



Australian Mineral Exploration Review 2013–2014

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Overview

- Mineral exploration expenditure (non-petroleum) was \$2108.8 million for the 2013–14 financial year.
- Exploration spending in the search for new mineralisation in greenfield districts was \$682.3 million and spending in brownfields districts was \$1426.5 million.
- Western Australia dominated Australian exploration spending with 58% of total expenditure followed by Queensland with 21%.
- Exploration drilling results and resource updates were announced for many different projects and commodities across Australia.
- Maiden resources were announced for a variety of commodities.
- New exploration initiatives were announced by Australian, State and Territory Governments to support mineral exploration in Australia.

Exploration Expenditure Review

- Mineral exploration expenditure (non-petroleum) for the 2013–14 financial year was \$2108.8 million.
- Exploration expenditure in and around known deposits (brownfields) was \$1426.5 million and expenditure for undiscovered mineralisation in frontier regions (greenfields) was \$682.3 million. Brownfields drilling totalled 4 855 800 metres (m) and greenfields drilling totalled 1 597 600 m.
- Exploration expenditure by jurisdiction in 2013–14 was: Western Australia \$1220.0 million, Queensland \$451.4 million, South Australia \$116.4 million, New South Wales \$138.9 million, Northern Territory \$118.4 million, Tasmania \$30.1 million and Victoria \$32.6 million.
- Exploration spending by commodity in 2013–14 was: iron ore \$710.6 million, gold \$434.3 million, base metals, copper, cobalt and nickel \$322.0 million, coal \$398.7 million, uranium \$43.9 million, and spending associated with minor commodities (such as manganese, molybdenum, phosphate, tin, tungsten and vanadium) \$156.4 million.

Selected Exploration Results 2013–14

Exploration results over the period July 2013 to June 2014 have been selected from publicly available information sources based on their likely future significance for the Australian exploration and mining industries. The results are listed by commodity in alphabetical order: base metals and silver, bauxite, copper (including copper-gold), gold, graphite, iron ore, manganese, nickel and cobalt, phosphate, platinum group elements, rare earth elements, tin, tungsten and uranium. For each commodity, the results are presented in alphabetical order of states and the Northern Territory. The locations of the exploration projects are shown in the figures. Exploration projects discussed in the text with significant drill hole intersections or maiden mineral resources are also identified in the centrefold map.

Geoscience Australia Initiatives

Geoscience Australia, in collaboration with the State and Northern Territory geological surveys and the research community, will seek to reveal the hidden potential of Australia's buried but prospective geology. The work will involve the acquisition, processing, interpretation and delivery of new pre-competitive geoscience data sets that develop and test geological models and key indicators of mineral resource potential in the subsurface. Geoscience Australia led two projects in 2013–14 in conjunction with State Governments. One project, the Staveland Zone Drilling Project, in western Victoria, carried out in conjunction with the Geological Survey of Victoria. The second project, the Southern Thomson Orogen Project, is around the border of Queensland and New South Wales (NSW) working with both the Geological Survey of Queensland (GSQ) and the Geological Survey of NSW.

http://www.ga.gov.au/metadata-gateway/metadata/record/gcat_77124

Government initiatives supporting mineral exploration

Australia



Australian Government

The Federal Government's Exploration Development Incentive will allow small mineral exploration companies with no taxable income to provide exploration credits, paid as a refundable tax offset to their Australian resident shareholders, for greenfields mineral exploration. The scheme is capped at \$100 million over the forward estimates period.

Exploration credits will be capped at \$25 million for exploration expenditure incurred in 2014–15, \$35 million for exploration expenditure incurred in 2015–16 and \$40 million for exploration expenditure incurred in 2016–17. A modulation process will be used to ensure the cap is not breached. <http://www.industry.gov.au/resource/Enhancing/ResourcesTaxation/Pages/ExplorationDevelopmentIncentive.aspx>

Northern Territory



Northern Territory Government

The Northern Territory Government's CORE (Creating Opportunities for Resource Exploration) initiative is a four-year (2014–18), \$23.8 million initiative designed to stimulate the Territory's next generation

of mineral and petroleum discoveries. Its main purpose is to support major programs of new pre-competitive geoscience in key geological provinces and basins. One of the initiative's focuses will be the minerals and unconventional petroleum potential of the McArthur Basin incorporating regional geophysical surveys, 3D basin models and resource assessments. Programs in 2014–15 will include the northern McArthur gravity survey, covering eastern Arnhem Land, which is highly prospective but almost unexplored, as well as new gravity coverage over the remote south-western corner of the Territory. The initiative also includes collaborative funding of greenfields exploration drilling programs and geophysical surveys, and ongoing improvements to web delivery of information. www.minerals.nt.gov.au/ntgs

Western Australia



The Western Australian government is investing \$131 million in the 2009–17 Exploration Incentive Scheme (EIS) to encourage resource discoveries in greenfield areas.

The EIS has resulted in the completion of the State's coverage of airborne magnetic and radiometric surveys, and in 2013–14 continues to co-fund innovative exploration drilling by companies in under-explored areas, and gravity, magnetotelluric and deep seismic lines. Also in 2013–14, the EIS funded a large \$2.5 million airborne electromagnetic survey in the greenfields Capricorn Orogen as part of a four year major collaborative geoscience program supporting the UNCOVER initiative with CSIRO, the University of Western Australia, Curtin University and industry. www.dmp.wa.gov.au

South Australia



Government of South Australia Department of State Development

South Australia's PACE (Plan for Accelerating Exploration) Initiative continues to provide the foundation of pre-competitive geoscience initiatives in the State. In 2012–13 this included a further \$2 million for Gawler Craton pre-competitive data, with a special focus on the Woomera Prohibited

Area (WPA). This funding has supported the acquisition and release of the eastern WPA gravity survey, which includes over 34 000 gravity stations on a 1x1 and 2x2 km grid across large parts of the highly IOCG prospective north-eastern part of the Gawler Craton. This survey was conducted in partnership with the Department of Defence and Geoscience Australia. The \$4 million PACE FRONTIERS will provide additional support for 2013–14 and 2014–15 years. The focus of this initiative has been within the deep cover exploration frontiers of the eastern Gawler Craton and the western Gawler Craton—Eucla Basin. The eastern Gawler Craton program will culminate in a regional mineral system drilling program in 2015 in collaboration with DET CRC. In the western Gawler Craton—Eucla Basin a deep crustal seismic program (in partnership with Geoscience Australia and AusScope) extending eastwards along the transcontinental railway line has been completed and will be followed by regional magnetotellurics, airborne magnetic and radiometrics and regional geochemistry.

www.statedevelopment.sa.gov.au/resources



Queensland



**Queensland
Government**
Australia

The Queensland Government's three-year \$30 million Future Resources Program allocated to the Geological Survey of Queensland (GSQ) is moving into its second year. Initiatives continuing in 2014–15 include geochemical data extraction, seismic section scanning, core library expansion, magnetotelluric and spinifex biogeochemical surveys in northwest Queensland, and assessment of petroleum and gas potential for the Maryborough and Galilee Basins. The latter has been expanded to other prospective hydrocarbon-bearing basins (including the Georgina, Cooper, Adavale and Bowen Basins) for 2014–15. Industry priority projects for 2014–15 include drilling of a potential new mineral sands province on Cape York, an airborne electromagnetic survey and mine development feasibility study in northwest Queensland, a CSIRO study to provide a range of state-wide spectral datasets, and a study of the magmatic mineralising systems of north Queensland in collaboration with James Cook University, exploration companies and consultants. The two-year Mount Isa Geophysics Initiative is also set to begin in 2014–15, with major deep seismic and magnetotelluric programs completed for northwest Queensland. www.dnrm.qld.gov.au/our-department/policies-initiatives/mining-resources/future-resources-program

New South Wales



**Trade &
Investment**
Resources & Energy

The NSW New Frontiers work program for 2014–15 seeks to address a major challenge facing the exploration industry—shifting the search space away from outcrop areas and existing deposits, by encouraging more drilling in new frontiers and supporting drill core storage and analysis. The highest priority projects are: Londonderry Core Library Extension—adding 4000 pallet capacity to cover acquisition until 2029; Cooperative Drilling funding—\$2 million allocated to support 20 drilling programs; Southern Thomson Orogen Project—geophysical acquisition and data synthesis; and the Geoscience Information Gateway—improving the ease and speed of data discovery and delivery. These projects, as well as smaller-scale NVCL Hylogger™ acquisition and affiliation to Deep Exploration Technologies CRC, encourage exploration drilling and provide a platform for discovery in frontier areas in NSW. In total there are 55 New Frontiers projects and ongoing activities across six themes that will be applied in 2014–15.

www.resourcesandenergy.nsw.gov.au/miners-and-explorers/geoscience-information/about/new-frontiers

Victoria



**DEPARTMENT OF
STATE DEVELOPMENT
BUSINESS AND
INNOVATION**

Strengthening Victoria's Earth Resources Sector is a four year \$19 million initiative that will support competitive and sustainable development of Victoria's mineral resources and lead a whole of government industry attraction campaign to promote Victoria as an investment destination. Through this initiative the Government will deliver key actions in response to the Economic Development and Infrastructure inquiry into greenfields mineral exploration and project development in Victoria by establishing a program for future development of the State's valuable earth resources.

www.energyandresources.vic.gov.au/earth-resources

Tasmania



Tasmania
Explore the possibilities

The Western Tasmania Geoscience Initiative is a three year (2011–2014) program designed to produce new data and interpretations to assist with exploration in this highly mineralised region. Projects include the geological mapping of four 1:25 000 map sheets, the collection of LiDAR, to assist with the geological mapping, new gravity and airborne magnetic data, to infill gaps in existing coverage, and geochronological and structural studies. All of this new information is being made available online, through the TIGER database, and is being used to update the existing 3D geological model of three areas of western and northern Tasmania. www.mrt.tas.gov.au

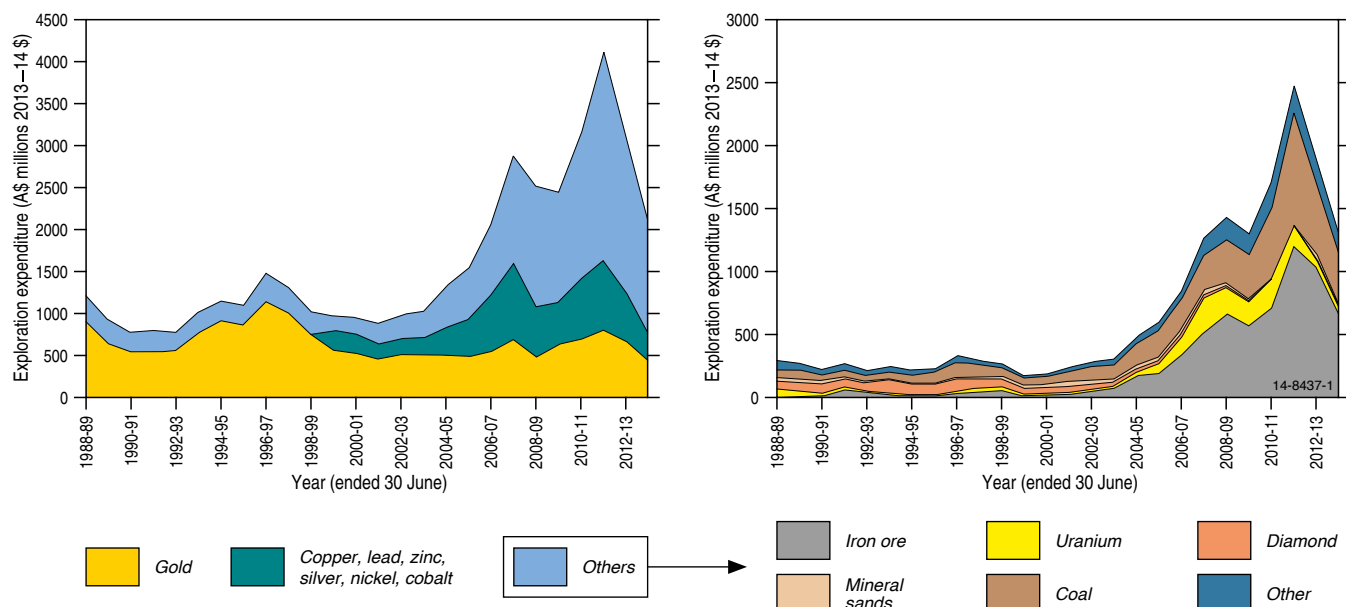


Figure 1 Australian mineral exploration expenditure in constant 2013–2014 dollars (based on Australian Bureau of Statistics data deflated by Consumer Price Index).

Base Metals and Silver

New South Wales

Argent Minerals Ltd announced assay results for the first phase of a diamond drilling program at its flagship Kempfield project. Base metals have been intersected along strike and at depth confirming the presence of a third volcanogenic massive sulphide (VMS) system lens group immediately to the west of the current open cut mine plan. Drill results include:

- 18 m @ 9.8% Pb/Zn, 113 g/t Ag and 0.26 g/t Au (including 5 m @ 17.9% Pb/Zn, 259 g/t Ag and 0.34 g/t Au)
- 13 m @ 0.22% Pb/Zn, 4.6 g/t Ag and 0.09 g/t Au (including 1 m @ 1.1% Pb/Zn, 15.1 g/t Ag and 0.21 g/t Au)

KBL Mining Ltd reported on drilling at the Southern Ore zone within Mineral Hill. The drilling intersected a high-grade polymetallic mineralisation at A Lode. The diamond drilling program totalled 5780 m and was designed to support new Mineral Resource and Ore Reserve estimates. A Lode remains open along strike and at depth and is close to existing underground development. Results of the drilling include:

- 17.3 m @ 1.6% Cu, 1.4% Pb, 0.3% Zn, 21 g/t Ag and 3.7 g/t Au (including 5.35 m @ 3.6% Cu, 1.8% Pb, 0.3% Zn, 43 g/t Ag and 9.3 g/t Au)
- 42.7 m @ 2.5% Cu, 18.7% Pb, 10.3% Zn, 132 g/t Ag and 1.4 g/t Au (including 25 m @ 3.1% Cu, 26.8% Pb, 13.3% Zn, 183 g/t Ag and 0.9 g/t Au)

Northern Territory

KGL Resources Ltd announced that drilling at the northern end of the Reward zone at the Jervois Range project 270 km ENE of Alice Springs intercepted copper mineralisation. This extension drilling intersected a new second zone of copper mineralisation 50 m east of the existing Reward resource. Extension drilling is planned to bring the new zone into the Jervois Resource. Drill results include:

- 4 m @ 1.47% Cu, 0.16% Pb, 0.11% Zn, 23.1 g/t Ag and 0.26 g/t Au
- 14 m @ 1.29% Cu, 0.71% Pb, 0.22% Zn, 28.2 g/t Ag and 0.36 g/t Au (including 7 m @ 2.04% Cu, 0.23% Pb, 0.09% Zn, 42.2 g/t Ag and 0.59 g/t Au)

Core Exploration Ltd announced results from a maiden reverse circulation (RC) drilling program at Blueys and Inkheart prospects at the Albarta project in which 16 out of 17 drill holes hit anomalous silver. The drilling program intersected high-grade silver at the Blueys prospect and discovered high-grade silver and lead mineralisation at the nearby Inkheart prospect. Drill results include:

- 7 m @ 166 g/t Ag and 1.27% Pb (including 1 m @ 1070 g/t Ag and 8.21% Pb)
- 4 m @ 195 g/t Ag, 5.24% Pb and 2.49% Zn (including 1 m @ 354 g/t Ag and 11.13 % Pb)

South Australia

Musgrave Minerals Ltd announced that it had intersected high-grade silver mineralisation at the new Frakes target on the Menninnie Dam project in the southern Gawler Craton region. Mineralisation remains open along strike and down dip. Follow-up drilling is planned. Near-surface aircore (AC) and RC drilling has intersected:

- 10 m @ 990 g/t Ag, 0.3 g/t Au, 0.4% Pb, 0.3% Zn and 0.2% Cu (including 2 m @ 3942 g/t Ag, 1.0 g/t Au, 0.7% Pb, 0.8% Zn and 0.9% Cu)

Adelaide Resources Ltd reported on an AC drilling program that intersected copper and lead mineralisation at the Six Ways Zone at Alford West in the northern part of the Moonta project tenement on the northern Yorke Peninsula. Mineralisation in many drill holes remains open at depth. Drill results include:

- 3 m @ 1.47% Cu
- 25 m @ 0.63% Cu

Western Australia

MacPhersons Resources Ltd announced that diamond drilling at their 100%-owned Nimbus-Boorara silver-gold-zinc project located 10 km east of Kalgoorlie's Super Pit gold mine, intersected silver-zinc-rich, massive and stringer sulphide and vein zones. Drill results include:

- 22.5 m @ 77 g/t Ag (including 3.3 m @ 226 g/t Ag)
- 20 m @ 287 g/t Ag and 4.6% Zn (including 2.1 m @ 330 g/t Ag and 4.6% Zn)

Bauxite

Tasmania

Australian Bauxite Ltd reported the discovery of a zone of high-grade, thick bauxite at its DL-130 prospect in northern Tasmania. DL-130 has the thickest and highest grade bauxite discovered to date in Tasmania with zones up to 14 m thick. Exploration fieldwork has identified a line-of-ode of bauxite outcrops extending over more than 12 km and more than 5 km wide.

Western Australia

MAIDEN RESOURCE

Bauxite Resources Ltd announced the completion of a Maiden Resource estimate on the Athena project on the eastern Darling Range. Bauxite within the resource is up to 13 m in thick with 0.5–1.0 m overburden. The resource has a high available alumina-to-reactive silica ratio considered desirable for alumina refining and prospective for direct shipping ore (DSO) export. The Maiden Inferred Resource Estimate is:

- 22.7 million tonnes @ 42.3% Al_2O_3 (total), 33.3% Al_2O_3 (available) and 2.7% SiO_2 (reactive)

Copper (including Copper-Gold)

New South Wales

MAIDEN RESOURCE

Peel Mining Ltd and CBH Resources Ltd announced the Maiden Mineral Resource estimate for the Mallee Bull copper-silver-gold deposit with approximately 90 000 tonnes contained copper, 4 million ounces contained silver and 43 000 ounces contained gold (at a 1% copper equivalent cut off). The Mineral Resource estimate comprises:

- 3.9 million tonnes @ 2.3% Cu, 32 g/t Ag and 0.3 g/t Au

Impact Minerals Ltd announced results of a rock sampling program at the Commonwealth project 95 km north of Orange. The sampling program has doubled the strike length of the mineralised zone to 600 m. Several new prospects and mineralised trends have been identified in the project area. Rock chip results up to:

- 24 g/t Au, 1100 g/t Ag, 2.6% Cu and 5.7% Zn

Alkane Resources Ltd reported a five-hole 1094 m RC drilling program at the Kaiser project near Wellington. The drilling has identified a new zone of porphyry-style copper mineralisation at the McGregor prospect and confirmed porphyry-style mineralisation at the Kaiser prospect. Drill results include

at McGregor prospect:

- 8 m @ 1.06% Cu and 0.34 g/t Au (including 5 m @ 1.42% Cu and 0.51 g/t Au)

at Kaiser prospect:

- 60 m @ 0.81 g/t Au and 0.91% Cu (including 41 m @ 1.15 g/t Au and 1.24% Cu)

Straits Resources Ltd updated the Mineral Resource and Ore Reserve for its Murrawombie deposit at the Tritton Copper Operations. The updated Ore Reserve for the deposit is:

- 4.0 million tonnes @ 1.3% Cu for 51.5 kilotonnes of contained Cu

Northern Territory

Blaze International Ltd reported an RC drilling program that intersected thick and high-grade copper and gold mineralisation at its Bluebird prospect. All drill holes intersected visual copper mineralisation. The mineralisation remains open in all directions. Follow-up diamond drilling is planned. Drill results include:

- 25 m @ 1.9% Cu (including 2 m @ 16.5% Cu)

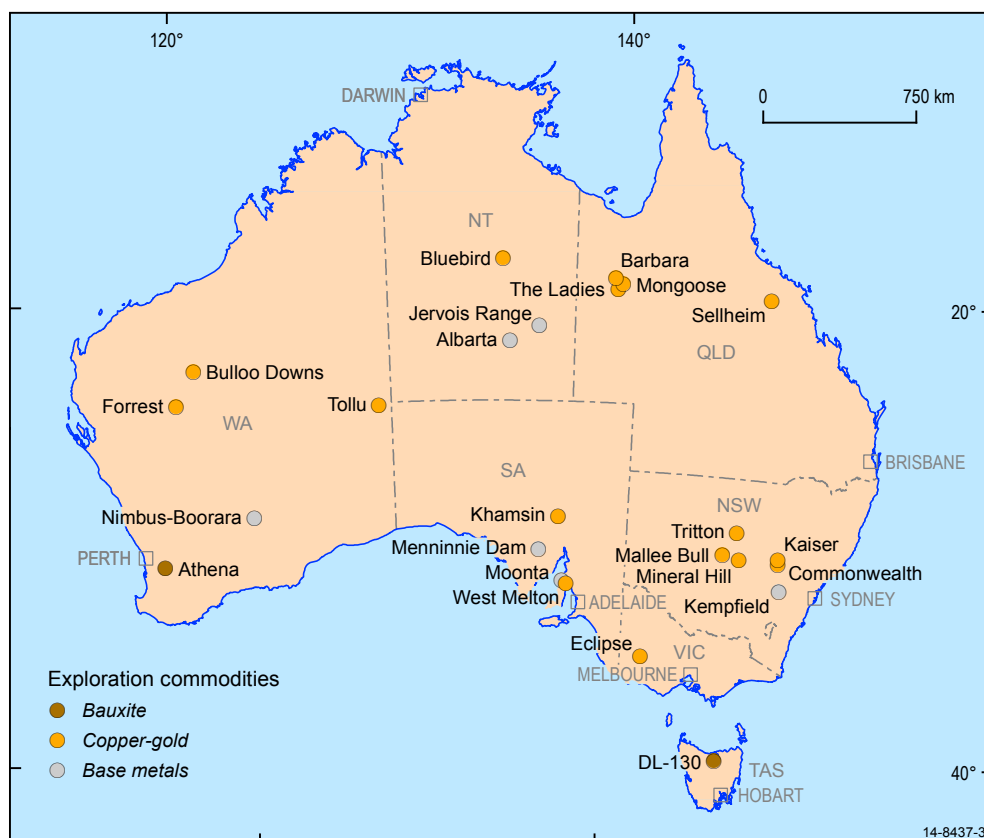


Figure 2 Selected base metals, bauxite and copper-gold exploration projects, 2013–14.

Queensland

Paradigm Metals Ltd completed a six-hole RC drilling program for a total of 816 m at the Ladies project, 70 km west of Cloncurry. The program was successful in testing for high-grade zones of sulphides below superficial copper-oxide mineralisation. Mineralisation is associated with secondary magnetite and red-rock alteration typical of iron oxide-copper-gold (IOGC) deposits in the Cloncurry region. Copper-gold mineralisation is open along strike in both directions. Drill results include

at Lady Kate:

- 15 m @ 2% Cu and 0.34 g/t Au (including 2 m @ 11% Cu and 1.85 g/t Au)

at Lady Rose:

- 16 m @ 0.51% Cu and 0.04 g/t Au
- 28 m @ 0.70% Cu and 0.14 g/t Au (including 6 m @ 1.5% Cu and 0.28 g/t Au)

Sovereign Metals Ltd and Mount Isa Mines Ltd reported the results from an RC drilling program at the Mongoose prospect south of Cloncurry. The drilling program comprised 20 drill holes for 3612 m with results confirming widths of copper mineralisation both at surface and at depth. Drill results include:

- 17 m @ 1.41% Cu and 0.29 g/t Au (including 4 m @ 4.07% Cu and 0.90 g/t Au)
- 16 m @ 4.20% Cu and 0.43 g/t Au

Syndicated Metals Ltd reported a 25-hole infill and extensional diamond drilling program at Barbara in northern Queensland. The latest results include high-grade intersections through both the oxide and sulphide zones corresponding to coarse-grained, chalcopryrite-rich, hanging-wall mineralisation, including:

- 42.4 m @ 1.91% Cu (including 17 m @ 3.39% Cu)
- 21.3 m @ 1.86% Cu

Silver City Minerals Ltd provided results of a drilling program at its Selkheim gold project. The drilling program comprised seven holes combining diamond and RC drilling for a total of 2268.4 m. Drilling was designed to test a number of induced polarisation (IP) anomalies underlying an alluvial goldfield in an area where rock chip samples had returned anomalous gold, silver, copper, bismuth and molybdenum. Four of the seven holes penetrated IP anomalies. The best intersection for the drilling program was:

- 11.1 m @ 0.66 g/t Au and 0.28% Cu

South Australia

MAIDEN RESOURCE

OZ Minerals Ltd announced the Maiden Mineral Resource estimate for the Khamsin IOCG deposit. The resource comprises:

- 202 million tonnes @ 0.6% Cu, 0.1 g/t Au, 1.7 g/t Ag and 86 ppm U for 1.1 million tonnes of Cu, 0.9 million ounces Au and 11 million ounces Ag

Marmota Energy Ltd reported a new copper discovery with high-grade copper assay results from the first holes drilled in the West Melton project on the Yorke Peninsula. The program was designed to test a copper and gold geochemical anomaly. The target is also strongly coincident with shallow modelled geophysical anomalies. Drill results include:

- 10 m @ 1.12% Cu
- 15 m @ 1.29% Cu

Victoria

Navarre Minerals Ltd reported an 11-hole RC drilling program at the Eclipse prospect. The drilling program confirmed a supergene blanket of enriched copper (chalcocite) mineralisation developed above widespread copper, gold and zinc mineralisation interpreted to be associated with a potential deeper porphyry source. Drill results include:

- 5 m @ 1.8% Cu (including 1 m @ 2.8% Cu)
- 29 m @ 0.5% Cu (including 1 m @ 1.4% Cu)

Western Australia

Redstone Resource Ltd announced results from a 7-hole drilling program at the Tollu project in the southeast West Musgrave region. The project area comprised hydrothermal copper-rich quartz veins in a mineralised system covering five square kilometres. Drill results include:

- 27 m @ 1.45% Cu
- 22 m @ 1.31% Cu

Aruma Resources Ltd advised that a first-pass drilling program on the Bulloo Downs project had encountered copper mineralisation. Aruma completed a 14-hole RC drilling program for a total of 1792 m. Thirteen holes ranging in depth from 60 m to 150 m were drilled on the western Madison Trend, while one 172 m hole was drilled under an old shaft known as the Bulloo Ilgarari on the Lachlan Trend. Anomalous copper was intersected (>500 ppm) in 8 of the 14 holes. The drilling program confirmed mineralised structures at Madison and Lachlan. Drill results include:

- 4 m @ 2.2% Cu

Resource and Investment NL announced the first assay results from diamond drilling at the Forrest discovery (RNI 80%, Fe Limited 20%), which is part of the Grosvenor project. The copper mineralisation at Forrest is interpreted as a steeply dipping oxide transitional zone beneath a substantial gold-rich cap. The copper mineralisation has now been defined down plunge over a strike length of ~200 m and remains open down dip and along strike. Drill results include:

- 9.1 m @ 5.27% Cu, 2 g/t Au and 8.35 g/t Ag (including 4.25 m @ 8.86% Cu, 2.84 g/t Au and 15.07 g/t Ag)

Gold

New South Wales

Unity Mining Ltd reported a 7-hole diamond drilling program at Dargues Reef. The drilling identified high-grade mineralisation down plunge of the Dargues Main Lode mineralisation. Results from the program include:

- 13 m @ 7.42 g/t Au
- 2.8 m @ 4.72 g/t Au

Rimfire Pacific Mining NL provided an update on its 4000 m RC and diamond core tail drilling program on the Sorpresa project at Fifield NSW. Four holes had been completed at Roadside within Sorpresa. Partial drilling results from the Twin Shafts area returned:

- 2 m @ 7.49 g/t Au

Tasmania

Greater Gold PLC reported a 300 m RC drilling program at Derby North prospect which is part of the Warrentinna Gold project 65 km northeast of Launceston. All three holes intersected gold mineralisation above 0.7 g/t gold, including:

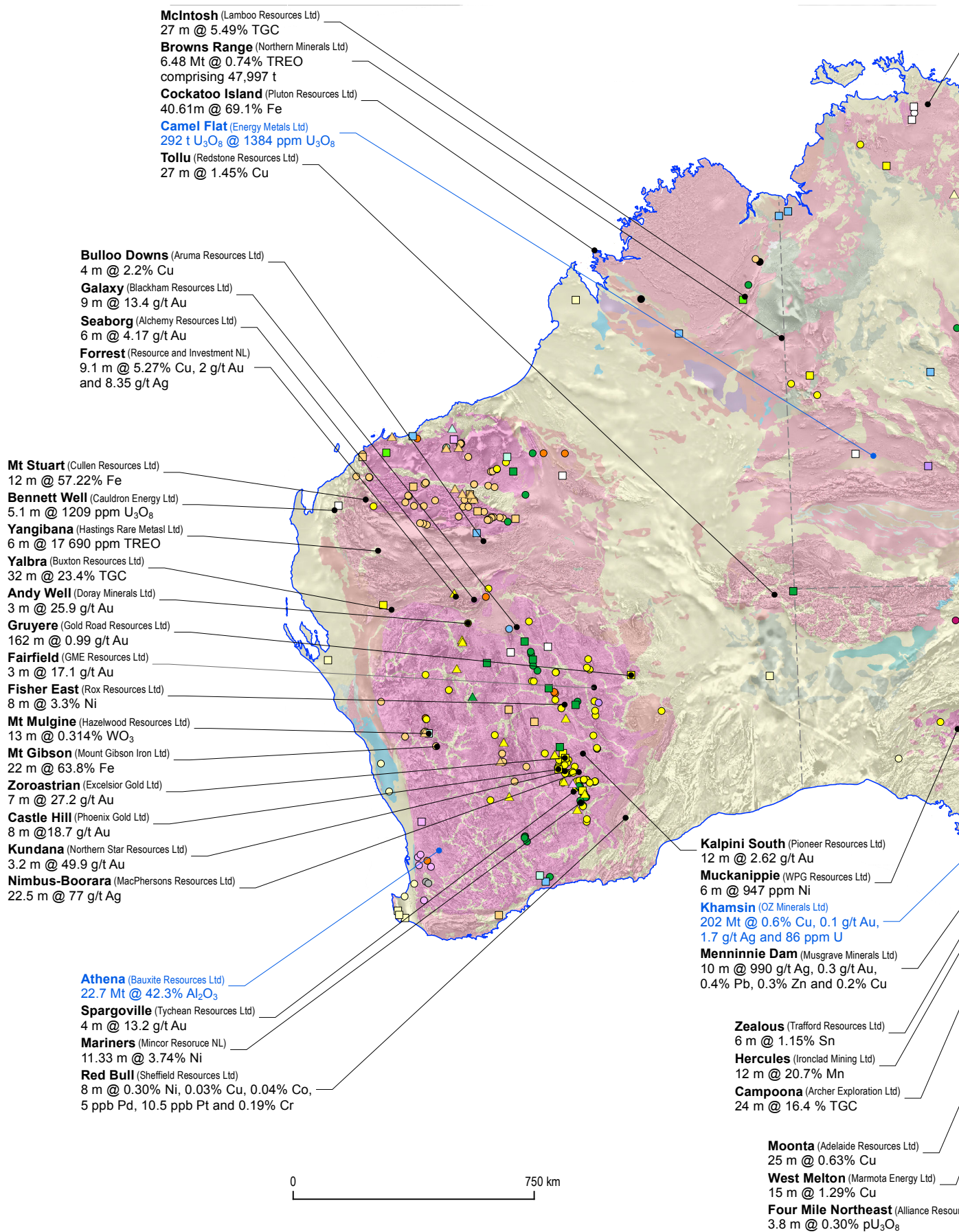
- 8 m @ 3.11 g/t Au
- 4 m @ 2.16 g/t Au

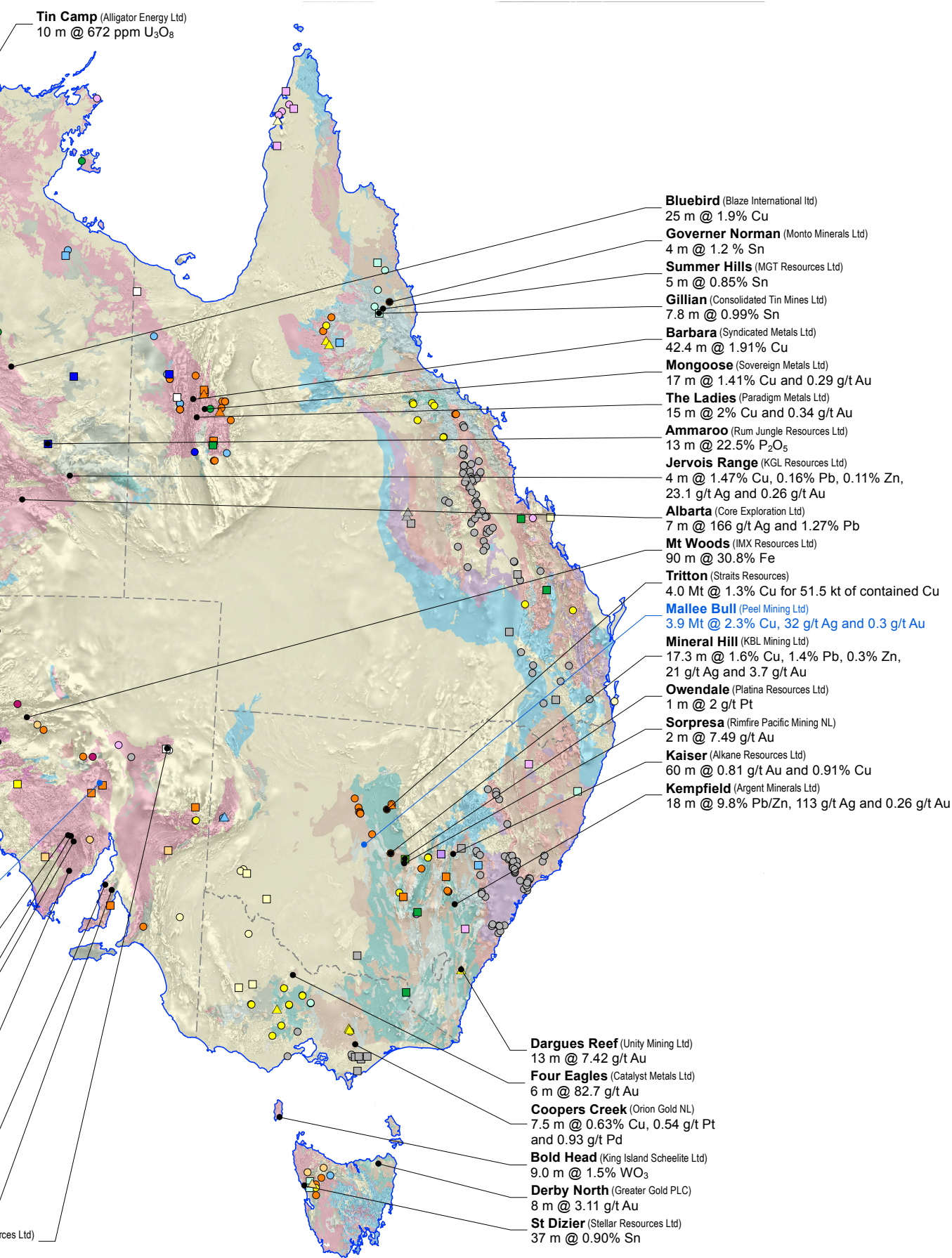
Victoria

Catalyst Metals Ltd announced the completion of an AC drilling program at its Four Eagles project, 70 km north of Bendigo and the successful intersection of basement in all but one hole. The program consisted of 28 holes for a total of 2657 m. The area tested was north of the Discovery prospect where high-grade gold mineralisation had been intersected in previous drilling, including:

- 6 m @ 82.7 g/t Au
- 1.5 m @ 1.81g/t Au

Examples of Major Mineral Exploration Results 2013–14





Map Legend

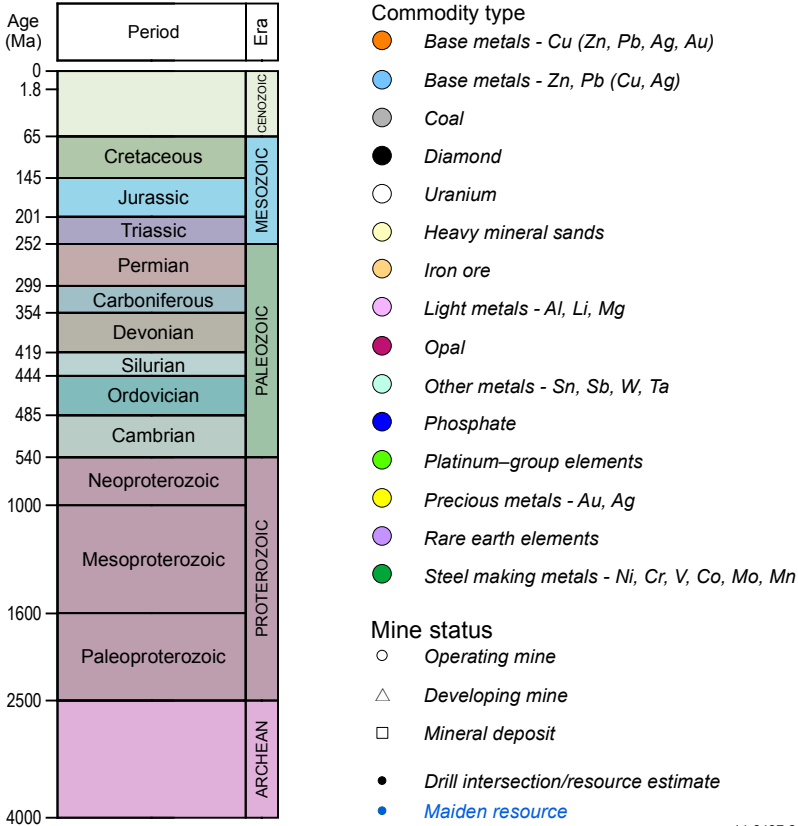


Figure 3 This map of Australia shows operating and developing mines and major mineral deposits on generalised surface geology (coloured areas; see legend above). The greyscale background represents aeromagnetic data (0.5 first vertical derivative of total magnetic intensity). Significant exploration results are indicated (maiden resources are shown in blue text).

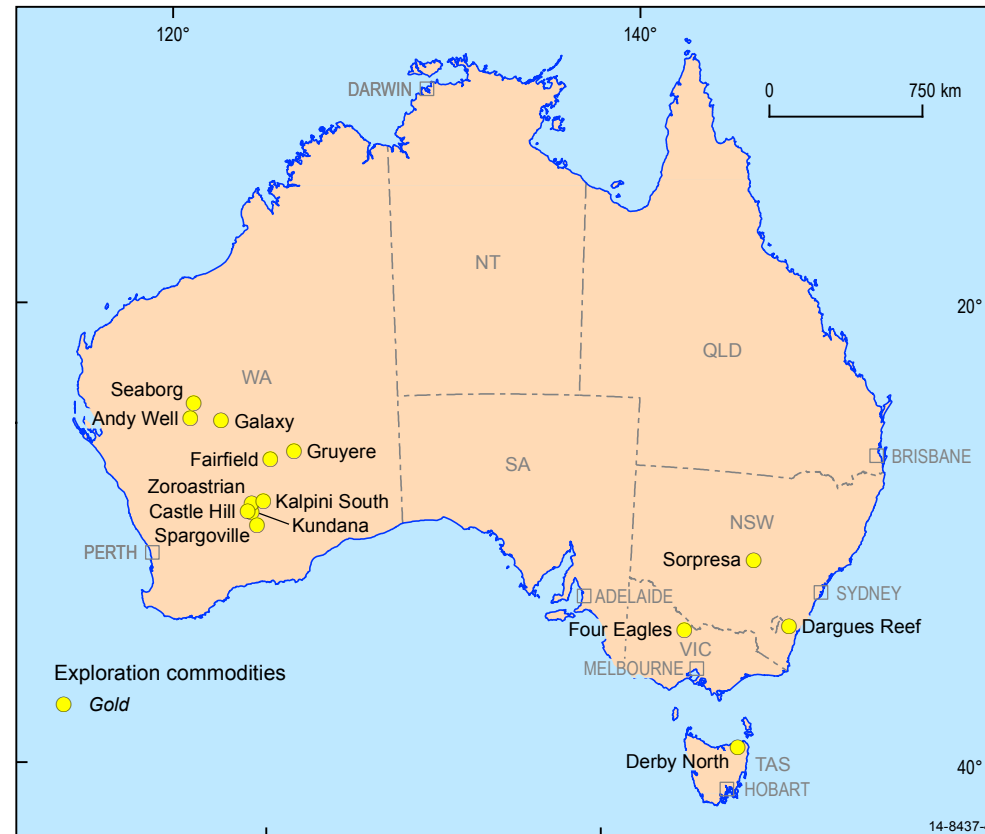


Figure 4 Selected gold exploration projects, 2013–14.

Western Australia

Northern Star Resources Ltd announced drilling results from the Kundana Gold Mine at the project's Pegasus discovery. The results have extended the known strike length of the current resource by 500 m and the known vertical depth of the high-grade zone by 100 m to 550 m. The Pegasus deposit remains open at depth and along strike. Visible gold was intersected in numerous holes. Intersections along strike and outside the current Pegasus resource include:

- 3.2 m @ 49.9 g/t Au
- 9 m @ 11.7 g/t Au

Gold Road Resources Ltd reported assay results from its recent diamond drilling program at the Gruyere prospect within the Dorothy Hills Trend, which confirm the presence of localised very high-grade gold mineralisation. The grade continuity and scale of this very large gold system have also been confirmed by assay results received from three diamond holes:

- 162 m @ 0.99 g/t Au
- 150.9 m @ 1.02 g/t Au

GME Resources Ltd advised that assay results had been received from a recently completed drilling program of 14 AC drill holes totalling 592 m at the company's 100%-owned Fairfield Gold prospect 25 km north of Laverton. The infill program was designed to reduce the drill hole spacing to 25 m by 25 m grid and test up-dip mineralisation intersected in previous drilling. The successful program intersected the targeted lodes in 11 of the 14 holes. Drilling results include:

- 3 m @ 17.1 g/t Au
- 4 m @ 3.6 g/t Au

Excelsior Gold Ltd advised results from a recently completed drilling program at the Kalgoorlie North project and extended the known mineralised structures within the large Zoroastrian multi-vein gold system. Results from two drill holes expanded gold resources and mineralised zones remain open down dip and along strike. Drill results include:

- 7 m @ 27.2 g/t Au (including 1 m @ 169 g/t Au)
- 1 m @ 4.78 g/t Au

Pioneer Resources Ltd provided an update on a drilling program at its Kalpini South prospect. The drilling program comprised 10 holes for 1279 m and confirmed the presence of gold mineralisation in a zone of steeply dipping quartz and sulphides including pyrite and arsenopyrite. Drill results include:

- 12 m @ 2.62 g/t Au (including 1 m @ 10.65 g/t Au)

Alchemy Resources Ltd announced high-grade gold results from an RC drilling program. These holes targeted gold mineralisation at the Seaborg prospect in its Bryah Basin project, located 130 km north of Meekatharra. The targeted drilling program consisting of four holes for 434 m was designed to test the continuity of mineralisation intersected by previous drilling. Mineralisation remains open along strike to the southwest and northeast as well as at depth. Further drilling is planned that has the potential to expand the area of gold mineralisation outside the known mineralised area. Drilling intersections include:

- 6 m @ 4.17 g/t Au
- 10 m @ 1.49 g/t Au

Blackham Resources Ltd announced results from an RC drilling program comprising 23 drill holes for 1464 m at the Galaxy deposit. The program tested a number of lode positions within a mineable open pit plan. Mineralisation at the base of the optimised pit remains open and drill hole intersections inside and outside the current resource envelope add to resource confidence and extensions. Drill results include:

- 9 m @ 13.4 g/t Au
- 2 m @ 28.9 g/t Au

Doray Minerals Ltd announced that a drilling program of the Suzie Zone at the Andy Well Gold project in the Northern Murchison region had returned a number of high-grade results. The Suzie Zone is the third zone of gold mineralisation to be discovered at Andy Well. RC drilling targeted the southern end of the Suzie Zone around previous drilling in order to infill drill spacing and step out the extents of known mineralisation. Drill results include:

- 3 m @ 25.9 g/t Au (including 1 m @ 58.8 g/t Au)

Phoenix Gold Ltd announced results from an infill and strike-extension drilling program at Castle Hill. The project is located on the highly prospective Kunanalling shear zone less than 50 km from Kalgoorlie. The drilling program comprised 182 RC holes totalling 10 267 m. Its aim was to test further extensions of the mineralisation to the south and east of the deposits, validate holes drilled in the 1980s and upgrade Inferred Mineral Resources to Indicated Mineral Resources. Significant mineralisation intercepted included:

- 8 m @ 18.7 g/t Au
- 3 m @ 40.2 g/t Au

Tychean Resources Ltd announced it had obtained highly anomalous composite results from recently completed regional AC drilling at the Spargoville project in the Eastern Goldfields. The drilling on the Golden Orb prospect comprised 20 holes for 1213 m to infill and further evaluate previously identified gold mineralised trends in prior drilling associated with interpreted contacts between felsic intrusive and ultramafic volcanic rocks. Results include:

- 4 m @ 13.2 g/t Au
- 4 m @ 6.21 g/t Au

Graphite

South Australia

Archer Exploration Ltd reported an infill drilling program from the Campoona project on the Eyre Peninsula. The program comprised 28 drill holes and was designed to build on the current Inferred Resource. The drilling confirmed the continuity of high-grade graphite mineralisation and that the mineralisation remains open at depth and thickens at depths from 40–60 m. Drill results include:

- 17 m @ 16.7% Total Graphite Count (TGC)
- 31 m @ 12.8 % TGC

Western Australia

Buxton Resources Ltd completed 15 RC drill holes for a total of 1674 m at Yalbra. Drilling within the Main Zone intersected substantial widths of very high-grade graphite mineralisation across multiple parallel zones. Petrographic studies show that significant portions of medium and coarse flake graphite occur in the samples. Observations reveal that graphite flakes generally range from 100 to 500 microns long and in some cases reach over 1 mm in length. Drilling results include:

- 32 m @ 23.4% TGC (including 7 m @ 32.6% TGC)
- 14 m @ 22.3% TGC (including 6 m @ 26.8% TGC)

Lamboo Resources Ltd completed an RC drilling program the consisted of 24 holes for 2538 m at Target 1 at the McIntosh project. The program extends the strike length of Target 1 mineralisation to 2500 m, shows it is open in both directions and has widths of up to 40 m. The drilling at Target 1 has produced broad intercepts including:

- 27 m @ 5.49% TGC
- 14 m @ 4.87% TGC

Iron Ore

South Australia

IMX Resources Ltd announced a pilot drilling program at its Mt Woods tenement had returned wide intersections of hematite. The program was undertaken to test two gravity anomalies. The drilling comprised four RC holes for a total of 521 m, with two holes at the Tomahawk East prospect and two holes at the western tip of the Tomahawk prospect. Significant iron intersections include:

- 90 m @ 30.8% Fe
- 54 m @ 35.6% Fe

Western Australia

Cullen Resources Ltd reported an assay result from a 1372 m RC drilling program at Mt Stuart, a joint venture with API Management Pty Ltd. Drill intersections include:

- 12 m @ 57.22% Fe
- 10 m @ 54.87% Fe

Mount Gibson Iron Ltd reported results from an exploration program at the Extension Hill South project in the Midwest region of Western Australia. The results from an initial RC drilling program of 65 holes confirmed the presence of significant high-grade iron mineralisation at the Iron Hill prospect. Intersections include:

- 22 m @ 63.8% Fe
- 53 m @ 61.8% Fe

Pluton Resources Ltd announced assay results from the maiden drill hole of a drilling program at the iron ore operation at Cockatoo Island. Mineralisation has very low impurity values for SiO₂, Al₂O₃, phosphorus and sulphur. Drill results include:

- 40.61 m @ 69.1% Fe

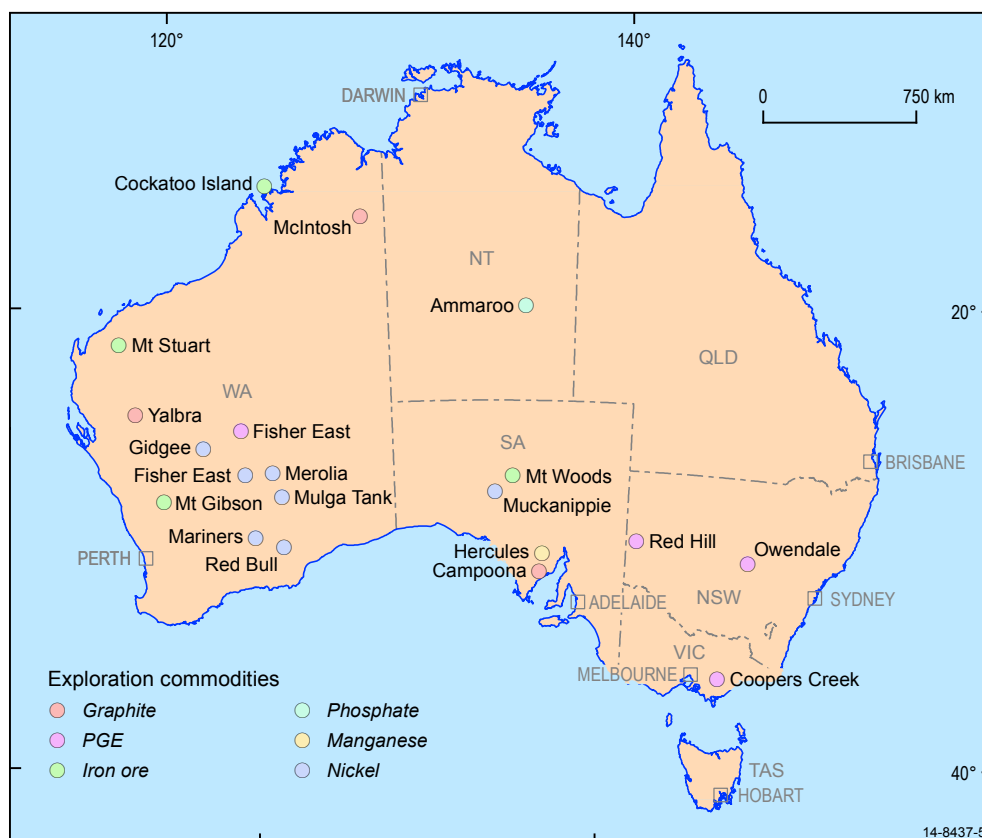


Figure 5 Selected graphite, iron, manganese, nickel, phosphate and platinum group elements exploration results, 2013–14.

Manganese

South Australia

Ironclad Mining Ltd reported on a drilling program comprising seven holes for 666 m at the Hercules East prospect. The nominal 50 m x 50 m-spaced program confirmed the original anomalous manganese intercept and established the presence of manganese mineralisation over a strike length of greater than 100 m. Manganese intercepts include:

- 12 m @ 20.7% Mn
- 11 m @ 29.9% Mn

Nickel and Cobalt

South Australia

WPG Resources Ltd announced results from a recent AC drilling program completed at the Muckanippie project in the Gawler Craton region. A total of 59 drill holes for 2569 m were completed over the Nardoo South, Nardoo East, Duke and Regal prospects. Assay results indicate broad zones of anomalous nickel mineralisation within the regolith profile at the Nardoo South prospect with individual assays of up to 0.12% Ni. Additional grid-based AC drilling is planned to follow up the results. Drill results from Nardoo South prospect include:

- 4 m @ 555 ppm Ni
- 6 m @ 947 ppm Ni

Western Australia

Sheffield Resources Ltd announced results from a second phase of AC drilling at its Red Bull project within the Fraser Range Nickel Province that outline more large nickel, copper, cobalt anomalies. The drilling has increased the length of the Stud anomaly strike to 1.8 km at 0.2% Ni cut-off. Prospectivity of the Stud anomaly is further enhanced by elevated copper (to 0.11% Cu) and cobalt (to 0.05% Co) values. The drilling has also identified a new anomaly at Hook prospect. Significant results from Phase 2 drilling include

at Stud:

- 8 m @ 0.37% Ni, 0.01% Cu, 0.01% Co, 4.6 ppb Pd, 4.4 ppb Pt and 0.18% Cr

at Earlobe:

- 8 m @ 0.29% Ni, 0.02% Cu, 0.02% Co, 4 ppb Pd, 3.5 ppb Pt and 0.19% Cr

at Hook:

- 2 m @ 0.25% Ni, 0.07% Cu, 0.03% Co, 34 ppb Pd, 25 ppb Pt and 0.64% Cr

Rox Resources Ltd reported assay results from its RC drilling program at Fisher East project, 500 km north of Kalgoorlie. The program of 14 holes for 2663 m was designed to define the high-grade zones at the two new nickel sulphide discoveries made by Rox at Musket and Cannonball along the strike of the Camelwood ultramafic unit. Significant widths of high-grade massive nickel sulphide mineralisation intersected at Musket include:

- 8 m @ 3.3% Ni (including 2 m @ 8.1% Ni)
- 17 m @ 2.2% Ni (including 4 m @ 3.2% Ni and 4 m @ 2.5% Ni)

Mincor Resources NL advised on exploration programs targeting additions to its nickel sulphide Resource and Reserve inventory in the Kambalda region. A drilling program at Mariners Mine confirmed extensions to the high-grade N10B ore body. Latest intersections at Mariners include:

- 11.33 m @ 3.74% Ni
- 12.91 m @ 3.48% Ni

Impact Minerals Ltd announced that assays from its maiden drill program at the Mulga Tank project 200 km northeast of Kalgoorlie confirmed the widespread presence of nickel and copper sulphide mineralisation over an area of about 15 square kilometres. Three styles of nickel-copper mineralisation have been identified with following drill results:

Extensive disseminated nickel in the Mulga Tank Dunite:

- 2 m @ 1.3% Ni (including 1 m @ 2% Ni)

High tenor veins at the base of the Mulga Tank Dunite:

- 0.25 m @ 3.8% Ni, 0.7% Cu and 0.7 g/t PGE

Nickel sulphide in multiple komatiites in a flow channel:

- 0.75 m @ 0.85% Ni, 0.35% Cu and 0.28 g/t platinum group elements (PGE)

Gateway Mining Ltd reported an RC drilling program at Apex for testing several early stage targets. Down Hole Transient Electromagnetic (DHTEM) surveying was carried out after the drilling and identified a strong off-end source of conductivity located a further 30 m to 70 m below the current drilling. The work has yielded follow-up targets that will be tested in future drill programs. Two short holes drilled underneath the gossan intersected mineralisation and returned samples of 2640 ppm Ni and 1210 ppm Cu. Drill results include:

- 35 m @ 0.15% Ni, 0.03 g/t Pt and 0.10 g/t Pd
- 5 m @ 0.13% Ni, 0.03 g/t Pt and 0.09 g/t Pd

White Cliff Minerals Ltd announced results from a geochemical soil-sampling program at the Merolia project which identified a nickel anomaly with associated chromium, bismuth and copper. The program comprised 1345 soil samples that were analysed using X-ray fluorescence spectroscopy. Geochemical results of the first 323 samples identified a nickel-chrome-bismuth-copper anomaly over a strike length of 800 m on the basal contact of a mafic-ultramafic intrusion and the adjacent ultramafic unit. The anomaly is open along strike to the north. A second, smaller, nickel anomaly with 200 m strike has been identified which is also open to the north.

Phosphate

Northern Territory

Rum Jungle Resources Ltd reported assay results for drilling undertaken at Ammaroo East. The results will be used to calculate a revised Mineral Resource update. Drill results include:

- 13 m @ 22.5% P₂O₅ (including 5 m @ 32.9% P₂O₅)
- 4 m @ 20.1% P₂O₅

Platinum Group Elements

New South Wales

Impact Minerals Ltd reported results from rock chip sampling and soil geochemistry at the Red Hill prospect. The results suggest the host ultramafic intrusive unit at Red Hill, which outcrops over an area of about 500 square metres, has a nickel-rich core and copper-precious metal-rich margins. Soil geochemistry results defined nickel, copper and precious metal anomalies covering several hundred square metres. Rock chip assays returned results up to:

- 16 g/t Pt, 12 g/t Pd, 4.2% Ni, 22% Cu, 1.8 g/t Au and 221 g/t Ag

Platina Resources Ltd announced assay results from a follow-up program of 1170 m of RC drilling recently completed on the Owendale project. The program was designed to increase the Indicated and Inferred Mineral Resource for platinum and test the significance of previously defined high-grade primary platinum within fresh rocks. Drill results include:

- 1 m @ 2 g/t Pt
- 1 m @ 1.38 g/t Pt

Victoria

Orion Gold NL advised that a drilling program had confirmed the potential for a large polymetallic system with significant PGE at its Coopers Creek project. The program tested for extensions to mineralisation intersected by previous explorers. Assays received for recently completed diamond drilling returned a number of anomalous intersections in zones of chalcopyrite-pyrrhotite mineralisation. Drill results include:

- 7.5 m @ 0.63% Cu, 0.54 g/t Pt and 0.93 g/t Pd
- 4.5 m @ 0.92% Cu, 0.81 g/t Pt and 1.31 g/t Pd

Western Australia

Rox Resources Ltd reported on a recent RC drilling program at the Fisher East nickel sulphide project, 500 km north of Kalgoorlie, that intersected high platinum, palladium and gold values of:

- 2 m @ 5.0 g/t Pt+Pd+Au

Rare Earth Elements (REE)

Northern Territory

Spectrum Rare Earths Ltd reported on results from a drilling program at the Skyfall prospect. Drilling identified mineralisation up to 9.2 m thick in a tabular body at surface over the 6 km-long mineralised footprint. Mineralised intersects include significant assays of over 0.9% Total Rare Earth Oxide (TREO). Mineralisation remains open in all directions and follow-up trial pitting and diamond drilling is planned.

