

EAST MESSOYAKHA

RUSSIA'S NORTHERNMOST CONTINENTAL FIELD

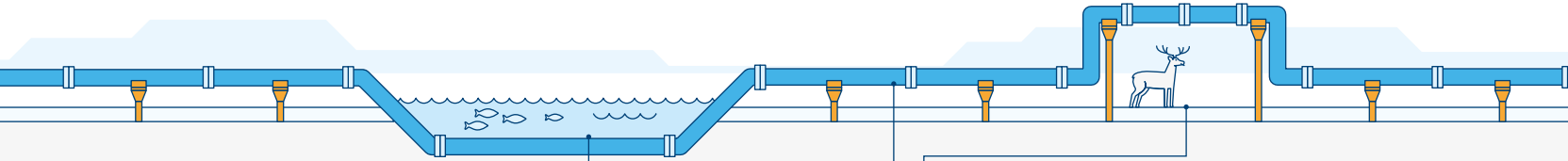
ESTABLISHING TECHNOLOGICAL LEADERSHIP

The East Messoyakha oil and gas condensate field was discovered in 1990. It is the northernmost continental field under development in Russia. Messoyakhaneftegaz JSC – a joint venture between Gazprom Neft and Rosneft – own the license for its exploration and development. Gazprom Neft handles the operational management of Messoyakhaneftegaz.

The field is located beyond the Arctic Circle. Its development has required complex logistical and technical solutions. In addition, its impact on the fragile ecosystem of the Arctic also had to be minimized.

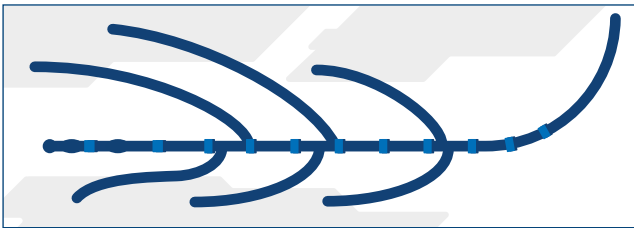
The first stage of the East Messoyakha field was put into operation in 2016. Oil is transported via a pressure pipeline to the Zapolyarye-Purpe

trunk pipeline. The oil is initially extracted from horizontal and multi-hole wells with a horizontal length of about 1,000 metres due to the geological structure of the deposits, which are further complicated by a powerful gas cap. In addition, the oil in the upper and lower layers of the field has different attributes. Messoyakha oil contains almost no sulphur.



Fishbone

Technology B.1



Fishbone technology involves the construction of wells with multiple horizontal branches that lead to separate oil sites without touching the formation with gas or water. This makes it possible to increase accumulated extraction by more than 20% compared with standard horizontal wells. The technology is particularly effective if the deposit has a shale streak between the gas and oil, as is the case at the East Messoyakha field.

Deer crossings

The pipeline route does not cross pastures and places that are sacred for the local indigenous population. Special crossings have been built on deer migration paths

The pressure pipeline

is equipped with leak detection and corrosion control systems. It runs above ground so as not to disturb the permafrost

98 KM

length of the pipeline

6

MN T PER YEAR

pumping capacity

Underwater crossings

The pipeline crosses the major rivers Muduyahu and Indikyahu underground. These are the northernmost underwater crossings built using directional drilling methods in Russia

RECOVERABLE RESERVES (100%)

