DATPREP

Project – Modeling an oil reservoir

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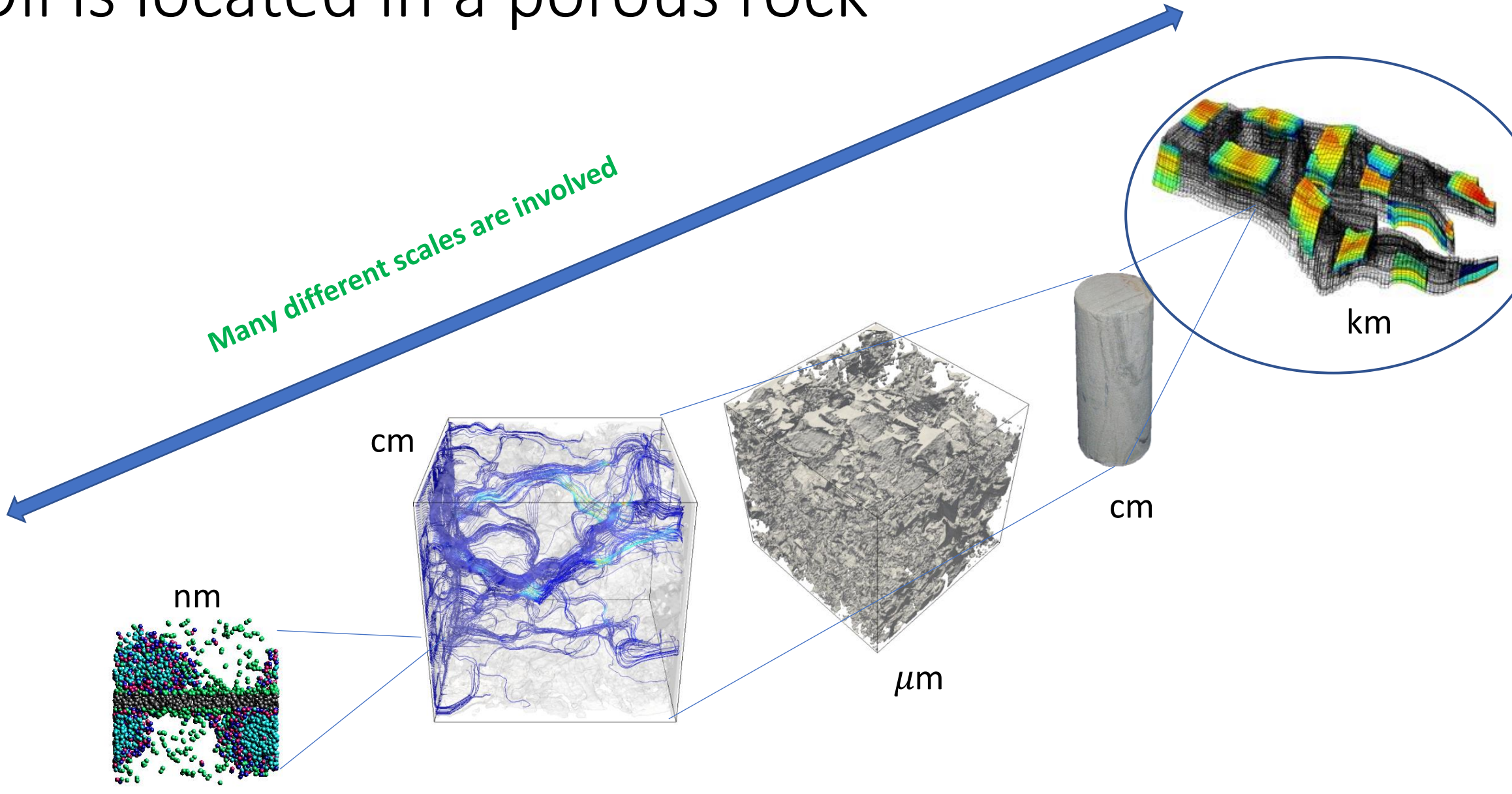
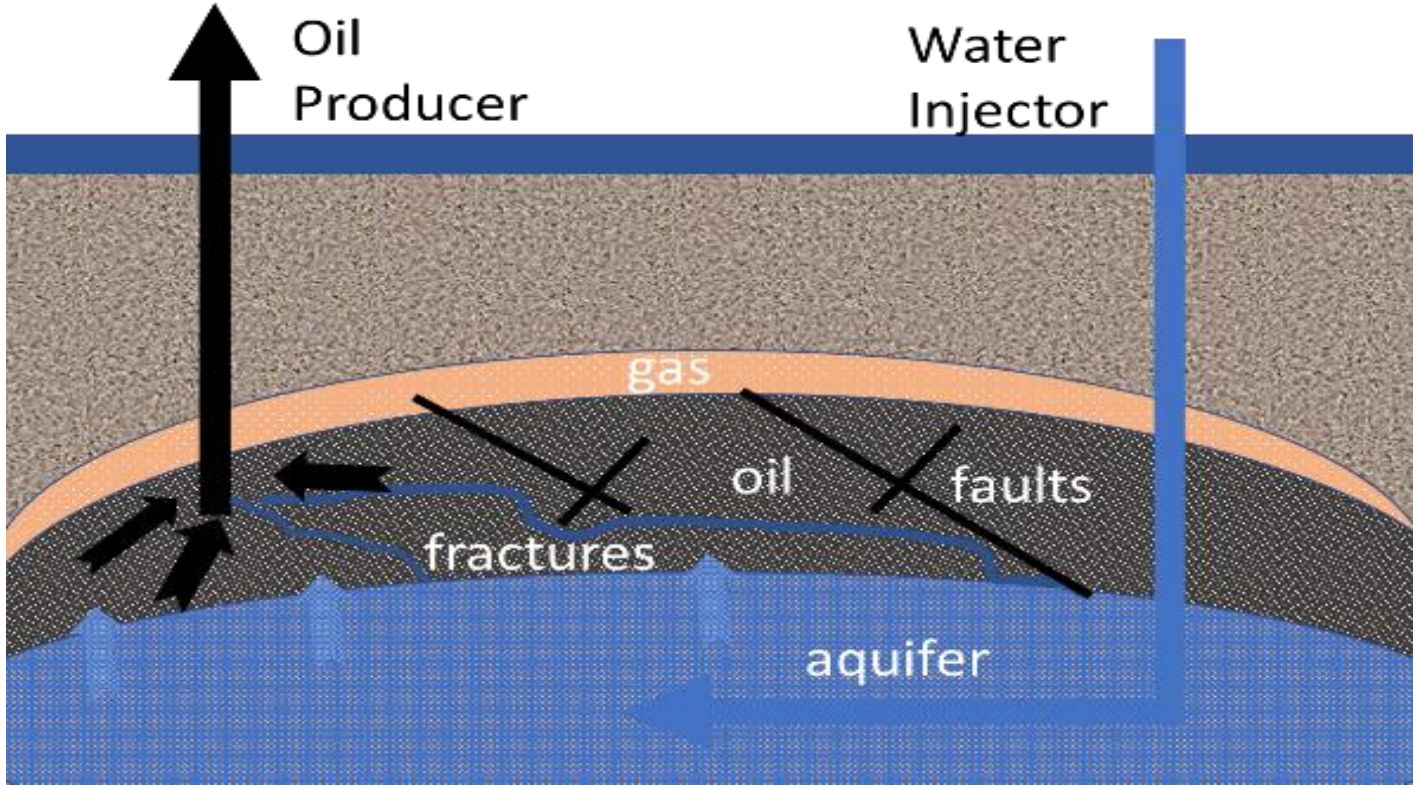
2020

