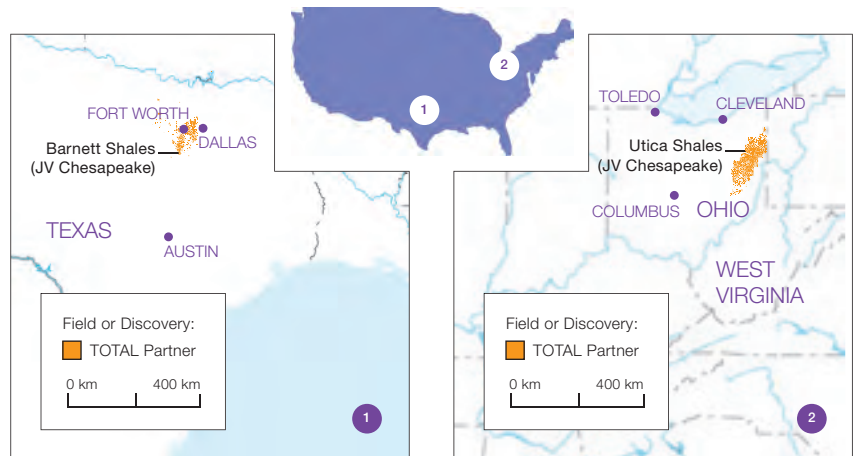
(2) TOTAL's interest in the joint venture with Chesapeake.



**UNITED STATES**

The Group's production was 89 kboe/d in 2015 compared to 78 kboe/d in 2014 and 60 kboe/d in 2013.

- In the Gulf of Mexico, TOTAL holds interests in the deep offshore fields Tahiti (17%) and Chinook (33.33%). In 2015, the TOTAL (40%) – Cobalt (60%, operator) alliance, formed in 2009 for exploration in the Gulf of Mexico, carried out further drilling to evaluate the size of the North Platte discovery.
- TOTAL is also present in shale gas production in the United States through its 25% stake in two joint ventures operated by Chesapeake in the Barnett (Texas) and Utica (Ohio) basins. Drilling activity in these basins was greatly reduced in 2015 due to the decrease in the price of gas and related liquids. In Barnett, four wells were drilled in 2015 compared to 40 in 2014 and



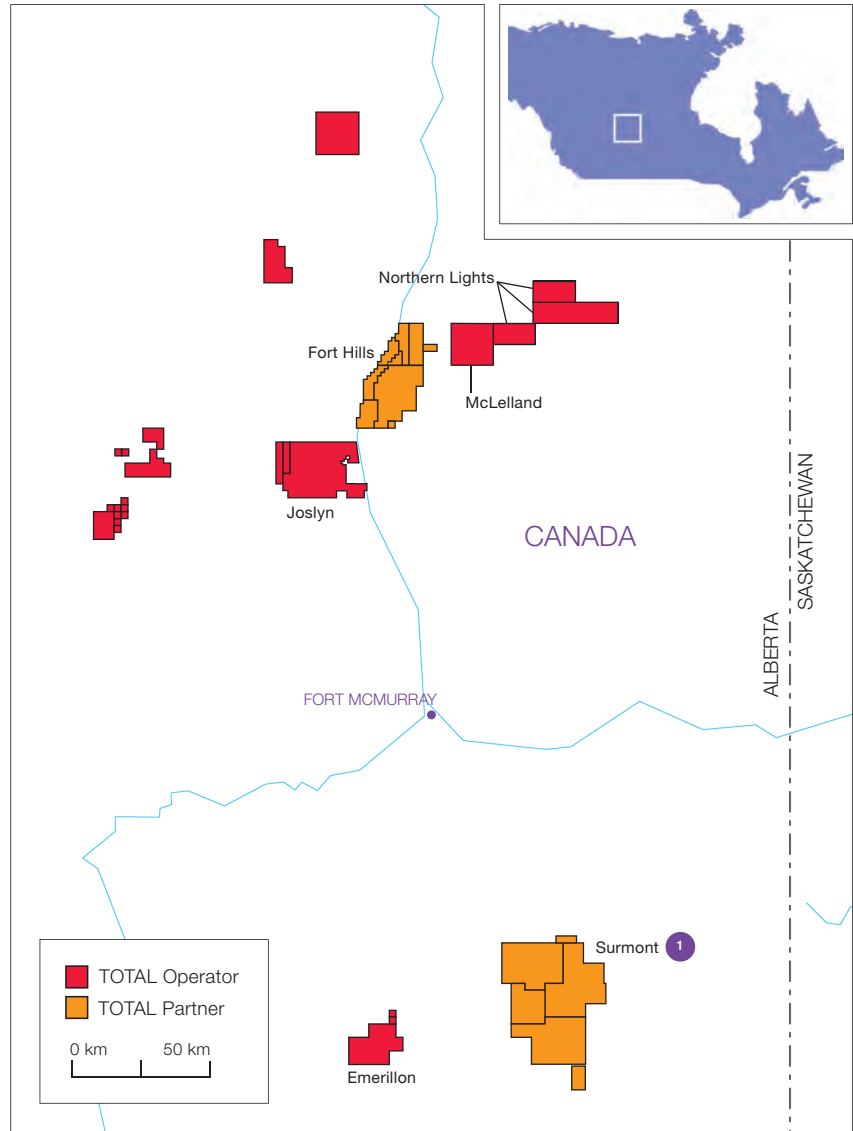
approximately 60 in 2013. In Utica, the number of drilling rigs employed has been reduced from nine to one in 2015 and TOTAL participated in eight wells with Chesapeake. In 2014, approximately 170 wells were drilled by the joint venture and over 200 were drilled in 2013.

The R&D stage oil shale projects (in situ and ex situ production technology) in which the Group holds a stake (through the American Shale Oil LLC, 55.7%, and the 50/50 joint venture with the company Red Leaf Resources) including the development of the Red Leaf pilot, have been deferred.

**CANADA**

The Group's production was 14 kboe/d in 2015 compared to 12 kboe/d in 2014 and 13 kboe/d in 2013. This production comes entirely from TOTAL's 50% stake in the Surmont project <sup>1</sup> developed by SAGD<sup>1</sup>. Phase 2 of the project was commissioned in September 2015 and at the end of the ramp-up in 2017, the project is expected to have a total capacity of approximately 150 kb/d (75 kb/d in Group share). Construction of the second oil sand project in which TOTAL has a stake, the Fort Hills mining project, has progressed on time and within budget. At a more than 50% completion rate as at the end of 2015, production from Fort Hills is expected to start toward the end of 2017. As a result of a full comparative analysis of its global assets portfolio of in the context of the lower oil prices, the Group decided in 2015 to reduce its exposure to Canadian oil sands. In November 2015, TOTAL sold 10% of its 39.2% stake in the Fort Hills project to the operator, reducing its interest to 29.2%.

