

Fieldnotes



Government of Western Australia
Department of Mines and Petroleum

Geological Survey of
Western Australia



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ISSN 1325-9377
ISSN 1834-2272

ISSN (PRINT) 978-1-74168-728-6
ISSN (PDF) 978-1-74168-727-9

EIS Co-funded Exploration Drilling offers — Round 14

The Minister for Mines and Petroleum, Hon. Sean L'Estrange, has announced the 42 successful projects in Round 14 of the Exploration Incentive Scheme's (EIS) Co-funded Exploration Drilling Program. Round 14 attracted 63 applications from 51 companies, including seven prospectors, with the Government offering co-funding of up to a total of \$4.75 million.

The Co-funded Drilling Program refunds up to 50% of direct drilling costs with caps of \$150 000 for a multi-hole project, \$200 000 for a single deep hole and \$30 000 for a prospector's project. Refunds are made to successful applicants after completion of drilling and submission of reports, which are released publicly via the Department of Mines and Petroleum's WAMEX and WAPIMS databases after a six-month confidentiality period.

This highly competitive drilling program has supported significant discoveries including:

- the Camelwood nickel deposits
- the Yeneena copper deposits
- the Millenium zinc and the Dusk Til Dawn gold discovery
- deep gold at Gruyere
- a nickel discovery at Emily Ann near Lake Johnson.

The Nova discovery, which was supported by EIS geophysics data and by co-funded drilling in 2011–12, is the first mine to be developed under the scheme. Production started in November 2016.

GENERAL

- 1 ACH Nickel Pty Ltd
- 2 Agnew Gold Mining Company
- 3 Anglo Australian Resources NL
- 4 Antipa Minerals
- 5 Antipa Minerals
- 6 Aphrodite Gold Ltd
- 7 Apollo Phoenix Resources Pty Ltd
- 8 Austral Pacific Pty Ltd
- 9 Australian Mines Ltd
- 10 Black Raven Mining
- 11 Chalice Gold Mines Ltd
- 12 Chalice Gold Mines Ltd
- 13 Encounter Resources Ltd
- 14 Encounter Resources Ltd
- 15 Fortescue Metals Group
- 16 Fortescue Metals Group
- 17 Fortescue Metals Group
- 18 Gold Road Resources
- 19 Impact Minerals Ltd
- 20 IronRinger (Tarraji) Pty Ltd
- 21 Kairos Minerals Ltd
- 22 Key Petroleum (Australia) Pty Ltd
- 23 Lodestar Minerals Ltd
- 24 MB Exploration Pty Ltd
- 25 Meridian (Lennard Shelf Project) Pty Ltd
- 26 Middle Island Resources Ltd
- 27 Minjar Gold
- 28 Mt Magnet Gold Pty Ltd
- 29 Poseidon Nickel Limited
- 30 Quadrio Resources Pty Ltd
- 31 Rio Tinto Exploration
- 32 Rox Resources Ltd
- 33 Sipa Exploration NL
- 34 Traka Resources
- 35 Ventnor Resources Pty Ltd

PROSPECTORS

- 36 Baracus Pty Ltd
- 37 Christopher Potts
- 38 David Pascoe
- 39 Mendelyarri Pty Ltd
- 40 Moving Rock & Resources Pty Ltd
- 41 Peter Kerley
- 42 Zebina Minerals Pty Ltd

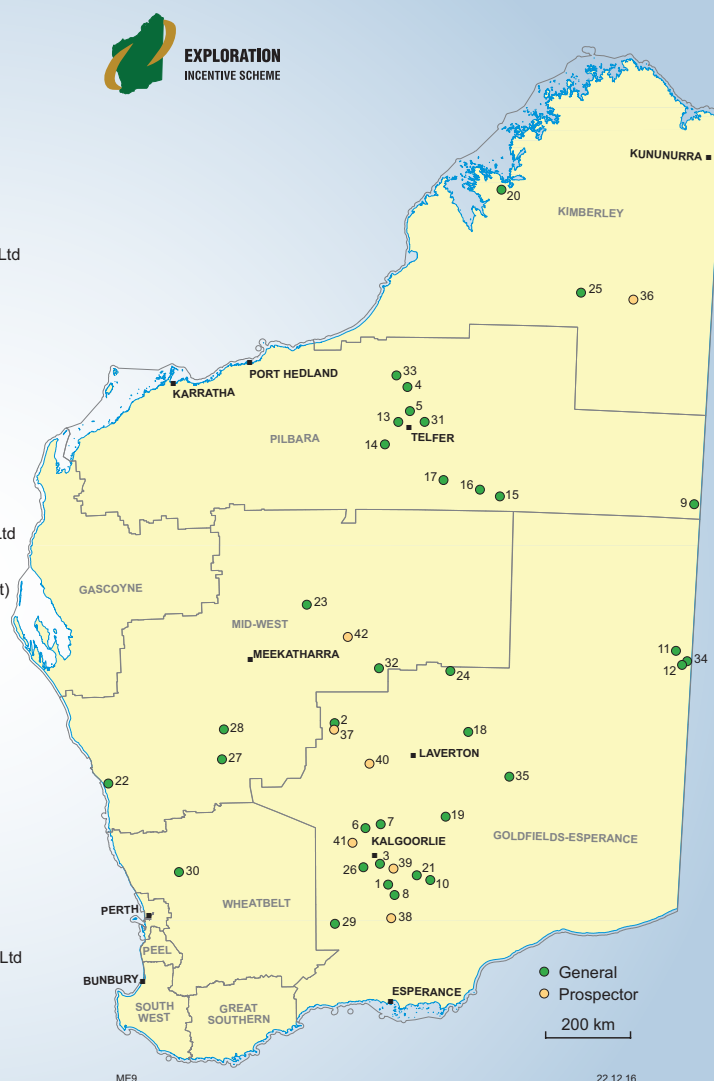


Figure 1. List and locations of approved sites for Round 14

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Friday 24 February 2017
8.30 am – 4.30 pm
Followed by a Sundowner

Esplanade Hotel, Fremantle
Cnr Marine Terrace & Essex Street

This is a great opportunity to hear presentations on the latest results from GSWA's geoscience programs, including collaborative work with CSIRO, Geoscience Australia, Curtin University and the Centre for Exploration Targeting (CET).

