STAVELY MINERALS
ASX Code: SVY

ASX ANNOUNCEMENT **14 November 2023**

Stavely Minerals – Update on Hawkstone Nickel Project, WA

Successful WA Government Drilling Co-Funding Application for 800m Deep Nickel Drill-Hole

Agreement finalised for up to $220,000 in WA Government co-funding to drill an 800m deep drill hole targeting magmatic nickel sulphides at the Hawkstone Project

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- **Following the recent successful Falcon gravity gradiometer and magnetic survey over the Hawkstone Project, located in the emerging magmatic nickel province in the West Kimberley, Stavely Minerals has entered into an agreement with the WA Government for co-funding of a proposed 800m deep diamond drill-hole.**
- **The Hawkstone Project sits along strike from the Buxton Resources/IGO Joint Venture's Double Magic Project, which hosts the Merlin nickel-copper-cobalt discovery, located ~1km along strike from the shared Hawkstone tenement boundary.**
- **The Merlin nickel-copper-cobalt discovery is a high-tenor (average 8% nickel tenor for massive sulphide) magmatic nickel style of mineralisation, with individual assays of up to 8.14% nickel, 5.26% copper and 0.69% cobalt, hosted by the Ruins Dolerite[1].**
- **Last week, IGO and Buxton Resources announced high-grade Ni-Cu-Co assays from the initial drill hole into the Dogleg Ni-Cu-Co discovery[2].**
- **The Hawkstone Project includes ~30 kilometres of easterly strike continuation of the Ruins Dolerite, which is highly prospective for nickel-copper-cobalt mineralisation.**
- **Additionally, a regionally significant gravity high under the Hawkstone Ni-Cu-Co Project may represent a deeper mafic magma chamber, potentially an analogue to the Eastern Deeps intrusion at the world-class Voisey's Bay deposit in Canada.**
- **The Hawkstone Project represents a relatively under-explored opportunity for a significant discovery in an emerging mineral field where the prospectivity and fertility of the Ruins Dolerite has already been demonstrated by the Merlin and Dogleg discoveries.**

Stavely Minerals Limited (ASX Code: **SVY** – "Stavely Minerals") is pleased to advise that it has entered into agreement with the WA Government, through the Exploration Incentive Scheme (EIS), for co-funding of an 800m deep diamond drill-hole at the Hawkstone Nickel-Copper-Cobalt Project to a maximum amount of $220,000 of co-funding.

[1] Buxton Resources website: West Kimberley - Buxton Resources Ltd, ASX:BUX announcement dated 27 November 2015
[2] See ASX: BUX announcement 6 November 2023

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Stavely Minerals Executive Chair and Managing Director, Mr Chris Cairns, said: *"Our Hawkstone Project is an exceptional walk-up exploration opportunity in a geological setting that has demonstrated prospectivity and fertility."*

"The Merlin nickel-copper-cobalt discovery is a high-tenor nickel discovery, which can be very important in terms of economic potential. Located just 1 kilometre from the Hawkstone Project tenement boundary, the Merlin discovery is significant in several respects."

"Technically, it demonstrates that the geological processes required to form a magmatic nickel sulphide deposit have occurred within the Ruins Dolerite, and the Hawkstone Project contains some 30 kilometres of strike continuation of this highly prospective yet under-explored unit."

"Just last week, IGO and Buxton announced high-grade assays from the new Dogleg nickel-copper-cobalt discovery located a further 13km north-west of Merlin."

"Stavely Minerals' recently completed Falcon gravity gradiometer survey sets a very strong foundation for our forward exploration programs to build upon. Both the gravity and magnetic data clearly show that the nickel-prospective Ruins Dolerite traverses our tenure for meaningful strike lengths of approximately 30 kilometres."

"Importantly, the gravity data from that survey are interpreted to show a large (~20km long) mafic magma chamber at depth beneath the Hawkstone Project. This chamber is considered to be analogous to the Eastern Deeps magma chamber at the world-class Voisey's Bay nickel mine – and it was a drilling proposal to test this potential that was the subject of the successful EIS co-funding application."

"We are very grateful for the WA Government's financial support to test this conceptual target and we are very excited to get on the ground in the next field season early next year."

Video with Stavely Executive Chair Chris Cairns – Listen to Chris Cairns discuss the Hawkstone Project and the significance of the recent Buxton/IGO discoveries which can be found on the Stavely Minerals website www.stavely.com.au under Investors/Media & Webinars – "Interview with Chris Cairns, Executive Chair & Managing Director of Stavely Minerals."

The Hawkstone Project

The Hawkstone Project is located in the emerging West Kimberley magmatic nickel province (Figure 1). Both the East and West Kimberley are part of a major regional magmatic nickel exploration play by IGO Limited (Figure 2).

The West Kimberley is an emerging magmatic-nickel province with two recent discoveries within separate IGO/Buxton JV's – the Merlin Ni-Cu-Co discovery in 2015 and the very recent Dogleg Ni-Cu-Co discovery (2023). Both of these discoveries are located directly along strike from Stavely Minerals' Hawkstone Ni-Cu-Co Project (Figure 3).

The Hawkstone Project comprises ~600km^2 of tenure, held both 100% and with earn-in and/or exploration rights in six separate tenements through Stavely Minerals' 100%-owned subsidiary, North West Nickel Pty Ltd (NWN).

Falcon Gravity Gradiometer Survey

In late July 2023, Stavely engaged Xcalibur Aviation (Australia) Pty Ltd to fly a state-of-the-art airborne gravity survey over the Hawkstone Project using its airborne Falcon™ Plus gravity gradiometer system.

The survey, comprising some 3,700 line-kilometres, was flown at 80m height above surface, on flight lines spaced 200m apart. With permission from the IGO/Buxton JV, the Falcon survey was also flown over the Merlin/Double Magic Ni-Cu-Co discovery (Figure 4).

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Stavely Minerals has received processed data and imagery including gravity, gravity gradient, total magnetic intensity (TMI) and the first vertical derivative (1VD) of the magnetic data (Figures 5-8).

The Hawkstone Project is located approximately 1km along strike from the Buxton Resources/IGO Joint Venture at the Double Magic Project, as shown in Figure 3. The recent Dogleg Ni-Cu-Co discovery is located a further 13km north-west of Merlin. Both discoveries are hosted in the Ruins Dolerite, which continues along strike for some 30 kilometres through the Hawkstone Project (Figure 4).

