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East Kimberley geophysics and mineral systems

EXPLORATION INCENTIVE SCHEME

Centre for EXPLORATION TARGETING

A geophysical investigation of the east Kimberley region provides the basis for a mineral systems approach to a prospectivity analysis of the Halls Creek Orogen in northern Western Australia

As part of the Geological Survey of Western Australia's (GSWA) ongoing collaboration with the Centre for Exploration Targeting (CET) at The University of Western Australia, two Reports are now available that provide new insights into the geophysics, geology and mineral prospectivity of the east Kimberley region of northern Western Australia. **Report 157** by MD Lindsay and others is a geophysical investigation of the region, while **Report 159** by SA Occhipinti and others is a mineral systems prospectivity analysis of the Halls Creek Orogen. The projects were funded through the Exploration Incentive Scheme (EIS).

Report 157 investigates the geology of the east Kimberley region through an integrated geophysical and geological approach. Emphasis is placed on identifying geological structures and features that may be important for assessing the mineral potential of the region (Fig. 1). Subsurface architecture is constrained through combined gravity and magnetic modelling along three easterly to southeasterly oriented transects across the northern, central and southern parts of the Halls Creek Orogen. Significant crustal-scale structures are interpreted and investigated to determine their potential influence on the development of the regional architecture, the emplacement of magma, and the circulation of hydrothermal fluids. Newly interpreted features include three orogen-normal structures, and another regional structure that runs obliquely across the Halls Creek Orogen starting from beneath the Speewah Dome (Fig. 1). The geophysical interpretation delineated a zone of high-grade metamorphic rock that is bounded by two of the orogen-normal structures (Fig. 1). A major positive gravity anomaly is modelled as a source of excess mass in the midcrust; this is compatible either with a large mafic–ultramafic intrusion, or a crustal fragment. Accretion of the crustal fragment to the Kimberley Craton prior to the 1865–1850 Ma Hooper Orogeny could have led to the propagation and creation of the orogen-normal and oblique structures. The structures represent weak zones in the crust, which may have led to differential exhumation of crust during the 1835–1810 Ma Halls Creek Orogeny, and formed fluid conduits in a mineral system.

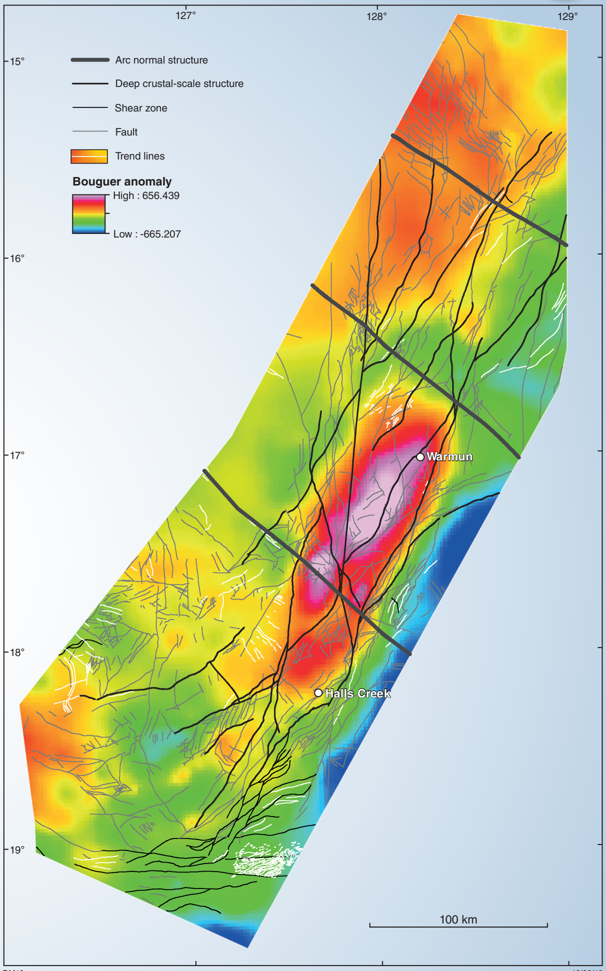


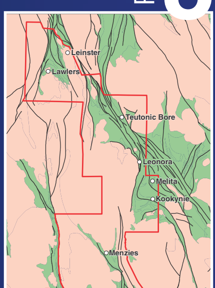
Figure 1. Structural elements of the Halls Creek Orogen delineated from geophysical data and geological and metamorphic maps, overlain on a Bouguer gravity image

continued on page 3

What's inside?

PAGE 6

PAGE 8



PAGE 11

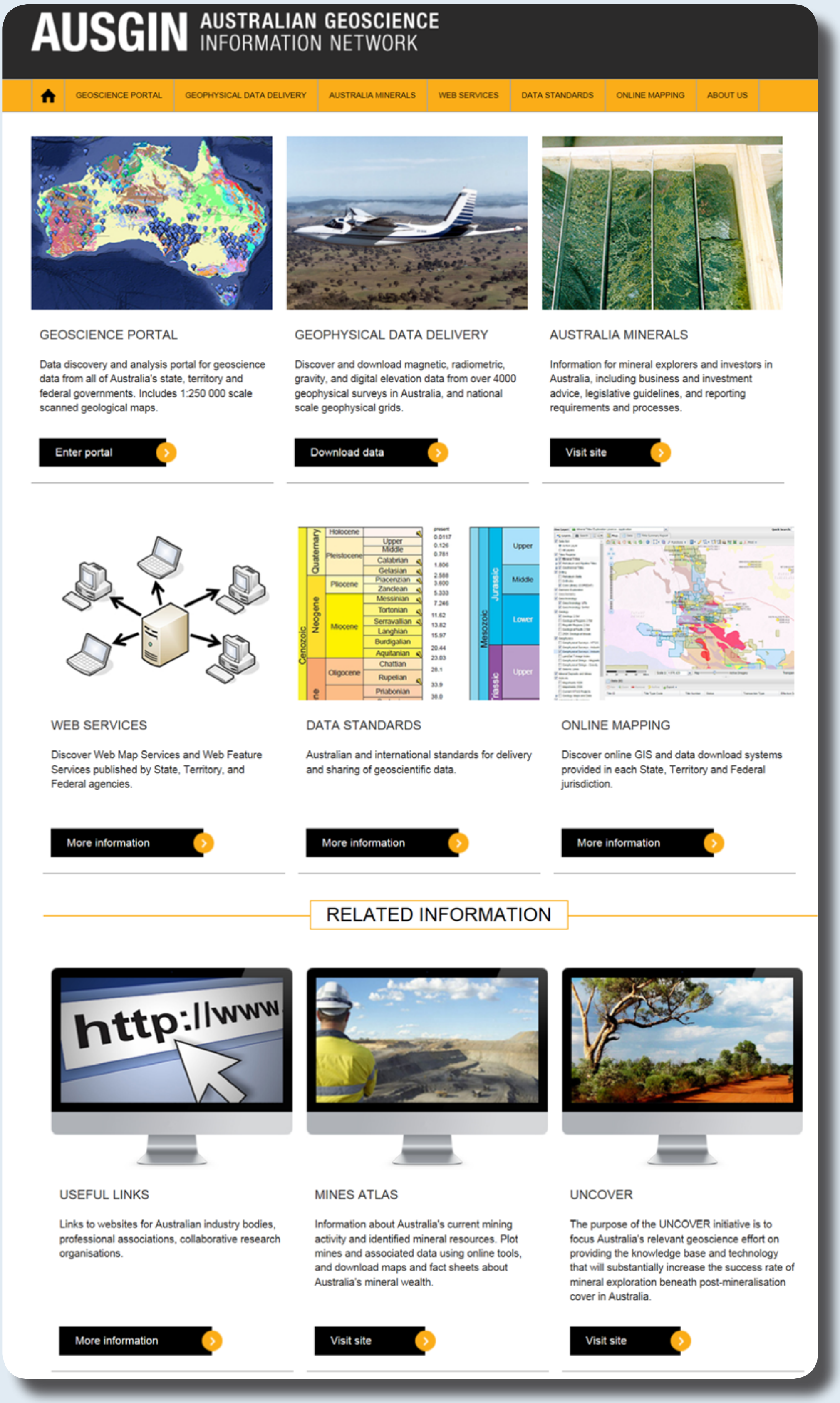
The AusGIN Portal goes live

Australian Government
Geoscience Australia

The Australian Geoscience Information Network (AusGIN) Portal gives a single point of access to geological and geophysical data and information. It provides a data discovery and analysis portal for geoscience data from all of Australia's state, territory and federal governments.

