

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

112099-MS SPE Conference Paper	Applying Sand Management Process on the Lunskeye High Gas-Rate Platform using Quantitative Risk Assessment	2008	Gunningham, Michael Caspar, Shell Intl. E&P BV Addis, Michael Anthony, Shell Hother, John Anthony, Proneta Ltd.	<p>This paper is a case study, which describes how Quantitative Risk Assessment (QRA) is applied to sand management in the specific case of Lunskeye, to minimise risk of failure, while maximising production, reducing cost, and safeguarding reserves. Lunskeye is a high-rate gas development offshore Sakhalin island. The key concern is safely producing gas at high velocity, while minimising the risk from sand production. In order to develop a safe method of producing gas, an integrated multidisciplinary team was put together to address the key parameters to manage potential sand production, using QRA.</p> <p>In particular, consequences, probabilities of occurrence and means of monitoring and control were addressed. The key aspects of this approach are using the right kind of technology to design a safe production system, and then using the appropriate data to monitor and manage the impact of sand production. The "intelligent tool?? that was used allows an experienced integrated team to focus on the practical aspects of managing sand production in a structured and systematic manner to quantify the residual risk to people, facilities, and the asset as a whole. That tool also allowed us to integrate the inputs from widely spaced geographical locations - the production system was designed in the Netherlands, and was being built in Korea, then relocated to Sakhalin island.</p> <p>The QRA involved the operator (Sakhalin Energy) and technical advisor (Shell), combining input from the corporate knowledge base with that of the asset team. This delivered operational plans that provide the key guidance for safe operation, which was endorsed by the operator and its shareholders. Overall, the value of this work has significantly reduced the risk exposure to the project, while reducing well completion costs and safeguarding production in the long term.</p>
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