

# Exploration & Production outlook

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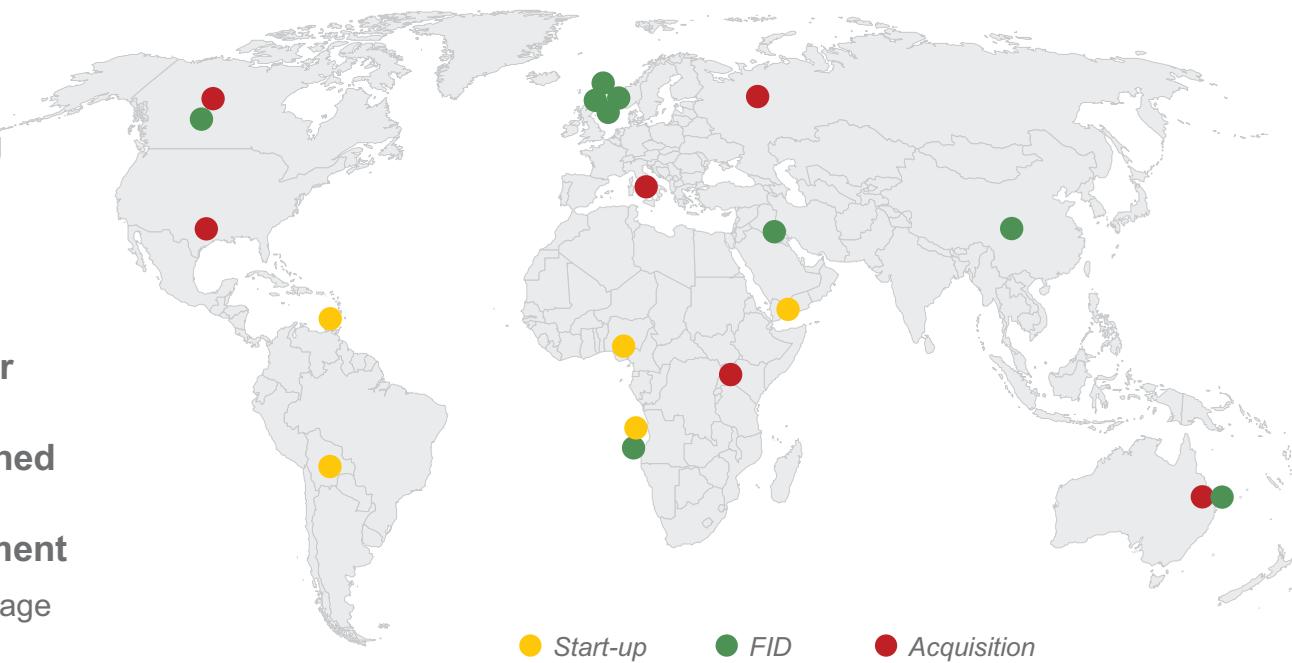
Yves-Louis Darricarrère

Executive Vice President, President Exploration & Production



# Main achievements in 2010-2011

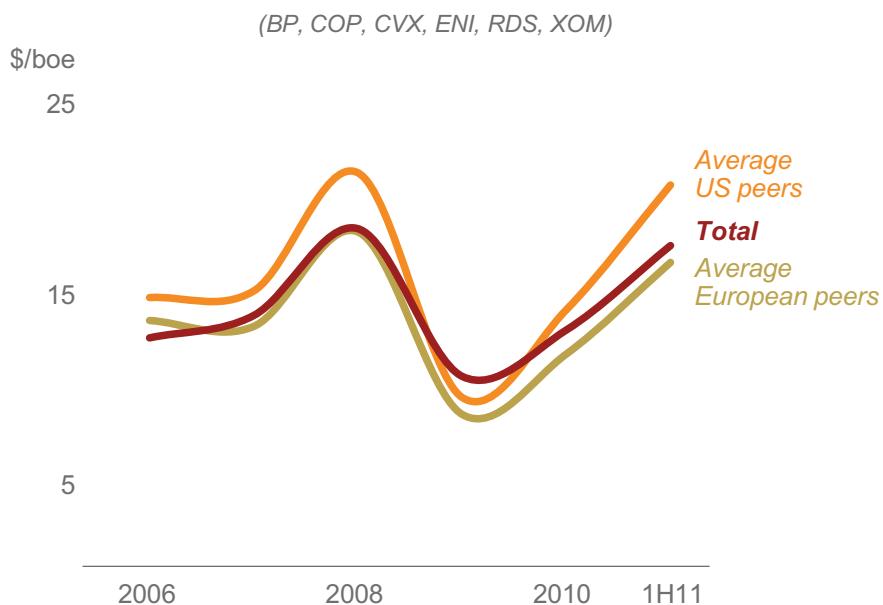
- ▶ New organization
- ▶ Rejuvenated exploration, new acreage and promising discoveries in Bolivia, Norway, French Guyana, Azerbaijan
- ▶ 5 start-ups including Pazflor
- ▶ 9 new major projects launched
- ▶ Dynamic portfolio management
  - Acquired 3.4 Bboe at an average cost of 3.4 \$/boe
  - 5.4 B\$ of Upstream asset sales
- ▶ 4 new major poles : Canada, Australia, Russia and East Africa



