



TotalEnergies

Aspen Geolog™ Connector to OSDU Helps TotalEnergies Accelerate Decision-Making and Project Delivery

“Our collaboration was very fruitful. It helped to further solidify our relationship and opened a path to additional developments around the OSDU Data Platform. Thanks to the team for its innovative spirit, professionalism and strong commitment!”

Tatiana Akimova, Data Platform Lead, OSDU Team, TotalEnergies

CHALLENGE

Improve collaboration using OSDU to reduce internal silos between drilling, geoscience and development business units. Help accelerate exploration or appraisal well definition by seamlessly sharing the same updated data with all parties involved in the project.

SOLUTION

An Aspen Geolog-OSDU Connector was built by the AspenTech SSE team in close collaboration with TotalEnergies. After end-to-end tests were performed in TotalEnergies' development and qualification environments, the connector was recognized by the customer as a fit-for-purpose solution that met the expectations of the end users.

VALUE CREATED

- The Aspen Geolog connector to OSDU TotalEnergies' data platform provides fast access to a standard, unified and shared data environment.
- Removes subsurface data exchange silos between drilling geosciences and development, for improved collaboration.
- Full integration of the advanced Aspen Geolog petrophysics package into the geoscience processing chain, and acceleration of data availability in Aspen Geolog due to connection to the Data Platform.



Overview

One of the key challenges in accelerating decision-making and reducing the development cycle of any operational E&P prospect is to reduce the time needed to make information and data available across the various disciplines and business entities involved. To address this challenge, a single, standardized shared data platform is required, and the applications used by different parties (e.g. drilling, geoscience, etc.) need to provide seamless access to this platform in order to both access existing data and publish new data such as the results of interpretation.

At the end of 2020, TotalEnergies decided to demonstrate the capabilities of the OSDU open-source data platform on an Azure cloud instance, and began an ambitious Suriname use case project with an eight-month duration.

The main goals of this project were first to demonstrate how OSDU could improve collaboration by reducing internal business silos between drilling, geoscience and development business units, and secondly, to help accelerate exploration or appraisal well definition by seamlessly sharing the same updated data with all parties involved in the project lifecycle.

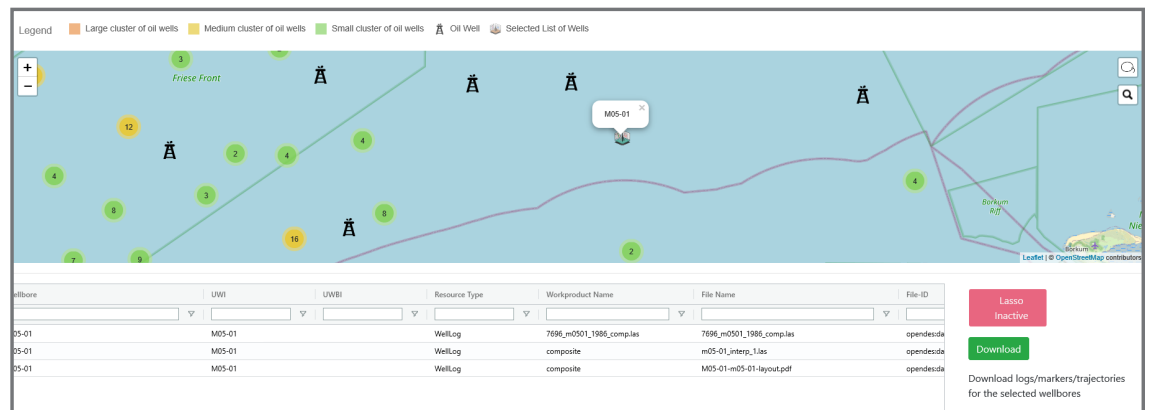


Figure 1. The Geolog WebApp allows users to connect to the OSDU instance and quickly search and access interpreted well data and associated documents.

Improved Collaboration through Direct Connection to the OSDU Instance

For the Operational Wells Team in TotalEnergies, there was a strong need to have the Aspen Geolog application be capable of connecting to the company's OSDU instance in order to be able to exchange well data. An Aspen Geolog-OSDU connector was a key component of the overall Suriname Use Case OSDU Data Platform project.

The Aspen Geolog-OSDU Connector was built by the SSE team in close collaboration with TotalEnergies throughout the project. (Figure 1)

Results

End-to-end tests in TotalEnergies development and qualification environments were performed in July/August 2021 together with the SSE team and TotalEnergies end users. The feedback from users after the testing phase was very positive and the connector was recognized by TotalEnergies as a fit-for-purpose solution that met the expectations of the final users.

