Gullfaks Group Project

This semester you will do simulation of the I1 Area of the Statfjord Formation of the Gullfaks Field., 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 I1 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.

All data available for the Gullfaks Field may be found in http://www.ipt.ntnu.no/gullfaks. Most of the material is in Norwegian, so some of you may need some assistance from Norwegian students (or use translate.google.com).

Additional data may be available from Statoil upon request. Please contact us if you would like to request more data from Statoil.

Preliminary problem statement:

Use Reservoir Simulation Analysis to investigate the behavior of area I1 of the Statfjord Formation in the Gullfaks Field. Your analysis should include:

- ***BASE CASE: Run Statoil's I1 model to generate the base case to compare with.***
- ***Assume that you are at the start of the production of the I1 Area and that you are free to place the wells as you feel are the best locations for high oil recovery. You may use horizontal or vertical wells. Predict the performance of the I1 Area from the start and until it is no longer making a profit. Compare your recovery results with the base case above.***
- ***Economical evaluation of your plan should be presented. Additional data for this will be supplied.***

Eclipse files and additional information may be downloaded from ItsLearning.

Please review individually the assignments. Read relevant parts of the Reservoir Management Plan (RSP). The 2007 version is in English. All students should meet in P13 on Thursday March 2 at 1015 where we will answer questions related to the Gullfaks Field and the database. The groups will be responsible for arranging internal meetings and discussions as needed to solve the problem. You are encouraged to solve as much as possible in close collaboration.

Each group will make a final presentation of their results in P13 on Thursday April 20, and turn in a their presentation.