Analytics Explorer Enterprise

Upstream CSM+ | Seize success with streamlined solution offerings — flourish in an ever-changing world

Thrive in today's dynamic world with S&P Global Energy Upstream Solutions. We've harnessed our market-leading wealth of content, insights, and cutting-edge software and analytics solutions and combined them into streamlined enterprise-wide packages.

By integrating our solutions, you gain the actionable insights crucial for navigating global market changes. Anticipate risks, evaluate opportunities, and optimize investments with confidence.

Our approach is designed to be simple and transparent. We offer clear and easy-to-understand service packages, enterprise-wide contracts, and delivery platform-agnostic pricing. Our value-based pricing models ensure that you get the most out of our services, enabling your organization to drive efficiency, and collaboration across technical and commercial workflows while making swift decisions and mitigating risks.

As your trusted partner, our solutions delivery team will continuously collaborate with you to grasp your strategic goals, challenges, and workflows. This collaboration enables us to identify areas where we can provide added value, ensuring your organization is equipped to thrive in an ever-changing world.

Overview

Geographic coverage	Global	**History**	Biannual
Licensing	Enterprise-wide access	**Content package options**	Software

Software

Access data science and machine learning capabilities to enhance your daily geoscience and engineering workflows.

You get:

– Analytics software — utilize data science and ML for deeper analyses and interpretation of subsurface data and optimizing geoscience and engineering workflows.

Data, software, and distribution

Get the edge in today's global markets with our Essential Intelligence® delivered through the providers and platforms which suit you.
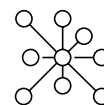
Desktop (software) & mobile

Cloud

Data feed

API solutions

Markets covered:

Global Oil & Gas Industry

Exploration & Production Sector

Oilfield Service Providers (OFS)

Software	What's Included	
Analytics Explorer	Data Science	Supervised and unsupervised ML
		Model explainability
		Multi-collinearity analysis
		Principal Component Analysis
		Attribute Impact Analysis
		Auto-ML
		Auto-data imputation
		ML model deployment
	Unconventional Well Analytics Automation	Well Spacing and Vintage Analysis
		Winerack Visuals
		Drainage Polygon Realizations
	Data Connectors	Kingdom™ Geoscience Software
		Harmony Enterprise™ Reservoir & Production Software
		EDIN
		Energy Studio: Impact
		EDM
	Prebuilt templates	**Kingdom™ Geoscience Software**
		Data Mining and Quality Control
		Deviation Survey Analysis
		Log Analysis Template
		Log Coverage
		Production Analysis
		Seismic Analysis
		Well Path Analysis
		Percentage Zone

Software	What's Included	
Analytics Explorer	Prebuilt templates	**Harmony Enterprise™ Reservoir & Production Software**
		Public Data: Well Information and Production Data Analysis
		Conventional RTA Data
		Unconventional RTA Data
		Probit Analytics
		EDIN
		Reservoir Benchmarking
		CO2-EOR Screener
		Energy Studio: Impact
		Predict Data
		Impact Data Overview

Key AI & ML Workflows

- **Predictive production maps:** Understand key drivers in well performance, normalize engineering variables and include geological data to generate production predictive maps to identify sweet spots.

- **Completion optimization:** Isolate the impact that every engineering and completion variable may have on production performance in modeling scenarios that include geological and physical constraints to get to the right completion strategy.

- **Geological and geophysical facies classification:** Apply clustering algorithms on select variables from digital logs, geological grids, and seismic data to identify facies that are linked to highly producing reservoirs.

- **Unconventional well analytics:** Analyze unconventional well datasets with automated features like Well Spacing calculation, Vintage detection, Winerack Visualization, and Drainage Polygon creation, making it easier to review well development patterns and identify infill opportunities.

- **Reservoir property prediction:** Predict subsurface parameters between wells by combining well property interpretations with seismic data and machine learning to establish relationships between seismic attributes and geological features. This approach enhances confidence in understanding the subsurface between wells, making predictions using seismic data as the foundation.

- **Enhance geological workflows:** Use with Kingdom to augment geological cross-sections by integrating multiple data (chronostratigraphic, biostratigraphic, geochemistry, geomechanical, etc.) that are synchronized with your Kingdom geological tops. Combine multiple property grids to create quality index maps, play fairway maps, and risk maps.
- **Data imputation for missing geological data:** Impute missing geological data such as digital logs to reliably increase the amount of data for your interpretation project to help you make better decisions with lower risk.

Key Software highlights:

- Data science and AI platform developed with renowned S&P Global Energy extensive data library plus a network of data scientists and partners for robust and sound machine learning algorithms rigorously tested and fine-tuned to address E&P challenges.
- Well property estimations and log imputation ML algorithms were calibrated using 10 million wells and 350 thousand digital logs from multiple basins.
- Delivers ML workflows across all E&P domains: Analytics Explorer integrates with S&P Global Energy Upstream Solutions, such as analytics-ready data (EDIN and Energy Studio: Impacy) with customer's proprietary data from Kingdom Geoscience Software and Harmony Enterprise Reservoir & Production Software.
- Can be overlaid on customer's proprietary data.
- Models are not black boxes: Contains interpretability methods that includes charts explaining results to the user: what are the model errors, what is the error variability between multiple model simulations to help clients better understand the model.
- Prebuilt geoscience, engineering, and global benchmarking templates ready to use.