It provides the following:

- Links to all Commonwealth, State and Territory geological surveys
- A download facility for all Australia's geological maps at 1:250 000 scale
- Airborne geophysical data and digital elevation data downloads from all State and Territory geological surveys and Geoscience Australia
- Links to all mining legislation and jurisdictional reporting guidelines
- The national reporting guidelines for mineral exploration 'Australian requirements for submission of digital exploration data' and the associated Mineral Reporting Template software
- The Australian mines atlas
- A national view of current minerals tenements.



Access the AusGIN portal at <www.geoscience.gov.au>.

For more information, contact Stephen Bandy (stephen.bandy@dmp.wa.gov.au).

continued from page 1

Opening up greenfields regions of Western Australia for mineral exploration is best facilitated through the understanding of regional mineral prospectivity. **Report 159** is a multicommodity mineral systems analysis carried out as the basis for prospectivity analyses and mapping in the underexplored Halls Creek Orogen. Known mineral occurrences or deposits in the region formed from as early as 1860 Ma through to 350 Ma, largely influenced by periods of tectonic activity that are linked to supercontinent assembly and breakup. This manifested in the region through the contractional 1865–1850 Ma Hooper and 1835–1805 Ma Halls Creek orogenies, and the 1000–800 Ma Yampi, c. 560 Ma King Leopold and 450–295 Ma Alice Springs orogenies, interspersed with periods of relaxation accompanied by extension and basin formation.

Prospectivity models are generated for seven commodity groups of various ages and ore genesis mechanisms within the region that include combinations of Ni, Cu, PGE, V, Ti, Au, Pb, Zn, and diamonds (Fig. 2). There is a link between key mineral systems and prospectivity model components and the distribution of disparate styles of mineral deposits in the region. The crustal-scale tectonic architecture was taken from **Report 157**.

Different ‘zones’ (tectonic terranes) of the Halls Creek Orogen are prospective for diverse commodity groups due to the tectonic environment in which they developed through time, their potential to be preserved at the present-day surface or subsurface, and favourable depositional sites that may be present in these zones (structural or lithological). Major crustal-scale faults or shear zones that intrinsically control the location of known ore deposits in the area are implied to be sites of fluid migration and proximal to sites of ore deposition. Of these, orogen-perpendicular (northwesterly trending) and orogen-oblique (northerly trending) faults seem to be the most influential structures with respect to ore deposition in the Halls Creek Orogen, especially in regions where they intersect each other or orogen-parallel (northeasterly trending) major crustal-scale structures.

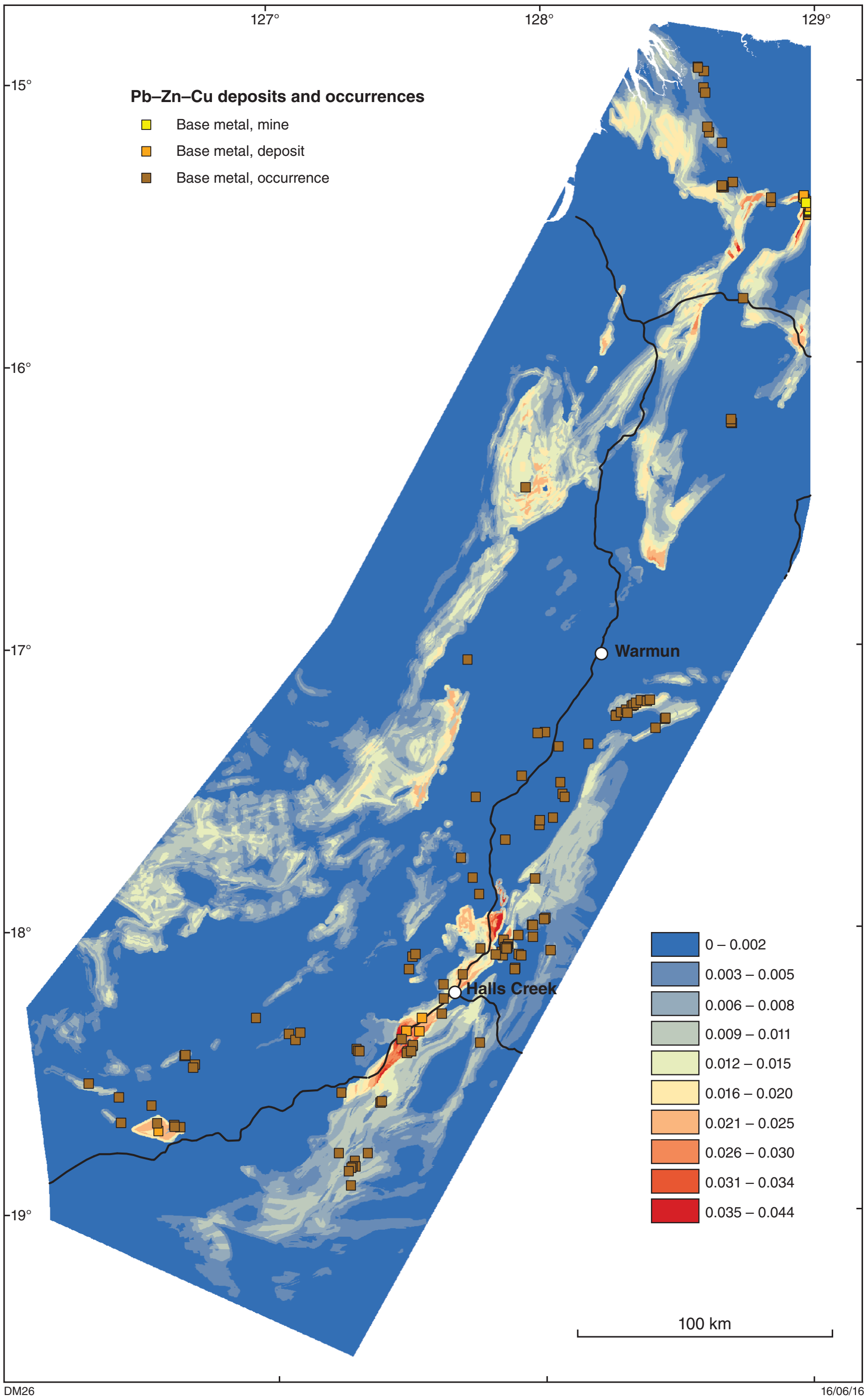


Figure 3. Prospectivity analysis for Pb–Zn–Cu–Ag

GSWA Report 157 A geophysical investigation of the east Kimberley region, northern Western Australia and **GSWA Report 159 Prospectivity analysis of the Halls Creek Orogen, northern Western Australia — using a mineral systems approach** are available as free downloadable PDF files from <www.dmp.wa.gov.au/ebookshop>.

For more information, contact Ian Tyler (ian.tyler@dmp.wa.gov.au).

Mesoarchean plate tectonic evolution of the northwest Pilbara

Crustal evolution of the Pilbara Craton changed abruptly at c. 3220 Ma, as revealed by major differences between the Paleoarchean East Pilbara Terrane (EPT) and the complex assemblage of Mesoarchean terranes and basins in the northwest Pilbara. The 3530–3220 Ma EPT was the product of 300 million years of plume-related volcanism and granitic intrusion that established a continental-scale volcanic plateau. In contrast, the crustal growth of the Mesoarchean northwest Pilbara was dominated by plate-tectonic processes: 3220–3160 Ma rifting and plate separation following breakup of the EPT, then 3160–2920 Ma convergence ending in 2955–2919 Ma collision and the North Pilbara Orogeny.

