

Institutional Strengthening of the Afghanistan Geological Survey

A project undertaken by the British Geological Survey

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The Islamic Republic of Afghanistan, to give it its official name, is a relatively recent nation state, gaining full independence only after the end of the Third Anglo-Afghan war on 19th August 1919. It is of course steeped in antiquity. Located at the crossroads of Central Asia, the Indian sub-continent and the Middle East, it has long been a place of changing dynasties and empires and passing military invasions, including those of Alexander the Great and Genghis Khan. More recently, since the late 1970s, it has been in a state of almost continuous warfare, culminating in the 2001 invasion led by the United States, resulting in the removal of the Taliban government.

Afghanistan straddles another type of crossroads. It is in part of the area where, over long geological time, the great Indian continental plate has gradually drifted northwards and collided with the Asian plate, causing the Indian plate to be 'subducted' beneath the Asian plate. This makes for great geological activity. A mountain-building period formed the Hindu Kush and Himalayas and, under intense pressures and temperatures deep in the earth, conditions were ideal for the creation of mineral deposits. The result: Afghanistan has a wealth of energy and mineral resources – coal, gas, oil, metallic minerals and precious metals, and precious and semi-precious gemstones – including the famous lapis lazuli, mined since the Neolithic Period and exported along the great Asian trade routes to the Ancient Egyptian civilizations.

Unfortunately, during the last 20 years of war the Afghanistan Geological Survey (AGS) was severely weakened, and in the more recent civil war the building complex was wrecked as it was a strong point on the front line of fighting between the Mujahedeen and the Taliban. While many staff survived the fighting and saved, at great personal risk, many of the very important maps, documents and samples, the AGS was barely functioning. After 2001, the new Afghanistan Government and the World Bank began to formulate a mining sector strategy and policy. The rehabilitation and restructuring of the AGS was an immediate aim – to create a modern geological survey with a reskilled and retrained staff, with programmes of geological mapping and resource assessment using modern

concepts and methods. The British Geological Survey was invited to undertake this capacity-building project which, with UK Department for International Development funding, started in August 2004 and was very successfully completed in January 2008.

In a blackened windowless shell of a building, pockmarked with bullet and shell holes, the work began. Windows, electrical wiring, water and sewage disposal were installed, and the rooms were redecorated and equipped with basic furniture. A generator was installed for electricity, a computer network and internet were set up, vehicles were purchased and the project was away!

Notable project achievements include:

- intensive English language and computer training, both highly popular with the AGS staff;
- collation, assessment and reinterpretation of existing information relating to mineral deposits, including the provision of a major information pack for the international tender exercise for the world's second largest unexploited mine, the Aynak Copper Deposit;
- creation of GIS and databases of mineral deposits and of documents held in the AGS archive, in English, Russian and Dari;
- compilation of information on the full range of Afghanistan mineral resources – promotional work included major conferences and open-file mineral dossiers;
- specialist geological training courses, work experience and field work;
- a set of laboratories established from scratch, covering everything from industrial minerals and rock thin sections to geochemistry and gemmology;
- a library, archive and museum and website – the museum, one of only a few in Afghanistan, is highly regarded and is used as a venue for major governmental functions.

On a personal level, the BGS team were all volunteers. A house was rented in Kabul and, because conditions were difficult and the work was intensive (working six days a week to match local work patterns), most staff rotated on five to six week visits to maintain a continuous presence. This pattern also allowed us to bring in a wide



The Afghanistan Geological Survey building in Kabul.

The Industrial Minerals Team working in a newly renovated laboratory.

Images © Bob McIntosh

range of experts to run specialized courses. Security was always an overriding factor in any activity or travel.

Over time, we visited most parts of Kabul. Particular favourites were the 5th century Bala Hissar Fort and ancient city walls; the Babur Gardens developed around 1528AD by the first Mughal Emperor; 'TV Hill', with tremendous views across the city; and of course the gem, carpet and other handicraft shops, and the well-stocked bookshop of Mr Shah, of *Bookseller of Kabul* fame. A surprising find was the 'British Cemetery,' initially for soldiers who fell in the Second Anglo-Afghan War (1878-1880), but since then for expatriates of all nationalities. All together, Kabul was an extremely interesting and dynamic place in which to live and work.

See www.bgs.ac.uk/afghanminerals for more information of the project.

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