![LTIMindtree]

GeoProQuik

SAAS Platform for Data Curation
Integration and Visualization
Integrated with OSDU™ Data Platform

Introduction

GeoProQuik integrated with the OSDU™ data platform is a lightweight web-based tool developed by LTIMindtree that enables geoscientists, reservoir engineers, and data managers to unlock the value of their existing geoscientific database. This tool can ideally be used by upstream oil and gas companies to address the data discovery and quality challenges as they migrate their legacy datasets between applications or to cloud-native data platforms. It can be used for data search discovery, curation, and visualization from any on-prem or cloud-based system of records (SORs).
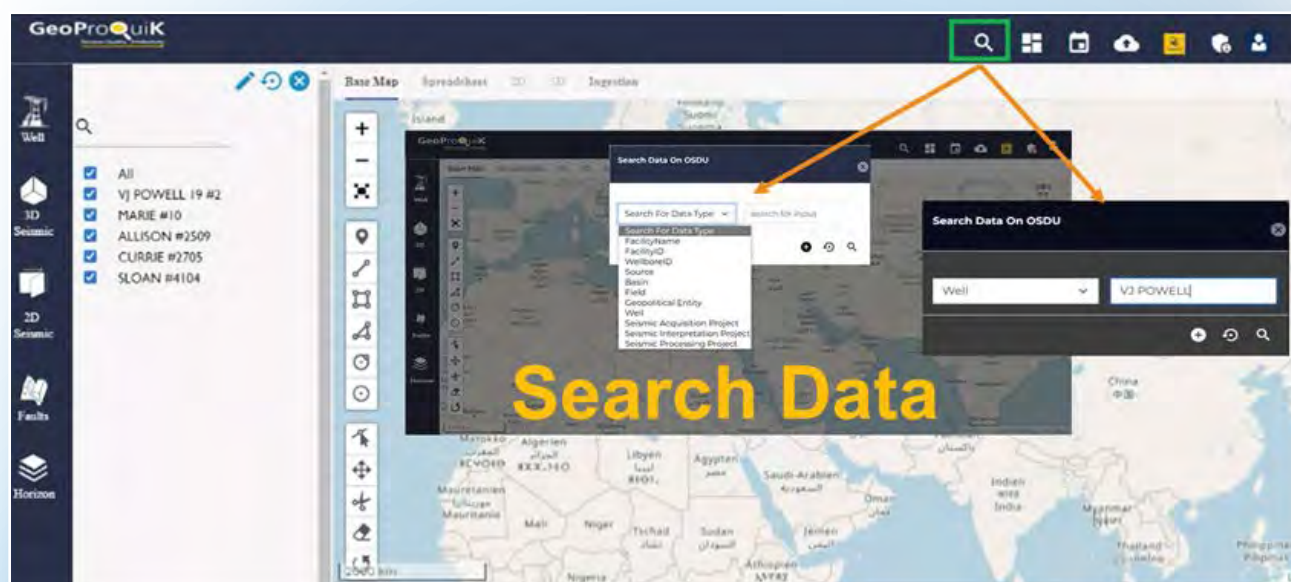
Key Features

GeoProQuik can currently process multiple subsurface data types like seismic, well, G&G interpretation and geospatial datasets. The notable features of this tool are

• Data search and retrieval based on keywords or map-based selection

• Data ingestion

• Data quality assessment using customizable user-defined business rules

• Data curation using the data editor

• Data visualization

This intuitive, user-friendly tool can be customized for any on-prem or cloud-native data stores.

GeoProQuik enables end users and data managers to efficiently search data using the map-based selection tool as well as keywords and data types. This feature reduces the time required for the data discovery process by more than 50% compared to conventional methods. The tool has an inbuilt pre-ingestion platform for data quality management, which is used for streamlining quality check processes, flag data inconsistencies, edit and curate data, and finally, preparing the data for ingestion. In addition, the smart data policy manager for entitlements and obligations ensure complete data security during data processing and migration.

GeoProQuik provides a highly scalable and intuitive single visualization platform for all datatypes. Multiple functionalities have been developed to search data and visualize the results based on the custom needs of the end user.