GSWA Report 160 traces the evolution of the northwest Pilbara using evidence from its stratigraphy, structural geology, geochemistry, geochronology, and mineralization. Mesoarchean plate-tectonic processes included rift and spreading centre volcanism, obduction, subduction, magmatic arc migration, and collision orogeny. An important conclusion is that the present distribution of terranes and basins is partly a consequence of major strike-slip faulting that involved lateral displacements of tens to hundreds of kilometres. These movements explain the considerable stratigraphic and structural differences across the faults. Effectively, these faults separate the northwest Pilbara into four tectonostratigraphic divisions (Figs 1 and 2). U–Pb zircon dating and Nd isotopic data indicate that two of these divisions (Karratha Terrane and Whim Creek – Caines Well Granitic Complex) are underlain by Early Paleoarchean crust and it is interpreted that this old crust was rifted from the EPT at c. 3220 Ma.

Report 160 Northwest Pilbara Craton: a record of 450 million years in the growth of Archean continental crust by AH Hickman is available as a free download from the DMP eBookshop at <www.dmp.wa.gov.au/ebookshop>.

For more information, contact Arthur Hickman (arthur.hickman@dmp.wa.gov.au).

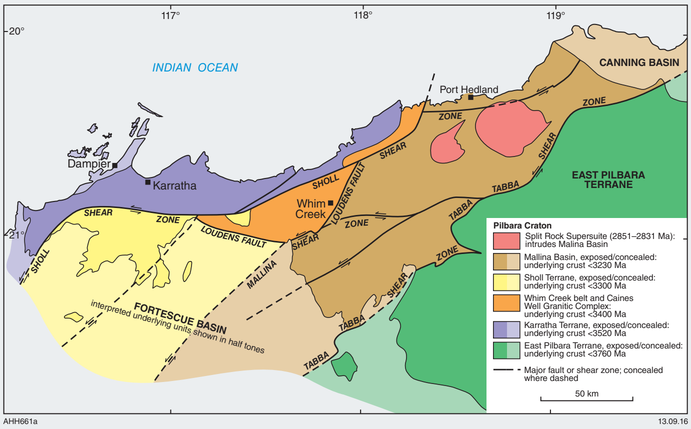


Figure 1. Four tectonostratigraphic divisions of the northwest Pilbara Craton separated by major faults and shear zones

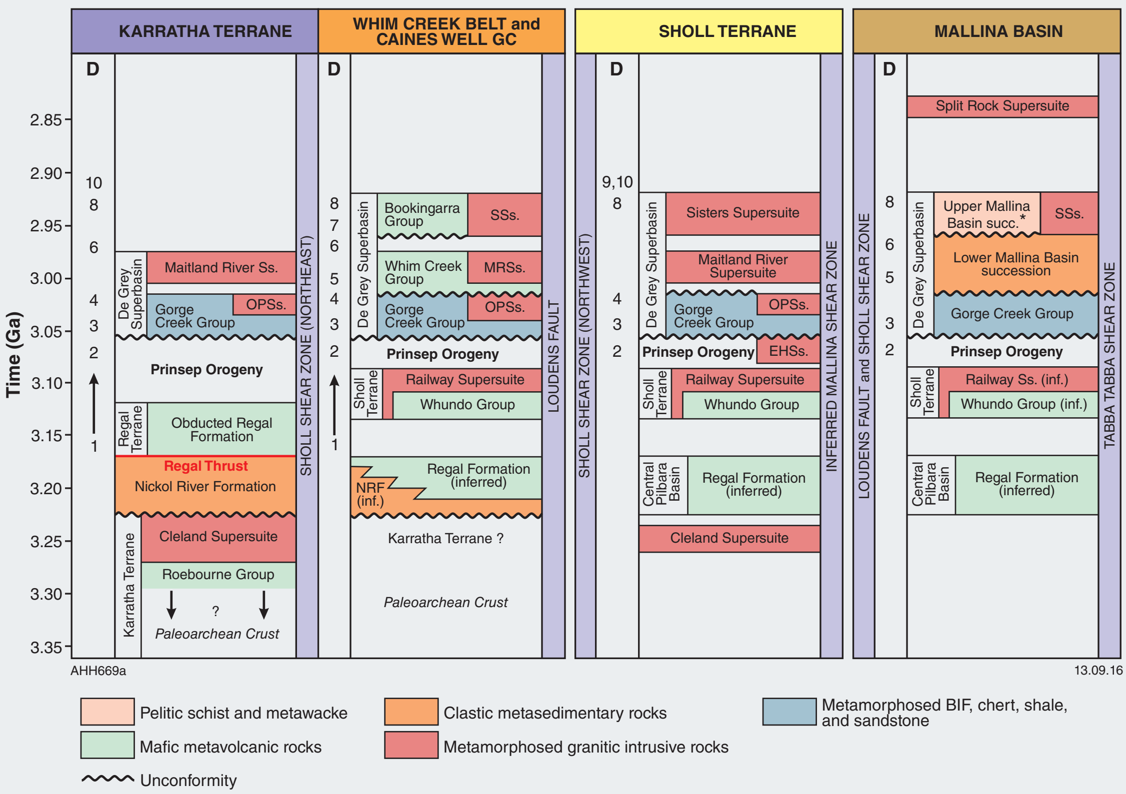


Figure 2. Time–space plot summarizing stratigraphy and deformation events of the four tectonostratigraphic divisions of the northwest Pilbara. Abbreviations: GC — Granitic Complex; SSs — Sisters Supersuite; OPSs — Orpheus Supersuite; MRSs — Maitland River Supersuite; EHSs — Elizabeth Hill Supersuite; D — deformation event

The evolution of mafic and ultramafic rocks of the Mesoproterozoic Fraser Zone

The Albany–Fraser Orogen is located along the southern and southeastern margins of the Archean Yilgarn Craton (Fig. 1) and formed from at least c. 1810 to 1140 Ma during reworking of the craton. The Fraser Zone is a geophysically and structurally distinct zone within the orogen, hosting abundant intrusions of predominantly c. 1305 to 1290 Ma metagabbroic rocks emplaced into sedimentary rocks belonging to the Snowys Dam Formation of the Arid Basin. Magma emplacement was most likely in a dominantly extensional setting and possibly related to orogenic collapse. The primary mafic magma had ~8.8% MgO and was derived from a depleted mantle source. This magma was contaminated with small (<<10%) amounts of crust before and during ascent and emplacement. The Fraser Zone has been the focus of considerable exploration for Ni–Cu sulfides following the discovery of the Nova–Bollinger deposit in 2012–13 in an intrusion consisting of interlayered olivine gabbronoritic, noritic, and peridotitic cumulates. Disseminated sulfides in drillcore intersecting the structural upper portion of the intrusion, above the main ore zone, have tenors of approximately 4–5% Ni, 1–4% Cu and very low PGE concentrations (<100 ppb), consistent with derivation from magma with broadly the same composition as the regional Fraser Zone metagabbros. However, mineral chemistry suggests that the Nova–Bollinger rocks crystallized from slightly more primitive parental melts, with higher εSr (38–52) and more variable δ_{34}S (–2 to +4) than the regional metagabbros (εSr 17–32, δ_{34}S around 0), which is consistent with the geochemical evidence for enhanced crustal assimilation of the metasedimentary country rock in a relatively large magma staging chamber.

