KUALA LUMPUR 2012 WORLD GAS CONFERENCE

25th world gas conference

"Gas: Sustaining Future Global Growth"

Principal approaches to developing OAO Gazprom long-term program for hydrocarbon fields development offshore the Russian Federation

Vladimir Vovk, Doctor of Geology and Mineralogy, Head of the Directorate for Offshore Fields Development Technology

Pavel Nikitin, Doctor of Economics, Deputy Director of the Offshore Oil and Gas Fields Center

Patron

IGU
INTERNATIONAL GAS UNION
UNION INTERNATIONALE DU GAZ

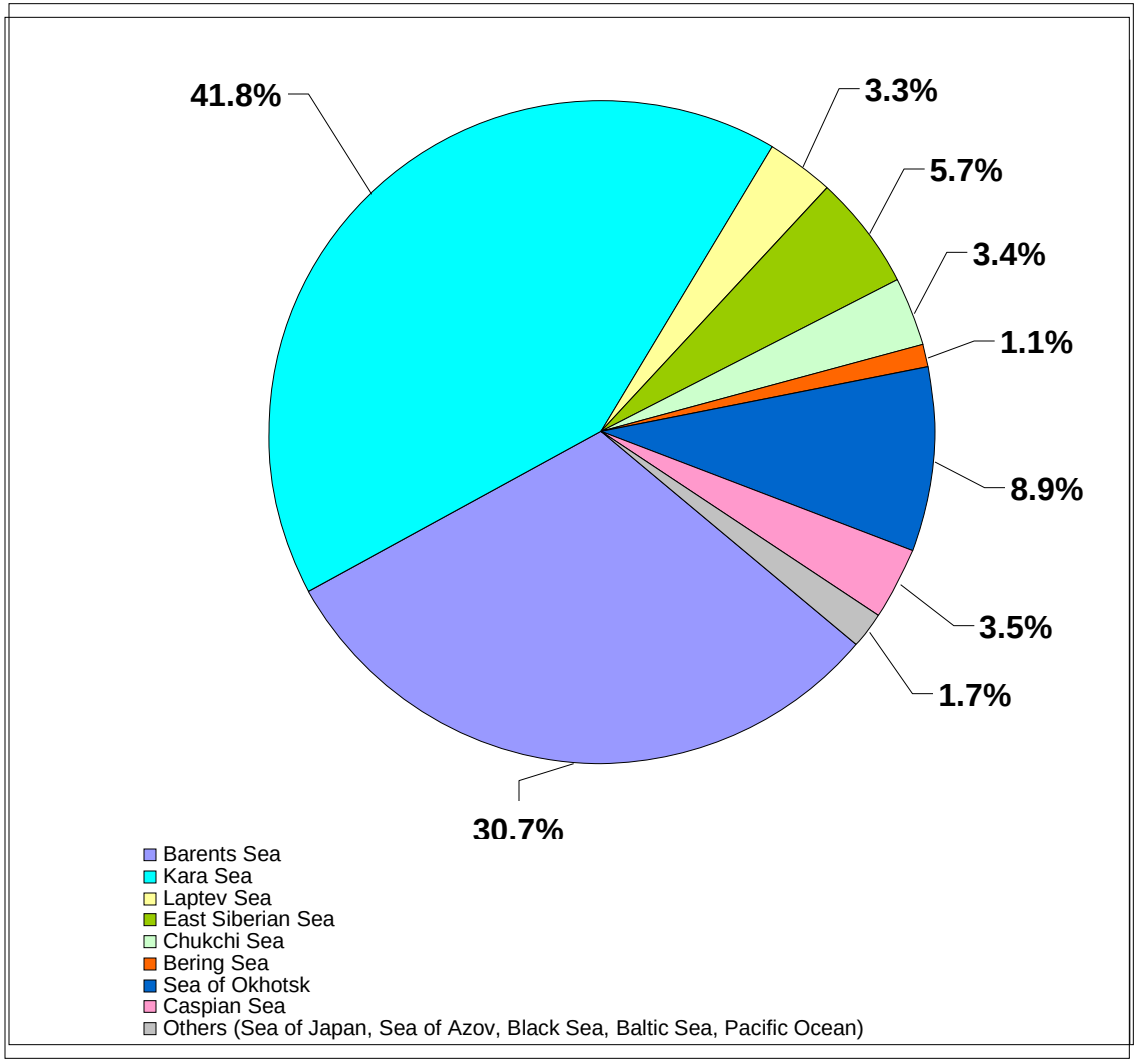
Host

MALAYSIAN Gas ASSOCIATION

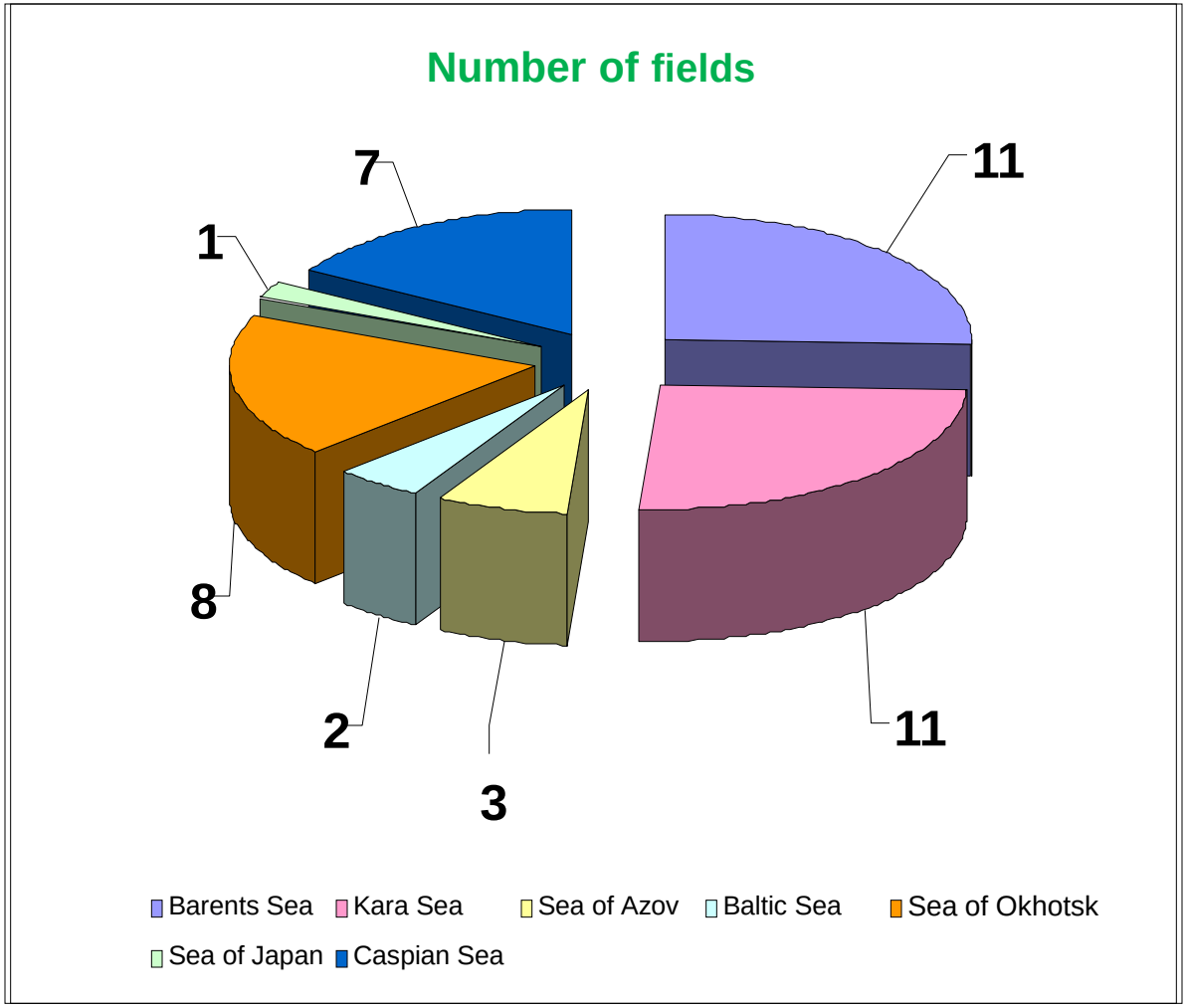
Host Sponsor

PETRONAS

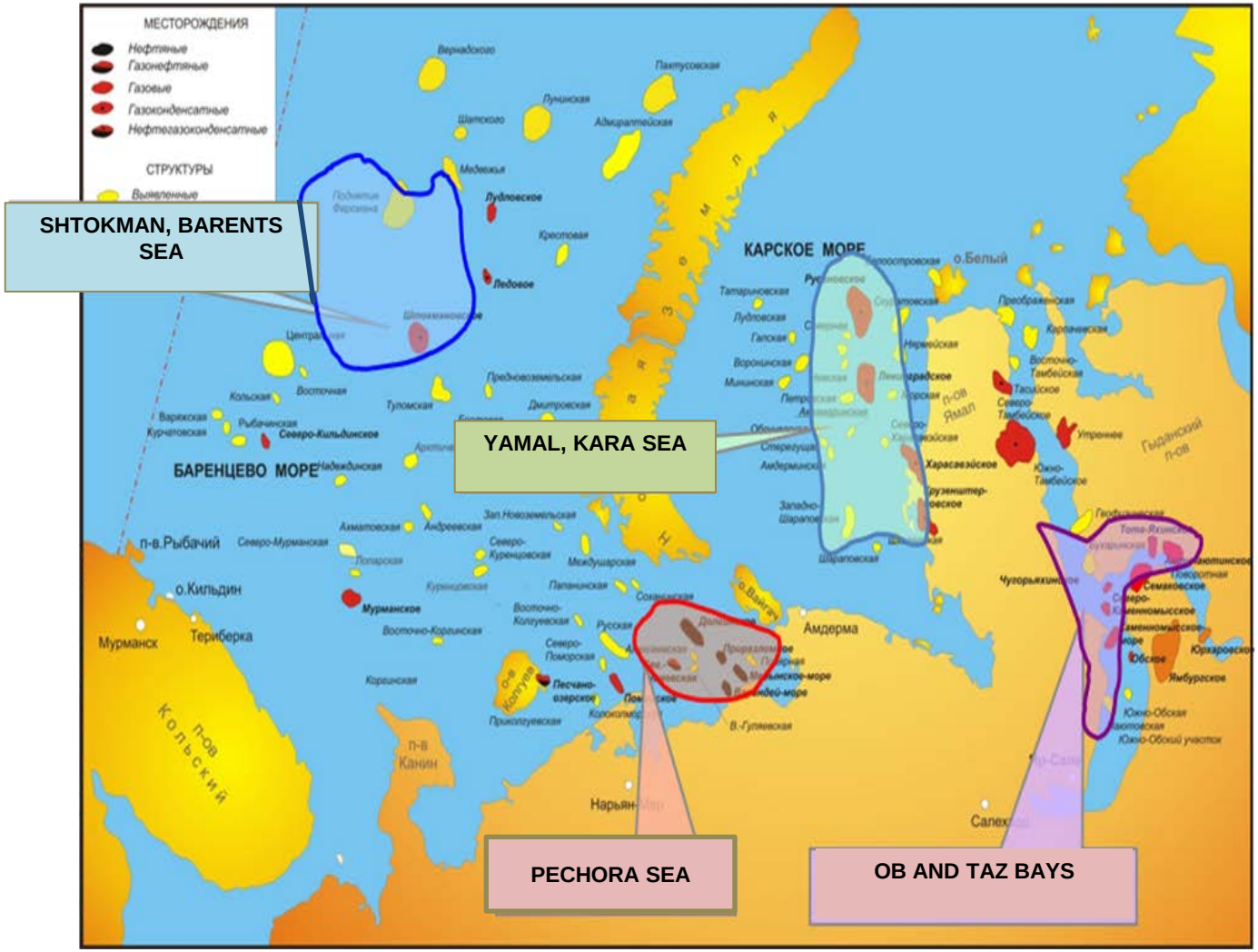
Total hydrocarbons initially in place offshore the Russian Federation



