

tNavigator[®]

ONE ASSET, ONE SOFTWARE: THE FUTURE OF RESERVOIR MODELLING

asktNav@rfdyn.com

WHY CHOOSE tNavigator®?



INTEGRATED ASSET MODELLING

All domains connected in one technology – automated, customisable workflows from reservoir to surface with integrated uncertainty analysis



EASY MIGRATION PROCESS

“Plug & Play” Solution – all industry standard data formats supported



BUILT FOR SPEED

Super fast, scalable simulator engine – no charges per core or GPU



SUPERIOR TECHNICAL SUPPORT

24/7 assistance from experts in our local and centralised support teams



AGILE SOFTWARE DEVELOPMENT

Listening to and acting upon the demands of our user community, delivering 4 major technology updates per year

INTERNATIONAL USER BASE WITH 350+ COMMERCIAL CLIENTS



WORLDWIDE SUPPORT OFFICES



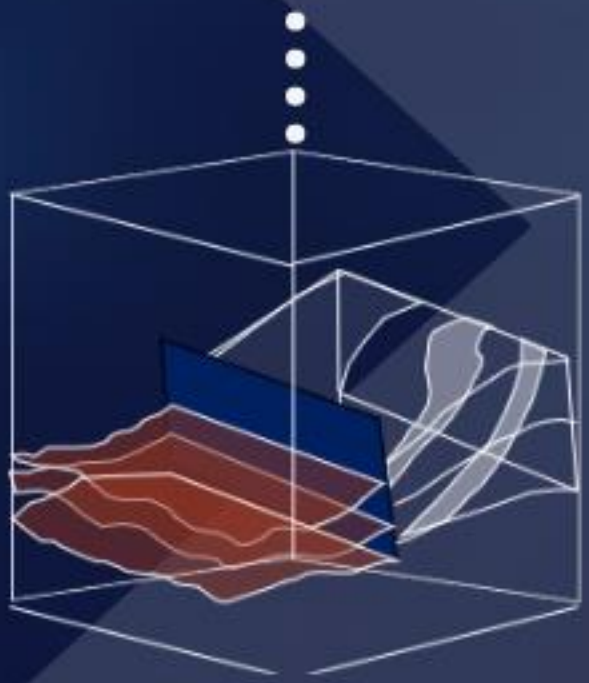
2020-2021 IN NUMBERS



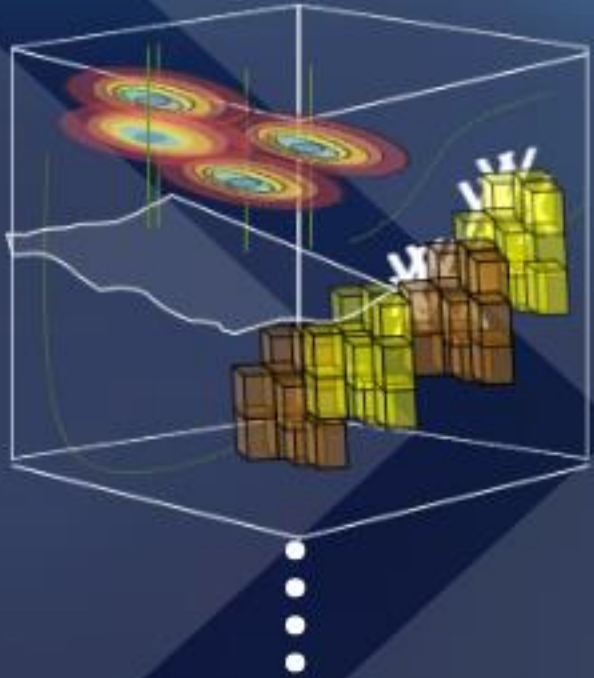
- +30 new clients in 10 new countries
- +60 new employees
- +600 slides of new training material
- +45 online webinars
- 12.5 million lines of code

ONE ASSET, ONE SOFTWARE

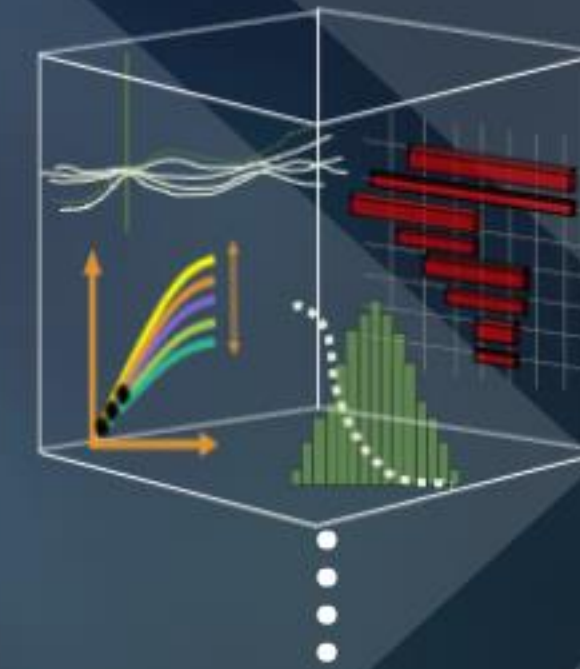
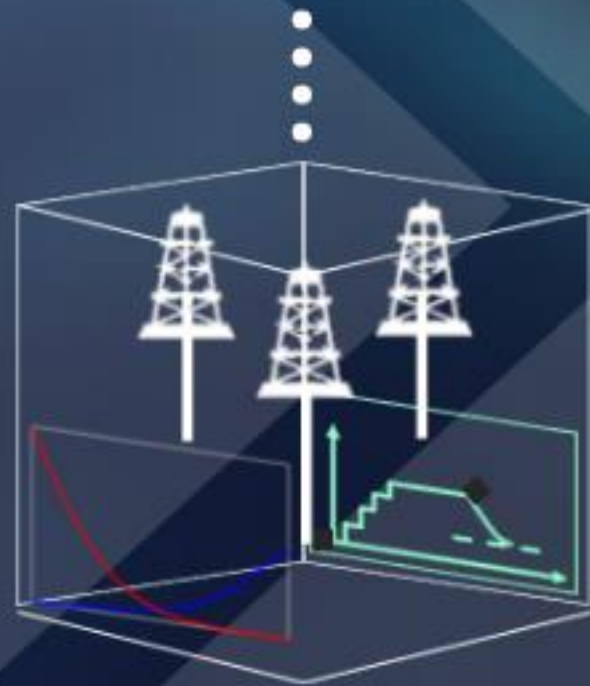
GEOLOGICAL
MODELLING



