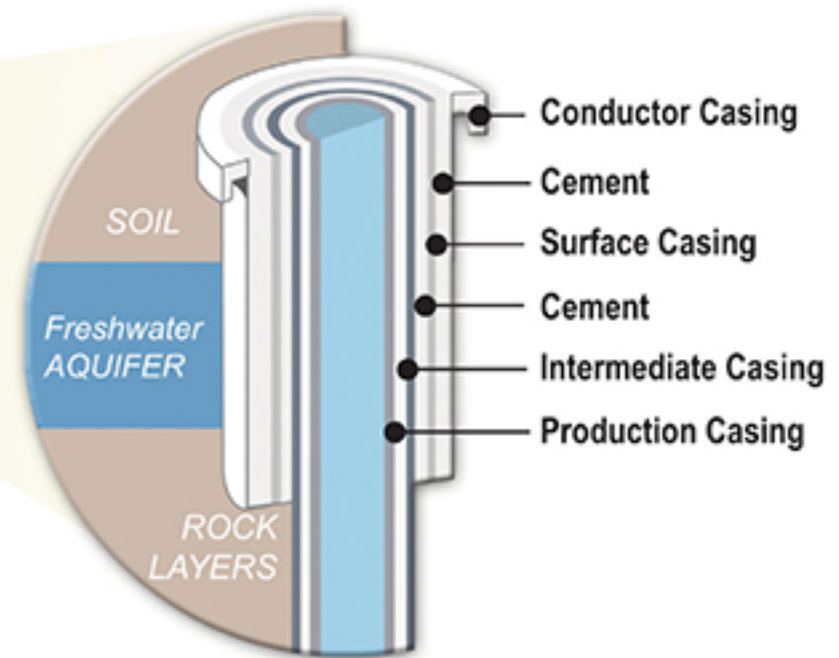
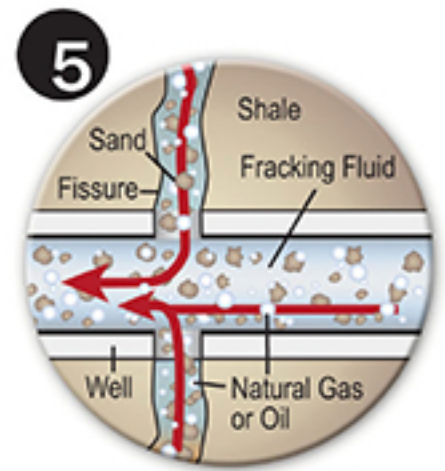
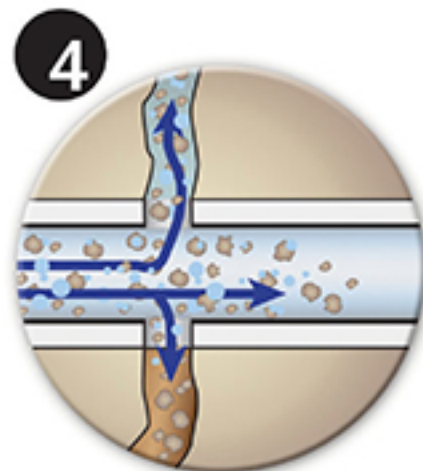
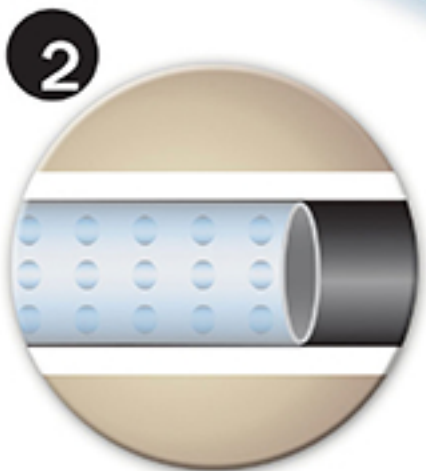


Cement casing protects aquifer.



1 Drilling turns horizontal, hitting multiple fissures and increasing volume of available oil and natural gas.



2 Production casing inserted into borehole, then surrounded with cement.

3 Casing is perforated blasting small holes through pipe, cement, and shale.

4 After drilling, the well is hydraulically fractured. A mixture of water, sand, and chemicals (fracking fluid) is pumped into the well at high pressure.

5 The fluid generates numerous small fissures in the shale, freeing trapped oil and gas that flow back up the pipeline to the wellhead. The sand keeps the fissures open to increase the flow of oil and natural gas.