Activities and results of the Exploration Incentive Scheme will be outlined including the launch of Round 15 of the Government Co-funded Exploration Drilling program.

Throughout the day there will be geological presentations, an extensive model display and

Cooperative mapping project between GSWA and CGS

China is Western Australia's largest trading partner. Therefore mutual understanding and cooperation at all levels within government are of great importance.

The Geological Survey of Western Australia (GSWA) has a Memorandum of Understanding (MOU) on Geoscience Cooperation with the China Geological Survey (CGS). Under that MOU, GSWA participated in a three-year project with the Xi'an Centre of the CGS for Cooperation in Geological Mapping Techniques. This involved cooperative research based on 1:100 000-scale regional geological surveys in the Archean Yalgoo–Singleton greenstone belt in the Murchison region of Western Australia, and 1:50 000 regional geological surveys in the Niujuanzi region of Gansu Province, northwestern China (Fig. 1).

The objectives of the cooperative project were to jointly develop field and laboratory-based geoscience skills, and to develop mapping and production techniques applicable to both 1:100 000 and 1:50 000 scale geological mapping.

This involved reciprocal visits between staff of the two countries and included structural and metamorphic geology, geochemistry, geochronology and isotope geology, tectonic analysis, mineral systems studies, stratigraphy and sedimentary basin analysis, and the interpretation of regional geophysical datasets.

The project has resulted in production of two regional geological maps in China, the publication of two maps in Western Australia, and a third Western Australian map is close to release (Fig. 2). Although the cooperative project has officially ended, researchers from China and Western Australia engaged in short reciprocal visits in 2015 and 2016 to finalize the interpretation of geochronology and geochemistry data in the context of the field mapping, and to prepare papers for publication in international journals.

A major outcome is the deepening of ties between Western Australia and China, and the application and continued development of digital mapping technology in the production of geological maps in both Western Australia and China. The project was instrumental in the Department of Mines and Petroleum winning the 2016 Premier's Award in the category 'Strategic engagement with China's resource sector'.

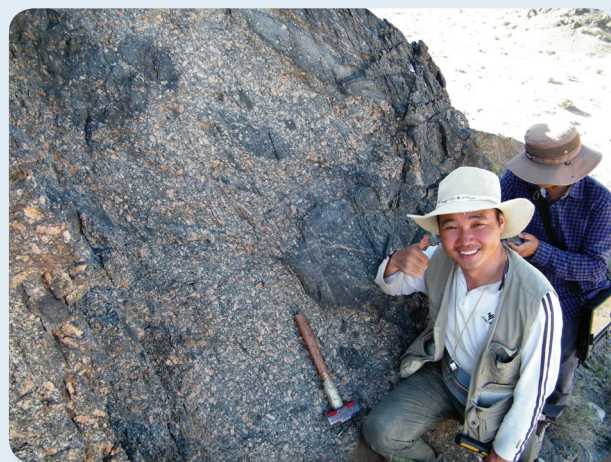


Figure 1. Dr Jianxing Li of the Xi'an Centre examining a granite outcrop in the Niujuanzi area

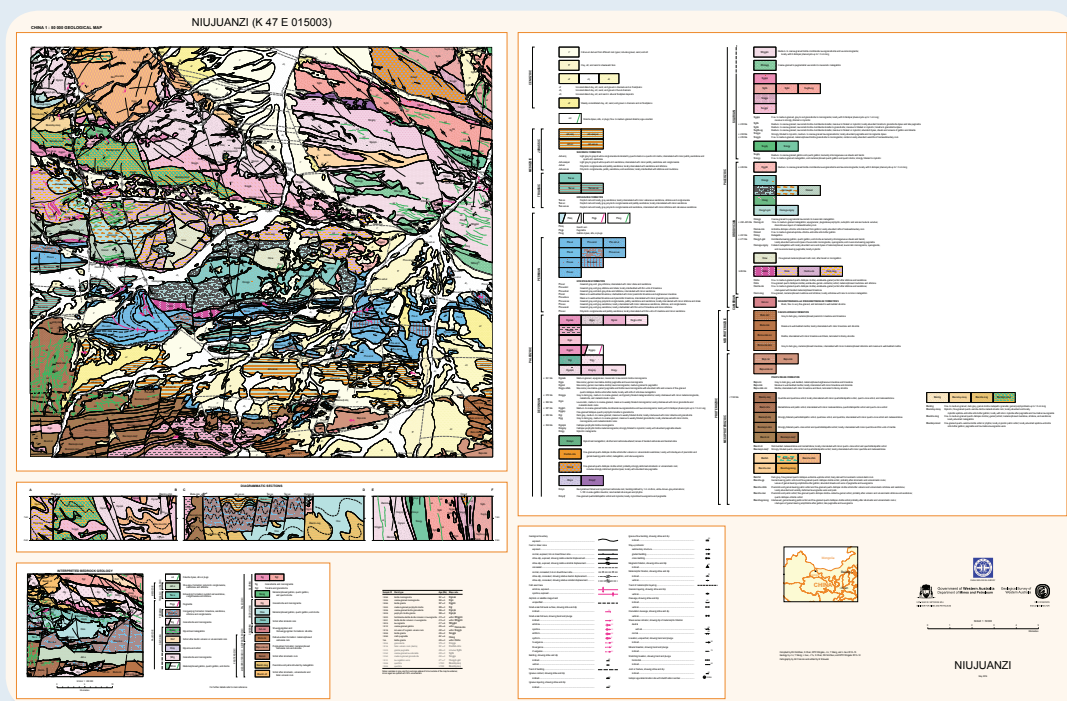


Figure 2. The Niujuanzi 1:50 000 scale geological map, based on collaborative work between GSWA and CGS geologists

For more information, contact Michael Wingate (michael.wingate@dmp.wa.gov.au) or Hugh Smithies (hugh.smithies@dmp.wa.gov.au).