RESERVOIR MODELLING

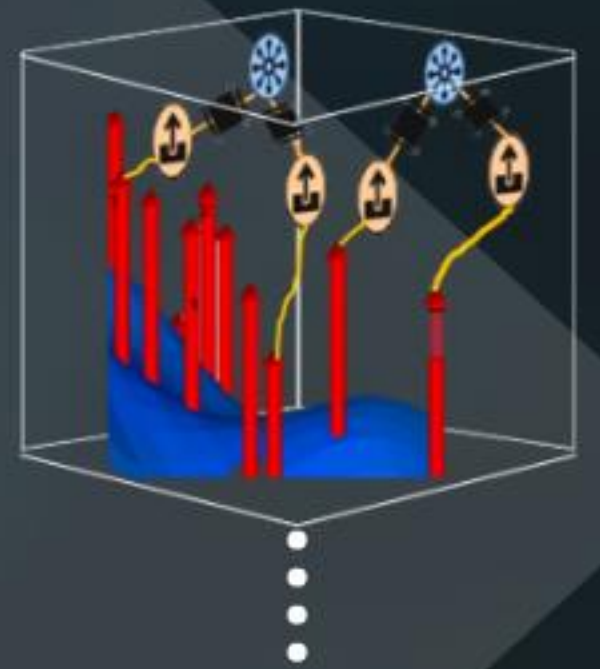
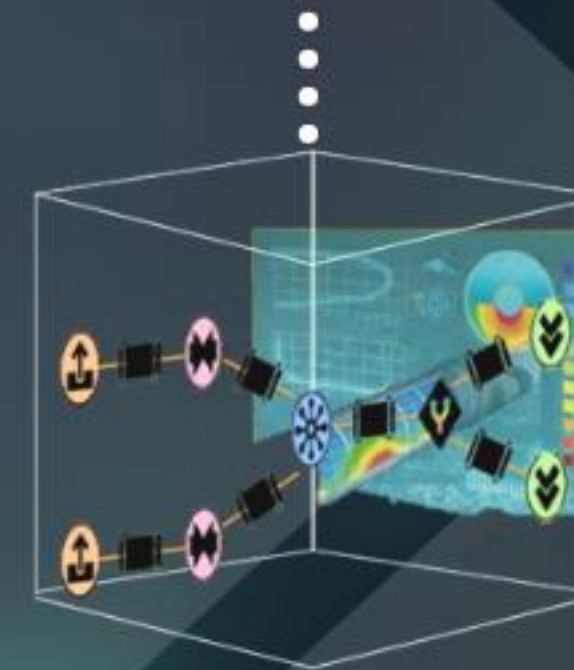


DYNAMIC MODELLING &
SIMULATION



UNCERTAINTY
QUANTIFICATION

SURFACE NETWORK
MODELLING



INTEGRATION &
COMPLETION

A CALCULATION ENGINE BUILT FOR 21ST CENTURY TECHNOLOGY



Unrivalled parallel scalability and simulation speed

CPU & GPU hybrid algorithms designed to leverage computational power for maximum performance.

Run control monitoring and pre/post processing in a single interface, with interactive and intuitive controls.

A SIMULATION SOLUTION FOR EVERY ASSET TYPE

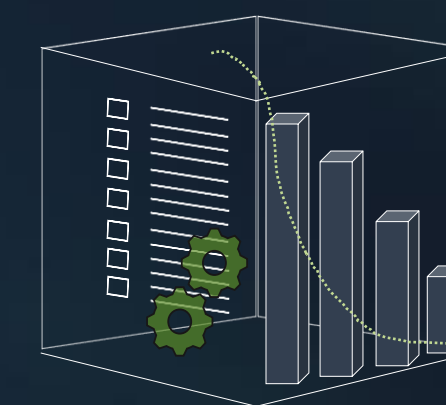
Non-conventional
Offshore
Heavy Oil
Gas condensate
CO2 Injection, CCS
Waterflood



