

Fieldnotes



Department of
Industry and Resources

Geological Survey of
Western Australia



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The Central Yilgarn Geoscience Database: another brick in the wall

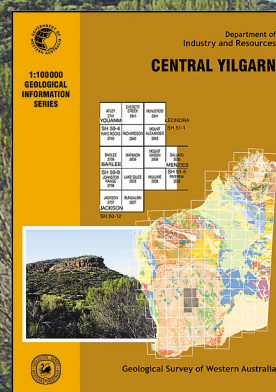
The Central Yilgarn 1:100 000 Geological Information Series (GIS) is the latest data release of seamless digital 1:100 000-scale mapping in Western Australia.

It covers a 41 000 km² area and incorporates 14 published 1:100 000-scale maps and 2 part maps over the northern part of the Southern Cross Domain, which is the easternmost domain of the Youanmi Terrane in the Yilgarn Craton. This central Yilgarn GIS adjoins and partly overlaps the area covered by the East Yilgarn 1:100 000 GIS, and will mesh with the Murchison 1:100 000 GIS that is currently being developed.

The geological information is presented as themes on 'layers', which can be superimposed and combined as required. Themes provided include seamless outcrop and interpreted bedrock geology, mineral deposit location and resource data, tenement details at the time of release, as well

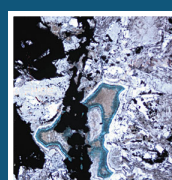
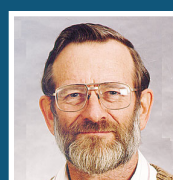
as geochemical and geochronological data from various sources. Remote-sensing imagery includes Landsat, aeromagnetic, gravity, radiometric, and a digital elevation model (DEM) derived from the Shuttle Radar Topography Mission (SRTM). Imagery has been extended for at least one half of a degree outside the product area to allow better understanding of the regional context. Interpreted bedrock geology is based on 1:100 000 mapping, and has been revised in areas where new aeromagnetic information had become available after publication of the original 1:100 000-scale mapping. Information on diamond drillcores that are available for viewing at GSWA's Joe Lord Core Library in Kalgoorlie is also provided. This information has been extracted from the Department's WAPIMS database (the online Western Australian petroleum information management system) Topo-cadastral details are derived from the published 1:100 000-scale geological maps.

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Mineral systems study

Western Australia's mineral systems study

Western Australia is one of the most important mineral producers in the world, with some of the largest resources in several commodities, such as iron, nickel, and gold. A review of exploration expenditure in Western Australia (see GSWA Annual Review 2004–05, p. 8–19, fig. 11) suggests a trend that is essentially focused on brownfields exploration. Because the search for new mineral deposits is becoming more difficult, a new approach aimed at providing vectors to mineralization is needed.

The concept of a mineral system is analogous to that of a petroleum system, but because of the nature of ore deposits and host rocks, a mineral system is far more diverse and complex. The formation of an ore deposit requires a source of metals, a mode of transport (usually a hydrothermal fluid, but also can be a magma), and a site of deposition or accumulation, where metal commodities become concentrated to enable economically viable extraction during a given period.

A mineral system includes all geological and geodynamic factors, at all scales, that control the inception, evolution, and preservation of ore deposits. Thus, the study of mineral systems necessarily must integrate:

- local studies on recognized deposits, including such factors as:

- location of potential accumulation sites;
- the physicochemical processes leading to deposition;

with

- regional-scale studies including:

- geodynamic (tectonic) controls on timing and location of ore deposits (space–time distribution);
- terrane-scale physico-chemical processes that determine how ore deposits are formed;
- the evolution of magmas and other energy sources, and fluids, at the scale of mineralizing systems that influence the location of individual deposits.

The purpose of this proposed program is to begin work on Western Australia's mineral systems, with a view to publishing a series of 'live' documents that can be regularly updated, as new ideas and information become available. These will be incorporated into WA Geology Online, GSWA's

proposed new web-based compilation of the geology and mineral resources of Western Australia.

An example study, recently carried out by GSWA geologists (Franco Pirajno, Peter Haines, and Roger Hocking) and published in the *Australian Journal of Earth Sciences* (v. 53) illustrates the type of work that can be done in order to indicate potential for base metal mineralization in this poorly explored region. The authors of this paper studied the drillcore of GSWA Lancer 1, drilled in 2003 in the western Officer Basin. They focused on a succession of tholeiitic lava flows, intersected between 527 and 576 m. This study indicates that these are hydrothermally altered lavas (see Fig. 1), which were erupted from a submarine volcanic vent. The tectono-stratigraphic setting and alteration mineralogy suggest that parts of the stratigraphic sequence of the northwest Officer Basin may host subseafloor sulfide mineralization. A conceptual model is shown in Figure 2.