Co-funded Exploration Drilling

continued from page 1



Location ID	Applicant Name	Drilling Project Title	Target Commodities
1	ACH Nickel Pty Ltd	Kenilworth Magnetic Anomaly	Au, Ni
2	Agnew Gold Mining Company	Agnew Strategic Stratigraphic	Au
3	Anglo Australian Resources NL	Feysville	Au
4	Antipa Minerals	Citadel Project	Cu, Au
5	Antipa Minerals	Minyari Dome IP	Au, Cu
6	Aphrodite Gold Ltd	Phi North Deep	Au
7	Apollo Phoenix Resources Pty Ltd	Carr Boyd	Ni, Cu, PGE
8	Austral Pacific Pty Ltd	Paris Gold Project	Au, Ag, Cu
9	Australian Mines Ltd	North Dovers Stratigraphic	Cu, Au
10	Black Raven Mining	Erayinia King North	Au, Cu, Zn
11	Chalice Gold Mines Ltd	West Musgraves La Serena, Harvarti and Manyas	Ni-Cu-PGE
12	Chalice Gold Mines Ltd	West Musgraves Pepperjack and Rokpol	Ni-Cu-PGE
13	Encounter Resources Ltd	Telfer West Project	Au, Cu
14	Encounter Resources Ltd	Fishhook	Cu, Co
15	Fortescue Metals Group	Separation East	Cu, Au
16	Fortescue Metals Group	Separation Graben	Cu, Au
17	Fortescue Metals Group	Rudall West	Cu, Au
18	Gold Road Resources	Hann Structural Corridor	Au
19	Impact Minerals Ltd	Mulga Tank Pan Handle	Ni, Cu, Au, PGE
20	IronRinger (Tarraji) Pty Ltd	Tarraji	Cu, Zn, Au
21	Kairos Minerals Ltd	Roe Hills Project	Ni, Cu
22	Key Petroleum (Aust) Pty Ltd	Wye Knot-1	Petroleum
23	Lodestar Minerals Ltd	Contessa Gold Prospect	Au
24	MB Exploration Pty Ltd	Lakes Edge Project	K
25	Meridian (Lennard Shelf) Pty Ltd	Mt Talbot North	Pb, Zn
26	Middle Island Resources Ltd	Two Mile Hill BIF Deeps	Au
27	Minjar Gold	Curara Well	Au
28	Mt Magnet Gold Pty Ltd	Morning Star Deeps	Au
29	Poseidon Nickel Ltd	Abi Rose Genesis	Ni
30	Quadrio Resources Pty Ltd	Calingiri	Cu
31	Rio Tinto Exploration	Budjidown	Cu, Au
32	Rox Resources Ltd	Camelwoop deeps	Ni
33	Sipa Exploration NL	Paterson North	Au, Co
34	Traka Resources	West Musgraves Munster and Cambozola	Ni-Cu-PGE
35	Ventnor Resources Pty Ltd	Silver Dragon Copper Nickel Propect	Cu, Ni
36	Baracus Pty Ltd	Mt Dockerell	Au
37	Christopher Potts	McAuley	Au
38	David Pascoe	New Waverley	Au
39	Mendelyarri Pty Ltd	Proprietary Project	Au
40	Moving Rock & Resources Pty Ltd	Braemore Project	Au
41	Peter Kerley	Never Can Tell	Au
42	Zebina Minerals Pty Ltd	Mizina/Coralie Prospect	Au

Figure 2. List of successful applicants Round 14

An economic impact study released early in 2015 showed that every \$1 million spent by the EIS generates \$10.3 million of exploration activity, and a longer term benefit to the State, in terms of higher Gross State Product, of \$23.7 million.

The successful projects (Figs 1, 2) are chosen via a transparent process which is scrutinized by an independent probity auditor and applications are evaluated by experienced exploration geologists who are members of professional organizations with strong codes of ethics. The process and list of successful applicants is ratified by a committee representing all the peak resource industry bodies in Western Australia.

Another round of co-funded drilling will be open from late February 2017. There will be a call for applications for projects to be undertaken between July 2017 and the end of June 2018. Information on the co-funded drilling can be found online at <www.dmp.wa.gov.au/eisdrilling>.

For more information, contact Margaret Ellis (margaret.ellis@dmp.wa.gov.au).

New map reveals extent of manganese mineralization in WA

A new 1:1 million scale map and data package highlights the extent of manganese mineralization discovered during the last 10 to 15 years in the east Pilbara and Capricorn regions, and the development of manganese projects in new stratigraphic settings. The products use data from the Department of Mines and Petroleum's MINEDEX mines and mineral deposits database.

Manganese exploration in the east Pilbara has expanded from the manganese mining corridor at Woodie Woodie at the periphery of the Fortescue and Hamersley Basins (Fig. 1). This has resulted in the discovery of a number of new prospects hosted in the Manganese Group, including new deposits at Sixty Sixer and Jay Eye.

In the Yeneena Basin, southeast of Woodie Woodie, significant manganese intersections were made in carbonate rock of the Broadhurst Formation (Throssell Range Group). In the Blake Sub-basin (Officer Basin), at Table Hill, manganese mineralization was discovered in association with base metals.

In the Padbury Basin, near the historical manganese centre of Horseshoe, manganese resources hosted by Millidie Creek Formation (Padbury Group) at Elsa Mary have expanded. From recent exploration work in the Bangemall Superbasin, manganese mineralization was found strongly associated with shales of the Collier Group (Yanneri); while in the west, manganese is associated with a combination of faulting and dolerite sills in mudstone-siltstone and dolomite host rocks of the Edmund Group (Mango – Five Fingers).

In the Earahedy Basin, exploration revealed significant manganese mineralization previously overlooked due to the iron-rich nature of the host rock (Frere Formation), and also in the carbonate Karri Karri Member (Lockeridge, Red Lake). In the southeastern Earahedy Basin, manganese mineralization has been noted with the siliciclastic Chiall Formation (Skull Soak, Dome), and carbonate Windidda Member (Dome, Windidda) and Wongawol Formation (Niminga).

