

sofoil

COMPANY PROFILE

ABOUT COMPANY



Sofoil provides a service in hydrocarbon exploration, master development planning (MDP), consequent field planning (FDP), integrated project management (IPM), production optimisation opportunities, reserves auditing (newly explored and mature) and general consultancy in Reservoir Engineering and Production.

MISSION

BRING ADVANCED DATA
MANAGEMENT AND
ARTIFICIAL INTELLIGENCE
INTO PETROLEUM PRACTISE

SERVICES

- EXPLORATION
- MDP/FDP/WRM
- RESERVOIR STUDY
- DRILLING SUPERVISING
- IPM

EXPERIENCE

- 10+ COUNTRIES
- ON-SHORE & OFF-SHORE
- DEEP WATER
- SANDSTONES & CARBONATES

TECH CENTER

- RESEARCH CENTER
- CENTER OF EXPERTS
- TRAINING CENTER

FDP CENTER

- MDP/FDP
- SUBSURFACE FACILITIES
- SURFACE FACILITIES
- ECONOMICS
- EOR



1100+
Specialists



100+
PhD



100+
Technological partners



200+
Projects



20+
Business-partners



RESEARCH CENTER



AUTOMATION

- Software Development
- Mathematical Modelling
- Artificial Intelligence



HARDWARE

- Downhole logging equipment
- Surface logging equipment



METHODOLOGY

- Integrated Project Management
- Integrated Asset Modelling
- Data Processing & Interpretation

CENTER OF EXPERTS



OPERATIONS CONSULTANCY

- Business Cases
- Project Resources
- Knowledge Sharing



NEW TECHNOLOGIES

- Technology market research
- Technology assessment
- Innovation Hub



MARKETING SUPPORT

- Technology Review
- Technical Papers
- Presentations

TRAINING CENTER



- Asset Management
- Exploration
- Reservoir Engineering
- Production Engineering
- Surface Facilities
- Nodal Analysis / Flow Assurance

Powered by

Digital Twin Petroleum Asset simulations



**WE TRAIN ROBOTS AND
ROBOTS TRAIN PEOPLE !**

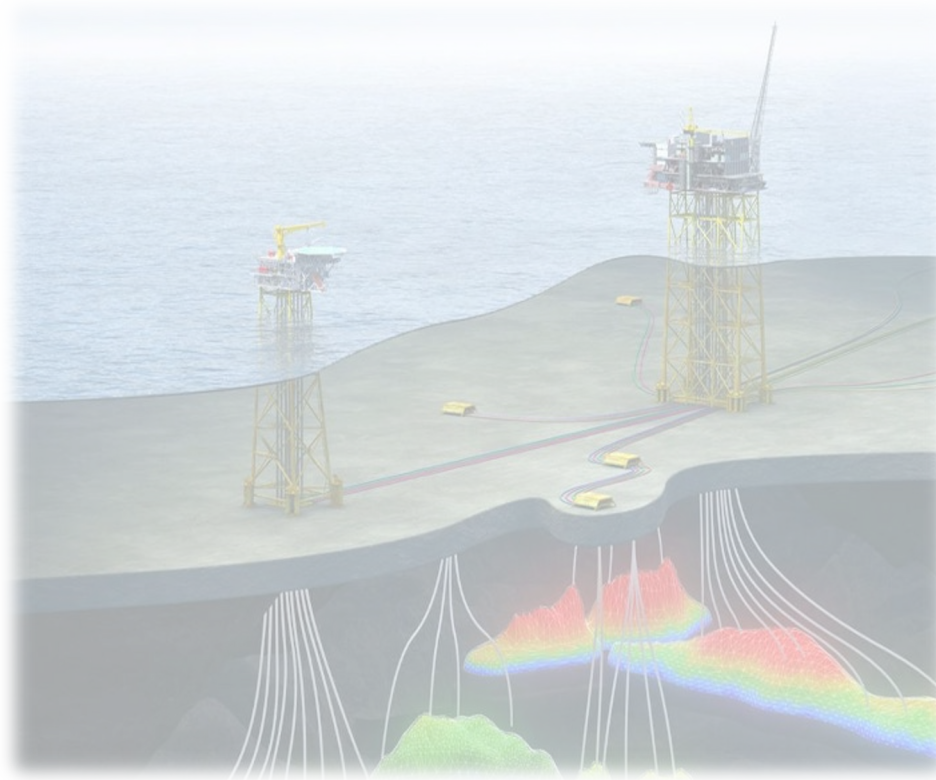


MDP / FDP

- On-shore / Off-shore
- Up to 2+ bln bbl reserves serviced
- Gas/Condensate
- Light Oil / Heavy Oil
- High/Mid/Low/Shale Permeability
- Stacked reservoirs
- Deltaic/Channel/Turbidite reservoirs

