



Company: Sakhalin Energy
Application: Integrated Oil and Gas Project



Scope:

Location: Russia's Sakhalin Island, Sea of Oshotsk

Reserves: Two fields, 140 million tons of oil (1 billion barrels) and 550 billion cubic meters of natural gas (20 trillion cubic feet)

Investment: \$10 Billion Dollars – largest single foreign investment in Russia (Shell Oil)

Output: Japan, South Korea and the United States have already bought all the gas to be produced at Sakhalin Island for the next 20 years



Challenges:

- Manage and test the largest throughput of oil and gas samples in the world
- Maintain environmental and health standards for the oceans, the groundwater and the indigenous people of Sakhalin Island
- Quality testing of oil and gas in near-arctic cold climates found on Sakhalin Island
- Process monitoring at LNG plants and testing at upstream facilities
- Integration with offshore and onshore laboratories, ERP and PI systems
- Maintain strict ISO 17025 compliance as well as GLP compliance

Background:

Sakhalin Energy has developed one of the largest integrated oil and gas projects in the world in Russia's Far East. The oil fields are located off the northeast coast of Sakhalin Island in waters frozen for six months of the year. This project involves the recovery, production and transportation of oil and liquefied natural gas (LNG) from the gas field platform through pipelines to an onshore production facility (OPF) and then via an 800 km onshore pipeline to the site of the LNG plant and oil and LNG export terminals.



Solution Components:

Thermo Scientific SampleManager LIMS in all laboratories

- Interfaces seamlessly with critical IT systems
- Provides documentation for all ISO/17025 requirements
- Proven reliable in rugged and extreme environments

Laboratory instrumentation and Gas Chromatography systems

- Integrated with SampleManager LIMS to enable centralized data and report storage
- SampleManager LIMS automatically schedules and monitors instrument calibration and repair to prevent downtime

Sakhalin Energy's Corporate Energy Resources

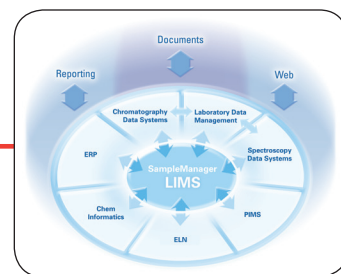
Sakhalin Energy's Process Information planning system

- Integrated with SampleManager LIMS
- Delivers efficient reporting and document support

Results:

Sakhalin Energy is Russia's largest project in the oil and gas industry and its scientific laboratories are designed to ensure LNG production is maintained year round. With both commercial and scientific strategies, Sakhalin Energy developed laboratories with technologies and infrastructure that allow it to deliver consistent support to the production and shipping cycle of finished product. Major benefits include increased sample turnaround time, ability to access data across all laboratories and locations and improved operational efficiencies. Additional benefits include GLP and ISO 17025 compliance audit trails. Standardization of processes and systems ensures that LNG supplies for the emerging Asian markets will be available for the coming decades.

CONNECTS Integration



Thermo Scientific SampleManager LIMS



Laboratory instrumentation and Gas Chromatography systems



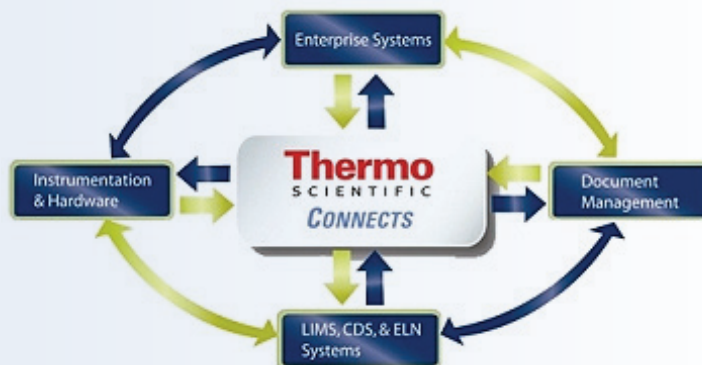
Sakhalin Energy's Corporate Energy Resources Planning System



Sakhalin Energy's PI (Process Information) planning system

About Thermo Scientific CONNECTS

Thermo Scientific CONNECTS is aimed at bridging the gaps between laboratory generated data and the enterprise level information that is required for mission critical management decisions. A broad product offering allows us to help our customers expand the business of science from the laboratory throughout the enterprise, providing both the integration of instruments and systems, and interoperability necessary to transforming data into relevant business drivers for companies across the broadest spectrum of industries.



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