- Petrophysicists were able to connect to OSDU from the Aspen Geolog 20 desktop application.
- The connector enabled users to collect well data from the OSDU Data Platform and load them into the local Aspen Geolog project. (Figure 2)
- The connector enabled users to send interpreted well data results back to the OSDU Data Platform and make them available to all other discipline specialists involved in the project. (Figure 3)

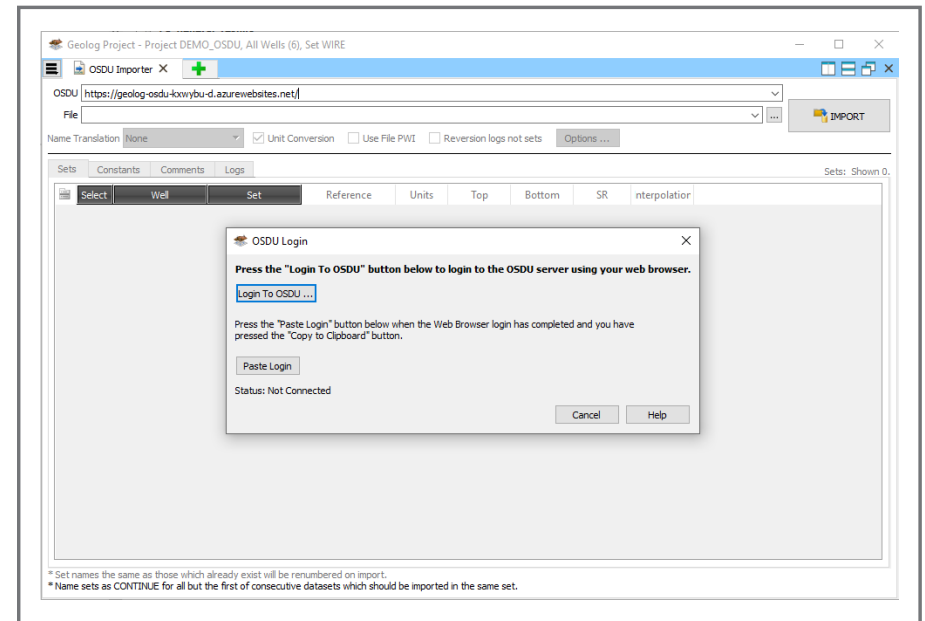


Figure 2. The Aspen Geolog-OSDU connector allows users to connect directly to the OSDU instance, and search and access available well data which can be imported into local Geolog projects, making them ready for the petrophysicists.

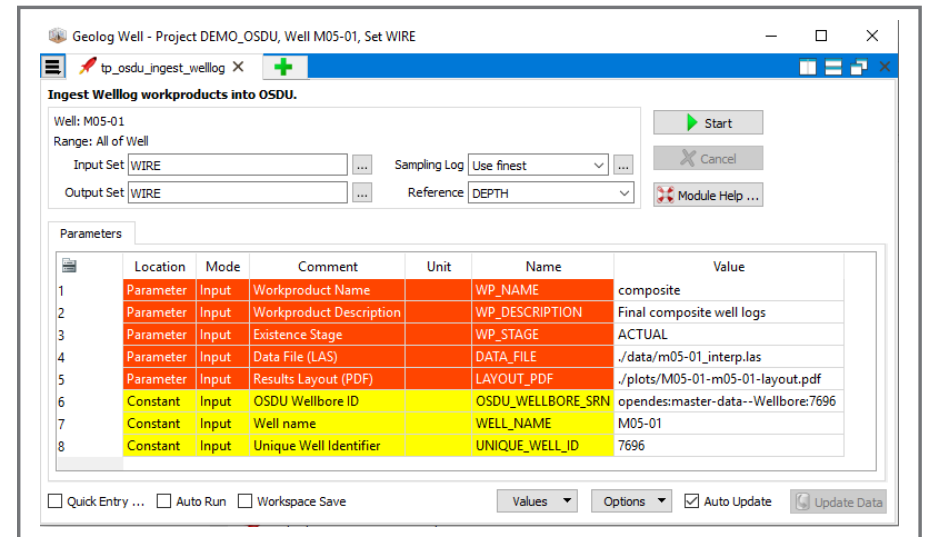


Figure 3. The Geolog ingestion program allows users to send interpreted results and associated documents back to the OSDU instance.

- The WebApp allowed users to graphically search the well data (well logs, well markers, well trajectories) and associated PDF documents and directly download them. This allowed the users to perform a quick check on data available on the data platform. (Figure 4)

Conclusion

The Suriname use case is the very first use case around TotalEnergies' internal Subsurface Data Platform, which is allowing the company to build the foundations of its new Data Platform through alignment with the OSDU ecosystem. This is a major change for the management of geosciences data within the company, for the applications that consume this data, and for their use within TotalEnergies.

