

2016-2017 SPE Romanian Section Technical Program

SPE Romanian Section Symposium: “Software Systems for E&P Sector of Petroleum Industry”
Technical Presentation: “Subsurface and surface hydrocarbon production”
15th November 2016, Universitatea “Al. I. Cuza”, Iasi



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Abstract:

Oil and gas are among the most important energy sources in the world. The exploration and quantification of the petroleum reserves is not an easy process. Valuable experts and professionals among the industry lead this process to success. We now have proven reserves, but what comes next?

Petroleum production engineering is the discipline responsible for bringing the hydrocarbons from reservoir to surface and prepares them for further processing. It starts with the selection, design, and installation of well completion and ends with the delivery of the useful product (oil and/or gas) to the customer. Between the two ends lie a large number of engineering activities and operations.

Many of them are impossible to achieve without the proper knowledge of the reservoir rock properties and lithology. For example, reservoir rock strength has a big impact on the design and installation of the well tubing and completion equipment. Along with the rock strength, rock permeability plays a huge role in how the well will be completed. Whether it will produce through a simple open hole completion or a complex frack and pack completion can even decide if a reservoir will be exploited.

Once we have a completion set-up, the rock still plays an important role. Few wells produce intermittently from first oil to abandonment. Formation damage occurs over time and restricts production. Knowing the formation properties is very important in preventing or mitigating these damages.

On top of the examples enumerated above, the current presentation offers a broad perspective on the importance of geology in the production process, while enumerating common industry practices.

Biography:

Alexandru Nitulete graduated with a Chemical Engineering degree from Politehnica University of Bucharest and ever since then he is working as a Production technologist for the Laslau Mare project, based in Medias.

Being in a severe depletion state, Laslau Mare offers a broad range of production challenges which developed Alexandru to be involved in all production management, optimization and enhancement areas related to these challenges. Along the four years of experience in the Oil and Gas industry, Alexandru was overtaking projects in areas like: gas well stimulation, gas well water deliquification, facilities optimization and debottlenecking, compression, well modeling, production chemistry, reservoir investigation, workover activities, snubbing and rigless operations design, planning and supervision.

Among the mentioned activities, Alexandru was leading the implementation or evaluation of several pilot technologies in Laslau Mare and in the area such as: automatic soap stick launcher, gas lift for water deliquification, matrix acidizing, nitrogen injection for water blockage removal. Alexandru was also core to the team who introduced other pilot technologies in the area such as: foam fracturing, screw compressors, velocity string for water deliquification.