

Method and Apparatus to Revive Gas Wells



Advanced Technology Removes Water from Gas Wells to Increase Production

Hydrostatic pressure of the water in a gas well can completely plug the well and stop gas production. To keep the well functional, the water must be removed to allow gas production to resume. There are a number of ways to eliminate water in the well, but most methods come with disadvantages such as high cost or greater energy requirements. One way the water can be removed is by using surfactants that rely on residual gas pressure and migration to produce agitation and foam to lift water out of the well.

Maverick Petroleum, with the help of a grant from the Department of Energy's Inventions and Innovation Program, developed a new self-agitating soap stick to revive non-producing and marginally producing gas wells. The process involves a blend of surfactants and gas producing chemicals that produces the self-agitating necessary to transform the static column of fluid into a column of foam without needing any assistance from the well itself. It allows the existing bottom hole pressure to restart flow from the well.

The new self-agitating soap stick offers the potential for substantiated energy savings by retrieving gas that would be lost when wells are plugged and abandoned. The new treatment is less expensive than other options, such as swabbing, and has been demonstrated to be equally successful.

Benefits

- ◆ Permits an operator's on-site personnel to treat wells.
- ◆ Successfully restored gas production in more than 90% of suitable wells treated.

Overview

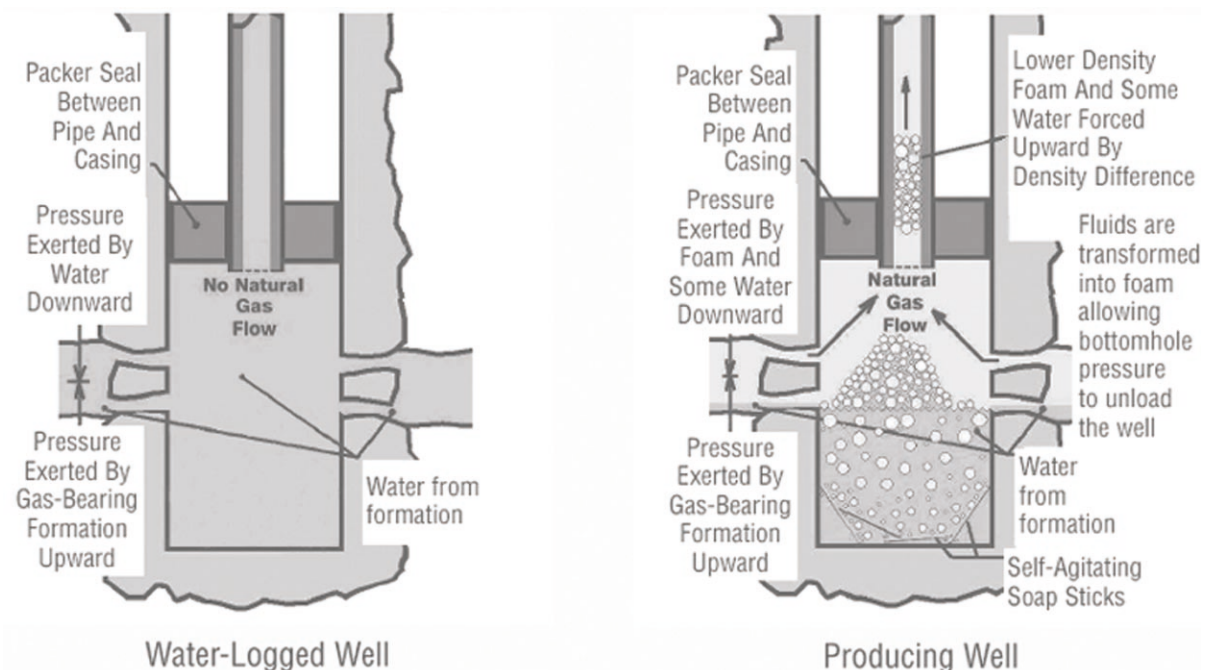
- ◆ Developed and tested by Maverick Petroleum Corporation
- ◆ Available through gas well acquisitions and joint ventures.

Applications

Restoration of gas well production

Capabilities

- ◆ Avoids the need to swab or pump water to maintain well production.
- ◆ Can easily be used on site.
- ◆ Treats wells with water influx rates of less than 5 barrels per day.



Self-Agitating Soap Sticks in Use in a Gas Well