



## MOLIKPAQ PLATFORM (PA-A)

### Location and Function

The Molikpaq (PA-A) drilling and oil production platform was installed in September 1998 in the Astokh area of the Piltun-Astokhskoye field, 16 km offshore, at a depth of 30 metres. It was the main facility of the Vityaz production complex during seasonal oil production for Phase 1 of the Sakhalin II project. Year-round oil production from the Molikpaq started in 2008. The Vityaz production complex included:

- Molikpaq Platform;
- Single Anchor Leg Mooring (SALM);
- Floating Storage and Offloading Unit (FSO) Okha;
- Two-kilometre long subsea pipeline connecting the SALM and the FSO.

### Design

Molikpaq is a converted ice-class drilling rig, previously based in the Beaufort Sea. A 15 m steel 'spacer' was fitted to the bottom of the Molikpaq so that it could be installed in the deeper waters offshore Sakhalin Island. The Molikpaq contains a caisson structure, the centre of which is filled with sand ballast ensuring effective anchoring of the platform on the sea bed.

A Box Girder Deck (BGD) supports most of the platform modules, but some key modules are supported directly by the caisson. The box girder deck is a movable deck resting on bearing pads that provide flexibility between the BGD and the caisson.

The deck is divided into 49 compartments containing engineering and utility services rooms, machinery spaces, a ballast control room, and an environmental monitoring room.

Main working areas are enclosed, temperature controlled and ventilated.



Outside equipment has winter protection. Living quarters are designed for 134 permanent and 30 seasonal employees.

Molikpaq Platform dimensions:

- Base dimensions – 111 m x 111 m;
- Deck dimensions – 73 m x 73 m;
- Height to helideck – 49 m;
- Height to top of derrick – 101 m;
- Weight (including process module) – 54,383 tonnes.

### Drilling

The Molikpaq includes 32 drill slots, 13 operating wells, one well for gas injection, four wells for water injection, and one well for drilling waste injection.

The Molikpaq is used for extended reach drilling of deviated wells to a maximum horizontal deviation up to 6 km and to a maximum well depth up to 6,650 m.

In 2004, the platform was used to drill the first re-injection well for the Sakhalin II project, designed for re-injection of waste drilling mud and cuttings, as well as associated water.

### Production Capacity

Oil – 90,000 barrels per day;  
Associated Gas – 1.7 mln cu. m per day.