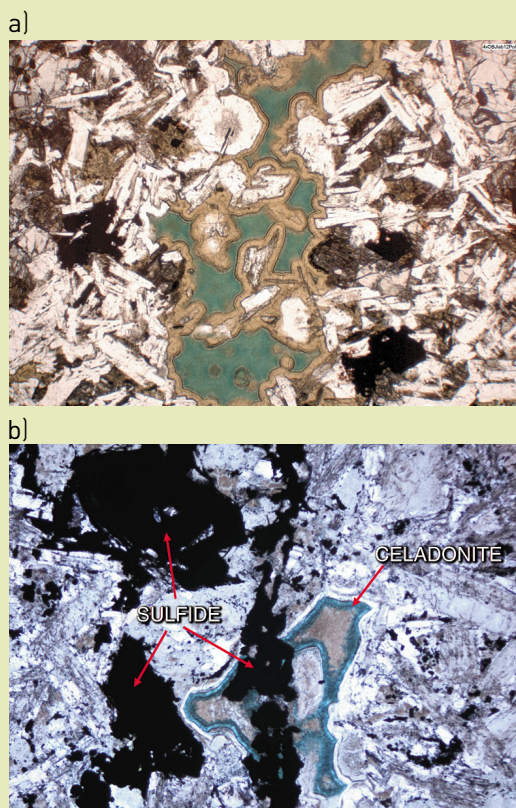


Figure 1. Plane-polarized light photomicrographs of basaltic lavas intersected in Lancer 1, showing: (a) interstitial celadonite (green) rimmed by kaolinite (brown); (b) sulfides (black) associated with celadonite (green)

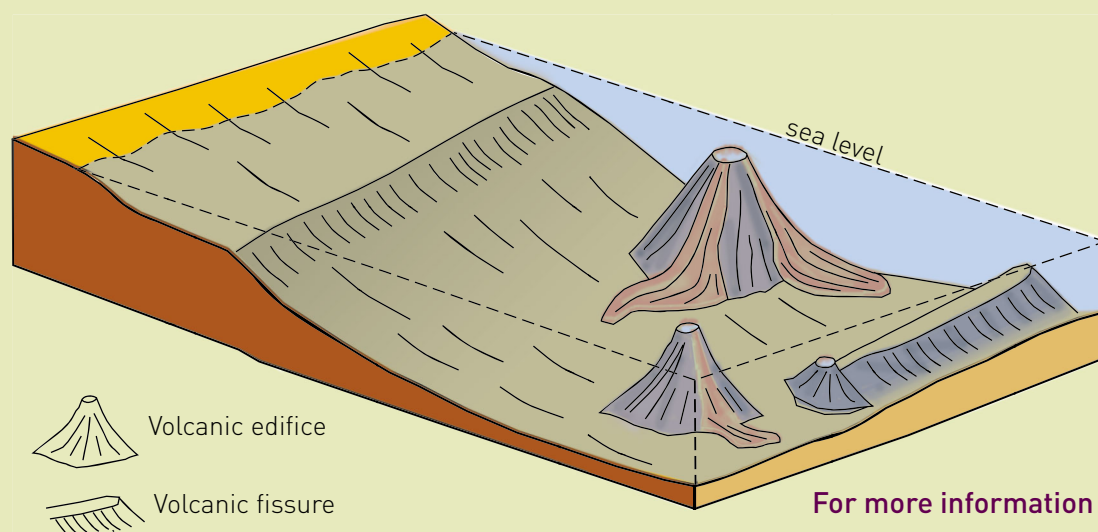
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Minerals & central Yilgarn

continued from page 2

Figure 2. Conceptual model, based on a study of Lancer 1 drillcore, showing discrete volcanic vents on shallow seafloor of an intracontinental basin (northwest Officer Basin); submarine hydrothermal systems may have formed, resulting in venting of hot fluids from which metal sulfides precipitate. The type of alteration observed in the basaltic lavas of Lancer 1 (Fig. 1) suggests that hydrothermal venting was present



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The Central Yilgarn 1:100 000 GIS also incorporates the new lithostructural framework for the central Yilgarn Craton that was introduced following completion of the GSWA mapping program in the region. Discrete greenstone belts with common stratigraphic elements and structural histories are the building blocks in the new scheme, and have been assigned unique codes within the GSWA state-wide rock units database. This approach allows particular units to be better characterized according to their lithology, distribution and relationships. It also means that if future mapping or analytical work leads to the establishment of a formal stratigraphy, then this could be easily accommodated within the structure of the database.