DRILLING SUPERVISING

- Trajectory/completion design
- Geosteering
- Continuous mud logging
- Continuous drill cuttings logging
- Run-time reservoir data log analysis



OPERATIONS CONSULTANCY

- Green, Brown, Mature fields
- Waterflood
- Infill drilling
- Chemical EOR
- Side-tracks /Workovers / Fraccing
- Fish-bones / Horizontals / Multifrac
- Smart Completions / Lift Optimization
- Flow Profile Control
- Flow Assurance

SURFACE FACILITIES

- Design & Audit
- Integrated Modeling



BASIN ANALYSIS

- Topography & Climate
- Stratigraphic Column
- Depositional Environment
- Geochemical Modelling
 - HC origin/migration/maturity
- Conceptual geological modeling



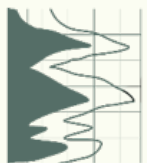
SEISMOLOGY

- Design & Support
- Raw Data Processing & Interpretation
- Attribute Analysis



GEOMECHANICS

- 1D/3D Well stability
- Discrete Fracture Network modeling



PETROPHYSICS and WELL LOGS

- Lithofacial Analysis and Petrotype Modelling
- Reservoir Data Log (OH, CH)
- Production Logging Design & Interpretation
- Integrity Logging Design & Interpretation



CORE

- Design & Support
- RCAL, SCAL
- Digital Core Analysis



FLUID ANALYSIS

- Fluid sample analysis
- BO/MBO/EOS PVT modeling



GRAVIMETRY & EM SURVEILLANCE

- Design & Support
- Data Processing & Interpretation

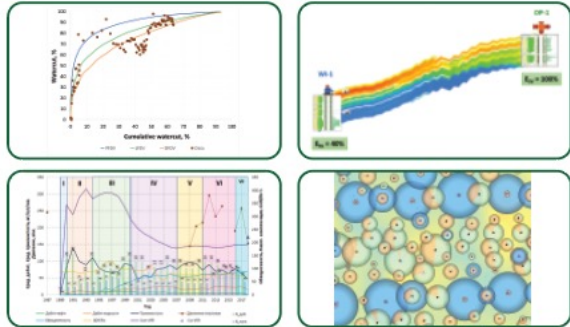


RESERVES AUDITING

- Compliance with:
 - Securities and Exchange Commission
 - Petroleum Resources Management System



PRODUCTION ANALYSIS

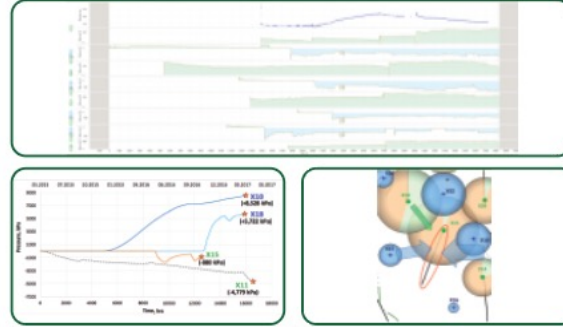


PRIME

PRIME is a set of Production Performance Indicators in **PolyPrime** software based on primary production history data (such as flow rates, formation and bottom-hole pressure, pressure tests, production logs) with zoom on wells and field areas which are dragging behind the expected recovery or pressure support targets due to integrity issues, poor connectivity or inaccurate understanding of the reservoir around these wells. This is a primary tool to select the candidates for additional data acquisition.



PRESSURE ANALYSIS

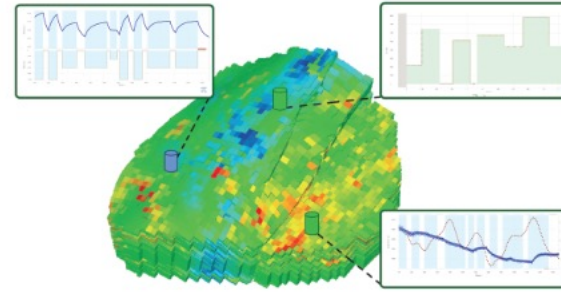


MRT

Multiwell Retrospective Testing is a **PolyGon** software aided workflow based on the correlation between bottomhole pressure and flowrates history. It uses a multi-well pressure deconvolution technique to estimate the potential drainage volumes, boundary types and their proximity, reservoir transmissibility and cross-well connectivity. It reconstructs the history of formation pressure and productivity index. It provides a lot of constraints for future reservoir modelling. It also helps to identify wells with suboptimal performance and propose a relevant surveillance.