The data presented in Record 2016/8 identify several factors potentially critical in determining whether or not Fraser Zone mafic magmas are mineralized. These data relate to intrusion history and local geodynamic conditions. Favourable sets of factors include initial emplacement of large magma chambers within the Arid Basin, assimilation of sulfur-rich metasedimentary rock, convective compositional homogenization and sulfur-saturation prior to olivine fractionation, and tectonically induced final transport and emplacement processes which modified or sorted both silicate and sulfide minerals and drained them of liquid. Unfavourable factors include initial emplacement beneath the base of the Arid Basin, early olivine fractionation, later emplacement within the Fraser Zone as small chambers that were unable to assimilate significant volumes of country rock or to convectively homogenize subsequent hybridized magma, and final emplacement during relative tectonic quiescence. Early olivine fractionation is monitored by whole-rock and mineral Mg, effective contamination by Arid Basin metasedimentary rocks is monitored by sulfur and Sr isotopic composition, the stage of sulfur-saturation is monitored by Ni concentration of olivine, and the intensity of tectonic activity is monitored by textural features of the cumulate rocks including the ratio of cumulate minerals to liquid.

Record 2016/8 The evolution of mafic and ultramafic rocks of the Mesoproterozoic Fraser Zone, Albany–Fraser Orogen, and implications for Ni–Cu sulfide potential of the region by WD Maier, RH Smithies, CV Spaggiari, SJ Barnes, CL Kirkland, O Kiddie, and MP Roberts is available as a free download from the DMP eBookshop at <www.dmp.wa.gov.au/ebookshop>.

For more information, contact Hugh Smithies (hugh.smithies@dmp.wa.gov.au).

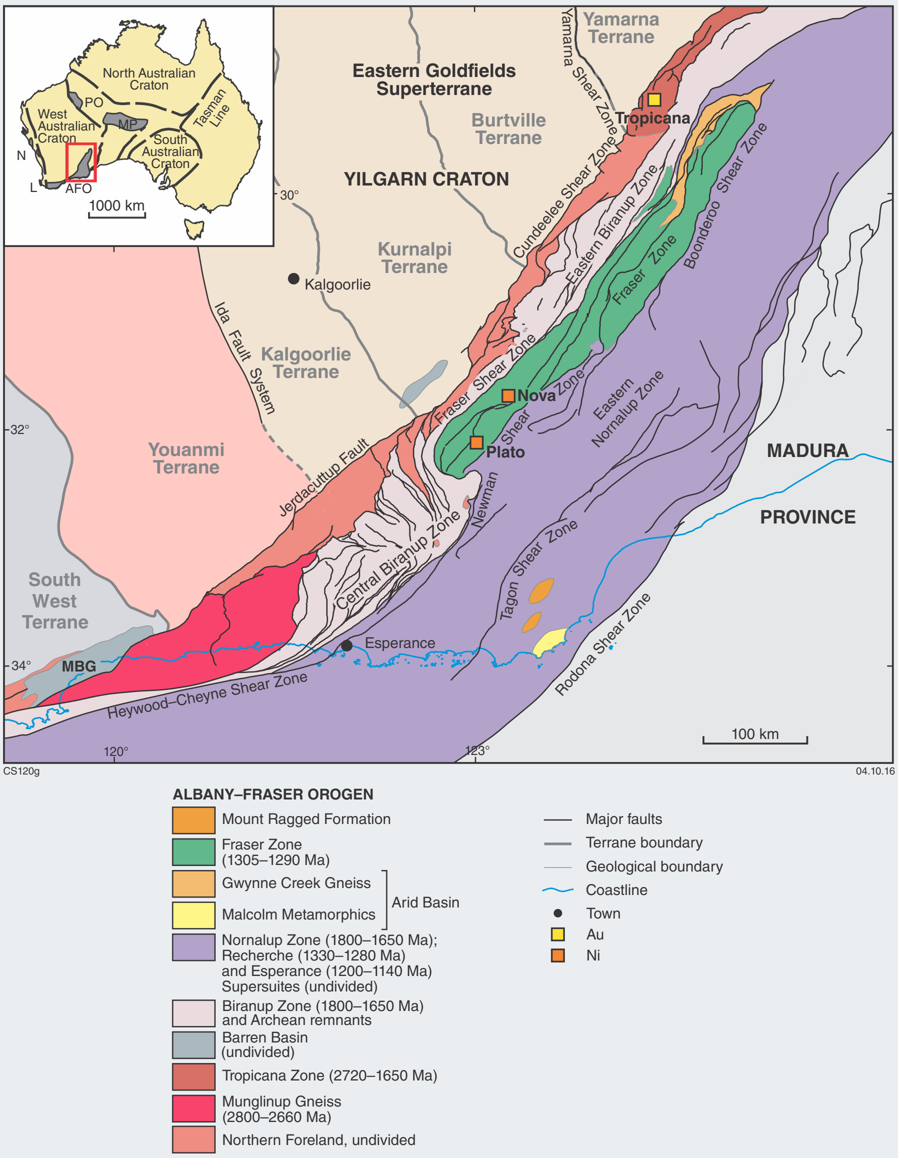


Figure 1. Simplified, pre-Mesozoic interpreted bedrock geology of the east Albany–Fraser Orogen and tectonic subdivisions of the Yilgarn Craton

What lies between — interpretations of the Eucla–Gawler deep crustal seismic reflection and MT transect

AuScope | EXPLORATION INCENTIVE SCHEME | Australian Government Geoscience Australia | Geological Survey of Western Australia | Government of South Australia Department of State Development

This 870-kilometre seismic reflection (13GA-EG1) and magnetotelluric (MT) data transect was acquired along the Trans-Australian Railway corridor, crossing the Nullarbor Plain. The data has provided an excellent view of the crust and upper mantle underlying cover rocks of the Eucla, Bight, Denman and Officer Basins, as well as depth and details of the basins themselves. The transect links to the 12GA-AF3 seismic line that crossed the Albany–Fraser Orogen (GSWA Record 2014/6) and traverses the Madura and Coompana Provinces and the western Gawler Craton in South Australia (from Haig to Tarcoola; Fig. 1). Models and interpretations of these and other geophysical data were presented at a dedicated session at the Australian Earth Sciences Convention in Adelaide, June 2016, entitled ‘Exposing the Nullarbor’. Interpretation of the seismic and MT data is a collaborative project between the Geological Survey of Western Australia (GSWA), the Geological Survey of South Australia (GSSA), and Geoscience Australia (GA). New interpretation methodology was tested, in particular the use of digital onscreen 2D and 3D visualization and annotation, so that interpretation workshops focused mainly on discussing the geological significance of the identified features. The group discussions and mix of expertise, ranging from challenging issues associated with data processing to making sense of completely hidden basement geology, proved very effective. The talks and abstracts are available for download from <www.dmp.wa.gov.au/Geological-Survey/Eucla-Gawler-Deep-Crustal-1458.aspx>.

Also available on the same page are posters presented at the conference of the sections with preliminary interpretations, including MT. Final, uninterpreted migrated TIF images of the seismic sections are available on the webpage as zip files, as well as supporting data. Alternative formats are available from Geoscience Australia at <www.ga.gov.au/metadata-gateway/metadata/record/89637>.

Overview of the presentations

Topics covered include processing of the seismic line, new analysis of the overlying basins, use of the Eucla basement stratigraphic drilling project outcomes in interpretations, new geochronology by GA from other drillcores, analysis and modelling of potential field data, geophysical studies of lithospheric structure in the region, and detailed analysis and interpretation of the seismic and MT data across the various crustal entities. This has led to a much improved understanding of the location, architecture and significance of major crustal boundaries, internal structural features across the various domains, and the extent and influence of voluminous magmatism in the region. The collaborative effort and mix of geophysical datasets has provided valuable insight into both the differences and similarities between such datasets that cover the same regional space. For example, bland, non-reflective zones in the seismic data may correlate with strongly conductive zones in the MT, suggestive of pathways for intrusive material through the crust.

