# **ASX ANNOUNCEMENT**

**08 February 2021** 



#### INFILL FLEM SURVEY UNDERWAY AT EAST LAVERTON NICKEL PROJECT

Great Southern Mining Limited (ASX: GSN, the "Company" or "GSN") is pleased to announce that an infill Fixed-Loop Electro-Magnetic (FLEM) survey is underway at the Company's 100%-owned East Laverton Nickel Project in Western Australia.

### **Highlights**

- FLEM survey underway at East Laverton.
- The survey is infilling last year's Moving-Loop Electro-Magnetic (MLEM) survey which allowed 3 bedrock conductors to be modelled.
- The FLEM survey seeks to refine the strike and dip of the 2 largest conductors ahead of planned drilling.
- A heritage survey is booked for later this month to facilitate drill testing of the targets.

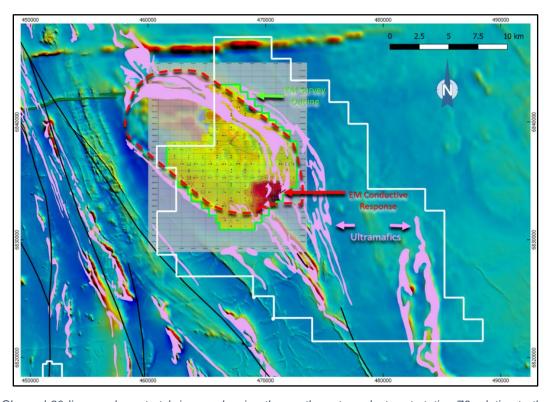


Figure 1 - Channel 30 linear colour stretch image showing the south-east conductor at station 76 relative to the Diorite Hill magmatic complex (red outline), overlayed with GSWA magnetics and interpreted ultramafic units.

#### **GSN's Executive Chairman, John Terpu, commented:**

"Whilst the Company is busy advancing its gold projects in Laverton with further drill programs set to commence at Southern Star, the East Laverton Nickel Project presents an opportunity for GSN to make a company changing discovery. Based on the MLEM survey from 2021, the highly prospective nickel-sulfide target is of the size and scale that presents a compelling drill target. With the conductors being modelled in the bedrock and on the edge of a regional gravity anomaly, the target is in a favourable position for massive sulfide accumulation. This fixed-loop electromagnetic survey is the next step to further refine this target for drill testing."



### **FLEM Survey Design**

The 2021 Moving-Loop Electro-Magnetic (MLEM) survey was the first of its kind over the Diorite Hill magmatic complex (Refer ASX Announcement 8/12/21, Figure 1). The MLEM survey results allowed 3 bedrock conductors to be modelled by leading exploration and geophysical consultants Newexco Pty Ltd (Figure 2).

A closer spaced FLEM survey has now been designed by Newexco. The FLEM survey is underway over the largest 2 conductors (76 and 124) and will aim to refine the strike and dip of the conductors to improve the accuracy of planned drill testing.

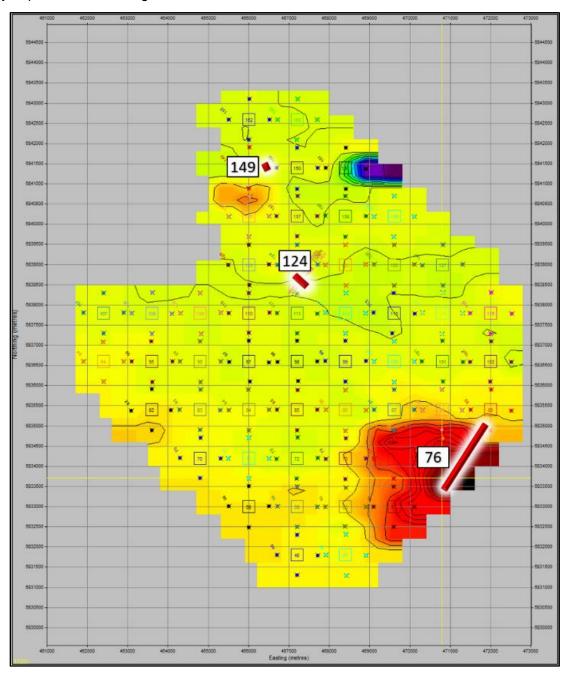


Figure 2 - Channel 30 (late time) linear colour stretch showing conductors modelled from the MLEM survey.



# **Next Steps**

The results of the FLEM survey are expected later this month.

A heritage survey to facilitate drill testing of the conductors has been booked with the Traditional Owners, also for later this month.

The release of this ASX announcement was authorised by the Executive Chairman of the Company. For Further Information Contact:

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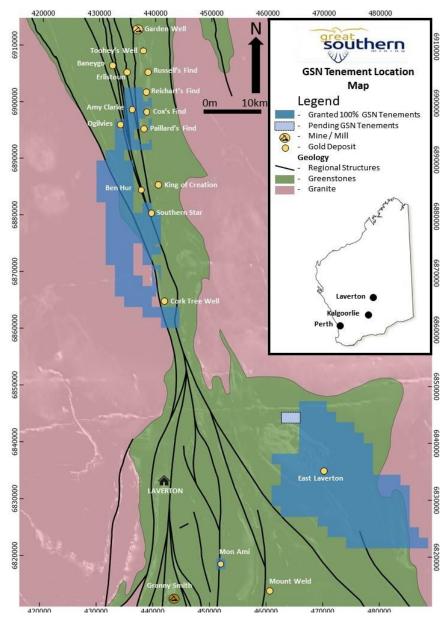


Figure 3 – GSN's Laverton tenure and projects.



## **About the 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<sup>2</sup> 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 it's 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.

It's 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 that 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 exploration company. With significant land holdings in the world-renowned mining districts of Laverton in Western Australia and Mt Carlton in North Queensland, all projects are located within 25km of operating mills and major operations.

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.



#### **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