Application Note

Deep bore wells

When aquifers are located very deep underground it is necessary to use a deep bore well for water extraction. Boreholes with 50 mm or 2” diameter will be sunk into the ground as monitoring wells for the measurement of groundwater level and hydrometry. Hydrologists then use the collected data to map the area and size of the aquifer.

When aquifers are suitable for water extraction, a suitable location for the pump installation is chosen and a small diameter deep bore well is sunk into the ground and lined with tubes. Deep bore wells extend tens or hundreds of meters or yards underground and a very small diameter extraction borehole pump is lowered into the aquifer to extract the water. Pumps can be as small as 100 mm or 4” in diameter, but commonly 150 mm or 6” diameter pumps are used. A submersible pressure transmitter will be lowered into the monitoring well or even into the deep bore well for monitoring the level of water and to protect the pump against running dry, if too much water is being extracted.

Hydrologists very commonly use the deep bore wells as monitoring wells to check the effects of the water extraction on the underground water level.

Deep bore wells and special borehole pumps provide water supply to homes or communities where water is scarce. In areas hit by drought, deserts or other areas where there is no natural surface water, deep bore wells can be sunk hundreds of meters into subterranean groundwater to supply fresh water in the most hostile regions.

Please find further information on this topic on our information platform www.wika.com/hydrostatic-level

Application Note

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