Mundrabilla Shear Zone

One of the highlights is the visualization in seismic reflection data of a crustal boundary that, from potential field data, is known to be subvertical — the Mundrabilla Shear Zone (Figs 1 and 2). Reflectors in seismic data are difficult to detect if they dip more than about 60°, so subvertical shear zones might

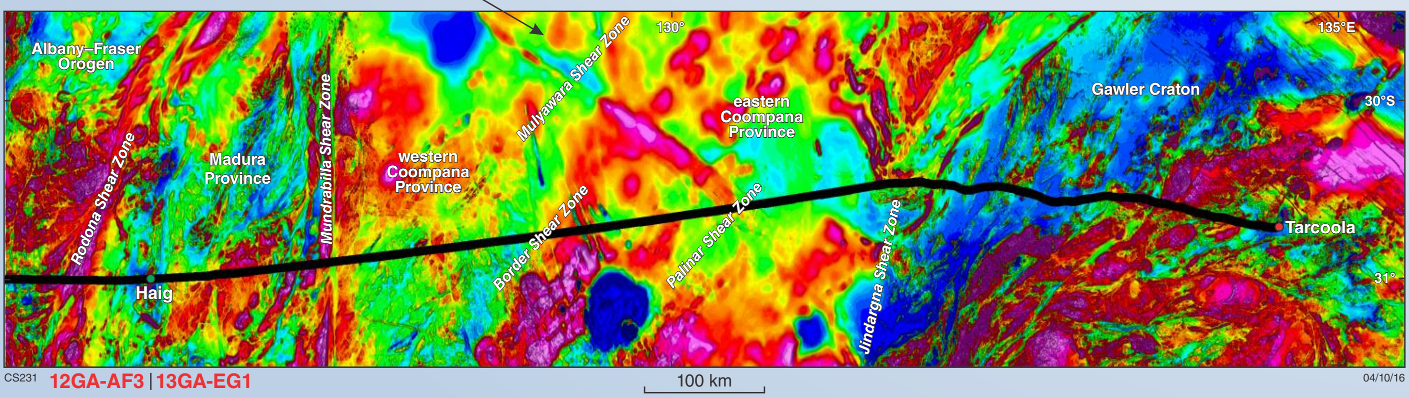


Figure 1. Reduced-to-pole aeromagnetic image showing the location of the transect 13GA-EG1, and the border between Western Australia and South Australia

show as distinct, non-reflective zones that truncate regions of reflectivity with dips less than about 60°. The Mundrabilla Shear Zone shows up as a broad, locally offset tapered zone of non-reflectivity that thins upward toward the surface (Fig. 2). Its interpretation is complicated by the presence of granitic intrusions that may have intruded during deformation, suggestive of a synmagmatic, sinistral transtensional shear zone.

Implications for geological evolution and mineral exploration

Madura Province and the link to the Albany–Fraser Orogen

- The Rodona Shear Zone is clearly defined as a broad system of southeasterly dipping coherent reflectors, and is coincident with the suture zone between the orogen and the Madura Province.
- Ophiolitic rocks occur in the hanging wall of the Rodona Shear Zone.
- Domal features in the Madura Province relate to extension and voluminous Moodini Supersuite intrusions emplaced during the c. 1200–1125 Ma Maralinga Event (prolific effect on geophysical datasets; some coincident with MT conductors).
- The Gunnadorrah Seismic Province (lower crust) crosses both the Madura Province and Albany–Fraser Orogen, but stops short of less to non-reworked Yilgarn crust.
- Clear (inverted) thrust-dominated architecture in the western part of the Albany–Fraser Orogen, but less coherent, more intrusion-dominated architecture east of the Fraser Zone, and in the Madura Province.

Coompana Province

- The Province contains evidence for both Proterozoic subduction-related and rift-related magmatism.
- Several crustal-scale structures are identified, some coincident with MT conductors.
- The Cook Domain adjacent to the western Gawler Craton may represent an ocean–continent transition, or the reworked margin of the Gawler Craton.
- MT data appear to record the effects of voluminous magmatism associated with the Maralinga Event, particularly the strongly magnetic northeasterly trending plutons that occur southeast of the Border Shear Zone in the Coompana Province.

Seismic line 13GA-EG1 is now available and provides a fantastic resource for future research. A Plate showing the interpretations is in production, and a multi-authored, co-branded (GSWA, GSSA, GA) Record discussing these interpretations and their geological significance is planned for early 2017–18. Results of the Eucla basement stratigraphic drilling program are available in **GSWA Record 2015/10**, and a detailed Report is in preparation.

At GSWA, planning is underway for a program of stratigraphic drilling in the Coompana Province.

For more information, contact Catherine Spaggiari (GSWA) (catherine.spaggiari@dmp.wa.gov.au) or Rian Dutch (GSSA) (Rian.Dutch@sa.gov.au).

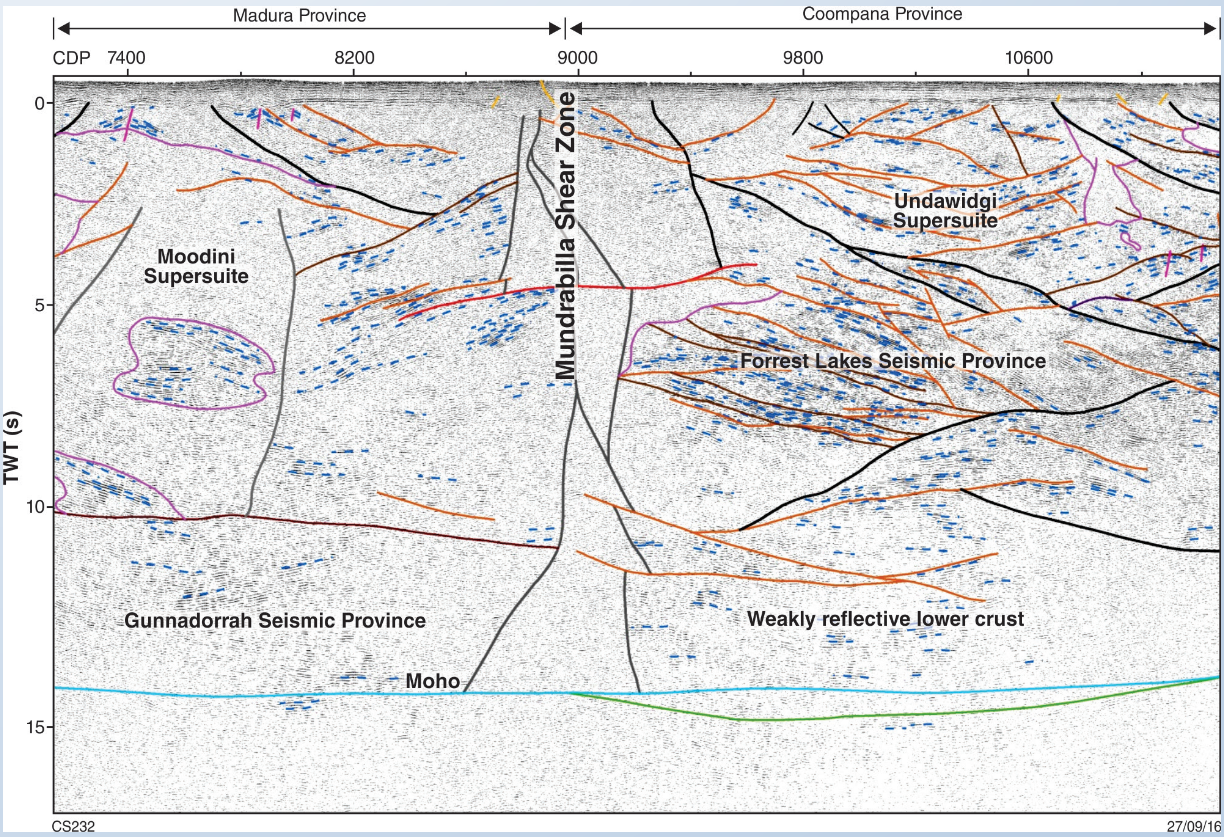


Figure 2. Seismic reflection image with interpretation of the Mundrabilla Shear Zone, a subvertical crustal boundary that separates the Madura and Coompana Provinces. Y-axis shows two-way-time in seconds.

