**ASX AND MEDIA RELEASE**

16 October 2019

# CARAWINE TARGETS COPPER-GOLD PORPHYRIES AT ITS VICTORIAN JAMIESON PROJECT

## KEY POINTS

- **Potential for large copper-gold porphyry mineral systems at and beneath the Hill 800 deposit at its Jamieson Project, identified in September this year**
- **Detailed helicopter-borne magnetic survey due to commence within two weeks, results will be used to provide targets for direct drill testing of the porphyry model at depth**
- **The Jamieson Project is in one of only two Cambrian-aged, calc-alkaline volcanic belts in Victoria – the other being the Stavely volcanics, host to Stavely Minerals' exciting Thursday's Gossan Project**
- **Drilling is due to commence mid-November, initially targeting extensions to known porphyry-related mineralisation at relatively shallow depths**
- **Carawine well-funded to complete its exploration programs following its recent successful capital raising**

Gold and base metals explorer Carawine Resources Limited (**"Carawine"** or **"the Company"**) (**ASX:CWX**) is pleased to announce it will soon start a detailed, helicopter-borne magnetic survey to further evaluate copper-gold porphyry targets at the Company's 100%-owned Jamieson Project in northeast Victoria, host to the Hill 800 and Rhyolite Creek prospects.

In September 2019 the Company announced the potential for mineralisation at Hill 800 to be related to a copper-gold porphyry system, based on analysis of multi-element geochemical data from Hill 800 by Dr. Scott Halley, an expert in this field (Figures 2 & 3) (refer ASX announcement 11 September 2019).

This followed the recognition of two distinct magnetic anomalies identified from regional-scale survey data at Jamieson (Figure 4) (refer ASX announcement 15 July 2019). Magnetic anomalies are commonly associated with mineralised porphyries and provide excellent targets for drill testing.

The recent success by Stavely Minerals (ASX:SVY) at their Thursday's Gossan Porphyry Copper-Gold Project in western Victoria[1] has provided further encouragement for Carawine, especially given the similarities in host rock age, chemistry and depositional setting of Jamieson with the host rocks for the Thursday's Gossan Project (Figure 1).

Carawine Managing Director Mr David Boyd said the exploration program over the next few months promises to be an exciting period for the Company.

*"We began to realise the potential for a copper-gold porphyry driving the mineral system at Hill 800 and its surrounds in July this year, and have since been developing this concept towards the point where we have the confidence to accurately define targets for drill testing.*

*"Following our recent successful capital raising, we are now in a great position to accelerate our exploration program at Jamieson, starting with a detailed magnetic survey that will be used to model the depth and spatial extent of magnetic anomalies beneath Hill 800 and Rhyolite Creek.*

*"This survey is planned to commence within the next 2 weeks, with drilling planned to commence soon thereafter, following the release of the Company's first Mineral Resource for Hill 800. We are gearing up for an exciting six months of intense exploration targeting porphyry style mineralisation at the Jamieson project"*

[1] *"Outstanding Thick Intercepts in First Step-Out Hole Confirm Substantial Shallow Copper-Gold Discovery"* Stavely Minerals (ASX:SVY) ASX announcement dated 7 October 2019

