



# Yamal LNG

Delivering worldclass LNG project

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# Yamal LNG project

Developing giant South Tambey onshore gas-condensate field

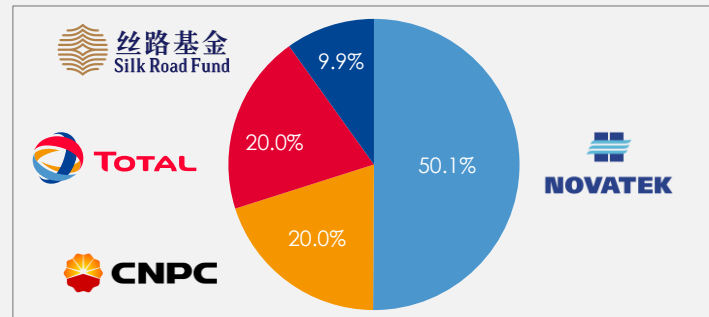
Plant in Sabetta, North-East of the Yamal Peninsula



## South-Tambey field

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

## Shareholders



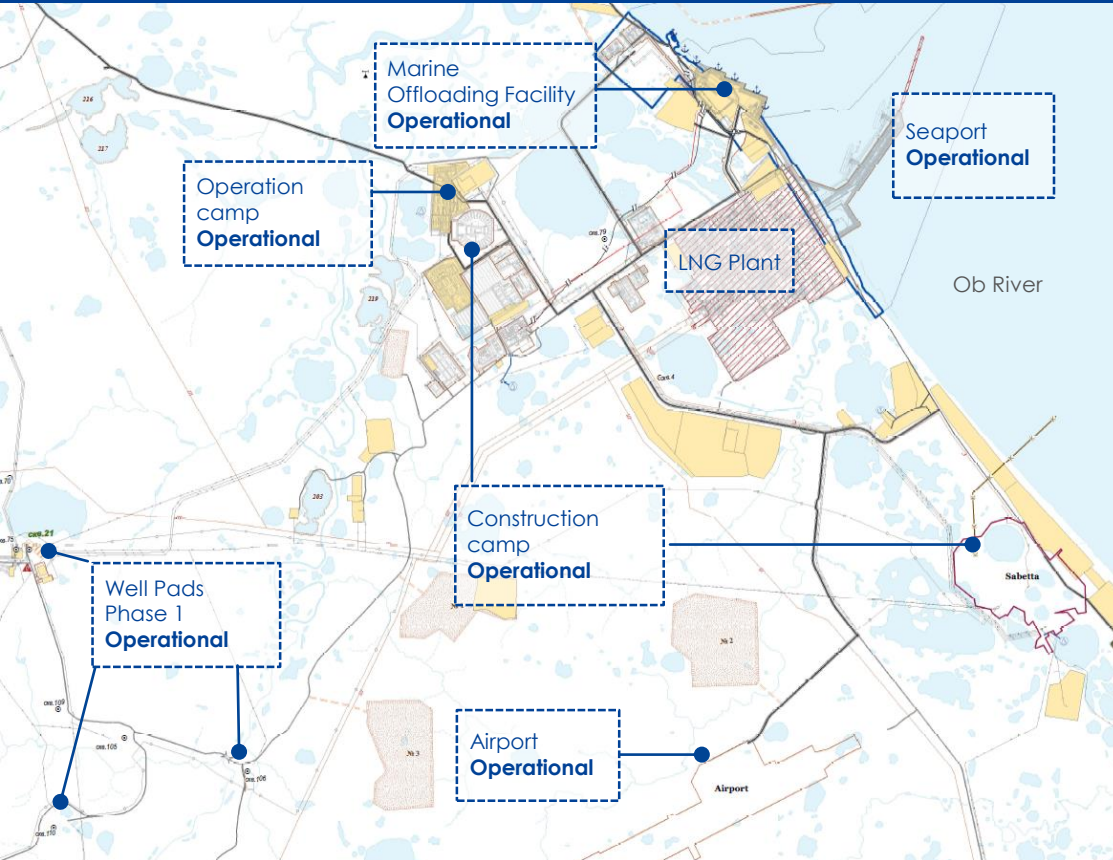
## LNG plant of 3 x 5.5 Mt/y capacity

27 B\$\* **development costs** (40% Ruble, 60% \$<sub>eq</sub>)