Where formal names have been assigned, as in the case of the Diemals Formation or for the various named granites, the naming conventions and descriptions conform with those used by GSWA throughout Western Australia.

The implementation of a new lithostructural scheme for the Southern Cross Domain in the central Yilgarn

GIS dataset has already provided the framework for a fresh look at structural and stratigraphic problems, such as the revised positioning of the Ida Fault relative to the surface geology, and the consequent subdivision of the Mount Ida greenstone belt into components of the Youanmi Terrane and Eastern Goldfields Superterrane.

Future expansion of the database will include more recent mapping and consolidation of legacy data in the WAROX (Western Australia rock database) layer, as well as detailed notes and descriptions covering the entire region. Ultimately, the central Yilgarn GIS package will be combined with Geological Information Series products in the adjacent East Yilgarn and Murchison regions to provide a fully integrated lithostructural and tectono-stratigraphic framework embracing the whole of the Yilgarn Craton.

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DigitalPaper user tip 5 & Training

DigitalPaper user tip 5

If you have recently accessed the WAMEX system to search company mineral exploration reports, or visited our Online Publications website <<http://www.doir.wa.gov.au/gswa/onlinepublications>>, you will know that we have a new document server for the delivery of our online documents. Here is the fifth in a series of user tips to help you get the most out of DigitalPaper.

Using the Birds Eye View Panel

In the top right-hand corner of any document viewed in DigitalPaper is a small rectangular box with a thumbnail image of the page you are currently viewing. This is the Birds Eye View Panel, which allows you to see the full page while you are viewing any individual section. This feature can be switched on or off by clicking the Birds Eye View button to the right of the two Zoom buttons on the top toolbar.

The area of the page you are viewing will appear as a transparent green box in the Birds Eye View Panel. Clicking anywhere in the Birds Eye View Panel will instantly relocate the area you are viewing allowing you to quickly move around pages to wherever you wish to view.

Using the Zoom features

To zoom in or out on the page, use the two Zoom buttons in the middle of the toolbar at the top of the page. When you zoom in on a section of a page, this section will be highlighted with transparent green in the Birds Eye View Panel. You can also zoom in or out of the page using the pull-down menu to the left of the Zoom buttons to specify the percentage of the zoom.

Alternatively, if you wish to zoom in on a specific section of the page, click on the Define Area icon on the left frame and then click and drag over the area you wish to zoom in on, then click the View Area icon underneath it to zoom in on the area.

Have you registered for 2006's final free information and training session on GSWA online systems and software?

We invite you to attend our final free afternoon training session for the year in our computer training facility where we will demonstrate our online systems and map-viewing software.

This is your opportunity to try these services for yourself and chat with the staff who create and manage them.

Sessions run for 1 hr 30 mins commencing at 3:00 pm.

This last session is minerals based.

Minerals topics covered:

- GeoVIEW.WA (Internet map viewing tool)
- GeoVIEWER.WA (PC map viewing tool)
- WAMEX (company reports online, including DigitalPaper)
- MINEDEX (mines and mineral deposits information)
- GSWA Publications Online

Final Minerals session date for 2006: Wednesday 15 November

Places are limited.

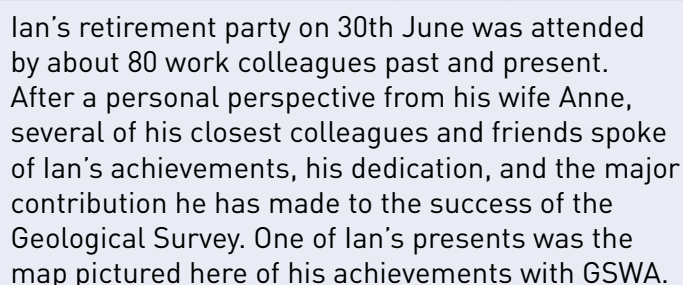
To register, email your details, including which session(s) you would like to attend, to publications@doir.wa.gov.au.



Ian Williams retired on 30 June, after 42 years and 4 months continuous service with the Geological Survey, easily qualifying him as our longest-serving geologist on record.

