ONHYM

المكتب الوطني للهيدروكاربورات و المعادن

ⵓⴼⵉⵙ ⵓⵏⴰⵟⵉⵔ ⵏ ⵉⵀⵉⴷⵔⵓⴽⴰⵔⴱⵓⵔⴰⵜ ⴷ ⵉⵎⵏⴰⵎⵏ

OFFICE NATIONAL DES HYDROCARBURES ET DES MINES

PGE MINERALISATIONS IN TWIRGA AMWAGA SECTOR (SOUTHERN PROVINCES, MOROCCO)

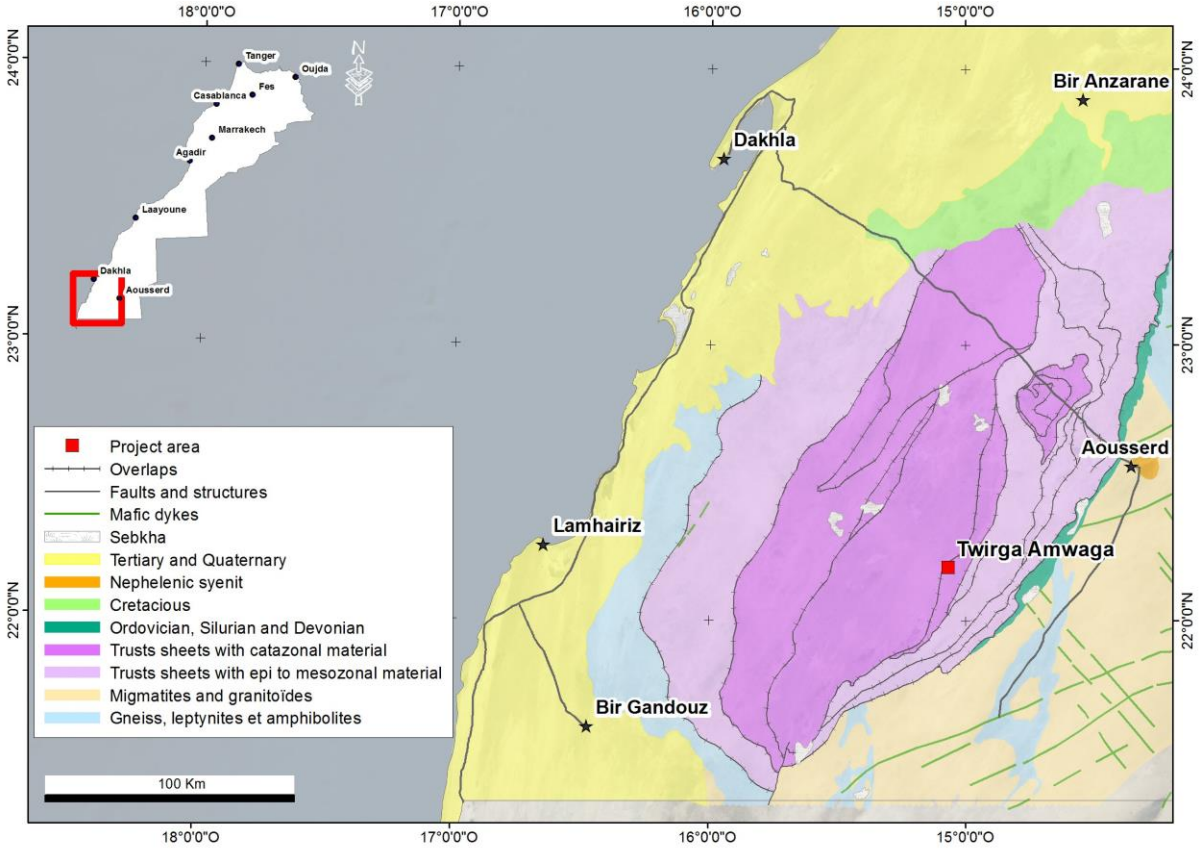
Overview :

Soil geochemistry revealed Pt, Pd, Cr and Ni anomalies on a kilometric extension in the Twirga-Amwaga sector. The presence of basic and ultrabasic rocks constitutes a favorable geological context for the formation of PGE-type deposits. Rock samples reach up to 320 ppb Pt in this area.