The host-rock ages for manganese mineralization in Western Australia now extend from the Archean into the Neoproterozoic due to the manganese discoveries in the Neoproterozoic Yeneena and Officer Basins, and in the Waltha Woora Formation at Woodie Woodie.

Details of the geological setting and mineralization styles of all manganese sites in MINEDEX have been included in the accompanying data package (on USB).

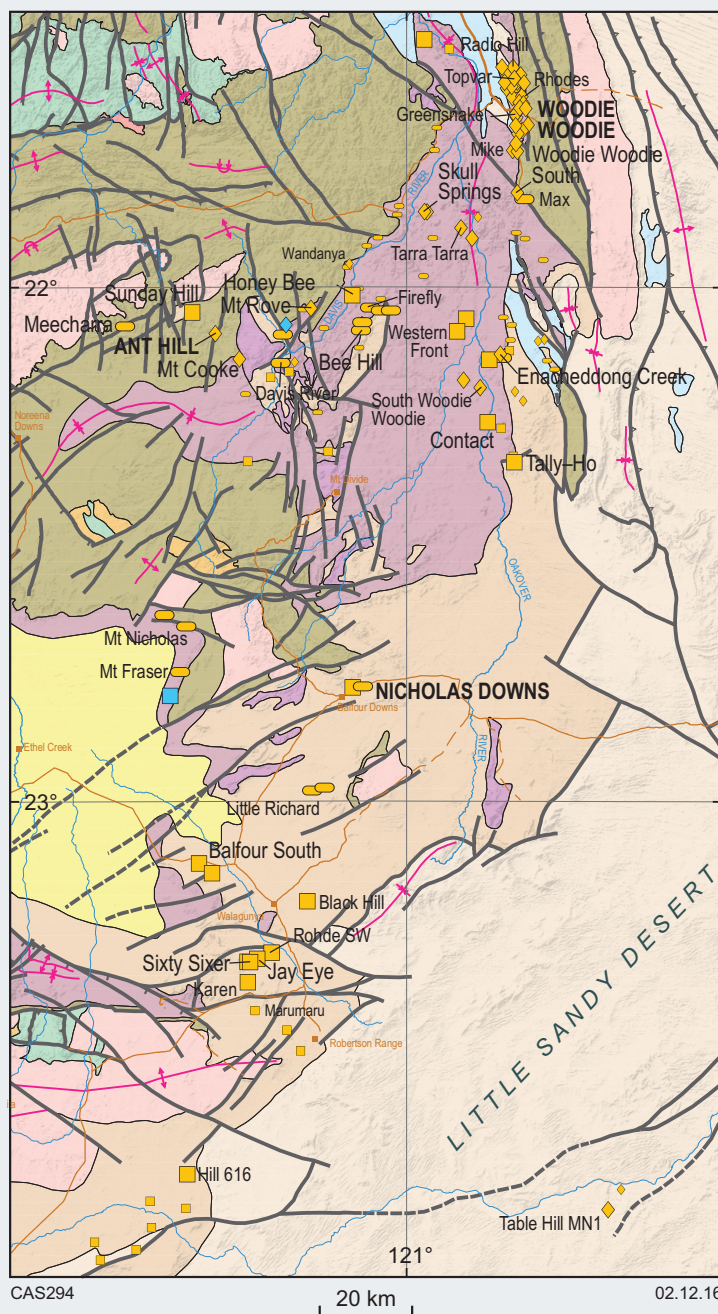


Figure 1. Part of the eastern side of the new manganese map of the Pilbara and Capricorn regions, from Woodie Woodie to Sylvania Inlier

Manganese deposits of the Pilbara and Capricorn regions, 2016 (data package and map) are accessible via the DMP eBookshop at www.dmp.wa.gov.au/ebookshop. Put 'manganese' into the search bar and press 'Go'.

For more information, contact Caroline Strong (caroline.strong@dmp.wa.gov.au).

GSWA in the Goldfields

GSWA in the Goldfields, hosted in Kalgoorlie on 10 November 2016, showcased current Geological Survey of Western Australia (GSWA) activities in the eastern part of the State. Over the course of the day, GSWA provided a training opportunity, an introduction to the Joe Lord Core Library collection, and several technical talks concerning current geological programs.

The day began with training in how to use GSWA online systems and databases. These sessions are always popular and the workshop was booked to overflowing.

The afternoon's proceedings at GSWA's Joe Lord Core Library in West Kalgoorlie commenced with a short presentation by Matt De Paoli from the GSWA Kalgoorlie office about the East Yilgarn stratigraphy project. This project, being undertaken by Matt and his colleague in Kalgoorlie, Jyotindra Sapkota, integrates previous mapping and research with new, targeted geochronological and geochemical data acquisition in the Eastern Goldfields into a seamless geological bedrock interpretation. Much of the interpretation over the western part of the Eastern Goldfields Superterrane has been completed (see **Fieldnotes October 2016 Number 80**). Matt will talk about progress on the project at the GSWA Open Day in Fremantle on 24 February 2017.

David Nixon, Senior Technical Geologist at KCGM, led a 'tour' (Fig. 1) along a stratigraphic diamond drillhole from the southern end of The Golden Mile (SE18/SE18W1: WAMEX open-file report A105910), which was acquired through GSWA's EIS Co-funded Drilling Program. This hole traverses the complete stratigraphy as it is preserved on The Golden Mile and has been extensively sampled for whole-rock geochemistry and scanned by the HyLogger. An EIS diamond drillhole from south of Kambalda through equivalent stratigraphy to that in SE18/SE18W1 (Gold Fields Ltd CD16056: WAMEX open-file report A95267) was displayed for comparison. Also on display was a drillhole through komatiite flows from the Marriotts Prospect north of Leonora, and EIS drillholes from the vicinity of the Nova-Bollinger nickel deposit.

