PRODUCT SHEET

TemisFlow™

Petroleum System Modeling

With a long proven track record, TemisFlow is the next-generation solution for basin modeling. It excels in assessing regionally-controlled petroleum systems while identifying local drilling opportunities and quantifying the associated commercial & technical risks.

Reducing the exploration risk

Basin modeling techniques are now the core of basin evaluation processes in a growing number of O&G companies. By integrating diverse geological, geochemical and engineering data in a consistent framework, TemisFlow dynamically simulates the evolution of a sedimentary basin through geological time, assessing generation, migration, trapping and accumulation processes and thus contributing thoroughly to play assessment. By predicting accumulated volumes in reservoir formations as well as the quality of trapped hydrocarbons through rigorous compositional modeling, TemisFlow is the ultimate solution for subsurface exploration teams to achieve prospect delineation & ranking.

Meeting today's exploration challenges

While meeting the demand for higher performance tools, TemisFlow may be successfully applied in a wide range of challenging settings, including but not limited to:

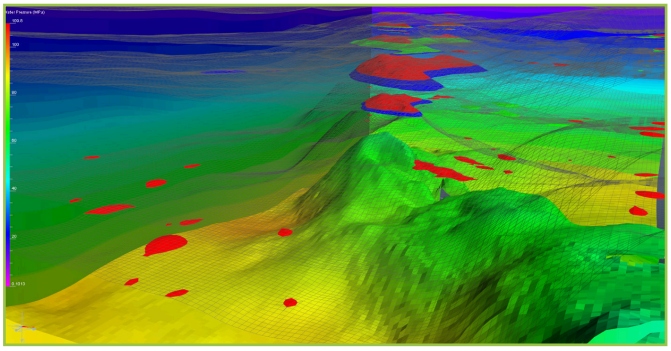
- Tectonically complex settings with salt and/or faults
- Severely overpressured or chemically compacted formations through a best-in-class pore pressure prediction scheme
- High-pressure/high-temperature reservoirs
- Biodegraded reservoirs
- Unconventional resources
- Coalbed methane and heavy oil prone formations
- Intrusions (including salt, mud and thermal)
- Stratigraphic traps through the link with DionisosFlow
- Traps affected by hydrodynamism (including flushing and OWC tilting)
- Risk and uncertainty management with CougarFlow

Prospect Resource Assessment

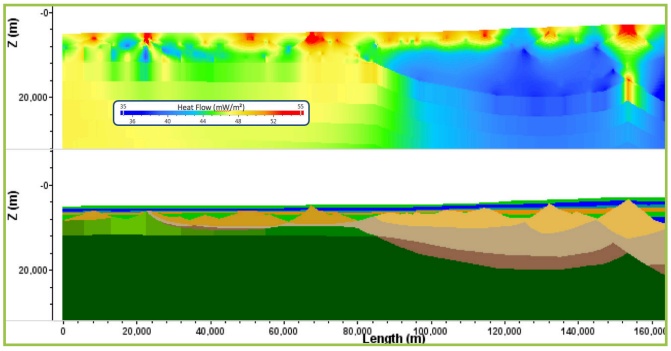
The use of basin modeling is not restricted to regional basin analysis in preliminary exploration phases. It may be extended to field development and appraisal stages, to help further reduce the risk on the development plan and on the overall economics of the project by contributing decisively to an unbiased estimation of the value of the opportunity. TemisFlow addresses this challenge by allowing a clear-cut modeling of reservoir structures through the handling of high-resolution meshes, by thoroughly simulating charging processes and by accurately predicting the accumulated petroleum fluid compositional heterogeneities.

Key benefits

- Fully quantitative prospect assessment
- Proven capabilities for dealing with challenging geological settings
- Unconventional resources appraisal
- Best-in-class pore pressure prediction
- Uncertainty and risk analysis
- Parallel computing for leveraging multi-core and cluster hardware



Trap Charge Assessment: oil and gas accumulations in several reservoirs, pressure field in background.



Coupling of the lithosphere with sedimentation and resulting heat flow distribution. Crust nature and structure have a strong impact on basal heat flow, at present day and through time.

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