

**Dakhleh Oasis Project**  
**Columbia University**  
**Excavations at Amheida 2007**  
**Topographic Work**

The topographic work carried out during the 2007 excavation season was preceded by the verification and re-definition of fixed survey points, due to the impossibility of identifying all the stakes used as benchmarks during the previous seasons of survey (2001–2006); this situation required the elaboration of a new and permanent traverse in which it was possible to include the whole site, beginning from the already extant points S1 and S2 and adding three new station points (S3–5) that were cemented to the ground.

#### GENERAL PLAN

While working at the new site plan, it was possible to verify the level of precision of the previous one, which showed a significant difference in the area between the temple and area 2.1, investigated in the 2001 and 2002 topographic campaigns; Therefore, it was necessary to re-map all the buildings above ground level.

#### AREA 1.2, 1.3, 1.4

The previous topographic survey of this area was improved and integrated with the new features uncovered during the 2007 excavation season.

#### AREA 2.1

Following the conclusion of the archaeological excavation within this area, a new and complete 2D plan was drawn, together with a detailed 3D survey (rooms 1–2, 4–8, 11–17 and perimetral walls of rooms 9–10); in both cases, particular attention was paid to the representation of all architectural features (niches, thresholds, vaults, staircases, etc.);

Still concerning Area 2.1, a photogrammetric survey of almost all the visible walls was carried out. In short, it consists of a series of non-compressed photographs that, once exported and geo-referenced using coordinates taken with the help of a Total Station, are rectified and joined together in a photomosaic; the final result is a single high-definition photogram, which can be used once imported and scaled in CAD environment as a graphic base layer for vectorial drawings. Following is a list of the photogrammetric images that were joined together in a photomosaic and vectorialized in CAD:

Room 2 (North, South, West, and East walls);

Room 4 (North, South, West, and East walls);

Room 6 (North, South, West, and East walls);

Room 7 (North, South, West, and East walls);

Room 8 (North, South, West, and East walls);

Rooms 9 and 10 (North wall);

Room 11 (North, South, West walls);

Room 12 (North, South, West, and East walls);

Room 13 (North, South, West, and East walls);

Room 14 (North, South, West, and East walls);

Room 15 (North, West, and East walls);

## CARTOGRAPHY

The map that was created shows territorial units that were identified on the basis of archaeological and geo-morphological data, with the goal of identifying the boundaries of the site and understanding the evolution of the area in relation to anthropic occupation.

The cartographic survey included a wide area delimited by the modern village of Amheida to the North, by the currently cultivated fields to the West and to the South, and by the modern road to the East.

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