A formal stratigraphy for the Eastern Goldfields

Since Roy Woodall defined the first formal stratigraphy for the Kalgoorlie area in 1965, various researchers, explorers and miners have used a plethora of names to describe the Archean geological units in the Eastern Goldfields. The Geological Survey of Western Australia (GSWA) is currently undertaking a program to produce a seamless geological interpretation of the Eastern Goldfields based on the published 1:100 000-scale mapping and enhanced by new geochronological, geochemical and geophysical data, much of which has been acquired in recent years through the Exploration Incentive Scheme (EIS). The current project area (Fig. 1) extends between Leinster in the north and Norseman in the south. The first release, in 2014, covered the Lawlers and Coolgardie–Kambalda regions. Recent annual releases have included the Leonora, Kookynie and Ora Banda regions. The next release, in 2017, will include Menzies and Davyhurst.

The new geological interpretation incorporates formal stratigraphy (Fig. 2), which is described in detailed explanatory notes that are prepared and published in the GSWA Explanatory Notes System (ENS) database as each area is completed. Entries include type sections or areas, geochronological constraints and detailed lithological descriptions. All formally named units are registered in the Geoscience Australia's Australian Stratigraphic Units Database.

An introduction to the stratigraphic scheme for the Eastern Goldfields will be presented at **GSWA in the Goldfields** in Kalgoorlie on 10 November 2016.

Kalgoorlie Group

The Kalgoorlie Group (2726–2680 Ma) comprises most of the lower mafic–ultramafic package in greenstone belts between Norseman and Wiluna. It appears to locally overlie older (up to c. >2817 Ma) mafic–ultramafic successions. Greenstone belts within the Kalgoorlie Group are not physically continuous but have a broad similarity in rock types, stratigraphic variations and age. Where there are continuous successions, they have been distinguished as subgroups. In the current project, these include the Hannans (Kalgoorlie–Kambalda area), Coolgardie (Coolgardie area), Vetters (Ora Banda area), Broad Arrow (Broad Arrow area), Marshall Pool (Leonora area) and Two Sisters (Lawlers area) Subgroups. Greenstone successions of the Kalgoorlie

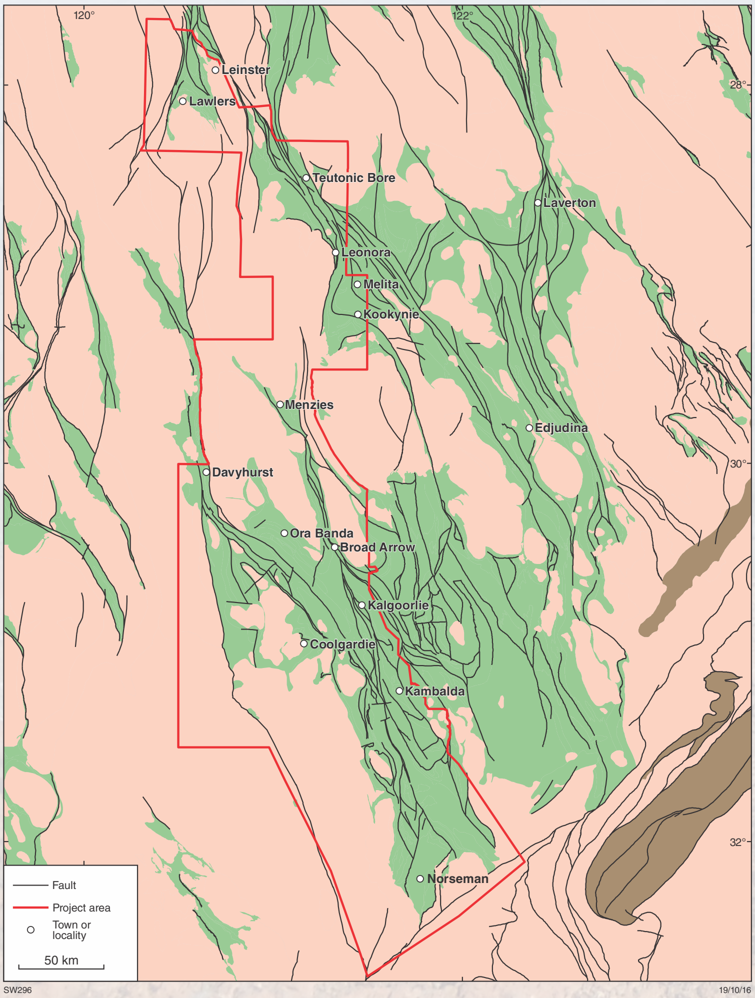
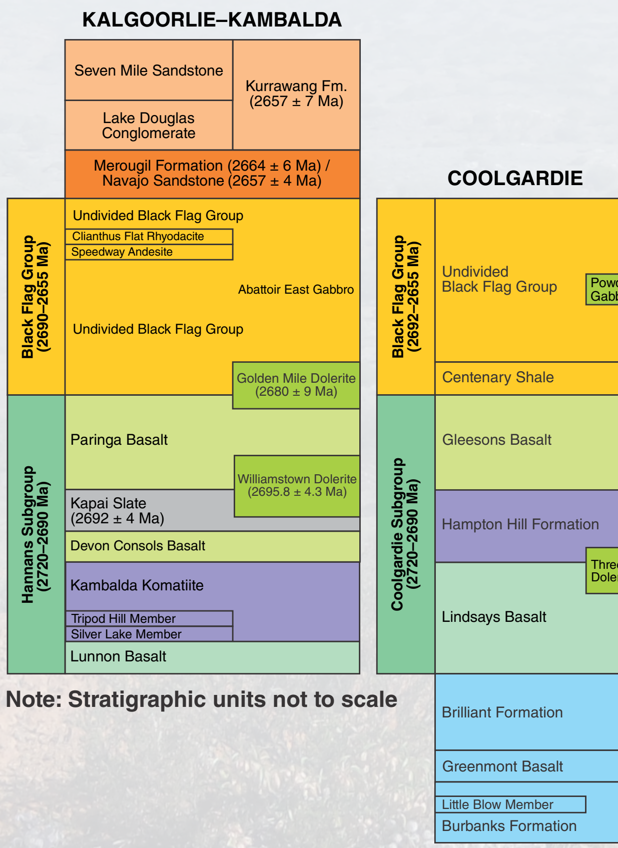


Figure 1. Current project area for the GSWA Eastern Goldfields stratigraphic interpretation



Group have been intruded by mafic–ultramafic sill complexes (e.g. Bounty Igneous Complex, Golden Mile Dolerite) at different stratigraphic levels.

Upper volcanic, volcaniclastic and siliciclastic stratigraphy

In the Kalgoorlie–Coolgardie–Kambalda region, the Black Flag Group (2692–2665 Ma), which comprises felsic and mafic volcanic and volcaniclastic rocks, overlies the Kalgoorlie Group. To the north, in the Lawlers region, the Mount White Group, which is similar to the Black Flag Group in lithofacies characteristics, age and stratigraphic relationships, is exposed in a syncline.

Siliciclastic and felsic volcaniclastic rocks that unconformably overlie the Mount White and Black Flag Groups include the Scotty Creek Formation (2662–2640 Ma) in the Lawlers region, the Navajo Sandstone (2657–2640 Ma) southwest of Kalgoorlie and the Merougil Formation (2664–2640 Ma) west of Kambalda.

Gindalbie Group

The Gindalbie Group (2694–2676 Ma), which outcrops in volcanic centres at Melita and Teutonic Bore, comprises bimodal (basaltic to rhyolitic) and calc-alkaline volcanic successions with associated intrusive rocks and quartz-rich sediments. It hosts volcanogenic massive sulfide (VMS) mineralization at Teutonic Bore.