***Securing drivers for future growth and optimizing the portfolio***

# Strong Upstream financial performance

## Upstream adjusted net operating income



## Upstream operating cash flow



- Best adjusted net operating income per barrel vs European peers since 2009
- Strict cost management mitigating inflationary pressure

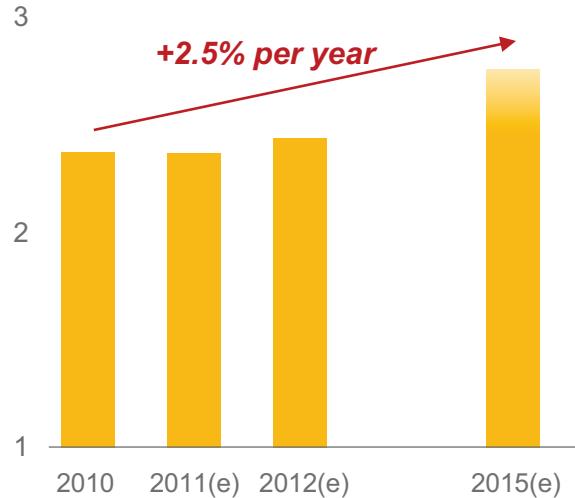
- Strong Upstream cash flow generation reflecting higher prices and positive impact of start-ups

## Competitive profitability and leverage to hydrocarbon prices

# Strengthened production growth for 2010-2015

## Production\*

Mboe/d



## Main project start-ups

2011

2012

2013

2015

- Itau
- Trinidad
- Pazflor
- Islay
- OML 58 upgrade
- Usan
- Angola LNG
- Bongkot South
- Halfaya
- Sulige
- Kashagan Ph.1

- South Mahakam
- Anguille Redevelopment
- West Franklin Ph.2
- Ekofisk South
- Block 15/06 NW
- Vega Pleyade
- Laggan Tormore
- CLOV
- Ofon 2

- Eldfisk 2
- Surmont Ph.2
- GLNG
- Ikike (OML99)
- Tempa Rossa
- Termokarstovoye

- Increased production growth target
- 2012 production to benefit from the start-up of Pazflor, Usan, Angola LNG
- Oil/Gas split stable around 50/50

**Start-ups contribute approximately 600 kboe/d in 2015  
80% already under development**

\* production including equity affiliates, based on ASC 932 ; Brent oil price environment of 100 \$/b for 2012 and thereafter

# Nine major projects launched increasing portfolio leverage and profitability

**Surmont Ph.2 (50%)**



- Capacity : 110 kb/d
- ~1.5 Bb\*
- Start-up : 2015(e)

**Laggan Tormore (80%, op.)**



- Capacity : 90 kboe/d
- 230 Mboe\*
- Start-up : 2014(e)

**CLOV (40%, op.)**



- Capacity : 160 kb/d
- ~500 Mb\*
- Start-up : 2014(e)

**Halfaya (18.75%)**



- Capacity : 535 kb/d
- 4.1 Bb\*
- Start-up : 2012(e)

**West Franklin Ph.2 (35.8%, op.)**



- Capacity : 40 kboe/d
- 85 Mboe\*
- Start-up : 2013(e)

**GLNG (27.5%)**



- Capacity : 150 kboe/d
- ~1.5 Bboe\*
- Start-up : 2015(e)

**Sulige (49%)**



- Capacity : ~50 kboe/d
- ~440 Mboe\*
- Start-up : 2012(e)

**Ekofisk South (39.9%)**



- Capacity : 70 kboe/d
- ~200 Mboe\*
- Start-up : 2014(e)