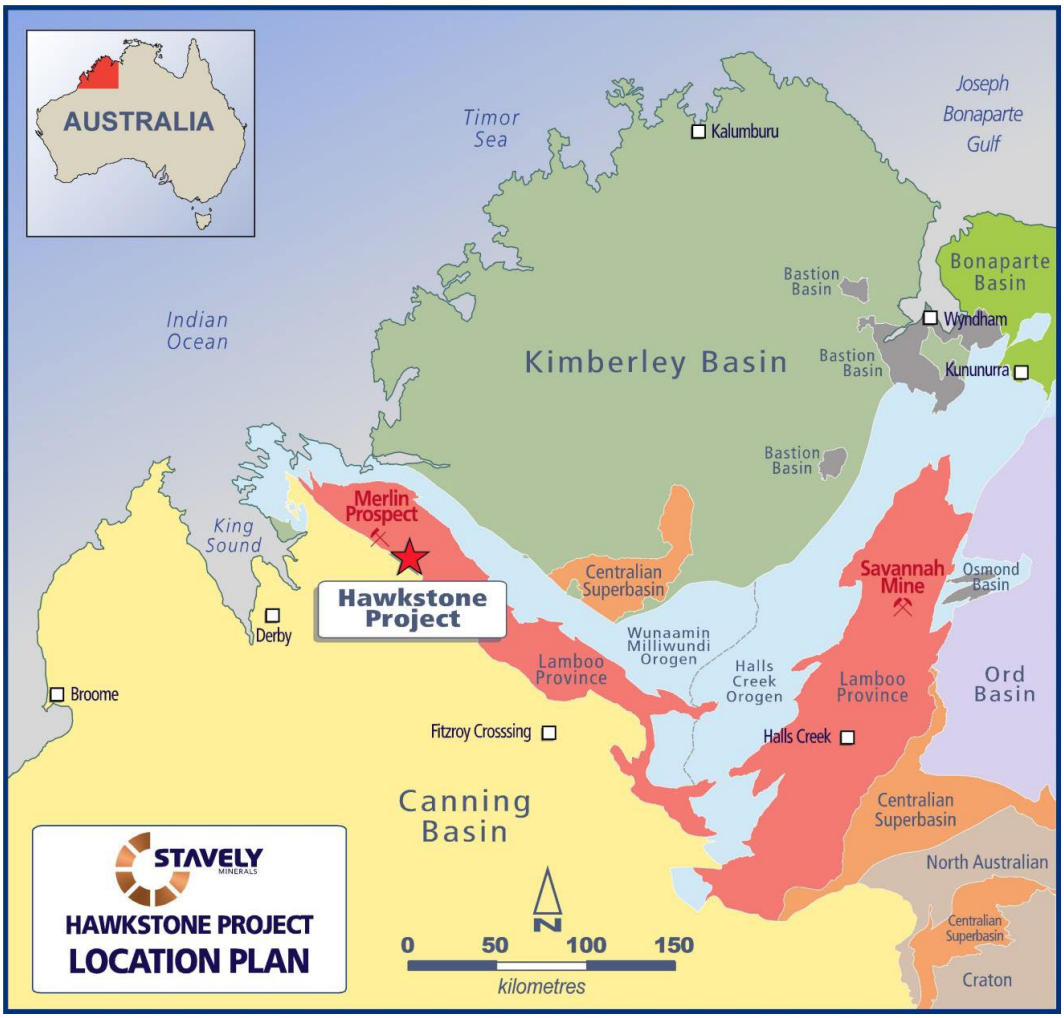

Figure 1. Hawkstone Project location map.

A key outcome of the Falcon gravity gradiometer survey is the recognition of a large (~20km long) interpreted mafic magma chamber located beneath the Hawkstone Project (Figure 5).

The significance of this mafic magma chamber is that the bulk of the nickel-copper-cobalt mineralisation at both the Nova Bollinger and Voisey's Bay mines is located at or near the base of mafic magma chambers (see Figure 10).

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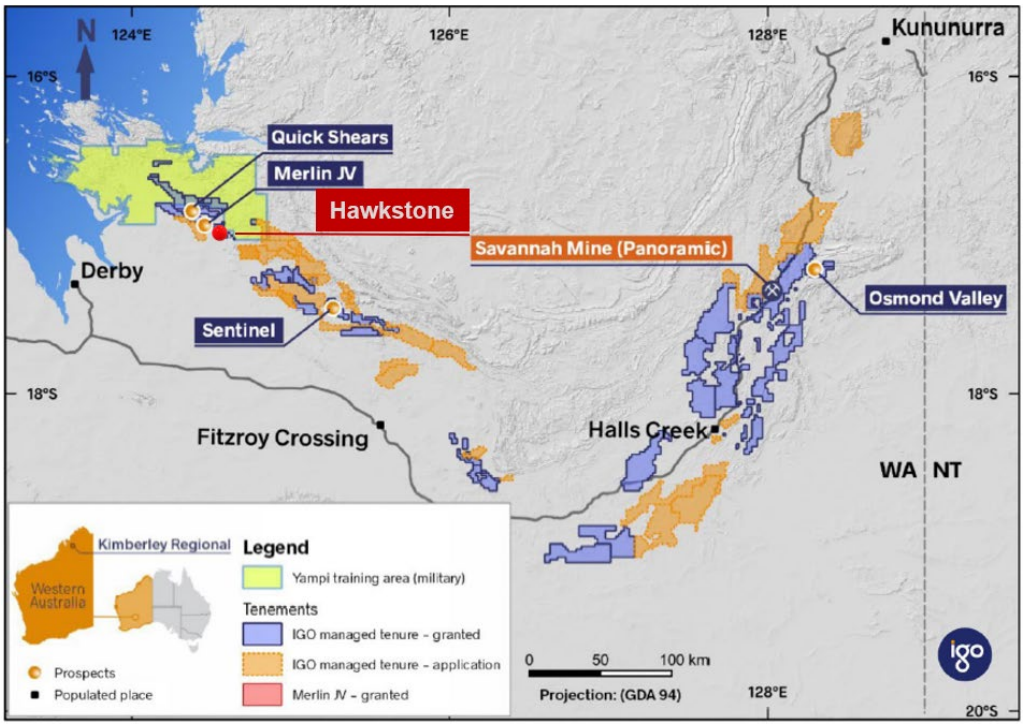

Figure 2. Hawkstone Project location map relative to IGO granted and application tenure.

