

# High-Resolution, Real-Time Data Helps Venineft Complete Testing of Three Zones 2 Days Sooner than Planned

Custom well test program with expert collaboration guides decisions in high-flow-rate Sakhalin reservoir

## CHALLENGE

Test three exploration zones in a high-flow-rate reservoir in harsh offshore conditions with limited operating window.

## SOLUTION

Develop a custom well test program using multiple real-time technologies designed to transmit well test data to remote locations, enable collaboration with reservoir experts, and ensure equipment reliability and efficiency.

## RESULTS

Gathered enough high-quality exploration data to complete three exploration well tests in 18 days, 2 days earlier than the expected 20-day duration.

**“Well testing was challenging due to the reservoir’s high flow rate and the operations’ limited time window, but Schlumberger showed high levels of commitment. In only 18 days, we tested three zones safely, smoothly, and efficiently while achieving very high gas flow rates.”**

Wei Jianfel  
Well Testing Supervisor  
Venineft



## Test a gas condensate well in limited time window

Venineft LLC, a joint venture of Rosneft and Sinopec, planned to test an exploration well offshore Sakhalin to acquire data for reservoir booking. Rig costs were high, and the drilling season was short due to harsh climatic and sea conditions offshore in the Okhotsk Sea. To successfully meet its test objectives, Venineft required a fast yet effective well test solution that would ensure collecting high-quality data for making field-development and future investment decisions. Eliminating NPT while enabling supported decision making was mandatory.

## Integrate reservoir engineering support during all operations

After comprehensive consultation with Venineft, Schlumberger designed a custom well test program that included a number of solution systems:

- RT Certain\* real-time test collaboration with reservoir experts, a service that provides recommendations for on-demand well testing, characterization, production, and quality optimization
- PIPESIM\* steady-state multiphase flow simulator for quicklook well test interpretation
- InterACT\* global connectivity, collaboration, and information service for access to the remote database of well test information
- TestingManager\* real-time collaborative testing platform, a virtual domain for expert-operator collaboration and reservoir management, which provides desktop and smartphone application viewers
- ArchiTest\* well test design and methodology software.

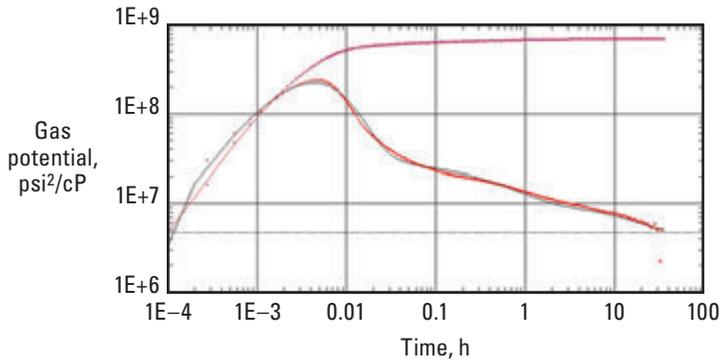
This new process was used to reevaluate previous reservoir and well test data, identify and narrow uncertainty, and optimize the job design to include equipment selection, PVT sampling and analysis, flow-regime modeling, and flow-duration estimation.



TestingManager platform visualization showing real-time PVT measurements, reservoir data, and events during the Venineft test operation.

### Meet test objectives in 2 fewer days

Using the updated well test design and processes, Venineft was able to test three zones of the exploration well quickly. Real-time collaboration between the customer and Schlumberger well test experts guided critical reservoir engineering decisions, which shortened the well test from an expected 20 days to 18 days with no NPT. Further, Venineft acquired higher-quality data than in any previous well tested in the field.



Log-log plot showing gas-potential measurements that were interpreted in real time.