In 1969 Ian found the Edjuidina Meteorite, a bronzite chondrite, about 30 cm across, and now in the Western Australian Museum. Later, his mapping of the Mount Narryer area contributed to the discovery of Western Australia's oldest rocks, and some of the oldest minerals (zircons) found on Earth. On subsequent mapping projects, his keen powers of observation resulted in the discovery of the 'chain of beads' (some of the earliest evidence of fossil seaweeds) in the Precambrian Stag Arrow Formation, and evidence of Proterozoic glaciation in what was until recently referred to as the Savory Basin. His ongoing interest in minerals led to his 1977 discovery of the new copper mineral moolooite, on Mooloo Downs Station in the Gascoyne region, and later to the discovery of the first Australian occurrence of jiangshinite ($\text{MgMn}_7\cdot 3\text{H}_2\text{O}$). During his more recent mapping in the Pilbara, Ian discovered a large tract of karst topography with dolines and caves that remains to be explored. He also discovered some exceptionally well preserved examples of Archean stromatolites, and his powers of observation led to discovery of a small unnamed meteorite crater that most geologists would have driven past without a second glance.

surprising then that his knowledge of Western Australia's geology is second to none, and with his departure the Survey has lost an irreplaceable source of knowledge. During his career Ian personally mapped about 10% of the State, which is an area bigger than Victoria, and almost as big as the combined areas of England, Scotland, Wales and Ireland. This represents a major contribution to the work and success of GSWA over the past 40 years.



Arthur Hickman

Pilbara excursion

GSWA excursions showcase outstanding geological features of the north

Between 21 and 30 August, Dr Arthur Hickman and Dr Martin Van Kranendonk (both of GSWA) and Dr David Huston (Geoscience Australia) led two geological field excursions to the northern Pilbara Craton. The 50 participants included geologists from the mining industry, geological consultants, academics, and members of the public from various towns in the Pilbara, in addition to a number of geologists from GSWA and GA. The purpose of the excursions was to showcase results from a recently completed 10-year program of 1:100 000-scale mapping, geochronology, geochemistry, structural geology, and mineralization studies jointly conducted by GSWA and GA as part of the National Geoscience Agreement. Fourteen geoscientists from GSWA and GA have worked on the project, and the large number of resulting international publications and presentations, in addition to several collaborative projects with overseas organizations, have now established the northern Pilbara Craton

up the 50 m-high, boulder-strewn granite hill not only led to an excellent vantage point providing a bird's eye view of local geology, but it also probably acted as a rapid ice-breaker, especially as the temperature was already quickly approaching 30°C. Arthur explained that this was a key locality to illustrate the geological relationships between granites, volcanics, and mafic dykes in the Marble Bar greenstone belt. Subsequent stops on Day 1 provided additional information on this superbly exposed and preserved greenstone belt, including examples of volcanic cycles in the basal Talga Talga Subgroup and a visit to one of the Pilbara's oldest banded iron-formations (>3480 Ma).

■ Day 2 commenced with a short drive, 3 km southwest of Marble Bar to Marble Bar Pool. Exposures of the c. 3.46 Ga Duffer Formation, including the Marble Bar Chert Member (Fig. 1), and the overlying Apex Basalt along the eastern bank of the Coongan River between Chinaman Pool and Marble Bar Pool, undoubtedly provide one of the world's best early Archean geological sections. This

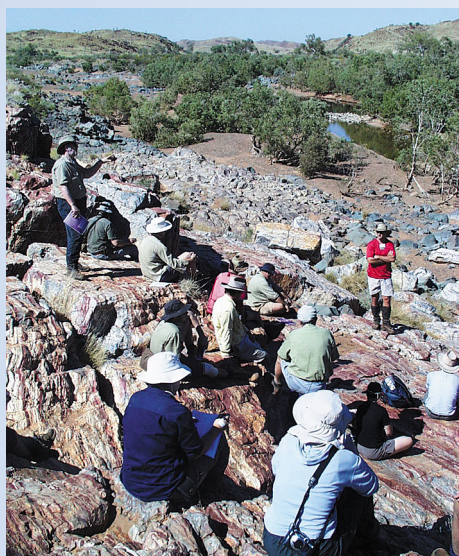


Figure 1. Arthur Hickman (top left) and Martin Van Kranendonk (centre right) explain geological features of the most-visited geological locality in the Pilbara — Marble Bar Pool 3 km southwest of Marble Bar, where the colourfully red-and-white banded Marble Bar Chert Member of the 3465 Ma Duffer Formation is magnificently exposed in the bed of the Coongan River

as arguably the world's best area to study Archean crustal evolution and early life between 3520 and 2900 million years ago. With this in their minds the three most excited excursion participants as the convoy of twenty 4WD vehicles pulled away from the Marble Bar Travel Stop at 8 am on 21 August must have been the three leaders — so much to show in only 10 days!