**12 year** mineral extraction **tax exemption**

\* Excluding capitalized pre-Opex

# Yamal LNG overall layout

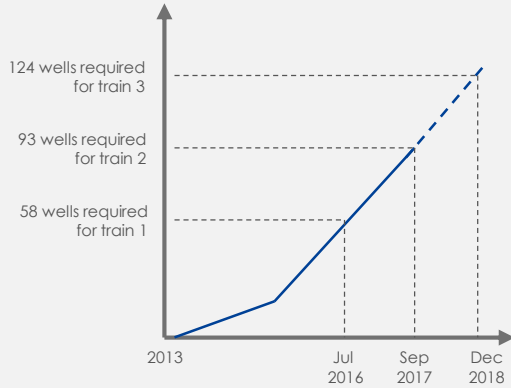


- Close proximity of gas production facilities to LNG Plant
- Integrated gas treatment and liquefaction facility
- Well prepared field infrastructure
- Reduced footprint
- Strict environmental policy

# Drilling and inlet facilities

## Drilling

### Well count vs. Time



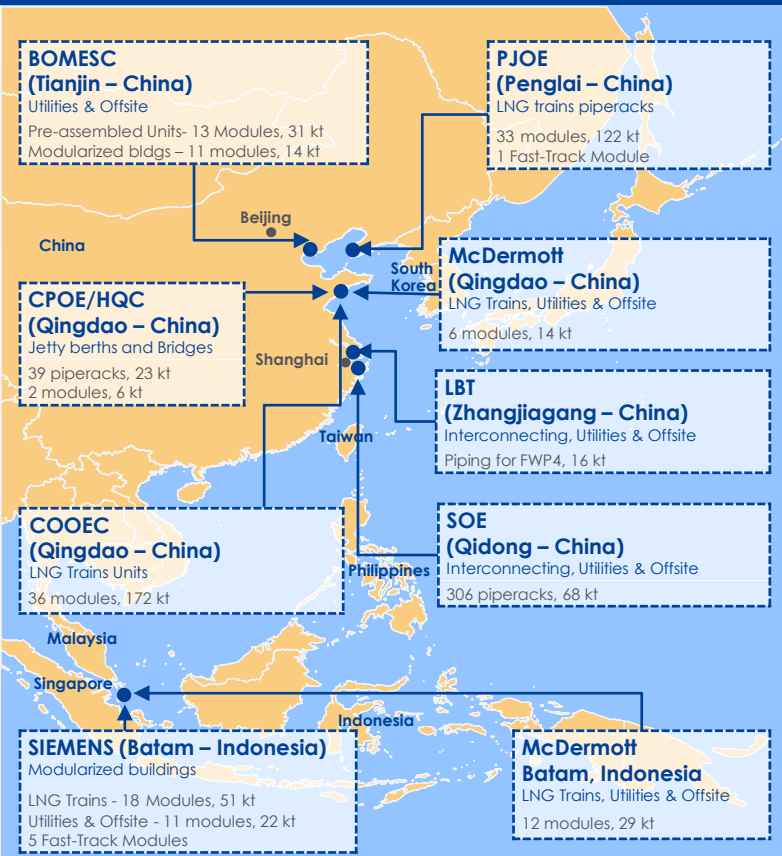
- 4 drilling rigs in operation
- 93 wells drilled out of 208
- Sufficient potential for 2 trains

## 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

# 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



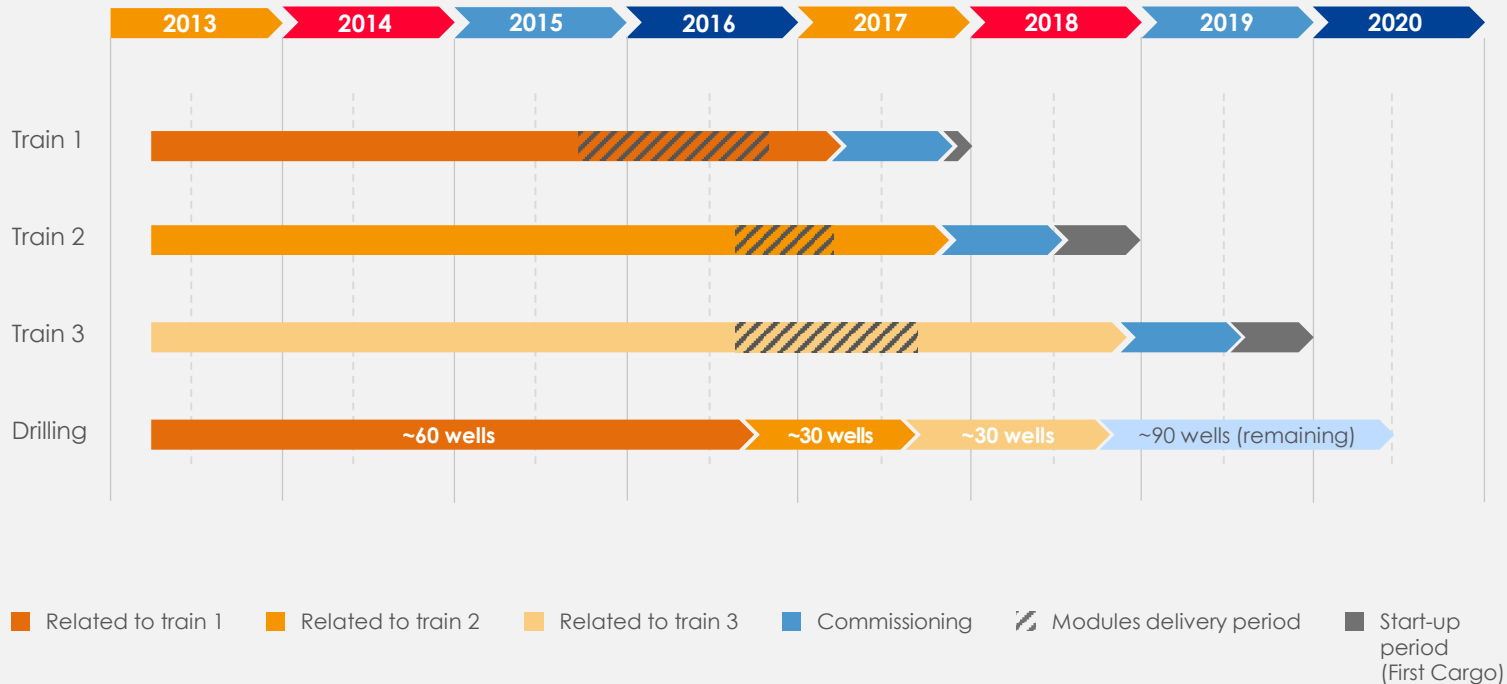
Camps - ~ 32,000 beds



# 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

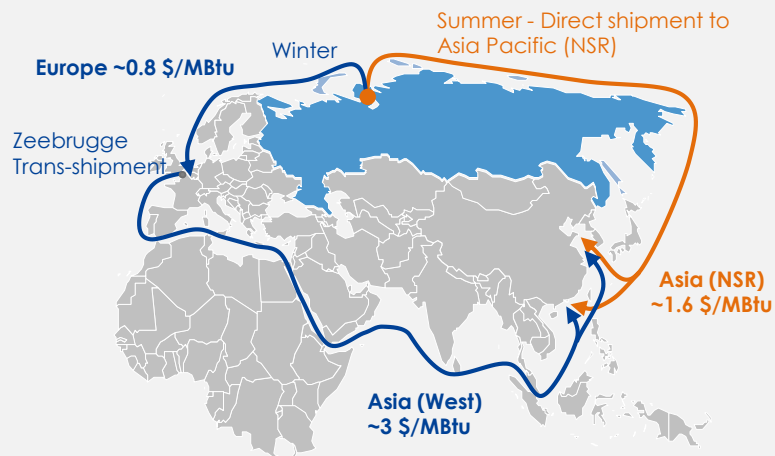


### Long term buyers

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

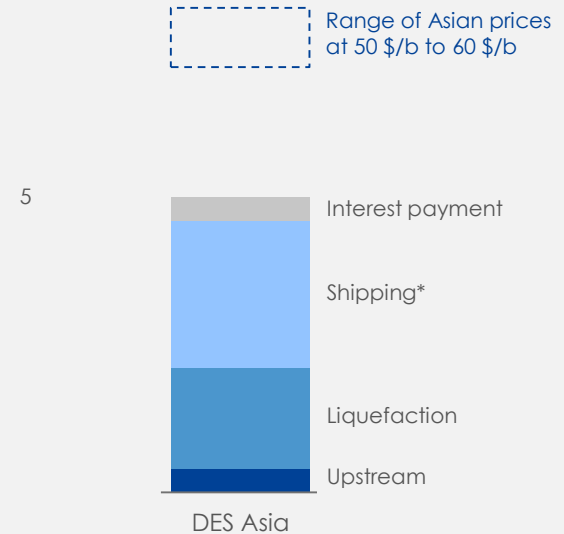
**World first** with the utilization of **ARC7 LNG carriers** for the Northern route (3 delivered by end 2017)

# Competitive LNG project due to low cost upstream

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



Competitive costs (Capex + Opex)  
\$/MBtu



Benefiting from **low upstream costs**

\* incl. Boil Off Gas