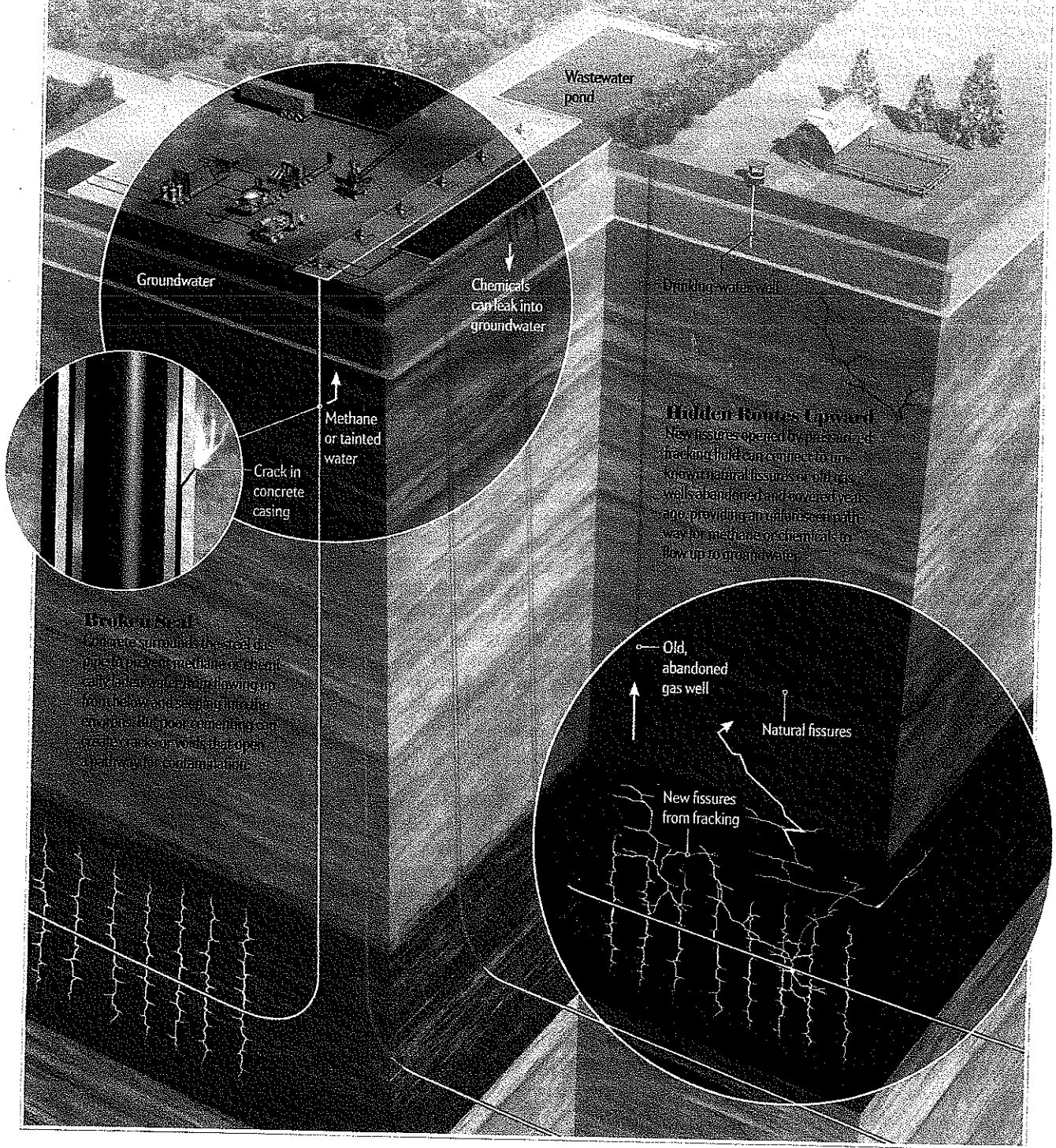


Risks to Drinking Water

Once a drill pad and wastewater pond are established, a driller may sink a dozen wells or more to fully tap the shale gas. Three spots may have the greatest potential to contaminate groundwater. Chemical-laden wastewater ponds can leak or overflow (center),

which happened in Pennsylvania in September because of flooding by Tropical Storm Lee. Concrete that encases the vertical pipe can crack (inset, left), and new fissures opened by the fracking can connect to natural fissures or old wells (inset, right).



Broken Seal
Concrete surrounding the casing can crack under the weight of a wellbore, allowing drilling fluids to flow into the well. This can happen if the casing is not properly installed or if the wellbore is not properly sealed.

Hidden Routes Upward
New fissures opened by pressurized fracking fluid can connect to natural fissures or old wells abandoned and covered over, providing an alternate pathway for methane or chemicals to flow up to groundwater.