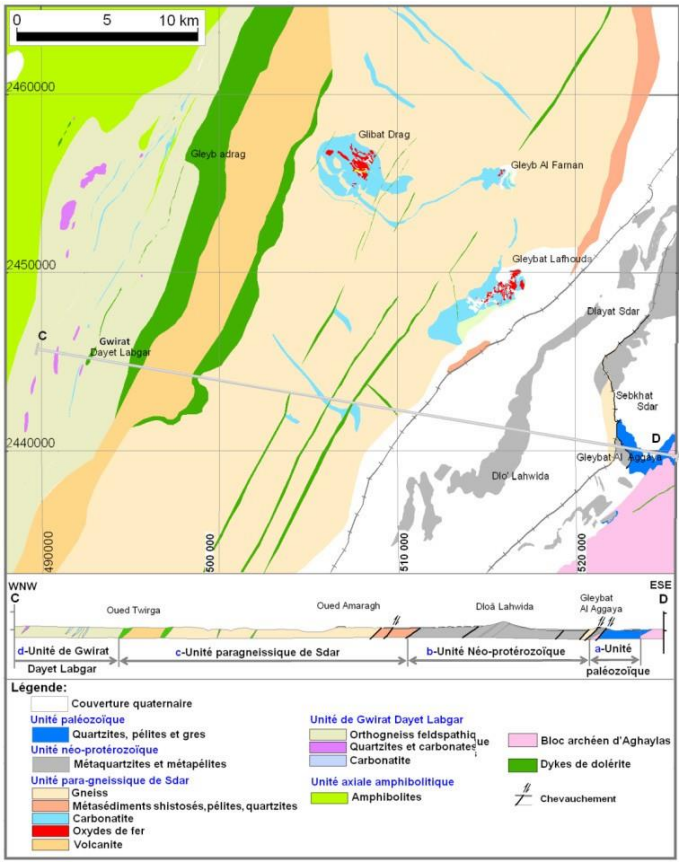
Target name	Twirga Amwaga
Type of mineralization	PGE
Licence coverage	Area reserved to ONHYM by the Ministry of Mines
Available data	Geological data/ Rock samples/ Geochemical data
Grades	320 ppb, up to 9142 ppm Cr, up to 2074 ppm Ni and 137 ppm Co
Dimensions	Plurikilometric extension
Infrastructures	Roads ; Dakhla seaport and airport

Geological setting and location:

The prospect of Twirga-Amwaga is located in the South west of Aousserd city. It is accessible directly by 90 km of tracks, or by 50 km of roads folowed by 50 km of normal tracks. Twirga-Amwaga area lies in the axial zone of Mauritanides zone which is a part of the western block elongated in a NNE-SSW extension of approximately 30 km and a width of about 15 km. The axial zone consists mainly of amphibolite, anorthosite intrusions, dolerite dikes and lavas.



Location and general geological setting of Twirga-Amwaga



Geological map of the eastern part of Adrar Souttouf

Achieved Works and results :

The interpretation of soil geochemical strategic survey in this area shows several anomalies in PGM elements. The main one (peak 26 ppb Pd and 950 ppm Ni) is located on an extension of Oued Twirga extended about 30 km extent NNE / SSW and 15 km width.

The work undertaken in this project consists of geological control of these anomalies and the location of the source of platinum and palladium detected on the ground. So the following works were performed :

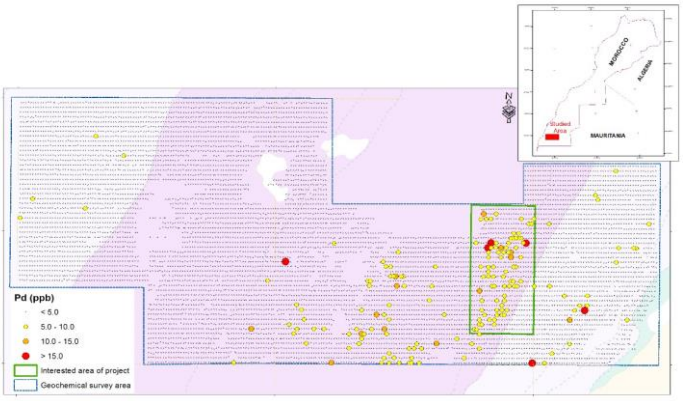
- 1/5000 geological mapping in promising areas to better approach their geology, the area covered is around 50 km² of which 400 samples were collected.
- A detailed geochemistry survey, which confirm geochemistry anomalies highlighted previously.

Chemical analysis of the samples confirm the presence of platinum and palladium in three distinct lithologic facies : ferruginous feldspathic orthogneisses with levels up to 63 ppb palladium and platinum up to 80 ppb, micro-dolerites with platinum contents of up to 260 ppb and palladium up to 42 ppb and serpentinites with platinum contents of up to 320 ppb and 22 ppb up to palladium. Contents, up to 9 142 ppm Cr, Ni up to 2 074 ppm, and 137 ppm Co, have been found in basic rocks (serpentine, dolerites).

Outlook :

The perspectives and the potentialities of the sector are high by:

- abundance of Pt and Pd soil anomalies in the
- Twirga-Amwaga sector ;
- the existence of mafic and ultramafic rocks such as amphibolite, dolerite and the serpentine ;
- the identification of promising Pt contents up to 320 ppb.



Distribution of palladium contents in soil

For more information, please contact Ms.
Amina BENKHADRA
General manager
5, Avenue Moulay Hassan- BP 99 - Rabat,
Maroc Tél : + 212 5 37 23 98 98
Fax : + 212 5 37 70 94 11
E-mail : benkhadra@onhym.com
Web site : www.onhym.com