

Geoscience information: What's new and what's ahead

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During 2018, in addition to the ongoing publication of reports and data generated by the Northern Territory Geological Survey (NTGS), new information and improvements in the delivery of information to industry have been focussed on capture of exploration drilling and geochemical data, and improving delivery of open file industry reports and data.

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New drilling and geochemistry data

Geochemistry and drilling data submitted during the entire life cycle of all mineral titles active since October 2016 has been captured, with the exception of a very small proportion of older, hardcopy reports. This project commenced in October 2016 and is now 98.9% complete. As at February 2019, 2093 titles of 2205 have had *all* data meeting the mandatory database criteria captured. One hundred and twelve (112) titles have one or more reports outstanding; these have been delayed due to their original format and large size. Overall, 4985 reports out of 5037 have now been processed, with 52 reports remaining to be captured. The first major release of open file data was in March 2018.

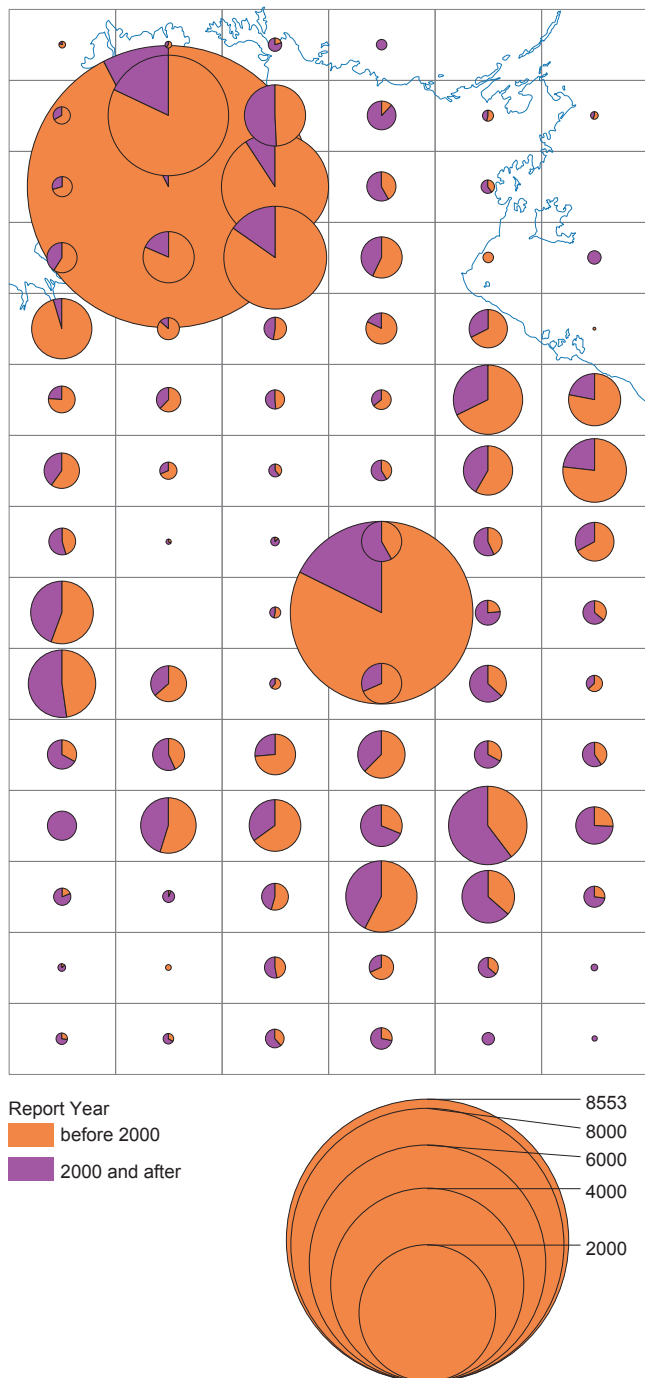
Drilling and geochemistry data captured from industry reports covering historical titles over five of the 1:100 000-scale mapsheets in the Batten Fault Zone area was completed and released in October 2018. To continue building on this data compilation, under the new four year *Resourcing the Territory* initiative, a major project capturing legacy data from industry reports has commenced. Planning and preparation for progressive data capture over the area between Tennant Creek to the NT:QLD border and throughout the Barkly Region is in progress. Capture of data from another 66 reports covering the Batten Fault Zone area commenced in January 2019; the Tennant Creek 1:250 000-scale mapsheet is the next area to be targeted. **Figure 1** shows the results of a preliminary review, indicating the numbers of reports identified as containing drilling and geochemistry data that have yet to be captured in each 1:250 000-scale map area.

New and recent data is now added to the database as it is received. Now when legacy data is captured over specific areas, all data from every title that currently exists or has ever existed in the area will have been captured if sufficient metadata exists. The legacy data capture project aims to achieve 100% database coverage for exploration drilling and geochemistry data in the Northern Territory, with a caveat that some data cannot be added to the database as critical information is missing. All the data will be released in batches through STRIKE and DIP 001 – *Northern Territory Geochemical Datasets*.

