



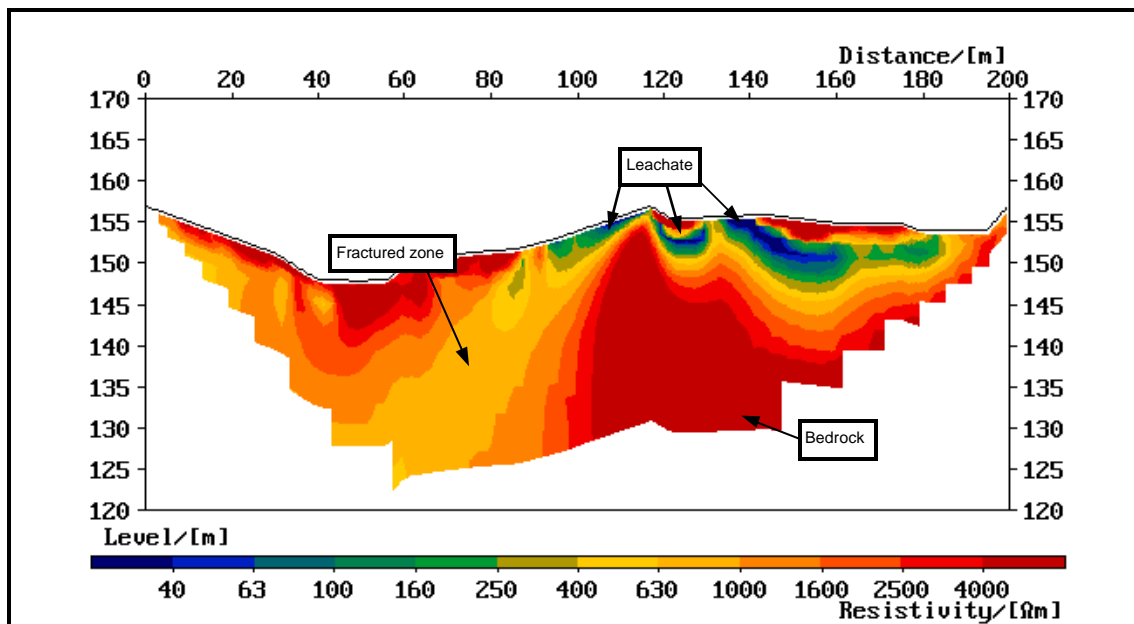
ACID LEACHATE

Kniphammaren, Jönköping municipality, Sweden

Unsuitable location of dangerous waste deposits means potential high risks for the environment, even at large distances from the deposit. The Kniphammaren acid waste deposit constitutes such an example. Resistivity Imaging was applied successfully to picture the acid plume.

The deposit is located a few kilometres south of Jönköping. It is placed in a former quarry with permeable layers of sand in the bottom and on the flanks. During a few years in the beginning of the seventies sludge containing oil with sulphuric acid from a nearby oil recycling plant was deposited in

the quarry. An insufficient cover and the permeable bed led to a high flow of acid leachate to a nearby stream. The area around the deposit has been investigated with several methods, including geophysics. However, no distinct information about the plume came out. For this reason the local authorities of Jönköping and the Swedish environmental protection agency commissioned Bjulemar & Brorsson Geofysik AB to make an investigation with resistivity surveying. An ABEM LUND Resistivity Imaging System was used to perform an investigation in a slope between the deposit and the stream, perpendicular to the leachate.



Within the surveyed area less than one meter moraine covers the bedrock. The low pH value of the leachate implies a low electrical resistivity. This means that the leachate easily can be detected in a resistivity survey. The investigation further indicated a fractured zone in the bedrock - a finding that can be of great importance for the

spread of the leachate.

As indicated in the above figure, the flow of the leachate is mapped in a way that hardly is possible using conventional direct methods, e.g. by taking samples. The Resistivity Imaging Method constitutes an efficient tool when time and finances are of importance.

For further information please contact Jörgen Brorsson at Bjulemar & Brorsson Geofysik AB