

# OIL AND WATER SHOULDN'T MIX

The underlying geology on the Prairies is made up of porous layers containing water, oil, or both, separated by aquitards. These layers of dense clay or shale block liquids from mixing between the layers.

There are more than 750,000 petroleum well boreholes in Western Canada. Some of the earliest are open holes. As geological knowledge and regulations improved, wells were capped deep underground with thick cement plugs. Petroleum wells often yield much more water than oil and gas. This extremely salty water is pumped back underground for disposal or to push more oil toward production wells, a process called enhanced oil recovery. This can increase pressures underground, potentially forcing contaminated, highly salty water through old boreholes and into water-bearing formations.