On the Joslyn (38.25%, operator) and Northern Lights (50% operator) oil sands licenses, the projects were suspended and works have been strictly limited to legal and contractual obligations, and maintaining safety.

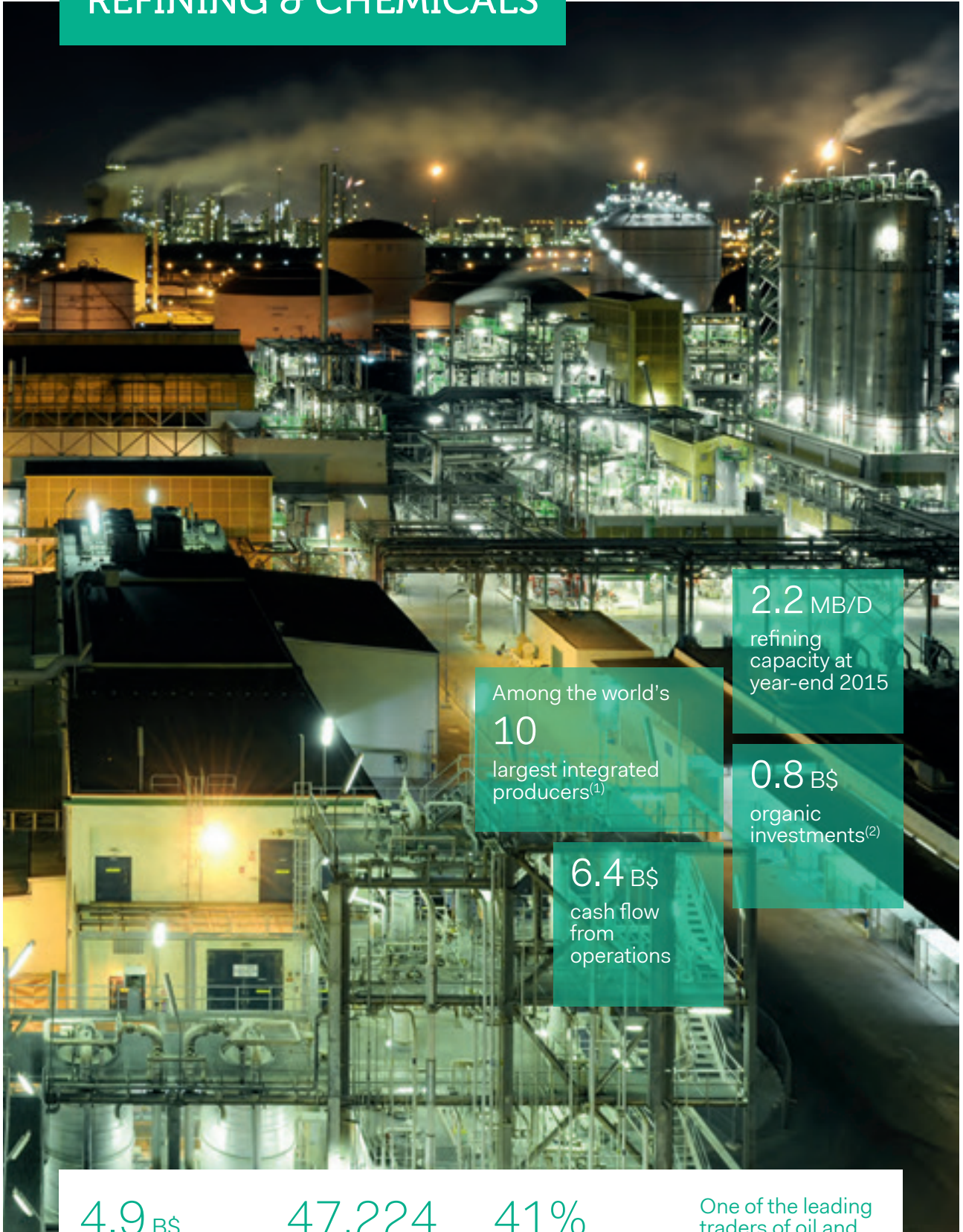


(1) Steam Assisted Gravity Drainage, production by injection of recycled water vapor.



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# REFINING & CHEMICALS



2.2 MB/D  
refining  
capacity at  
year-end 2015

Among the world's  
10  
largest integrated  
producers<sup>(1)</sup>

0.8 B\$  
organic  
investments<sup>(2)</sup>

6.4 B\$  
cash flow  
from  
operations

4.9 B\$  
adjusted net  
operating income

47,224  
employees

41%  
ROACE  
(business  
segment)

One of the leading  
traders of oil and  
refined products  
worldwide

(1) Based on publicly available information, production capacities at year-end 2014.  
(2) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.

## The Refining & Chemicals segment comprises...

### Refining, petrochemicals and specialty chemicals operations

TOTAL's petrochemical operations are integrated with its refining operations. The specialty chemicals businesses include elastomer processing (Hutchinson) and electroplating chemistry (Atotech).

### Oil trading and shipping activities



## Delivering

4 major projects in Lindsey, La Mède, Antwerp and Satorp

## Focusing

on major integrated platforms – Antwerp, Daesan, Normandy, Port Arthur, Qatar, Satorp

## Expanding

in growing regions and markets:  
– Evaluating a side-cracker in the United States and a cracker debottlenecking in Qatar  
– Promoting Bio Fuels and Bio plastics

## Enhancing

operational efficiency to reach  $\geq 94\%$  availability rate

## Building

smart digital plants and integrating new technologies in organizations



## FINANCIAL HIGHLIGHTS

(in million dollars)	2015	2014	2013	2012	2011
Adjusted operating income <sup>(1)</sup>	5,649	2,739	1,766	1,873	848
Adjusted net operating income <sup>(1)</sup>	4,889	2,489	1,857	1,768	1,173
Contribution of Specialty Chemicals	496	629	583	491	590
Gross investments <sup>(2)</sup>	1,843	2,022	2,708	2,502	2,659
Organic investments <sup>(3)</sup>	827	1,944	2,530	2,094	2,373
Divestments	3,488	192	365	392	3,492
Cash flow from operations	6,432	6,302	4,260	2,726	2,987

(1) Adjusted results are defined as income at replacement cost, excluding non-recurring items, and excluding the impact of fair value changes.

(2) Including acquisitions and increases in non-current loans.

(3) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.

