



NUMBER 3 July/September 2001

**A GEOSCIENCE INFORMATION NEWSLETTER
SERVING THE MINERALS AND ENERGY INTERESTS OF QUEENSLAND**

NEW GEOLOGICAL maps for Central Queensland have just been released, covering the Departmental "Yarrol Project" area.

The 1:100 000 scale maps include Rookwood, Ridgeland, Rockhampton, Duinga, Mount Morgan, Bajool, Gladstone Special, Biloela, Calliope, Scoria, and Monto.

They can be purchased for \$38.50 each (including \$3.50GST).

Following are some highlights of new information that have emanated from the Project.

New interpretations of age were assisted by interpreting conodonts extracted from cores of the Mount Morgan gold-copper host rocks.

Their biostratigraphic position enabled more precise correlations with other potentially prospective horizons within this terrain.

Understanding the age relations of volcanic sequences and granitic intrusions has been assisted by 16 sensitive high-resolution iron microprobe (SHRIMP) dates.

In general, these show that the granitic intrusions are older than was previously indicated by K-Ar dating.

Geochemically, the Permian-Triassic intrusives of the Yarrol district fall within the Clarence River Supersuite defined in the New England region of New South Wales. Three distinct suites can be outlined within this overall group.

Comparison of the Devonian Mount Morgan Trondhjemite with published analyses clearly demonstrates an oceanic setting, and confirms that the host rocks for the Mount Morgan deposit were part of an exotic terrain which later accreted to the Australian continent.

A comprehensive interpretation of airborne magnetic data also assisted in refining the geological knowledge of the area.

A geological report is presently being edited. A digital GIS has been designed and will include geophysical data, geological and geophysical interpretations, and all point attribute data, details of mineral occurrences, mines and prospects, past exploration history, and an evaluation of prospectivity.



Queensland Government
Natural Resources and Mines

NEW PUBLICATION FOR NORTH QUEENSLAND

A new publication, QUEENSLAND GEOLOGICAL RECORD 2001/4 - **Geology of the Bullock Creek 1:100 000 Sheet area** has been produced by staff geologist Laurie Hutton.

The oldest rocks on BULLOCK CREEK are metamorphics, of probable Precambrian age. Early Silurian leucogranites and pegmatites, together with localised anatectic complexes and migmatite, form a widespread basement to the Late Palaeozoic intrusive and extrusive rocks.

Metamorphosed sandstone, calcareous sandstone, siltstone and shale of probable Silurian to Devonian age are only preserved in the core of cauldron subsidence areas in north-east BULLOCK CREEK. It is probable that these sediments are only preserved where cauldron subsidence has occurred during eruption of felsic volcanics from near surface magma chambers.

Most of the rocks in BULLOCK CREEK belong to three different suites of high level intrusives and extrusive rocks. These rocks are part of a late Carboniferous–early Permian igneous/volcanic province in north Queensland.

Subsequent to this igneous event, the rocks have undergone a period of deep weathering (laterite development) during the Tertiary followed by erosion and alluvial deposition to the present.

During the late Tertiary and Quaternary, basalt flow cut across the corners of the Sheet area from the McBride Basalt Province to the south.

Record 2001/04 can be purchased for \$11.00 (including \$1.00GST).

NEW GRAVITY SURVEY BETWEEN MOUNT ISA AND GEORGETOWN

A new regional gravity survey consisting of approximately 5200 data points collected on a 4kmx4km grid has been completed over the Julia Creek, Millungera, Croydon, Georgetown and Gilberton 1:250 000 sheet areas.

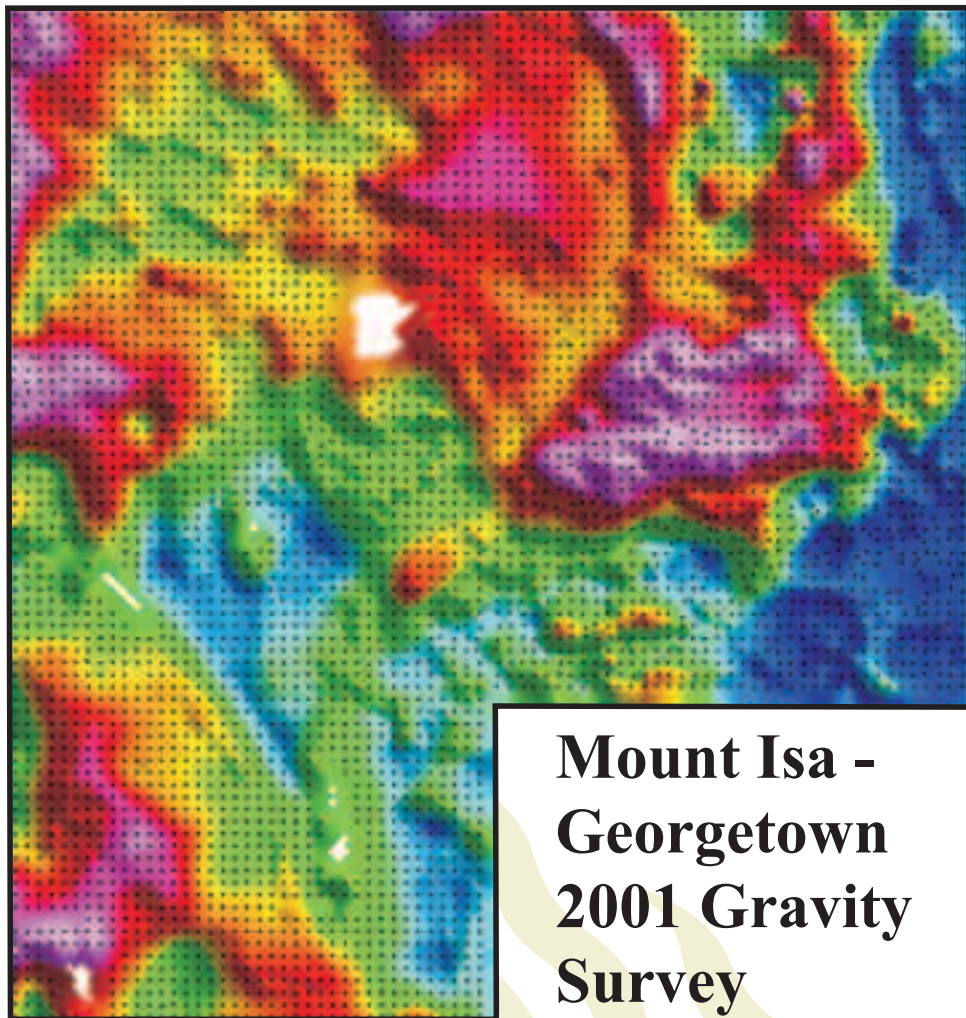
Fogro Ground Geophysics commenced data collection in April 2001 and completed this phase of the project in late June 2001. Data were collected using a LaCoste and Romberg G-38 gravimeter and transported to each station location via a Robinson R44 helicopter with motor vehicle ground support. Gravity stations were positioned (XYZ) using an Ashtech GPS system.