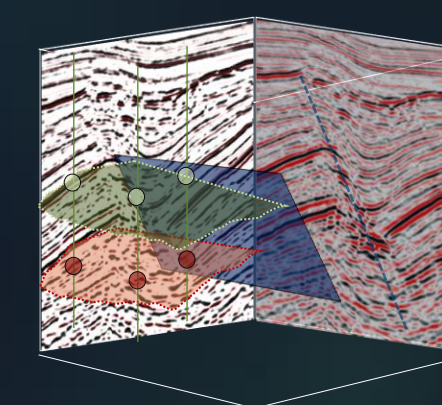
FULL STATIC MODELLING WORKFLOW

Comprehensive static modelling for a
fraction of the price

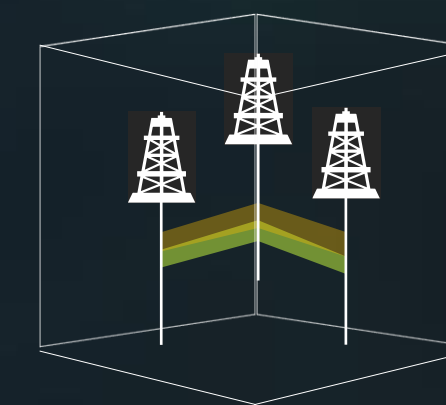
Data
Reconnaissance



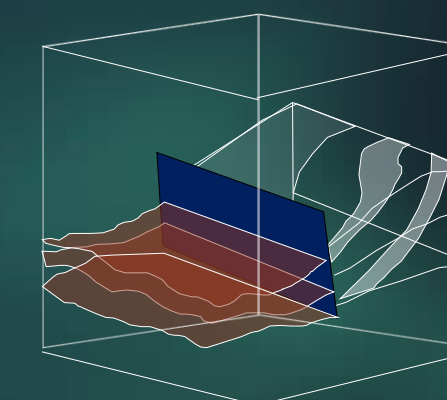
Geophysical
Interpretation



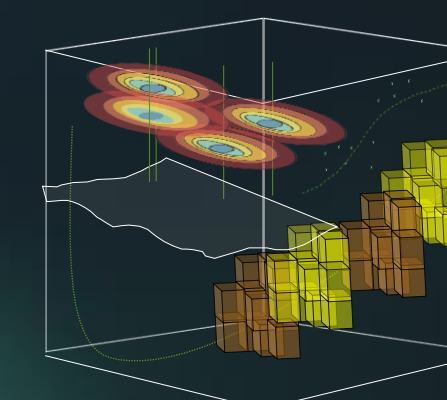
Geological
Interpretation



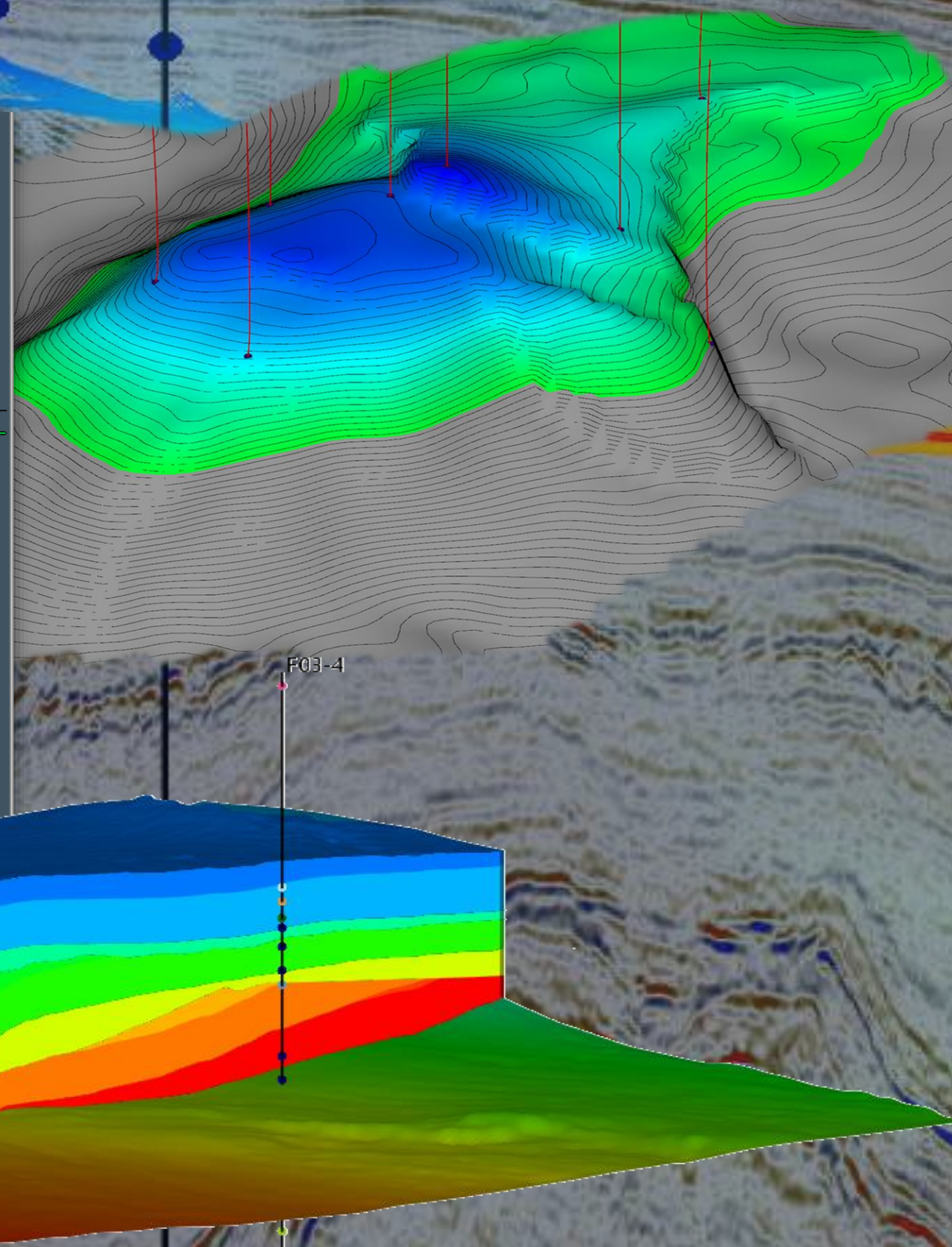
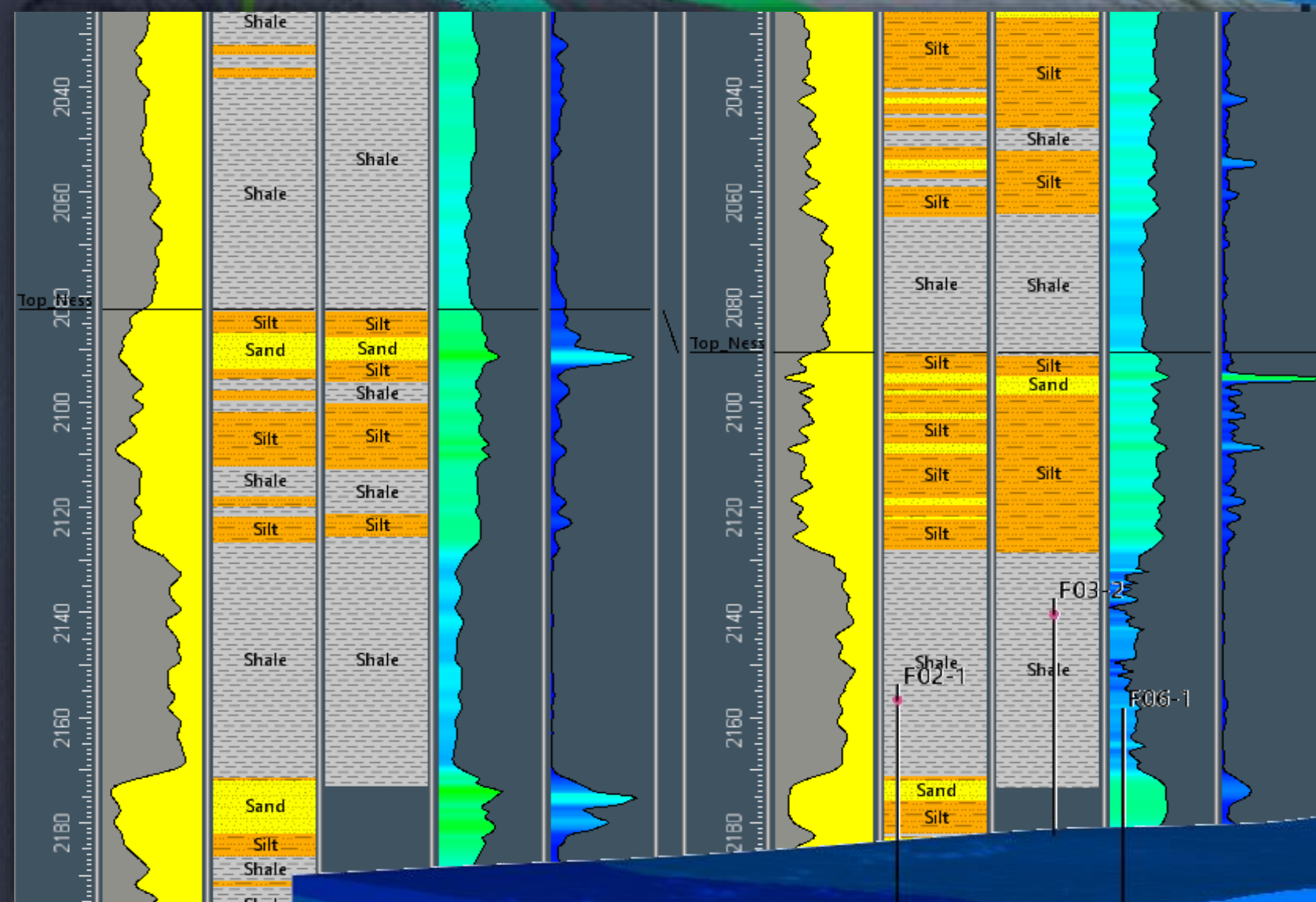
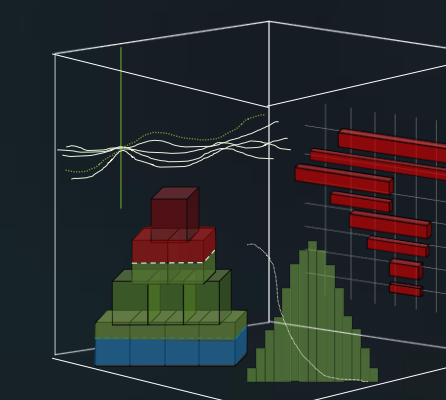
Structural
Modelling



