

Afghanistan is endowed with world-class, but undeveloped, mineral deposits. The BGS has been helping local geologists take the first steps towards realising the potential of these deposits as a source of revenue. **Dave Greenbaum and Mike Petterson** report.

A fresh start in Afghanistan

War-ravaged Afghanistan stands on the brink of a bright new future. The country possesses a wealth of energy and mineral resources, many undeveloped, including coal, gas, oil, metallic minerals, precious metals, precious and semi-precious stones and construction/industrial minerals. Natural resource development could potentially provide the vehicle to revive the Afghan economy, provide jobs, and help move the country away from narcotics production. This potential is illustrated by the 1995 United Nations report entitled *Geology and Mineral Resources of Afghanistan* which noted that over 1400 mineral deposits, occurrences and showings are documented — among them world-class deposits of copper, iron and gemstones. However, in 1995 minerals formed only 1% of the country's gross national product. It is thus evident that Afghanistan's energy and mineral deposits are a potentially large, and as yet untapped, revenue source.

Afghanistan faces some major obstacles in developing its minerals. Energy and mining are global industries and companies have little loyalty to any one area or country. Afghanistan will need to compete with the rest of the world to attract the attention of key players. Additionally, the country's roads, railways, airports, water and sewerage, pipelines, electricity cabling and housing are in urgent need of development if Afghanistan is to take full advantage of its human and natural capital. Above all, Afghanistan needs a period of political stability and security if companies are to be persuaded to invest.

Current state of the Afghan Geological Survey

Like other government institutions, the Afghan Geological Survey (AGS) has been severely weakened by years of conflict during which there has been a lack of investment and skills development, and an inability to perform an active work programme. During the fighting between Mujahideen factions following the withdrawal of the Soviets

in 1989, the AGS stood in the front line of firing and was severely damaged by artillery. Throughout this period of conflict and during the later rule by the Taleban, the dedicated staff of the AGS salvaged and protected documents, maps and samples — often at great personal risk to themselves and their families. Only after the Taleban left Kabul in December 2001 were these precious data returned to the Survey. Afghanistan owes a debt of gratitude to these staff. These records of past work will now form the foundation of new databases.

When the BGS first visited the AGS building in late 2002 it was a windowless shell, pock-marked with bullet and shell holes. The offices were unheated, lacked water and power facilities, and were largely devoid of equipment. Only slight improvement had taken place by autumn 2004. Despite an almost non-existent budget, the AGS currently still employs around 600 people of whom around 100–150 are qualified professional staff. The rebirth of a fully functioning AGS is thus an urgent priority. Not only does

the infrastructure require a large investment but there is a need for the staff to be reskilled and retrained and for a fundamental re-orientation away from the previous Soviet-style organisation — which included all activities relating to natural resource development, from the initial collection and provision of geological data, to drilling and exploration, through to mining and energy extraction — to a modern, western-style organisation. Besides minerals, the Survey should have the capability to advise government on groundwater, environmental protection, and natural hazards such as earthquakes, droughts and floods. The AGS must strengthen and re-orient capacity if it is to attract high quality inward investment



Slaked lime processing.



Sand and gravel extraction.

to develop its energy and mining resources, and contribute in a range of ways to infrastructure development and hazard mitigation.

The DFID-funded project

Recognising the economic and social importance of a viable AGS able to promote and support the minerals sector, the Department for International Development (DFID) commissioned the BGS to undertake a capacity-building project entitled 'Institutional strengthening of the Afghan Geological Survey'. This has been in the planning stage for more than a year. It is a three-year programme of work aimed at good governance.

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The BGS eventually deployed staff to Kabul in October 2004, some ten days after the presidential election. Given the situation of Kabul and of the AGS, everything needed to be approached from a grass-roots level. The initial tasks were largely logistical: setting up and equipping a BGS project house; purchasing project vehicles; and carrying out an essential part-refurbishment of the AGS building. Since the end of 2004,

there have been fully functioning offices at the AGS equipped with the latest IT hardware and software needed to address the various components of the project. A business training-needs assessment has been carried out aimed at defining the skills gap, and staff training has commenced. The project will work in concert with other initiatives from the World Bank and United States Geological Survey.

The success of the project depends largely on political stability and the security situation. Not only are these factors necessary for the project, but they are prerequisites for attracting inward investment from international mining companies. There is a long way to go. But there is a great deal of real enthusiasm and optimism, and a desire to make it happen.

Our ultimate objective is, in a small way, to help Afghanistan move slowly but surely down the road to a peace-oriented economy. The BGS's main focus — in re-skilling people, generating highly valuable modern databases, trying to develop the mineral economy, and encouraging good governance — will, it is hoped, form the foundation of a more prosperous and optimistic future for this highly strategic country.

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The DFID-funded project has the following activities and objectives:

- A training-needs analysis and programme of human resource strengthening.
- Advice on a new management and organisational structure designed to deliver high quality, transparent and accountable government service.
- Limited refurbishment of essential parts of the AGS infrastructure.
- The collation, assessment and reinterpretation of existing information relating to Afghanistan's mineral deposits.
- The generation of digital databases and information packages accessible by a wide range of potential users.
- The generation of open-file mineral dossiers for selected, high priority industrial and metallic mineral deposits.
- The development of a transparent and fully accountable mining cadastre and related prospecting, exploration and licensing system linked to the new, soon-to-be-enacted, mining law.
- The transformation of work practices from analogue- to digital-based systems and GIS.
- The development of an AGS–MMI website, to promote the activities of the organisation and its data holdings, and to provide information to potential investors in Afghanistan's mineral sector.
- The development of a global and Asian-centred mineral market economics capability to examine the economic feasibility of mineral development within Afghanistan.
- The establishment of a vigorous promotional programme to attract the international mining industry.