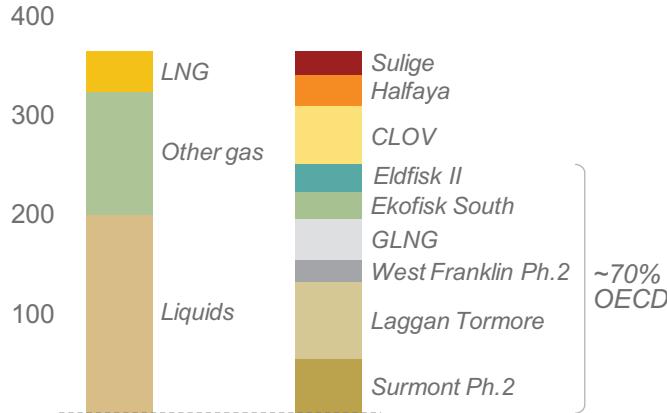
**Eldfisk II (39.9%)**



- Capacity : 70 kboe/d
- ~250 Mboe\*
- Start-up : 2015(e)

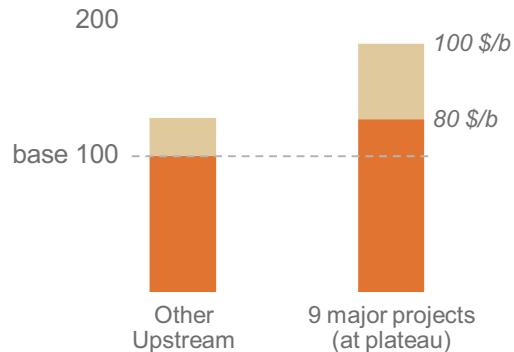
## Well balanced oil / gas and OECD exposure

(Cumulative production in kboe/d\*\*)



## Projects combining profitability and leverage to oil prices

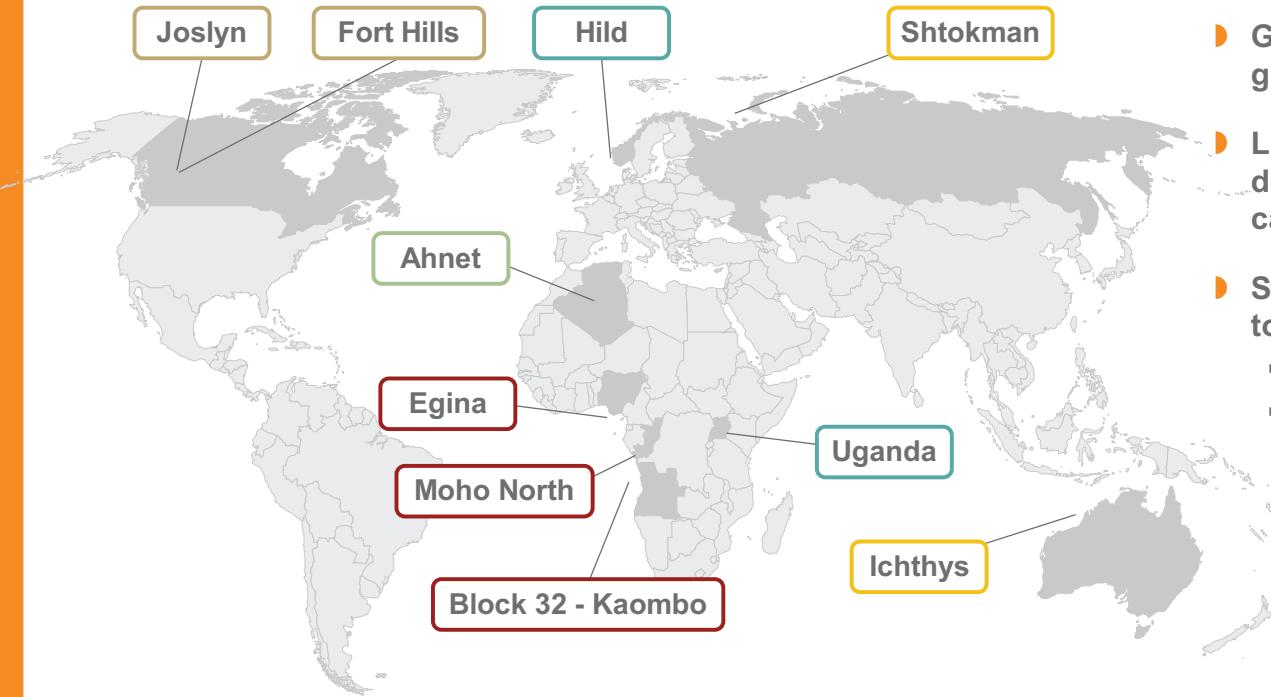
(Net operating income in \$/boe)



