



Wipro HOLMES™ E&P report digitization

Alive, intelligent and interactive E&P data



During various stages of the Exploration and Production (E&P) life cycle, upstream O&G companies and their partners generate huge amounts of structured, semi-structured and unstructured data. This has resulted in a large repository of documents, schematics and reports stored in network file systems or data lakes. Although there is a substantial information within these unstructured documents, O&G companies have been unable to tap their full potential.

An effective and efficient utilization of information could help in solving the unique E&P related data challenges, resulting in a competitive advantage for any industry player.

Variations in document format/structure

A document structure varies depending on the source of data and the year of publication. As the data is not always uniform, using a pattern matching based approach to extract meaningful content becomes an ineffective and erroneous process.

Human readable/machine unreadable

Humans are required to analyze the entire data, as most of the content in old documents may not be machine-readable. Furthermore, some older documents may be in a typewritten format, which is unreadable given the current OCR technologies. Turning large volumes of paper based content into a readable digital format is a big ask.

Poor document quality

The quality levels of older documents are significantly lower as a result of scanning errors and noise (stamps, manual scribbling, binding markers, page folds, ink stains). Even conventional processing methods of extracting relevant information by eliminating the noise, do not yield the desired results.

The solution

Wipro HOLMES™, our Artificial Intelligence Platform, is a rich set of cognitive computing services for the development of digital virtual agents, predictive systems, cognitive process automation, visual computing applications, knowledge virtualization, robotics and drones. The platform has been developed using machine learning, natural language processing, genetic and deep learning algorithms, semantic ontologies, pattern recognition and knowledge-modeling technologies - resulting in solutions that deliver cognitive enhancement to experience and productivity, accelerate process through automation and, at the highest stage of maturity, reach autonomous abilities.

Wipro HOLMES™ E&P Report Digitization is a cutting-edge solution that utilizes advanced cognitive capabilities such as neural network based OCR, cognitive classifiers and NLP engines, to automate the process of extracting relevant data from E&P reports. It also provides an intelligent interactive interface for analysts, engineers and geoscientists, to effectively utilize the E&P data.

Benefits

Reduced cycle time in data requisition.
Reduces instances of buying data by leveraging available data.



Historical insights

Access to chronological history of the data leading to better insights and decision-making capabilities in subsurface operations.



Maximize production

It helps to create a common knowledge base that can be conveniently used to predict events in upstream operations, thereby reducing the overall unit cost of hydrocarbon extraction.



Searchability

An “enterprise Google” kind of search capability along with personalization, leading to improvement in information usage and productivity. This feature is expected to transform the upstream data management processes and practices.



Reduces cycle time

Minimal time to first oil or gas, thus lowering operating costs while improving the productivity of assets throughout their lifecycle.

Features



Right information at the right time

The solution ensures seamless, automated availability of right information to the workforce at the right time.



Validation

Extracted information from reports can be tied back to the corporate data store, to ensure data completeness for any missing fields. The extracted content can also be used for data validation, to confirm if the well entity ties back to the right documents.



Standardization

Data from documents with varying formats and structures are converted into a structured XML or CSV format, which can be plugged into a corporate or project data store. This helps geoscientists, engineers, and analysts to optimize the extraction of hydrocarbons.



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Wipro Limited (NYSE: WIT, BSE: 507685, NSE: WIPRO) is a leading global information technology, consulting and business process services company. We harness the power of cognitive computing, hyper-automation, robotics, cloud, analytics and emerging technologies to help our clients adapt to the digital world and make them successful. A company recognized globally for its comprehensive portfolio of services, strong commitment to sustainability and good corporate citizenship, we have over 160,000 dedicated employees serving clients across six continents. Together, we discover ideas and connect the dots to build a better and a bold new future.

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