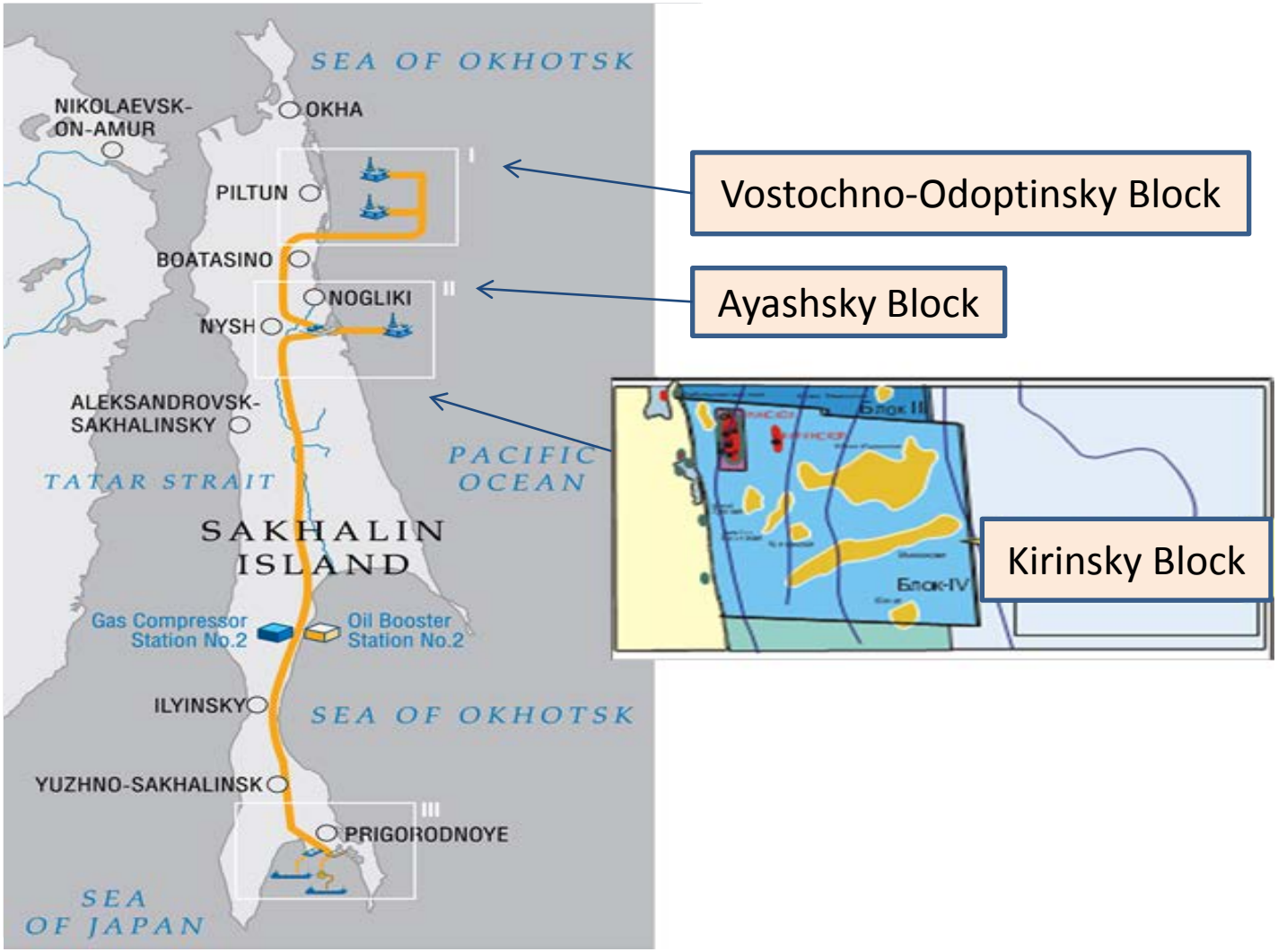
Fields located offshore the Russian Federation