Oil is located in a porous rock



How do we get it out?

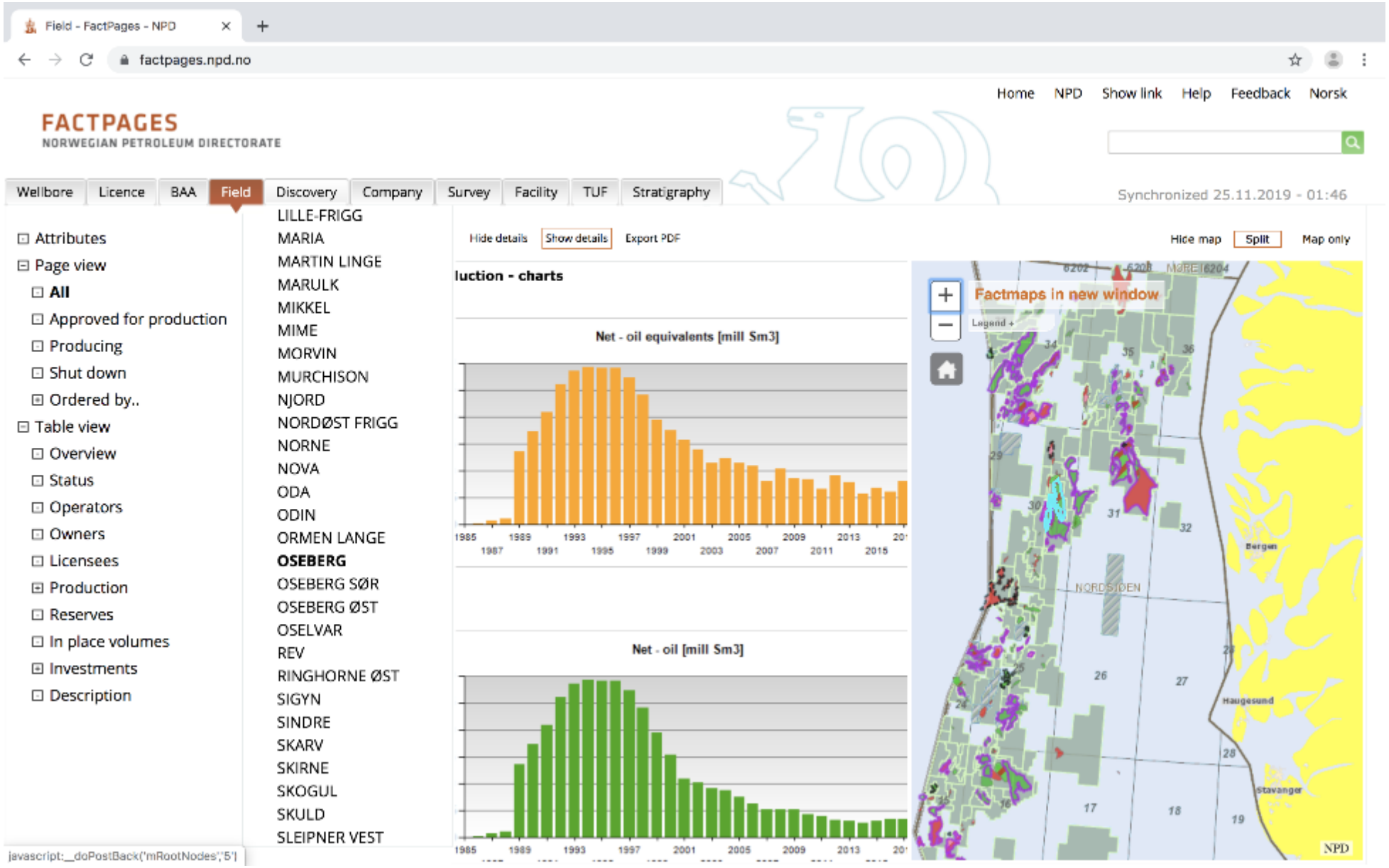
- Replace oil with a cheaper fluid, e.g. water or CO2



Petroleum Act

Production of petroleum shall take place in such a manner that as much as possible of the petroleum in place in each individual petroleum deposit, or in several deposits in combination, will be produced. ***The production shall take place in accordance with prudent technical and sound economic principles and in such a manner that waste of petroleum or reservoir energy is avoided****. The licensee shall carry out continuous evaluation of production strategy and technical solutions and shall take the necessary measures in order to achieve this.*