In the evening, three talks were presented by invitation to the Raglan Drilling Geology Lecture Series at the historic Hannans Club. With more than a hundred geologists, prospectors and other interested spectators in attendance, Stephen Wyche, the manager of GSWA's Yilgarn Craton mapping programs, began by describing Yilgarn datasets available from GSWA. He was followed by Lauren Burley, a geologist from GSWA's Minerals Exploration Geoscience Group, who talked about nickel prospectivity in the mafic-ultramafic successions in the underexplored northeastern Goldfields (see **Fieldnotes April 2016 Number 78**). The final talk was presented by



Figure 1. Viewing Kalgoorlie stratigraphy at the Joe Lord Core Library



Figure 2. GSWA Kalgoorlie geologists, Matt De Paoli and Jyotindra Sapkota, at the Hannans Club (Photo taken by Melissa Drummond)

Catherine Spaggiari, manager of GSWA's Albany–Fraser Orogen Project, who discussed findings from, and interpretations based on, the recent Eucla basement drilling program (see **Fieldnotes October 2016 Number 80**). Speakers and audience then adjourned to the bar for follow-up discussions over beer and pizza (Fig. 2).

GSWA would like to thank Alicia Verbeeten, David Nixon, and Raglan Drilling for their assistance in organizing this event. Judging by the attendance and enthusiasm at all events throughout the day, GSWA in the Goldfields is set to become a fixture on the GSWA calendar.

For more information, contact Stephen Wyche (stephen.wyche@dmp.wa.gov.au).

Layered intrusions of the western Yilgarn Craton

The Archean Bushveld?

A growing body of work in the western Yilgarn Craton has revealed the vast extent and detailed evolution of several layered mafic-ultramafic intrusions: the Windimurra, Narndee, Youanmi and Atley Igneous Complexes (Fig. 1). Mapping of the intrusions is now complete. Of the 1:100 000-scale map sheets on which they occur, COOLAMANINU, CHALLA, WINDIMURRA, WYNYANGOO, YOUANMI and BUNGAR have been published, and WOODLEY, the last of which was released this month. All digital map data are included in Murchison Geological Information Series (GIS) annual releases. An interpretation map of the igneous complexes at 1:200 000 scale, **Layered intrusions of the Youanmi Terrane, Yilgarn Craton**, has also been published.

An excursion guide that explores highlights of the intrusions (**GSWA Record 2016/6**) is also available as a 'virtual tour' that can be downloaded from the Department of Mines and Petroleum (DMP) website as a kmz 'Google Earth' file (**Virtual tour of the mafic-ultramafic intrusions of the Youanmi Terrane**). Detailed descriptions of all units within the intrusions will be incorporated in future releases of the Geological Survey of Western Australia (GSWA) Explanatory Notes System (ENS), which can be viewed online. Interpretations based on deep crustal seismic reflection surveys and associated magnetotelluric (MT) surveys undertaken in 2010 were released in 2013 (**GSWA Record 2013/6**).

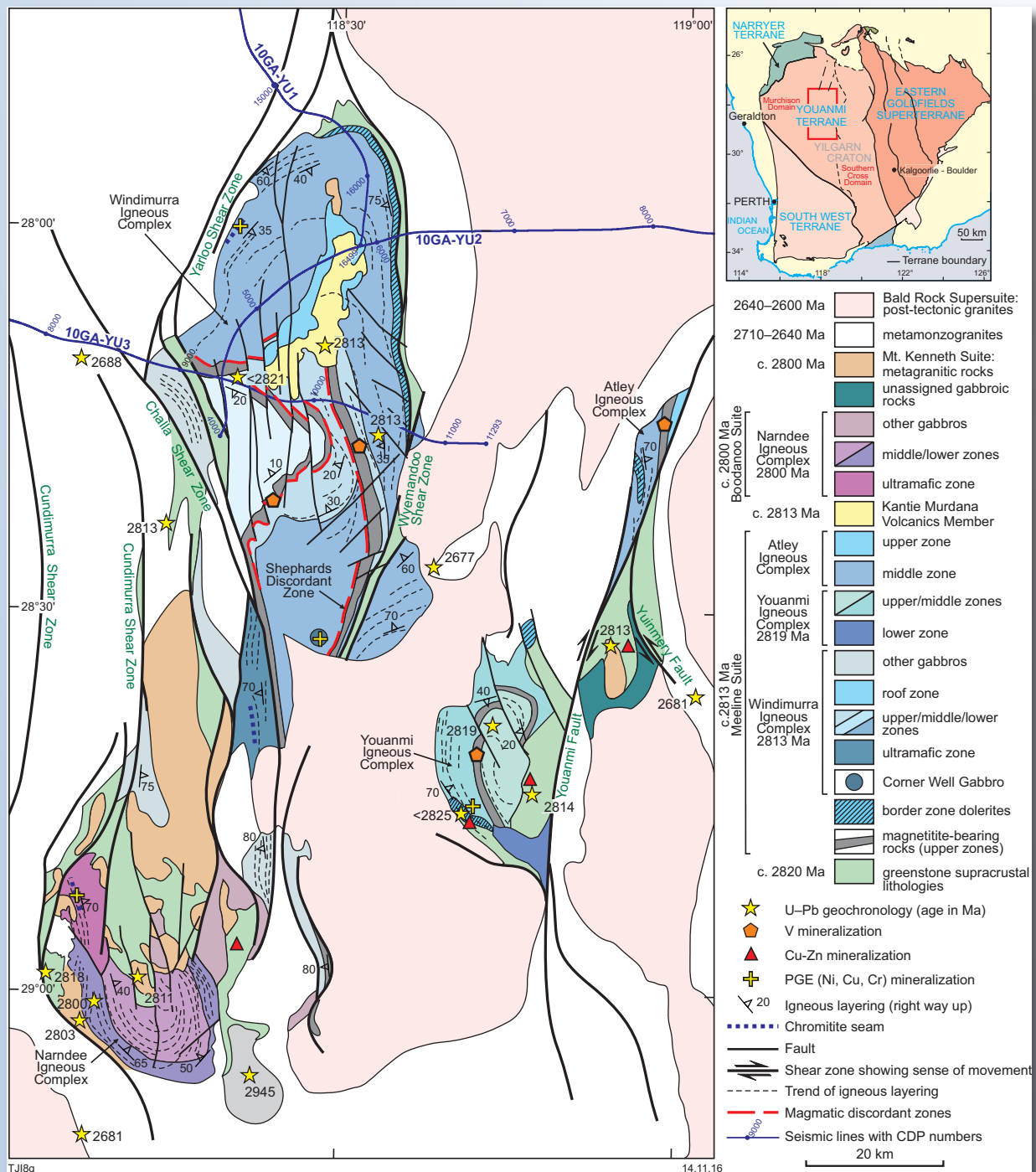


Figure 1. Simplified geological map of the layered intrusions of the Youanmi Terrane, Yilgarn Craton showing seismic lines, age data and selected mineral deposits