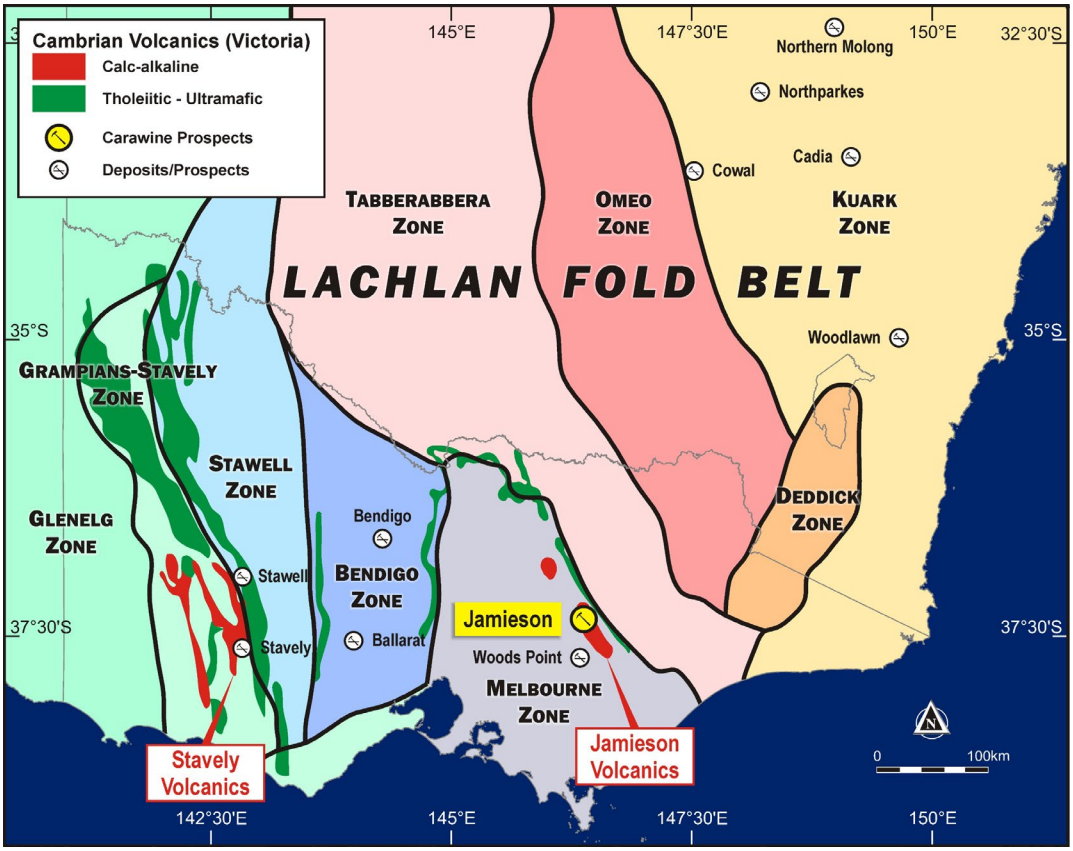



***Figure 1: Lachlan Fold Belt, southeastern Australia, note Jamieson and Stavely are within the only Cambrian-aged calc-alkaline volcanic belts in Victoria (modified from Huston et.al, 2016 & VandenBerg et. al., 2000).***

*Hill 800*

Hill 800 is the most advanced prospect at the Jamieson Project, with drilling to date returning outstanding widths and grades of gold and copper mineralisation from intensely altered volcanics, including:

- **93m @ 3.22g/t Au** from 2m (0.3g/t Au cut-off), hole H8DD006, *including:*
  **12m @ 5.59g/t Au** from 2m, *and* **31m @ 6.64g/t Au** from 58m (1g/t Au cut-off)
- **49m @ 2.54g/t Au, 0.2% Cu** from 143m (0.3g/t Au cut-off), hole H8DD004, *including:*
  **17m @ 6.62g/t Au, 0.3% Cu** from 157m (1g/t Au cut-off)
- **43m @ 4.24g/t Au, 0.3% Cu** from 177m (0.3g/t Au cut off), hole H8DD002 *including:*
  **10m @ 5.66g/t Au, 0.9% Cu** from 182m *and* **5m @ 24.1g/t Au, 0.4% Cu** from 203m (1g/t Au cut off) (Downhole widths, refer ASX announcement 27 May 2019 for details)

Hill 800 remains open down-dip, where the mineralisation appears to be increasing in both grade and width. The Company's first Mineral Resource for Hill 800 is in progress and will be released within the next few weeks, with drilling planned to re-commence around mid-November.

*Hill 800 Porphyry Copper-Gold Relationship*

Earlier this year the Company announced five new prospects identified in the vicinity of Hill 800 from a combination of mapping and surface sampling, along with the potential for the existence of deep magmatic systems at Jamieson as indicated in regional magnetic data (Figure 4) (refer ASX announcement 15 July 2019). To further investigate this, Carawine approached Dr Scott Halley from Mineral Mapping Pty Ltd to provide an analysis of multi-element lithogeochemical data collected from its nineteen diamond drill holes at Hill 800.

