#### 3. Technical

This section comprises of technical officers who are basically responsible for, laboratory thin sections used for microscopic mineral identification, field logistics, rock storage and retrieval, equipment inventory, mineral processing and map scanning.



*Microscope used for examining mineral thickness* 

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Microscopic minerals in thin sections.



### Mineral Resources Authority of Papua New Guinea

## Geological Mapping & Exploration Branch GEOLOGICAL SURVEY DIVISION

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Minerals for Life



The Geological Mapping and Exploration Branch (GMEB) is the strategic exploration arm of the Geological Survey Division (GSD) of the Mineral Resources Authority (MRA).

The GMEB carries out strategic multidisciplinary geoscientific studies on both systematic and thematic levels in order to assist all clients who consist of mining & exploration company executives, politicians, grass roots, landowners, state & private institutions and all other land-users.

It carries out work in strategic resource areas and initiate geological mapping projects in areas of poorly understood geology.

Geological mapping allows serendipitous discoveries which underpin future successful mineral exploration.

For instance, the successful production at Ok Tedi, Porgera, Lihir and Bougainville can be attributed directly to work carried out by government geologist in the late 1950's and 1960's.

The GMEB is also responsible for offshore geology/ resources, comprises of geologists, cartographers and technicians.

### **CORE FUNCTIONS**

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The core functions of the GMEB are:

1. Accumulation of high quality geoscientific data of economic and social

### value to PNG through:

- Field research, i.e. regional geological and exploration mapping
- Laboratory research
- Literature research
- Collaborative research with national and international institutions and geoscientists.

# 2. Publication of geo-scientific data and synthesis in the form of:

- Geological maps in digital and paper formats
- Publications (technical notes, reports, journals and memoirs)

3. Dissemination of geo-scientific information and provision of advice for clients, who range from grass-roots, landowners, executives of international corporations, State and Provincial governments.

4. Archival of geo-scientific data of economic and social value to PNG in MRA database

The primary work of GMEB involves:

- Carrying out regional geological and exploration mapping
- Production and publication of GIS-based geological maps and reports
- Production of GIS metallogenic map
- Database search

ies

- Mineral occurrence inventory
- Detailed onsite geological stud-

### SECTIONS WITHIN THE GME BRANCH

There are three (3) sections within the branch

### 1. Geological Mapping

This section comprises of mapping geologists who are responsible for the collection and compilation of all geological data through field work and research.

All queries regarding geology (rocks) from clients both internally and externally are attended to by them.



*Pic. 1: GPS machine & geopeak used for collecting samples at various locations.* 



Pic. 2: Field map.

### 2. Cartography

This section comprises of cartographers who carry out all geological map making activities. Activities basically involve scanning of old geological maps (raster), registration of images, digitizing (vectorizing), editing and printing.

### Sample maps:



