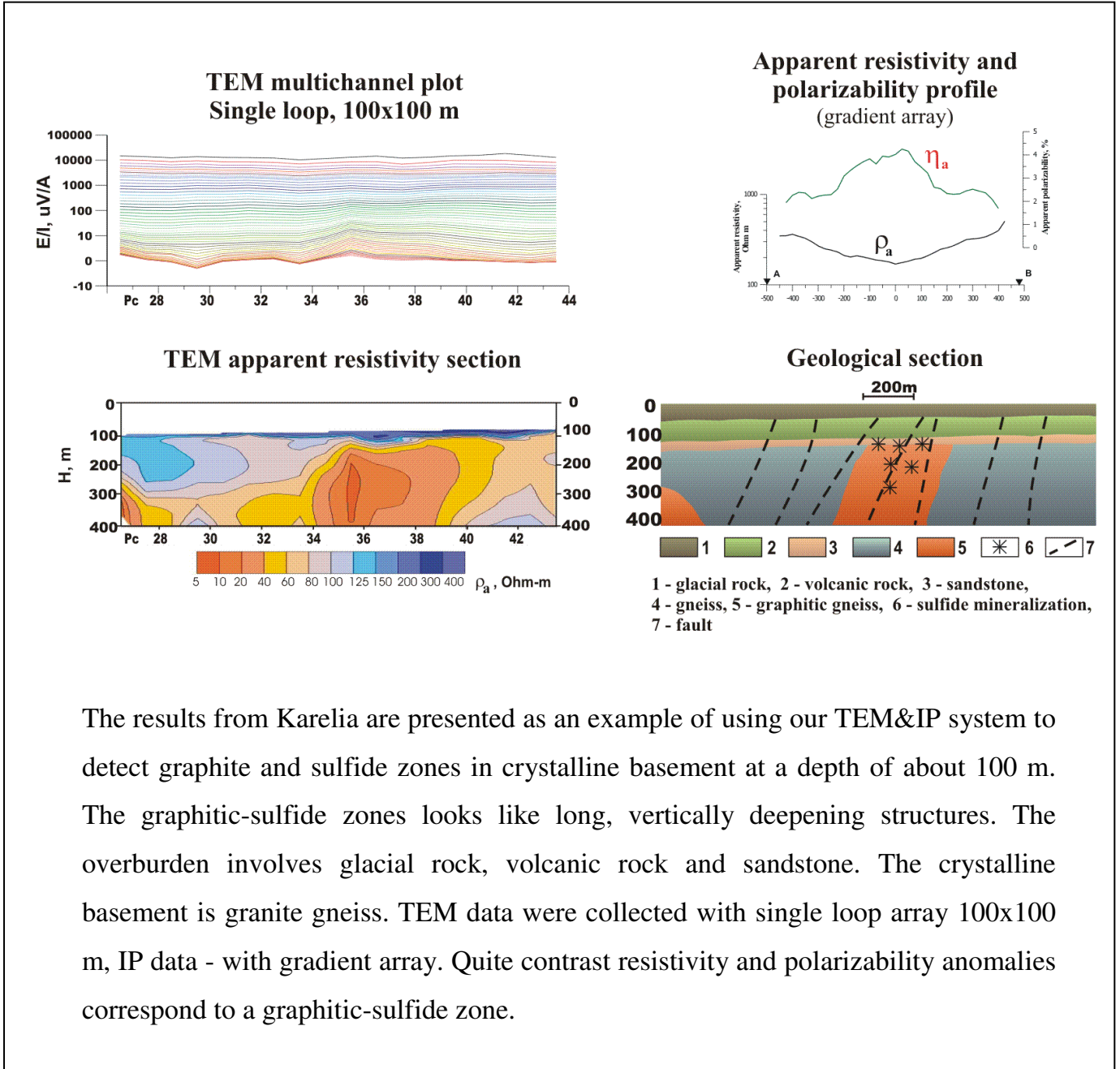


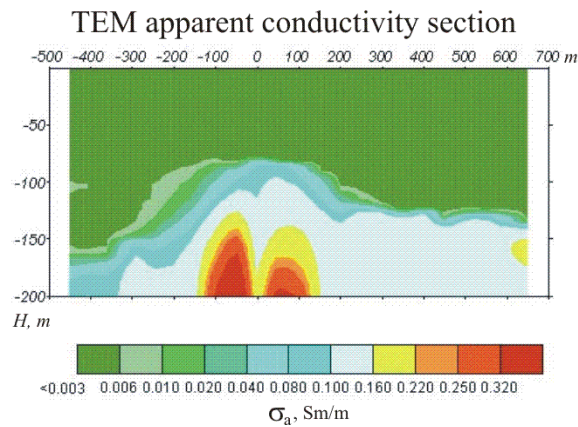
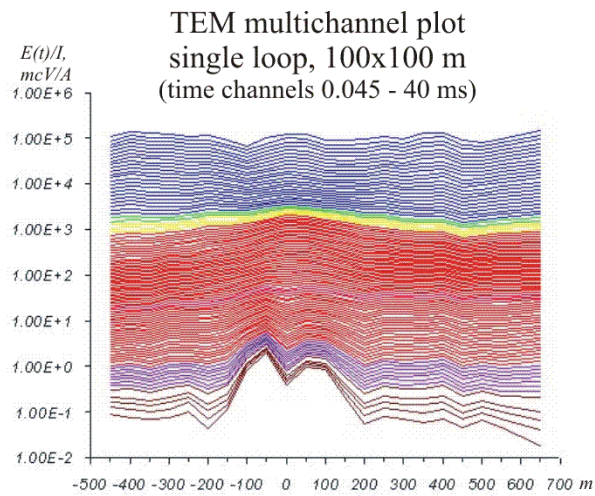
CASE HISTORIES

1. TEM & IP prospecting for graphitic zones in crystalline basement

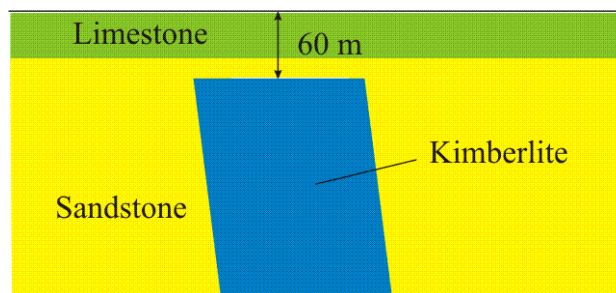


The results from Karelia are presented as an example of using our TEM&IP system to detect graphite and sulfide zones in crystalline basement at a depth of about 100 m. The graphitic-sulfide zones look like long, vertically deepening structures. The overburden involves glacial rock, volcanic rock and sandstone. The crystalline basement is granite gneiss. TEM data were collected with single loop array 100x100 m, IP data - with gradient array. Quite contrast resistivity and polarizability anomalies correspond to a graphitic-sulfide zone.