CROSS-WELL SURVEILLANCE

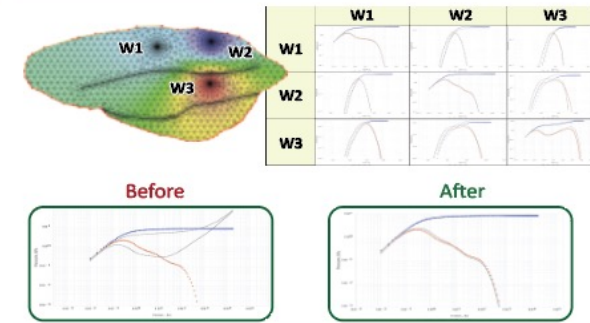


PCT

Pulse Code Testing is a specific implementation of pressure interference testing based on the **PolyGon** software and bottomhole pressure/rate readings which can be executed in working wells without punishing production delays caused by responding wells shut-down. It provides estimation of reservoir permeability and thickness separately. In case of contrast fluids mobilities, it shows a fair sensitivity to displacement efficiency. Although PCT can be performed over the existing PDG and surface flowrate data, the scanning accuracy can be substantially improved when using the zFlux downhole pressure/rate measuring facility.



PRESSURE MODELLING



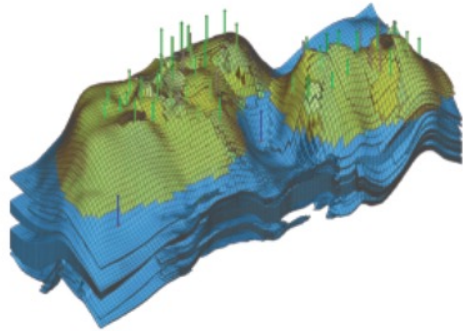
XPM

Cross-field CROSS-WELL MODELLING is a **PolyGon** software aided numerical simulation workflow and a primary step of full-field reservoir simulations with a focus on few large-scale model properties (such as drainage volumes, boundaries, barriers, baffles, faults, lateral permeabilities and effective thickness). These properties play a dominant role in reservoir pressure dynamics.





RESERVOIR MODELING

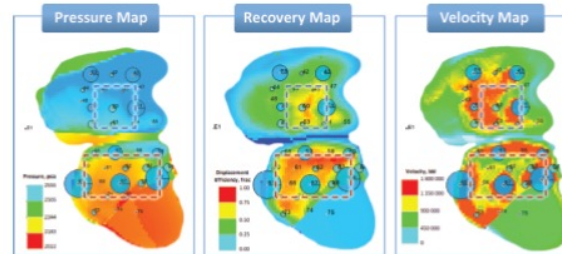


GFM

Geology and Flow Modelling is a conventional 2D/3D full-field modelling workflow. In case the results of XPM exercises are available the **XPM** takes the latter as input and the rest of the process simplifies to adjusting the facies distribution and their permeability/displacement properties to achieve a well-by-well match to the oil/gas/water cut history and available OH/CH saturation profiles.



FIELD DEVELOPMENT PLANNING



MSDP

Multi-Scenario Field Development Planning is a specific workflow based on multiple iterations performed by professional asset teams or corporate individuals via the **PolyPlan** web-facility which automatically translates the field activities (like drilling, workover, conversions, surveillance) into the model runs and reverts back with production/surveillance results in conventional report formats and financial statements including NPV. This exposes a newly built models to a wider range of corporate specialists and improves the chances of finding the best field development solution.



INTEGRATED PROJECTS



DOM

Development Opportunities Management is a type of Integrated Project Management of a complex workflow consisting of field data analyses, acquiring the new data, field modelling, building production forecasts, designing and evaluating the results of execution of new field development activities. It involves both Sofoil and non-Sofoil services based on their feasibility within a given project and sets the major focus to achieve the ultimate goal – improve production performance. This service is usually required for the fields with particular corporate importance or those which are dragging far behind the production targets.