Data freely available on NPD factpages



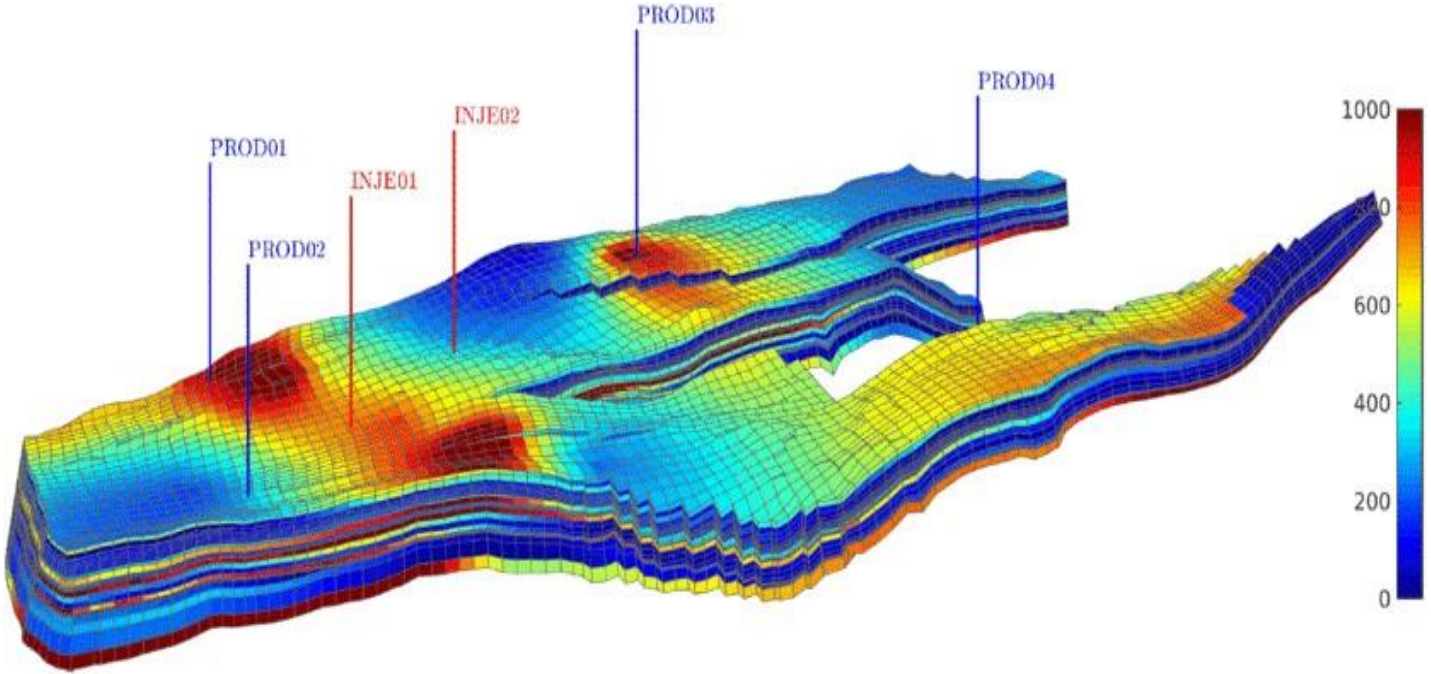
To interpret data we need a model

A model is a *sufficient* simplification of a real world problem

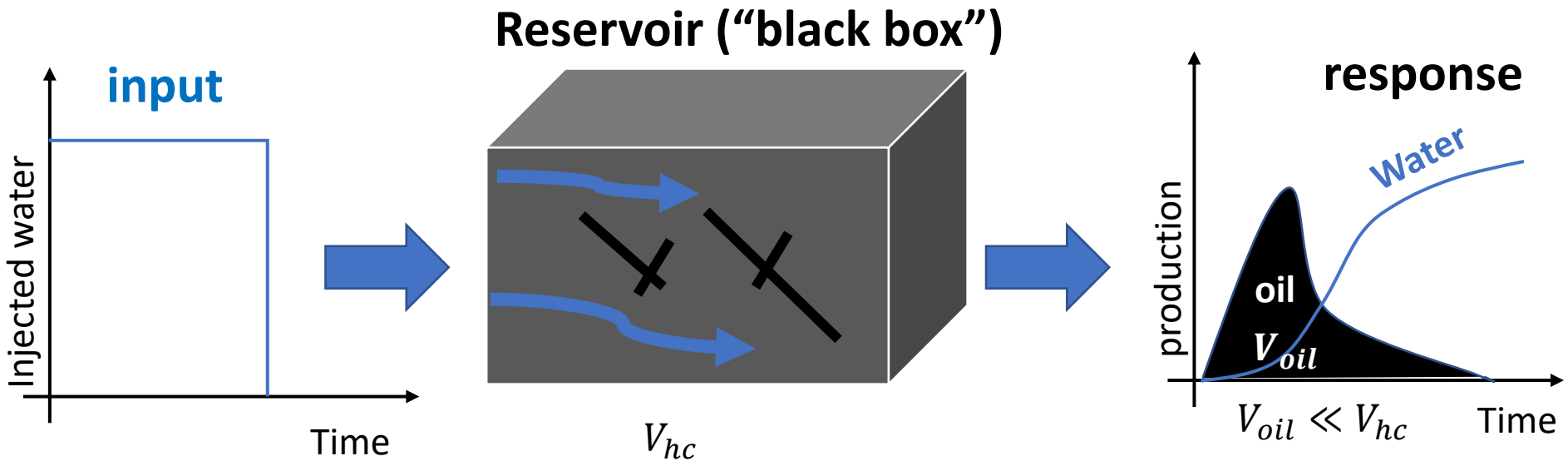
