

## Parallel application of ERT and microgravity measurements

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**Abstract:** The usage of combination of microgravity survey and electrical resistivity tomography is not unique in geophysics. However we have used this complex of methods over a known cavity structures with detail geometry information of the anomalous body (cavity) to prove capability of the complex of methods determine the precise geometry and to find out pros and cons of the methods by finding an optimal solution.

Selection of the test localities has been based on strong density and resistivity contrast characterizing the cavity by microgravity and resistivity measurements.

All the field measurements have been held using an ARES multielectrode system and Scintrex CG-5 gravimeter, which booth ensures precise and reliable results in combination with geodetic survey of the area using GPS and terrestrial techniques. Spacing of the electrodes and gravity stations was always equal, designed to enhance the resolution of the results.

Final results have been processed into the form of separate geophysical models for both methods. Following the results in confrontation with the real anomalous body's geometry is possible to prove the quality of the survey and specify the suitability of application of the complex of methods. Another result yielding from the parallel measurements is data source for the cross correlation database.

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