COMPANY EXPERIENCE

EXPLORATION EXPERIENCE



FULL GEOLOGY RESEARCH CYCLE

DISCOVERIES & RESERVES BOOKING

FIELD MODELS

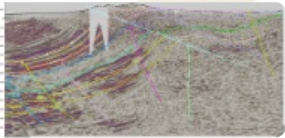
SEDIMENTOLOGICAL MODEL



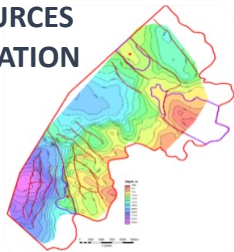
TECTONIC MODEL



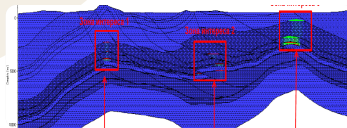
SEISMIC ANALYSIS



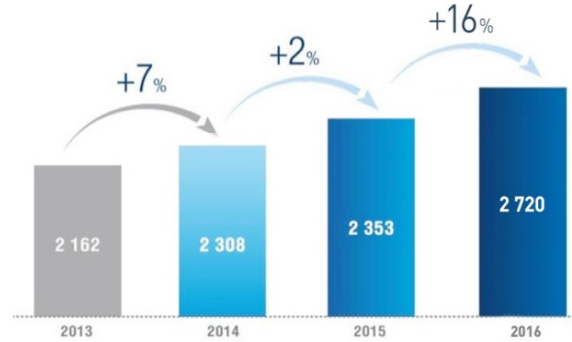
RESOURCES EVALUATION



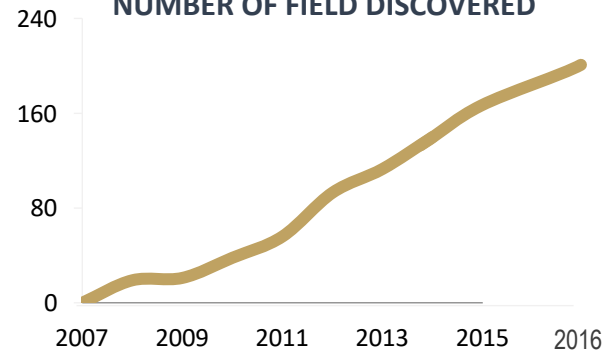
BASIN MODELING



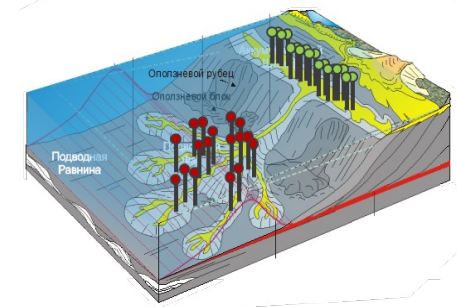
2P PRMS RESERVES, MM. BBL.



