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

LNG plant of 3 x 5.5 Mt/y capacity

- 27 B$* development costs (40% Ruble, 60% $eq)
- 12 year mineral extraction tax exemption

* Excluding capitalized pre-Opex

Shareholders

- 50.1% NOVATEK
- 20.0% CNPC
- 20.0% Total
- 9.9% Silk Road Fund

* 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

2017 Field Trip
• **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

- Train 1
  - 2013: ~60 wells
  - 2014: ~60 wells
  - 2015: ~30 wells
  - 2016: ~30 wells
  - 2017: ~30 wells
  - 2018: ~90 wells (remaining)

- Train 2
  - 2013: ~60 wells
  - 2014: ~60 wells
  - 2015: ~30 wells
  - 2016: ~30 wells
  - 2017: ~90 wells (remaining)

- Train 3
  - 2013: ~60 wells
  - 2014: ~60 wells
  - 2015: ~30 wells
  - 2016: ~30 wells
  - 2017: ~90 wells (remaining)

- Drilling
  - 2013: ~60 wells
  - 2014: ~60 wells
  - 2015: ~30 wells
  - 2016: ~30 wells
  - 2017: ~90 wells (remaining)
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

Shipping optimization with Zeebrugge
LNG trans-shipment

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

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

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

Benefiting from **low upstream costs**

* incl. Boil Off Gas