Layered intrusions of the western Yilgarn Craton

Seismic lines crossing the Windimurra Igneous Complex showed that this intrusion was likely very thick — approximately 11 km — the thickest such intrusion reported on Earth. The seismic data, in conjunction with new GSWA gravity and aeromagnetic data, and the 1:100 000 scale mapping, allowed the development of a 3D model of the complex (Fig. 2 and see **GSWA Record 2015/12** and **3D Geomodel Series: Windimurra, 2015**). Results of published research were presented at the 13th International Ni-Cu-PGE Symposium in Fremantle, Australia in September 2016 (**GSWA Record 2016/13**) and a report detailing all the work on the intrusions is in preparation.

The 3D model illustrates intricate overlapping layering features and discordant zones within the Windimurra Igneous Complex. It also identified a previously unreported, thick, subsurface ultramafic zone that is prospective for Cr–PGE mineralization (**GSWA Record 2016/13**, p. 41). This suggests the possibility of other orthomagmatic deposits apart from the dominantly Fe–Ti–V deposits (e.g. the Windimurra vanadium deposit, Fig. 3) in the upper parts of the Windimurra Igneous Complex and other associated intrusions of the Meeline Suite.

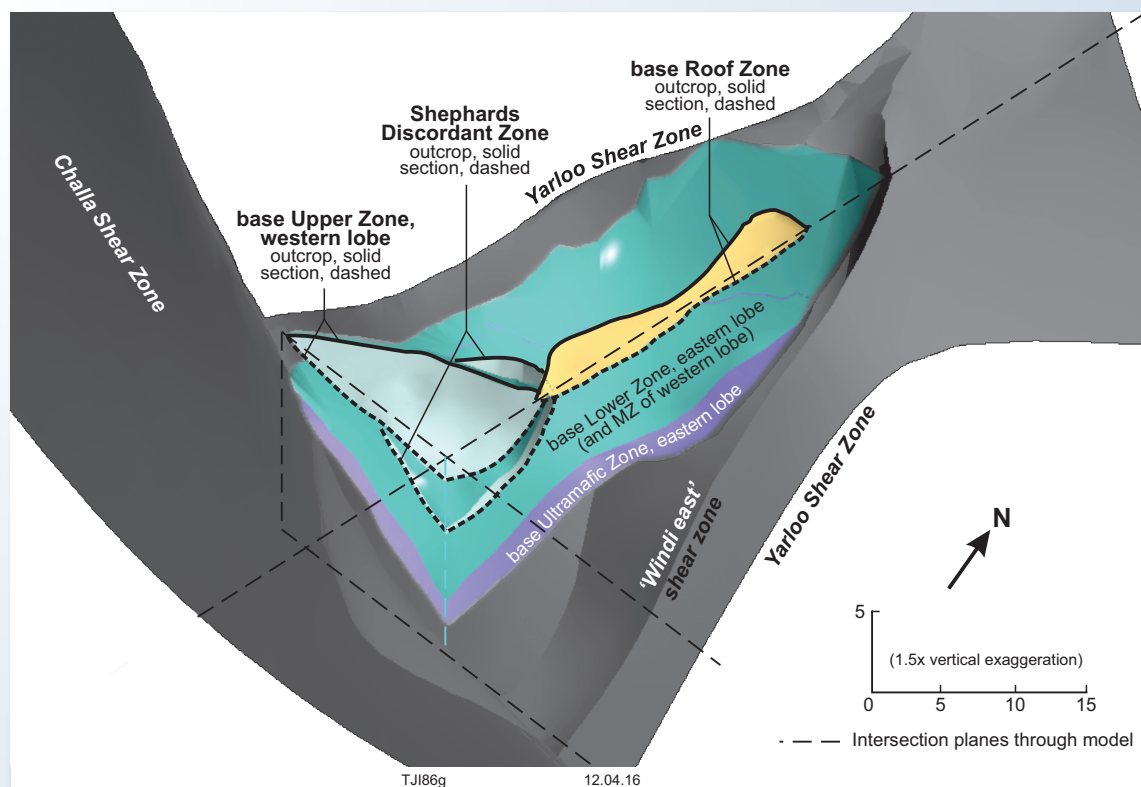


Figure 2. View of the Windimurra 3D model in Geoscience ANALYST software highlighting the main discordant horizons. The model is clipped in approximately north-northeasterly and west-northwesterly trending vertical sections. Note the vertical exaggeration is 1.5



Figure 3. Photograph looking south in the Windimurra vanadium pit showing moderately west-dipping layers of magnetitite (dark layers) hosted in magnetite-bearing leucogabbro (pale layers) of the Upper Zone of the eastern lobe. Pit wall is 30 m high. Note the multi-scale cyclicity of mafic and felsic layers on a centimetre to decametre scale

The Windimurra Igneous Complex is the largest single mafic–ultramafic intrusion in Australia, and may be the largest such Archean intrusion identified globally. When combined with other complexes within the wider Meeline Suite, which may have been lateral lobes of a composite intrusion, it is second only in size to the world famous Bushveld Complex in South Africa. Hence, it has been called ‘the Archean Bushveld’ (**GSWA Record 2016/13**, p. 40).

