ASX: GSN

ASX ANNOUNCEMENT

8 December 2021

EM CONDUCTORS IDENTIFIED AT EAST LAVERTON NICKEL PROJECT

Great Southern Mining Limited (ASX: GSN, the "Company" or "GSN") is pleased to announce that the EM survey at the Company's 100%-owned East Laverton Nickel Project in Western Australia has identified significant bedrock conductors.

Highlights

- Multiple bedrock EM anomalies identified by the recent MLEM survey.
- The largest anomaly has been modelled by Newexco as a large (2km x 1km) sub-vertical conductor of 1,000 siemens at a depth of approximately 300m.
- The Project is considered highly prospective for nickel-sulfide discoveries with the prominent modelled bedrock conductor close to the edge of the interpreted Diorite Hill magmatic complex, which is a favourable position for massive sulfide accumulation.
- The conductor is also coincident with the edge of a regional gravity anomaly, further upgrading the potential for a blind nickel sulfide discovery.
- A follow-up, tighter spaced EM survey is under design to refine the geometry of the modelled conductors ahead of drill testing as soon as practical.

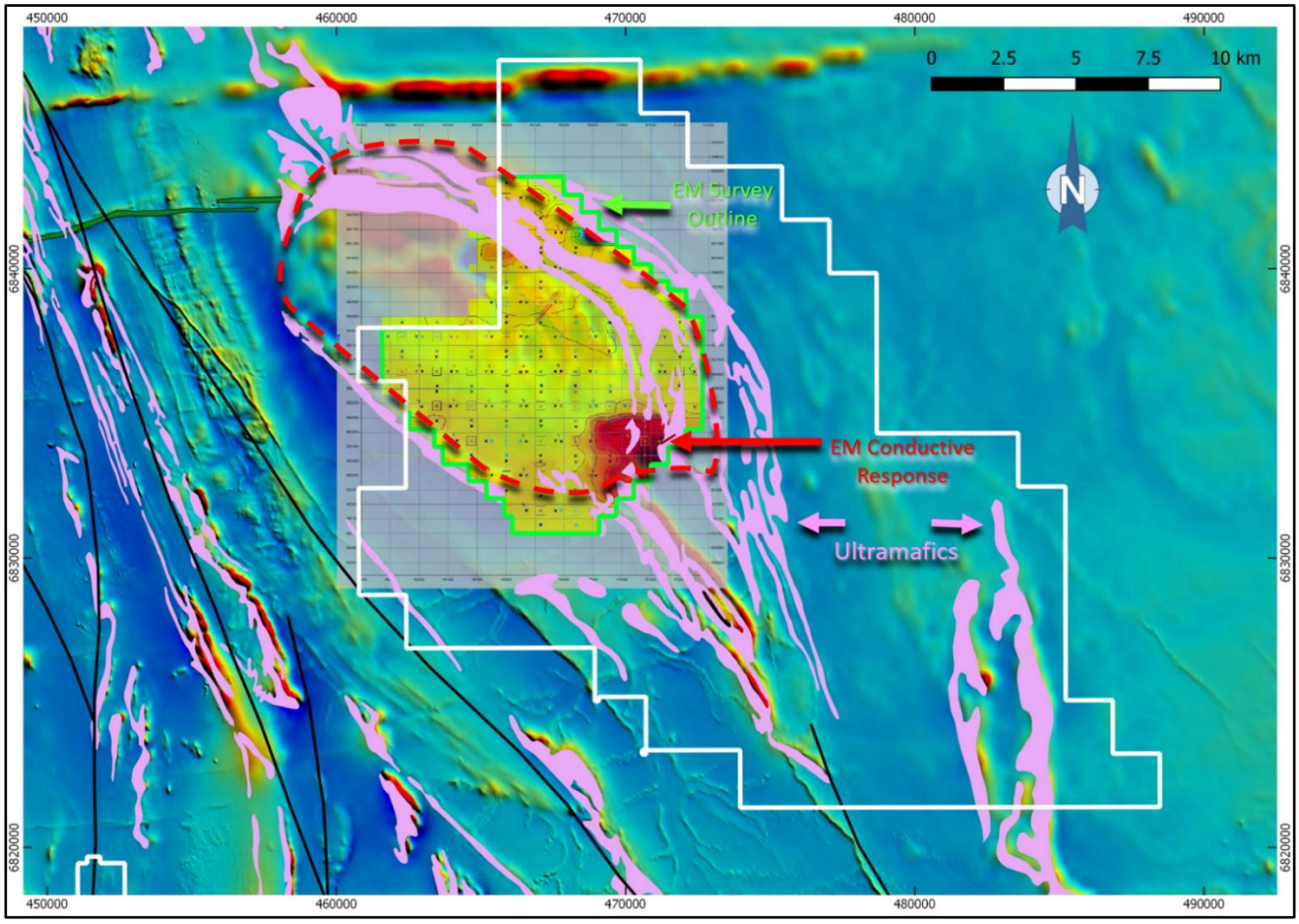

Figure 1 - Channel 30 linear colour stretch image showing the south-east conductor at station 76 relative to the Diorite Hill magmatic complex (red outline), overlayed with GSWA magnetics and interpreted ultramafic units.

GSN's Chief Executive Officer, Sean Gregory, commented:

"This is an exciting development for GSN and is part of our overall strategy to progress exploration opportunities on multiple fronts. Although our primary focus is gold, GSN has identified the East Laverton Project as highly prospective for nickel-sulfide discoveries. This recent MLEM survey was the first modern ground-based EM survey over Diorite Hill and has identified a bedrock conductor in a favourable geological environment that represents a very intriguing target. We are very pleased with the results of this initial survey which justify close spaced EM and drill testing as soon as practical."

