

ASX Announcement

20 February 2023

Prospective rare earth tenement granted in NSW

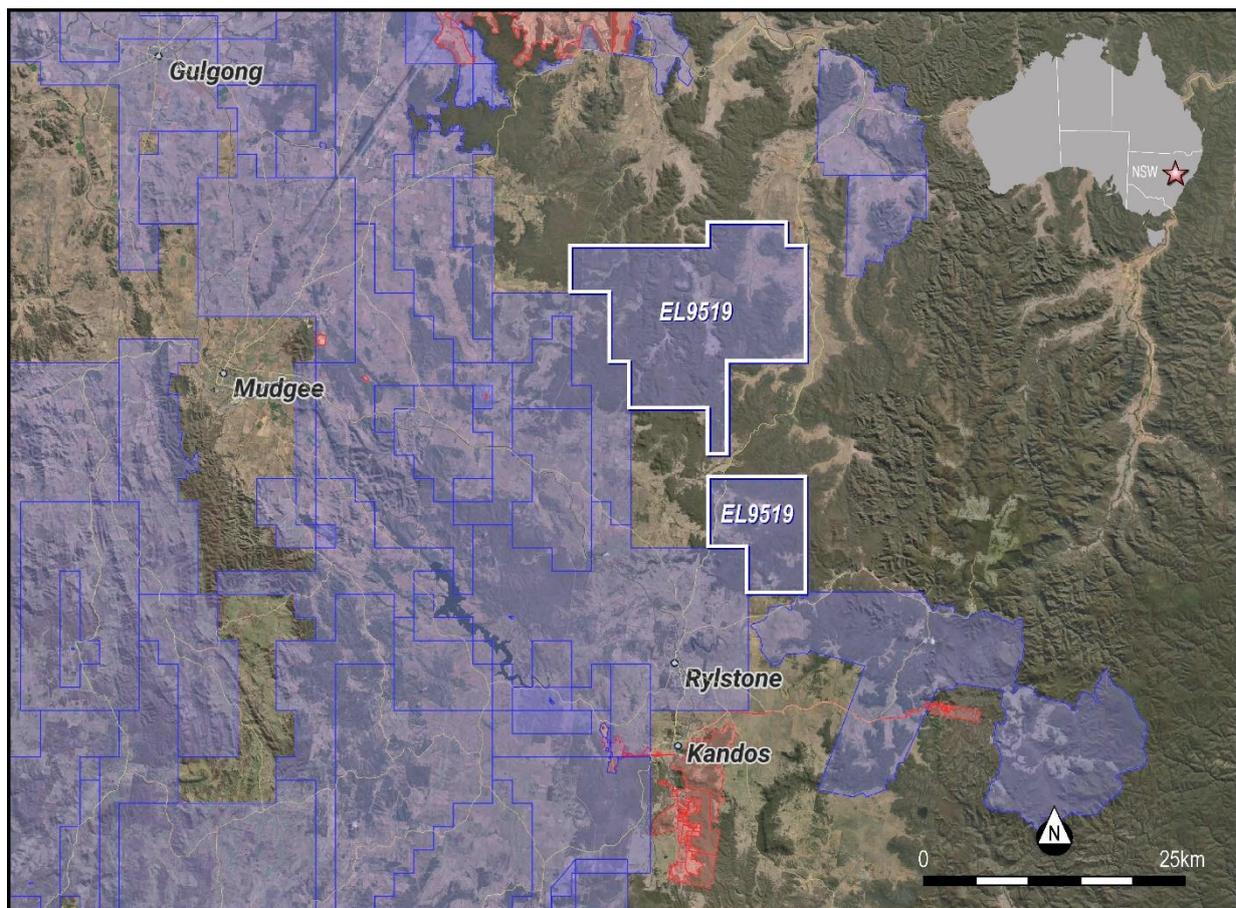
Highlights:

- Great Northern Minerals has been granted EL9519 in NSW
- EL9519 covers a number of Mesozoic alkalic-peralkaline intrusions identical in age and potentially similar to Australian Strategic Metals (ASM) peralkaline Toongi intrusion (Dubbo Project)
- New REE project signals a strategic diversification into critical minerals and metals

Great Northern Minerals Limited (ASX: GNM) (“GNM” or the “Company”) is pleased to announce that it has been granted exploration licence EL9519 located in the central west of New South Wales, approximately 12kms north of Rylstone and approximately 30 km east of Mudgee.

EL9519 is held by GNM’s 100% owned subsidiary Greenpower Gold Pty Ltd. The licence area covers a number of Mesozoic alkalic-peralkaline intrusions identical in age and potentially similar to the peralkaline Toongi intrusion.

