

New copper tenement application in the NT

HIGHLIGHTS

- ☆ **New tenement application in the under-explored Birrindudu Basin**
- ☆ **Recent studies by the NTGS, CSIRO, and GA highlight the prospectivity of the basin for copper**
- ☆ **Stratiform sedimentary copper deposits targeted**
- ☆ **First mover advantage**

Westar Resources Limited (ASX: **WSR**) (**Westar** or the **Company**) is pleased to advise that it has submitted a tenement application, EL34118, to explore for copper in the frontier Birrindudu Basin in the Northern Territory.

The tenement application is located about 470km SW of Katherine and covers an area of 619km². The area is crossed by the unsealed Buntine Highway and the Mistake Creek–Inverway Road.

The Company's intention is to identify sedimentary-hosted copper and other base metal deposits within the applied area of the Birrindudu Basin. The targeted deposits are analogues to sedimentary copper deposits in the Central African Copperbelt, the Kupferscheifer district in Germany and Poland, and White Pine in Michigan.

Previous exploration

The Birrindudu Basin, including the application area, has seen very little minerals exploration. The area covered by EL34118 includes only a handful of soil and stream-sediment samples, mainly collected for diamond exploration historically. This basin is now regarded as part of the 'greater McArthur Basin'¹, following recognition of correlative units between the Birrindudu Basin and the McArthur Basin to the east, which hosts the giant Hyc Pb–Zn deposit.

Probably the most substantial exploration program in the application area, was that by Ausquest Ltd in the early 2000s². The company was exploring for Noril'sk-style Ni–Cu–PGE deposits in the Cambrian Antrim Plateau Volcanics which overlie the Birrindudu Basin. Ausquest drilled holes ANTD003 and ANTRC004 within and adjacent to the application area. These holes intersected thin erosional remnants of the Antrim Plateau Volcanics. Hole ANTD003 intersected sedimentary units of the Limbunya Group below the volcanic rocks; the black pyritic mudstone at 306.5–337.0m is interpreted to be the Amos Knob Formation. Hole ANTRC004 terminated in red and green mudstone at 141m depth, which in ANTD003 lies above the black pyritic mudstone.

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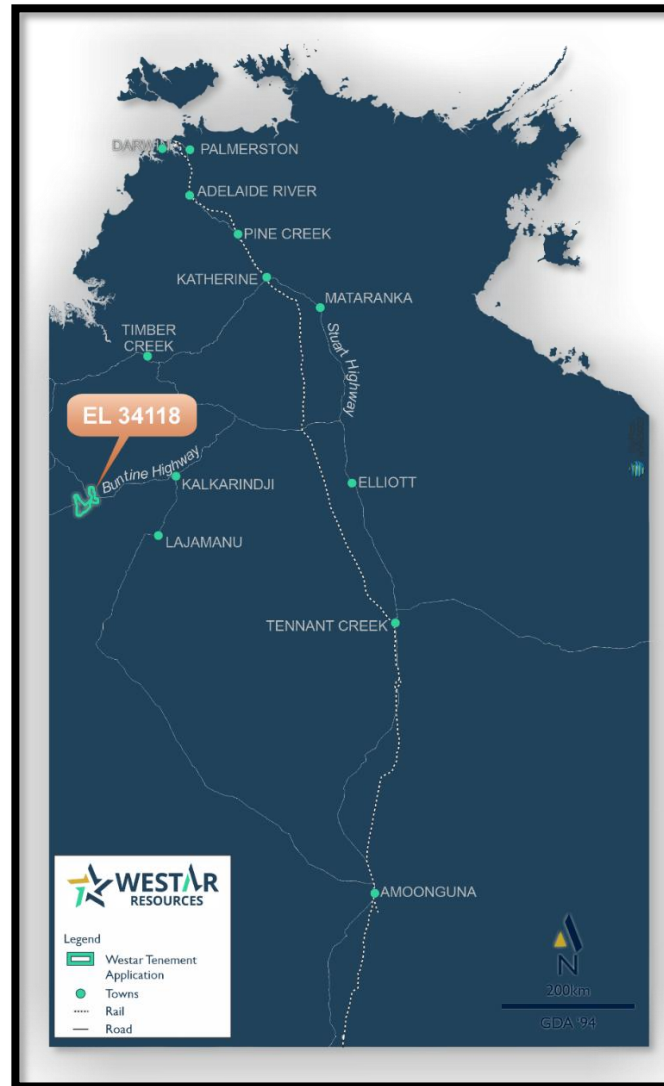


