

## CGG GeoSoftware Increases E&P Efficiency and Effectiveness with Machine Learning and Cloud-Ready Applications

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At the 2018 EAGE convention in Copenhagen, CGG GeoSoftware is showcasing its latest developments aimed at harnessing the powerful capabilities of machine learning and cloud computing to enhance the performance and value of its geoscience software. E&P industry users can benefit from these new advances and transform their work practices, processes and workflows to ultimately streamline and improve operations.

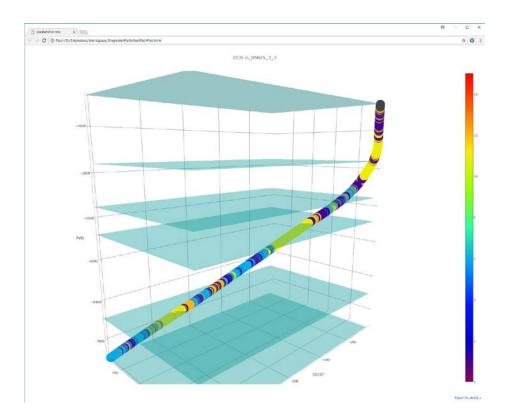
In machine learning, GeoSoftware is addressing the complex challenges of reservoir characterization and interpretation, such as developing permeability models in complex carbonates and developing porosity and permeability models in unconventional reservoirs, as well as more mundane requirements for automating routine, but necessary, tasks such as modeling missing log curves essential for seismic reservoir characterization or automatically identifying and flagging poor-quality log curves in a project.

With the latest 9.7.2 release of PowerLog petrophysical analysis software, users can now solve complex petrophysical and reservoir engineering challenges by accessing native machine learning and deep learning Python utilities, opening up vast possibilities for leveraging open-source technology and solutions, and designing bespoke workflows.

This year's release of version 10.4 of GeoSoftware's HampsonRussell reservoir characterization software will deliver substantial new machine learning technology in its Emerge attribute prediction module with advanced Deep Feed Forward Neural Network technology. Early investigations show promise for estimating density which is typically challenging to achieve through inversion.

GeoSoftware is migrating all of its software products to the Cloud, first to Microsoft Azure and then to other cloud providers. It has already completed the first "Lift-and-shift" phase of its digitalization technology roadmap to ensure all its applications can run in the cloud. Phase two is focused on support for scaling out CPU-intensive computations to take advantage of the massive compute power available in the cloud, while phase three is focused on native cloud applications to take full advantage of the elasticity offered by the cloud environment.

Sophie Zurquiyah, CEO, CGG, said: "As an integrated geoscience company, CGG is aware of the challenges of digitalization for the E&P industry as well as the significant rewards it can bring to create new value and optimize decision-making. GeoSoftware is taking the lead to develop and demonstrate new workflows and capabilities so its software users can leverage the full potential of these new technologies and trends. These first results from our technology roadmap are just the beginning and we anticipate many more exciting developments in the future."



Deviated well bore displayed with facies generated by machine learning in the PowerLog Ecosystem (image: courtesy of CGG GeoSoftware).

## **About CGG**

CGG (<u>www.cgg.com</u>) is a fully integrated Geoscience company providing leading geological, geophysical and reservoir capabilities to its broad base of customers primarily from the global oil and gas industry. Through its three complementary businesses of Equipment, Acquisition and Geology, Geophysics & Reservoir (GGR), CGG brings value across all aspects of natural resource exploration and exploitation. CGG employs around 5,300 people around the world, all with a Passion for Geoscience and working together to deliver the best solutions to its customers.

CGG is listed on the Euronext Paris SA (ISIN: 0013181864) and the New York Stock Exchange (in the form of American Depositary Shares. NYSE: CGG).

## Contacts

Group Communications Christophe Barnini Tel: + 33 1 64 47 38 11 E-Mail: : invrelparis@cgg.com Investor Relations Catherine Leveau Tel: +33 1 64 47 34 89 E-mail: : invrelparis@cgg.com