GAZPROM NEFT WORKING WITH YANDEX TERRA TO DEVELOP INNOVATIVE RUSSIAN DIGITAL SOLUTIONS IN SEISMIC DATA PROCESSING

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May 30th, 2018. The Gazprom Neft Science and Technology Centre (NTC) and Yandex Terra (Seismotech Ltd) have announced the completion of a two-year programme testing a range of domestically produced software to support seismic data processing and interpretation. Roll-out operations, using Yandex Terra’s “Prime” software, have demonstrated the viability of using only Russian software in the processing and the subsequent interpretation of seismic data. The next step for Gazprom Neft will be developing a digital platform to fulfil the full data-analysis cycle, using exclusively Russian solutions.

The Gazprom Neft Science and Technology Centre’s collaboration with Yandex Terra began in 2016, when the companies signed an agreement on developing digital technologies and software to be used in the processing and interpretation of geological and geophysical data. Processing seismic data through the Prime system developed by Yandex Terra showed a significant increase in the volume of useful geological information obtained. This data had, initially, been processed using foreign software, which meant it was possible to undertake a detailed step-by-step comparison against the data previously obtained. Using Russian digital solutions showed significant qualitative improvements, particularly in making it possible to obtain a higher level of detail in imaging, some 20 to 30 percent better than the initial outcome. This revised interpretation of the data made possible fine-tuning of the seismic-geological field model and reserves estimates, as well as identifying the optimum system for field development.

Going forward, specialists from the Gazprom Neft Science and Technology Centre will continue working on a programme for developing domestic digital technologies and integrating software into a holistic technological platform based on solutions from Russian IT companies.

Mars Khasanov, Director of the Gazprom Neft Science and Technology Centre, commented: “Major Russian companies form part of the innovative environment surrounding Gazprom Neft. Together we are implementing unique projects that will act as a stimulus for the development not just of our own company, but the entire oil and gas industry. The objective of new software products is not simply one of import substitution, of replacing competitive imported foreign products, but of moving to a new level in evaluating and processing information and taking this to a whole new level in terms of efficiency. An approach that has allowed Gazprom Neft to remain the flagship in the digital transformation of production processes.”

Dmitry Mosyakov, CEO, Yandex Terra (Seismotech Ltd), added: “Implementing a genuine production project with specialists from the Gazprom Neft Science and Technology Centre allowed us to obtain an objective assessment of the capabilities of Prime software, as well as a detailed comparison of the outcomes — dispelling the myth, prevalent among many Russian companies, of domestic solutions in geophysics lagging behind. Our collaboration illustrates our commitment to improving quality and efficiency in seismic operations, allowing us to find new areas and directions in developing technologies and software”.

REFERENCE

Gazprom Neft is a vertically integrated oil company, primarily involved in oil and gas exploration and production, refining, and the production and sale of oil products. Gazprom Neft’s corporate structure comprises more than 70 production, refining and sales subsidiaries throughout Russia, the CIS, and abroad. The company’s proved and probable reserves (SPE-PRMS) are estimated at 2.78 billion tonnes of oil equivalent (btoe), making Gazprom Neft one of the top-20 largest oil and gas companies in the world, and one of Russia's top three largest companies in terms of production and refining volumes. Total production in 2017 reached 89.75 million tonnes of oil equivalent (mtoe), with refining volumes of 40.1 million tonnes. Gazprom Neft products are exported to more than 50 countries worldwide, and sold throughout the Russian Federation and abroad. The company’s filling station network totals more
than 1,850 outlets throughout Russia, the CIS and Europe. Gazprom Neft's net profit in 2017 was RUB253 billion — a 26.5-percent increase year-on-year. The company is an industry market leader in terms of both financial growth and various efficiency metrics, including its internal rate of return (IRR). The company’s main shareholder is Gazprom PJSC, which has a 95.68-percent interest, with the remaining shares in free circulation.

**Yandex Terra (Seismotech, Ltd)** provides the unique set of services including all required components for seismic data processing based on its own development - a full-featured seismic data processing software Prime.

**Prime** is a system for the interpretative processing of 2D/3D/4D/3C/4C seismic data. Distinctive feature of the system is its focus on depth-velocity model building and obtaining of deep dynamic images of environment with an option of results verification and the usage of a priori information. Prime allows processing of onshore and offshore wide-azimuth or narrow-azimuth complex data due to unique technologies and algorithms, interpretative processing, provable results, interactivity, high technological efficiency, parallel computing, distribution using SaaS model.

“Seismotech, Ltd” is a resident of the **Skolkovo Innovation Center** since 2016.

**Partnership**: May 10th, 2016. The Gazprom Neft Joint Scientific and Research Centre LLC has signed a memorandum with Yandex Terra (Seismotech, Ltd) on joining forces in the development of domestic IT technologies and software for the processing and interpretation of seismic data. Work on developing the algorithms necessary for the platform to work has involved determining the necessary computational resources, testing currently available programmes, and putting together a list of those modules that need to be developed. The platform will allow the geological and seismic conditions of various regions throughout Russia to be analysed.

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