\* initial proved and probable reserves at 100% (Total estimates) and for Halfaya, Iraqi Energy Minister estimates

\*\* sum of Total's production rights at plateau

# Higher production growth post-2015



## 10 major projects to start up in 2016-2018

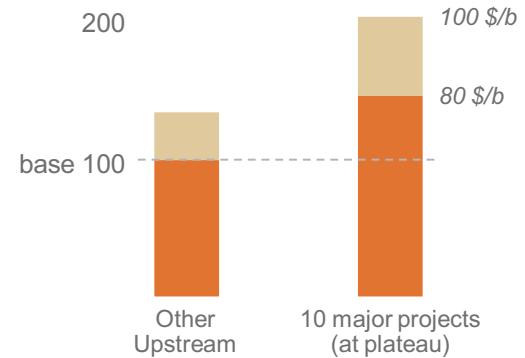
- Heavy oil
- LNG
- Unconventional gas
- Deep offshore
- Conventional resources

**~500 kboe/d of production from 2016-2018 start-ups**

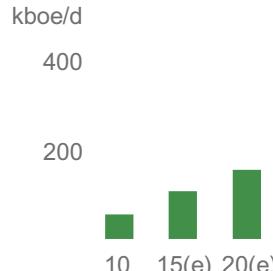
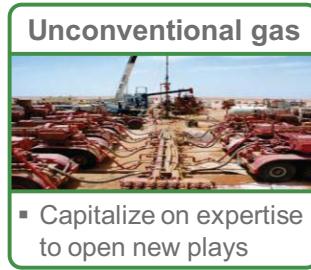
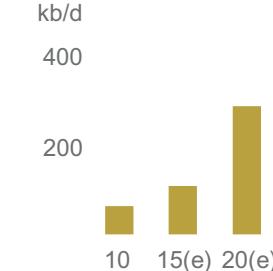
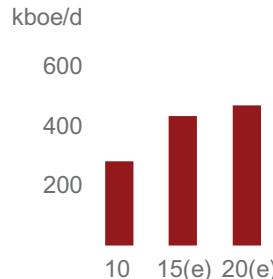
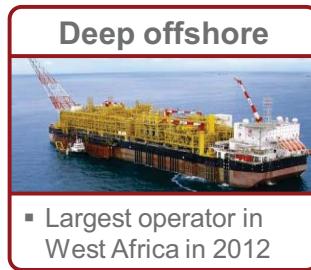
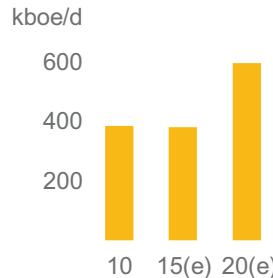
- Good visibility on post-2015 production growth with 10 identified projects
- Long-plateau production reduces decline rate and generates strong cash flow
- Strict financial discipline to ensure profitable growth
  - 80 \$/b Brent for conventional projects
  - 100 \$/b for long-plateau projects with test at 80 \$/b

## Projects combining profitability and leverage to oil prices

(Net operating income in \$/boe)



# Strengthening positions in growth segments



## ► Capitalizing on our expertise

- Priority to safety and environment
- Maintaining edge through constant innovation
- Industry leader in major project management