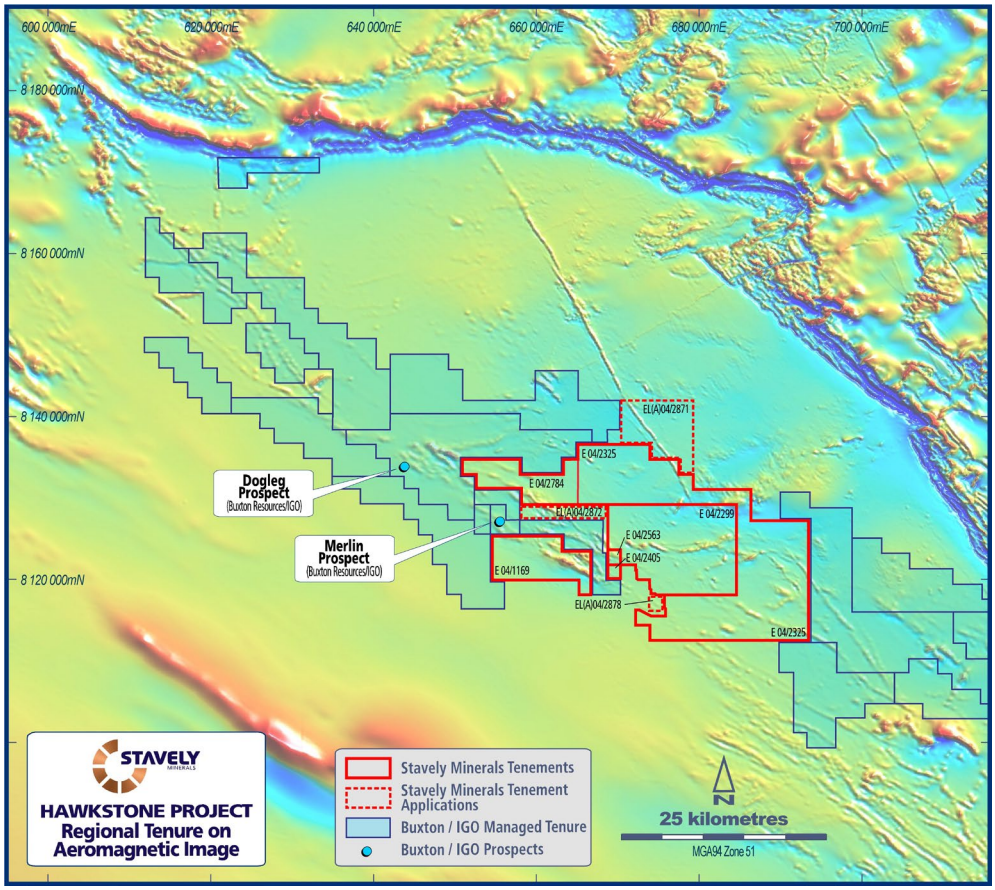

Figure 3. Hawkstone Project location map relative to IGO-controlled tenure and the Merlin (2015) and Dogleg (2023) nickel-sulphide discoveries overlaid on aeromagnetics.

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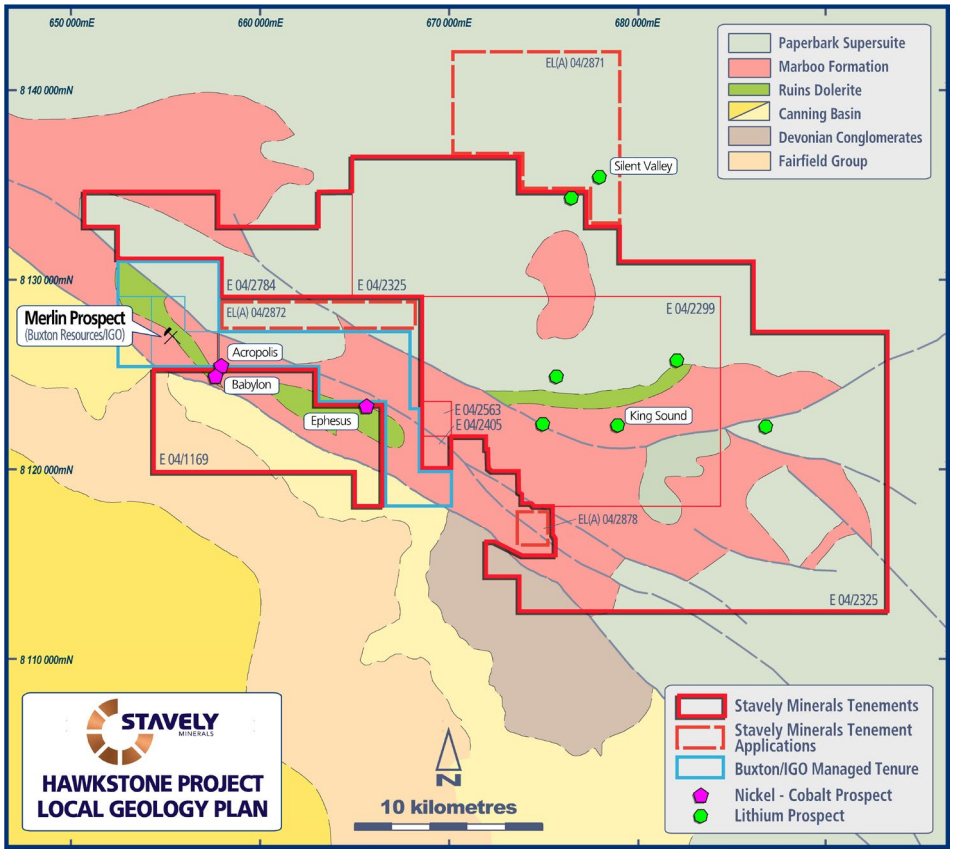

Figure 4. Hawkstone Project and the Buxton / IGO JV tenements, the location of the Merlin Ni-Cu-Co mineralisation with the distribution of the prospective host Ruins Dolerite.