Reservoir
Modelling



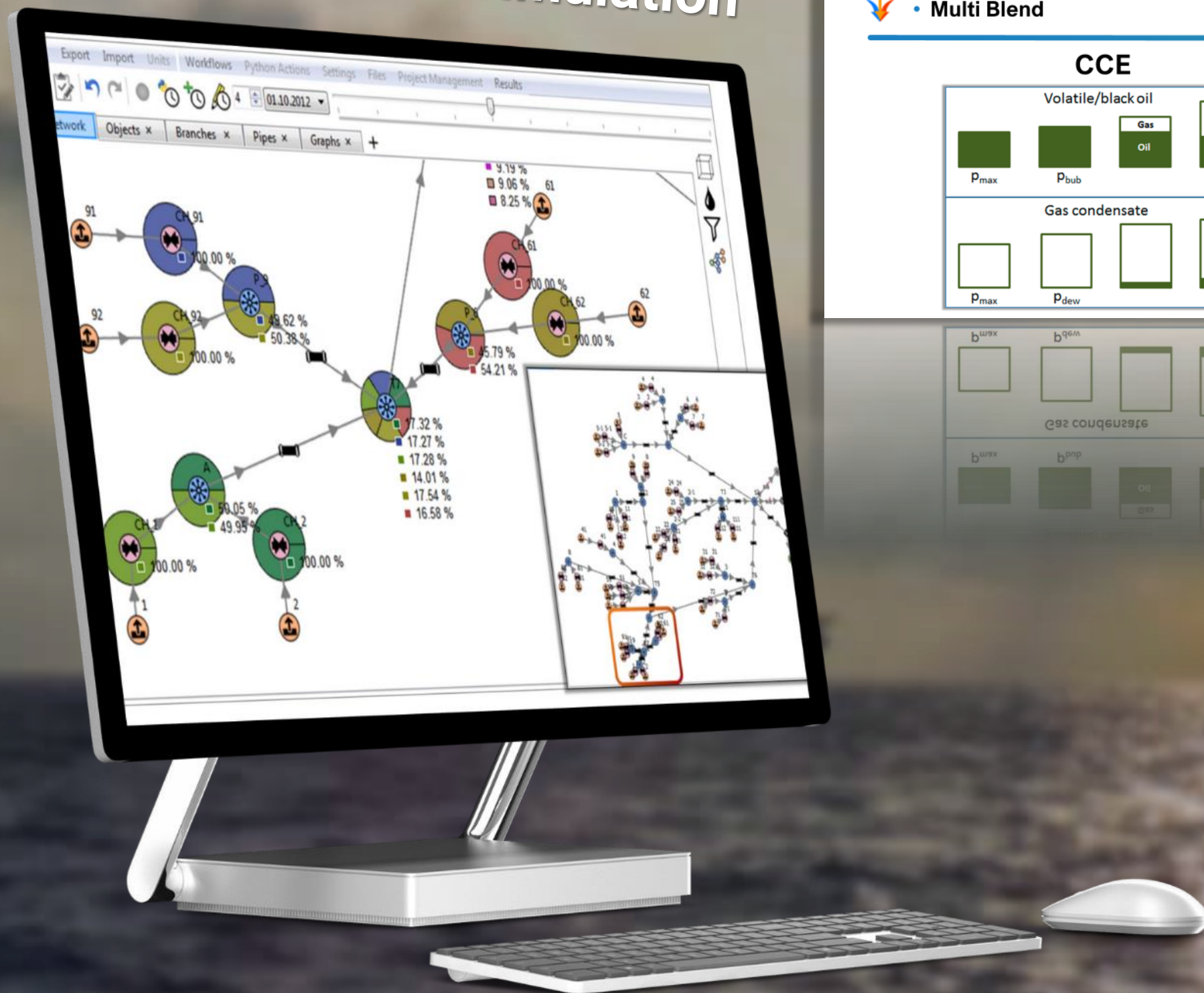
Volumetrics &
Uncertainty



WORKFLOWS FOR PRODUCTION AND NETWORK ENGINEERS

Analysis of PVT Experiments

Surface Network Simulation



Modeling Tools

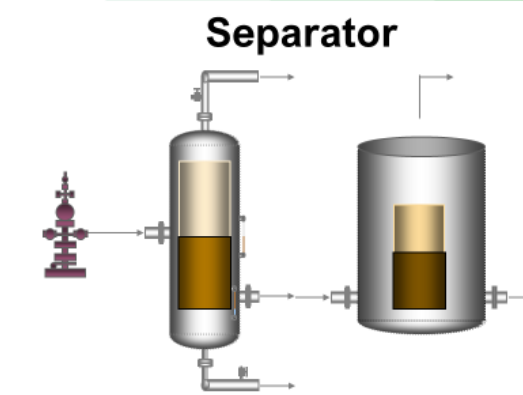
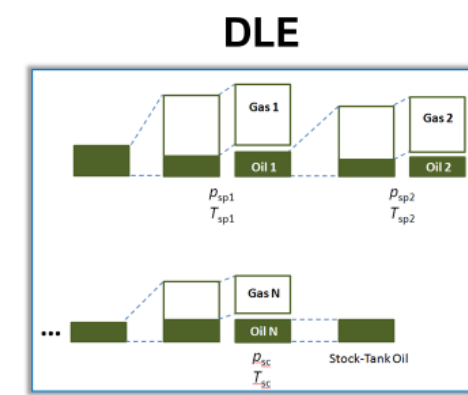
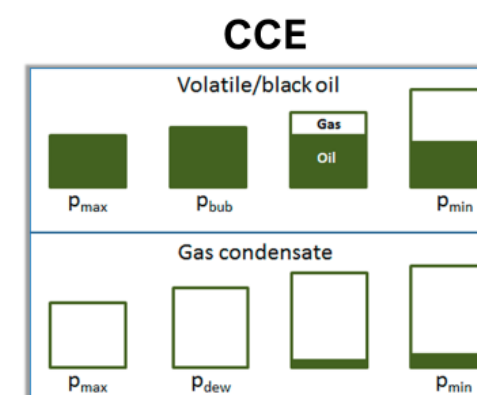
- Matching/Regression
- Splitting
- Lumping
- Decontamination
- Blend
- Multi Blend