The key outcomes from Dr Halley's work are summarised as follows:

1. The gold-mineralised zone at Hill 800 has a strong gold (Au), tellurium (Te), bismuth (Bi) and selenium (Se) association which is most like that of magmatic fluids originating from a copper-gold porphyry intrusion (referred to as a "fertile" porphyry) (Figure 3).
2. Geochemical fingerprinting of the rock types at Hill 800 shows that most of the gold intersected to date occurs within the rock unit geochemically classified as rhyodacite.
3. The types of magmas that form porphyry copper-gold deposits have very distinctive chemical compositions. The preferentially mineralised rock unit at Hill 800 has a chemical composition that matches compositions observed in porphyry copper-gold magma and is therefore most likely sourced from a copper-gold porphyry intrusive complex.
4. Primary Porphyry copper-gold magmas are invariably magnetic. There is a high-intensity magnetic anomaly at depth below Hill 800 (Figure 4), and therefore a reasonable probability that this is highlighting the source of the preferentially mineralised rock at Hill 800. This magnetic feature is a high priority exploration target, with the style of mineralisation more likely to be porphyry Cu-Au-Mo rather than the Au-Te-Bi intersected closer to surface (e.g. Figure 3).

The geochemical data also defines an alteration pattern at Hill 800 which is typical of porphyry mineral systems. Proximal to and associated with the Main mineralised zone at Hill 800, the intense silica-sericite (paragonite)-pyrite alteration has a geochemical signature consistent with phyllic alteration. Associated with lower gold grades and more distal to the main mineralised zone, moderate sericite-chlorite alteration has a geochemical signature consistent with propylitic alteration (Figure 2). For further details refer to ASX announcement dated 11 September 2019.

The geochemical evidence therefore supports the interpretation of the mineralisation at Hill 800 being sourced from, and related to, a fertile copper-gold porphyry intrusion at some distance from the deposit.

