Exploration Analyst

Analyse Play Chance, Resources and Acreage

Exploration Analyst is an extension to Esri’s ArcMap and ArcGIS Pro software for performing petroleum play chance analysis; resource assessment; and block, lease and company ranking.

Exploration Analyst is designed specifically for oil and gas exploration or new ventures departments, and provides essential play based exploration (PBE) tools for the petroleum exploration geoscientist.

Uses

Exploration Analyst allows you to apply play based exploration (PBE) workflows to help streamline your exploration process:

• Create play chance maps from GIS data.
• Validate play chance maps against well results.
• Create pool size distributions and expected volume statistics (e.g. P10, P50, P90).
• Create creaming curves for plays.
• Calculate prospect volumetrics.
• Estimate resources “yet-to-find”
• Develop and refine play investment strategy.
• Perform multi-criteria block/lease analysis.
• Perform company analyses and develop portfolio investment strategy.

Benefits

• Make better decisions by focusing your exploration at the play level, rather than the prospect level.
• Make better decisions by validating prospect probabilities against the spatial distribution of play chance.
• Make better decisions by validating prospect volumes against play history and maturity.
• Increase efficiency during bid rounds by using multi-criteria analyses that enable you to quickly focus on the best acreage.
• Gain cost savings by focusing expensive geoscience resources more appropriately.
• Improve communication between teams, disciplines, and management by presenting fully auditable results in summary reports and maps.
Functionality/Features

Play Chance Mapping
Create play chance maps within ArcGIS for both conventional and unconventional plays. Sketch or create play element chance layers from pre-existing GIS data and then combine these into a play chance model. You can then validate the model against results of wells that have been drilled.

Basin and Play Statistics
Exploration Analyst provides a toolkit for assessing basin, play and prospect volumes. Create and analyse pool size distributions, creaming curves, play statistics and prospect volumes. Estimate yet-to-find; validate resource volumes against discovery history and play maturity; and export prospect volume statistics for use in stochastic volumetric modelling software.

Acreage Analysis
Integrate multi-disciplinary asset data (e.g. geology, environment, economic, infrastructure) to identify the best blocks, leases or company positions in your area of interest. Analyse multiple GIS layers with respect to their spatial relationships with leases or blocks; and score, weight and rank the acreage. You can then analyse the results and create summary maps, graphs and reports.

About Exprodat
With a unique blend of geoscience and GIS expertise, Exprodat specialises in improving upstream petroleum E&P processes for oil and gas companies by creatively applying spatial technology. Our petroleum focussed ArcGIS support services, software and training courses enable our customers to make better decisions, increase efficiency, save costs and improve communication.

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