■ Day 1 started extremely well. The first locality was only 1.5 km east of Marble Bar and the climb



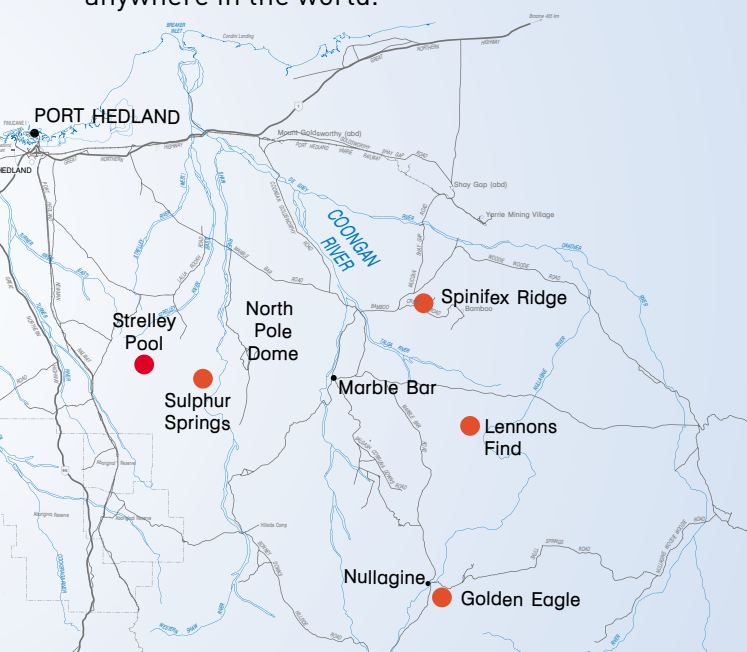
Figure 2. Martin Van Kranendonk (red shirt, left) explaining structural evidence for diapiric sinking of greenstones in the Warrawoona Synform, 20 km south of Marble Bar, east Pilbara



Figure 3. Excursion participants examining a diamond drillcore at a nickel-copper mine, east Pilbara

chert is not only strikingly attractive due to red, white and black layering, but current research is investigating evidence from the hematite in the red chert that could push back oxygenation of the Earth's atmosphere from c. 2350 Ma, as now generally accepted, to >3460 Ma. Structural evidence provided by exposures in the Warrawoona Synform (Fig. 2) supports other evidence that the remarkably well preserved dome-and-basin pattern of the east Pilbara is a product of vertical, gravity-driven diapiric deformation. Because such deformation patterns are mainly confined to Archean granite-greenstone terranes their origins continue to be controversial.

■ Day 3 was a 'mineralization day', with visits to the Golden Eagle gold project near Nullagine, the Lennons Find volcanic-hosted massive sulfide (VHMS) Cu-Pb-Zn-Ba deposits, and the Spinifex Ridge porphyry-related Mo-Cu deposits. The Lennons Find and Spinifex Ridge deposits are the oldest known examples of such mineralization styles anywhere in the world.



Participants examine the Radio Hill west Pilbara



Figure 4. Colin Arthur (left), Geology Superintendent, explains lithium mineralization at Sons of Gwalia's Wodgina mine to excursion participants

■ Day 4 was devoted to the geology of the North Pole Dome and Earth's oldest stromatolites (c. 3525 Ma), and their association with hydrothermal systems that have produced massive barite mineralization.

■ Day 5 took the excursion to CBH Resources Sulphur Springs VHMS Cu-Zn deposit, and also included Earth's oldest identified angular unconformity between the c. 3520 Ma Coonterunah Subgroup of the Warrawoona Group and the overlying c. 3400 Ma Strelley Pool Chert of the Kelly Group.

■ On Day 6, those excursion participants with long-range tanks visited beautifully preserved domical stromatolites in the Strelley Pool Chert west of Strelley Pool. The east Pilbara excursion concluded with a visit to Sons of Gwalia's Wodgina tantalite mine, the biggest tantalite mine in the world, where the company generously provided lunch during a presentation on the mining operations. This was followed by a guided tour of pegmatite-hosted mineralization in the Mount Cassiterite pit. From Wodgina, participants attending the west Pilbara excursion drove 250 km to Karratha.

The west Pilbara excursion commenced from the Karratha Travellers Stop on Sunday, 27 August. Most of the participants on the east Pilbara excursion were still present, but there were some new faces. A major aim of the west Pilbara excursion was to highlight the differences in geological evolution and mineralization between the granite-greenstones of the East Pilbara Terrane and those of the West Pilbara Superterrane. The West Pilbara Superterrane has recently become the focus of international interest as a site of possible evidence for the oldest operation of plate tectonics, bringing together the East Pilbara Terrane and the West Pilbara Superterrane at c. 3050 Ma.

■ The first stops on Day 1 were to see pillow basalts and komatiites of the Regal Terrane, which may represent oceanic crust obducted onto the older continental crust of the Karratha Terrane across the Regal Thrust. This thrust is a layer-parallel belt of strong deformation including shearing, mylonitization, recumbent folding and tectonic slicing of the adjoining Regal and Nickol River Formations.

