

## OPTIMIZATION OF THE WELL DRILLING IN COMPLEX GEOLOGY AREAS (WELL SITING) GEOELECTRICAL METHOD

**Project:**

well siting for drinking water (2007)

**Location:**

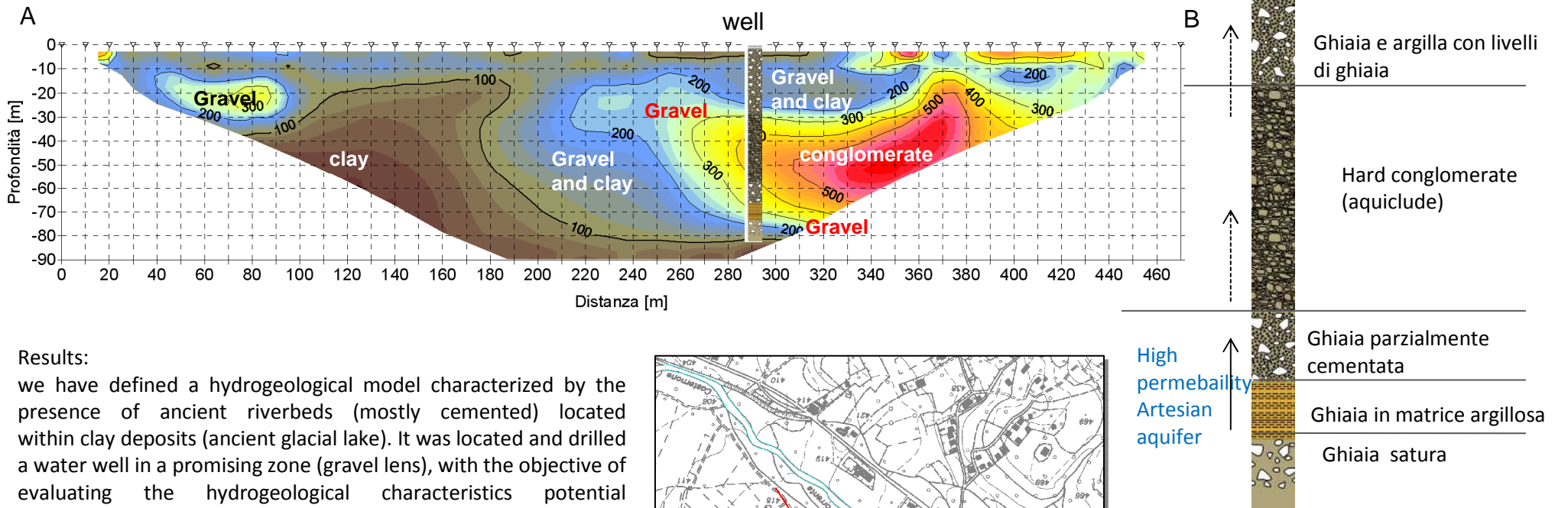
the foothills west of Turin (Italy)

**Scope of the survey:**

Localize gravel lenses (ancient river beds, water productive) inside lacustrine deposits (mainly clay)

**Survey array:**

Acquisition of two lines perpendicular to each other (48 electrodes spaced by 10 m). Maximum depth: 90 m



**Results:**

we have defined a hydrogeological model characterized by the presence of ancient riverbeds (mostly cemented) located within clay deposits (ancient glacial lake). It was located and drilled a water well in a promising zone (gravel lens), with the objective of evaluating the hydrogeological characteristics potential aquifer. The results of the water well (drilled in February 2009) have shown the presence of two aquifers separated from each other: a phreatic aquifer in the upper gravel/clay deposits (with static level to -12 m) and a deep artesian aquifer (with static level to -3 m), in the gravel deposits below conglomerate. Flow rate of the second artesian aquifer: 7 l / s