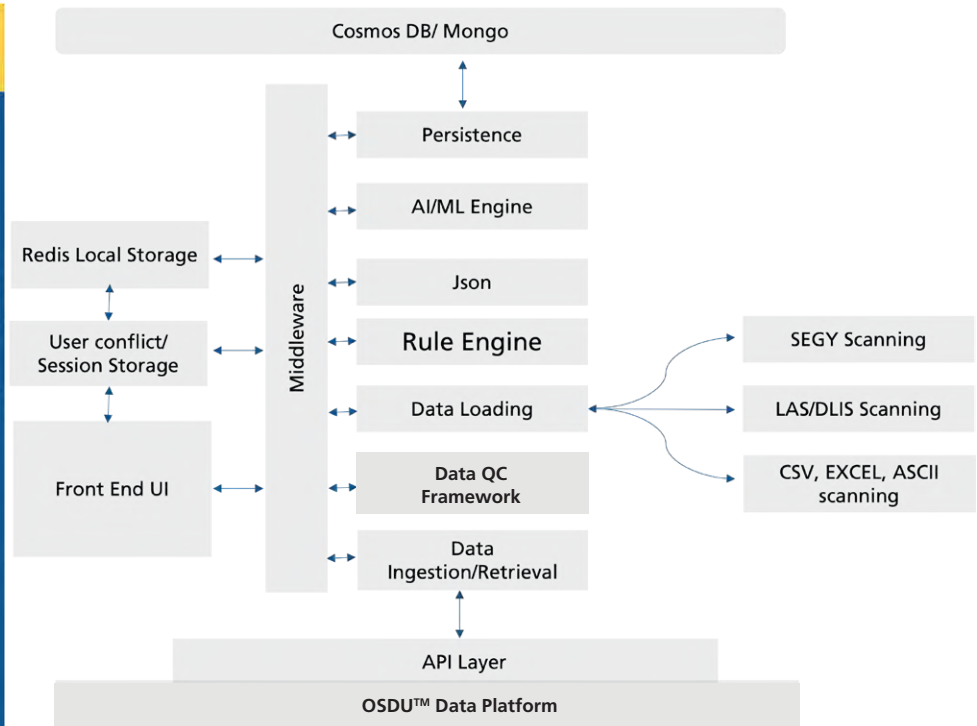GeoProQuik also enables the end user to curate the dataset as per specific project requirements. This is implemented by data retrieval, comparison, statistics, quality check, and editing abilities of the tool on the Pre-Ingestion platform. In addition, data