■ Day 2 took participants across the Sholl Shear Zone, a 1 km-wide belt of mylonite which separates the Karratha and Regal Terranes from the Sholl Terrane, and may represent a reactivated suture. The main part of Day 2 was taken up by visits to mining projects of Fox Resources at the Radio Hill Ni-Cu mine (Fig. 3) and the Whundo and West Whundo (Fig. 4) VHMS Cu-Zn mineralization. From

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North Australia Project wrap leads to Tanami seismic line interpretation

A meeting in Alice Springs from 20 to 22 June marked the wrap up of Geoscience Australia's (GA's) North Australia Project (NAP). This collaborative 6-year project with the Northern Territory Geological Survey (NTGS) and GSWA also involved several exploration and mining companies. The project was aimed at better understanding the tectonic evolution of the North Australian Craton, which is critical in assessing its mineral prospectivity.

The first day of the conference was devoted to the tectonic evolution of the North Australian Craton, and to studies on the mineralization of the constituent tectonic units. Day two dealt with the geology and mineralization of the Tanami region, including discussion of the first-pass interpretation of the joint GA-NTGS-GSWA 2005 Tanami Seismic Collaborative Research Project results. Day three examined the regional geology of various elements within the craton (Halls Creek Orogen, Pine Creek Orogen, Mount Isa Inlier, Curnamona Craton).

It is clear from the results presented at the conference that the concept of the 'Barramundi Orogeny' invoking vertical ensialic tectonics for the Proterozoic evolution of the craton (Etheridge et al., 1987, *Orogenesis and tectonic process in the early to middle Proterozoic of Northern Australia*, in *Proterozoic Lithospheric Evolution*, edited by A. Kröner: Washington D.C., American Geophysical Union, 17, p. 131–147) has been abandoned. The evolution of the craton is now being discussed using a plate-tectonic framework. There are several reasons for this:

- Geochronological studies have demonstrated that the constituent tectonic units of the craton do not consist of the same tripartite rift-sag-flysch sequences, intruded by granites of uniform composition. For example, new dating in the Pine Creek Orogen shows that there is a 150 m.y. time break between the supposed 'rift' and 'sag' phases. The 'rift' phase is considerably older than any other sedimentary package identified in the North Australian Craton.
- Both SHRIMP U-Pb zircon and, more recently, in situ monazite SHRIMP U-Pb dating have shown that deformation events previously

correlated across the craton are in some instances of substantially different ages. For example, orogenic activity in the southern Arunta region previously thought to be c. 1800 Ma has now been dated at c. 1640 Ma.

- The identification of an exotic late Paleoproterozoic terrane along the southern margin of the Arunta region by workers in the NTGS has emphasised the role of horizontal tectonics. The wider acceptance that the Halls Creek Orogen has rock associations and a geological history unlike most other regions in the North Australian Craton has strengthened the interpretation of the orogen as a Paleoproterozoic suture of some sort.

If any reinforcement of the role of plate tectonics in the evolution of the craton was needed, then the recent Tanami seismic line provides it (see Figs 1 to 3). The main northwest-trending line (Fig. 1) shows Paleoproterozoic metasedimentary rocks of the Tanami Group, 3–10 km thick, commonly marked at its base by an inferred subhorizontal shear zone, overlying a more reflective middle and lower crust. The Tanami Group is cut by a series of shallowly dipping reflectors (Fig. 2), interpreted as thrusts, which are typically associated with a series of antiforms. Some of these thrusts continue through to the base of the crust. The overall geometry strongly resembles a fold-and-thrust belt propagating from the southeast (i.e. the southern margin of the North Australian Craton).

The main seismic line also crosses at its southern end, the boundary between the Tanami and Arunta, which is marked by a prominent east-trending gravity ridge. The line has imaged an apparent southeast-dipping suture marked by a 'crocodile structure' (i.e. a wedge of Arunta crust between the 'jaws' of Tanami crust) and thickening of the lithosphere

