



Pro Blend[®] PMP Case Study - Venezuela

The project consisted of selecting a well that displayed unfavorable bottomhole characteristics (such as low pump inlet pressure) with the purpose of increasing the bottomhole pressure. This work involved deep well stimulation via the injection of 1000 BBLs of water containing 2000 liters of the Pro Blend[®] PMP polymer. This polymer is derived from the family of inorganic chemical compounds and its structure consists of either sodium or potassium + sodium + nanoparticles. As a result, the polymer is highly stable and safe, and thereby can easily be applied by diluting it within an aqueous solution and injected through the annulus (between the production tubing and the casing). The solution was injected for approximately four hours, considering that 1000 BBLs were pumped, in addition to the 2000 liters of the Pro Blend[®] PMP Polymer. The polymer was dissolved in fresh water at a rate of 5 BBLs/min and it was left to soak for a period of 24 hours once the injection process had been completed.

Improvements were noted with respect to the following: bottomhole conditions; stable operational variables; the restoration of production levels; an increase in production (the production of this well had fluctuated between 150 and 170 BBL/D, and, upon injection of the polymer, production increased to 300 BBL/D; on the day of stimulation, an Absolute Open Flow Potential (AOF) of **190 BBL/D** was recorded at the well; however, once injection began, the AOF Absolute Open Flow (AOF) shot up to **628 BBL/D**, which is approximately four times higher the initial value and an improvement in the useful life of the lift equipment (progressing cavity pump).