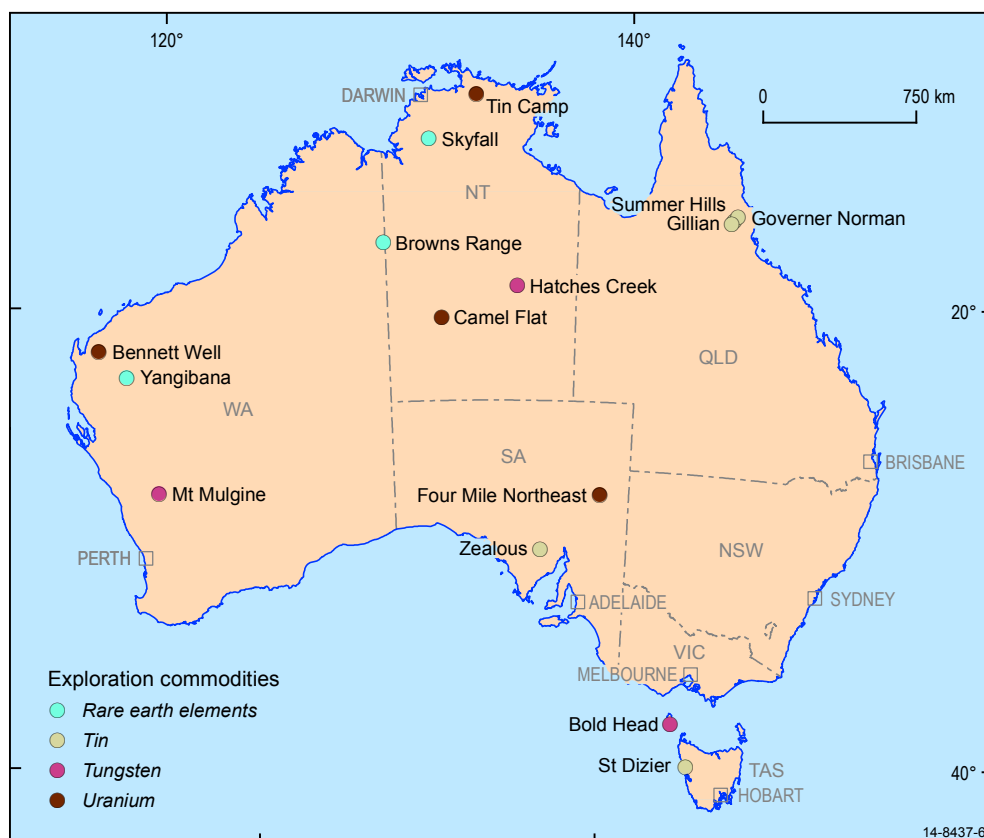


Figure 6 Selected rare earth elements, tin, tungsten and uranium exploration results, 2013–14.

Western Australia

Northern Minerals announced an increased Mineral Resource estimate for its heavy rare earths Browns Range project. The Total Mineral Resource is now estimated at:

- 6.48 Mt @ 0.74% TREO comprising 47 997 tonnes contained TREO using a cut-off grade of 0.15% TREO

Hastings Rare Metals Ltd reported the completion of the first phase of its drilling at the Yangibana North prospect with 44 RC holes drilled for a total of 1836 m. Results include:

- 5 m @ 7200 ppm TREO
- 6 m @ 17 690 ppm TREO

Tin

Queensland

MGT Resources Ltd announced results from drilling program at the Summer Hills project comprising 63 RC percussion drill holes (3370 m) and eight RC extensions to existing holes (490 m). The purpose of the program was to expand and upgrade tin resources to provide feed for the Mt Veteran tin processing plant. New mineralisation was intersected in an area 200 m to the northeast of the main mineralisation. Intervals of high-grade tin include:

- 5 m @ 0.85% Sn (including 2 m @ 1.8% Sn)
- 8 m @ 0.55% Sn (including 1 m @ 1.1% Sn)

Monto Minerals Ltd completed the initial drilling program at the Governor Norman prospect located within the Herberton Tin project. The Governor Norman prospect comprises several historic high-grade mines over a strike extent of 1.2 km. The initial drilling program comprised eight holes for a total of 596 m. Drill results include:

- 3 m @ 0.18% Sn
- 1 m @ 1.0% Sn

Consolidated Tin Mines Ltd announced final assay results from a drilling program at the Gillian deposit within the Mt Garnet Tin project. The program consisted of a total of 6481 m. Drill results include:

- 7.8 m @ 0.99% Sn
- 5.1 m @ 0.84% Sn

South Australia

Trafford Resources Ltd announced results from a 9-hole, 1300 m, RC drilling program at the Zealous prospect at Wilcherry Hill. Drilling produced economic intersections of tin defined over 250 m of strike length and a minimum vertical depth of approximately 130 m. The extent of the body remains open in all directions. Results include:

- 6 m @ 1.15% Sn
- 30 m @ 0.43% Sn

Tasmania

Stellar Resources Ltd undertook a diamond drilling program comprising five holes for 974 m at St Dizier. The drilling was designed to test near-surface extensions of mineralisation, extensions to the west of known mineralisation and for metallurgical testing. One of the holes drilled near the centre of the deposit returned the following intersections:

- 37 m @ 0.90% Sn (including 18 m @ 1.27% Sn)
- 29 m @ 0.99% Sn (including 10 m @ 1.41% Sn)

Tungsten

Northern Territory

Arunta Resources Ltd announced that an extensive sampling program at its Hatches Creek Tungsten project, 360 km northeast of Alice Springs, had confirmed the presence of significant high-grade tungsten within and adjacent to areas that had been mined historically. The company had received the first round of results from metallurgical test work completed on bulk and grab samples of mullock, alluvial and alluvial material and selected lode material collected at Hatches Creek, with key highlights including:

- an average grade of 0.73% WO₃ from samples taken from historical mine waste dumps, with individual samples grading up to 1.385% WO₃ and 1.034% WO₃
- an average grade of 13.41% WO₃ from selected rock chips from lode (quartz) in dumps, with individual samples grading up to 38.357% WO₃
- alluvial samples from The Black and Green Diamond groups returned the highest and most consistent results averaging 0.11% WO₃ per tonne with a peak value of 0.45% WO₃ per tonne

Tasmania

King Island Scheelite Ltd reported the completion of a resource-delineation drilling program around the previously closed Dolphin and Bold Head mines on King Island. The drilling was undertaken to identify additional resources to supplement previously identified resources in these areas. At Bold Head eight diamond drill holes were completed for a total of 653 m and at Dolphin West five diamond drill holes for a total of 178 m. Results include

at Bold Head:

- 9.0 m @ 1.5% WO₃ (including 3.0 m @ 3.0% WO₃)

at Dolphin West:

- 16.9 m @ 0.7% WO₃ (including 3.4 m @ 2.8% WO₃)

Western Australia

Hazelwood Resources Ltd completed a 9-hole RC drilling program at Mt Mulgine. The results demonstrate high-grade WO₃ mineralisation 150 m along strike from previously known mineralisation. Tungsten intervals include:

- 13 m @ 0.314% WO₃
- 26 m @ 0.167% WO₃

Uranium

Northern Territory

MAIDEN RESOURCE

Energy Metals Ltd advised that maiden uranium resource estimates had been obtained for the Camel Flat, Anomaly 15 East (Western Zone) and Bigwest satellite deposits in the northern margin of the Ngalia Basin. Maiden Inferred Resource estimates for the three deposits are:

- Camel Flat Deposit: 292 tonnes U₃O₈ @ 1384 ppm U₃O₈
- Anomaly 15 East (Western Zone) Deposit: 187 tonnes equivalent U₃O₈ (eU₃O₈) @ 1320 ppm eU₃O₈
- Bigwest Deposit: 147 tonnes eU₃O₈ @ 362 ppm eU₃O₈

Alligator Energy Ltd announced the results of a drilling program at the company's Tin Camp Creek Uranium project comprising 5584 m of diamond and RC drilling. Drilling was focused on the Caramal East area and Orion North prospect targeting areas prospective for large deposits. Results include:

- 10 m @ 672 ppm U₃O₈

South Australia

Alliance Resources Ltd announced uranium intercepts from drilling at the recently discovered Four Mile Northeast prospect. The drilling has increased the strike length of uranium mineralisation to approximately 2200 m with maximum width approximately 800 m. Mineralisation remains open to the northeast. Selected intersections include:

- 3.8 m @ 0.30% pU₃O₈ *
- 1.5 m @ 0.53% pU₃O₈

*pU₃O₈ is the equivalent grade as estimated from Prompt Fission Neutron (PFN) logging

Western Australia

Cauldron Energy Ltd announced an update on the diamond core drilling program completed at the Bennett Well deposit at its wholly-owned Yanrey project. The assay results confirm significant increases in grade width for some of the drill holes. Results include:

- 5.1 m @ 1209 ppm U₃O₈
- 1.5 m @ 1237 ppm U₃O₈

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