Models have no value in and off themselves. They only have value to the extent they are *useful* for some specific purpose.

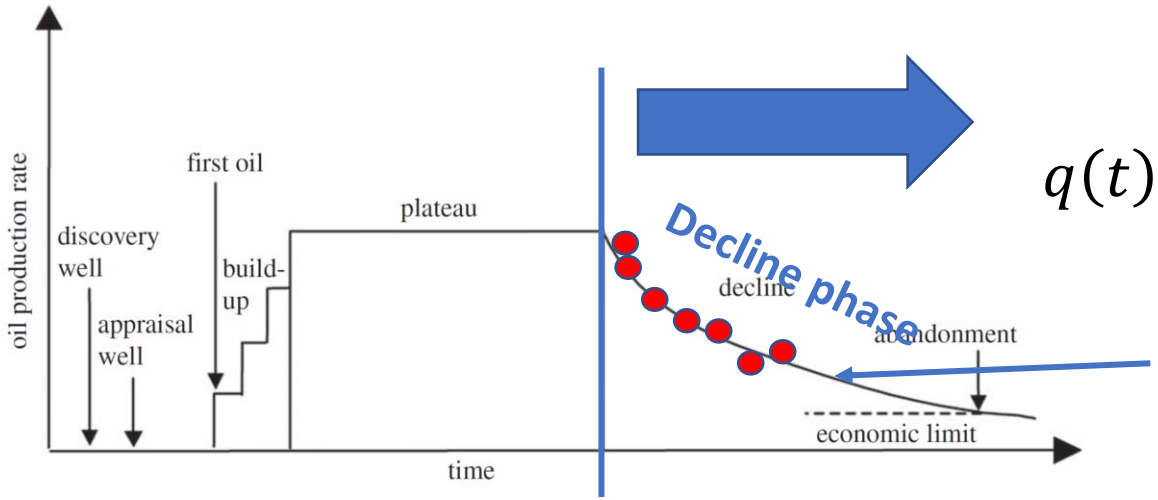
Reservoir models:

- Needs lot of data
- Good for field specific studies



Conceptual Model



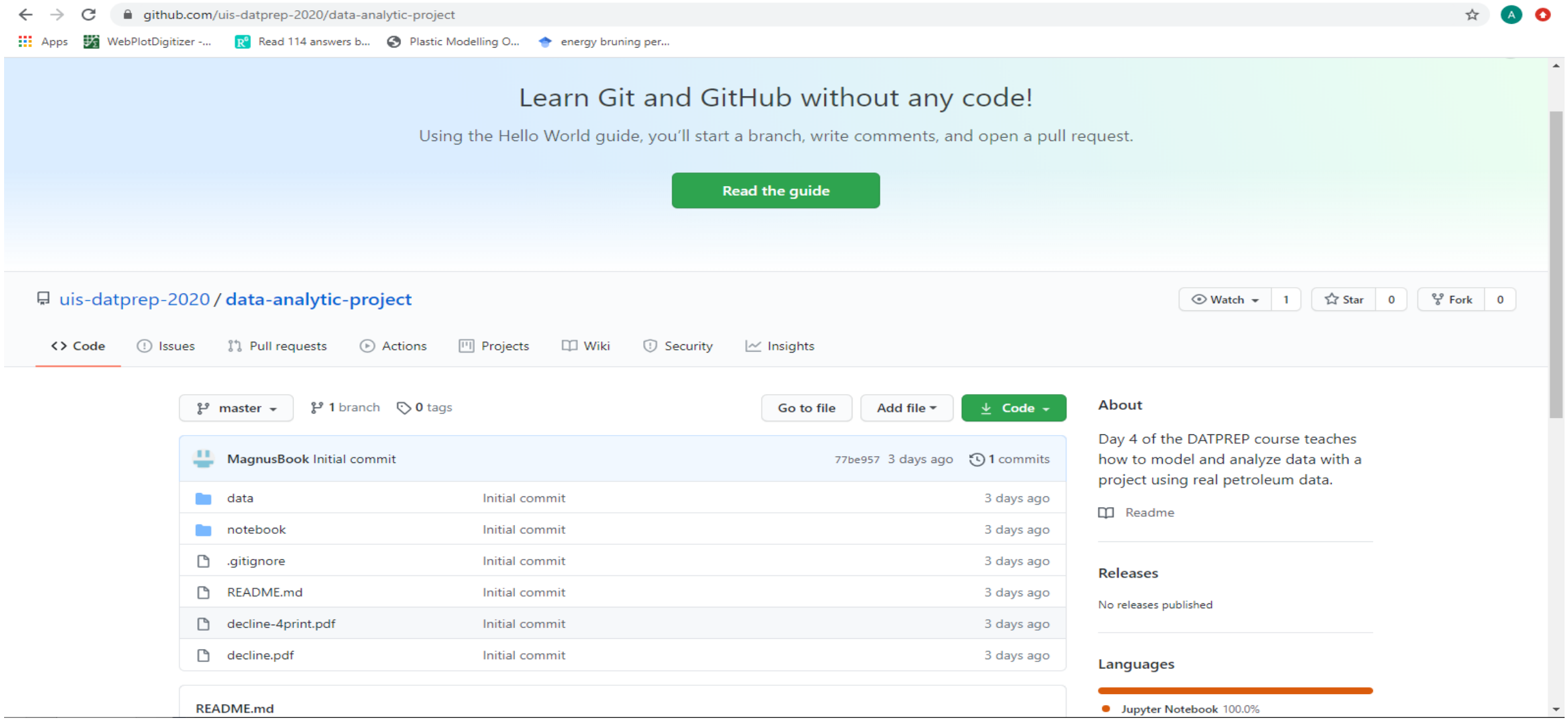


$$q(t) = q(t_0)e^{-\lambda(t-t_0)}$$

- data
- prediction

Forecast production to know the economic limit

Get started


github.com/uis-datprep-2020/data-analytic-project
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Pull requests
Actions
Projects
Wiki
Security
Insights
master
1 branch
0 tags
Go to file
Add file
Code
MagnusBook Initial commit
77be957 3 days ago
1 commits
data Initial commit 3 days ago
notebook Initial commit 3 days ago
.gitignore Initial commit 3 days ago
README.md Initial commit 3 days ago
decline-4print.pdf Initial commit 3 days ago
decline.pdf Initial commit 3 days ago
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About
Day 4 of the DATPREP course teaches how to model and analyze data with a project using real petroleum data.
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