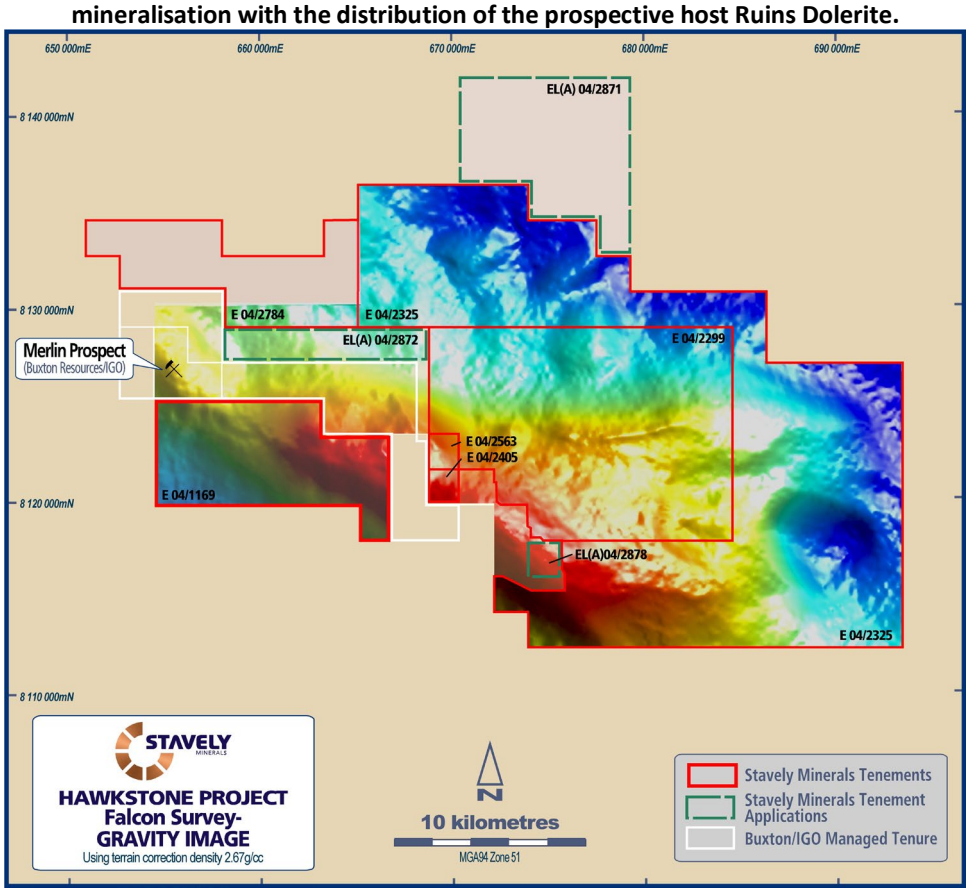

Figure 5. Hawkstone gravity image with tenement outlines and the location of the Merlin Ni-Cu-Co discovery.

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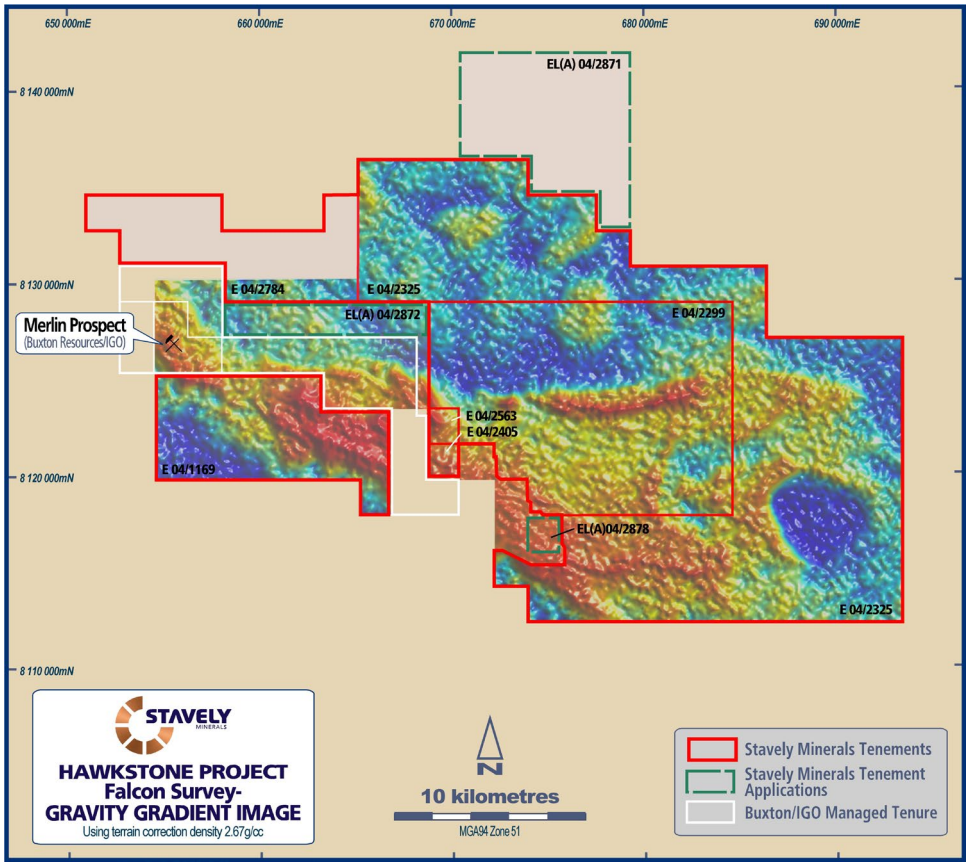

Figure 6. Hawkstone gravity gradient image with tenement outlines and the location of the Merlin Ni-Cu-Co discovery.

