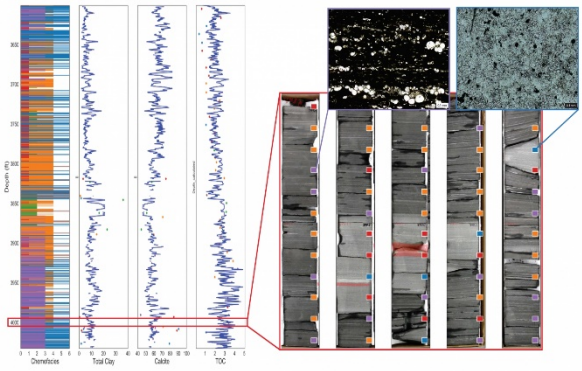
SEMINAR ANNOUNCEMENT: FRIDAY, DECEMBER 18, 2020, 11.00, TEAMS PLATFORM[1]



Well Logging

Defining Subsurface Rock Properties

Topics:

(1) Well Logging: why?

(2) Well Logging: how?

(3) AI supporting Well Log Interpretation

Presented by Davide Baldini
Eni

Well Logging: why?

Well logging is the practice of recording and analyzing various kinds of data about the rock formations around a borehole. This kind of activity allows to determine the physical properties of the rocks which, in general, are defined by their mineralogical composition, texture and fluids. Therefore, the interpretation of well logs can provide important information not only of petrophysical type but also of geological type, helping to evaluate the potential of a reservoir and facilitating the strategic drilling and production decisions.

Well Logging: how?

There are several well logging methods available nowadays, each one providing strategic information.

Logs While Drilling (LWD) provide the main petrophysical properties of the rocks during drilling operations, while Wireline Logs (WLL) are recorded just after drilling by lowering a logging tool on an electrical cable into the borehole.

Moreover, the Surface Logging technology (SLS) involves the analysis of drilling mud and rock cuttings in order to support lithology and fluid type identification, while Core Logging involves drilling out a cylindrical rock sample from the borehole and analyze it in laboratory to provide the most relevant petrophysical properties.

AI supporting Well Log Interpretation

AI can support geologists by means of machine learning models capable of automating real time data interpretations. In this way, deliverables are available in a shorter time allowing geologists to optimize real time decisions and to improve operational effectiveness.

Biography

Davide Baldini joined Eni in 2001 after having worked for several service companies.

In his 20+ years' experience in the Energy industry he has worked in Subsurface Geology and G&G Operations. He is currently the technical reference in Eni for Subsurface and Geological Operations. He has recently become a Chartered Geologist awarded by the Geological Society of London, a recognized UK professional body for Geoscientists.

Since 2017 Davide is playing an active role in the Eni Digital Transformation process.

UNIVERSITÀ DEGLI STUDI DI TRIESTE

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