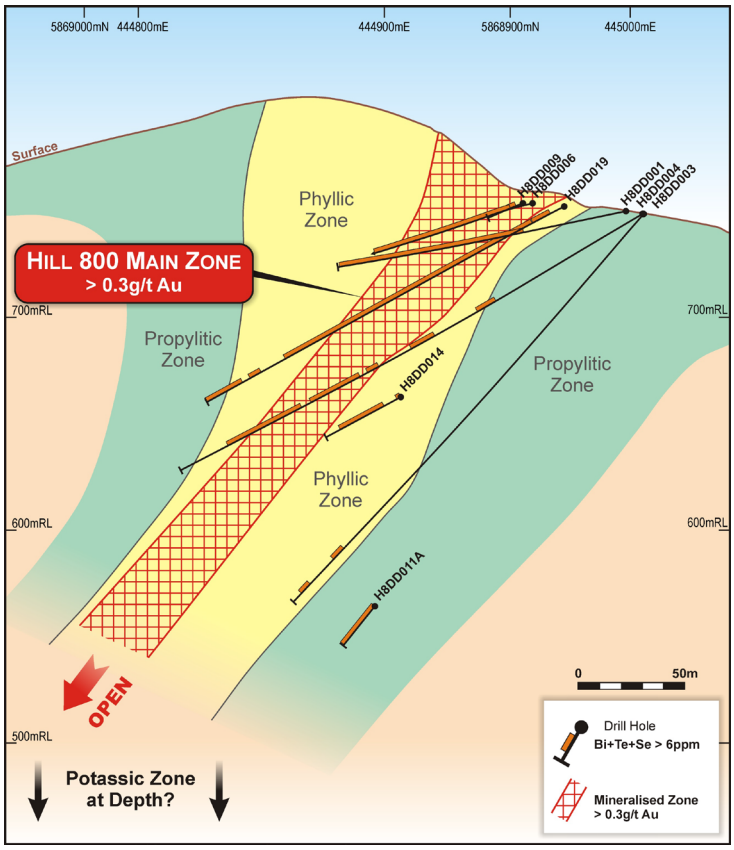



***Figure 2: Hill 800 cross-Section J-J' (window +/- 20m) showing alteration zones and pathfinder elements.***

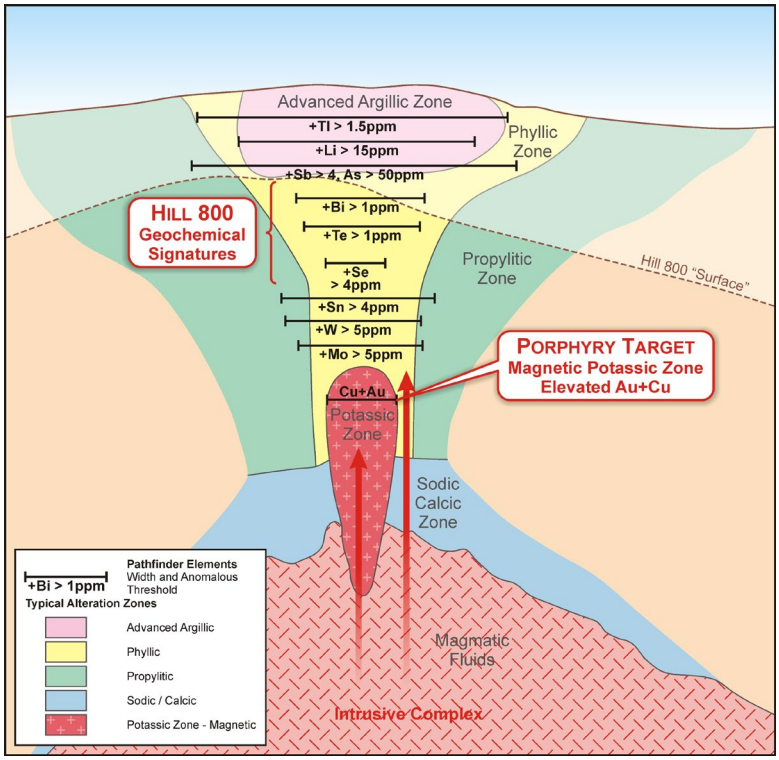



***Figure 3: Schematic diagram showing the pathfinder geochemical and alteration patterns of a typical porphyry copper-gold mineral system and the relative location of Hill 800 (modified from Halley et.al, 2015).***

### *Jamieson Project Copper-Gold Porphyry Targets*

A key targeting feature for copper-gold porphyry deposits is the biotite-magnetite alteration associated with the potassic zone, which therefore commonly appears as an anomaly in magnetic (geophysical) survey data.

As previously reported, two broad magnetic anomalies are recognised from regional-scale airborne magnetic data at the Jamieson project, one beneath the Rhyolite Creek prospect area and another, stronger one beneath the Hill 800 prospect area and surrounds (Figure 4) (refer ASX announcement 15 July 2019).

These magnetic anomalies could be associated with the potassic zone of copper-gold enriched porphyries. Modelling of the magnetic anomalies from regional-scale data at Hill 800 by the Company's geophysical consultants SGC indicate the presence of multiple, overlapping magnetic bodies with depths to the tops of each body of between 200m and 600m below surface. However, as the models are based on regional scale data, a more detailed survey is required to refine these models with enough accuracy to effectively target drill holes.

### *Detailed Magnetic Survey*

The Company has engaged a geophysical survey contractor to commence a detailed, low-level helicopter-borne magnetic and radiometric survey, with flying to commence within the next two weeks. This survey will cover the entire "window" of Cambrian Jamieson volcanics at 50m line spacing (Figure 4), with results to be used to model magnetic sources beneath Hill 800 and Rhyolite Creek as well as exploring for additional discrete magnetic and radiometric anomalies (Hill 800 was first identified from regional radiometric data).

Dependent on the results of the survey, drilling will be scheduled to test high priority anomaly sources as part of the upcoming drill program at Jamieson.