## ► Access to resources through strategic partnerships

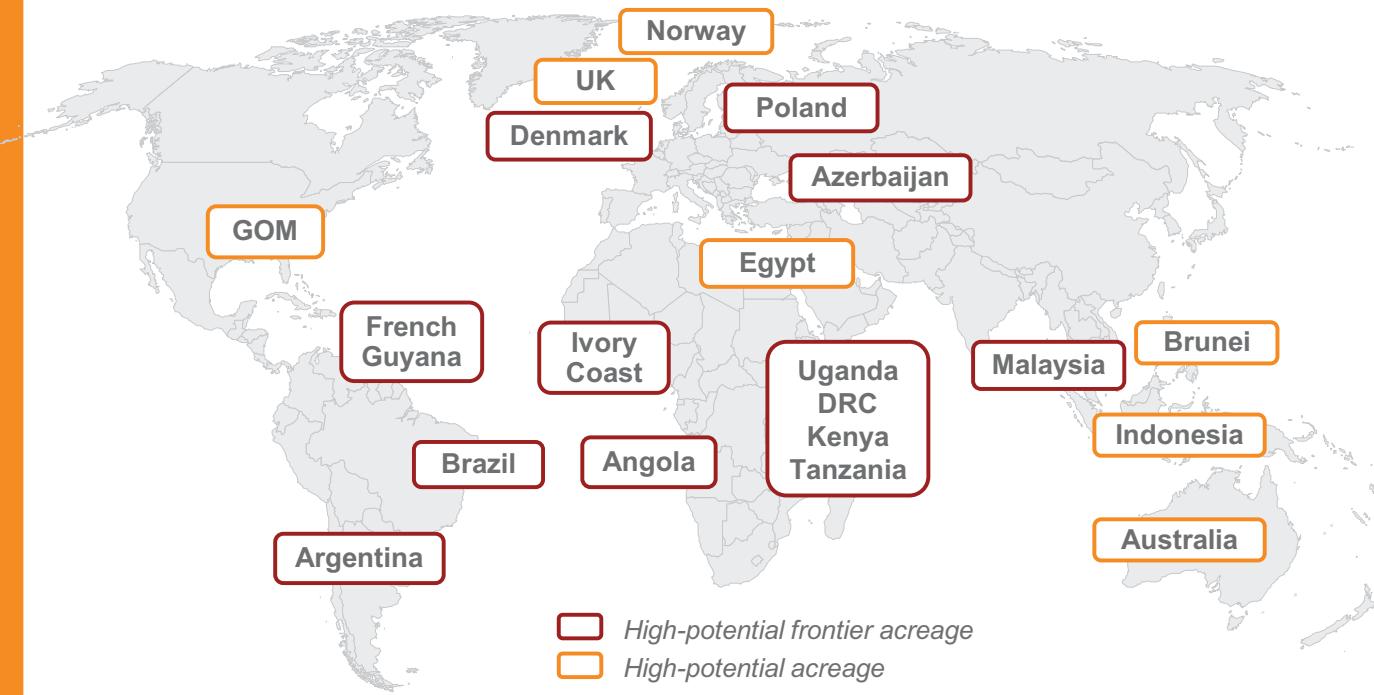
- |             |          |
|-------------|----------|
| ▪ Russia    | ▪ China  |
| ▪ Australia | ▪ USA    |
| ▪ Canada    | ▪ Angola |
| ▪ Uganda    |          |

*~50% of proved and probable reserves on growth segments*

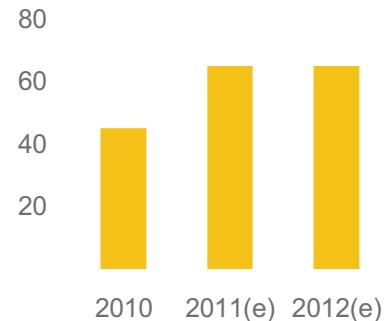


# Bold exploration strategy

## New exploration acreage



## Increasing number of exploration wells drilled



- More wells
- More frontier
- Larger prospects

- Exploration budget increased to 2.1 B\$ in 2011
- Added 185,000 km<sup>2</sup>

*Recent promising discoveries :*  
**Bolivia, Norway, French Guyana, Azerbaijan**

# North Sea : creating value in mature area

## Laggan Tormore (80%, operator)



- ▶ Two gas fields in deep-offshore West of Shetland (UK) : 600 m water depth
- ▶ New gas processing plant in Sullom Voe
- ▶ New production hub
- ▶ Reserves\* : ~230 Mboe (Oil/Gas 10/90)
- ▶ Capacity : ~90 kboe/d
- ▶ Start-up : 2014(e)

## Laggan Tormore

## Alwyn

## Elgin Franklin

## Snøhvit

## Haltenbanken

## Hild area

## Ekofisk / Eldfisk

## Offshore Netherlands

### ▶ Major exploration program :

- Norway : Norvarg discovery ; 2 additional wells ongoing
- UK : Edradour discovery ; 4 wells in 2011
- 6 new licenses in the UK in 2010 and 5 in Norway in 2011

## Ekofisk South-Eldfisk II (39.9%)



- ▶ New facilities to further develop the Ekofisk and Eldfisk fields
- ▶ Reserves\* : ~450 Mboe (Oil/Gas 80/20)
- ▶ **Ekofisk South**
  - Capacity : ~70 kboe/d
  - Start-up : 2014(e)
- ▶ **Eldfisk II**
  - Capacity : ~70 kboe/d
  - Start-up : 2015(e)

