

Development of an integrated model of the Urmano-Archinskaya group of fields for Gazpromneft-Vostok

- Sector:** Oil and Gas
- Region:** Russia
- Year:** 2021
- Client:** Gazpromneft-Vostok
- Task:**
1. Collection and systematization of source data required for the development of a complex integrated model (IM) of the Urmano-Archinskaya group of fields, checking data for compliance in terms of completeness and quality;
 2. Development and adjustment of model-components of fluid (compositional and Black Oil), reservoir, wells, and gathering and transport systems;
 3. Development and configuration of IM, updating and maintaining the solution;
 4. Development of competencies of the specialists of Gazpromneft-Vostok sufficient for operating the solution independently;
 5. Preparation and implementation of pilot industrial operation, calculations.
- Result:**
- The implemented solution makes it possible to conduct a highly accurate short-term forecast of hydrocarbon production for up to one year to optimize the operating modes of production wells, to identify bottlenecks, and to conduct an express assessment of the financial efficiency of activities on the well-stock, the technological effect of which is preliminarily calculated on an integrated model;
 - Improved efficiency and effectiveness of the management decisions, speed of response to deviations from production plans and emergencies;
 - Possibility to optimize well operation modes in conditions of gas production rate limitation;
 - Reduced the volume of non-production losses;

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- Production Control Centre specialists have received all the necessary competencies and practical skills to successfully work with IM (due to the traveling restrictions in 2020, most of the training was conducted remotely);
 - The customer received comprehensive instructions for updating the IM and a set of practical tools for automating routine procedures that increase the speed and accuracy of operating the solution.

Line of activity:

Intelligent Oilfield

Review:

“The use of digital tools opens up unique opportunities for us. Innovative systems make it possible to use the existing well stock as efficiently as possible and monitor ten fields in real-time. We have developed and launched an integrated model of the Urmano-Archinskaya group of fields. The next step is the development of digital models of other assets of Gazpromneft-Vostok. Technologies based on artificial intelligence will allow us to be even more efficient.”

Konstantin Karabadzhak, General Director of Gazpromneft-Vostok LLC.