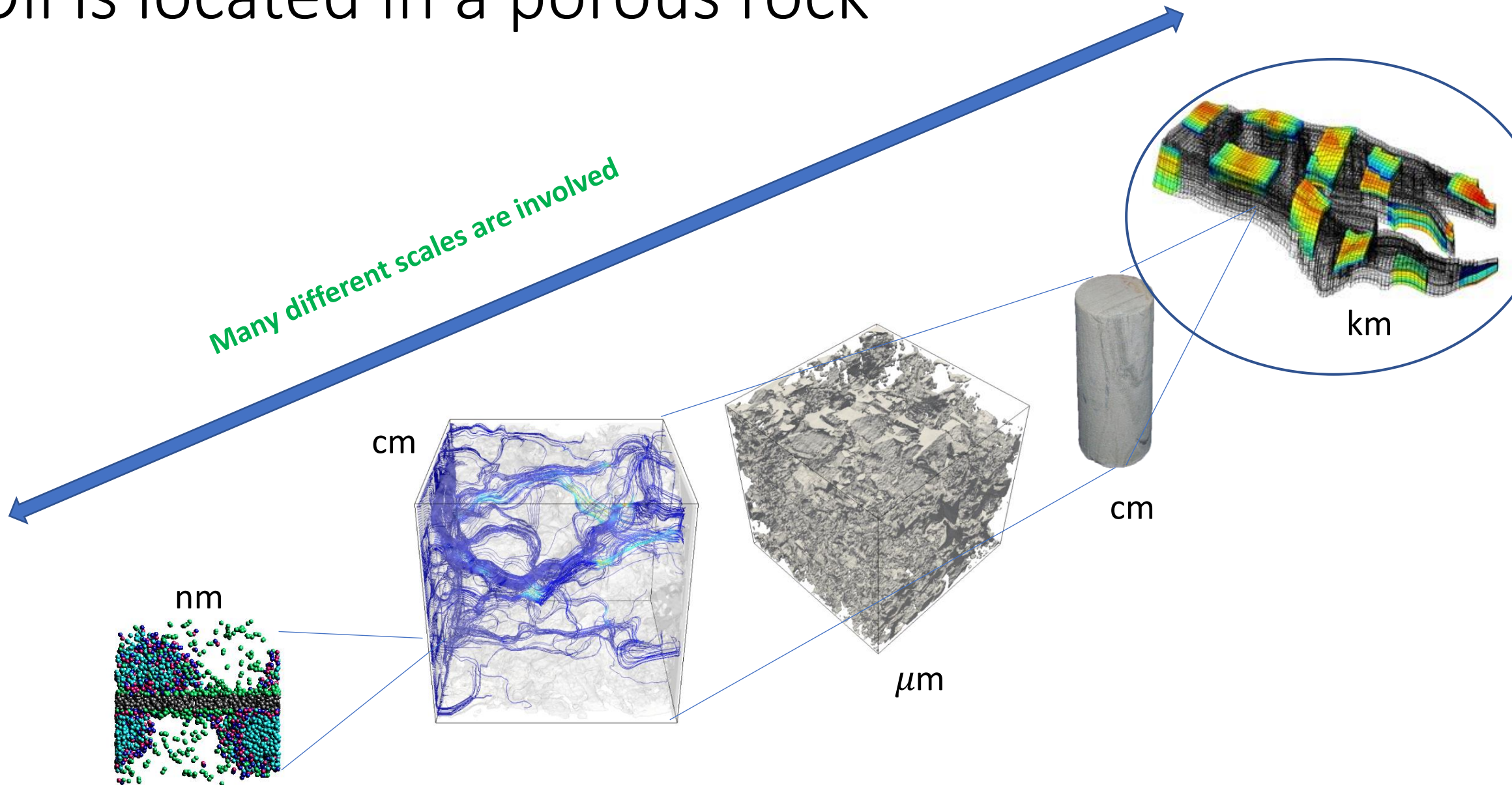


# DATPREP

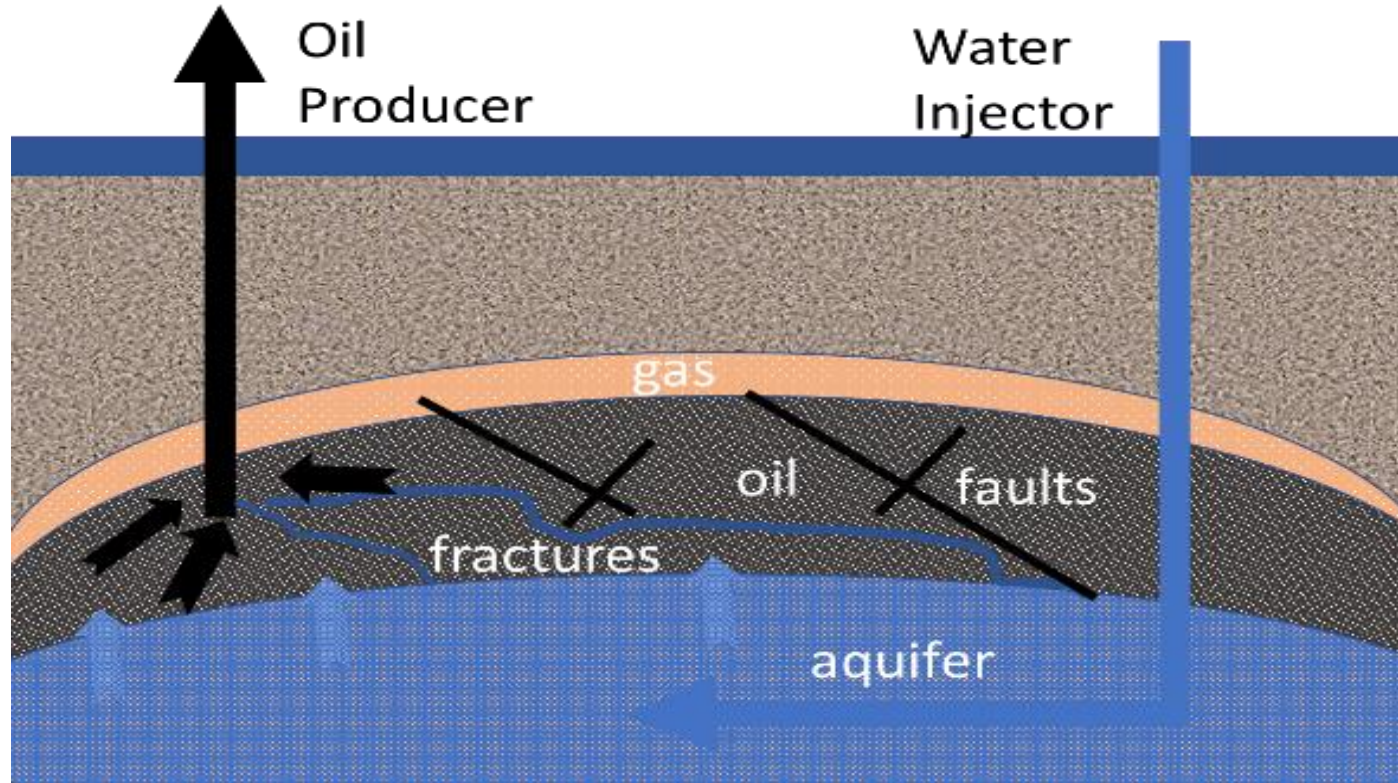
Project – Modeling an oil reservoir  
Aksel Hiorth and Oddbjørn Nødland  
2020

# Oil is located in a porous rock



# How do we get it out?

- Replace oil with a cheaper fluid, e.g. water or CO<sub>2</sub>



# Petroleum Act

The background of the slide features a photograph of several offshore oil drilling rigs in the ocean. The image is heavily filtered with a teal or cyan color, giving it a monochromatic appearance. The rigs are silhouetted against a lighter, hazy sky, with some lights visible on their structures. The water in the foreground is dark and textured.