Late-basin siliciclastic successions

The Kurrawang Formation (<2657 Ma) overlies the Black Flag Group and Navajo Sandstone west of Kalgoorlie along a low-angle unconformity. The lower part of the Kurrawang Formation has an exotic clast provenance represented by banded iron-formation, granite, gneiss, metasedimentary rocks and felsic volcanic rocks.

For more information, contact:

Jyotindra Sapkota (Kalgoorlie) (jyotindra.sapkota@dmp.wa.gov.au)

Matt De Paoli (Kalgoorlie) (matt.depaoli@dmp.wa.gov.au)

Stephen Wyche (Perth) (stephen.wyche@dmp.wa.gov.au)

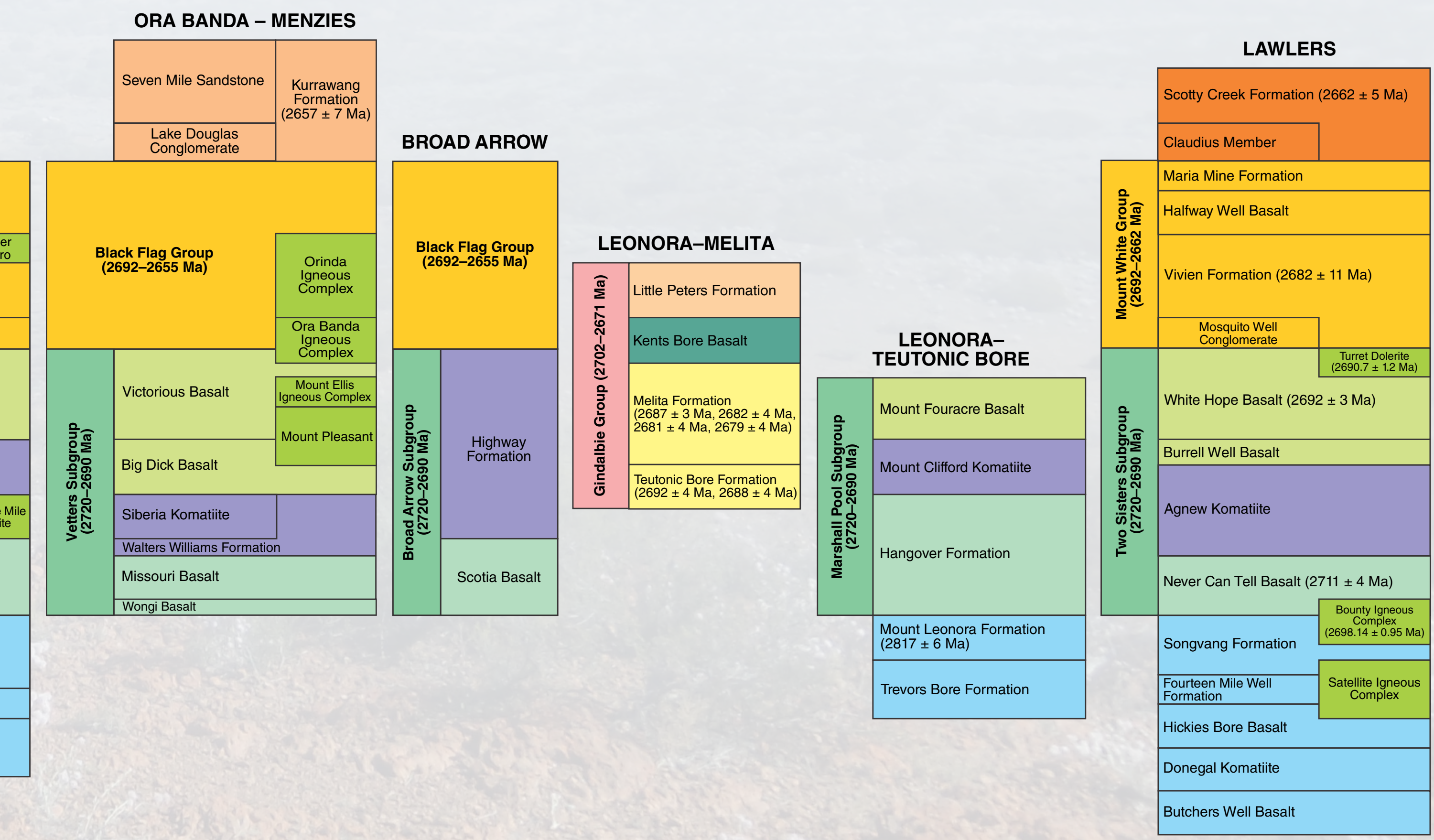
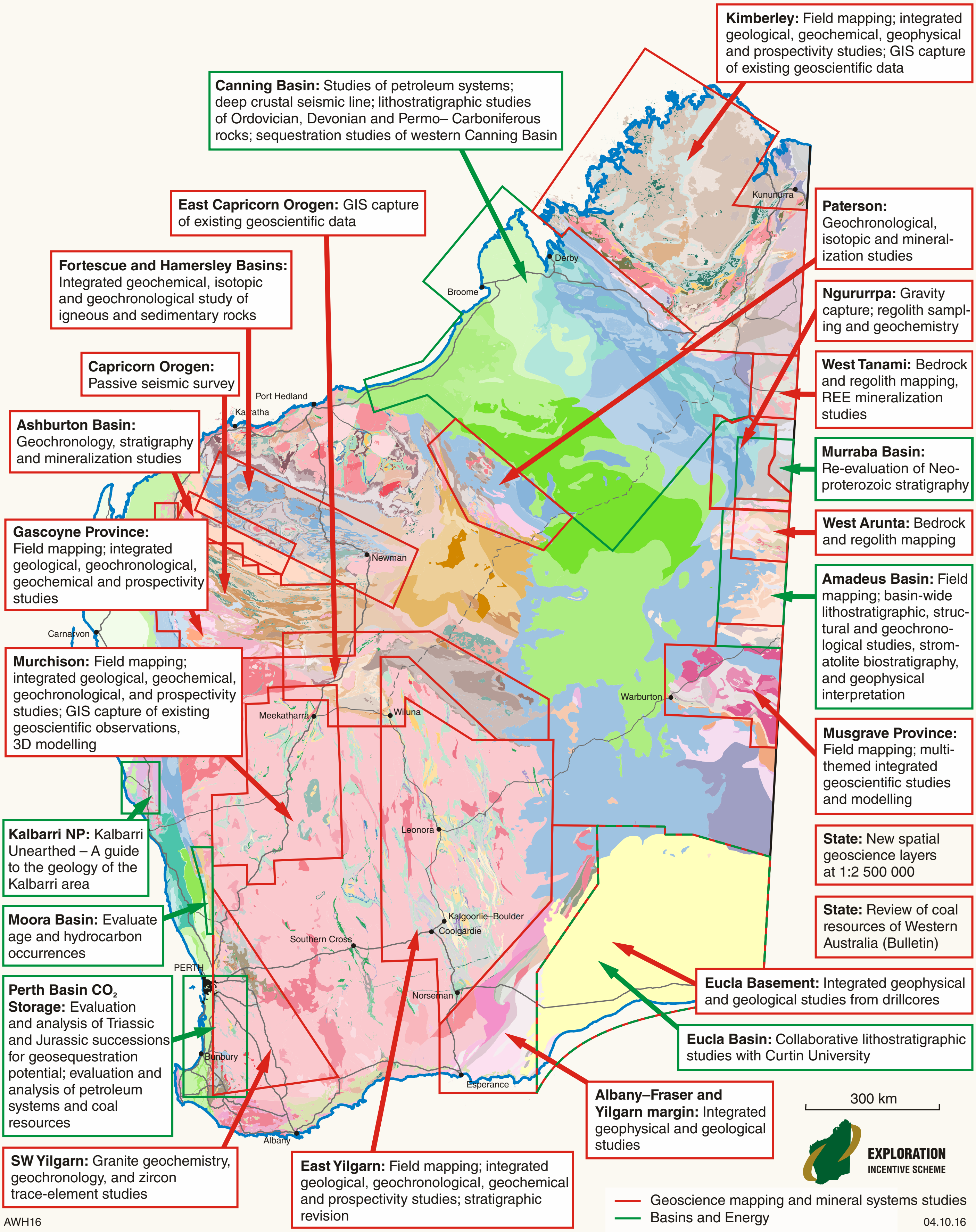


Figure 2. Stratigraphic associations between Kambalda and Leinster

Where we are working



GSWA regional geophysics surveys: 3 October 2016 update

Data downloads

Located data — Geophysical Archive Data Delivery System <www.ga.gov.au/gadds>.