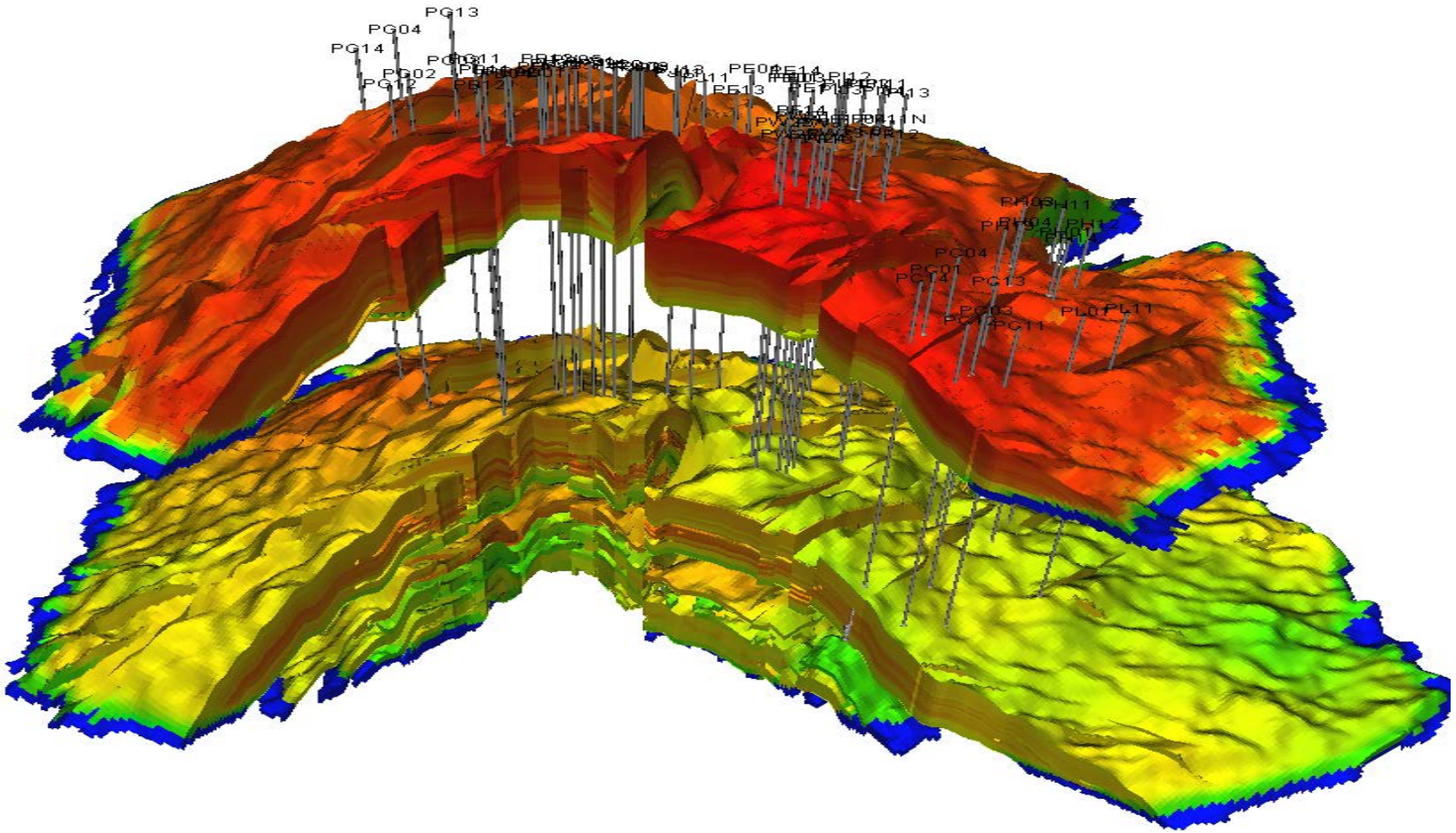
Areas of OAO Gazprom activities on the Russian Arctic shelf



