

Challenge's Topic

Use of packing tools to optimize oil production in an artificial lift system with electro-submersible pumps.

Introduction

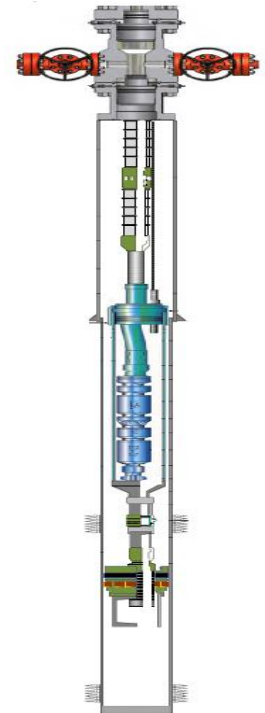
The versatility of the electro-submersible equipment allows development projects with the use of different tools, to carry out some applications such as:

- Isolate sands.
- Produce with two or more reservoirs.
- ESP below the perforations.

We will focus our analysis on the system known as CanSystem, this have tools like a packer, seal unit, a capsule, an ESP penetrator system.

This type of completions has allowed us to produce from a reservoir without the need to isolate another or produce below the area of the perforations accompanied by the ESP lifting system.

This practice allows us to optimize production and transmit all the energy from the oil well to the capsule.



Scopes/objectives:

- Determine the flowing pressures inside and outside the capsule.
- Analyze pressure drops at different points in the system.
- Carry out a comparison between the traditional system and CanSystem focused on low production.
- Optimization of production in reservoirs with low productivity index.

Careers involved

- Petroleum Engineering.
- Chemical Engineering.
- Mechanical Engineering.

Other aspects

Knowledge in:

- Nodal analysis simulation.
- Sizing of electrosubmersible equipment.
- Fluid Mechanics.
- Special completions with Packers.