

Mike Gunningham SPE Papers – Link: <https://www.onepetro.org/>

<p>114805-MS SPE Conference Paper</p>	<p>The Integrated Use Of New Technology In The Development Of The Sakhalin II Project</p>	<p>2008</p>	<p>Gunningham, Michael Caspar, SEIC Varley, Chris John, Shell Intl. E&P BV</p>	<p>The Sakhalin II Project, the world's largest E&P project, is currently developing 2 oil and gas fields, offshore Sakhalin Island off the east coast of mainland Russia. This is a challenging area for exploration and development, with 4.5 Billion BOE (675 Million tonnes oil equivalent) of oil and gas in place. This paper will outline how new technologies have assessed and realized the Project's potential.</p> <p>Integrated Reservoir Modeling, utilizing modern seismic processing and interpretation, to evaluate short, medium- and long-term subsurface uncertainties, and to support development planning and reservoir management. The results have been combined into a fully integrated production system model from each reservoir to the LNG plant and Oil Export Terminal.</p> <p>The Lunskeye field, which is being developed with the highest capacity gas wells in Russia, has used the latest sand failure prediction software, which can quantify sand production, so that gas production is optimized, while minimizing sand production. Production performance is enhanced using the latest perforating optimization software.</p> <p>In the Piltun-Astokh field, Smart Water Injectors are used to allocate water into multiple layers to optimize reservoir recovery. In addition, extended reach wells are tapping into undrained areas of the field, to recover additional reserves, reducing the environmental footprint. The field will also be developed with the latest in Smart Field technology for well and reservoir management, using tools such as Fieldware. Longer term, 4-D seismic, using whale friendly seismic, will be implemented to identify infill drilling locations.</p> <p>For the future, in this sub-Arctic environment, the opportunities include acquiring seismic under ice, Arctic (ice resistant) jack-up drilling rigs for year-round drilling and developing low-cost facilities, which can withstand the ice or even be installed subsea, under ice.</p>
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