Building and testing the Geolog-OSDU System of Records connector with the AspenTech team was an extremely rich collaborative experience.

Major benefits of the connector:

- Full integration of the advanced Aspen Geolog petrophysics package into the geoscience processing chain
- Removal of subsurface data exchange silos between drilling geosciences and development, for improved collaboration
- Standardization of .las2 files sent from Aspen Geolog to OSDU thanks to common OSDU schemas
- Acceleration of data availability in Aspen Geolog due to connection to the Data Platform

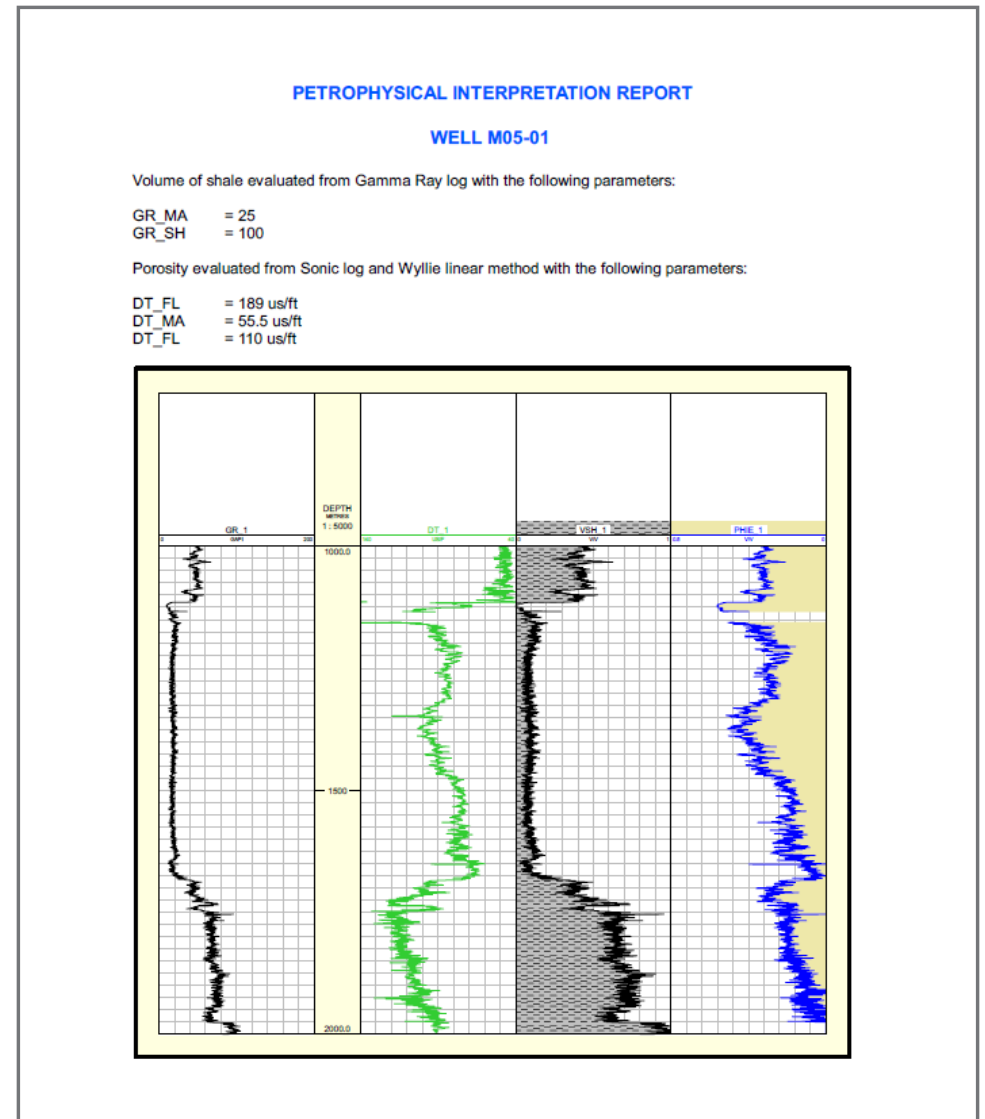


Figure 4. A Geolog-generated PDF report of the petrophysicist's results.



About AspenTech

Aspen Technology, Inc. (NASDAQ: AZPN) is a global software leader helping industries at the forefront of the world's dual challenge meet the increasing demand for resources from a rapidly growing population in a profitable and sustainable manner. AspenTech solutions address complex environments where it is critical to optimize the asset design, operation and maintenance lifecycle. Through our unique combination of deep domain expertise and innovation, customers in capital-intensive industries can run their assets safer, greener, longer and faster to improve their operational excellence.

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