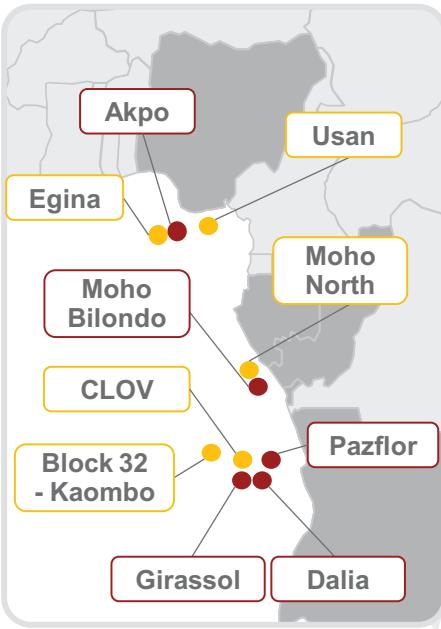
\* initial proved and probable reserves at 100%

# West Africa : industry leader in deep offshore

## Pazflor (40%, operator)



- ▶ Capacity : 220 kb/d
- ▶ 9 B\$ investment in line with budget
- ▶ Successful start-up in August 2011, ahead of schedule
- ▶ World's largest FPSO (325 m long, 62 m wide)
- ▶ Most complex subsea network (49 wells, 180 km of pipeline, 10,000 tons of subsea equipment)
- ▶ First full scale development with subsea separation



## Usan (20%, operator)



- ▶ Capacity : 180 kb/d
- ▶ 8 B\$ investment
- ▶ Start-up : 1Q12(e)
- ▶ FPSO on site (320 m long, 61 m wide)
- ▶ Complex subsea network (42 wells, 130 km of pipeline)

***Total's production to increase by more than 4% per year in West Africa over 2010-2015***

# East Africa : creating a new pole in a promising area

**DRC**

- Block III (Lake Albert area) – 60%
- Operator : Total
- Drilling expected in 2013+

**South Sudan**

- Block B – 32.5%
- Operator : Total
- Frontier exploration
- Resumption depends on political situation

**Uganda**

- Blocks 1, 2, 3A – 33.33%
- Operators : Total (1), Tullow (2), CNOOC (3A) : complementary partnership for optimum development of the project
- ~1 Bb already discovered
- ~1 Bb of potential additional resources
- Production capacity : potentially 300 kb/d
- First oil expected in 2015+

**Tanzania**

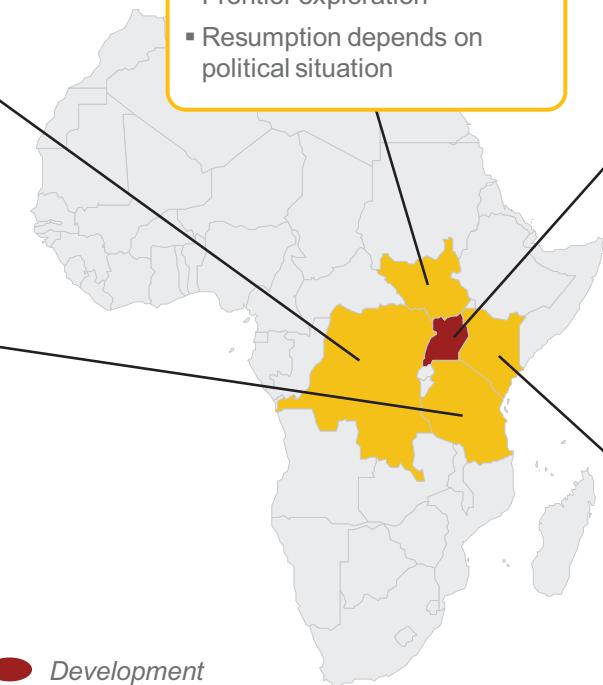
- Block Tanganyika Lake North
- Total selected as operator
- Frontier exploration
- Deep lake : 500–1,500 m
- First drilling expected in 2015+

**Kenya**

- Farm-in on blocks L5, L7, L11a, L11b, L12 – 40%
- Frontier exploration
- Deep offshore
- Drilling expected in 2012-13