Figure 1 EL9519 Location

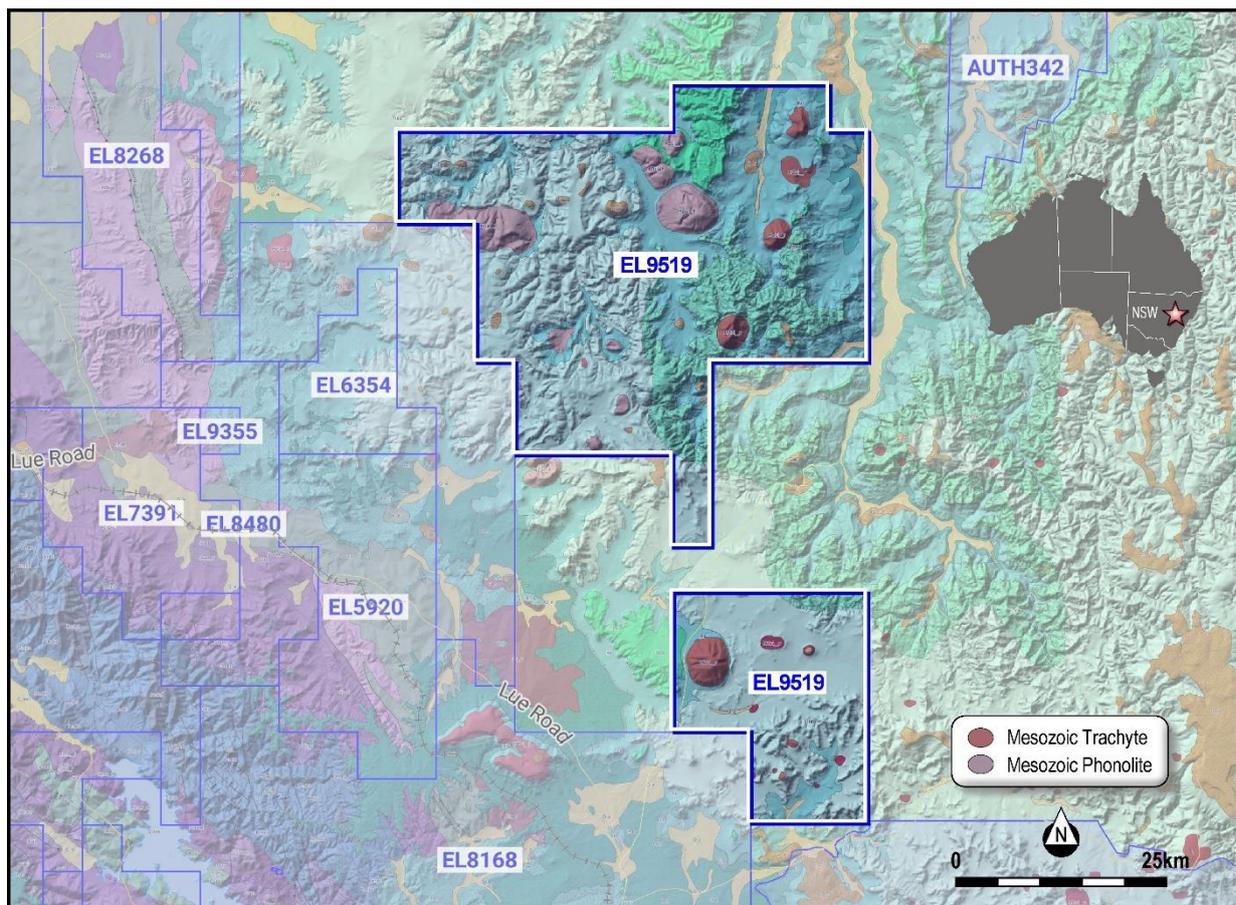


The Toongi intrusion, located in central NSW, hosts significant resources of Zr, Hf, Nb, Ta, Y and REE within a small (ca. 0.3 km²), rapidly cooled trachyte laccolith. Toongi is part of regional Late Triassic to Jurassic alkaline magmatic field, but is distinguished from the other igneous bodies by its peralkaline composition and economically significant rare metal content that is homogeneously distributed throughout the trachyte body. The primary ore minerals are evenly dispersed throughout the rock and include lueshite/natroniobite and complex Na–Fe–Zr–Nb–Y–REE silicate minerals.

The intrusions within EL9519 are considered to have a potential for similar style zirconium-rare earth mineralisation enriched in heavy rare earths.

