

the coplanar inphase channel 24 is negative. The negative response shows that magnetic permeability exists.

Dual-frequency surveying

For surveys flown primarily for resistivity mapping, as opposed to EM surveying, the two transmitter coils may be energized at two well-separated frequencies (e.g., 900 and 3600 Hz). Apparent resistivity maps can be made independently for each frequency. The interpretation procedure involves comparing the apparent resistivity and apparent depth parameters at the two frequencies.

The use of two different coil-pair orientations (i.e., coaxial and coplanar) for dual-frequency resistivity mapping is an unorthodox procedure. However, as long as the current flow patterns are primarily horizontal, the different coil orientations do not influence the results. Wire fences and other cultural features will produce local deviations, because they usually respond preferentially to one or the other of the coil-pairs.

The difference channels 33 and 34, and the anomaly recognition channel 35, are not produced for dual frequency surveys. This is because the divergent frequencies of the two coil-pairs render them meaningless.