

## **Shallow subsurface cavities revealing by means of seismic-electric effect**

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Seismic-electric effect was applied in field to forecast subsurface cave dome cavities. A source of seismic waves were repeated blows of a heavy hammer or powerful signals of magnetostrictive installation. Main frequency used was 500 Hz. Passed a soil layer and reached a second boundary between upper limestone sediments and a cave cavity, the seismic wave caused electromagnetic fields on the both boundaries what in general is due to dipole charge separation owe to an imbalance of streaming currents induced by the seismic wave on opposite sides of a boundary interface. According to theoretical works of Pride the electromagnetic field appears on a boundary between two layers with different physical properties while a seismic wave propagation. An electric responses of electromagnetic fields were measured on a surface by pair of grounded dipole antennas, or by one pivot and a long wire antenna acting as a capacitive pickup. The arrival times of first series of responses correspond to the time of a seismic wave propagation from a source to a boundary between soil and limestone layers. The arrival times of second row of responses correspond to the time of a seismic wave way from a source to a boundary of limestone layer with a cave cavity. The method depths successfully investigated were between 2,5-15m. Similar electromagnetic field on another type of geological structure was also revealed by Mikhailov et al., Massachusetts, but their signals registered from the second frontier were too faint and not evident in comparing with ours ones that occurred to be perfect and clear.