*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

Field - FactPages - NPD

factpages.npd.no

Home NPD Show link Help Feedback Norsk

FACTPAGES  
NORWEGIAN PETROLEUM DIRECTORATE

Wellbore Licence BAA **Field** Discovery Company Survey Facility TUF Stratigraphy

Synchronized 25.11.2019 - 01:46

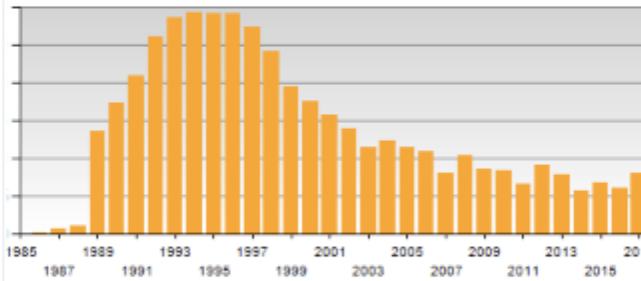
☐ Attributes  
☐ Page view  
☐ All  
☐ Approved for production  
☐ Producing  
☐ Shut down  
☐ Ordered by..  
☐ Table view  
☐ Overview  
☐ Status  
☐ Operators  
☐ Owners  
☐ Licensees  
☐ Production  
☐ Reserves  
☐ In place volumes  
☐ Investments  
☐ Description

LILLE-FRIGG  
MARIA  
MARTIN LINGE  
MARULK  
MIKKEL  
MIME  
MORVIN  
MURCHISON  
NJORD  
NORDØST FRIGG  
NORNE  
NOVA  
ODA  
ODIN  
ORMEN LANGE  
**OSEBERG**  
OSEBERG SØR  
OSEBERG ØST  
OSELVAR  
REV  
RINGHORNE ØST  
SIGYN  
SINDRE  
SKARV  
SKIRNE  
SKOGUL  
SKULD  
SLEIPNER VEST

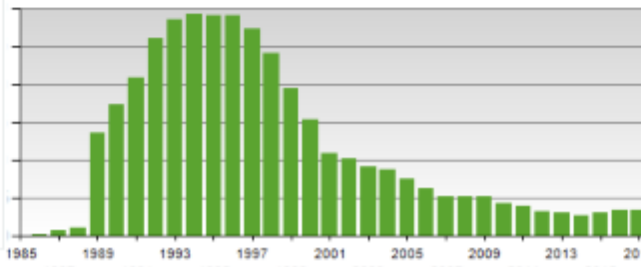
Hide details Show details Export PDF

Production - charts

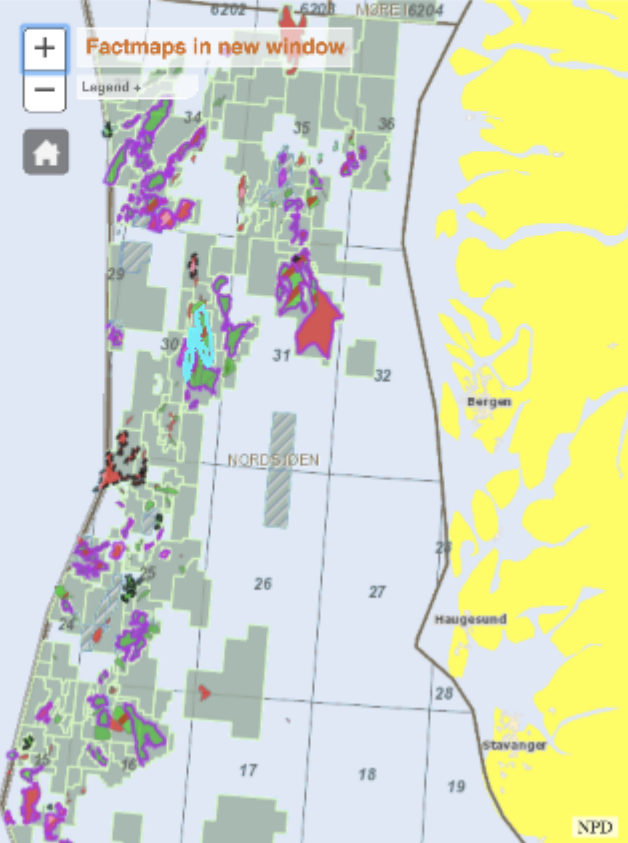
Net - oil equivalents [mill Sm<sup>3</sup>]



Net - oil [mill Sm<sup>3</sup>]



Factmaps in new window



NPD

javascript: \_\_doPostBack('mRootNodes','5')