MLEM Survey Design

The Moving-Loop Electro-Magnetic (MLEM) survey was the first of its kind over the Diorite Hill magmatic complex. The survey involved laying wide spaced 200m square transmitter loops and taking soundings 600m from the loop centers at four points of the compass (Figure 1). This process was repeated at 55 transmitter locations across the Diorite Hill Magmatic Complex on a 1200m x 1200m spacing totaling 220 soundings covering 70km^2.

The survey was designed and modelled by Bill Amann from leading exploration and geophysical consultants Newexco Exploration Pty Ltd (Newexco), who have been instrumental in the discovery of numerous major nickel sulfide deposits in Western Australia over the last 20 years including Flying Fox, Spotted Quoll and Nova.

Anomalies and Conductors Identified

The initial broad spaced MLEM survey returned adequate data that identified four Electro-Magnetic (EM) anomalies consistent with possible bedrock conductors. These four survey stations were then subject to infill soundings that enabled three bedrock conductors to be modelled (Figure 2).

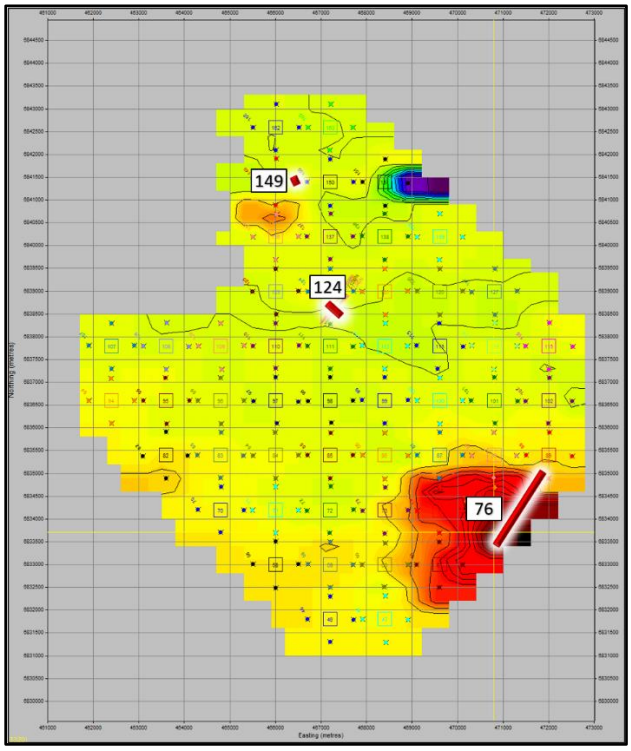

Figure 2 - Channel 30 (late time) linear colour stretch showing conductors modelled.

The strongest anomaly was identified in the south-east of the survey area. Loop 76 was of particular interest as this loop, and the adjacent loop, returned what appears to be exponential late time decays on all 8 soundings. (Figure 2).

An infill survey using one profile at Loop 76 was completed to assist in delineating the source of the anomaly. Preliminary interpretation produced a large bedrock conductor at depth with a north-east orientation (Table 1 and Figure 3). Modelling is ongoing.

