

**THE ITALIAN GEO-ARCHAEOLOGY MISSION TO MONGOLIA HAS BEEN IN THE GOBI-ALTAI REGION —IN THE PROVINCES OF BAYANKHONGOR AND ÖVÖRKHANGAI—SINCE 2000, WORKING ON BRONZE AND IRON AGE BURIAL SITES IN PARTNERSHIP WITH THE MONGOLIAN SCIENCE ACADEMY AND ARCHAEOLOGY INSTITUTE. THE MISSION RECENTLY EXTENDED ITS INVESTIGATIONS TO THE NORTH-EAST OF THE COUNTRY, WHERE IT IS FOCUSING ON MEDIEVAL TOMBS DATING BACK TO THE HUN EMPIRE.**

# In search of **IMPERIAL TOMBS**



Fig 1



Fig 3 A round feature is apparent in this SPOT 5 2.5-metre black-and-white image.



Fig 2 The track fades into the landscape.

The province—*aimag* in Mongolian—of Khentii, some 50 kilometres north-east of Ulan-Bator, is the cradle of the Great Mongol Empire (*Yeke Mongol Ulus*) established by Gengis Khan and his descendents in the 13<sup>th</sup> and 14<sup>th</sup> centuries. This is where the great Mongol chiefs were buried with their retinue of wives, mistresses, servants and horses. In accordance with popular tradition, unchanged through generations since the founding of the Mongol state in 1206, the early Great Khans including Gengis Khan are buried somewhere in the land of their birth, well hidden by terrain morphology and even more so by the vow of secrecy imposed on their subjects.

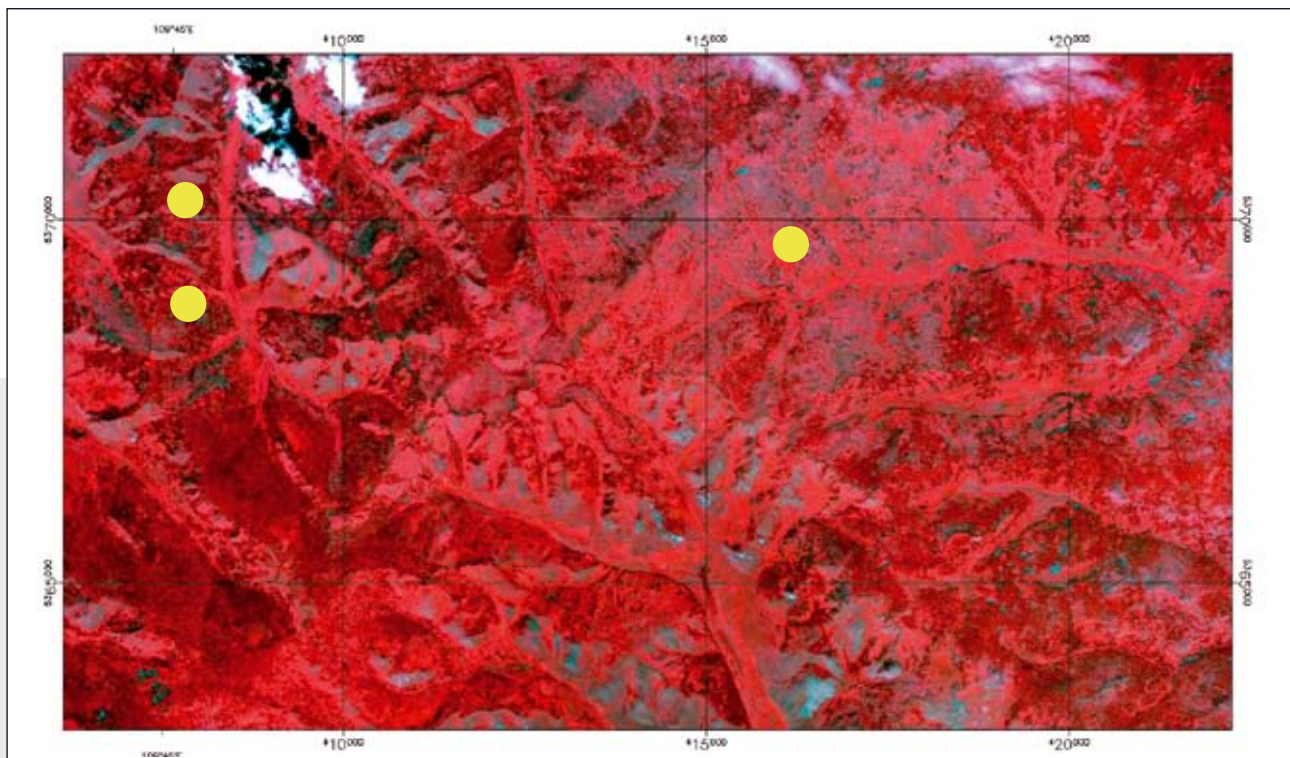
Ethnological field surveys and analysis of historical sources delimited the search area to the districts—*sums* in Mongolian—of Batshireet and Binder (Fig. 1).

During a first reconnaissance field trip in January 2008, the team used preliminary geo-archaeological interpretations of Landsat 7 ETM+ imagery of the Barkh valley as far as the foothills of the Gurvan logoe mountain range; several large buried geometric features—covering tens to hundreds of metres—of round and square shape were observed on the range's northern slopes. These features can be distinguished from variations in plant cover and moisture in unsaturated soils. Their morphology reveals the presence of complexes of aristocratic tombs at an estimated depth of 10 to 15 metres, where men (in circular structures) and women (in square structures) are buried.

The team therefore decided to refine their search using very-high-quality multispectral (10-metre) and black-and-white (2.5-metre) SPOT 5 imagery of the area of interest, supplied by par Spot Image.

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Location of the tombs shown in this SPOT 5 image.



Fig 4

The landscape of the region is typically formed by wide glacial valleys carved between low hills, with no prominent features (Fig. 2).

The area is characterized by low, rolling hills, essentially more or less metamorphic granite from the Palaeozoic era, covered by discontinuous woodland with conifers and birch.

### SPOT 5 high-resolution imagery was fundamental

Imagery interpreted geomorphologically and geo-archeologically using an interactive process revealed many round and square surface features in the area of interest (Fig. 3), a clear sign that there were probably aristocratic tombs not very far below from the age of the Mongol Empire (13<sup>th</sup> and 14<sup>th</sup> century).

Even at this early stage, SPOT 5 high-resolution imagery was fundamental in identifying tombs of the Great Khan imperial family in a remote area with no easily visible topographic features to go by in the field.

Field inspections in June 2008 confirmed the features seen in the imagery, indicating the presence of a probably rich and very important burial site (Fig. 4).

As a result of these efforts, a project is now being prepared to study the sites in Gurvan logoe (Batshireet) and Borboulag (Binder), involving digs and using electrical and radar sounding to unveil the closely guarded secrets of these large tombs. ■

#### MORE INFORMATION

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