● Exploration & Appraisal

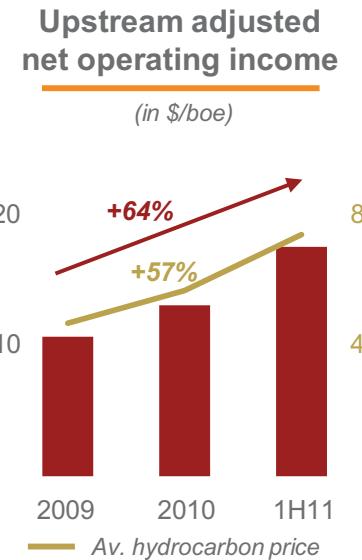
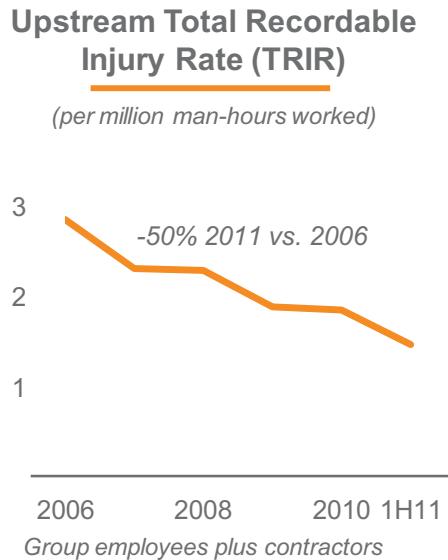
● Development



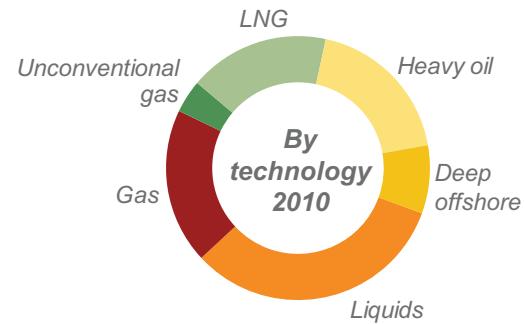
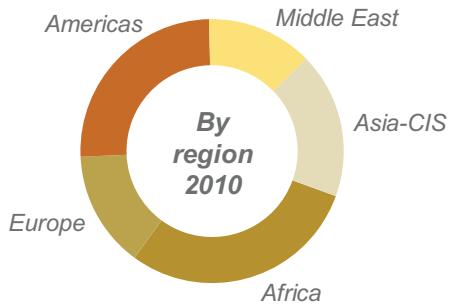
- More than 10 Bboe of potential resources in the region
- Integrating environmental and local challenges in development

# Combining near-term delivery and long-term strategy

- ▶ Focusing on safety and environment for sustainable development
- ▶ Managing large projects with skilled workforce
- ▶ Increasing exploration
- ▶ Delivering profitable growth
- ▶ Upgrading portfolio with a strong base of long-plateau projects
- ▶ Developing strategic partnerships



## More than 20 years of proved and probable reserves



# Diversified portfolio of major Upstream projects

	Projects	Countries	Capacity (kboe/d)	Share	Op*	Status
2018(e)	IMA (OML 112)	Nigeria	Gas	60	40%	✓ Study
	Brass LNG	Nigeria	LNG	300	17%	FEED
	Joslyn North Mine	Canada	Heavy oil	100	38.25%	✓ FEED
	Shtokman Ph.1	Russia	LNG/Pipeline	410	25%	FEED
	Shah Deniz Ph.2	Azerbaijan	Gas	380	10%	Study
	Ichthys	Australia	LNG	335	24%	FEED
	Blocks 1,2 and 3A	Uganda	Liquids	~300	33.3%	✓ Study
	Hild	Norway	Liq/Gas	80	49%	✓ FEED
	Fort Hills	Canada	Heavy oil	160	39.2%	FEED
	Moho North	Congo	Deep off.	100	53.5%	✓ Study
	Block 32 - Kaombo	Angola	Deep off.	200	30%	✓ Study
	Egina	Nigeria	Deep off.	200	24%	✓ FEED
	Ahnet	Algeria	Gas	70	47%	Study
	Termokarstovoye	Russia	Gas/Cond.	70	49%	FEED
2015(e)	Tempa Rossa	Italy	Heavy oil	55	75%	✓ FEED
	Ikike (OML 99)	Nigeria	Liq/Gas	55	40%	✓ FEED
	GLNG	Australia	LNG	150	27.5%	Dev.
	Surmont Ph.2	Canada	Heavy oil	110	50%	Dev.
	Eldfisk 2	Norway	Liq/Gas	70	39.9%	Dev.
	Ofon 2	Nigeria	Liq/Gas	70	40%	✓ Dev./EPC
	CLOV	Angola	Deep off.	160	40%	✓ Dev.
	Laggan Tormore	U.K	Deep off.	90	80%	✓ Dev.
	Vega Pleyade	Argentina	Gas	70	37.5%	✓ FEED
	Block 15/06 NW	Angola	Liquids	80	15%	Dev.
	Ekofisk South	Norway	Liq/Gas	70	39.9%	Dev.
	West Franklin Ph.2	UK	Gas/Cond.	40	35.8%	✓ Dev.
	Anguille redev. Ph.1-3	Gabon	Liquids	20	100%	✓ Dev.
	South Mahakam Ph.1&2	Indonesia	LNG	55	50%	✓ Dev.
2012(e)	Kashagan Ph.1	Kazakhstan	Liquids	300	16.8%	Dev.
	Sulige	China	Gas	50	49%	Dev.
	Halfaya	Iraq	Liquids	535	18.75%	Dev.
	Bongkot South	Thailand	Gas	70	33.3%	Dev.
	Angola LNG	Angola	LNG	175	13.6%	Dev.
	Usan	Nigeria	Deep off.	180	20%	✓ Dev.
	OML 58 Upgrade	Nigeria	Gas/Cond.	70	40%	✓ Dev.
	Islay	UK	Gas/Cond.	15	100%	✓ Dev.
	Pazflor	Angola	Deep off.	220	40%	✓ Prod.
	Trinidad Block 2C	Trinidad	Gas	45	30%	Prod.