Table 1 – Anomalies and conductors modelled at Diorite Hill

Anomaly	**Model size**	**Depth to top**	**Conductivity thickness time constant**
76	2,000 x 1,000 m	300 m	1,000 Siemens 80ms
101	No significant conductor able to be modelled		
124	300m x 300 m	300 m	500 Siemens 30ms
149	100m x 100 m	100 m	100 Siemens 3ms

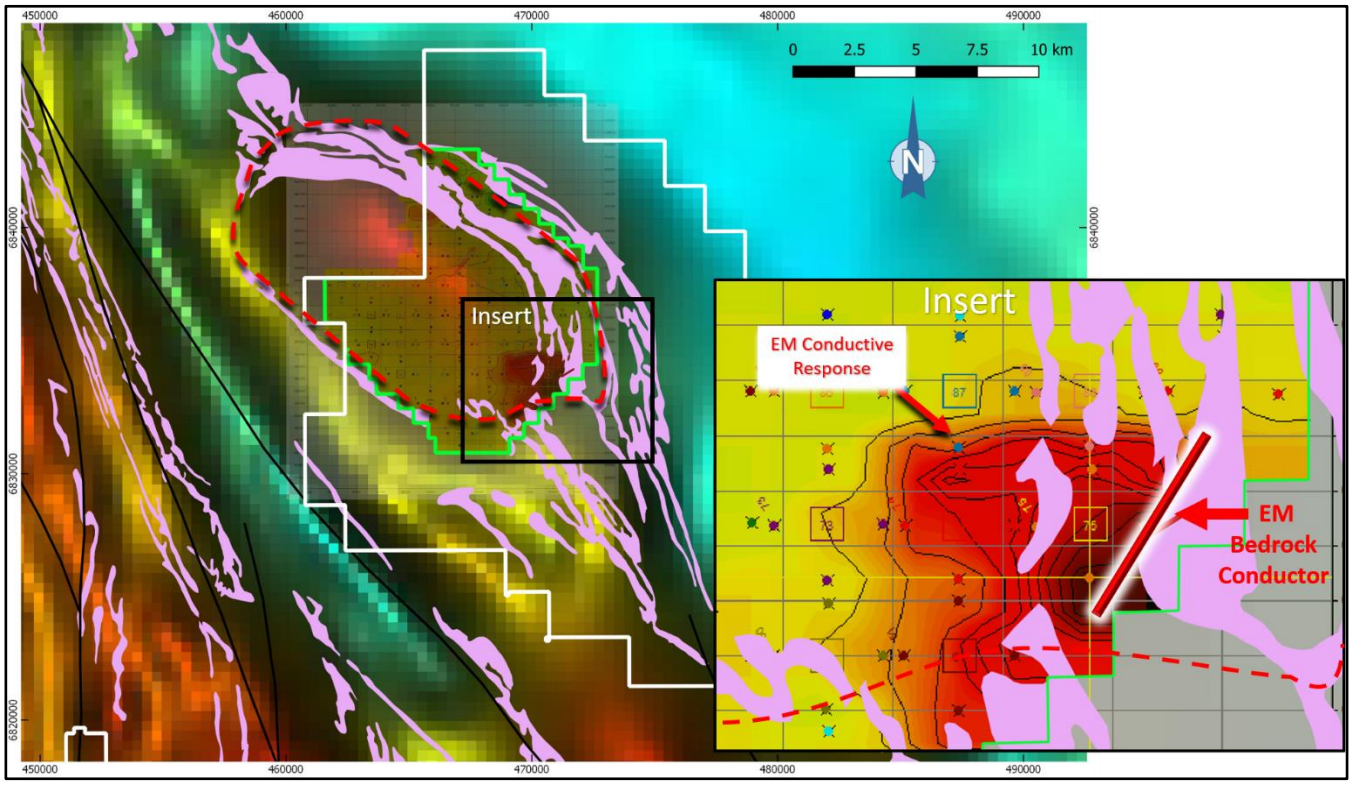

Figure 3 – South-east modelled EM bedrock conductor relative to the Diorite Hill magmatic complex, overlayed with GSWA gravity and GSWA interpreted ultramafic units. Insert highlights the preliminary modelled bedrock conductor.