PVT experiments

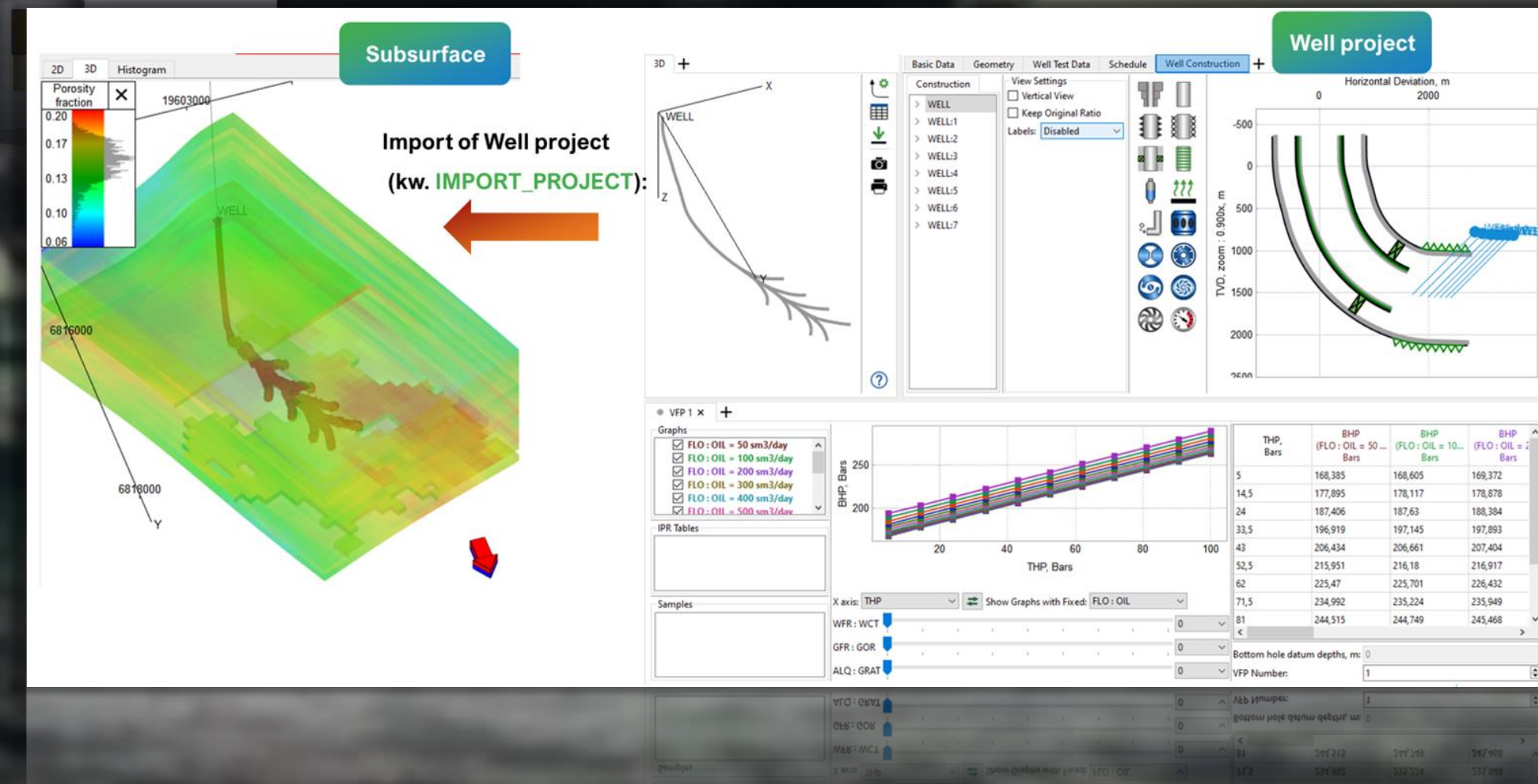
- CCE/DLE/CVD
- Separator Test
- Grading Test
- Swelling Test
- MMP

