Gullfaks Group Project

Last semester some of you worked on the application of Material Balance Analysis to the K1/K2 Area of the Statfjord Formation of the Gullfaks Field. This semester you will apply reservoir simulation to the same area, using the Eclipse 100 simulation model.

An input data file for Eclipse is provided by the Gullfaks Licence in Bergen. This file will be used as the basis for your work. You will have to modify the file in order to optimize the oil recovery from the K1/K2 Area.

The objective of the group project is to apply the Eclipse model to real field simulation, including history matching, use of RESTART files, introducing new wells in a field, and study effects of well locations on oil recovery.

Problem statement:

Use Reservoir Simulation Analysis to investigate the behavior of area K1/K2 of the Statfjord Formation in the Gullfaks Field. Your analysis should include:

1. *Updating of the input data file and improvement of history match (base case)*

2. *Creation of a RESTART file based on the history matched base case file.*

3. *Make a forecast simulation until 2025 using only the wells and flow rates used at the end of the base case.*

4. *Introduce a new well and make a new forecast until 2025.*
   You are free to place the well as you feel is the best location for high oil recovery. You may use a horizontal or vertical well. Compare your oil recovery results with the base case above

A poster presentation of results by each group will be held on Tuesday April 21 at 1015-12 in the corridor outside P10-P13.

A list of the group members may be found at Its Learning. The groups will be responsible for arranging meetings and discussions as needed to solve the problem. You are encouraged to solve as much as possible in close collaboration.

Support persons:
Rasoul
Knut Backe
Jan Ivar
Jon