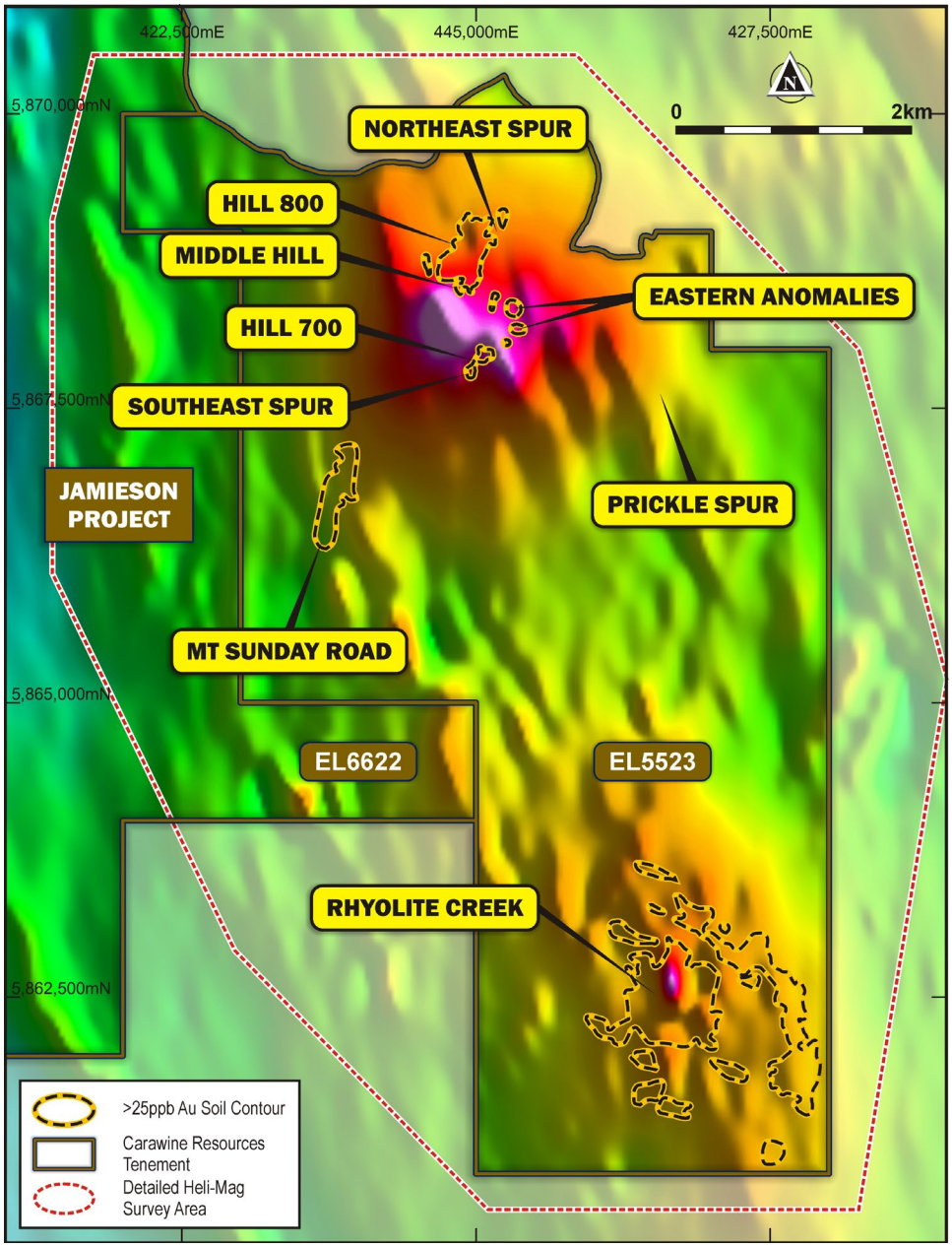



***Figure 4: Planned detailed magnetic survey area shown on a regional-scale magnetic image with distinct magnetic high anomalies beneath Hill 800 and Rhyolite Creek prospect areas.***