The prominent bedrock conductor identified is in close proximity to the edge of the interpreted Diorite Hill magmatic complex, which is a favourable position for massive sulfide accumulation. Regional gravity data clearly highlights the Diorite Hill magmatic complex with the EM conductor positioned on the edge of the gravity high (Figure 3). This further upgrades the prospectivity and the significance of the bedrock conductor highlighting the potential for a blind discovery.

Next Steps

The south-east portion of the survey area is of main interest and final modelling of the data is ongoing. Newexco have recommended that a closer spaced EM survey will further refine the orientation of the newly identified bedrock conductors ahead of drill testing as soon as practical. The survey will also extend south to examine if any other conductive sources are present.

The release of this ASX announcement was authorised by the Executive Chairman on behalf of the Board of Directors of the Company.

For Further Information Contact:

John Terpu

Executive Chairman

admin@gsml.com.au

+61 8 9240 4111

About East Laverton Nickel Project

The East Laverton Nickel Project is dominated by the Diorite Hill magmatic complex (**Diorite Hill**), Diorite Hill covers an area of approximately 110km^2 and consists of a thick (7 km) cumulate rock sequence of interlayered peridotites, pyroxenites, gabbros and anorthosites. The southern and eastern part of the complex is contained within the project area.

Diorite Hill intruded a greenstone volcanic rock sequence indicated by the presence of non-cumulate mafic/ultramafic hornfels xenoliths within the complex. Diorite Hill is commonly covered by shallow modern aeolian sands that have hampered previous exploration. Diorite Hill is abutted to the south by the Rotorua Komatiite, a 10km by 1.5km extrusive ultramafic. The Curara Komatiite is further to the east.

Komatiites flows have been the main source of developed nickel-sulfide mines in WA and have been explored extensively since the late 1960's. Due to their well understood geochemistry, formation, and high-grade sulfide enrichment process within defined channels, most of the studies and exploration programs in WA have focused on discovering this style of mineralisation. The Kambalda-Kalgoorlie-Leinster-Laverton Goldfields Region has been the main focus for komatiite exploration, with limited potential existing outside this region. Greenfields discoveries of komatiite nickel have reduced in recent years in the Goldfields Region and its only deep brownfields exploration that is delivering new nickel deposits.

Elsewhere around the world, large scale magmatic nickel deposits are the common place, producing world-class deposits with long productive mine lives. In WA, magmatic nickel deposits occur scattered throughout the state, however, they have had a long and slow history of discovery, development and understanding.

Its only in recent years, since the 2012 discovery of the Nova-Bollinger 13Mt @ 2% Ni 0.8% Cu and 0.1 % Co deposit in the Fraser Range, that a string of magmatic nickel deposit have suddenly been discovered. As komatiite sources dry up, focus and understanding around magmatic nickel deposits is starting to gain momentum, resulting in exploration companies looking at various mafic-ultramafic bodies which have had limited to no exploration completed over them to date. This is resulting in a new level of understanding in WA on the formation/deposition of nickel-copper sulfides within magmatic rocks, leading to a wave of new discoveries.

Interest in magmatic nickel-copper deposits have had a resurgence with the recent discoveries of magmatic hosted sulfide mineralisation at Chalice Gold Mines' (ASX:CHN) Julimar Project. It is this "Voisey Bay" magmatic style model has not been adequately explored at Diorite Hill. This represents a compelling exploration target opportunity which the Company intends to aggressively pursue.

About Great Southern Mining

Great Southern Mining Limited is a leading Australian listed gold exploration company. With significant land holdings in the world-renowned gold districts of Laverton in Western Australia and Mt Carlton in North Queensland, all projects are located within 25km of operating gold mills and major operations.

The East Laverton Nickel Project is located 15km east from the town of Laverton in Western Australia where GSN maintains an exploration base to service its significant exploration portfolio in the region, including the Southern Star Gold Deposit within the Duketon Gold Project to the north and the Mon Ami Gold Project south of Laverton.

The Company's focus is on creating shareholder wealth through efficient exploration programs and strategic acquisitions of projects that complement the Company's existing portfolio of quality assets.

For further information regarding Great Southern Mining Limited please visit the ASX platform (ASX:GSN) or the Company's website www.gsml.com.au.