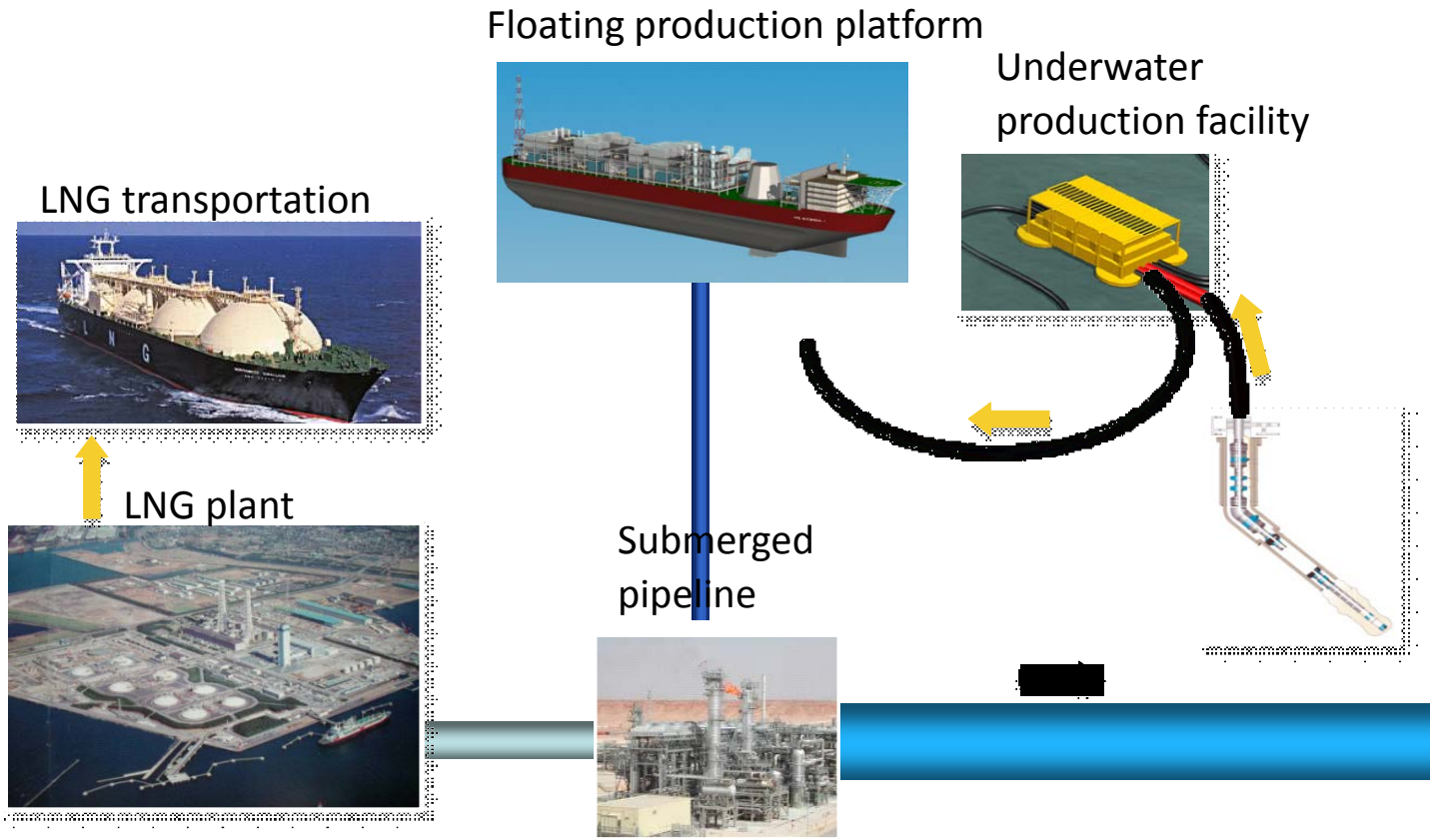
Areas of OAO Gazprom activities on the Sakhalin Island shelf



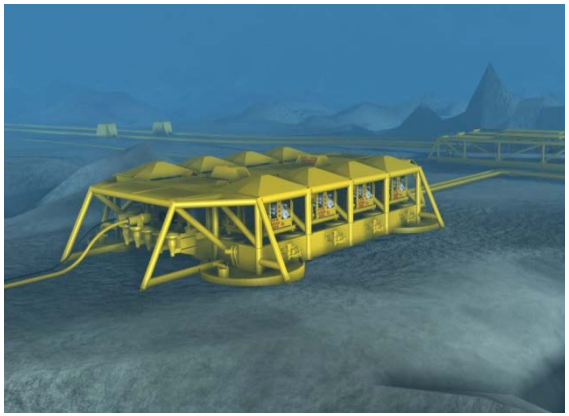
Geological model of an offshore field



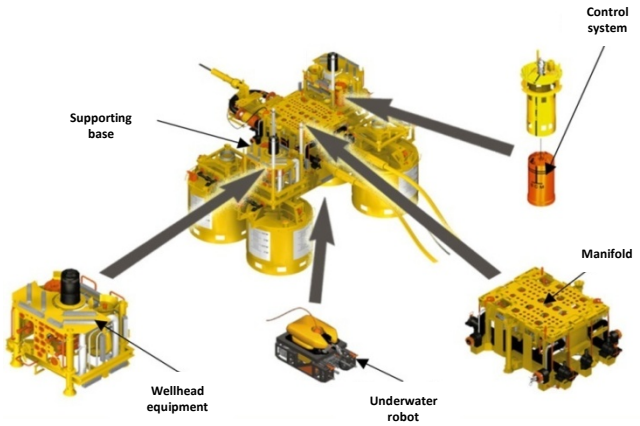
Shtokman field infrastructure layout



DEVELOPMENT TRENDS IN OFFSHORE OIL AND GAS PRODUCTION TECHNOLOGY AND FACILITIES



Underwater production facility (UPF)



