

**THE SPATIAL COVERAGE AND SEDIMENT SEQUENCE OF A 'DEAD-ICE HOLLOW'
AS REVEALED BY THE ELECTROMAGNETIC REFLECTION METHOD**

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Electromagnetic reflection method (EMR, ground penetrating radar, GPR) has been used to delineate groundwater table topography and depth as well as to locate shallow subsurface structures in selected areas of northern Germany. The EMR profiles are acquired using 60 MHz Antennas (center frequency).

At a wooded area, one site revealed complex subsurface structures, which had no surface expression. A distinct sand-filled, trough-shaped form totally encased in silts and clays was mapped. The base of the trough is quite irregular. A few hyperbolic patterns occur. These could be due to individual boulders along the base of the trough or due to undulations in the sub-trough material. This structure is interpreted as 'dead-ice' sinks, which were shaped at the end of the late-glacial period due to melting of dead ice blocks and later filled with glacio-fluvial sediments.

The regression of glacierization has resulted in the formation of local parts of dead ice blocks (ice calved off the front of the glacier and therefore was no longer connected). Melting of dead-ice blocks created non-flowing, water-filled hollows and sinks.

The spatial coverage of such dead-ice hollows and their sediment sequences will be illustrated, as revealed by EMR.