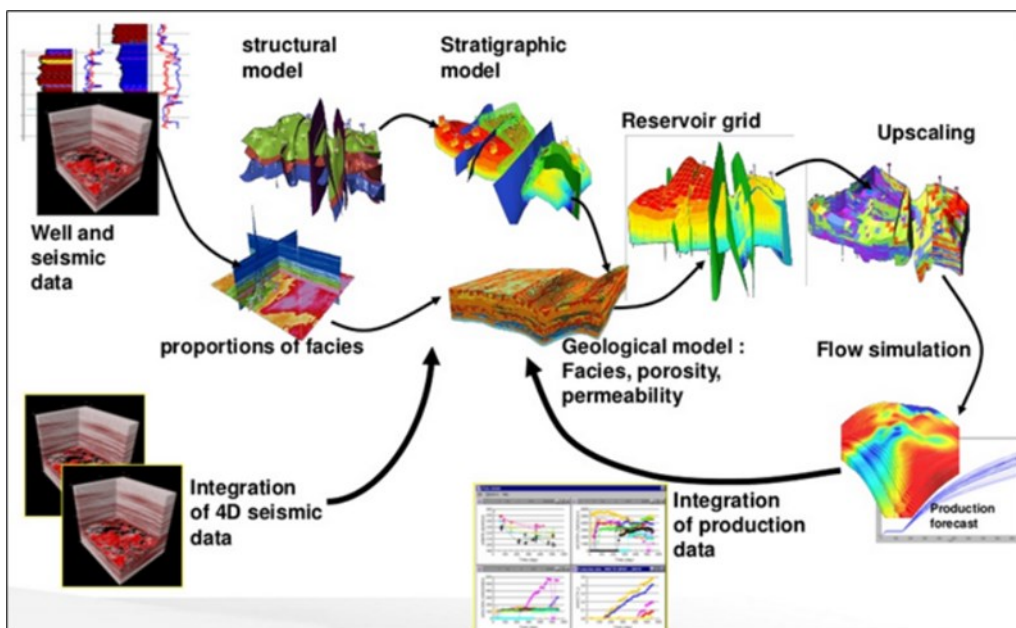


Reservoir Engineering Services

PetroExplorers Inc. offers comprehensive reservoir engineering services tailored to the needs of upstream oil and gas operators and consulting firms. Our team specializes in field development planning, reserves evaluation, reservoir simulation, enhanced recovery design, and production optimization. Our services are built on decades of expertise and guided by international standards including NI 51-101, PRMS, and SEC.



Reserves Evaluation & Technical Due Diligence

- Classification of reserves (1P, 2P, 3P) per NI 51-101, PRMS, SEC
- Volumetric, material balance, and simulation-based reserves estimation
- Automation of reserves reporting and M&A support
- Monte Carlo probabilistic modeling and aggregation workflows

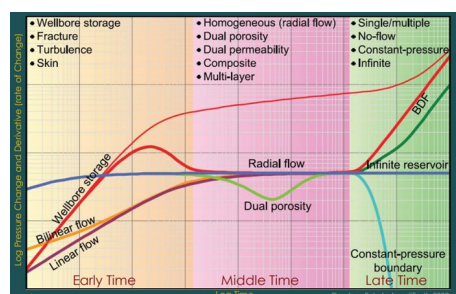
Full-Field Studies & Development Planning