Special features

- Non-equilibrium flash
- 3-phase flash
- Gas hydrates



Complex Wellbore Modelling

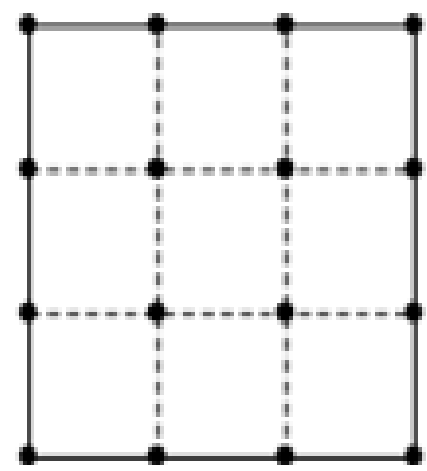


UNIVERSAL UNCERTAINTY ENGINE

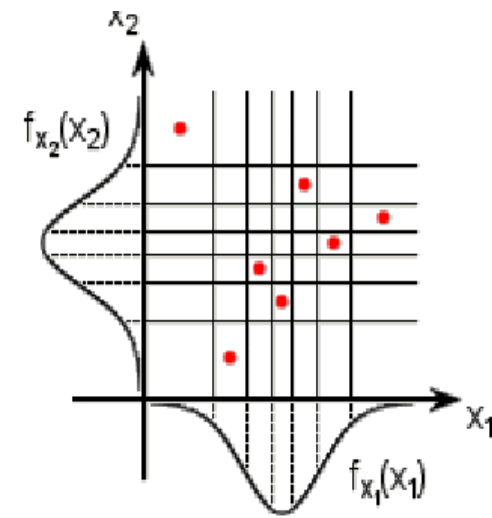
EXPERIMENTAL DESIGN

Variables range screening, variables ranking

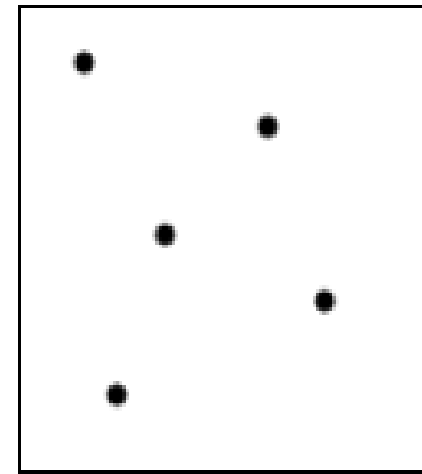
Grid Search



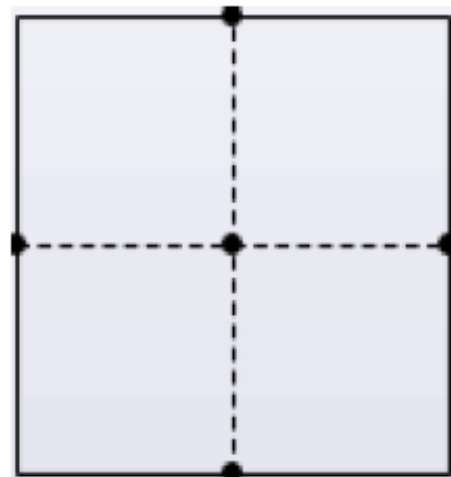
Latin Hypercube



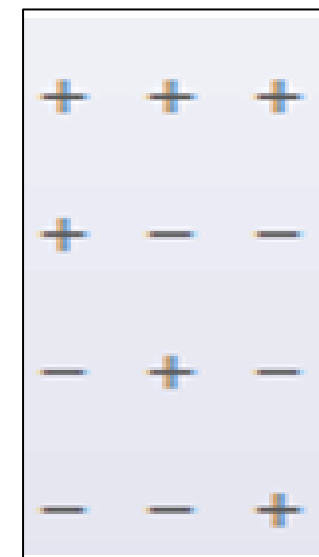
Monte Carlo



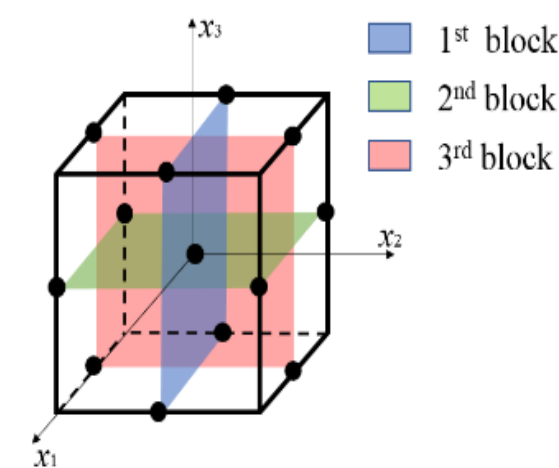
Tornado



Plackett-Burman



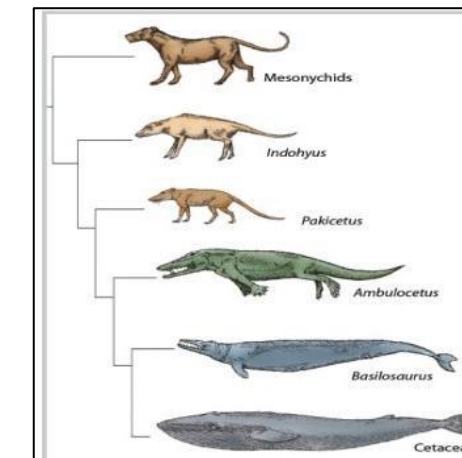
Box-Behnken



AUTOMATED HISTORY MATCHING, ENSEMBLE MODELLING, OPTIMISATION UNDER UNCERTAINTY

Minimising or maximising objective function

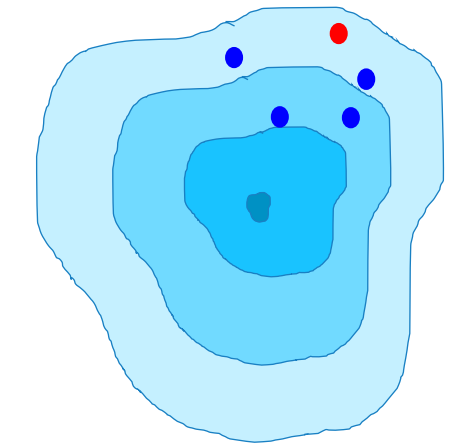
Differential Evolution



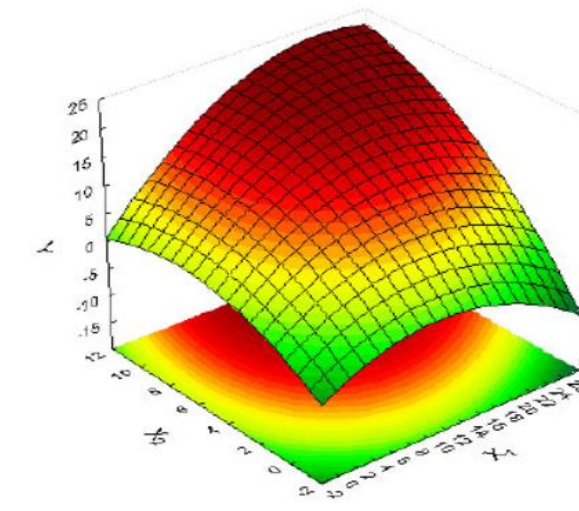
Particle Swarm Optimisation



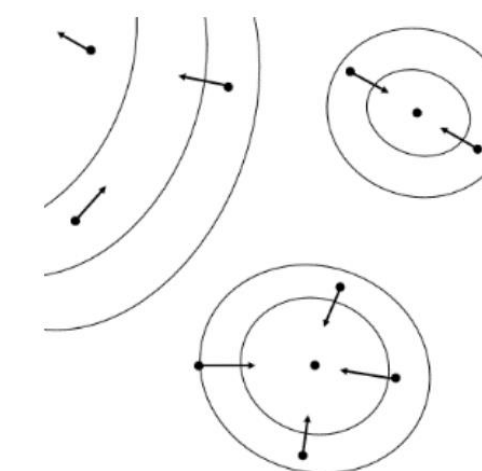
Simplex Method



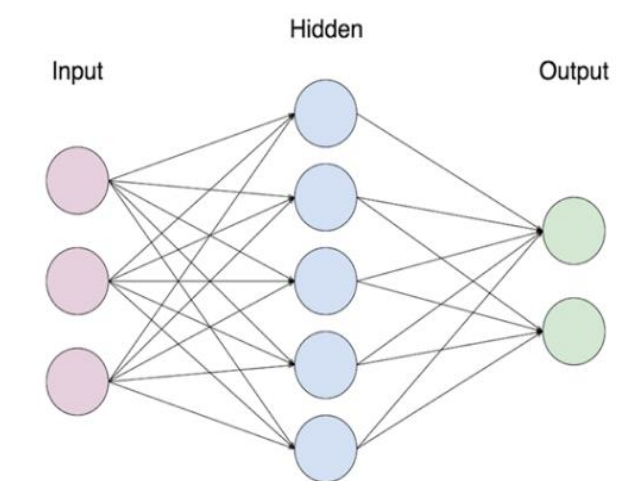
Response Surface (Proxy-Models)