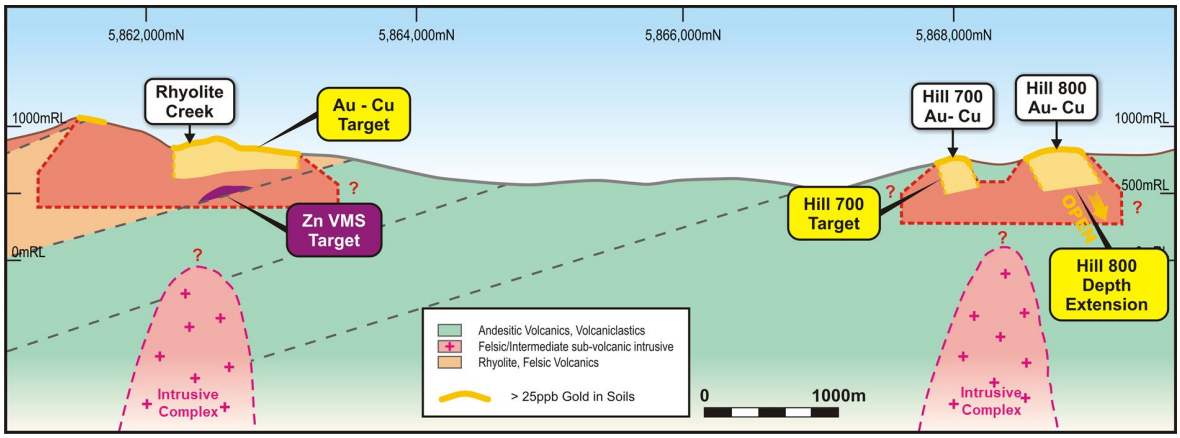


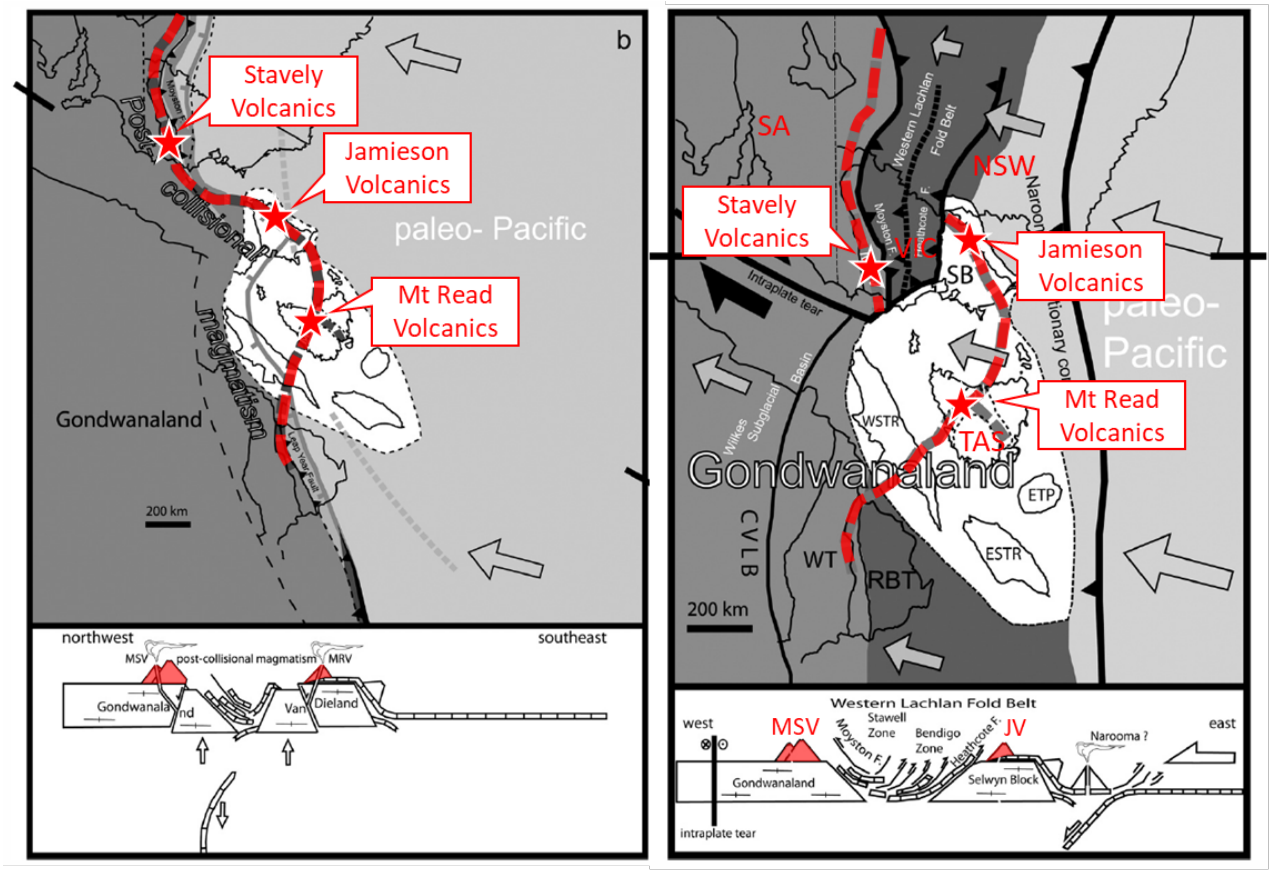

***Figure 5: Schematic long section schematic showing previously announced potential relationships of porphyry intrusive complexes with the main Jamieson prospect areas (refer ASX announcement dated 15 July 2019).***

*Jamieson and Stavely Link*

Porphyry-related mineral deposits are considered attractive exploration targets given they are typically large, can contain economic concentrations of copper and gold, and commonly occur as multiple deposits in a single location. Australian examples include Cadia Valley (Newcrest Mining) and Northparkes (CMOC) operations in New South Wales, and Stavely Minerals' Thursday's Gossan discovery in western Victoria. These are all located within the Lachlan Fold Belt of southeastern Australia (Figure 1).

The Stavely Volcanics and the Jamieson Volcanics are the only Cambrian-aged, calc-alkaline volcanic belts in Victoria. They therefore share similar settings for their formation and evolution (VandenBerg *et al*., 2000). This link is further supported by tectonic reconstructions of eastern Gondwanaland which join the Mt Stavely Volcanics with the Jamieson Volcanics and the Mt Read Volcanics in Tasmania at the time of their formation/deposition (Figure 6) (Cayley, 2011).

The association of the Jamieson Volcanics with the Mt Stavely Volcanics and the Mt Read Volcanics (a well-established, major metallogenic region of Australia), is considered to significantly adds to the prospectivity of Carawine's Jamieson Project to host significant mineral deposits.




500–495 Ma
Discrete pulse of post-collisional magmatism intrudes adjacent to the stalled portions of the subduction-zone front, generating (from north to south) the geochemically distinctive Mount Stavely Volcanics (MSV), Jamieson Volcanics (JV), and Mount Read Volcanics (MRV).

450Ma
New tectonic model for east Gondwanaland: Late Ordovician–Early Silurian (450–430 Ma) (current Australian State boundaries).

***Figure 6: Tectonic model for east Gondwanaland from Middle Cambrian (left) to Early Silurian (right) showing the evolution of the Stavely-Jamieson-Mt Read Volcanic belt (from Cayley, 2011).***

Additional details of the Company's exploration projects are available from the Company's website: www.carawine.com.au.

**ENDS**

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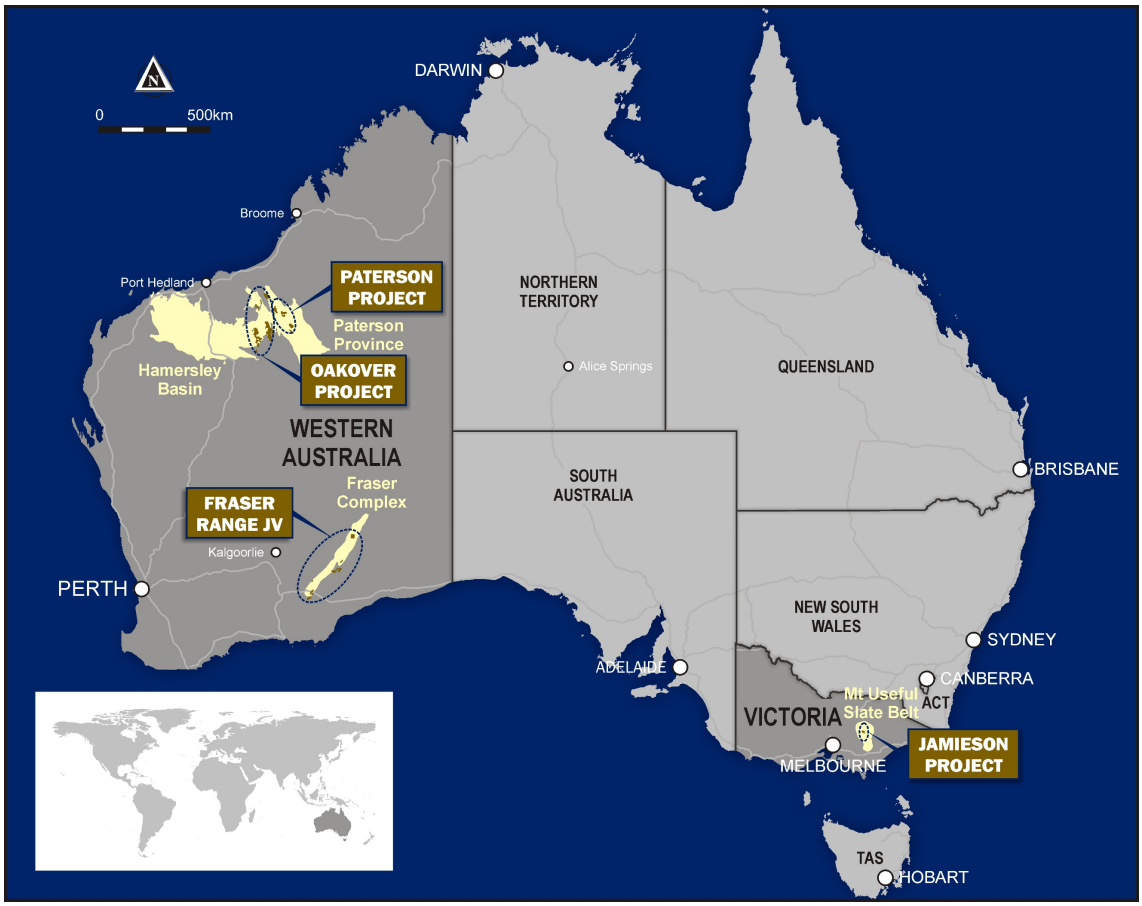