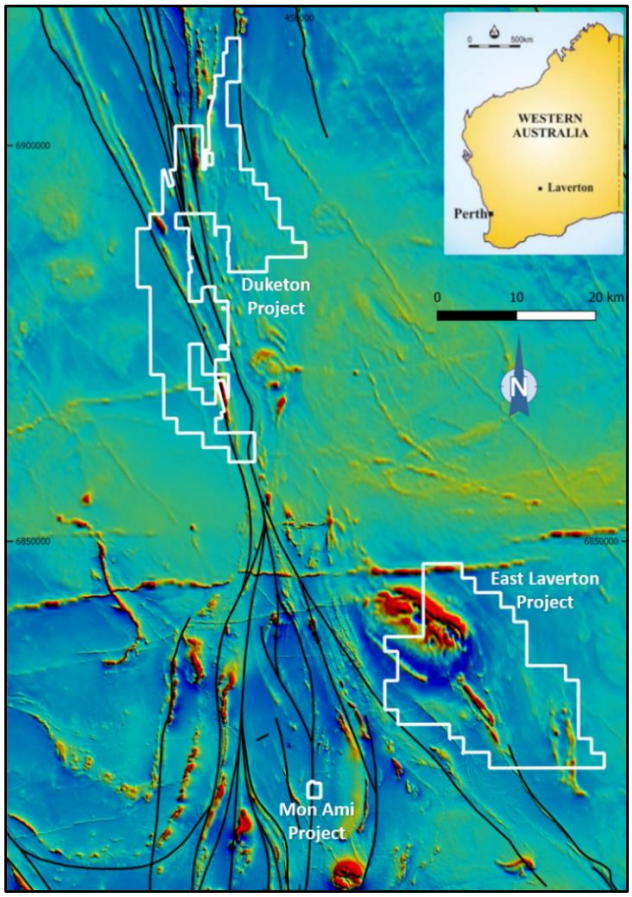

Figure 4 – GSN's Laverton tenure and projects over GSWA TMI magnetics.

Competent Person's Statement

The information in this report that relates to exploration results at East Laverton is based on, and fairly represents, information and supporting documentation compiled by Simon Buswell-Smith. Mr. Buswell-Smith is a full-time employee of Great Southern Mining Limited. He has sufficient experience relevant to the style of mineralization and type of deposit under consideration. Mr. Buswell-Smith is a Member of the Australian Institute of Geoscientists and as such, is a Competent Person for the Reporting of Exploration Results, Mineral Resources and Ore Reserves under the JORC Code (2012). Mr. Buswell-Smith consents to the inclusion in the report of the matters based on his information in the form and context in which they occur.

Forward Looking Statements

Forward- looking statements are only predictions and are not guaranteed. They are subject to known and unknown risks, uncertainties and assumptions, some of which are outside the control of the Company. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward-looking statements or other forecast. The occurrence of events in the future are subject to risks, uncertainties and other factors that may cause the Company's actual results, performance or achievements to differ from those referred to in this announcement. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward- looking statements in this announcement speak only at the date of issue of this announcement. Subject to any continuing obligations under applicable law and the ASX Listing Rules, the Company, its directors, officers, employees and agents do not give any assurance or guarantee that the occurrence of the events referred to in this announcement will occur as contemplated.

JORC Code 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	A reconnaissance Time Domain Electro Magnetic survey of 220 Soundings on a 600 x 600m grid spacing was completed. 96 amperes were applied to 300m x 300m transmitter loops on a 1200m x 1200m pattern at 1.0Hz base frequency. An ARMIT Gen 4 receiver was placed out of loop at 500m. 8 detailed profiles were completed at various station spacing for an additional 78 stations.
Drilling techniques	No drilling reported
Drill sample recovery	No drill recovery was reported.
Logging	N/A
Sub-sampling techniques and sample preparation	8 detailed profiles were completed at various station spacing for an additional 78 stations at areas of anomalous responses.
Quality of assay data and laboratory tests	N/A
Verification of sampling and assaying	Infill profiles repeated original anomalous responses, validating EM survey.
Location of data points	All sites are in MGA94 – Zone 51 grid coordinates Handheld GPS was used for location. Topographic control in nominal.
Data spacing and distribution	See sample techniques
Orientation of data in relation to geological structure	N/A
Sample security	Data was gathered daily onsite and sent to Newexco daily for interpretation.
Audits or reviews	Newexco process and interpret the field data received and is peer reviewed.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	Tenement E38/3663 was granted 27/7/2020 in the name of East Laverton Exploration Pty Ltd, a 100% owned subsidiary of Great Southern Mining Limited. The tenement is in good standing. Tenements E38/3664 and E38/3662 was granted 29/04/2021 in the name of Great Southern Mining Limited. The tenements are in good standing.
Exploration done by other parties	In 1990 Aberfoyle conducted three RAB drilling programmes totalling 4,629m in 119 holes (DHRB001 – 119) across the Diorite Hill Complex aimed at assessing the PGE potential. Bottom of hole and near surface lateritic samples were collected from drill holes DHRB001 to 83 and bottom of hole samples only from DHBR084 to 119. Aberfoyle followed up on their PGE prospective ultramafic – mafic contact zone at diorite hill with a four (4) hole RC pre-collar diamond program in 1992 (DIORCDD 120, 121, 122, 123) for a combined 525m of drilling.

