

PRESS RELEASE  
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## LUKOIL APPLIES INNOVATION TECHNOLOGIES

Innovation developments by LUKOIL engineers have been nominated for the RF Government's Science and Technology Award.

These developments are aimed at the extraction of the so called "non-demanded" hydrocarbon reserves located in Russia's major oil and gas regions. The non-demanded reserves are those whose studies and development are technically, geographically and environmentally difficult and economically unfeasible given the current market environment and the level of scientific and technical development of the oil and gas industry.

To conduct integrated geological studies and develop these reserves, OAO LUKOIL specialists have developed and implemented innovative organizational, methodological and engineering solutions at all stages of the geological survey and development of hydrocarbon fields. This brought practical results with a significant economic effect.

To begin the extraction of previously non-demanded reserves located in Russia's major oil and gas regions (the provinces of Timan-Pechora, the Baltic, Western Siberia, the Volga-Urals and the Caspian) the following innovative solutions, approaches and technologies are required:

- innovative methods of optimizing geological exploration;
- better arrangements for the licensing of subsoil use;
- organizational arrangements for application of techniques to enhance oil recovery and intensify oil production;
- engineering solutions for integrated recovery of heavy and high-viscosity oils containing industrial concentrations of rare metals (vanadium, nickel, cobalt, molybdenum, etc.);
- methodological and engineering solutions for the recovery of oil reserves from structurally complex reservoirs;
- patterns for application of environmentally safe techniques of field development

in protected environmental areas;

- organizational and engineering approaches ensuring optimization of regional and zonal oil and gas related works and accelerated development of poorly explored peripheral areas of sedimentary basins in Russia.

The innovation solutions were successfully implemented by a number of LUKOIL Group companies. For instance, introduction of innovation technologies for sidetrack drilling at marginal wells and application of fracturing techniques in Western Siberia enabled the Company to increase oil production from the Achimov deposits within a seven-year period from 100,000 tons yearly to almost 1 million tons and to increment the reserves twofold. In Perm region, extraction of oil reserves has begun from beneath the deposits of potassium and magnesium salts of the unique Verkhnekamskoye field. This came as a result of implementing a special program combining cutting-edge drilling technologies and safe maintenance techniques for horizontal wells with a significant horizontal displacement. Due to this program, over 110 million tons of previously out-of-reach reserves have become recoverable. Industrial application of steam-assisted gravity drainage for development of high-viscosity oil fields in Timano-Pechora oil and gas province allowed to increase the oil production base by 300 million tons and considerably enhance industrial and environmental safety. Application of the environmentally friendly “zero-discharge” principle and techniques for a multi-stage transportation of the field’s products in the Baltic Sea provided for a full development of the highly productive Kravtsovskoye field.

The integral economic effect resulting from better organizational and methodological approaches and innovative engineering solutions in the key regions of LUKOIL Group presence came to over RUR 48.2 billion in 2002-2007. The direct economic effect from lower budgetary costs came to RUR 26.6 billion in 2002-2007. The segregated economic effect due to the successful implementation of a program of subsoil use licensing came to RUR 11.9 billion.