



Mineral Resources Authority of Papua New Guinea

*Geo-Physical Mapping
Branch*

GEOLOGICAL SURVEY DIVISION



Minerals for Life

The Geophysical Mapping Branch is an integral part of the Geological Survey Division, tasked with the acquisition, archiving and dissemination of geo-science related data.

The Branch carries out geophysical, geochemical and geothermal activities and plays an interdisciplinary role between the Geological Mapping and Mineral Exploration and the Geotechnical and Hydrogeological Branches.

The Branch provides support services to these Branches by acquisition of geophysical and geochemical data relevant to the respective branches, processing them and also interpreting them

to relate to the geology of the study area.

The Branch leads the geothermal mapping activities.

The Geophysical Mapping Branch is staffed with geologists, three geophysicists and a geochemist who carry out the activities of the Branch, ensuring client needs are attended to efficiently and in a professional manner.

CORE FUNCTIONS

The core functions of the Geophysical Mapping Branch are:

1. Provide support services to the Geological Mapping and Mineral Exploration and the Geotechnical and Hydrogeology Branches.
2. Acquire, archive and disseminate geophysical data (airborne, land and marine) acquired by large exploration companies.
3. Acquire, archive and disseminate geochemical data acquired through stream sampling.
4. Locate (map), sample



MRA scientists out on field work

and identify pro-spective areas for de-velopment of geother-mal resources.

5. Provide technical advice to clients in are-as of interest.

6. Plan and execute small-scale geophysical surveys for clients interested in mineral explora-tion (ground mag-net-ic), ge-otechnical engineering and groundwater investiga-tions.



methods surveys for ground-water investigations.

SUPPORT SERVICES

The Geophysical Mapping Branch is able to provide the following support services:

- Process and interpret data obtained from large-scale regional geophysical surveys, including airborne mag-net-ics, radio-metrics, and electromagnetics.
- Process and interpret land gravity data
- Process and interpret marine magnetics and gravity data.
- Plan and undertake seismic refraction studies for ge-otechnical engineering investi-gations
- Plan and undertake electrical

EQUIPMENT AND OPERATIONS

The Branch has field equipment for different purposes and uses Ge-osoftware Oasis Montaj for data processing and interpretation.

Field operations are arranged upon client request or where it is relevant to acquire data for updating of the geophysical database.

RESPONSIBILITIES

1. Update geophysical, geochemical and geothermal databases at the end of every month.
2. Methodically process all incoming datasets within two weeks of acquisition.

3. Update all metadata for existing databases.

4. Provide summary of incoming geophysical datasets, and updating of the meta data tables.

5. Make copies of incoming datasets within two weeks of acquiring them from clients

6. Provide summary of current status of geophysical data compilation and identification of areas not surveyed by the end of each year

7. Acquiring, processing, integrating and updating geo-physical data coverage by the end of each year

8. Using current datasets (e.g. provided by Fugro1) to identify areas which may require further ground geo-physical surveys

9. Providing an interpretation for anomalies in current datasets.

10. Publish research papers as technical notes locally and externally in journals.