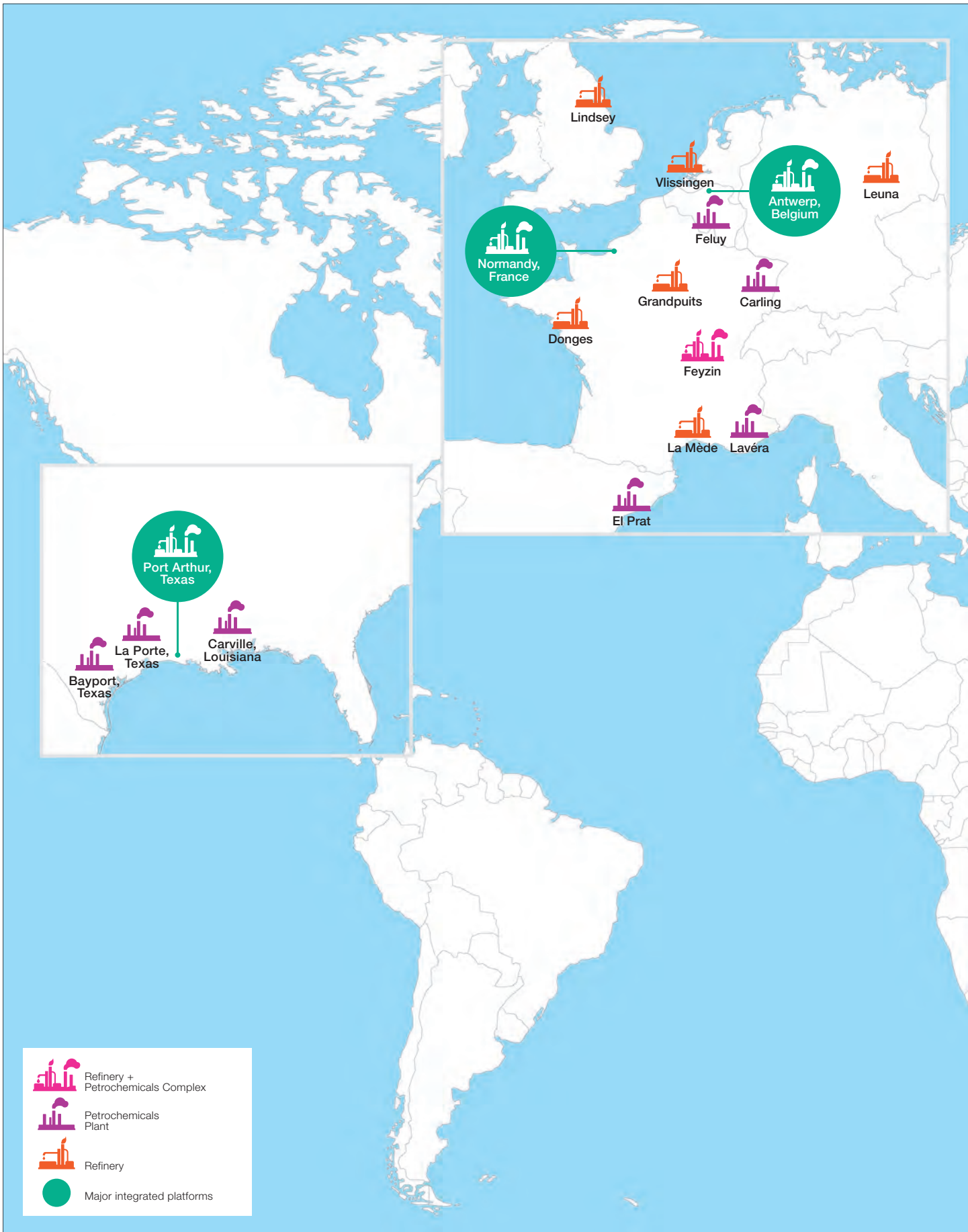
## OPERATIONAL HIGHLIGHTS<sup>(1)</sup>

(in kb/d)	2015	2014	2013	2012	2011
Distillation capacity Group share at year-end <sup>(2)</sup>	2,247	2,187	2,042	2,048	2,096
Refinery throughput	1,938	1,775	1,719	1,786	1,863

(1) Including share of CEPSA until July 31, 2011 and share of TotalErg. Results for refineries in Africa, French Antilles and Italy are reported in the Marketing & Services segment.

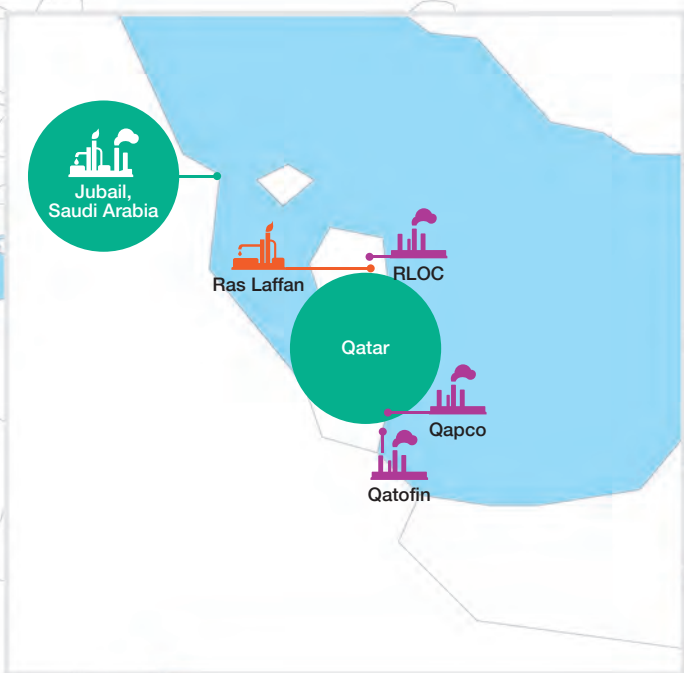
(2) Capacity data based on refinery process unit stream-day capacities under normal operating conditions, less the impact of shutdown for regular repair and maintenance activities averaged over an extended period of time.

MAIN REFINING & CHEMICALS PLANTS AS OF DECEMBER 31, 2015



# 2.2 MB/D

OF REFINING CAPACITY  
AT YEAR-END 2015



And worldwide specialty chemicals positions



*Bostik sale completed on February 2, 2015.*





## REFINING & CHEMICALS

### ONGOING PROJECTS PAVING THE WAY TO FUTURE CASH GENERATION

**TOTAL's target to reduce European capacity by 20% is expected to be met by end 2016, one year ahead of schedule**

**Implementing the French refining roadmap presented in 2015**

- In La Mède, TOTAL is investing to build the first French bio-refinery to meet the growing demand for biofuel in Europe, while ending crude processing at the end of 2016.
- In Donges, TOTAL is adapting its refinery by building an intermediate feedstock desulfurization unit and an associated hydrogen production plant. The production of lower sulfur content products will enable Total to target more profitable markets.

**Rejuvenating the Carling site**

- Steam cracker shut down in October 2015.
- New hydrocarbon resin and polypropylene compound production units are being built and are expected to be commissioned in 2016.