2. Prospecting of a kimberlite pipe with TEM method

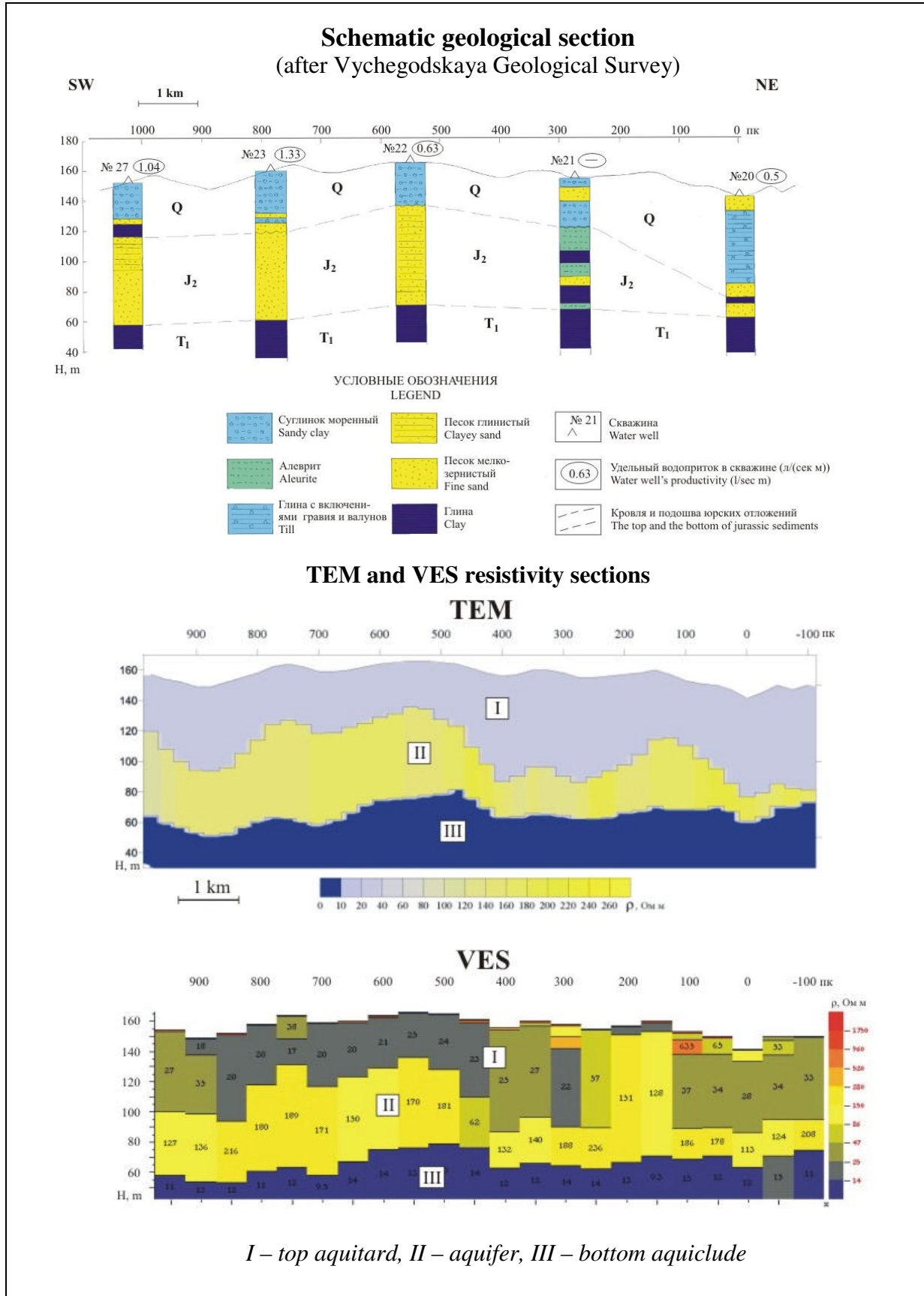


Simplified geological section



That is a usual situation when kimberlite is more conductive in comparison with the host rock, so TEM method can be effectively used for its detection. In the presented case a kimberlite pipe was quite a deep target (depth is about 60 m). The overburden rock is limestone, host rock is sandstone. Single loop TEM array 100x100 m was used to detect the target. The result of inversion gives a bit deeper apparent conductivity anomaly comparing to the real location of the kimberlite body.

3. The joint use of TEM and VES in groundwater prospecting



TEM and VES were applied to groundwater prospecting at a site in Komi Republic (Russia). Sandy and clayey deposits are spread throughout the area of investigation.

TEM data were collected with coincident loop array of 50 m side length. VES were carried out with four-electrode Schlumberger array (up to 2000 m long). Based on the TEM&VES data we managed to map the aquifer and define an area, where water wells could be most productive, that was confirmed by hydrogeological results.