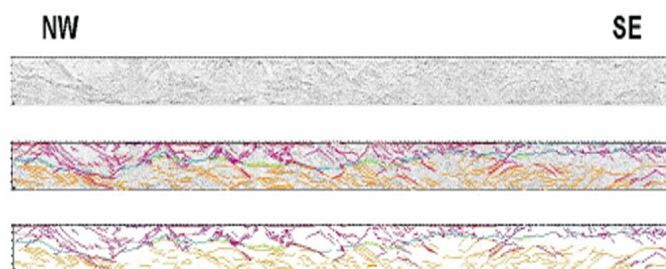


Figure 1. The main northwest-trending Tanami seismic line



Tanami seismic line

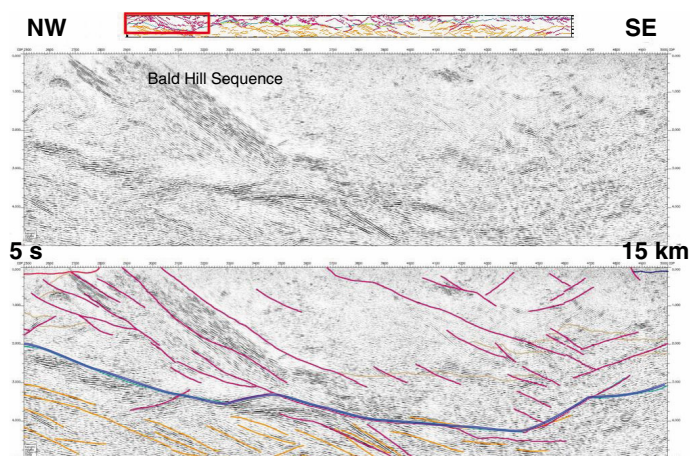


Figure 2. A Tanami seismic line showing shallowly dipping reflectors cutting the Tanami Group

from 40 to 60 km. This suture is blanketed by the metasedimentary rocks of the upper crust, implying that the collision between the two basement units occurred before about 1865 Ma.

The Tanami seismic lines also identified a link between known mineralization and crustal-scale faults and their associated near-surface antiformal thrust stacks. In addition, the seismic lines crossed several granites that have been mapped as domes. The images show that the granites are not domes, but very thin (~1 km) tabular bodies (Fig. 3), and that they are underlain by inward-dipping reflectors, suggesting that the granites intruded synformal structures flanked by the antiformal thrust stacks.

The seismic workshop notes, including the interpretations shown here, will be published as a combined GA-GSWA-NTGS publication in the near future. Also see Lyons and Huston (2006, GA Record 2006/16), and Huston et al. (2006, GA Record 2006/13).

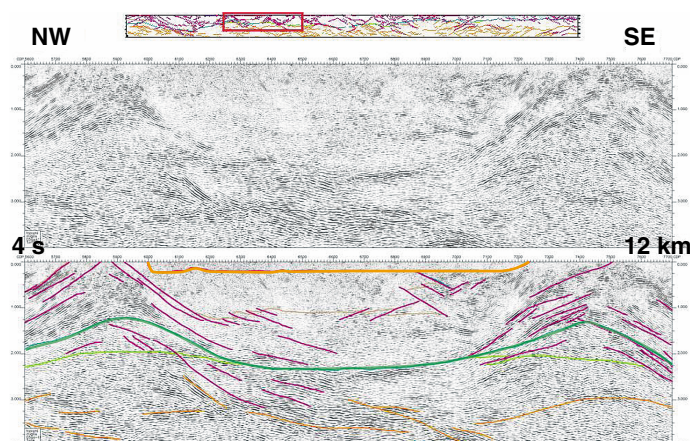


Figure 3. A Tanami seismic line crossing several granites that are not domes, but very thin (~1 km) tabular bodies, underlain by inward-dipping reflectors

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West Whundo the excursion drove to the layered mafic-ultramafic Munni Munni Intrusion where a major undeveloped platinum group element (PGE) resource has been identified. However, visiting the main PGE deposit was prevented by difficult access conditions on a disused and waterlogged track.

■ Day 3 began with further visits to the volcanic rocks in the Whundo Group, which have been shown by the work of GSWA's Hugh Smithies and others to have chemical and isotopic compositions consistent with an oceanic island-arc setting. The excursion returned across the Sholl Shear Zone to view the unconformity between the Regal Terrane and iron formation of the Cleaverville Formation. This relationship implies that the Gorge Creek Group is the first stratigraphic unit that can be recognized in both the east and west Pilbara, and that the two were brought together prior to 3020 Ma.

■ Day 4 took the excursion across the overlying Whim Creek and Mallina Basins, and looked first at VHMS Cu-Zn mineralization at Straits Resources' Whim Creek mine before returning to the margin of the East Pilbara Terrane to finish on the Tappa Tappa Shear Zone. Here the excursion looked at recently discovered gold and VHMS base metal mineralization being explored by De Grey Mining.

The two excursion guidebooks will be available as PDFs from the DoIR website in a few weeks (see page 12).

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Petroleum Systems Studies takes aim at the Canning Basin

Work in the Canning Basin by members of the Petroleum Systems Studies team is gaining momentum. The basin is the largest onshore basin in WA, but is underexplored for a basin with economic oilfields (albeit small) and scattered shows at several levels in the succession, with a very low density of wells overall.