Collaborative research undertaken with the Australian National University, Monash University, Macquarie University and Curtin University has provided additional chemical constraints on these intrusions and revealed diverse mantle source characteristics and unique ages for the anhydrous Meeline Suite (2813 Ma) and hydrous Boodanoo Suite (2800 Ma). These findings are summarized in **GSWA Record 2016/6**.

All publications and maps, and the virtual field guide, are available as free downloads from the DMP eBookshop at www.dmp.wa.gov.au/ebookshop.

For more information, contact Tim Ivanic (tim.ivanic@dmp.wa.gov.au).

Expansion of core library a boost for exploration

There is new life in one of government's important but often overlooked assets in the resources sector — the Perth Core Library. This was recognized when Mines and Petroleum Minister Hon. Sean L'Estrange officially opened the new \$7.3 million extension to the core library on 2 November 2016 (Fig. 1).



Figure 1. Minister L'Estrange and Acting Director General, Tim Griffin, at the official opening ceremony, 2 November 2016

The Department of Mines and Petroleum (DMP) facility in Carlisle stores drillcore samples that can be studied by researchers and explorers seeking new petroleum and mineral discoveries. The previous capacity of more than 8600 pallets of core has been almost doubled to 15 400 pallets.

'The Perth Core Library is a vital resource for geologists, other scientists, and anybody who is interested in exploring for minerals and resources in Western Australia,' Mr L'Estrange said.

'The library would have reached full capacity this year if the State Government had not funded the expansion.' The expanded facility now has sufficient capacity to store the forecast delivery of core and cuttings until about 2033.

'We have also completed a new covered viewing area that was previously open to the elements, as well as a dedicated area to house the state-of-the-art HyLogger spectral scanner used to analyse drillcore.'

The Minister said that there had been a 300% increase in viewing of core samples during the past 10 years. The added capacity and space would reduce current waiting times and make it easier to access the core samples (Fig. 2).

'The precompetitive geoscience information provided through the core library promotes the mineral and energy prospectivity of the State, and encourages innovative research and more targeted, lower-cost exploration for mineral and petroleum resources,' Mr L'Estrange said.

Some interesting statistics on the expansion project are as follows:

- The project was completed on time and on budget.
- The one-year construction project obtained its 'notice of practical completion' on 12 October 2016. Actual construction (with demolition of the old Norton Building) commenced in January 2016.
- The architects for the project were Sandover Pinder Pty Ltd.
- The construction firm was Firm Constructions Pty Ltd.
- Project management was by Building and Major Works (BMW), part of the Department of Finance.
- Capital cost for the project overall was \$7.3 million, which also covered a new high-rise turret truck as the pallet storage is 12 racks high, as well as a new forklift; thus ensuring improved operational continuity in case of equipment breakdowns.
- The new enclosed viewing area is larger than the pre-existing enclosed viewing area (Fig. 3).



Figure 2. Image of time-lapse video showing construction of the core library. To view the video, go to the QR code app on your phone and hover over the QR code image. You should then be directed to Vimeo.



Perth Core Library expansion



Figure 3. The new enclosed viewing area (formerly the external viewing area), housing the HyLogger spectral scanner

- Additional funding of \$1.2 million for the enclosed viewing area was provided by the National Offshore Petroleum Titles Administrator (NOPTA).
- In conjunction with NOPTA and Geoscience Australia, DMP operates the Perth Core Library as the western hub of the National Offshore Petroleum Data and Core Repository (NOPDCR) with the formal agreement designed to manage the physical assets that belong to the Commonwealth.
- The Perth Core Library will store two-thirds of all Commonwealth-managed petroleum core from offshore drilling from around Australia, plus all ditch cuttings and side-wall cores.
- The Perth Core Library, as a secure purpose-built facility, was established in 2002, but government has been storing core and cuttings on site ever since the first onshore petroleum well was drilled at Rough Range in 1953.
- Over the last few years, about 2000 clients per year have used the facility, which has involved accessing about 2000 pallets per year and 1500–2000 boxes of ditch cuttings per year (Figs 4, 5).
- A record 116 000 metres of core was laid out for customers in 2015–16.
- Samples taken by customers for further analysis average around 5000–6000 per year, but reached a record of 23 360 in 2014–15.
- Petroleum clients outnumber mineral industry clients at the Perth Core Library by a ratio of 3:1, and offshore petroleum clients (from Commonwealth jurisdiction) outnumber Western Australian petroleum clients.

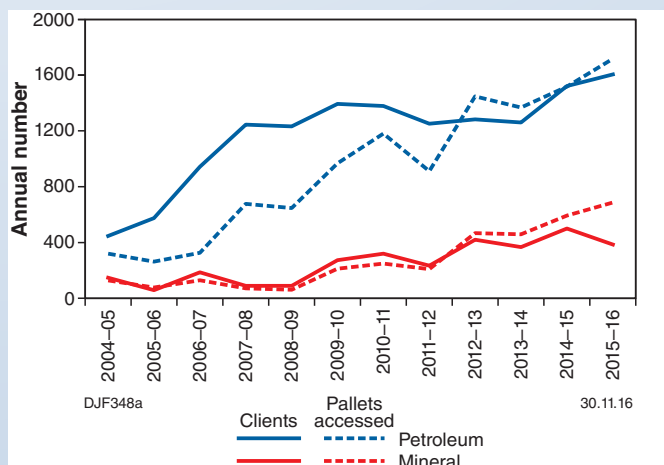


Figure 4. Perth Core Library usage statistics part A

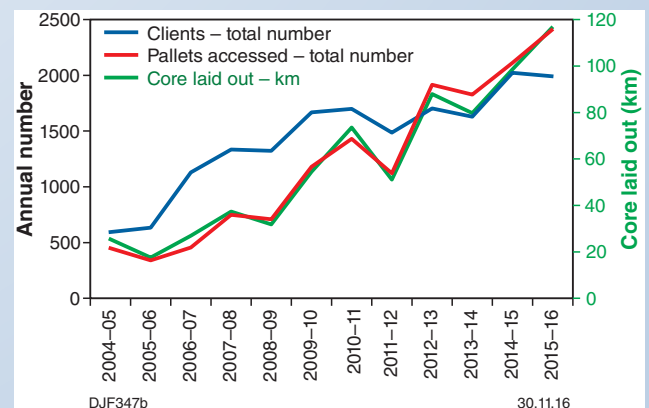


Figure 5. Perth Core Library usage statistics part B

For more information, contact Don Flint
(don.flint@dmp.wa.gov.au).