**Enhancing competitiveness in the United Kingdom**

- In the Lindsey refinery, the 5 Mt/y distillation capacity reduction planned for end 2016 and conversion capacity increase will improve the site's profitability. Its competitiveness will also benefit from logistical improvements and the simplification of the refinery organization.

**Reinforcing major platforms**

**Modernizing Refining & Petrochemicals platform in Belgium**

- The upgrade of the Antwerp integrated platform launched in 2013 is a key cash generation contributor in the mid-term.
- This project consists of two parts:
  - the construction of new conversion units in response to the shift in demand towards lighter oil products with a very low sulfur content (completion in 2016), and
  - the construction of a new unit to convert part of the combustible gases recovered from the refining process into raw materials for petrochemical units (start up in 2017).

**Building on Saudi Arabia operational success**

- Jubail refinery, fully operational since mid-2014, has reached its plateau of 400 kb/d capacity in 2015. A 10% capacity creeping project is ongoing to maximize value out of the plant.

## REFINERY CAPACITY (GROUP SHARE)

As of December 31, 2015 (kb/d)

Major upgrading plant capacity at 100%<sup>(1)</sup>

	Total Distillation Capacity	Group Interest	Group Capacity	Cat Crack	Cat Reform	Hydro-Cracking	Resid. Hydro-Treat	Dist. Hydro-Treat	Alky	Isom	Vis	Coker
<b>France</b>												
Normandy, Gonfreville	247	100%	247	-	34	62	-	205	-	-	21	-
Provence, La Mède	153	100%	153	35	29	-	-	121	-	-	14	-
Donges	219	100%	219	51	23	-	-	126	7	-	26	-
Feyzin	109	100%	109	29	11	-	-	72	5	-	15	-
Grandpuits	101	100%	101	31	14	-	-	77	4	-	13	-
<b>Total France</b>	<b>829</b>		<b>829</b>	<b>146</b>	<b>111</b>	<b>62</b>	<b>-</b>	<b>601</b>	<b>16</b>	<b>-</b>	<b>89</b>	<b>-</b>
<b>Rest of Europe</b>												
United Kingdom, Immingham/Lindsey	207	100%	207	50	31	-	-	140	7	-	20	-
Netherlands, Vlissingen	148	55%	81	-	26	72	-	64	-	-	-	-
Belgium, Antwerp	338	100%	338	95	56	-	83	253	9	-	26	-
Germany, Leuna	227	100%	227	59	25	-	-	238	10	-	25	-
Italy, Treccate (TotalErg) <sup>(2)</sup>	131	13%	17	35	-	-	-	-	-	-	-	-
<b>Total rest of Europe</b>	<b>1,051</b>		<b>870</b>	<b>239</b>	<b>138</b>	<b>72</b>	<b>83</b>	<b>695</b>	<b>26</b>	<b>-</b>	<b>71</b>	<b>-</b>
<b>United States</b>												
Texas, Port Arthur (Refinery)	174	100%	174	75	38	-	-	241	6	8	-	58
Texas, Port Arthur (Condensate Splitter) <sup>(3)</sup>	60	40%	24	-	-	-	-	-	-	-	-	-
<b>Total United States</b>	<b>234</b>		<b>198</b>	<b>75</b>	<b>38</b>	<b>-</b>	<b>-</b>	<b>241</b>	<b>6</b>	<b>8</b>	<b>-</b>	<b>58</b>
<b>Africa</b>												
Cameroon, Limbe	42	20%	8	-	8	-	-	27	-	-	-	-
Côte d'Ivoire, Abidjan	76	25%	19	-	14	17	-	33	-	-	-	-
Gabon, Port Gentil	24	44%	11	-	2	-	-	6	-	-	8	-
Senegal, Dakar	24	20%	5	-	3	-	-	5	-	-	-	-
South Africa, Sasolburg	105	18%	19	25	18	12	15	44	5	-	-	-
<b>Total Africa</b>	<b>271</b>		<b>62</b>	<b>25</b>	<b>45</b>	<b>29</b>	<b>15</b>	<b>115</b>	<b>5</b>	<b>-</b>	<b>8</b>	<b>-</b>
<b>Asia &amp; Middle East</b>												
China, Dalian	219	22%	49	55	15	29	41	119	-	-	-	-
Korea, Daesan <sup>(4)</sup>	158	50%	79	-	-	-	-	-	-	-	-	-
Qatar, Ras Laffan	155	10%	15	-	-	-	-	132	-	-	-	-
Saudi Arabia Jubail	386	38%	145	31	61	111	-	272	12	-	-	99
<b>Total Asia</b>	<b>917</b>		<b>288</b>	<b>86</b>	<b>76</b>	<b>140</b>	<b>41</b>	<b>523</b>	<b>12</b>	<b>-</b>	<b>-</b>	<b>99</b>
<b>Worldwide crude distillation</b>	<b>3,302</b>		<b>2,247</b>	<b>571</b>	<b>408</b>	<b>303</b>	<b>139</b>	<b>2,175</b>	<b>65</b>	<b>8</b>	<b>168</b>	<b>157</b>

(1) Cat Crack: Catalytic Cracking; Cat Reform: Catalytic Reforming; Resid Hydrotreat: Residual Hydrotreating; Dist Hydrotreat: Distillate Hydrotreating; Alky: Alkylation; Isom: C5/C6 Isomerization; Vis: Visbreaker.

(2) In October 2010, TOTAL Italy merged with Erg to create the new company TotalErg – TOTAL holds 49% of TotalErg.

(3) Condensates Splitter held by the joint venture BFLP (40% TOTAL, 60% BASF and TOTAL operator) and included in the refining capacities from 31<sup>st</sup> December 2015.

(4) Condensates Splitter held by the joint venture HTC (50% TOTAL, 50% Hanwha and HTC operator) and included in the refining capacities from 31<sup>st</sup> December 2015.

## DISTILLATION CAPACITY (GROUP SHARE)<sup>(1)</sup>

Capacity, throughput and production data include equity share of refineries in which the Group holds a direct or indirect interest:

As of December 31, (kb/d)	2015	2014	2013	2012	2011
France	829	829	829	829	829
Rest of Europe	870	907	907	913	958
United States and French West Indies <sup>(2)</sup>	198	178	178	178	178
Asia & Middle East <sup>(3)</sup>	288	209	64	64	64
Africa	62	64	64	64	67 <sup>(4)</sup>
<b>Total</b>	<b>2,247</b>	<b>2,187</b>	<b>2,042</b>	<b>2,048</b>	<b>2,096</b>

(1) Capacity at the end of the year. Includes share of CEPSA until July 31, 2011, and share of TotalErg. Results for refineries in Africa, French Antilles and Italy are reported in the Marketing & Services segment.

(2) Including from December 31, 2015, TOTAL share in BTP Condensate Splitter (40%) in United States.

(3) Including TOTAL share (50%) in HTC Condensate Splitter in Korea from December 31, 2015.

(4) TOTAL share in NATREF adjusted from 36.36% to 18.22%.

## REFINERY THROUGHPUT (GROUP SHARE)<sup>(1)</sup>

Capacity, throughput and production data include equity share of refineries in which the Group holds a direct or indirect interest:

(kb/d)	2015	2014	2013	2012	2011
France	674	639	647	657	732
Rest of Europe	849	794	797	866	885
United States and French West Indies	204	188	178	182	148
Asia & Middle East	157	105	48	33	32
Africa	54	49	50	48	66
<b>Total</b>	<b>1,938</b>	<b>1,775</b>	<b>1,719</b>	<b>1,786</b>	<b>1,863</b>

(1) Includes share of CEPSA until July 31, 2011, and share of TotalErg. Results for refineries in Africa, French Antilles and Italy are reported in the Marketing & Services segment.

## UTILIZATION RATE (BASED ON CRUDE AND OTHER FEEDSTOCKS)<sup>(1)(2)</sup>

(%)	2015	2014	2013	2012	2011
France	81	77	78	82	91
Rest of Europe <sup>(3)</sup>	94	88	87	88	78
Americas	115	106	100	99	81
Asia & Middle East	75	50	75	67	67
Africa	84	77	78	75	80
<b>Average</b>	<b>89</b>	<b>81</b>	<b>84</b>	<b>86</b>	<b>83</b>

(1) Including equity share of refineries in which the Group has a stake.

(2) (Crude + crackers' feedstock)/distillation capacity at the beginning of the year (2014: SATORP refinery's capacity considered as from January 1).

(3) Including CEPSA until end-July 2011 and TotalErg. For CEPSA in 2011: calculation of the utilization rate based on production and capacity prorated on the first seven months of the year.

## UTILIZATION RATE (BASED ON CRUDE ONLY)<sup>(1)(2)</sup>

(%)	2015	2014	2013	2012	2011
<b>Average</b>	<b>86</b>	<b>77</b>	<b>80</b>	<b>82</b>	<b>78</b>

(1) Including equity share of refineries in which the Group has a stake.

(2) Crude/distillation capacity at the beginning of the year (2014: SATORP refinery's capacity considered as from January 1).

## PRODUCTION LEVELS (GROUP SHARE)<sup>(1)</sup>

The table below sets forth by product category TOTAL's net share of refined quantities produced at the Group's refineries<sup>(1)</sup>.

(kb/d)	2015	2014	2013	2012	2011
LPG	55	51	52	51	50
Motor gasoline	346	344	340	351	350
Avgas, jet fuel and kerosene	172	148	146	153	158
Diesel fuel and heating oils	812	787	739	734	804
Fuel oils	129	134	133	160	179
Lubricants	17	20	18	11	15
Bitumen	31	29	33	30	34
Other products	284	229	219	246	236
<b>Total</b>	<b>1,846</b>	<b>1,742</b>	<b>1,680</b>	<b>1,736</b>	<b>1,826</b>

(1) For refineries not 100% owned by TOTAL the production shown is TOTAL's equity share of the site's overall production.

## MAIN PETROCHEMICALS PRODUCT GROUPS AND THEIR MAJOR APPLICATIONS

Main product groups	Major applications
<b>Base Petrochemicals</b>	
Olefins	
Ethylene	Production of polyethylene, vinyl chloride monomer, styrene, functional polymers and copolymers, ethylene oxide, glycols and vinyl acetate monomer.
Propylene	Production of polypropylene, acrylic acid, oxo-alcohols, propylene oxide, glycols, cumene and acrylonitrile.
Butadiene	Production of rubber, polybutadiene, elastomers, latex and ABS.
Aromatics	
Benzene	Production of styrene, cyclohexane, chlorobenzenes, cumene, aniline, alkylbenzenes and maleic anhydride.
Styrene	Production of polystyrene, expanded polystyrene, ABS, emulsions, resins, latex and rubbers.
Toluene	Production of chemical intermediates and solvents.
Xylenes	Production of phthalic anhydride, terephthalic acid (PTA) and solvents.
<b>Polymers</b>	
Polyethylene	Flexible and rigid packaging, cables, pipes and tubes, molded bottles, fuel tanks artificial grass and caps and closures.
Polypropylene	Flexible and rigid packaging, containers, automotive parts, household and sanitary goods, fibers, medical, pipes and caps and closures.
Polystyrene	Food packaging, refrigeration appliances, insulation boards and television sets.

## MAIN PRODUCTION CAPACITIES AT YEAR-END<sup>(1)</sup>

(in thousands of tons)				2015	2014	2013	2012	2011
	Europe	North America	Asia and Middle East <sup>(2)</sup>	World	World	World	World	World
Olefins <sup>(3)</sup>	4,384	1,525	1,525	7,433	7,791	7,654	8,039	7,097
Aromatics <sup>(4)</sup>	2,903	1,512	2,368	6,783	6,773	5,635	5,795	5,730
Polyethylene	1,120	445	773	2,338	2,338	2,289	2,239	2,094
Polypropylene	1,350	1,200	400	2,950	2,950	2,895	2,875	2,835
Polystyrene	637	700	408	1,745	1,805	1,530	1,595	1,555
Others <sup>(5)</sup>	-	-	63	63	63	63	358	358
<b>Total</b>	<b>10,394</b>	<b>5,382</b>	<b>5,536</b>	<b>21,312</b>	<b>21,720</b>	<b>20,065</b>	<b>20,900</b>	<b>19,668</b>

(1) Excluding inter-segment sales.

(2) Including interests in Qatar, 50% of Hanwha Total Petrochemicals Co. Ltd and 37.5% of SATORP in Saudi Arabia.

(3) Ethylene + Propylene + Butadiene.

(4) Including monomer styrene.

(5) Mainly Monoethylene Glycol (MEG) and Cyclohexane.

## SALES BY GEOGRAPHIC AREA – PETROCHEMICALS PRODUCTS<sup>(1)</sup>

(%)	2015	2014	2013	2012	2011
France	13%	15%	18%	21%	24%
Rest of Europe	41%	39%	40%	45%	44%
North America	34%	33%	28%	22%	20%
Rest of world	12%	13%	14%	12%	12%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

(1) Excluding inter-segment sales and sales by equity affiliates and including fertilizers sales.

## MAIN SPECIALTY CHEMICALS PRODUCT GROUPS AND THEIR MAJOR APPLICATIONS

Main product groups	Major applications
Elastomer processing	Elastomer parts for the automotive, transportation and aerospace industries: transmission systems, antivibration systems, fluid transfer parts, body sealings, precision sealing (Hutchinson).
Adhesives	Adhesives and sealants for construction, packaging, transportation, hygiene and assembly markets (Bostik) <sup>(1)</sup> .
Electroplating	General metal finishing, electronics materials and semiconductors, green technologies chemistry and systems (Atotech).