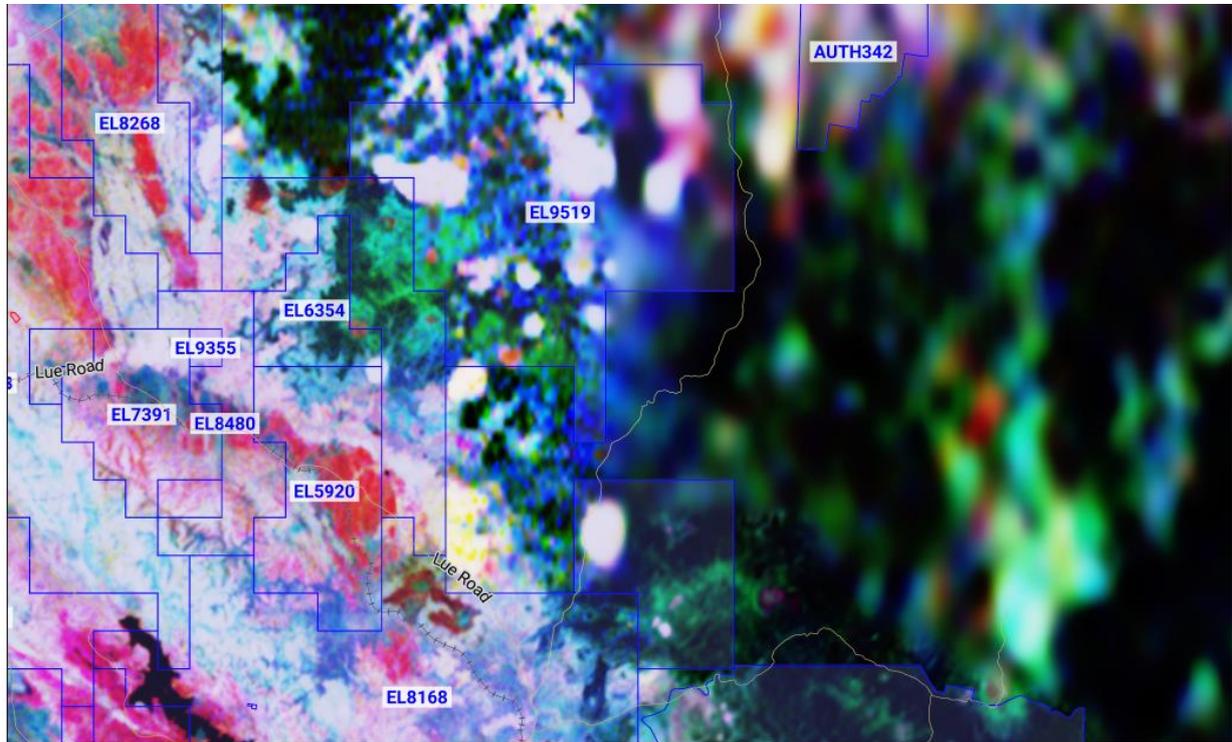
The proposed exploration program will encompass a systematic review of historical exploration activities to date, followed by initial reconnaissance mapping and sampling over the known intrusions to identify intrusions which host REE mineralisation. Further mapping and sampling will be undertaken to support a first pass drilling program. The target area will be drilled, and should the drilling confirm the presence of potentially economic levels of REE mineralisation, this will be followed up by a more detailed drill program to generate sufficient information to start to model the REE mineralisation as part of early stage resource definition activities.

Figure 2 EL9519 Geology



Radiometrics suggest multiple U-Th-K anomalies within EL9519 associated with the trachytes and phonolites.

Figure 3 EL9519 Radiometrics



Ternary radioelement potassium(K)-thorium (Th)-uranium(U) channel data. The image was generated by merging many individual airborne surveys and is a red-green-blue (RGB) composite using a histogram-equalised colour-stretch for each of the three channels. The red, green and blue channels represent K, Th and U respectively. Mixed compositions are indicated by the proportional blend of the corresponding additive primary colours (e.g. yellow indicates the presence of both K and Th, magenta the presence of K and U while aqua indicates the presence of Th and U). Black indicates low concentrations and white represents high concentrations for all three radioelements. The distribution of radioelements reflects the geochemistry and mineralogy of the near-surface, which may constitute either bedrock or regolith materials.

ENDS

This announcement has been authorised by the Board of Great Northern Minerals Limited.

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About Great Northern Minerals Limited

Great Northern Minerals Limited is an ASX-listed gold focused explorer and developer. The Company's Golden Ant Project is located in Far North Queensland and includes the Amanda Bell and Big Rush Goldfields. Total gold production from the Amanda Bell Goldfield was approximately 95,000 oz Au (57,000 oz from Camel Creek and 14,000 oz from Camel Creek satellite deposits plus 18,000 oz from Golden Cup and 6,000 oz from Golden Cup satellite deposits). Total gold production from the Big Rush Goldfield was 60,000 oz Au. Three heap leach gold mines were operated (Camel Creek, Golden Cup and Big Rush). Mining activities commenced in 1989 and ceased in 1998 with the depletion of oxide gold mineralisation. Great Northern Minerals aims to develop a new gold camp in North Queensland based on the Golden Ant Project.

Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled under the supervision of Simon Coxhell, the Technical Director of Great Northern Minerals Limited. Mr. Coxhell is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience of relevance to the styles of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves." Mr. Coxhell consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.