Grids and images — Search in GeoVIEW.WA under the Government Surveys layers.

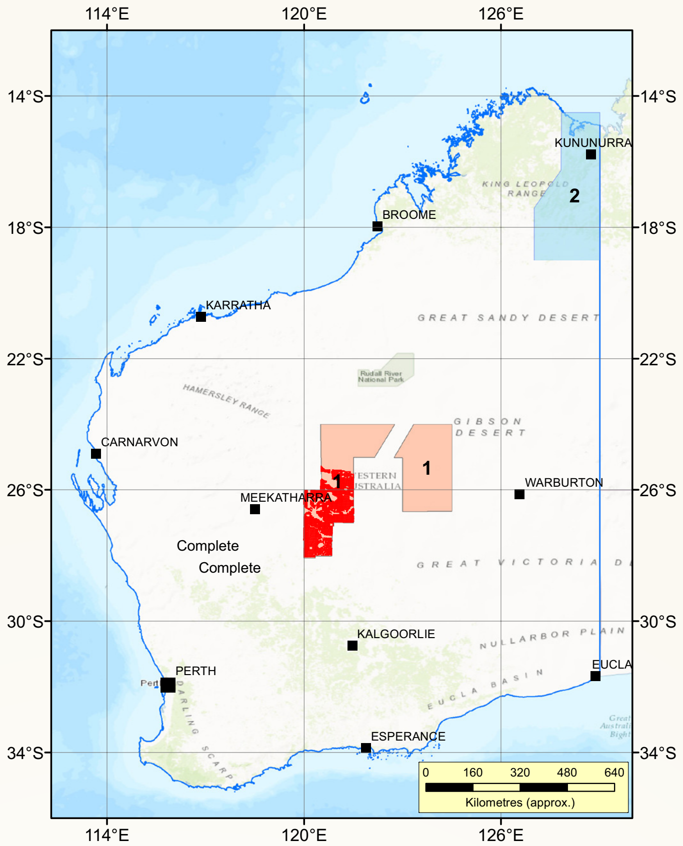
Subscribe to the GSWA eNewsletter for alerts of preliminary and final data release dates. Go to <www.dmp.wa.gov.au/enewsletter>.

Survey outline shapefiles are available online at <www.dmp.wa.gov.au/geophysics>.

For more information, contact David Howard (david.howard@dmp.wa.gov.au).

EXPLORATION INCENTIVE SCHEME

Airborne gravity survey
Ground gravity survey (planned area)
Ground gravity (access cleared)

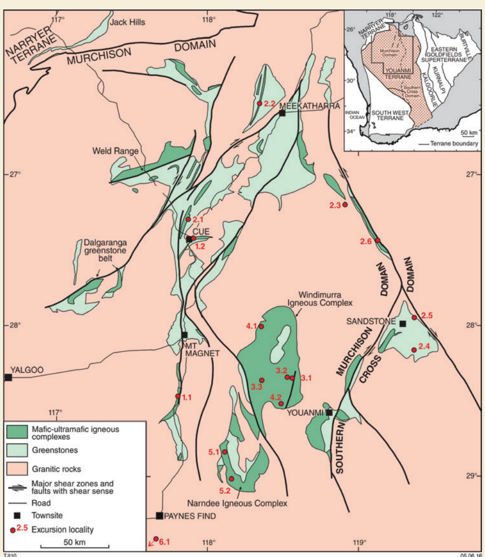


ID	Area/Name	Method	Configuration	Size	Status	Start	End	Release
1	Wiluna 2016	Gravity	Grid 2.5 km	11 000 stns	Planned	Deferred to 2017		
1	Survey over area cleared for access			4 454 stns	Processing	20-08-16	21-09-16	Nov-16*
2	E Kimberley 2016	Air Grav	2500 m, E-W	38 000 km	Mobilization	Oct-16*	Dec-16*	tbd

Information current at: 3 October 2016

** Estimated date*

Product releases



Virtual tour of the mafic–ultramafic intrusions of the Youanmi Terrane
Enquiries to Email: gsd.dda@dmp.wa.gov.au; Phone: +61 8 9222 3459; Fax: +61 8 9222 3444.
Free (online): www.dmp.wa.gov.au/ebookshop

RECORDS

Record 2016/12 Komatiites and associated rocks of the Kalgoorlie–Leonora region
by Barnes, SJ, Mole, D, Wyche, S and Dering, G

Record 2016/13 13th International Ni–Cu–PGE Symposium, Fremantle, Australia: Abstracts
by Godel, B, Barnes, SJ, Gonzalez-Alvarez, I, Fiorentini, ML and Le Vaillant, M

NON-SERIES MAP

Layered intrusions of the Youanmi Terrane, Yilgarn Craton
by Ivanic, TJ

VIRTUAL TOUR

Virtual tour of the mafic–ultramafic intrusions of the Youanmi Terrane
by Farrell, TR and Ivanic, TJ

See bottom of back page for product information and ordering details.

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GSWA in the Goldfields (Kalgoorlie) — Thursday 10 November

The Geological Survey of Western Australia (GSWA) is opening its doors with 'GSWA in the Goldfields' on Thursday 10 November with a number of discrete free events at different venues during the day, culminating at Hannans Club with three talks as part of the Raglan Series (aka KEG).

SCHEDULE

Joe Lord Core Library, corner Broadwood & Hunter Streets, West Kalgoorlie

1–4.30 pm Recent deep stratigraphic drilling around Kalgoorlie

Presentations

- Welcome and introduction — Rick Rogerson
- Kalgoorlie stratigraphy project — Matt De Paoli
- Deep drilling on the Golden Mile — David Nixon (KCGM)

After the presentations — viewing the core display

Viewing of the core display at the Joe Lord Core Library will feature a deep stratigraphic hole from the Golden Mile, a comparison hole through similar stratigraphy from Kambalda, and other holes from the GSWA Kalgoorlie collection showing textures and lithological components typically found in rocks of the Eastern Goldfields. Core from the vicinity of the Nova–Bollinger nickel deposit will also be on display. The Joe Lord Core Library doors close at 4.30 pm.

Viewing core at the Joe Lord Core Library

Joe Lord Core Library

GSWA online database training, 34 Cheetham Street, Kalgoorlie, central campus for the Goldfields Institute of Technology

9 am – 4 pm

This training course is appropriate for all prospectors and geologists wanting to learn more about GSWA online systems.

To register for the training only, please email <publications@dmp.wa.gov.au>.

The Raglan Series at Hannans Club, 44 Brookman Street, Kalgoorlie

5.30 pm for 6.00 pm start

Talks

- Mineral distribution in the Yilgarn reflected in large-scale datasets — Stephen Wyche
- The geology of the Fisher East komatiite-hosted nickel sulfide deposit — Lauren Burley
- Exposing the Eucla basement: what separates the Albany–Fraser Orogen and the Gawler Craton? — Catherine Spaggiari

For all enquiries and to register your interest, please email <cindi.dunjey@dmp.wa.gov.au>.