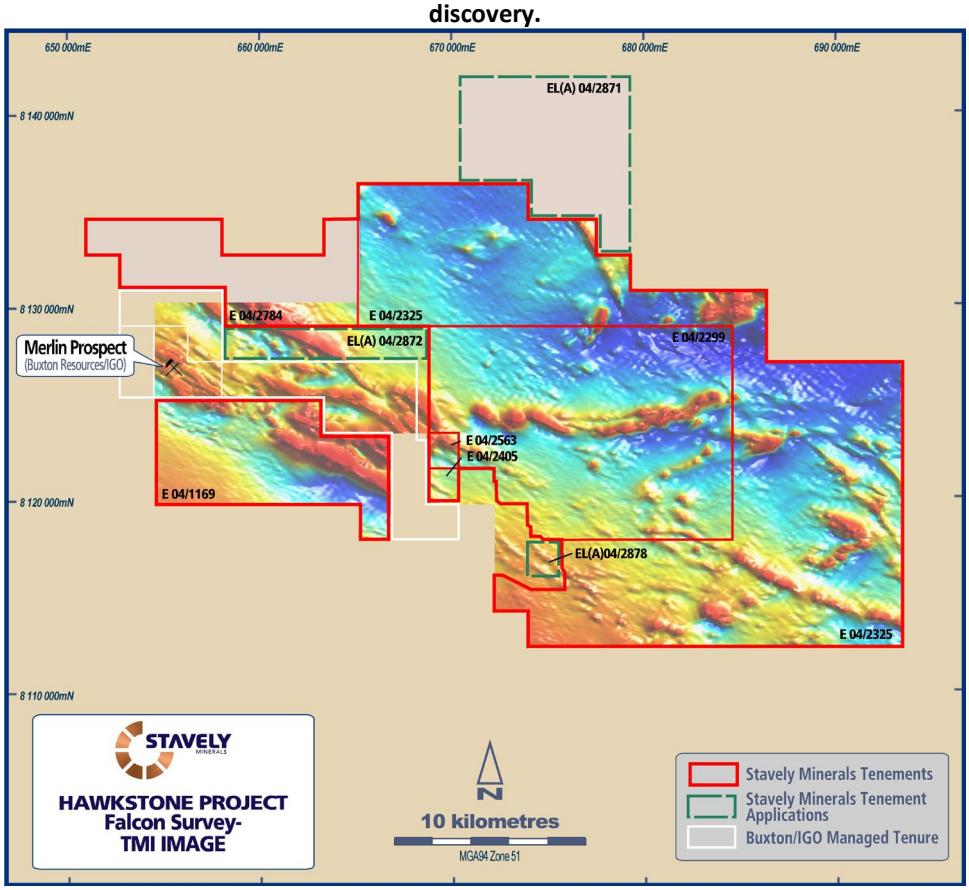

Figure 7. Hawkstone TMI image with tenement outlines and the location of the Merlin Ni-Cu-Co discovery.

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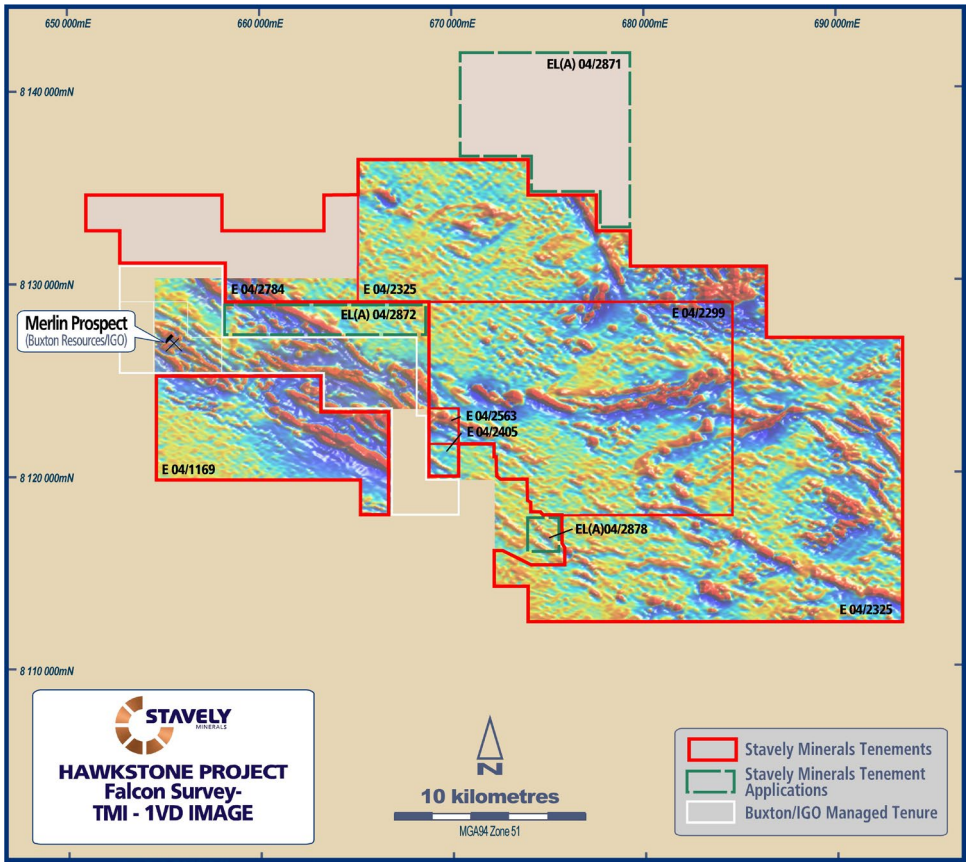

Figure 8. Hawkstone 1VD magnetic image with tenement outlines and the location of the Merlin Ni-Cu-Co discovery.

Of note in the Falcon images is the very large gravity high ridge, interpreted to be an intermediate mafic magma chamber, traversing Stavely Minerals' Hawkstone Project and the location of the Merlin Ni-Cu-Co discovery at one end of that gravity ridge (Figure 5).

The Merlin and Dogleg Ni-Cu-Co Discoveries

Initial mineral exploration focused on the Jack's Hill gossan. Two holes were drilled in the 1960s by Pickland Mathers. No further work was conducted until 2007. Two RC drill programs and one ground EM survey highlighted widespread low-grade (typically ~0.2-0.4% Ni) sulphide mineralization near the gossan.

In 2013 a helicopter VTEM survey identified eight significant conductors, with five located within a ~1.5km radius and interpreted to be associated with the margins of a deformed intrusion, along strike to the north-west of the gossan. These five VTEM conductors were further followed up with ground EM which resulted in the definition of seven discrete bedrock conductors, A-G (now referred to as the Merlin Prospect).

A four-hole RC drill program was undertaken by Victory Mines Ltd to test these EM targets. Highly encouraging, significant nickel-copper sulphide mineralisation was intersected. All NI-sulphide occurrences are EM conductors with coincident with gravity highs.

In 2015, Buxton Resources Limited acquired the Double Magic Project and undertook an intensive exploration programme. Buxton confirmed that the Ruins Dolerite unit hosts economic grades and widths of primary ortho-magmatic nickel-copper sulphide mineralisation.

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Drill-hole DMRC0003 intersected **8m at 3.05% Ni, 1.88% Cu & 0.10% Co** from 50m drill depth, within a broader **17m zone at 1.78% Ni & 1.16% Cu** from 46m drill depth at the Merlin Prospect (Conductor D)[3].