STRIKE

The last twelve months has seen steady progressive improvements to STRIKE across various layers, eg display of attributes, updated and additional metadata, fixes to data and map display. Downloads are now directly accessed from a new link; the A4 portrait print layout has been updated; and searches have been improved and added for a number of layers.

Basic searches for 13 layers and advanced searches for 36 layers have been added or upgraded. Standard searches on layers accessed through the Search tab at



**Figure 1.** Number and distribution of reports with data to be captured in each 1:250 000-scale map area.

the top of the layer menu have been added to 13 layers including the 250 000- and 100 000-scale map indexes, mineral occurrences, mines, geochemical sampling layers and geophysical survey indexes. An advanced search functionality has been added to 21 layers, including petroleum title layers, geochronology layers, open file mineral report index and Native Title and Indigenous Land Use Agreement layers. This search function, which is accessed via the binocular icon next to the quick search text box on the upper right of the application, provides qualification using operators and the ability to query more than one attribute in the active layer. It has also increased the range of attributes that can be searched on mineral titles, historical petroleum titles, petroleum wells and drillhole layers.

In the near future, download of individual geoscience data layers and improved web map services (WMS) will be available. At present, multiple layers are included within a themed group, and the whole group has to be downloaded although only one layer may be of interest. Work is underway to permit downloading of each individual geoscience data layer so users only receive what they really want.

Improvements to the web services are nearly complete and will result in better quality services; this includes a split into two services: one for titles and one for geoscience data, making it easier for consumers to determine the layers contained within each smaller web service package.

### Industry reports

The project to process the backlog of reports for open file release under the five year 'sunset clause' introduced in the *Mineral Titles Act* (MTA) continues. Over the last 12 months, reports from 2009–2010 have been open filed and added to the MEX collection on GEMIS; review of the 2011 reports for open file release is in progress. As part of the review, each report's associated MEX record is checked and updated to ensure the information is complete and correct before it is released.

PEX Geophysics now has 409 records with downloadable files. From the total of 468 records, only 59 records have no files attached. This is in contrast to the numbers at the time of launch in March 2017 when there were 456 records and 291 without files for download. Records without downloadable files are either not scanned or the datasets are greater than 1GB in digital size. Availability is indicated in the Notes field; clients can request copies using the GEMIS Request Cart.

The PEX Tenure Collection, covering industry reports on geological surveys, regional interpretation and similar reports, is under development; the current aim is to launch the collection in March 2019. This will complete the online PEX collections. It will also include the small number of geothermal exploration reports submitted under the *Geothermal Energy Act*.

### Resourcing the Territory website

In mid-2018, the 'CORE' website for *Creating Opportunities for Resource Exploration* was given a basic update to reflect the new initiative, *Resourcing the Territory* and a new URL [www.resourcingtheterritory.nt.gov.au](http://www.resourcingtheterritory.nt.gov.au). NTGS has engaged a web design and digital services company to develop a new website, incorporating a new creative look, modern design and user experience. Development of the new website is underway and it will be launched within the next couple of months. The website is aimed at attracting investors and explorers to the Territory by presenting insights and relevant information on exploration, projects and commodities to provide clients with the confidence to initiate the investment decision-making process.

### New Northern Territory Geological Survey products

New or updated NTGS products released since March 2018 include 12 new Records, eight HyLogger Data Packages, two new and four updated Digital Information Packages, data and images of the NT-wide gravity stitch, and two new geological GIS datasets. Four revised geological GIS datasets have also been released.

Besides a number summarising geochronology results, Records released include the stratigraphic subdivision of the Velkerri Formation in the McArthur Basin, revised Neoproterozoic stratigraphy in the Mount Conner area in the Amadeus Basin, using tourmaline to identify base metal and tungsten mineralising processes in the Jervois mineral field and Bonya Hills area, and the AGES 2018 presentations and posters.

Together with the new geological GIS dataset for Alcoota 1:250 000-scale mapsheet released just before AGES 2018, the publication of the new GIS dataset for the Hay River 1:250 000-scale outcrop geology map in June 2018 completes NT-wide coverage of geological GIS data at this scale. However, reiterating previous statements, although the datasets conform to the same data structure, the data is not seamless and there are gaps and overlaps resulting from differences in the datum used for mapping.

Other releases include a new 1:100 000-scale geological GIS dataset for the Tawallah Range map and revised GIS datasets for the Mount Theo, Sandover River, Mount Solitaire and Tobermorey 1:250 000-scale outcrop geology maps.

An update to the metallogenic NT-wide map and new editions of three Digital Information Packages will be released for AGES 2019.

### Reference

Rogers T, 2018. Geoscience Information and delivery in 2017-18: in *Annual Geoscience Exploration Seminar (AGES) Proceedings, Alice Springs, Northern Territory, 20–21 March 2018*. Northern Territory Geological Survey, Darwin.