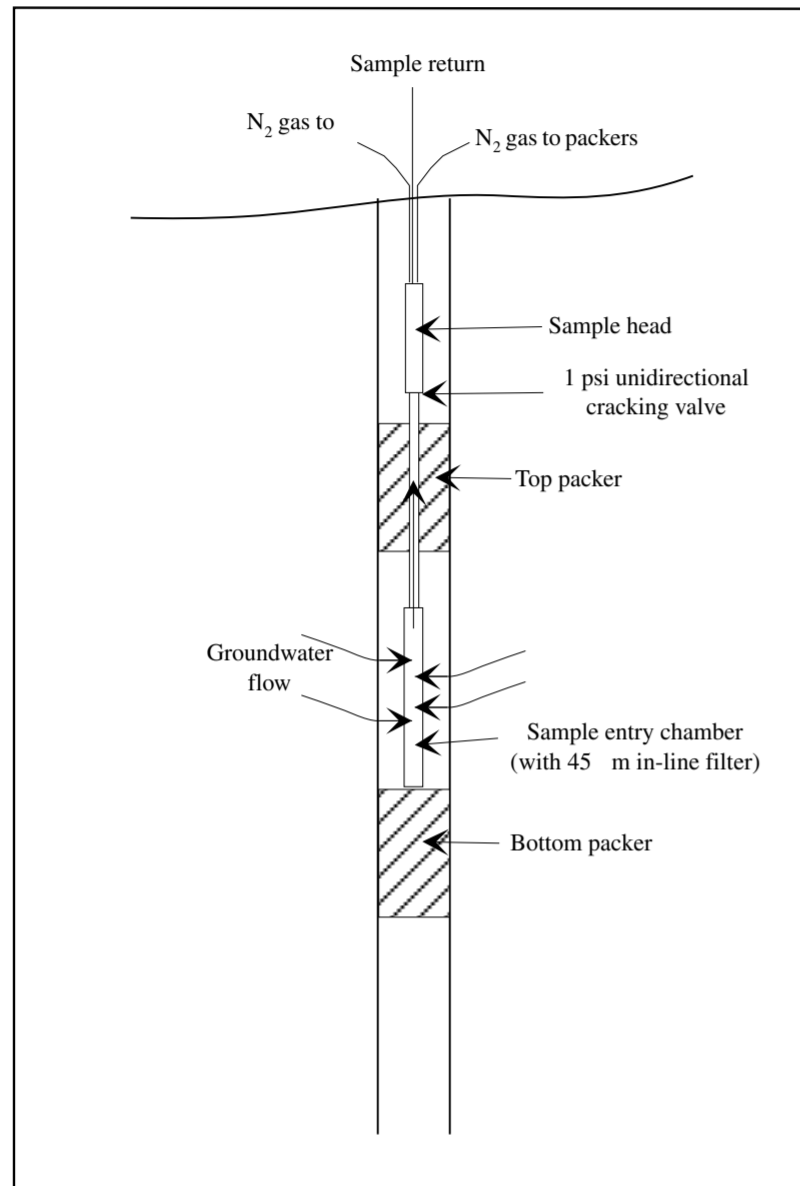


# 4. Field Methods

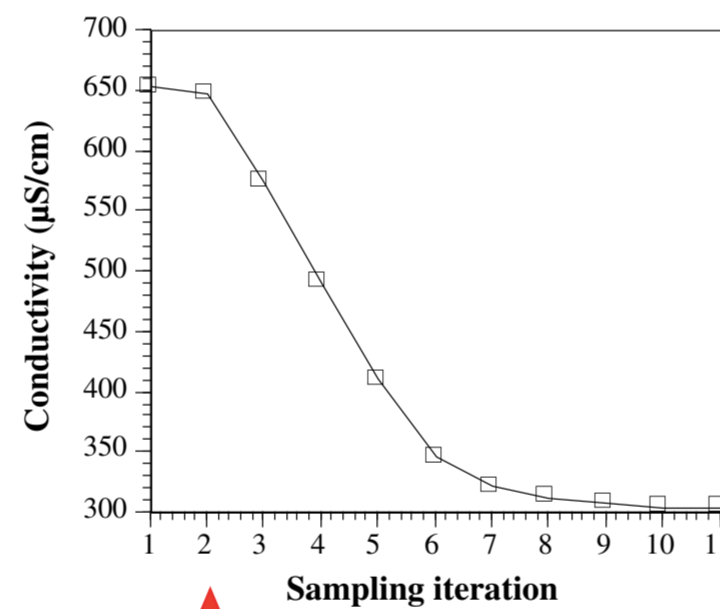
Two types of straddle head packer system were used. A sliding-head packer system built by the GSC, using RST packer heads, and a fixed head packer built by Solinst. However, only the sliding head packer could be worked for our purpose because of the rigidity and small amount of expansion of the fixed head type. Fixed head packers would be more useful where the drill holes are fairly recent and fully cased with screens.



Schematic diagram of operation of straddle-packer system (from Leybourne et al., 2000).



Another method that was implemented was using a double-valve pump. Solinst is the manufacturer of this piece of equipment and this system involves lowering the pump head to a given depth in the hole and using N<sub>2</sub> gas to drive a column of water to the surface. This system was used on a number of occasions because many times the drill hole diameter was either too large or too small for either packer system.



For packer and double-valve pump collected samples, depths were developed until conductivity, Eh and pH reach a steady-state.



A third method used in this study was a Grundfos electric pump. Pumping could be done down to a maximum depth of approximately 20 m. The Grundfos was used to pump water up out of the drill hole and to carry out pump tests in holes at sites 95-2, C14 and A4.