This nickel exploration focus culminated in the discovery of the Double Magic Merlin Ni-Cu-Co deposit. This establishes the Ruins Dolerite, and the West Kimberley in general, as a de-risked, fertile and underexplored new nickel-copper-cobalt province.

All coincident gravity and EM conductors within Ruins Dolerite drill tested by Buxton at the Merlin Prospect have returned nickel-copper-cobalt sulphide mineralisation (Figure 9).

In 2023, at the Dogleg prospect, IGO drill tested a 15,000 Siemens MLEM conductor and intersected **13.85m @ 4.35% Ni, 0.34% Cu and 0.15% Co** from 177.34m, including **5.86m @ 7.47% Ni, 0.31% Cu and 0.25% Co**[4] in diamond drill hole 23WKDD003.

A follow-up drill hole, 23WKDD004, drilled 65m down-dip of the initial intercept was reported as having intercepted 2.85m of semi-massive sulphides with assays pending[5].

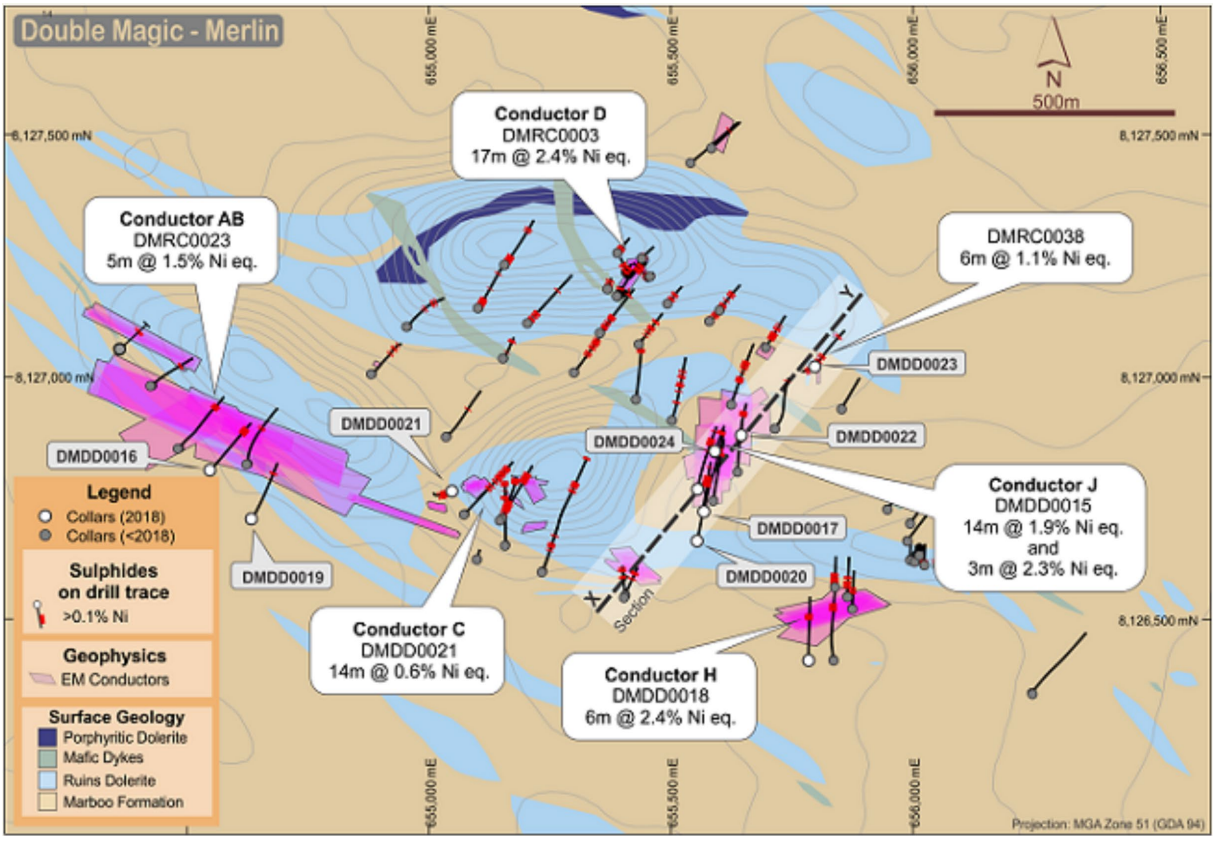

Figure 9. Merlin Ni-Cu-Co discovery map with EM conductor plates, drill-hole traces, and significant NiEq[6] intercepts on local geology *(source Buxton Resources website).*

[3] Buxton Resources ASX announcement dated 2 November 2015
[4] Buxton Resources ASX announcement dated 6 November 11, 2023
[5] Buxton Resources ASX announcement dated 19 October 2023
[6] NiEq calculation used by Buxton Resources as provided in ASX announcement 11 March 2019 –

Ni equivalent calculation: Ni% Equiv. = (Ni% x Ni recovery) + ((Cu% x Cu recovery) x (Cu price/Ni price)) + ((Co% x Co recovery) x (Co price / Ni price)) where Ni = US$13,450/t, Cu = US$6,553/t, Co = US33,000/t. Metal prices sources from LME 5th March 2019. Ni recovery = 94%, Cu recovery = 99% and Co recovery = 88%. Recovery values based on preliminary metallurgical testwork as reported ASX:BUX 16 August 2017.

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Potential Similarities to Voisey's Bay

The Merlin/Double Magic Ni-Cu-Co discovery and the more recent Dogleg discovery are magmatic nickel style of sulphide mineralisation.

The generalised model for formation of a magmatic Ni-Cu deposit requires (Figure 10):

1. Emplacement of a deep seated typically mafic magma chamber,
2. Ascent of magma through a sulphur-rich stratum introducing sulphur to the melt,
3. Sequestering of Ni and Cu from the melt into immiscible sulphide droplets entrained in the magma flow
4. Flow of the sulphur droplet bearing magma into dykes and intermediate chambers where the velocity of magma travel reduces and allows precipitation of the heavy sulphide droplets to the base of dykes and magma chambers.