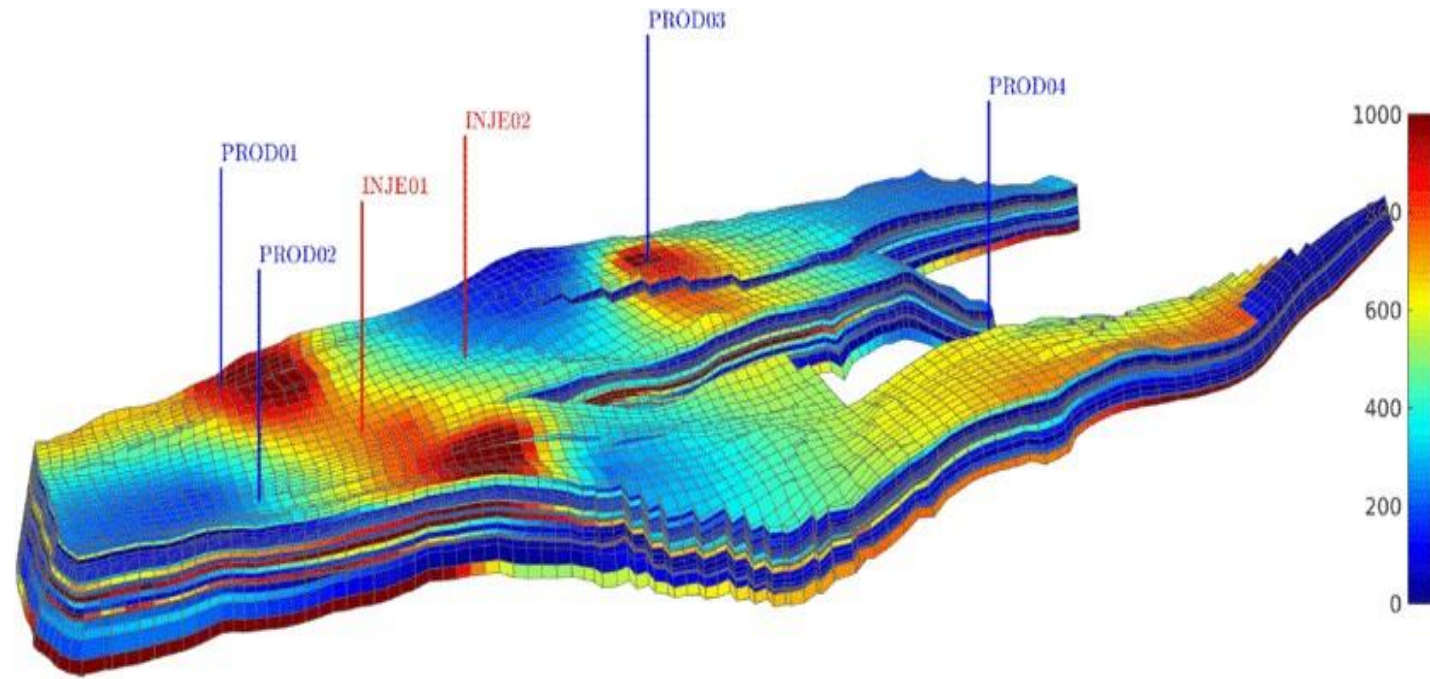
# To interpret data we need a model

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

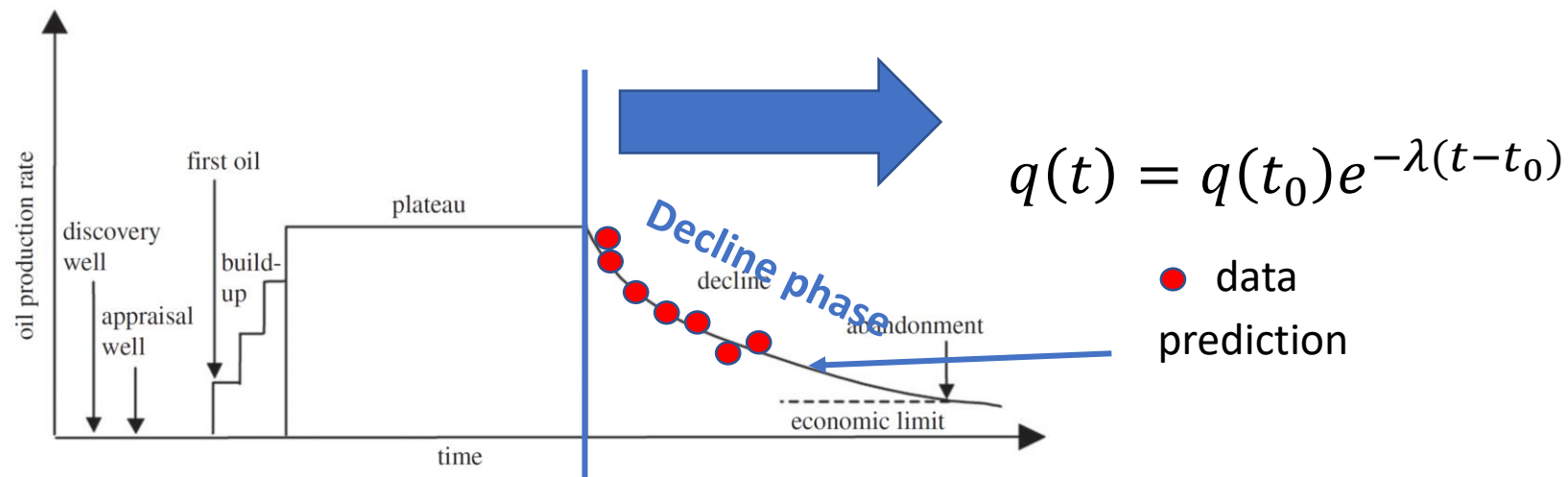
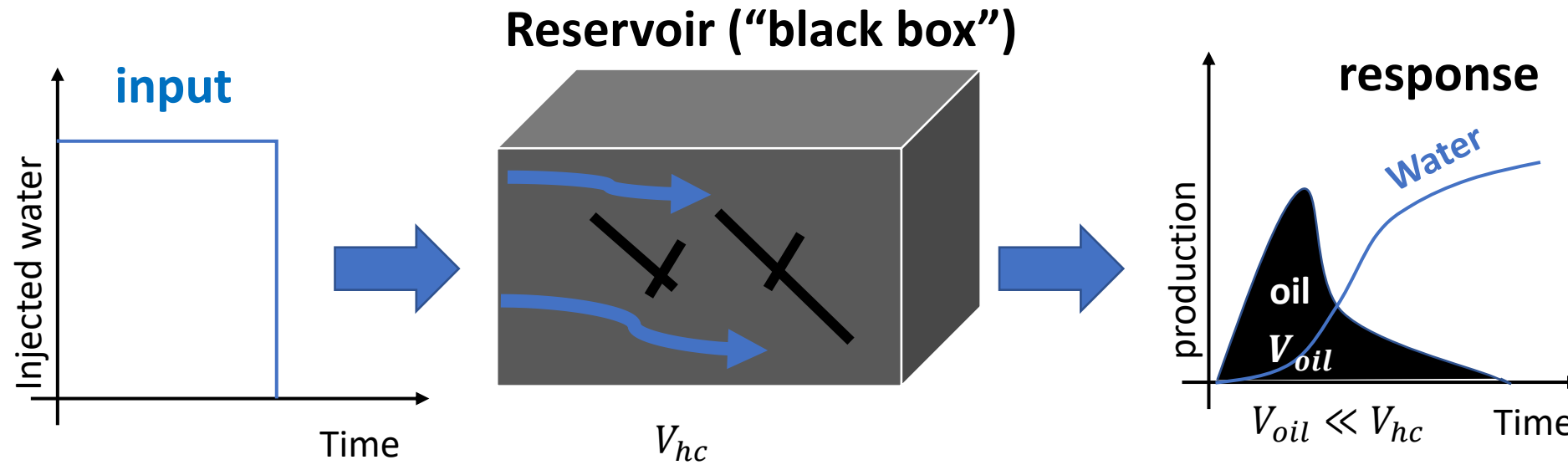
Models have no value in and of themselves. They only have value to the extent they are *useful* for some specific purpose.

Reservoir models:

- Needs lot of data
- Good for field specific studies



# Conceptual Model



Forecast production to know the economic limit

# Get started

← → ↻

github.com/uis-datprep-2020/data-analytic-project

☆

A

+

Apps WebPlotDigitizer -... R Read 114 answers b... Plastic Modelling O... energy bruning per...

Learn Git and GitHub without any code!

Using the Hello World guide, you'll start a branch, write comments, and open a pull request.

Read the guide

uis-datprep-2020 / data-analytic-project

Watch 1 Star 0 Fork 0

<> Code Issues 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

README.md

About

Day 4 of the DATPREP course teaches how to model and analyze data with a project using real petroleum data.

Readme

Releases

No releases published

Languages

Jupyter Notebook 100.0%