Work procedure for measure profitable of the GRM effects

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Geophysical reservoir monitoring (GRM) has become an accepted part of the IOR toolbox for improving the production performance of oil and gas fields. About 80% of Statoil operated fields in NCS are using GRM actively for optimizing well planning, production/injection of existing wells and for reservoir management. The type of GRM technology and frequency of acquisitions vary from field to field. Most of the fields using conventional streamer seismic with a frequency between 2-5 years. However, at Snorre and Grane the world's largest Permanent Reservoir Monitoring (PRM) systems are installed at the seabed with the intension to acquire repeated seismic surveys twice a year.

When a field is planning a new seismic monitoring survey there is a requirement to establish a business case and calculate the economics.

In general, all fields utilize GRM data for optimizing well planning to increase value creation. In addition, the PRM fields have experienced that fresh seismic data give valuable information for optimizing planning and execution of well-interventions. This added value should be included in the business case.

Previously there has not been a common way to establish business cases across the fields and there is sometimes quite challenging to demonstrate the actual value of the GRM data by numbers.

A project is ongoing to establish work procedures and applications of methodology to measure value and profitability of the GRM effects. This will lead to more efficient and better optimization of each project, contribute to more consistent QC processes and improve the prioritization within the seismic project portfolio.