statistics can be analyzed in customized tabular format that aids in enhanced QC and QA processes based on user-defined business rules. This ensures the right data quality is ingested into target applications or databases.
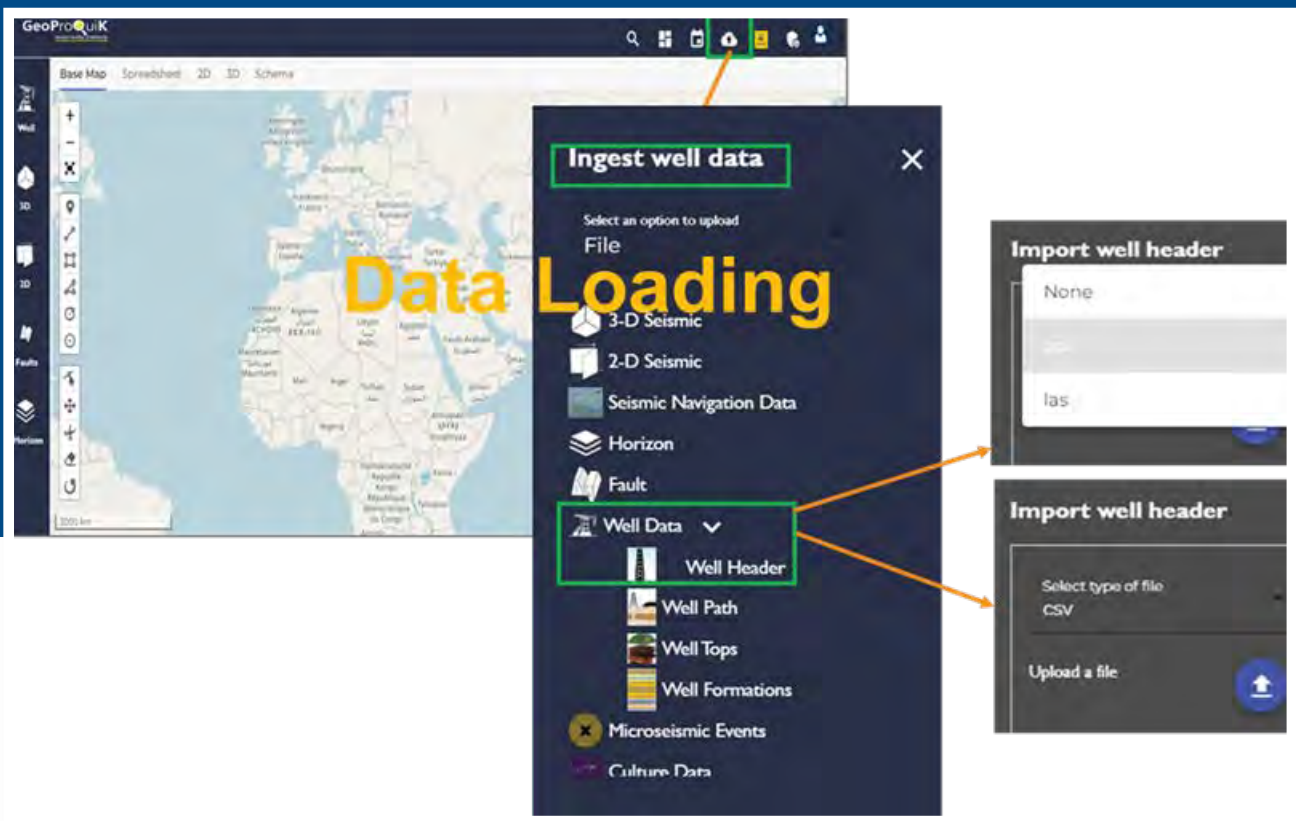
Functional Architecture