UPF structure

Supporting base

Control module

Manufacture of an umbilical

UNDERWATER EQUIPMENT DEVELOPMENT AREAS

Underwater gas compressor station

Pump module

Separation module

Underwater compressor module

Economic conditions of field development

The economic conditions of field development are characterized by product prices, its transportation costs, a system of taxes and levies as well as engineering solutions applied for field development purposes that all affect operating and capital expenses.

Proposals on economic encouragement of further operations on the Russian shelf

The Russian Government has recently decided to introduce tax benefits in the offshore development sector. A package of legislative measures stipulating elimination of export duties and differentiation of hydrocarbon production payment rates is to be elaborated before October 1.

Proposals in the area of sci-tech support of the Program for hydrocarbon resources exploitation on the Russian shelf until 2030:

- Optimizing process facilities of offshore platforms to reduce their weight and size.
- Conducting research studies aimed at infrastructure development at top-priority fields of the Arctic shelf using subsea wellhead systems and platform installations.
- Optimizing energy supply to infrastructure development facilities of offshore fields in the Arctic environment.
- Conducting research studies aimed at creating an efficient safety system for Arctic offshore platforms located at a considerable distance from onshore bases.

Proposals in the area of cutting-edge technologies and equipment:

- Conducting research studies aimed at creating underwater and subglacial oil and gas facilities.
- Developing technical solutions for year-round drilling of exploratory wells in freezing seas.
- Developing technologies for building and repairing offshore pipelines at sea depths down to 400 m.
- Conducting research studies aimed at creating process and infrastructure management systems at offshore fields of the Arctic shelf.
- Undertaking R&D aimed at creating domestic heat supply facilities for offshore infrastructure at oil and gas fields.

Proposals in the area of regulatory support of projects:

- Developing Russian national standards for the design, engineering, construction and operation of infrastructure at offshore Arctic oil and gas fields as well as for the manufacture of domestic process equipment in line with up-to-date international regulatory documents.
- Developing common Technical Regulations on operational safety of oil and gas resources exploitation on the Russian shelf.
- Developing special Technical Regulations for risk assessment during the design, engineering, construction and operation of installations for developing offshore oil and gas fields.

Proposals in the area of hydrometeorological and geoecological studies:

- Conducting long-lasting monitoring observations over hydrometeorological, ice formation and environmental conditions in anticipated production regions.
- Carrying out systematic hydrological surveys including detailed investigations of surface and abyssal flows of a permanent or seasonal character, regularities of their formation and possible influence on engineering installations.
- Developing new approaches to the evaluation and reliable forecasting of man-made environmental impacts resulting from offshore development operations.
- Creating and maintaining a databank of all studies and observations as well as developing information storage and analysis tools.

OAO Gazprom international cooperation

The Barents 2020 project has received positive assessments due to the results achieved by the Russian Federation and Norway in their joint efforts on harmonizing standards applied in the oil and gas industry. The project was aimed at defining common health, safety, and environment standards for the Barents Sea.

With a view to prevent and eliminate oil spills, the Arctic Council member states continue working on a draft multilateral document on international cooperation in the area of oil spill preparedness and response throughout the Arctic region, as decided by the Ministerial Meeting. The document provisions will be not advisory, but binding. In line with the Russian Federation Government's Directive No. 2265-r of December 20, 2011, Gazprom's representatives are directly engaged in the activities of the Task Force and EPPR Working Group responsible for preparing this Agreement of vital importance for the Arctic development. The Agreement is to be prepared by May 2013.

Conclusions

In general, the proposed approaches enable to take into account the geological, technological and economic aspects of offshore operations development as well as implement an objectively substantiated long-term program for oil and gas resources exploitation on the Russian continental shelf. The program is aimed at ensuring the national energy security.

THANK YOU FOR YOUR ATTENTION