Criteria	Commentary
	A conclusion from the work was that the hole intersected too high in the layered complex to be prospective for PGE mineralisation, however no further work was undertaken. The potential for primary Ni sulfide mineralisation was not discussed. Follow-up drilling by Ni-West in 2002 on Aberfoyles best intersections consisted of 15 vertical aircore programs for 534m (DRA0001 – 0005, KNA001 – 002, DCAC0001 – 13). Holes were drilled to recognisable bedrock, were generally low anomalism and included a best 'standout' intercept of 8m at 0.98% Ni and 0.18% Co from 32m (DRAC0008) located proximal to the Ni intersection in DIORCDD 123 by Aberfoyle. Placer Dome Asia Pacific ("Placer") farmed into the Diorite Hill Project in late 2002 and initially completed a high-resolution airborne EM and magnetic survey. Work completed by Placer during the following year included follow up soil sampling (452 samples), RAB and minor aircore drilling totalling 7,224 metres in 171 drill holes, and two diamond drill holes for 599.5 metres (including 78.7 metres in pre-collars). The drilling programme was designed to map basement geology beneath the transported cover, test soil and geophysical anomalies and locate PGM-bearing sulfide and chromite layers. Holes were sited to give broad coverage across the entire width of the intrusive body, both augmenting and infilling the earlier Aberfoyle RAB drilling, and targeting the zones/layers interpreted to be the most prospective from both the magnetics and the earlier drilling. In 2006, Southern Geoscience consultants ("SGC") were contracted by A1 Minerals to re-process and interpret aeromagnetic data collected as part of the Diorite Hill Hoistem helicopter EM survey flown by Placer Dome.
Geology	The East Laverton project incorporates the southern portion of the Diorite Hill Layered Ultramafic Complex, a NW-SE trending body, about 7000m wide and delineated by an aeromagnetic anomaly. The interpreted feeder conduit to the layered complex has been classified as the Rotorua Ultramafic unit. The Diorite Hill Layered Intrusive Complex was originally interpreted as an east facing, steeply dipping sequence, but was subsequently interpreted as a shallow dipping, west facing sequence complicated by thrusting with remnants of hornfels grade country rock. There is a complex inter-fingering of cross-cutting coarse pyroxenite in fine magnetic recrystallised dolerite/peridotite, as well as xenoliths of the finer grained lithology in foliated pyroxenite. The geology is poorly understood, with previous workers interpreting a layered sill complex comprising alternating layers of olivine-rich cumulates, pyroxenites, gabbros and even anorthosites. A mafic-ultramafic hornfels has been interpreted along the granite contact to the east, and it appears as if abundant hornfels xenoliths may have been caught up in the layered pyroxenite and gabbro units. A basaltic rock sequence defines the western margin. Recrystallised dolerite has also been interpreted from certain outcrops. The topography is generally flat to slightly undulating with occasional low hills of outcrop and lateritic residuum. Outcrop in the area is poor (5–10%), restricted to the north eastern sector of the body, with the remainder covered by transported alluvium, laterite and minor calcrete. Sediments have been mapped in the eastern portion of the tenement.
Drill hole Information	No drillhole information reported No material information has been excluded

Criteria	Commentary
Data aggregation methods	N/A
Relationship between mineralisation widths and intercept lengths	No drilling results reported.
Diagrams	Relevant Diagrams are included in the body of this report.
Balanced reporting	Area of survey is illustrated for balanced reporting
Other substantive exploration data	N/A
Further work	Future exploration is included in next steps of the body of the report