

Minerals database for Mauritania

A valuable resource for future exploration

by Stan Coats, *Keyworth*

As part of the World Bank-funded 'Projet de Renforcement Institutionnel du Secteur Minier' (PRISM) in Mauritania, the BGS has the task of creating a 'Système d'Information Géologique et Minier' (SIGM). This involves designing bibliographical and mineral occurrence databases and incorporating these into a Geographical Information System (GIS) and 1:500 000 scale geological compilation map of the whole country. The author, Dr J Mankelov (GIS), and V Hulland (Systems Support), assisted by the staff of the Direction des Mines et de la Géologie (DMG), have the task of producing the geology and mining database.

The BGS purchased and installed a network of four computers in an office in Nouakchott (*right*), which, while it looked somewhat like a prison cell from the outside with small barred windows, was fully air conditioned, dust-free and reasonably spacious. An A0 scanner is included in the contract and, with its software, is capable of turning a brown-stained, 50-year old dyeline print into a clear black and white diagram of far higher quality than the original.

Existing data

Much of the country is covered in drifting sand and the geology is not well known. Despite this, there are a surprising number of publications and reports. Over two and a half thousand were identified but, because the country was administered from Dakar (Senegal) in French colonial times, copies do not

always exist in the DMG offices in Nouakchott. Also, the physical condition of the older reports is rapidly deteriorating and the key documents are being scanned to create an electronic library, accessible to all the DMG staff via the database.

The mineral occurrence database has been compiled from reports and lists dating back to the 1930s. Finding your bearings in the Sahara desert without a Global Positioning System is difficult, and the location of many older occurrences is only approximate. This can create problems when the database combines historical and modern data. Mineralised areas include the Reguilbat

Shield with iron, gold and diamonds, and the Mauritanides fold belt with copper, gold and rare earth deposits.

It is important that even small indications of mineralisation are entered into the databases, even though they may, at first sight, appear insignificant. They could lead to the discovery of new deposits, particularly when combined with information from remote sensing, airborne geophysics, and new geological mapping. Mauritania has a high potential for these deposits and, with its modern mining law and stable political structure, it could become one of the fastest developing African nations.

Staff and training

Creating databases for countries like Mauritania is only half the task and training the DMG staff is very important. They need to be able to develop and sustain the work in the future, so practical IT training is key to the success of the whole project. Two periods of training have been provided and the DMG staff are rapidly gaining in confidence and skill. The SIGM is very much a flagship for the PRISM project and Minister of Mines and Industry took a personal interest to ensure its success.

Acknowledgement should be made of the efforts of the BGS, DMG and PRISM staff in helping to make this on-going project a success.



Ahmedou Medeya Ould Saleck (DMG) scanning a report in Nouakchott.