(1) Bostik sale to Arkema completed on February 2, 2015.

## SALES BY ACTIVITY – SPECIALTY CHEMICALS PRODUCTS

(in million dollars)	2015	2014	2013	2012	2011
Hutchinson	4,256	4,599	4,351	4,066	4,161
Bostik <sup>(1)</sup>	155	2,043	1,999	1,990	1,989
Atotech	1,093	1,261	1,175	1,240	1,243

(1) Bostik sale to Arkema completed on February 2, 2015.

## SALES BY GEOGRAPHIC AREA – SPECIALTY CHEMICALS PRODUCTS<sup>(1)(2)</sup>

(%)	2015	2014	2013	2012	2011
France	14%	14%	15%	16%	15%
Rest of Europe	35%	35%	34%	33%	33%
North America	26%	24%	24%	24%	28%
Rest of world	25%	27%	27%	27%	24%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

(1) Excluding inter-segment sales.

(2) The Cray Valley coating resins and Sartomer photocure resins businesses were divested in July 2011. The structural and hydrocarbon resins business lines were kept and have been incorporated into the Petrochemicals division as of January 1, 2012.

## SALES BY ACTIVITY – SPECIALTY CHEMICALS PRODUCTS<sup>(1)</sup>

(%)	2015	2014	2013	2012	2011
Elastomer processing	77%	58%	58%	56%	44%
Resins <sup>(2)</sup>	-	-	-	-	22%
Adhesives <sup>(3)</sup>	3%	26%	27%	27%	21%
Electroplating	20%	16%	16%	17%	13%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

(1) Excluding inter-segment sales.

(2) The Cray Valley coating resins and Sartomer photocure resins businesses were divested in July 2011. The structural and hydrocarbon resins business lines were kept and have been incorporated into the Petrochemicals division as of January 1, 2012.

(3) Bostik sale to Arkema completed on February 2, 2015.



# MARKETING & SERVICES



N°1  
marketer  
in Africa<sup>(3)</sup>

Among the largest  
marketers  
in Western Europe<sup>(1)</sup>

2.3 B\$  
cash flow  
from operations

1.6 B\$  
organic  
investments<sup>(2)</sup>

Products & services  
marketed in more than  
150<sup>(4)</sup>  
countries

16,023  
service-stations

1.7 B\$  
adjusted net  
operating income

1,818 kb/d  
of refined  
products sales<sup>(5)</sup>

28,398  
employees

(1) Data published by the companies based on quantities sold in 2014.

(2) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.

(3) PFC Energy and Company data 2014.

(4) Including via national distributors.

(5) Excluding trading and refinery bulk sales, including share of TotalErg.



## The Marketing & Services segment comprises...

### Marketing & Services

The Marketing & Services (M&S) business segment is dedicated to the development of TOTAL's oil products distribution activities and related services throughout the world. M&S conveys TOTAL's brand image to its customers, both private and professional, through a large retail network and the distribution of a wide range of products from its refineries and other facilities. TOTAL is among the key players in the specialty products market, in particular for lubricants, LPG, jet fuel, special fluids, bitumen and marine fuels. TOTAL also offers numerous services for consumers and professionals in the mobility, residential and industrial sectors.

### New Energies

TOTAL focuses on two main development axes: solar energy, a high-growth market in which the Group is positioned among the leaders through SunPower<sup>(1)</sup> and the transformation of biomass through biotechnology which aims to develop new biosourced product solutions for transportation and chemicals.

In addition, TOTAL actively follows developments in other renewable energies.



## Growing

while maintaining high profitability

## Expanding

retail network:  
+6% growth in 2014-2015

## Developing

high return lubricants worldwide:  
+3% growth in 2014-2015

## Consolidating

positions in Europe and growing  
in Africa and the Middle East

## Becoming

the partner of choice

## Innovating

in products and services

## Investing

500 M\$ in New Energies

(1) Listed on Nasdaq.

## FINANCIAL HIGHLIGHTS

(in million dollars)	2015	2014	2013	2012	2011
Adjusted operating income <sup>(1)</sup>	2,098	1,709	2,152	1,740	1,671
Adjusted net operating income <sup>(1)</sup>	1,699	1,254	1,554	1,069	1,147
Gross investments <sup>(2)</sup>	1,841	1,818	1,814	1,671	2,553
Organic investments <sup>(3)</sup>	1,569	1,424	1,579	1,507	1,239
Divestments	856	163	186	196	2,721
Cash flow from operations	2,323	2,721	2,557	1,456	753

(1) Adjusted results are defined as income at replacement cost, excluding non-recurring items, and excluding the impact of fair value changes.

(2) Including acquisitions and increases in non current loans.

(3) Organic investments = net investments, excluding acquisitions, divestments and other operations with non-controlling interests.

