



Transport of formation water with hydrocarbons.

ROCH
Argentina | 2015

Working Conditions:

Formation water with traces of hydrocarbons at 40°C, ambient temperature from -10°C to 30°C

Pexgol Pipe:

Pexgol 110 mm (4"), Class 12

Application:

Formation water transport

Length:

4000 m

The Challenge

ROCH is a private company dedicated to the exploration and exploitation of hydrocarbons. As part of their production plans, it was necessary to produce and treat formation water which will then be injected through injection wells for secondary recovery. The purpose of secondary recovery is to maintain reservoir pressure and facilitate the displacement of hydrocarbons to the HC producing well.

The specific challenge was not only to find a pipe material that could support the composition of the fluid, but also to solve the following situations:

- Both the workforce and the heavy equipment, in Santa Cruz (Argentina), are very expensive and represent a very significant portion of the total cost of putting a line of production to work.

- The line had to cross a field belonging to the businessman Benetton, in which sheep are raised to produce wool that is used for his clothes business. Benetton did not allow trenches to remain open during the night (for fear that the animals could fall inside). This situation, forced to work on sections, opening the trench, installing the pipeline and refilling the trench on the same day.

The pipe options that were handled were steel, HDPE and PE-X.



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Pexgol Solution

ROCH decided to install PE-X.

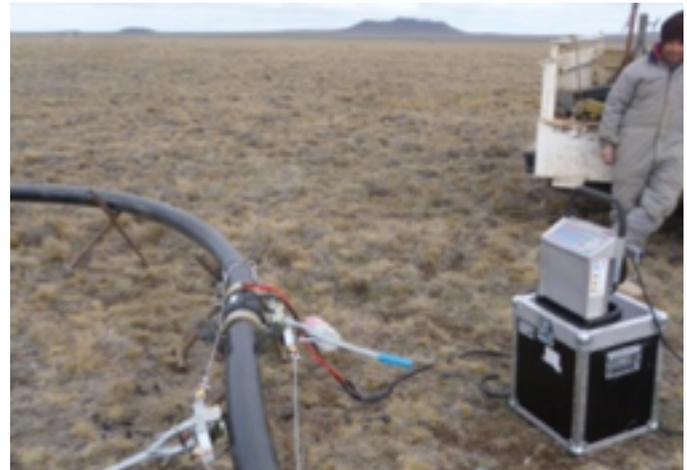
With Pexgol the installation cost dropped drastically reducing the number of operators and their qualifications (no need for professional welders).

In addition, the equipment for the laying of the pipeline is light and not very sophisticated: only a backhoe is used. When installing steel pipes, for example, special equipment must be used.

Furthermore, not only allowed to make a much faster installation, but installation could also be carried out with fewer joints. Both the steel and the HDPE would have required 333 connections and with Pexgol only 13 were eventually needed. This saved costs, labor and time.

The installation was quick and easy despite the harsh weather conditions, and did not require any special tools or equipment.

Regarding the problem of the trenches, Pexgol turned out to be the ideal solution due to the ease and rapidity of laying many meters of pipe in a short time (due to its presentation in rolls).



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Advantages

High resistance to wear:

Pexgol is the preferred solution for abrasive materials transportation. Typically resists three times more than HDPE and twice more than steel.

Excellent chemical and corrosion resistance:

Pexgol pipes can resist a wide range of chemical agents, slurries, toxic and radioactive materials.

High temperature resistance:

Working temperatures can range from -50°C/-58°F up to 110°C/230°F.

Superb internal and external corrosion resistance:

Our pipes are proven to withstand decades of exposure to corrosive environments, with nonstop

performance in some of the world's harshest environments.

- **Long pipe sections:**

Pexgol's pipes can be supplied in long lengths coils, reducing number of joints, installation time and risks.

- **Creep and impact resistance:**

Pexgol's crosslinking piping solution can withstand high amounts of axial and radial stresses and is highly resistant to impact, fracture and fatigue. Also is completely resistant to cracks even when dragged over sharp rocky terrain and coagulated salt crystals.