Key Software

Analytics Explorer — a data science and AI platform designed for E&P companies to help them get more value from their subsurface data. The platform is ideal for organizations managing a large portfolio of wells, assets, and reservoirs. With guided and automated workflows, users can rapidly integrate, visualize, validate, and optimize vast amounts of subsurface data to improve geoscience interpretations, operational efficiency, production performance, completion design, and well spacing.

How customers are using our analytics software solution

Geoscientist, Geophysicist, Geologist

- Conduct regional exploration studies and evaluations of basins' petroleum systems.
- Integrate petrophysical, geological, and geophysical data.
- Use data science and ML tools/platforms to optimize workflows to speed up data quality and identify relevant variables.
- Carry out reservoir characterization to create regional reservoir models and maps for reservoir and field analysis.
- Generate automated well plans within a specified lease.

Production Engineer

- Identify, design, and evaluate well production and system performance to maintain sustainable production throughout a well's life cycle.
- Utilize AI predictive models to understand key drivers in well performance.
- Normalize engineering variables and incorporate geological data to generate production predictive maps to update/optimize production strategies.

Drilling and Completion Engineer

- Develop the well plan, schedule, design, and run drill site operational management for initial well drilling and completion or subsequent well intervention procedures.
- Employs advanced analytics and ML to run multiple model scenarios to identify the impact of engineering and completion variables on production performance.
- Develop/adjust the completion strategy based on model scenario results.

Reservoir Engineer

- Estimate, classify, and efficiently recover proven reserves through characterizing, monitoring, forecasting and economically justifying capital exploitation projects.
- Run and analyze the impact of each attribute (completion, quality of the rock, production performance) influencing production using AI/ML methodologies.
- Identify potential candidates for workover (Recompletions or Refrac jobs), sweet spot identification, best completion strategies used, etc. to ultimately help increase EUR/NPV.
- Identify depleted oil reservoirs suitable for miscible CO_2-EOR by estimating potential recovery through P50 cumulative production distribution and curves at a specified %HCPV, utilizing analytical probabilistic curves to describe the Recovery Factor, Net Utilization Factor, and their product to assess potential CO_2 storage.

Subsurface Data Manager

– Integrates diverse types of multidisciplinary data.

– Pushes the most updated and clean data sets to interpreters.

– Provides the outcomes to asset team members who need to collaborate more efficiently.

– Implements data science and ML tools/platforms to streamline the connectivity of geological, engineering, and S&P Global Commodity Insights subscription data with their company proprietary data for all the members of the asset team.

– Ensures the asset team can work on a common platform so they can collaborate and analyze, predict, and optimize oil and gas field operations.

Asset Manager

– Works to reduce cost and risk while increasing efficiency and accuracy in their recommendations to the VP.

– Addresses depleting assets, poorly performing wells drilled in the wrong place, risk, and uncertainty, and a reduced budget.

– Continuously looks to adopt analytics and ML tools/platforms for their multidisciplinary team to drive team efficiency, decrease time to decision, reduce risk, and uncertainty in identifying well locations, and improve hitting the sweet spot by drilling wells in optimal locations.

Why choose this software solution

– Save time and resources with our validated data science and ML platform and immediately gain value from your data investment with simplified access to advanced analytics tools and guided workflows.

– Benefit from seamless compatibility by connecting to Commodity Insights Upstream Solutions and/or your proprietary SQL/PostgreSQL database to integrate data and derive more asset insights and understanding.

– Reduce interpretation bias by using a wide range of attributes in your subsurface interpretation workflows for more reliable and unbiased insights. Identify which attributes to focus on, reduce risk through repetition and data-driven recommendations.

– Customize and fine-tune algorithms and workflows to match your basin, reservoir, or well knowledge. Understand and investigate results to pinpoint anomalies and visualize trends with ease.

– Easily evaluate and visualize your data with both table and visual formats, and with the dynamic connection to TIBCO Spotfire®, effortlessly customize displays to align with your organization's needs.

About S&P Global Energy

At S&P Global Energy, our comprehensive view of global energy and commodities markets enables our customers to make superior decisions and create long-term, sustainable value.

Our four core capabilities are: Platts for pricing and news; CERA for research and advisory; Horizons for energy expansion and sustainability solutions; and Events for industry collaboration.

S&P Global Energy is a division of S&P Global (NYSE: SPGI). S&P Global enables businesses, governments, and individuals with trusted data, expertise, and technology to make decisions with conviction. We are Advancing Essential Intelligence through world-leading benchmarks, data, and insights that customers need in order to plan confidently, act decisively, and thrive economically in a rapidly changing global landscape.

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