Friday 24 February 2017

8.30 am – 4.30 pm

Followed by a Sundowner

Esplanade Hotel, Fremantle

Cnr Marine Tce & Essex St

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Throughout the day there will be geological presentations, an extensive poster display, and demonstrations of online systems.

Register online at

www.dmp.wa.gov.au/gswa2017

For further information, call **(08) 9222 3168**



Government of **Western Australia**
Department of **Mines and Petroleum**

GSWA regional geophysics surveys: 19 December 2016 update

Data downloads

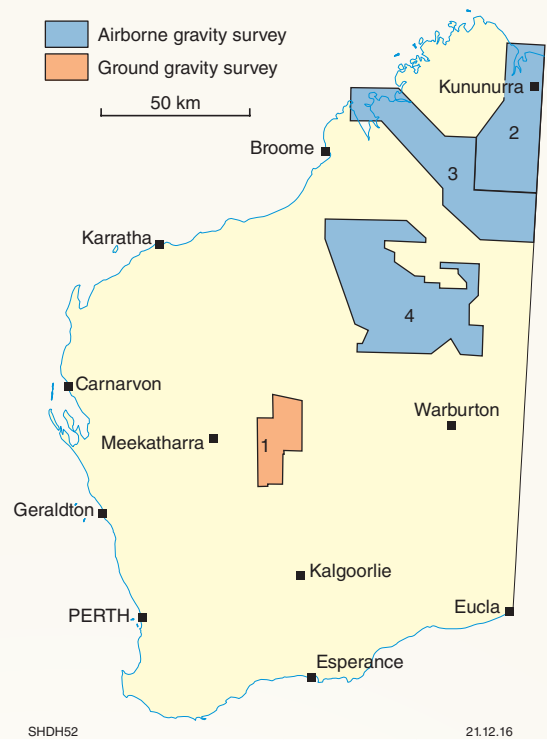
Located data — Geophysical Archive Data Delivery System
<www.ga.gov.au/gadds>.

Grids and images — search in GeoVIEW.WA under
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).



ID	Area/Name	Method	Configuration	Size	Status	Start	End	Release
1	Wiluna 2016	Gravity	Grid 2.5 km	4 454 stns	Released	20-08-16	21-09-15	24-11-16
2	E Kimberley 2016	Air Grav	2500 m, E-W	38 000 km	Processing	08-10-16	04-12-16	Feb-16*
3	Tanami – King Leopold 2017	Air Grav	2500 m, N-S	50 000 km	Tender — closes 31 January 2017 AusTender ID GA2016/5184			
4	Kidson 2017	Air Grav	2500 m (TBA)	70 000 km				

Information current at: 19 December 2016

* Estimated date

GSWA training

GSWA online systems training 2017

Find out how to access geoscience data online and understand
our systems at this **FREE** training course.

Systems include:

- WAMEX
- GeoVIEW.WA
- GeoMap.WA
- Data and Software Centre
- Mineral drillholes and geochemistry databases
- Department of Mines and Petroleum's (updated) website

PERTH

The Perth training has been divided into separate sessions: one
for **prospectors** (morning), and one for **mining companies/
geologists** (afternoon).

- Wednesday 1 March
- Thursday 1 June
- Thursday 26 October

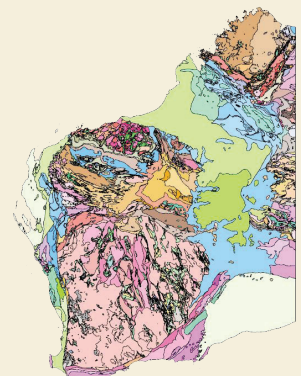
KALGOORLIE

The Kalgoorlie training is open to **anyone** (full day).

- Thursday 9 March
- Thursday 8 June
- Thursday 16 November

Register

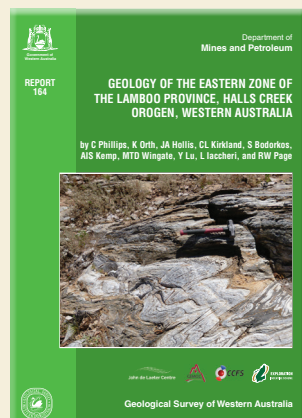
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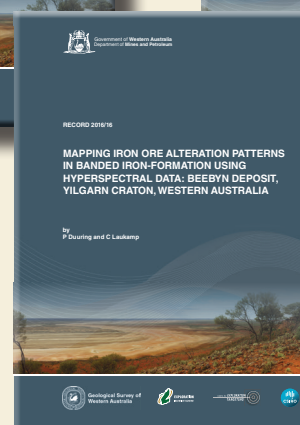
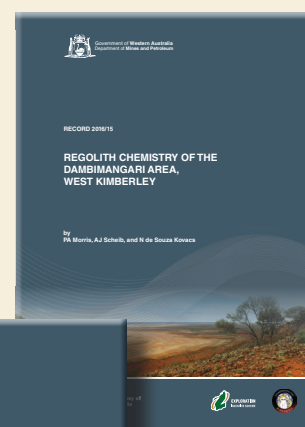
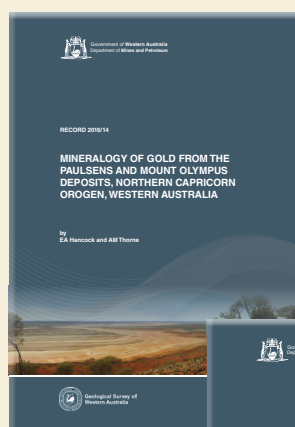


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