\* Total operated ; in Uganda, Total operator of block 1 only

# Disclaimer

This document may contain forward-looking statements, including within the meaning of the Private Securities Litigation Reform Act of 1995, notably with respect to the financial condition, results of operations, business, strategy and plans of TOTAL. Such statements are based on a number of assumptions that could ultimately prove inaccurate, and are subject to a number of risk factors, including currency fluctuations, the price of petroleum products, the ability to realize cost reductions and operating efficiencies without unduly disrupting business operations, environmental regulatory considerations and general economic and business conditions. Neither TOTAL nor any of its subsidiaries assumes any obligation to update publicly any forward-looking statement, whether as a result of new information, future events or otherwise. Further information on factors which could affect the company's financial results is provided in documents filed by the Group with the French Autorité des Marchés Financiers and the U.S. Securities and Exchange Commission ("SEC").

Financial information by business segment is reported in accordance with the internal reporting system and shows internal segment information that is used to manage and measure the performance of TOTAL. Performance indicators excluding the adjustment items, such as adjusted operating income, adjusted net operating income, and adjusted net income are meant to facilitate the analysis of the financial performance and the comparison of income between periods.

Adjustment items include:

(I) Special items

Due to their unusual nature or particular significance, certain transactions qualified as "special items" are excluded from the business segment figures. In general, special items relate to transactions that are significant, infrequent or unusual. However, in certain instances, transactions such as restructuring costs or asset disposals, which are not considered to be representative of the normal course of business, may be qualified as special items although they may have occurred within prior years or are likely to occur again within the coming years.

(II) Inventory valuation effect

The adjusted results of the Downstream and Chemicals segments are presented according to the replacement cost method. This method is used to assess the segments' performance and facilitate the comparability of the segments' performance with those of its competitors.

In the replacement cost method, which approximates the LIFO (Last-In, First-Out) method, the variation of inventory values in the statement of income is, depending on the nature of the inventory, determined using either the month-end prices differential between one period and another or the average prices of the period rather than the historical value. The inventory valuation effect is the difference between the results according to the FIFO (First-In, First-Out) and the replacement cost.

(III) Effect of changes in fair value

As from January 1, 2011, the effect of changes in fair value presented as an adjustment item reflects for some transactions differences between internal measures of performance used by TOTAL's management and the accounting for these transactions under IFRS.

IFRS requires that trading inventories be recorded at their fair value using period-end spot prices. In order to best reflect the management of economic exposure through derivative transactions, internal indicators used to measure performance include valuations of trading inventories based on forward prices.

Furthermore, TOTAL, in its trading activities, enters into storage contracts, which future effects are recorded at fair value in Group's internal economic performance. IFRS precludes recognition of this fair value effect.

(IV) Until June 30, 2010, TOTAL's equity share of adjustment items reconciling "Business net income" to Net income attributable to equity holders of Sanofi

The adjusted results (adjusted operating income, adjusted net operating income, adjusted net income) are defined as replacement cost results, adjusted for special items, excluding the effect of changes in fair value as from January 1st, 2011 and excluding TOTAL's equity share of adjustment items related to Sanofi until June 30, 2010.

Dollar amounts presented herein represent euro amounts converted at the average euro-dollar exchange rate for the applicable period and are not the result of financial statements prepared in dollars.

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