A workstation-ready seismic dataset is being prepared. The dataset was initially generated by scanning and uploading seismic data for ongoing use in GSWA project work. Feedback from the petroleum industry has been favourable, and a second dataset release is planned once the data are uploaded and translated into a suitable format.

In the same fashion as the seismic data release, a diverse body of basic analytical data from recent GSWA geochemical studies in petroleum exploration wells, and some mineral exploration drillholes, have been collated and released as GSWA Record 2006/7. Interpretive studies are underway, with publications in due course. These data will be of immediate use to explorers interested in the two acreage release areas currently available in the Broome Platform and William Sub-basin (go to http://www.doir.wa.gov.au/mineralsandpetroleum/acreage_release.asp for more information).

Geologists Peter Haines and Arthur Mory have just returned from field seasons in the Canning Basin. Apart from studying the Devonian rocks of the Lennard Shelf, GSWA has not been active in the field in the Canning Basin since the mid-1970s. The field programs are aimed at enhancing the knowledge of significant parts of the basin succession by integrating outcrop observations with subsurface work. In collaborative studies with the University of Manchester and Southern Cross University (SCU), Arthur is refining the sedimentology and stratigraphy of the Upper Carboniferous to Permian succession, which is the reservoir for several oilfields on the Lennard Shelf. A key part of the work is the collection of outcrop gamma-ray profiles, for reservoir-scale modelling and correlation between sections and the subsurface. Peter visited the limited exposures of the Ordovician and examined core of the Ordovician from mineral exploration drillholes around outcrop areas. This work so far indicates that the outcropping section probably correlates reasonably well with recognized units in the subsurface to the south, and that that there was unlikely to have been an open link between the Canning Basin and the Amadeus Basin to the east, dubbed the Larapintine Seaway by

previous workers. This has important implications, raising the prospectivity of the Ordovician in the eastern part of the basin, and changing exploration models and plays in the central parts of the basin.

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Steve Abbott (SCU) contemplating a large channel in the Permian Poole Sandstone

AusGeo News: for Western Australian readers

AusGeo News is Geoscience Australia's (GA's) quarterly news magazine. Each issue comprises geoscience-related features, brief articles about GA's research and initiatives, news about geoscience products and spatial data, and a calendar of coming seminars and conferences

AusGeo News Issue No. 83, September 2006

Some of the articles pertinent to Western Australia are:

- Seabed minerals map
- Natural hazard risk reduction in indigenous communities (based on a Kimberley community)
- Modelling of tsunamis off the NW shelf
- Echoes of ancient tsunamis
- Catching the nickel boom
- Topo map data
- New geophysical datasets (includes Paterson)

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AAPG visits Perth



The 2006 International Meeting of the American Association of Petroleum Geologists (AAPG) is almost in town. This conference, one of the most important annual meetings in the petroleum geology arena, will be in Perth from 5 to 8 November, with several excursions to geologically significant areas around Australia and in New Zealand before and after the conference. More than 1000 people from all corners of the petroleum exploration industry will be attending, with registrations in late August auguring well for the conference to be the most successful AAPG International meeting ever.

GSWA is significantly involved in the conference. Several papers and a poster span a range of GSWA's work in the Canning Basin and elsewhere in WA's basins. Papers and posters concerned with the Canning Basin focus on geochemical studies, controls on cyclicity in Devonian reef complexes, significance of the Frasnian–Famennian boundary in the reef complexes, Ordovician basin geometry, and 50 years of petroleum exploration in the reef complexes. Other papers span Permian glaciation across Gondwana and its impact on WA, and reservoir-scale modelling studies of the Tumblagooda Sandstone at Kalbarri. Additionally, a major promotional display with a Team Australia approach, including all States and Geoscience Australia, will be mounted.

Within WA, excursions to Kalbarri, Shark Bay, Rottnest Island, and to the Margaret River area are being led by GSWA geologists. Other excursions associated with the conference will visit the Great Barrier Reef, the south coast of Victoria, the Canterbury region of the South Island of New Zealand, and coastal exposures on the North Island of New Zealand.

A strong Western Australian presence at AAPG International, while the eyes of the petroleum world are focused on Perth, could attract major new players to the petroleum exploration field in WA, and lead to significant investment in the State. Western Australia is widely regarded as a region with a favourable exploration climate. This conference should enhance that view, and will raise interest in currently available acreage release areas in the Canning, Carnarvon, and Perth Basins.

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or go to <http://www.aapg.org> and follow the links

For acreage release areas go to http://www.doir.wa.gov.au/mineralsandpetroleum/acreage_releases.asp

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