Post collection processing and reduction were commenced during data collection, and the finalised data were released to our network of licensed distributors to commence sales on Monday 24th September.

The Department also holds 1:100 000 and 1:250 000 station location and Bouger gravity contour printed maps and transparencies for the whole survey area. The station location maps have been draped over the AUSLIG topographic backgrounds for each sheet area. These can be viewed at the Department, or copies can be obtained from the licenced distributors.

The total survey data along with existing AGSO gravity data and open file company report gravity data is available on CD from the Department and the distribution network.

The total data package sells for \$2860 (incl. \$260GST) or can be requested as individual 1:250 000 sheet packages for \$660 (incl. \$60GST) per sheet area.



Mount Isa - Georgetown 2001 Gravity Survey

Julia Creek, Millungera, Croydon, Georgetown, Gilberton 1:250 000 sheet areas.

Approximately 5200 data points.

Nominal 4km x 4km station spacing

DGPS elevation and location.

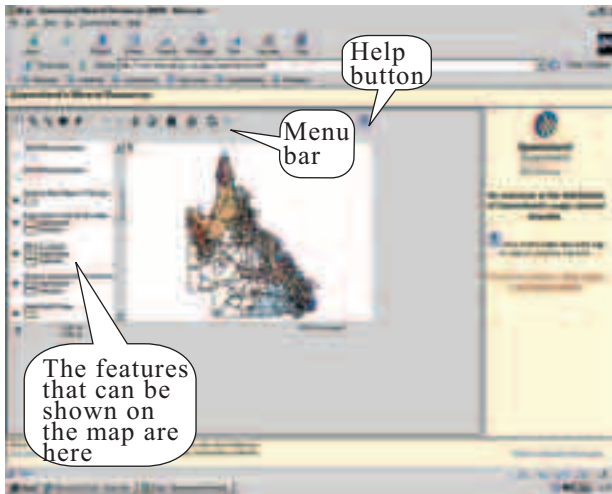
To order any of the products shown in this newsletter, please contact the Geoscience Sales unit on (07) 3237 1434 or email sales/DME@dme.qld.gov.au

NOTE: PRICES FOR THESE PRODUCTS INCLUDE HANDLING CHARGES. POSTAGE WILL BE CHARGED ONLY FOR COURIER SERVICE IN AUSTRALIA, AND SOME POSTAGE MAY BE CHARGED FOR OVERSEAS DELIVERY.

GST, a Federal Government Tax, only applies in Australia.

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HOW TO USE INTERACTIVE RESOURCE AND TENURE MAPS - www.dme.qld.gov.au



Interactive maps on the Department's Internet site can show you:-

- Location and details of granted exploration and mining tenures
- Areas under application
- Locations of mines and deposits
- Geology
- Infrastructure
- National Parks

You choose what you want to see - over the area you're interested in!

Step 1: Go to www.dme.qld.gov.au on the internet.

Step 2: Go to interactive resource and tenure maps.

Step 3: Scroll down and choose your preferred map.


Step 4: Click on 1024x786 under this map heading. (Use 800x600 for smaller screens).


Step 5: Wait for the map to load. Be patient!


Step 6: Selected features have a next to them.

NOTE: These features have a hierarchy and you may need to deselect some to interrogate those lower on the legend.

To remove a feature from the map click on the to show . To add a feature click on to show . These automatically update the map on the right hand side.

Step 7: To zoom in to a particular area click on the  button in the menu bar and click on the area of the map you would like to look at. Be patient as the map has to upload again. Repeat for even more detail.

You can search for a feature by clicking on the binoculars  button on the menu bar.

You can find out more about a feature by clicking on the  button and clicking on the feature (information comes up on the far right hand side of the map).

If you have any questions or need help, phone Paul Garrad on 07 3237 1637.