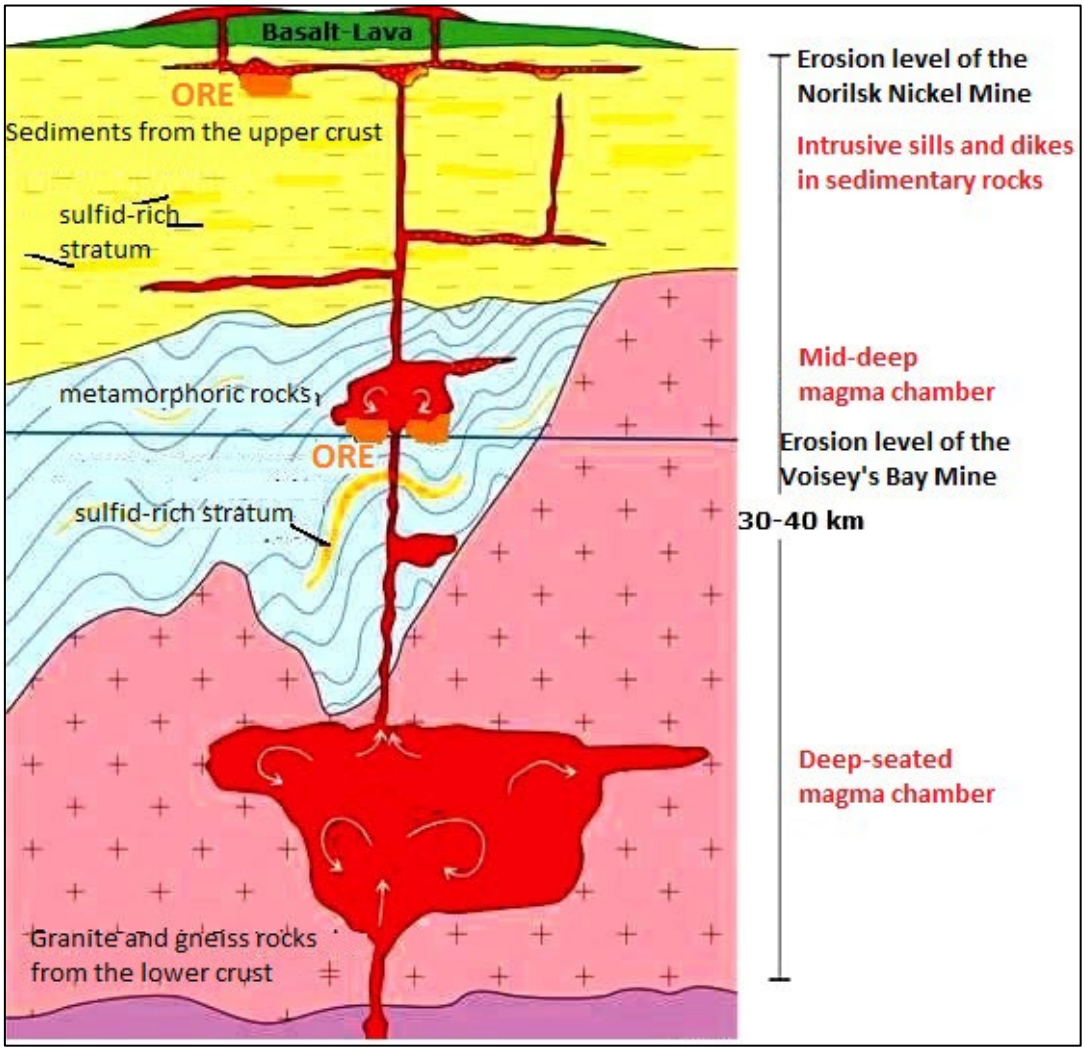

Figure 10. Generalised model for formation of a magmatic Ni-Cu deposit (source: The Korelin Economics Report on the Voisey's Bay Discovery).

Given the proximity of the Merlin/Double Magic Ni-Cu-Co discovery, and now the Dogleg discovery, Stavely Minerals has high confidence that the processes 1-4 described above have occurred in the Ruins Dolerite and that the Hawkstone Project hosts some 30 kilometres of strike of the ruins Dolerite that has been very lightly explored to date.

The large gravity anomaly traversing the Hawkstone Ni-Cu-Co Project could be reflecting a large magma chamber at depth and, if the Merlin/Double Magic Ni-Cu-Co mineralisation were equivalent to the Voisey's Bay Discovery Zone in a chamber-linking dyke, a model where the large gravity

anomaly/potential magma chamber at the Hawkstone Project could host mineralisation in an analogous position to that of the Eastern Deeps at Voisey's Bay (Figure 11).

The Nova/Bollinger Ni-Cu-Co deposits are likewise associated with a mafic magma chamber[7] (Figure 12). This mafic magma chamber/nickel sulphide precipitation hypothesis will be tested by the deep 800m diamond drill-hole that is the subject of the WA Government EIS co-funding grant.

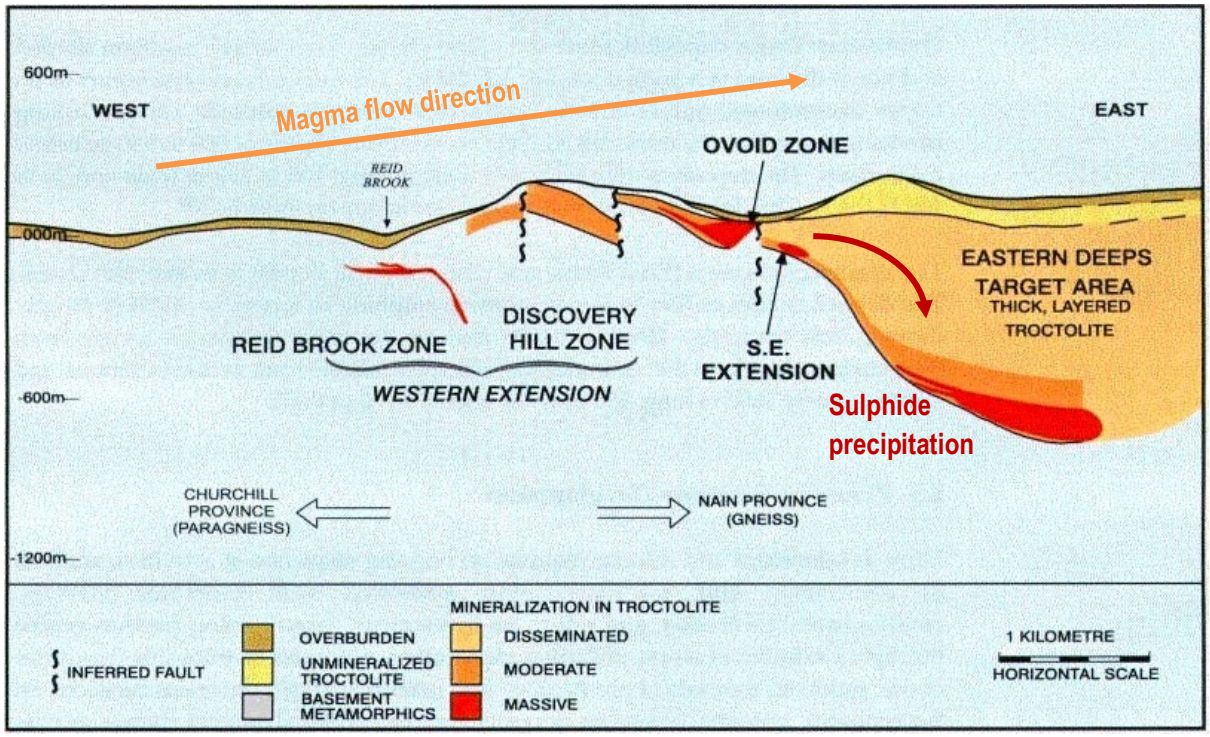

Figure 11. Schematic long-section of the Voisey's Bay Ni-Cu deposit in Labrador, Newfoundland. The Eastern Deeps nickel-sulphide mineralisation is formed by a change of flow velocity as the magma enters the Eastern Deeps magma chamber causing the denser immiscible sulphide droplets to precipitate to the bottom of the magma chamber (image source: The Korelin Economics Report on the Voisey's Bay Discovery).

[7] Bennett, M. et. al., 2014, Motive, Means and Opportunity: Key factors in the discovery of the Nova-Bollinger magmatic nickel-copper sulfide deposits in Western Australia

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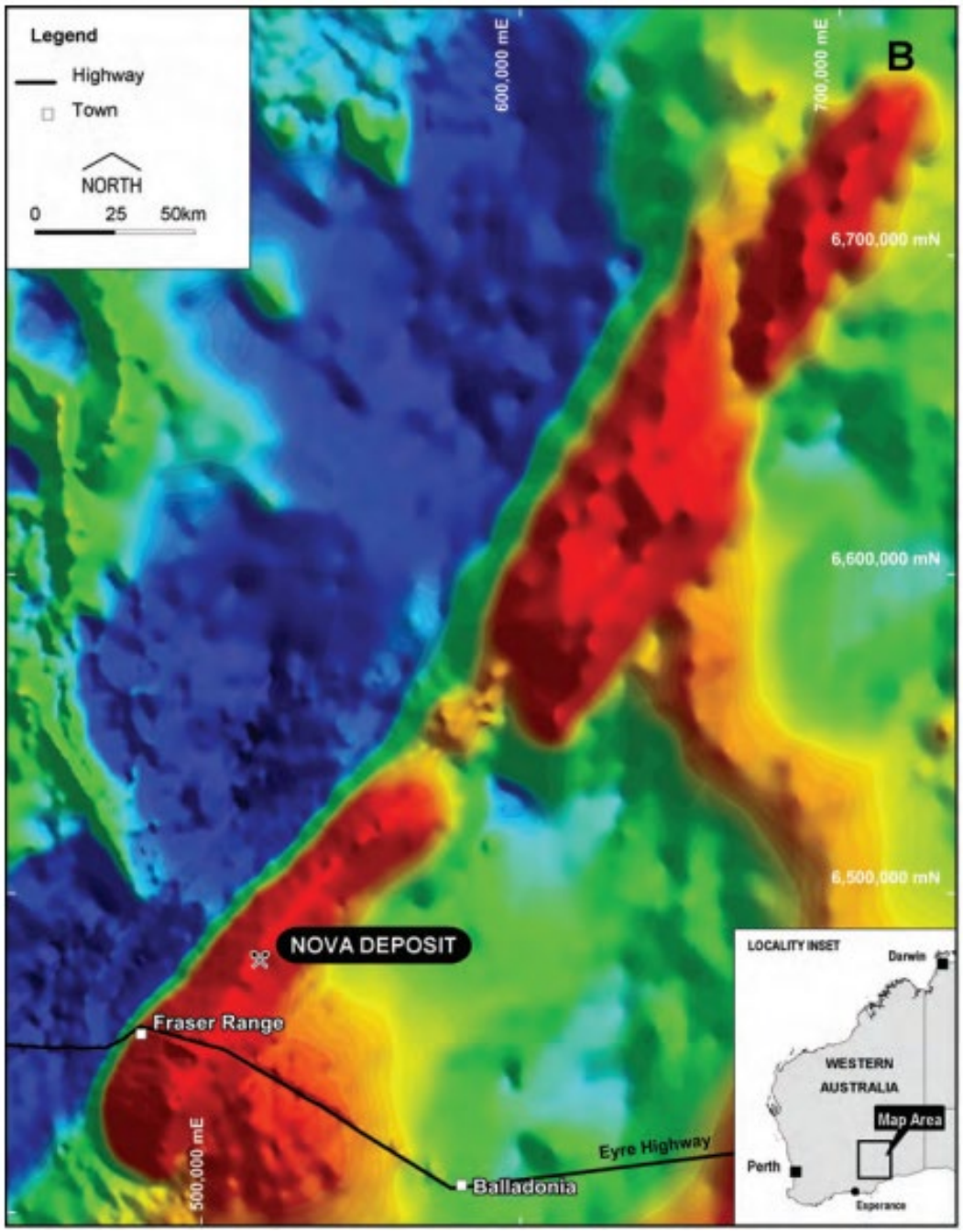

Figure 11. Gravity image showing the gravity high associated with the Nova/Bollinger mafic magma chamber.

Yours sincerely,

Chris Cairns
Executive Chair and Managing Director

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Chris Cairns, a Competent Person who is a Fellow of the Australian Institute of Geoscientists and a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Cairns is a full-time employee of the Company. Mr Cairns is Executive Chair and Managing Director of Stavely Minerals Limited and is a shareholder and option holder of the Company. Mr Cairns has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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 Cairns consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

There is no certainty that further work will lead to achieving the same size, shape, grade, or form of any comparison deposits. Stavely's Project is in a different stage of development and that further exploration needs to be undertaken to further prove or disprove any comparison.

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Authorised for lodgement by Chris Cairns, Executive Chair and Managing Director.

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