



Surfactants in Action

Voiceover

Waterfloods alone usually don't achieve a uniform sweep through heterogeneous reservoir rock. Water moves in a "fingering" pattern, sweeping oil from much of the reservoir but missing sections along the way.

As waterflood recovery declines over time and less oil is captured per barrel of water injected into the reservoir, Chevron uses a surface active agent, or surfactant. When surfactant is mixed with water and flooded into a reservoir, the surfactant acts as a household detergent, reducing surface energy between water and oil and causing oil droplets to flow more efficiently through rock formations deep in the reservoir to the producing wells.