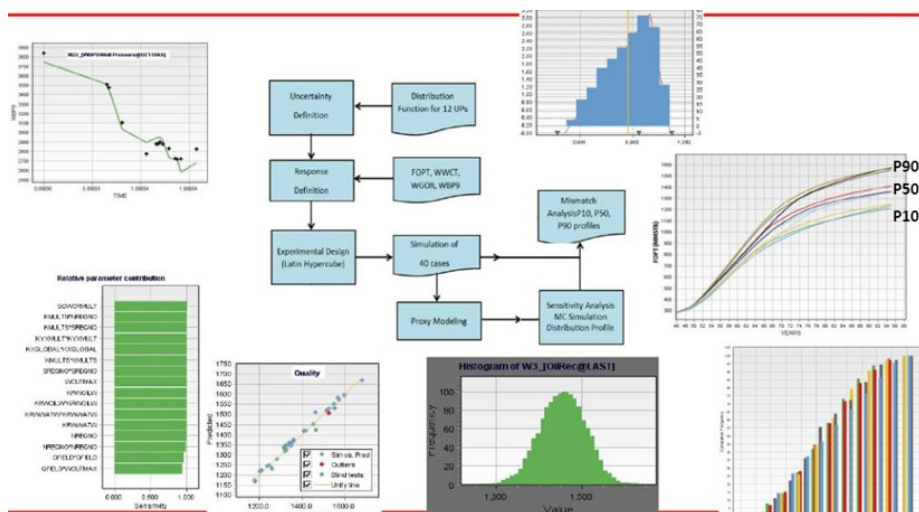
- Greenfield and brownfield optimization projects
- History matching, scenario simulation, and economic forecasting
- Well placement strategy, drilling sequence planning

Examples: Krishna Godavari basin (India), Teapot Dome (USA), Blackfoot (Canada)

Reservoir Simulation & Uncertainty Analysis

- Black oil, compositional, and thermal models (CMG: IMEX, GEM, STARS)
 - Assisted history matching and experimental design (CMOST, Enable, MEPO)
 - CCUS, acid gas disposal, pressure containment, and storage evaluation
- Complex workflows with coupled geomechanical modeling for injection wells viability





Reservoir Fluid Analysis & PVT Modeling

- Black oil and compositional modeling using CMG-WinProp and GEM
- EOS tuning for volatile oil, gas condensate, and heavy oil systems
- Asphaltene/wax prediction and multi-phase behavior under thermal and miscible conditions
- CO₂ and sour gas solubility evaluation, solvent interaction, and gas injection design
- Heavy oil PVT modeling integrated with SAGD, CSS, and solvent-based EOR processes
- Lab PVT design and field data QC for phase behavior and flash calculations

Successfully delivered fluid analysis for SAGD, tight gas, and carbonate fields in Canada, Colombia, Egypt, and Bahrain

Advanced PTA/RTA, DCA, and Type Curve Analysis

- DFIT, DST, buildup, falloff interpretation for conventional and unconventional wells
- Pressure and rate transient modeling for reservoir and completion diagnosis
- Decline curve analysis (DCA) and EUR forecasting with Harmony, Topaze
- Multi-layer and naturally fractured system interpretation

Fracture Diagnostics & Modeling

- Integrated fracture modeling using CMG, GOHFER, ResFrac
- Frac-hit diagnostics, step-down and mini-frac interpretation
- Application in tight oil, shale gas, carbonate fracturing, and frac-augmented thermal EOR

Enhanced and Improved Oil Recovery (EOR/IOR)

- Waterflood, polymer, surfactant, miscible gas, CO₂ injection
- SAGD, CSS, THAI, air injection, and solvent-assisted thermal recovery
- Lab and simulation-supported screening and development workflows
- Expertise in high-temperature and high-viscosity recovery modeling

Emerging and Digital Capabilities

• AI-Assisted History Matching and Optimization:

CMOST, EasySense, MEPO, Python-based workflows for field-wide sensitivity, prediction, and tuning

• Analog Benchmarking & Decline Matching:

Historical analog-based EUR forecasting and decision support for green/brown fields

• Reserves Visualization & Automation:

Custom dashboards, OFM reporting, Python/Excel automation for audit-grade reserves delivery

• Evaluation of New Energy Reservoirs:

Geothermal, Hydrogen, Helium, Lithium — screening and modeling for subsurface commercial



YOUR EXPLORATION PARTNERS

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