Ensemble

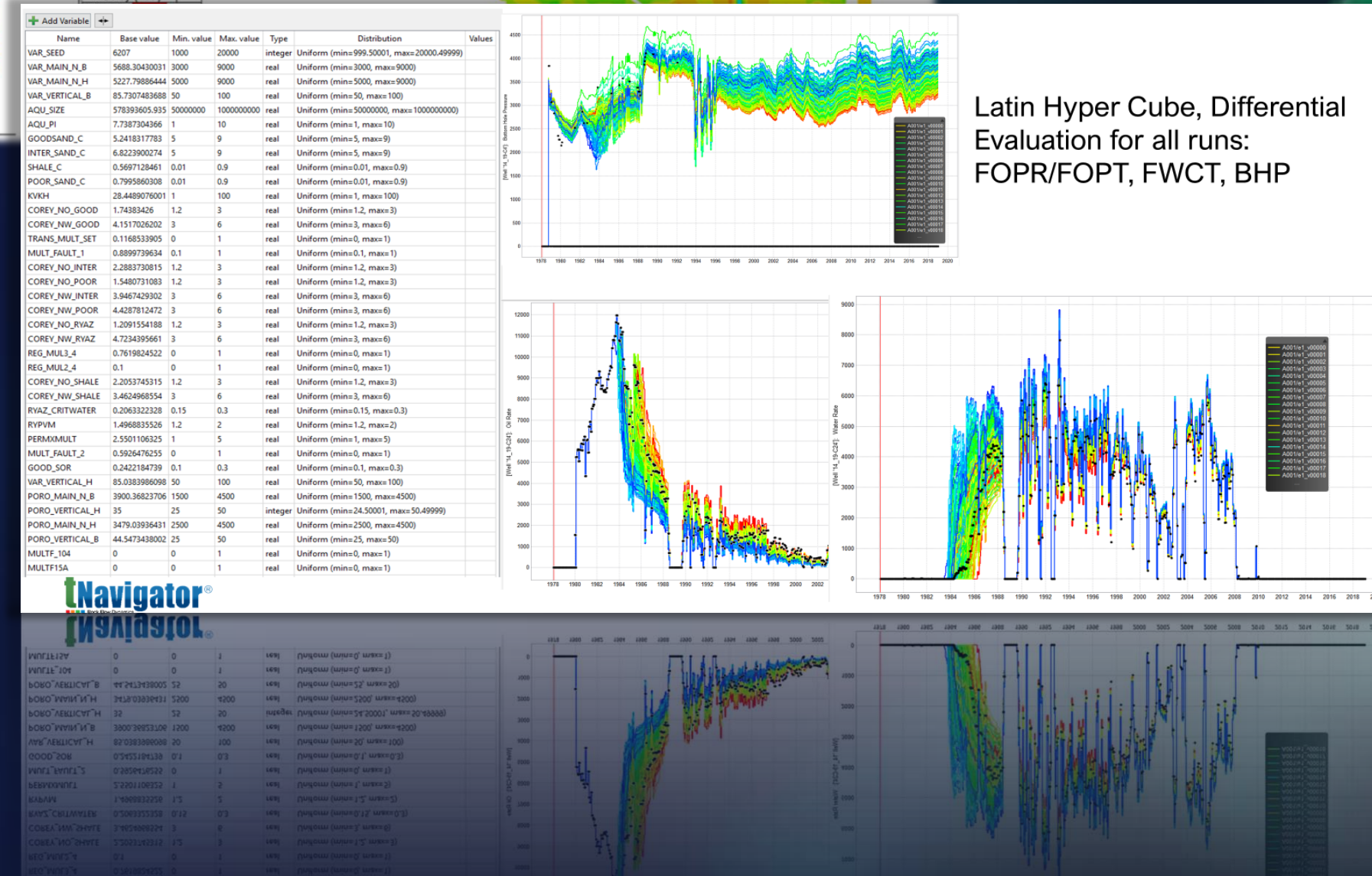
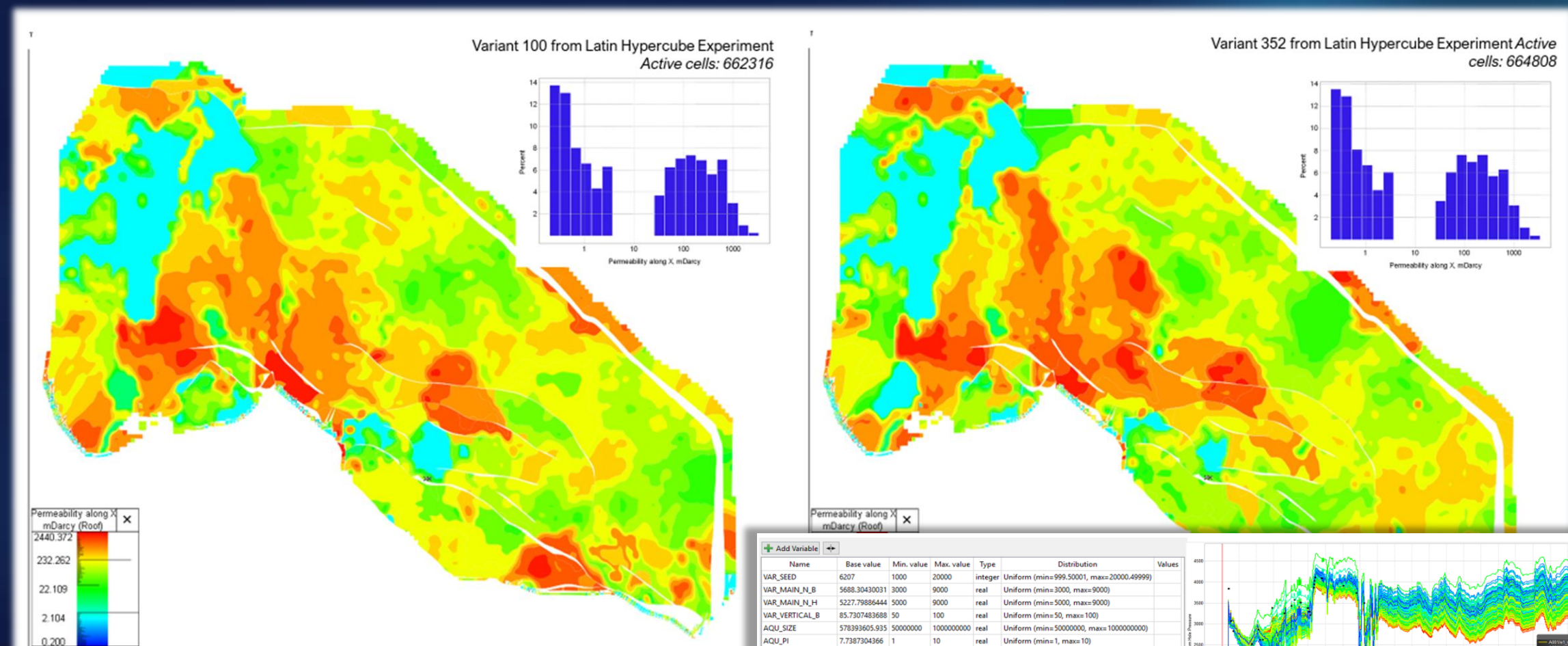


