Identification of Archeological Remnants: Czorsztyn Castle, Poland

Study area was within the ruins of the 14th century Czorsztyn Castle, located in the boundaries of Pieniny National Park (southern Poland). The main goal of this research was to check if one of the stone wall residues continues under the ground surface. Additionally, an attempt was made to identify other geoelectrical anomalies that may have archeological character. The results of the geophysical interpretation and archeological data from excavations were used by archeologists in order to create a more reliable conception of historical development course and to plan further archeological surveys. Due to the limited study area and obstacles (fence, outbuilding, etc.) only one ERT profile was carried out. It runs from W to E direction and is 33 m long with basic electrode spacing $a = 0.5$ m. The surveys were conducted with SuperSting R8 (www.agiusa.com) resistivity meter with dipole-dipole array. PBRP measurements at 11.0 and 23.5 m of the ERT survey line were performed.

Data courtesy of AGH University of Science and Technology
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- **Objective**: Archaeological site investigation
- **Survey site**: Czorsztyn castle, Poland
- **Instrument**: SuperSting R8/IP/SP, 67 electrodes at 0.5 m spacing, using dipole-dipole array

In the geoelectrical section a discontinuous zone A with resistivity value above 100 Ωm was distinguished. It is a remnant (sand, debris) after construction works conducted in the past. Moreover, zones B1, B2 and B3 were distinguished. They are characterized by a relatively ‘regular shapes’ and increased resistivity values. In addition, anomalies B1 and B2 are located in the extension of the sought wall. Taking the information from the test trenches and PBRP results into consideration, it can be assumed that the source of the mentioned anomalies is remains of ramparts. However the B3 anomaly, due to its characteristic shape and resistivity value, may be probably interpreted as a residue of (stone?) wall. The PBRP23 curve from the depth of 1.2 m does not correlate with the resistivity values obtained from the ERT data inversion. This may be related to the appearance of the characteristic ‘af’ zones surrounding a regularly-shaped bodies with a resistivity much higher than the resistivity of the background (Bania and Ćwiklik 2013). Zone C (resistivity below 25 Ωm) can be treated as an original basement.

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