

ANNULAR STRUCTURE OF LAHJEYRA (REE, Nb, Fe, Mo, Au, V) (SOUTHERN PROVINCES, MOROCCO)

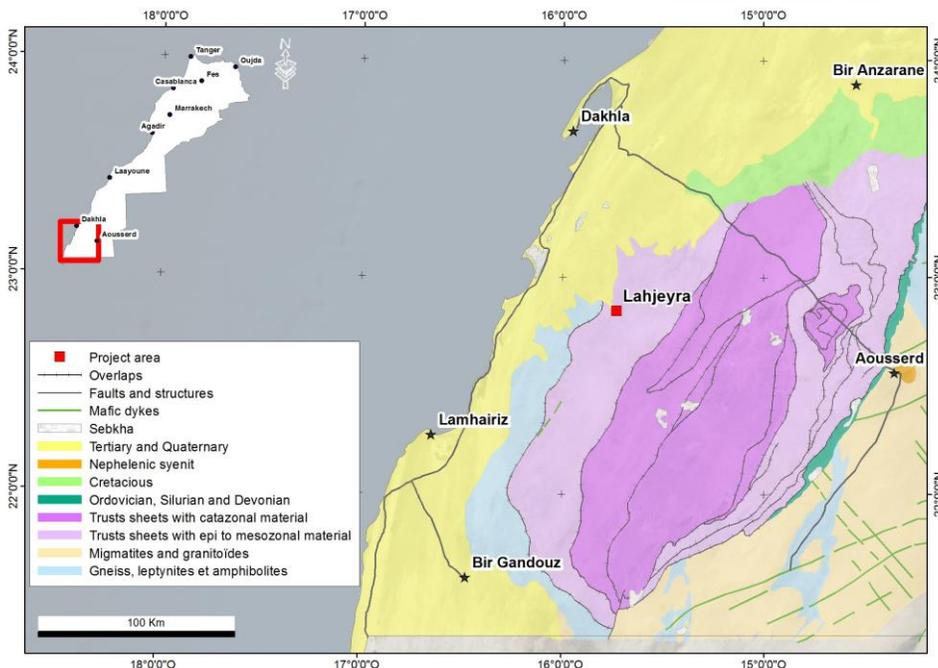
Overview :

Lahjeyra is a plurikilometric annular volcanic structure of breccia silica and iron oxides ; located near the circular structure of Twihinatte and Lamlaga linked with magnetic and radiometric anomaly. It is mineralized in REE, Niobium and Iron with indicial grades of Mo, Au and V.

Target name	Lahjeyra
Type of mineralization	REE, Nb, Fe, Mo, Au, V
Licence coverage	5 Licences
Available data	Geological data (mapping to 1/5 000 of an area of 8 km ²)
	Geophysical data (geophysical survey : magnetometry and gravimetry)
	Geochemical data (area of about 60 km ² , 920 soil samples)
	Drilling data (15 drill holes totaling 2 792 m)
Grades	372 MT at 0,62% LREE, 613 ppm HREE, 0,34% Nb ₂ O ₅ et 461 ppm Th
Dimensions	Extension : kilomeric/ Thickness : 10 to 207 m
Infrastructures	Roads ; Dakhla seaport and airport

Geological setting and location :

The prospect of Lahjeyra is located 200 km south of the city of Dakhla, including 130 km of roads and 70 km of tracks, in the 1/100 000 topographic sheet of Mzayzat As-Sakkoum. It is located 80 km north of the Twihinatte's structure. The geological survey shows a large annular structure of at least 4 km long and 2.5 km wide through Proterozoic gneiss. This volcanic structure includes a main body (composed of breccia silica and iron oxides) and a peripheral ring (composed of iron oxides and quartz) that surrounds it. These two parts are separated in places, by a large intermediate depression filled with recent formations. The mineralization in Rare earth elements and Niobium is hosted either by iron oxides and breccia silica.



Location and general geological setting of Lahjeyra

Achieved Works and results :

The magnetic and radiometric data of Mzayzat As-Sakkoum were obtained by the interpretation of the aëro magnetic and spectrometric survey done by Sander Geophysics on the southern part of Morocco. Several anomalies were individualized and have undergone geological control, which led to the discovery of Lahjeyra structure.

Lahjeyra circular structure is clearly visible on the Landsat image and is marked by the superposition of three geophysical anomalies (uranium, thorium and magnetic).

The geological control shows that the magmatic complex is mainly composed of varied brecciated silica outcropping in the central part and iron oxides surrounding depression. Several ferruginous and breccia quartz vein are identified, they primarily affect the gneissic basement hidden by recent cover (sand, soil and reg) which is extended to the periphery of the structure.

Siliceous outcrops are largely represented by varied Iron silica vacuolar and brecciated. The quartz veins are often white slightly ferruginous and are located at the periphery of the structure, with a variable direction (subparallel to the peripheral ring), and metric dimensions with a thickness that can reach 2-6 m. Quartz carbonates occupy the depression where they are represented by limestones. The results of chemical analyzes ponctually reach 3.52% Ce, 2.10% La, 0.63% Nb, 137 ppm Ta and 936 ppm U.

A soil geochemistry survey was conducted over an area of about 60 km² using a square grid of 250 m and on east-west direction. 920 soil samples were collected. The analysis results show anomalies in Ce, Nb, Mo and Zn, which coincide with the structure of Lahjeyra and its immediate surroundings.

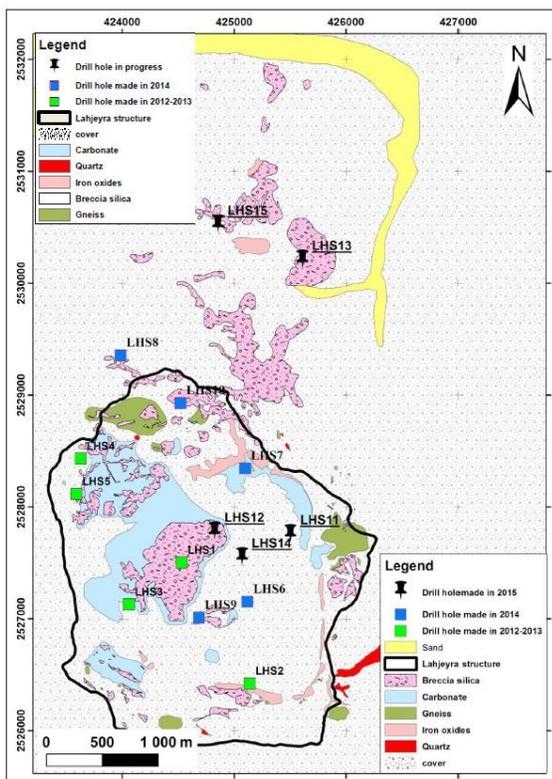
A ground geophysical survey in magnetometry and gravimetry was executed. It shows two magnetic and gravity anomalies that overlap and suggests the presence of a dense and magnetic body.

Three drilling programs were completed (15 drill holes totaling 2 792 m). Based on the results of drill holes LHS1, LHS6, LHS9, LHS11, LHS12 and LHS14 realized on the central part a resource assessment was conducted and shows a potential of 372 MT at 0.62% LREE, HREE 613 ppm, 0.34% Nb₂O₅ and 461 ppm Th.

Outlook :

Prospects and potential of the sector are large with:

- the dimensions of the structure;
- the extension of the prospect Lahjeyra under the intermediate depression;
- the existence of other geophysical and geochemical anomalies in the immediate vicinity of the annular structure;
- the presence of gold mineralization and molybdenum on the peripheral ring.



Geological Survey 1/5 000 with drill doles locations

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