Artificial Intelligence

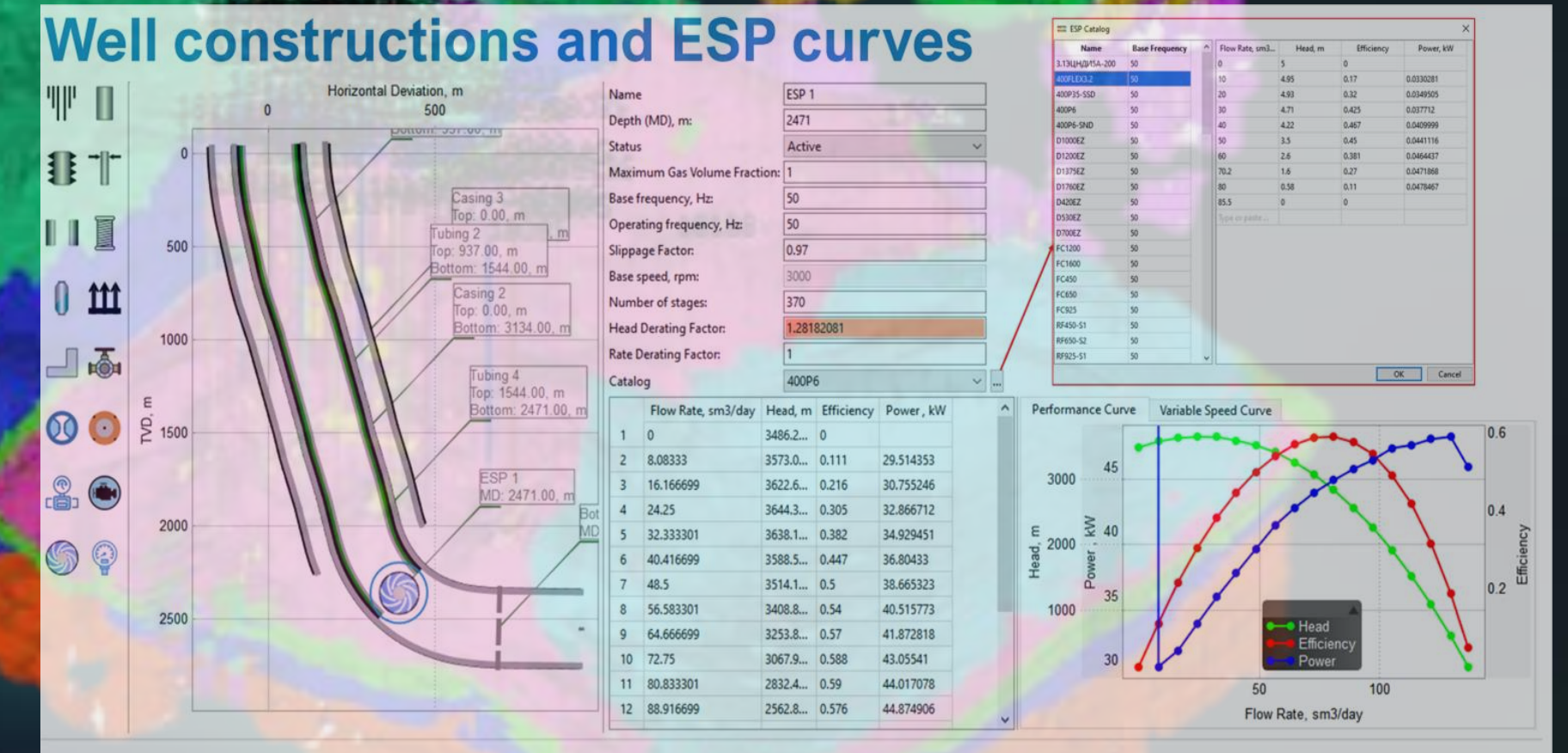


INTEGRATED UNCERTAINTY WORKFLOWS

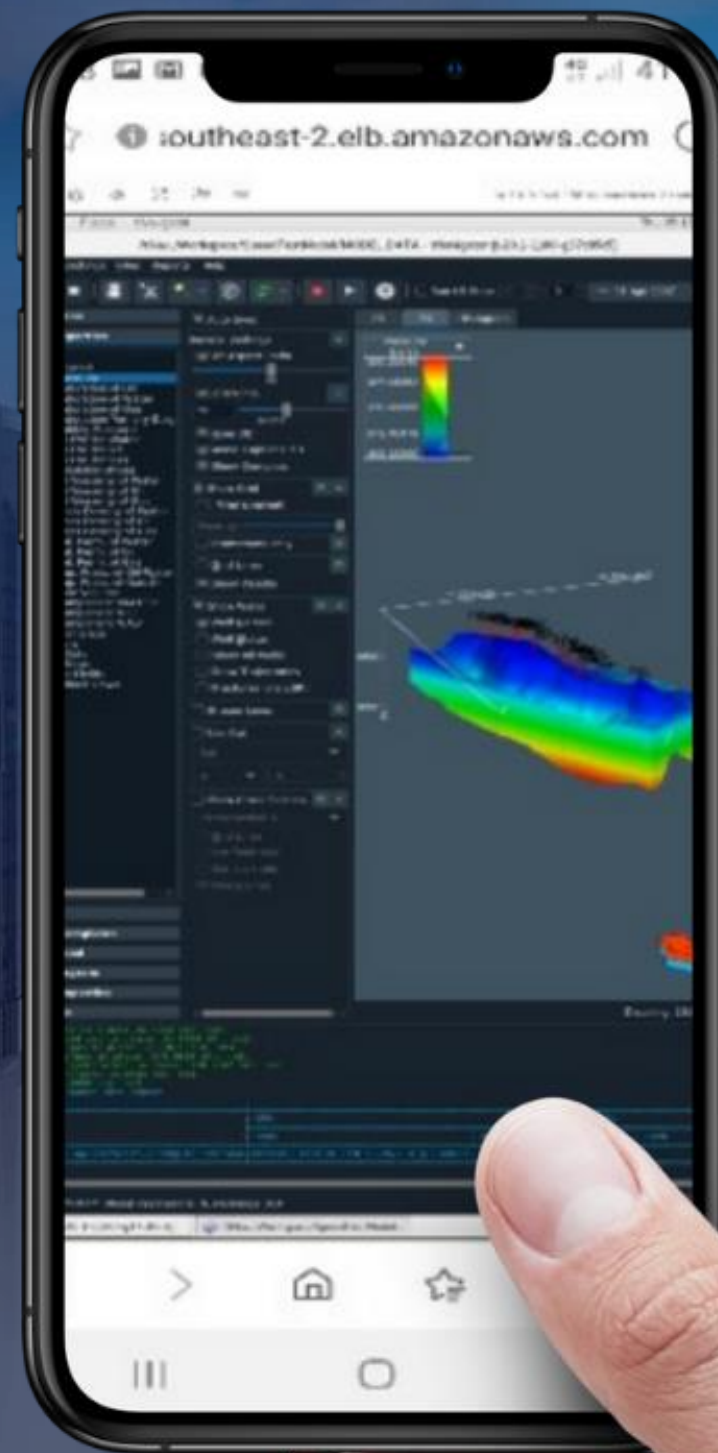
Static & Dynamic Uncertainty



Surface Network, Well Design & Reservoir



BROWSER BASED CLOUD SOLUTION

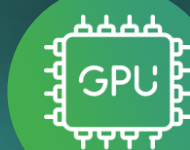


“pay as you go” software-hardware access models

configure and use virtual multi-node clusters in minutes

large simulation models, massive history matching/optimisation is reality

WHY CHOOSE **tNavigator**®?



BUILT FOR SPEED

Super fast, scalable simulator engine –
no charges per core or GPU



ADVANCED FEATURES

Integrated fracture design, unstructured grid description,
simulation & optimisation workflow



A NEW GENERATION OF GEOSCIENCE

Low cost, no fuss replacement – full static
modelling workflow in one license



RESERVOIR TO SURFACE INTEGRATION

Fully coupled, fully implicit modelling with
integrated well design tools & PVT analysis



ADVANCED PYTHON WORKFLOWS

Integrated static & dynamic history matching analysis