The web-based architecture of this tool enables the end user to shape their information asset in a cloud-based environment. Users can use this tool to seamlessly connect to their cloud native or on-prem database for uploading or downloading data as per project requirements and faster business decisions. It is designed in such a way that multiple users from different domains and locations can access the application and the database simultaneously. The application is highly scalable and easy to navigate.

Technical Design

- SAAS based Service
- Cloud Native
- Microservice Development
- Complete CI-CD

Cosmos DB/ Mongo

Persistence

AI/ML Engine

Json

Rule Engine

Data Loading

Data QC Framework

Data Ingestion/Retrieval

Middleware

Redis Local Storage

User conflict/ Session Storage

Front End UI

SEGY Scanning

LAS/DLIS Scanning

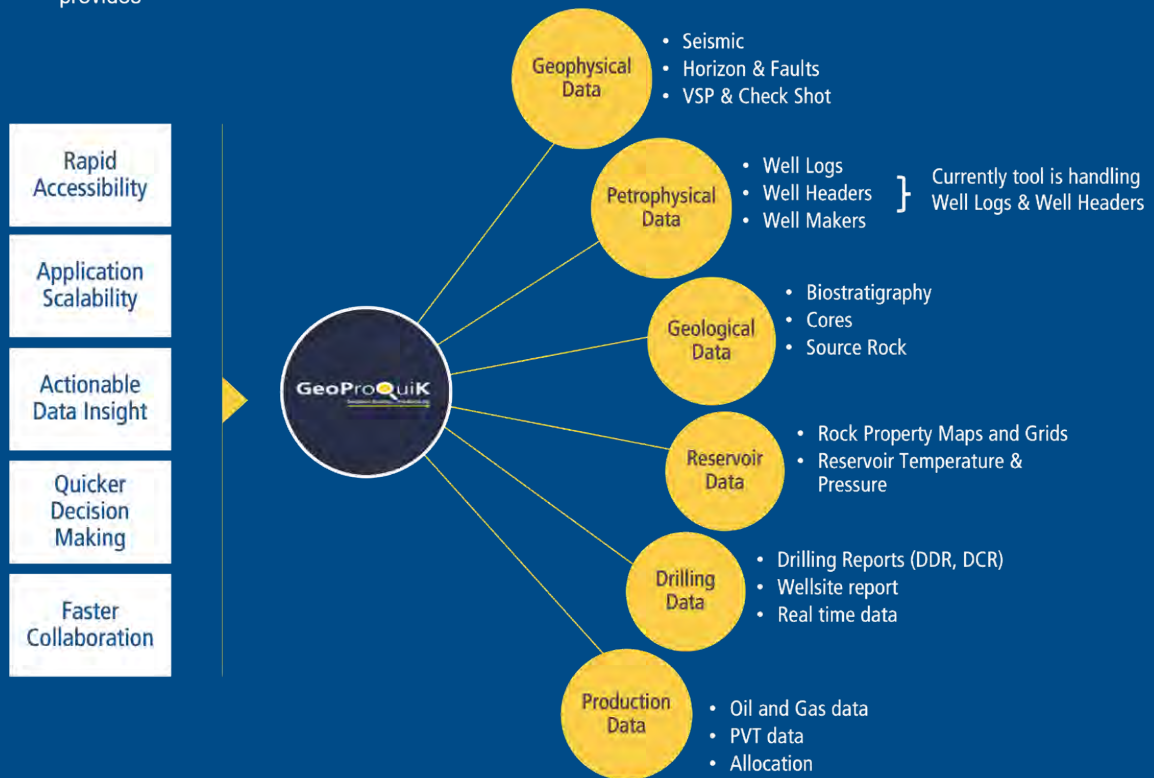CSV, EXCEL, ASCII scanning

API Layer

OSDU™ Data Platform

Advantages and business benefits

GeoProQuik is primarily a robust, user-friendly and highly customizable data discovery, visualization and curation tool that can be used by both domain specialists and data managers. It enhances the accuracy and efficiency of the interpretation and data migration workflows by enabling the end users to retrieve and create the right data set at the right time. It can process multiple types and formats of unstructured and disorganized data from different subsurface domains (seismic and well data) into a curated and well-defined data structure format. Users can use this tool to do end-to-end data tracking and integrate data across multiple data stores (SOR).

GeoProQuik's Comprehensive Subsurface Data QA/QC engine provides

- Rapid Accessibility
- Application Scalability
- Actionable Data Insight
- Quicker Decision Making
- Faster Collaboration

GeoProQuiK

GeoProQuik Supports a large Subsurface Datatypes

Geophysical Data
- Seismic
- Horizon & Faults
- VSP & Check Shot

Petrophysical Data
- Well Logs
- Well Headers
- Well Makers

} Currently tool is handling Well Logs & Well Headers

Geological Data
- Biostratigraphy
- Cores
- Source Rock

Reservoir Data
- Rock Property Maps and Grids
- Reservoir Temperature & Pressure

Drilling Data
- Drilling Reports (DDR, DCR)
- Wellsite report
- Real time data

Production Data
- Oil and Gas data
- PVT data
- Allocation

GeoProQuik will be an ideal tool for E&P companies who want a quick analysis of any geodatabase regarding subsurface data content, quality, and volume. It has an intuitive visualization screen for well and seismic data overview along with its geospatial location. This tool can be leveraged by oil and gas companies for data search, retrieval, ingestion, and visualization on the OSDU™ data platform also. Additionally, the quick QC capabilities inbuilt within the tool will help the user to improve data quality before ingestion to the petro-technical applications or the OSDU™ Data Platform. All these features will provide accurate subsurface datasets to the business user, thereby increasing interpretation accuracy and lowering the interpretation cycle time.

For further queries, costs and demonstration of the GeoProQuik tool please reach out to the product development team at LTIMindtree:

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