

Build a More Efficient Energy Supply Chain With Data + AI

Data drives innovation, and leading oil and gas companies are harnessing the power of analytics to future-proof operations and accelerate outcomes. With data at the core of their strategy, companies can make smarter decisions at every stage of the supply chain.



The high cost of operations requires a smarter approach



\$1.1K PER MINUTE

Estimated cost to operate a land-based oil rig

\$1M PER DAY

Estimated cost to operate an offshore oil rig

Leading oil and gas companies drive innovation with Databricks



Increasing loyalty across 1.5M customers by delivering personalized offers and rewards via Shell's Go+ loyalty program



Identifying new pockets of oil and gas more efficiently and safely for the communities they serve

Deliver better outcomes with the Databricks Lakehouse Platform

Databricks provides a Lakehouse Platform that helps energy companies democratize data for downstream analytics and AI — streamlining operations and accelerating transformative and sustainable innovation.



DATA CHALLENGE	THE DATABRICKS LAKEHOUSE FOR ENERGY
Data Ingest: Processing batch and streaming data can be slow and error prone, impacting downstream analytics	Connect traditional data with alternative data insights
Data Lake Management: Data silos can limit the ability to gain a complete view of the user	Easily handle large volumes of data from multiple sources (sensor data, geospatial, customer, inventory, etc.) built on a strong privacy foundation
Data Query: Fragmented, siloed and inconsistent data sources for BI and data science	Ability to rapidly and inexpensively experiment, manage and push out at scale from a single platform

Databricks
oil and gas customers



HALLIBURTON



Data + AI use cases in oil and gas

UPSTREAM USE CASES

Improve oil exploration, production and labor efficiencies while reducing operational risk

Oil Exploration

Utilize data analytics to identify oil reserves and drilling targets

Drilling Optimization

Improve the rate of penetration to drill faster and more effectively

Production Optimization

Streamline oil extraction methods to maximize field asset values

Predictive Maintenance

Avoid production failures and downtime by predicting equipment maintenance needs

Location Development and Project Execution

Optimize land-based rig locations to improve site development, rig operations, resource management and labor costs

Environmental, Social and Governance

Integrate ESG objectives into field operations to build models for continuously tracking and reducing carbon emissions

MIDSTREAM USE CASES

Ensure secure and efficient oil processing and transportation

Supply Chain Optimization

Manage inventory levels more efficiently to reduce overall costs and accelerate delivery

Demand Forecasting

Predict future oil production needs to optimize delivery resource planning

Risk Mitigation

Prevent security and fraud losses through proactive risk management

DOWNSTREAM USE CASES

Optimize fuel price, the customer experience and nonfuel upsell opportunities

Oil Price Optimization

Determine optimal fuel prices based on seasonal, environmental and event-based trends (e.g., sporting events, holidays, weather, etc.)

Location Optimization

Identify ideal retail sites based on regional demographics to yield more revenue

Energy Trading

Develop data-driven trading strategies that increase top-line growth and optimize pump price

Product Personalization

Increase customer lifetime value with personalized recommendations of nonfuel products (e.g., coffee, candy, soda, etc.)

The Databricks Impact

Databricks helps companies automate infrastructure management, increase ETL performance at scale, and accelerate machine learning and analytics initiatives.

12x faster
ETL pipelines

Impact:
Faster time-to-market for new analytics insights and models

+25%
Gain in productivity

Impact:
More productive data scientists result in more AI innovation

+47%
Overall cost savings

Impact:
Lower infrastructure costs boost operational margins

Learn more about
our oil and gas solutions



[DBRICKS.CO/OIL-AND-GAS](https://databricks.co/oil-and-gas)