353.3¹

MN T OF OIL

2.9

MN T OF CONDENSATE

119

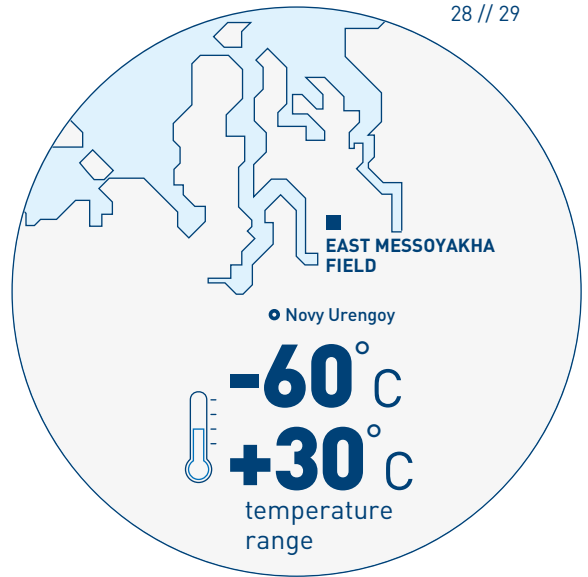
BN M³ OF GAS

3.16²

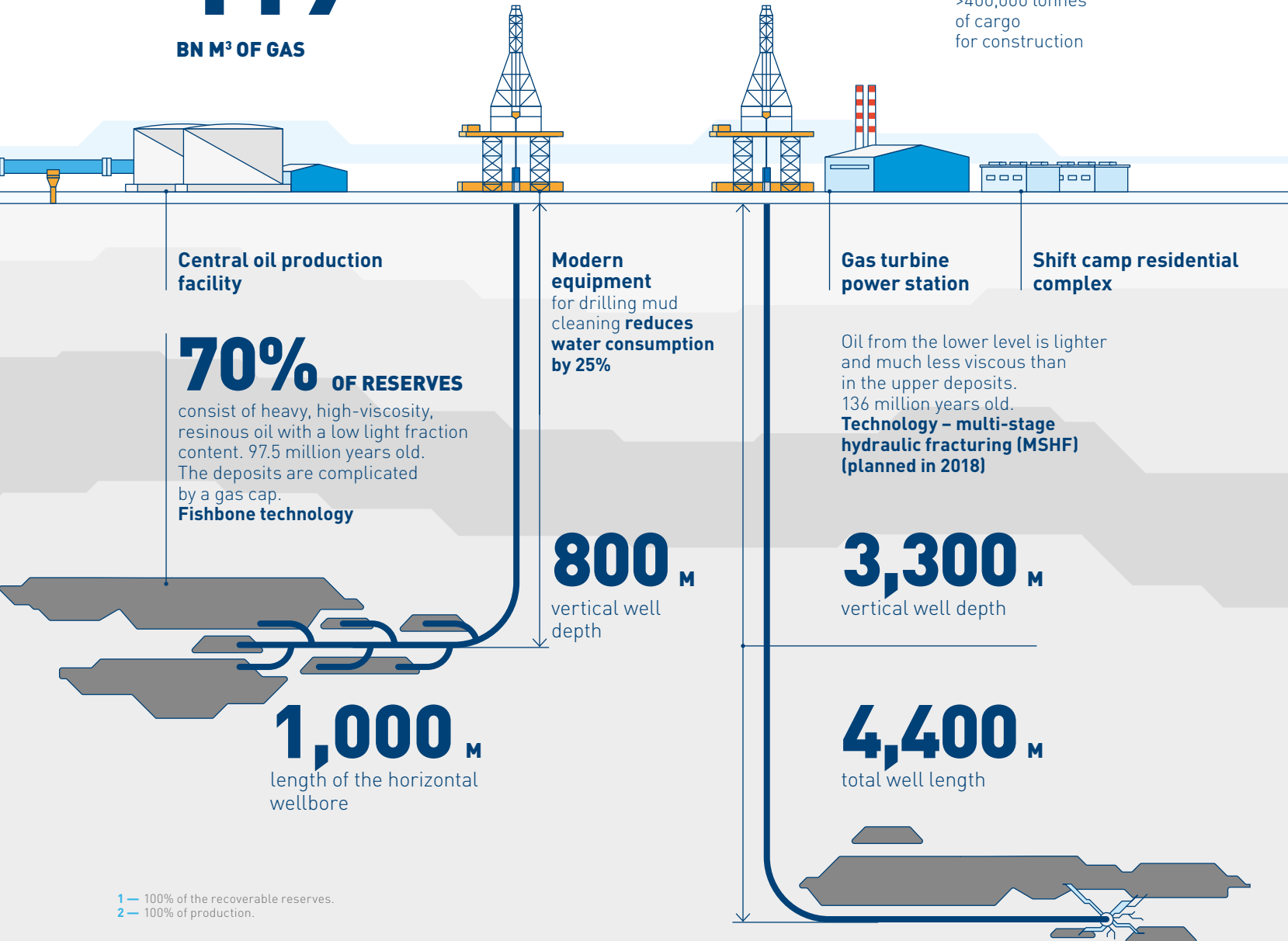
MN T OF OIL (100%)
PRODUCED IN 2017

5.9

MN T PER YEAR
AT FULL DESIGN
CAPACITY (2021)



Helicopters
delivered
>400,000 tonnes
of cargo
for construction



1 — 100% of the recoverable reserves.
2 — 100% of production.