AAPG Datapages/Search and Discovery Article #90306 ©2017 AAPG Latin America & Caribbean Region GTW, Optimization of E&P Projects: Integrating Geosciences and Engineering from Block Acquisition through Production, Rio De Janeiro, Brazil, August 22-23, 2017

Using Cognitive Computing to Enable Multidisciplinary Knowledge Integration across the E&P Value Chain

Emilio Vital[1]

[1]IBM Research, Brazil

ABSTRACT

Nowadays the oil and gas industry is facing a data flooding problem. Each step in the E&P value chain creates terabytes of information, but it is still a challenge to extract meaningful knowledge and insights to support decision-making processes. In this presentation, we will present a workflow based on cognitive tools that help to integrate different sources of knowledge, therefore enabling better analytics tools to ground decisions. To illustrate our approach, we will describe a real-case scenario that starts from seismic interpretation, going through the process of reservoir characterization and simulation, up to the assessment of different scenarios of oil-production. We capture all critical decisions in this workflow and use that as a documentation of the final results, enabling the decision maker to investigate the rationale behind the final numbers. This historical data allows creating informative what-if scenarios in any decisive point of the process.