Schlumberger

GeoX Software Play and Prospect Assessment

Consistent and comprehensive evaluation of exploration risks and resources

APPLICATIONS

- Area of interest or undiscovered plays
- New venture opportunities
- Exploration well decisions
- Ranked exploration opportunity portfolio
- Forward exploration drilling plan

BENEFITS

- Consistent and complete stochastic evaluation of exploration opportunities
- Robust handling of multiple target opportunities
- Undiscovered plays based on assessed and postulated prospects
- Integrated risk, resource, and value assessment workflows
- Integrated petroleum resource management
- Systematic learning through preand postdrilling performance tracking

FEATURES

- Advanced segment volumetrics
- Applicable to shale gas, shale oil, and coalbed methane wells
- Rigorous assessment of shared play risks
- Robust functionality to assess risk and volume dependency in prospects and plays
- Unique modeling of fluid scenarios
- Extensive trail browsing for quality assurance reporting
- Common relational database (Oracle or SQL server)
- Integrated postulated, historical, and existing prospects

GeoX* exploration risk, resource, and value assessment software provides powerful capabilities to support your key exploration decisions. It provides consistent, unbiased, and accurate assessment of the risked resource potential from single prospects to regional play fairways.

Probabilistic modeling for risk assessment

GeoX software enables the modeling of the fullrange of assessment scenarios, reflecting the decision timeline, project maturity, and data availability in prospect and play assessments. Fully probabilistic capabilities provide a broad range of modeling alternatives including

- multiple depth-dependent representations of volumetrics
- advanced fluid modeling
- saturation height functions
- dual-porosity systems and the effects of charge uncertainty.

Risk models can be customized within a basic shared play risks and conditional local risk framework. A flexible Bayesian risk modification scheme supports effective integration of seismic anomaly indicators. Features in GeoX software can be applied to oil, gas, multiple phase accumulations, shale gas, shale oil, and coalbed methane opportunities.



Undiscovered play potential ranked by size.

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Play assessment and undiscovered resources

A rigorous play assessment is the basis for the analysis and management of shared play risks in GeoX software, enabling the evaluation of undiscovered resource potential in a play or a play fairway. GeoX software provides advanced analytics for the feature-based assessment of undiscovered resource potential. The common relational database enables play assessments that integrate postulated prospects as well as historical and existing prospects. Tailored reporting formats—such as size-by-rank diagrams—facilitate comprehensive interpretation and communication of results.



Probabilistic assessment of resources in a multisegment prospect.

Prospect assessment

Given different levels of risk dependencies and volume correlations between segments, GeoX software provides robust functionality to assess prospect level chance-of-success and success case resources. A shared-risk approach enables multiple overlapping risk dependency groups that can capture the essential elements of your geological interpretation. GeoX software supports rapid and flexible definition and redefinition of prospects based on the analysis of constituent segments stored in the GeoX software database. Unique modeling capabilities support integrated and explicit representations of fluid communication scenarios. Extensive trial browsing assists in quality assurance reporting and interpreting assessment results.

Consistent assessment of risks and resource potential

GeoX software honors risk dependency and volume correlations between assessment units in a play or across different plays. This enables the consistent assessment of multiple plays by aggregating prospects and respective segments. GeoX software optimizes the evaluation of the undiscovered potential in a play, fairway, or basin as well as areas with stacked plays or any other assessment unit that is relevant to your exploration decision.

Integrated workflows over a shared, secure database

The GeoX software database provides a platform for integrated assessment of segments, prospects, and plays, enabling

- risk, resource, and full-cycle economic value assessment and analysis
- integrated assessment and reserve tracking where assessments of assets can be automatically booked in GeoX software
- direct use of map-based prospect assessments from the Petrel* E&P software platform.

GeoX software is an integrated platform used throughout the exploration life cycle. A common relational database, interface, and probabilistic building blocks facilitate sharing and communication of data and experiences across projects, teams, and disciplines.

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