Figure 1. Location of EL34118 (application).

Exploration rationale

Copper and base metal mineralisation can occur within sedimentary basins when metals are leached and deposited by brine fluids circulating within the basin³. Potential source rocks include oxidised terrestrial sedimentary rock at the base of the basin stratigraphy and/or copper bearing volcanic rock in the lower stratigraphy/basement (Hitzman et al., 2005). When oxidised brines bearing copper and other base metals meet a suitable chemical reductant, copper and other metals may be precipitated⁴.

Recently completed and ongoing work conducted by the NTGS and CSIRO on drill core from within the Birrindudu Basin, has highlighted its potential to host stratiform sedimentary copper deposits^{5,6}. This work has provided evidence that a copper source is present, that oxidised basinal fluids have leached copper from the basement geology, and that a suitable reductant is present in the lower part of the succession (Amos Knob Formation). This ongoing work is novel and highlights the Birrindudu Basin as a potential new frontier district for copper mineralisation.

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Area selection was heavily influenced by 1:250,000 scale mapping conducted by the NTGS⁷ and insights provided by the ongoing CSIRO/NTGS project. EL34118 contains much of the Limbunya Group of the Birrindudu Basin. The Limbunya Group is the lower group of the stratigraphy and is known to contain a pyritic shale unit (Amos Knob formation). It is probable that this is the first reductant unit that would be encountered by circulating fertile fluids. The presence of evaporites within the succession also provides a ready source of salt for basinal brines to transport base metals⁸.

There is no outcropping target stratigraphy on EL34118, but the pyritic shale unit has been observed in drill hole ANT003 underneath transported cover within the application area¹. Furthermore, a regional seismic line, 23GA NT3, crosses the application area and shows that the base of the Limbunya Group is present at <500m below surface. Mapping by the NTGS shows a series of close to tight folds that may have developed above interpreted strike-slip faults in the basement⁷, and which may form structural traps for mineralising fluids.

The area comprising the tenement application has been chosen where the Amos Knob Formation is likely to be present at depths <250m below surface.

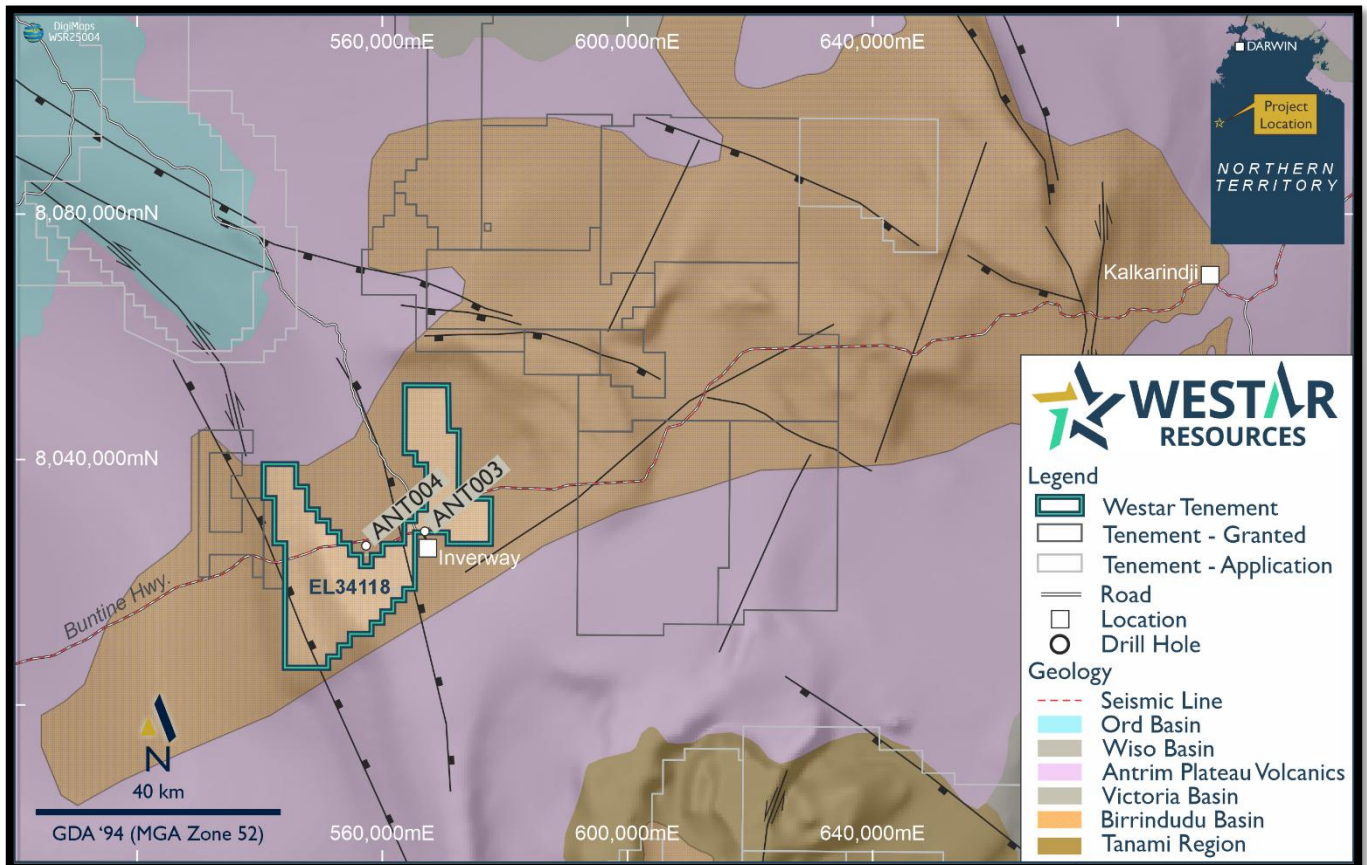


Figure 2. Simplified geology of EL34118 and surrounds. Tenements are plotted on the NTGS 1:2,500,000 geology regions. The structures and underlying depth to basement are from SEEBASE⁹.

References in this Release

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6. Schmid, S and Crombez, V, (2023). Proterozoic sediment-hosted copper mineral systems in the Birrindudu Basin, Northern Territory. 6IAS: 6th International Archean Symposium – abstracts, 184-185.
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For the purpose of Listing Rule 15.5, this announcement has been authorised by the board of Westar Resources Ltd.

ENQUIRIES

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The information compiled in this announcement is based on, and fairly represents, information compiled by Steve Sheppard, a Competent Person who is a Registered Member of the Australian Institute of Geoscientists (AIG; Member ID 5290). Steve is a full-time employee of Westar Resources Ltd and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he has undertaken to qualify as a Competent Person as defined in the 2012 edition of the JORC Code. Steve consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Forward-Looking Statements

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Westar Resources Limited's planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although Westar Resources Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

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About Westar Resources Ltd

Westar Resources is a Perth-based Resource company focused on creating value for shareholders and the communities we live and work in, through the discovery, acquisition and development of high-quality gold and copper projects in supportive jurisdictions. Westar's projects are strategically located in the highly prospective Yilgarn Craton near Southern Cross and Sandstone.

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