

# **Yamal LNG**

Delivering worldclass LNG project

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#### Disclaimer

This document may contain forward-looking information on the Group (including objectives and trends), as well as forward-looking statements 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. These data do not represent forecasts within the meaning of European Regulation No. 809/2004.

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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. These 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 Refining & Chemicals and Marketing & Services 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 price differentials 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

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.

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.

Cautionary Note to U.S. Investors – The SEC permits oil and gas companies, in their filings with the SEC, to separately disclose proved, probable and possible reserves that a company has determined in accordance with SEC rules. We may use certain terms in this presentation, such as resources, that the SEC's guidelines strictly prohibit us from including in filings with the SEC. U.S. investors are urged to consider closely the disclosure in our Form 20-F, File N° 1-10888, available from us at 2, Place Jean Millier – Arche Nord Coupole/Regnault –92078 Paris-La Défense Cedex, France, or at our website: <a href="total.com">total.com</a>. You can also obtain this form from the SEC by calling 1-800-SEC-0330 or on the SEC's website: <a href="total.com">total.com</a>.



### Yamal LNG project

#### Developing giant South Tambey onshore gas-condensate field

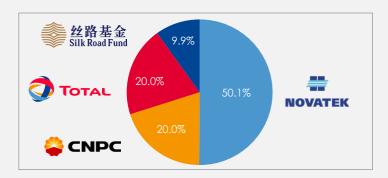
Plant in Sabetta, North-East of the Yamal Peninsula



South-Tambey field

- > 4 Bboe reserves developed with 208 wells
- > 450 kboe/d production plateau including 30 kb/d liquids
- License until 2045

Shareholders



**LNG plant** of 3 x 5.5 Mt/y capacity

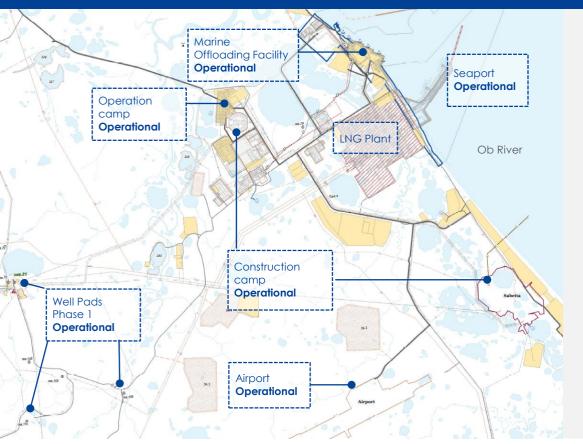
27 B $^*$  development costs (40% Ruble, 60%  $^\circ$ 

12 year mineral extraction tax exemption



<sup>\*</sup> Excluding capitalized pre-Opex

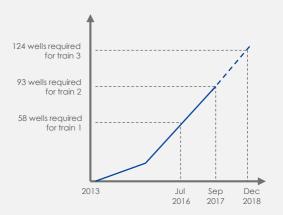
### Yamal LNG overall layout



- Close proximity of gas production facilities to LNG Plant
- Integrated gas treatment and liquefaction facility
- Well prepared field infrastructure
- Reduced footprint
- Strict environmental policy

### Drilling and inlet facilities

# Drilling Well count vs. Time



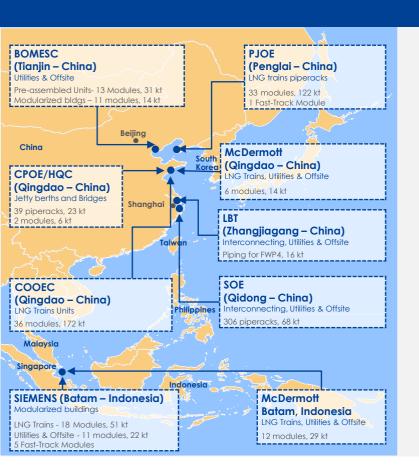
- 4 drilling rigs in operation
- 93 wells drilled out of 208
- Sufficient potential for 2 trains

#### Inlet facilities



- First line operational, feeding 2 LNG trains
- Second line operational in Dec. 2017
- YLNG controlling 100% of its gas stream

#### Modules fabrication – excellent track record





- 142 modules fabricated and shipped by 10 yards (incl. 7 in China)
- 24 to 36 months from award to last module sail away, all delivered
- Modules overall weight > 500,000 tons
- Good HSE performance: LTIR 0.5 / TRIR 0.3
- Good quality performance: carry over at 0.9% of direct hours
- 22 trips via Bering Strait out of 55 shipments. Largest transportation fleet for a project

TOTAL

2017 Field Trip

### LNG plant status



#### Train 1

- Power plant (4 turbines) and utilities (air, nitrogen, glycol) operational
- Gas-in started on Sept. 10
- Commissioning being completed
- First LNG cargo by year end

#### Train 2/3

- All modules on site
- Hook-up and commissioning in progress

### Infrastructures in Sabetta started in 2011

Worldclass logistical infrastructure ready

International airport – 2700 m runway First landing in Dec. 2014 – 5 flights per day



Equipment offloading facility – 6 berths
Operational since Nov. 2013 – 11 Mt freight delivered



2 LNG Offloading Jetties - Operational



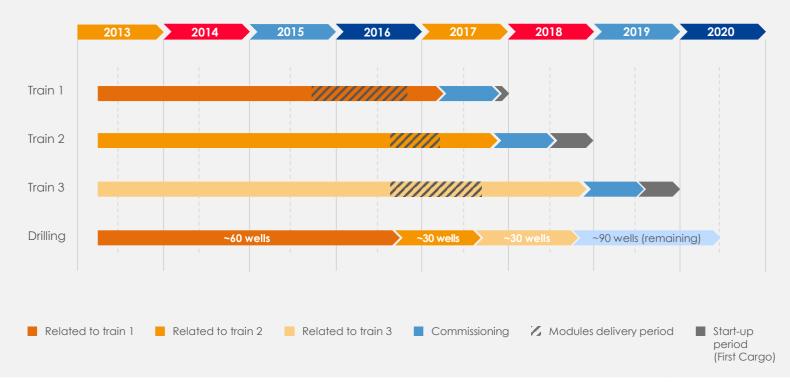
Camps - ~ 32,000 beds



### Planning status

### Successful execution leading to on-time start-up within budget

Yamal LNG planning chart



# Marketing and shipping Pioneering and innovative LNG supply

# Marketing ~85% oil price linked, ~15% NBP linked



#### Long term buyers

Total 4 Mtpa CNPC 3 Mtpa Gazprom 2.9 Mtpa Gas Natural 2.5 Mtpa Novatek 2.4 Mtpa

Note: annual contract quantity, Ex Ship DES – IHS data

#### Shipping



LT contracted volume: **54% to Asia**, **46% to Europe** 

**Shipping optimization** with Zeebrugge LNG trans-shipment

**World first** with the utilization of **ARC7 LNG carriers** for the Northern route (3 delivered by end 2017)



## Competitive LNG project due to low cost upstream

Cash breakeven at 45 \$/b 2020-30, 30 \$/b thereafter



Competitive costs (Capex + Opex) \$/MBtu Range of Asian prices at 50 \$/b to 60 \$/b Interest payment Shipping\* Liquefaction

Benefiting from low upstream costs

**DES** Asia

\* incl. Boil Off Gas

Upstream