

## Improving access to geoscience information: Recent highlights

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In 2020, we accelerated the extraction of legacy data contained in reports for inclusion in the Northern Territory Geological Survey (NTGS) drilling and geochemistry database with data capture from seven 1:250 000 map sheets in the Barkly region. A new data capture project commenced for the gradual scanning and digitising of hardcopy seismic sections and well logs. There was also steady progress in open filing of mineral exploration reports and updating Minerals Exploration Reports (MEX) records, and open filing of older petroleum reports (PEX). The project to increase the number of exploration geophysical datasets available through GEMIS was completed. To improve the dissemination of news and updates on activities, the *NTGS monthly alert* email newsletter was launched and further updates to the *Resourcing the Territory* website were implemented.

### New drilling and geochemistry data

Capture of legacy drilling and geochemistry data over the Tennant Creek area to the Queensland border and throughout the Barkly Region has continued at an accelerated pace during 2020. In addition to the data captured from the SHORT RANGE<sup>3</sup> 1:100 000 mapsheet in 2019, data was captured from the remaining 100 000 scale mapsheets in the TENNANT CREEK 1:250 000 mapsheet (ie FLYNN, TENNANT CREEK, GOSSE RIVER, KELLY and BARKLY). Data was also captured for the ALROY, RANKEN, MOUNT DRUMMOND, BRUNETTE DOWNS and CALVERT HILLS 1:250 000 mapsheets. Data capture from the WALHALLOW 1:250 000-scale mapsheet is in progress.

A larger than expected volume of data was captured in 2020 as funds were redirected due to COVID-19 restrictions. Approximately 21 100 drill collars, 108 500 drill samples, 53 700 surface samples and associated results from over 1000 reports will be published in DIP 001 (*Northern Territory Geochemical Datasets*) and on STRIKE in April 2021.

The duplication issues (reporting of results in a different report to that containing the sampling data) and the sheer volume of data being captured creates a complex and challenging data management project. It should be noted that there is a high amount of duplication in the reporting, and the numbers of drillholes and samples included in the database and in the final releases are lower than the numbers captured. Once fully checked and duplicate records removed, the data is released. Where additional investigation and follow-up is required, some data may be released at a later date than the majority of the data from the same area.

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<sup>3</sup> Names of 1:250 000 and 1:100 000 mapsheets are shown in large and small capital letters respectively, eg TENNANT CREEK, BARKLY

### STRIKE

A new STRIKE user guide is under development and due for release in April 2021. Unlike the current user guide document found on our website and also accessible via the Help link within STRIKE, the new guide will be a part of STRIKE itself. The guide will show all the latest functionality and be accessible as a tab at the top of the map window, next to the Downloads tab.

The NT-wide SEEBASE<sup>®</sup> data was released in February 2021, and several layers are being added to STRIKE.

### Industry reports

Work to reduce the backlog of reports due for release under the five year 'sunset clause' in the Mineral Titles Act (MTA) continues. Over the last 12 months, reports from 2013 and 2014 have been released (open filed), and database records updated and added to the MEX collection on GEMIS. A project to upload geophysical datasets with a size up to 1 GB to the relevant report records in MEX has been completed. Nearly 400 existing MEX records had geophysical datasets added to GEMIS between March and October 2020. Over three years, a total of 1220 datasets were added for more immediate access.

There is a significant number of older seismic surveys and well logs within the petroleum reporting collections that are not available in digital format. Some hard copy reports, logs or sections have not yet been scanned or do not have digital datasets suitable for viewing and interpretation in geophysical processing or well analysis software. A project to scan and digitise hardcopy seismic sections and well logs in priority areas commenced in 2020. Seismic data will be made available in SEG-Y format and well logs in LAS format. The new digital datasets are progressively uploaded to existing records, and it is worth checking to see if there have been any updates in the Petroleum Exploration Reports (PEX) collections on GEMIS. In 2020, various logs of 20 wells in the McArthur Basin / Beetaloo Sub-basin, Amadeus and Georgina Basins and 10 lines of the Kilgour 2D SS 1992 in McArthur Basin were digitised and released.

### *Resourcing the Territory* website and NTGS Monthly Alert

The *Resourcing the Territory* (RTT) website has had several enhancements since its launch in January 2020. News of exploration compiled from public sources has been available via the Exploration News database for a number of years. In 2020, the report format was revamped and the most recent news is now linked directly from the RTT website.

The NTGS Monthly Alert, a refresh of the NTGS Update email newsletter now integrated with RTT mail outs, was launched in October 2020. The NTGS Monthly Alert will bring you the latest news from NTGS including updates on

events and new product releases from the RTT initiative. Subscribe to the newsletter via this link<sup>4</sup>.

### **Petroleum Onshore Information NT (POINT) portal<sup>5</sup>**

The POINT portal was launched on 17 February 2021 to provide information relating to proposed and approved activities by the onshore petroleum industry in the Territory, particularly environmental approvals, plans and compliance reporting. To assist discovery and group related documents and information, the mapping interface includes geological basins, petroleum titles, petroleum wells, and basic information on petroleum companies operating in the NT. However it should be noted that POINT is aimed at a general audience as part of a government commitment to transparency in the development and regulation of the onshore petroleum industry. STRIKE or GEMIS online systems are still the primary sources for more detailed titles information, statutory geoscientific reports and data, and geoscientific products.

### **New NTGS products**

New or updated NTGS products released since March 2020 include 11 Records, 20 HyLogger Data Packages (HDP), nine new Digital Information Packages (DIP), the South West McArthur gravity survey data and grids, NT-wide geophysical maps (2020 editions), three new and five revised geological GIS datasets, and one new interpreted geological map and related explanatory notes.

Records released cover geochronology results, characterisation of the Neoproterozoic succession of the

northeastern Amadeus Basin, revised stratigraphy for NTGS stratigraphic drillholes LA05DD01 and BR05DD01 in the western Amadeus Basin, and revised stratigraphy for drillhole BL002 in the northeastern Amadeus Basin. Although the AGES 2020 event was a casualty of the initial COVID-19 lock down and had to be cancelled, the Proceedings and a Record containing the presentations and posters were published as normal.

Six new DIPs, each focusing on a mineral deposit in the Warramunga Province were released in 2020. Another two comprising the NT-wide SEEBASE<sup>®</sup> and one on the CSIRO–NTGS McArthur Basin Project have been released in 2021.

GIS datasets for the 1:250 000 mapsheets identified as having varying data quality issues are being progressively revised and re-released. At the same time, the datasets are also released in ESRI Shape format. MILINGIMBI, THE GRANITES, MOUNT PEAKE, CALVERT HILLS and BEETALOO datasets were re-released in 2020.

Other releases include new 1:100 000-scale geological GIS datasets for the CARRARA RANGE, DEVILS MARBLES and KURUNDI maps during 2020, and the new West Amadeus Basin 1:500 000-scale interpreted geology map, explanatory notes and GIS dataset released in March 2021.

### **Reference**

Rogers T, 2020. Geoscience information systems and services: 2019 and 2020: in *Annual Geoscience Exploration Seminar (AGES) Proceedings, Alice Springs, Northern Territory, 24–25 March 2020*. Northern Territory Geological Survey, Darwin, 20–21.

<sup>4</sup> <https://resourcingtheterritory.nt.gov.au/northern-territory-geological-survey-ntgs>

<sup>5</sup> <https://point.nt.gov.au/>