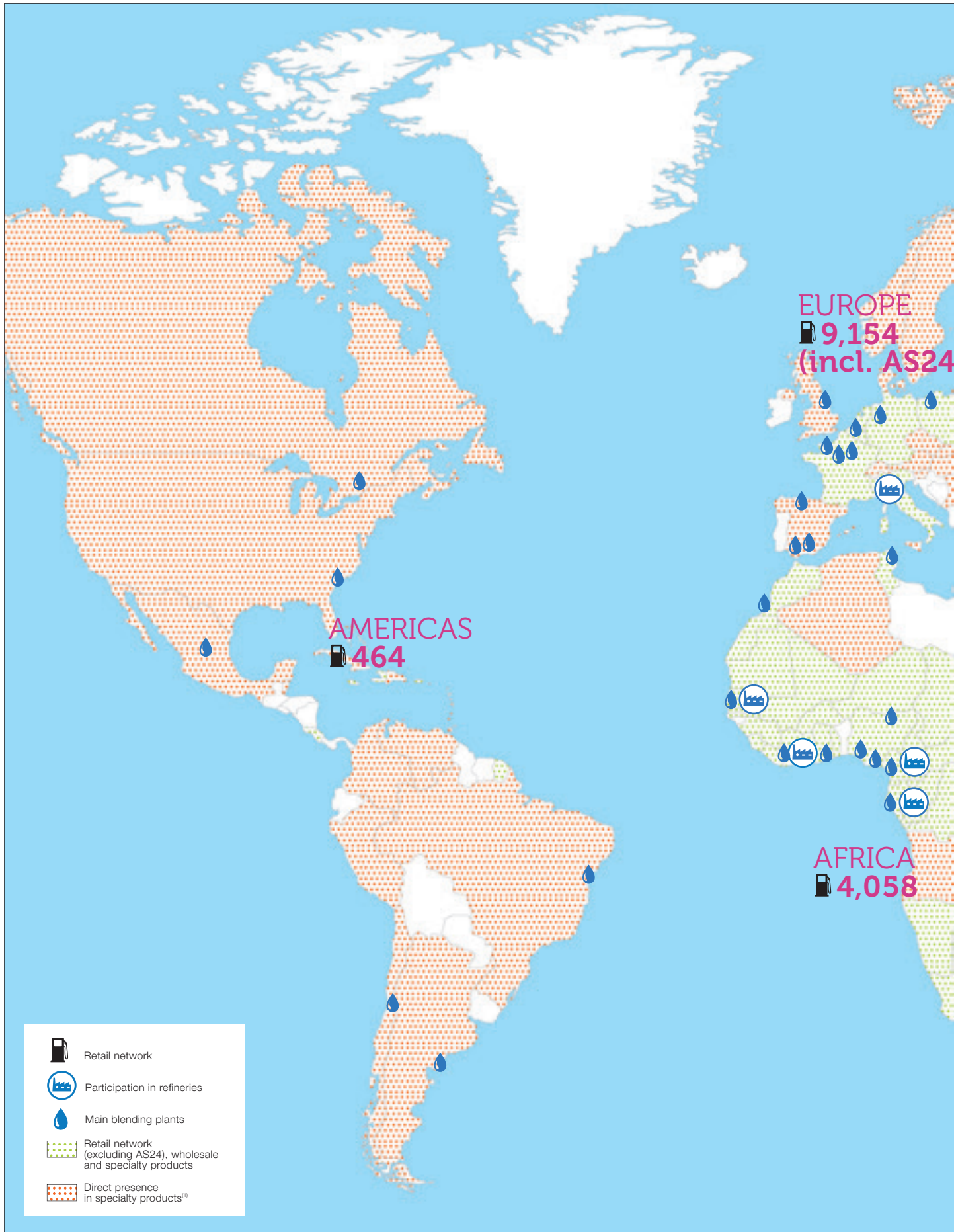
## OPERATIONAL HIGHLIGHTS

(in kb/d)	2015	2014	2013	2012	2011
<b>Refined product sales excluding Trading and bulk sales</b>	<b>1,818</b>	<b>1,769</b>	<b>1,749</b>	<b>1,710</b>	<b>1,987</b>
Trading sales <sup>(1)</sup>	1,538	1,385	1,155	1,161	1,215
Bulk sales <sup>(2)</sup>	649	615	617	690	437
<b>Refined product sales including Trading and bulk sales</b>	<b>4,005</b>	<b>3,769</b>	<b>3,521</b>	<b>3,561</b>	<b>3,639</b>

(1) Results of Trading and bulk sales are reported in the Refining & Chemicals segment.

(2) Data for UK procurement/exchange reprocessed for 2012 and 2013.

# MARKETING & SERVICES POSITIONS AS OF DECEMBER 31, 2015



(1) Lubricants - LPG - jet fuel - special fluids - bitumen - heavy fuels - marine fuels - additives and special fuels.







## MARKETING & SERVICES

Expanding highly profitable business in growth-driven regions

### Expanding our retail network

M&S has a large footprint in retail with presence in 65 countries (7 in Europe, 43 in Africa and the Middle East, 6 in the Americas and 9 in Asia) and achieved network growth of 6% in 2015. In Africa, TOTAL is the number one retail player with an average retail market share of 18% in 2015. Its network is also one of the largest in Western Europe with presence in key markets (France, Germany, Benelux, Italy).

M&S continues to develop its retail activities through:

- **Organic growth.** In Europe, M&S has increased its average market share by 3% in France since Total Access, a low-price/high quality fuel concept, was launched, and gained 1% market share in Germany in the last two years.
- **Bolt-on acquisitions.** M&S has secured significant assets in dynamic regions: the acquisition of the Chevron retail network in Pakistan was finalized in 2015, adding around 500 stations to an existing retail network of nearly 300 sites. In the Caribbean, M&S acquired a 70% stake in the leading fuel retailer in the Dominican Republic in 2016, strengthening its footprint in the region.
- **A modern and attractive new concept of service stations.** A new image, alongside a range of services selected for drivers' convenience, such as food, shops, and car washing facilities, enable the service station to provide a pleasant experience to customers. Available in 42 countries, Total's mobile application allows customers to stay connected with Total.
- **High quality innovative and alternative fuels.** The new Total Excellium, which enhances vehicles' performance by protecting engines from grime and deposits, was launched in 2015. Preparing for evolving trends in consumption, Total is already testing gas, electricity and hydrogen as transport fuels in a selection of countries.

### Lubricants: a global and profitable business

Lubricant sales grew by 3% in 2015. TOTAL aims to continue outpacing market growth.

- Lubricant demand is expected to be driven by the Asia-Pacific region. Total's new blending plant in Singapore, inaugurated in 2015, is well set to capture this growing demand. With a capacity of 310 kt per year, the plant is Total's largest.
- TOTAL continues to create new partnerships to leverage its lubricants brand. In 2015, Total Lubricants signed a new after-market partnership with Tata Motors to supply high performance lubricants across Tata Motors sales & service points in the global market.
- Through its efforts in R&D, TOTAL is able to provide quality lubricants to its customers, including fuel economy engine oils and biodegradable oils.

### Expanding specialties worldwide

With the ambition to become the partner of choice and proximity for its clients, Total invests in its production tools and develops new offers and services:

- TOTAL has selectively strengthened its position in LPG through acquisitions in Tunisia, South Africa and Vietnam, where Total has become the second largest LPG player in the market.
- TOTAL has started up a special fluid production plant near Houston, USA, in early 2016.
- Through the introduction of an online portal for professionals to buy their bitumen at fixed prices in France, Total is helping its clients control their expenses in case of sudden changes in price.