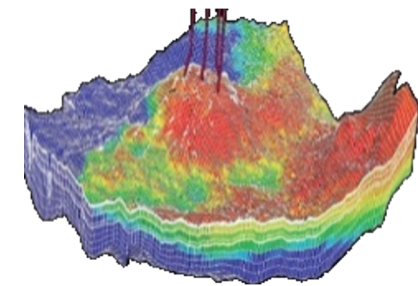
NUMBER OF FIELD DISCOVERED



CONCEPTUAL FIELD MODELS



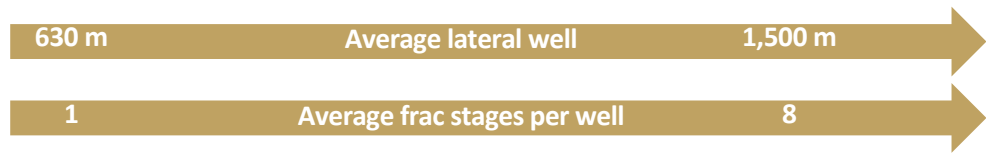
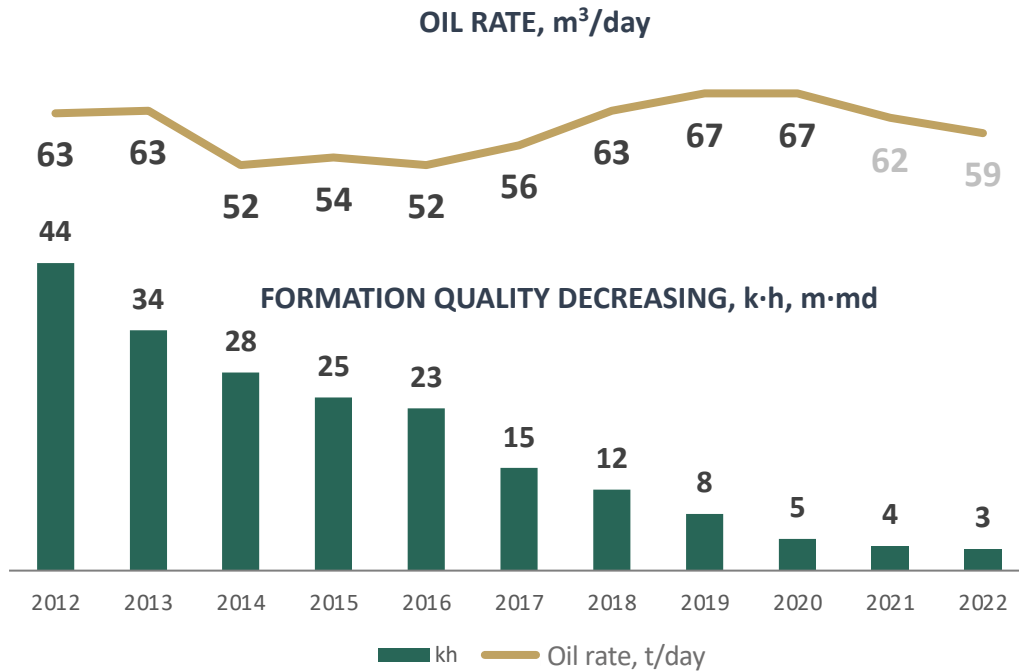
SEISMIC & GEOLOGY MODELS



