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Tepe Ghabristan: A Chalcolithic Tell Buried in Alluvium

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Abstract

The late Chalcolithic (4th millennium BC) tell of Ghabristan in the Qasvin plain of NW Iran stood once about five metres high above a vast floodplain. Seasonal rivers are fed by rain over the mountains in the south and deposited alluvial sediments that have buried the tell. Today it is ploughed level with the surrounding paddy fields. After abandoning the tell, Iron-age people started a new settlement 500m to the NE (Tepe Sagzabad) and used the older site as their burial ground. These Iron-age graves are within the current plough-zone and have been heavily looted, leaving a crater landscape. Over the last years several excavations have investigated other parts of the site and revealed its deep stratigraphy. Of particular importance are metalworking finds from the chalcolithic period.

Magnetometer surveys of a 6ha area were undertaken to identify the extent of the tell and any associated features (Figure 2). The robber pits in the central area produced pronounced negative anomalies and any potential features below them were undetectable. Outside this disturbed area important discoveries were made. Several pit-like anomalies were detected adjacent to the illicit excavations (1) and it is likely that these are related to burials that may still be undisturbed. In addition, the outlines of irrigation channels (2) were detected. They appear to be much more curvilinear than the straight irrigation ditches used in modern times. Upon excavation one of these was found to be buried by ca. 0.8m of gravels and silt. Due to their relatively shallow nature these features are possibly contemporary with the Iron-age graves and provide important insight into past land use.

Most of the formerly excavated areas were not backfilled, which allowed to conduct magnetometer surveys closer to the earlier occupation levels. The data revealed distinct rectilinear anomalies (3), which are probably linked to the chalcolithic metal production that was reported from adjacently excavated areas of the site.

The survey has revealed new insights into the Chalcolithic and Iron-age use of this site and will lead to further archaeological and geoarchaeological investigations.

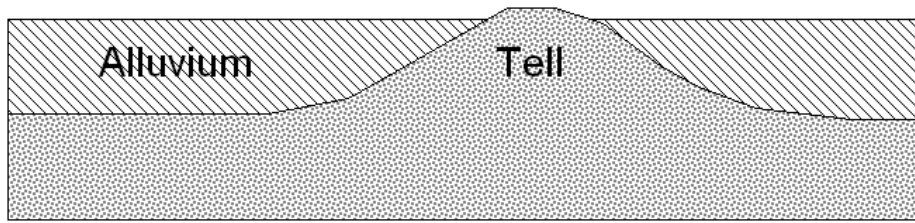


Figure 1: Tepe Ghabristan buried in alluvium

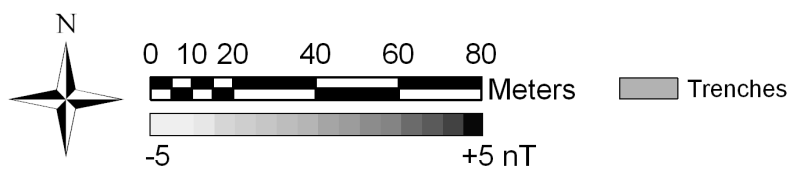
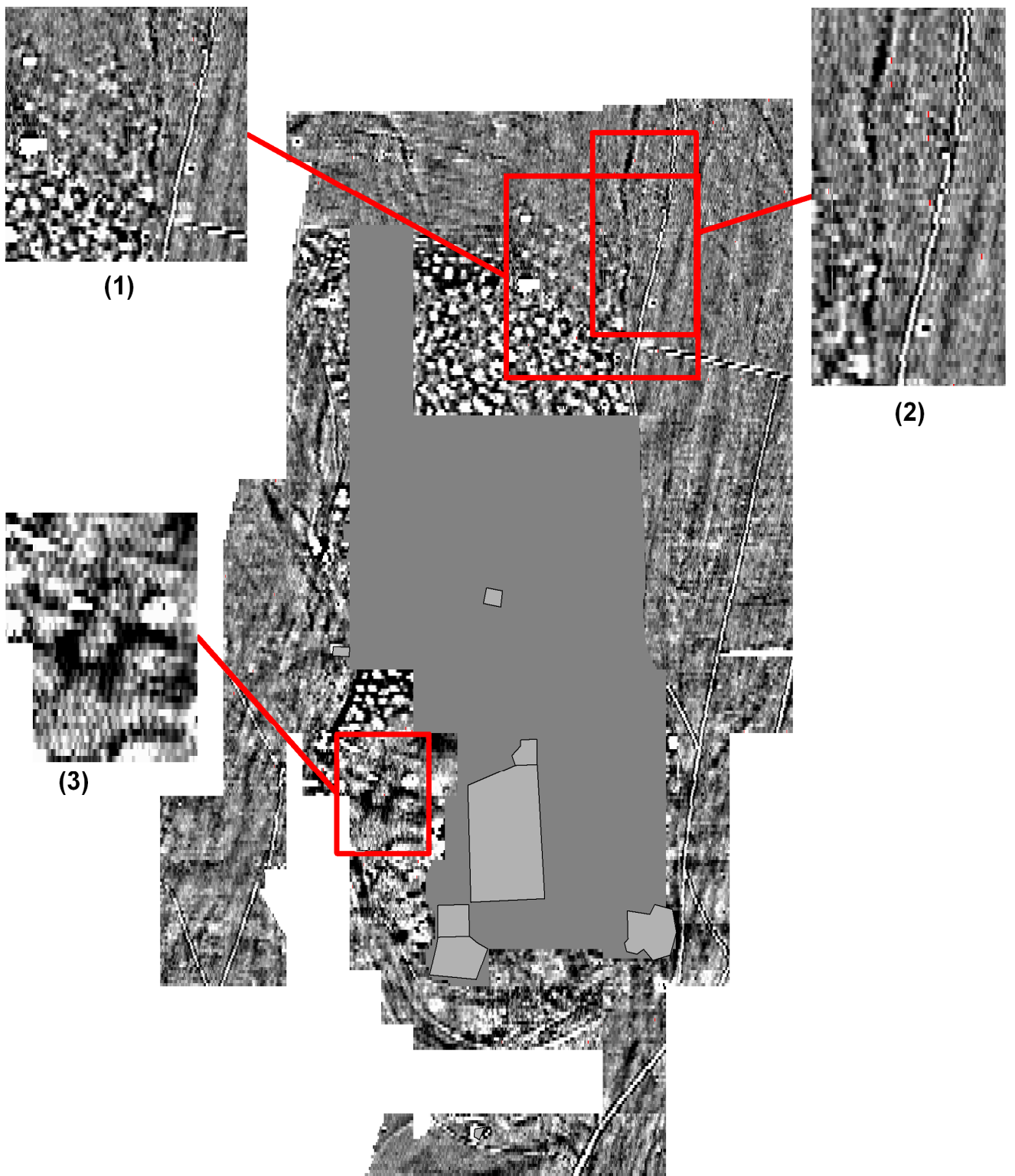


Figure 2: Fluxgate gradiometer survey (0.25m × 1m resolution)