## PETROLEUM PRODUCT SALES (EXCLUDING TRADING AND BULK SALES)

### By geographic area

(kb/d)	2015	2014	2013	2012	2011
<b>Europe</b>					
France	541	547	575	566	574
United Kingdom	27	26	27	26	115
Benelux	214	214	211	226	231
Germany	192	195	205	207	214
Italy <sup>(1)</sup>	81	76	77	89	95
Spain <sup>(2)</sup>	1	1	1	1	163
Portugal <sup>(2)</sup>	-	-	-	-	9
Rest of Europe	36	41	43	45	54
<b>Total Europe</b>	<b>1,092</b>	<b>1,100</b>	<b>1,139</b>	<b>1,160</b>	<b>1,455</b>
<b>Africa</b>					
Northern Africa	118	108	56	56	56
Western Africa	85	82	78	76	70
Eastern Africa	89	72	69	56	53
Southern Africa	87	73	69	66	69
Central Africa	31	30	33	32	32
Other <sup>(3)</sup>	13	15	21	21	24
<b>Total Africa</b>	<b>423</b>	<b>380</b>	<b>326</b>	<b>307</b>	<b>304</b>
<b>Americas</b>					
United States	28	29	37	3	3
Caribbean Islands	35	42	41	42	45
Latin America	7	7	8	8	8
<b>Total Americas</b>	<b>70</b>	<b>78</b>	<b>86</b>	<b>53</b>	<b>56</b>
<b>Middle East</b>					
Jordan, Lebanon, Turkey and others	85	77	54	55	51
<b>Total Middle East</b>	<b>85</b>	<b>77</b>	<b>54</b>	<b>55</b>	<b>51</b>
<b>Asia-Pacific</b>					
East Asia	124	107	118	108	93
Pacific	9	12	10	10	10
Indian Ocean islands	15	15	17	17	18
<b>Total Asia-Pacific</b>	<b>148</b>	<b>134</b>	<b>144</b>	<b>135</b>	<b>121</b>
<b>Total Worldwide</b>	<b>1,818</b>	<b>1,769</b>	<b>1,749</b>	<b>1,710</b>	<b>1,987</b>

(1) From October 1, 2010, TOTAL Italy merged with Erg to create TotalErg – TOTAL holds 49% of TotalErg.

(2) On July 31, 2011, TOTAL sold its 48.83% share in CEPSA.

(3) Represents supply to African non consolidated group companies and third parties.

### By main products<sup>(1)</sup>

(kb/d)	2015	2014	2013	2012	2011
LPG <sup>(2)</sup>	70	86	88	91	103
Motor gasoline	332	312	277	275	327
Avgas and jet fuel	243	228	246	215	238
Diesel fuel and heating oils	1,018	995	980	956	1,050
Fuel oils	42	39	45	65	121
Lubricants and base oil	39	37	37	38	40
Solvents	14	15	15	15	24
Bitumen	45	40	45	43	57
Other products	15	17	16	12	27
<b>Total</b>	<b>1,818</b>	<b>1,769</b>	<b>1,749</b>	<b>1,710</b>	<b>1,987</b>

(1) Including TOTAL's share in CEPSA until July 31, 2011 and in TotalErg since October 1, 2010.

(2) Sale of Totalgaz since May 29, 2015.



## SERVICE-STATIONS<sup>(1)</sup>

As of December 31,	2015	2014	2013	2012	2011
<b>Europe</b>					
France	3,667	3,727	3,813	3,911	4,046
Benelux	928	922	923	931	929
Germany	1,178	1,157	1,122	1,108	1,091
Italy <sup>(1)</sup>	2,608	2,749	3,017	3,161	3,355
Poland	10	2	-	-	-
AS24 Stations	763	740	731	700	615
<b>Total Europe</b>	<b>9,154</b>	<b>9,297</b>	<b>9,606</b>	<b>9,811</b>	<b>10,036</b>
<b>Africa</b>					
Northern Africa	673	653	585	490	470
Western Africa	1,509	1,502	1,379	1,336	1,293
Eastern Africa	882	866	845	841	836
Southern Africa	592	587	578	588	528
Central Africa	402	383	339	346	337
<b>Total Africa</b>	<b>4,058</b>	<b>3,991</b>	<b>3,726</b>	<b>3,601</b>	<b>3,464</b>
<b>Americas</b>					
Caribbean Islands	464	452	438	415	410
<b>Total Americas</b>	<b>464</b>	<b>452</b>	<b>438</b>	<b>415</b>	<b>410</b>
<b>Middle East</b>					
Jordan, Lebanon, Turkey	816	796	770	637	613
<b>Total Middle East</b>	<b>816</b>	<b>796</b>	<b>770</b>	<b>637</b>	<b>613</b>
<b>Asia-Pacific</b>					
East Asia	1,276	734	716	669	618
Pacific	96	91	90	88	86
Indian Ocean islands	159	208	205	204	207
<b>Total Asia-Pacific</b>	<b>1,531</b>	<b>1,033</b>	<b>1,011</b>	<b>961</b>	<b>911</b>
<b>Total excluding AS24</b>	<b>15,257</b>	<b>14,829</b>	<b>14,820</b>	<b>14,725</b>	<b>14,819</b>
<b>Total Worldwide</b>	<b>16,023</b>	<b>15,569</b>	<b>15,551</b>	<b>15,425</b>	<b>15,434</b>

(1) Including TotalErg service-stations. From October 1, 2010, TOTAL Italy merged with Erg to create TotalErg.



## NEW ENERGIES: TAKING ADVANTAGE OF FAST GROWING RENEWABLE ENERGY MARKET

Total is investing for the long term in New Energies (Solar and Biofuels) because it believes in their future profitability. Therefore, the Group allocates around \$500 million of capital expenditures per year to high-tech, high-quality platforms for growth.

### Solar: Worldwide Projects with our affiliate SunPower

More than 60 gigawatts have been deployed worldwide by the solar photovoltaic industry in 2015. The global solar market is growing fast at more than 10% per year and the cost of photovoltaic solar continues to come down. In this environment, Total's solar affiliate SunPower takes advantage of Total's international footprint to develop new projects, providing governments, utilities, businesses and residential customers around the globe with complete high-efficiency competitive solar solutions.

### The U.S.: A Strong Presence

June 2015: SunPower completed construction of the 579 MWac Solar Star Project [1](#), the world's largest photovoltaic solar power plant, in Rosamond, California. SunPower designed and built the facility, and now provides operations and maintenance services. Solar Star supplies enough electricity to power nearly 255,000 Californian homes. SunPower also completed the construction of Quinto [2](#), a 110 MWac solar farm and began building Henrietta [3](#) (102 MWac), both in California.

### South Africa: Solar power plant under construction

April 2015: Total and SunPower began building Prieska [4](#), a 75 MWac solar power plant located in South Africa's Northern Cape province. The plant is expected to be operational by mid-2016 and will power approximately 75,000 homes. This project was selected by South Africa's Department of Energy, as part of the third round of tenders for renewable energy generation facilities.

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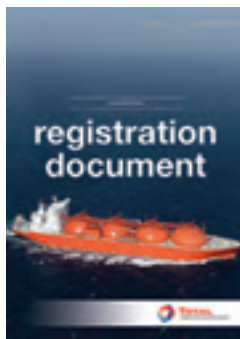
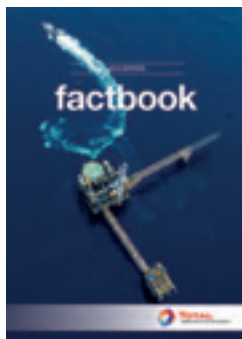
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