RE

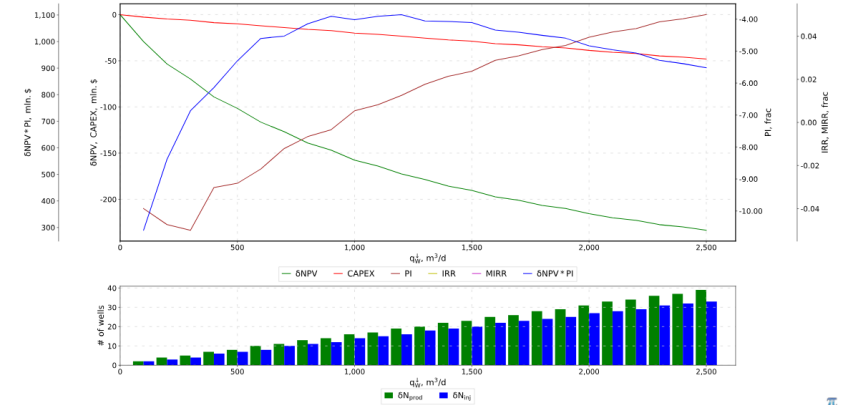


PRODUCTIVITY MANAGEMENT

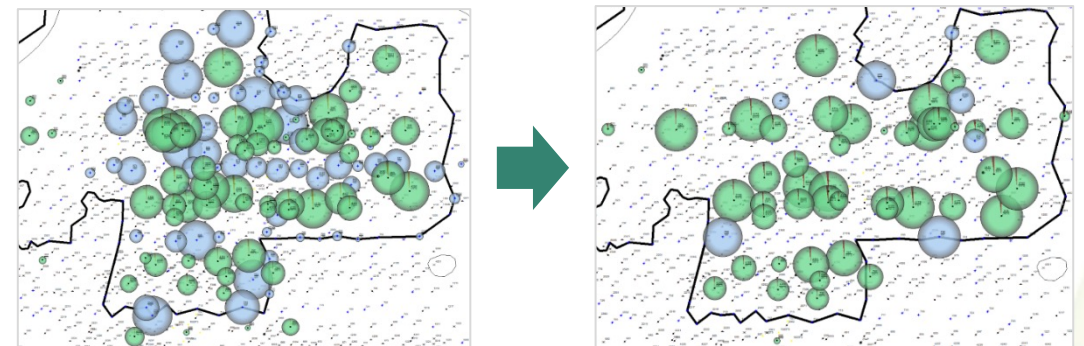


WATERFLOOD OPTIMIZATION

>10,000 scenarios via automated model runs



PRODUCTION CONSTRAINT TO MINIMIZE ECONOMIC LOSSES



DRILLING SUPERVISING



1000 + wells per year

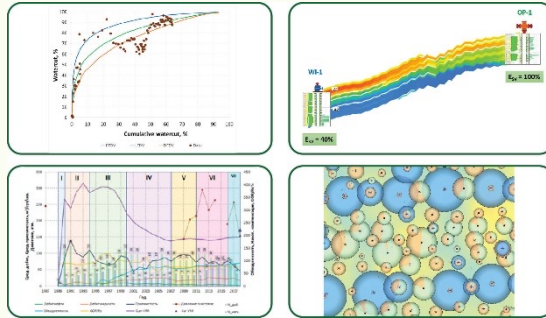


PRODUCTION CONSULTANCY EXPERIENCE



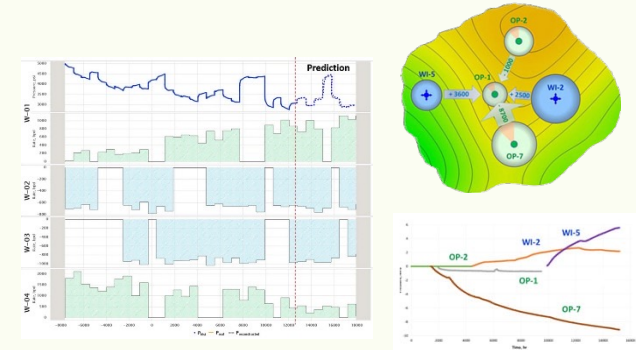
PRODUCTION HISTORY ANALYSIS

100+
PRIME JOBS



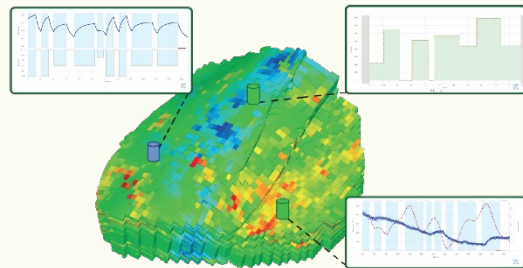
BHP/RATE CORRELATION

1,000+
MRT JOBS



CROSS-WELL INTERFERENCE TESTS

200+
PCT JOBS

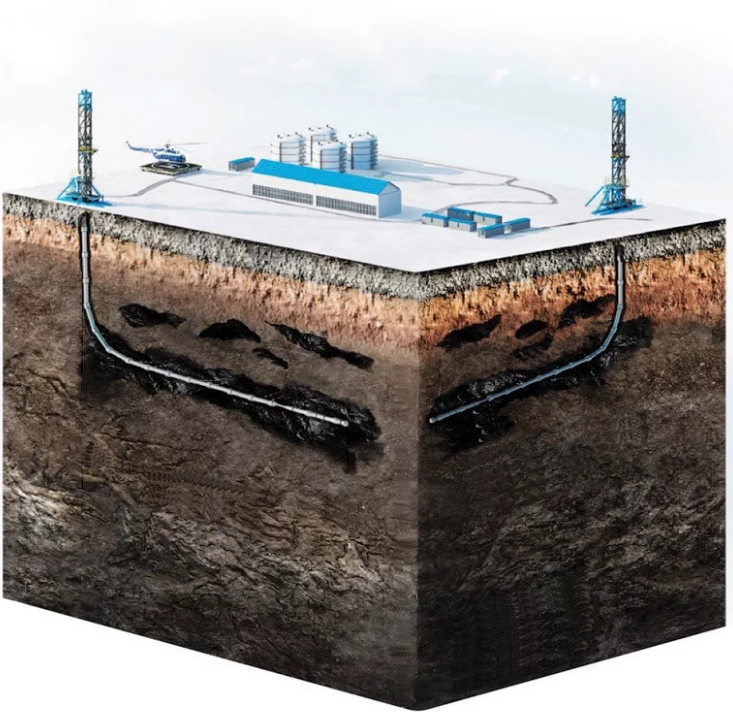


INTEGRATED STUDIES

12+
DOM JOBS



INTEGRATED MODELLING (DIGITAL TWINS)



QUICK STATS



 **1998**
Since

 **100+**
SPE Paper

 **10+**
Countries

GEOGRAPHY

IOC / NOC

PARTNERS



+24



THANK YOU !

2023

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