***Figure 7: Carawine's project locations.***

***Academic References:***

Cayley R. A., 2011. *Exotic crustal block accretion to the eastern Gondwanaland margin in the Late Cambrian–Tasmania, the Selwyn Block, and implications for the Cambrian–Silurian evolution of the Ross, Delamerian, and Lachlan orogens.* Gondwana Research Volume 19, Issue 3, April 2011, Pages 628-649.

Halley S.W., Dilles J.H., Tosdal R.M., 2015. *Footprints: hydrothermal alteration and geochemical dispersion around porphyry copper deposits.* SEG Newsletter 100(1): 12–17.

Huston, D.L., Champion, D.C., Mernagh, T.P., Downes, P.M., Jones, P., Carr, G., Forster, D. and David, V., 2016. *Metallogenesis and geodynamics of the Lachlan Orogen: New (and old) insights from spatial and temporal variations in lead isotopes.* Ore Geology Reviews 76 (2016) 257–267.

VandenBerg, A.H.M., Willman, C.E., Maher, S., Simons, B.A., Cayley, R.A., Taylor, D.H., Morand, V.J., Moore, D.H. and Radojkovic, A., 2000. *The Tasman Fold Belt System in Victoria.* Geological Survey of Victoria Special Publication.

## COMPLIANCE STATEMENTS

### PREVIOUSLY REPORTED INFORMATION

This announcement includes information that relates to Exploration Results prepared and first disclosed under the JORC Code (2012). The information was extracted from the Company's previous ASX Announcements as follows:

- Jamieson: "Copper-gold Porphyry Targets at Hill 800" 11 September 2019
- Hill 800: "New Gold Prospects Defined at Jamieson" 15 July 2019
- Hill 800: "Gold Zone Extended with Latest Results from Hill 800" 27 May 2019
- Hill 800: "New Drill Holes Confirm High Grade at Hill 800" 3 May 2019
- Hill 800: "High Grade Gold-Copper Zone Extended at Hill 800" 1 April 2019
- Hill 800: "Hill 800 Drilling Program Update" 20 March 2019
- Hill 800: "New Gold Zone Discovered at Hill 800" 5 February 2019
- Hill 800: "Second Round of Diamond Drilling Underway at Hill 800" 28 November 2018
- Hill 800: "Strong Finish to Maiden Drilling Program at Hill 800" 20 August 2018
- Hill 800: "Latest Results Increase Strike Potential at Hill 800" 6 August 2018
- Hill 800: "Record High-Grade Gold Intersection from Hill 800" 10 July 2018
- Hill 800: "New High Grade Gold-Copper Zone at Hill 800" 25 June 2018
- Hill 800: "Exceptional First Results from Hill 800 Drilling" 7 June 2018

Copies of these are available from the ASX Announcements page of the Company's website: www.carawine.com.au

The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements. The Company confirms that the form and context in which the competent person's findings are presented have not been materially modified from the relevant original market announcements.

### FORWARD LOOKING AND CAUTIONARY STATEMENTS

Some statements in this announcement regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "predict", "foresee", "proposed", "aim", "target", "opportunity", "could", "nominal", "conceptual" and similar expressions. Forward-looking statements, opinions and estimates included in this report are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results and may cause the Company's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. So, there can be no assurance that actual outcomes will not materially differ from these forward-looking statements.

## ABOUT CARAWINE RESOURCES

Carawine Resources Limited is an exploration company whose primary focus is to explore for, and ultimately develop, economic gold, copper and base metal deposits within Australia. The Company has four projects, each targeting high-grade deposits in well-established mineralised provinces throughout Australia.

### JAMIESON PROJECT (Au-Cu, Zn-Au-Ag)

The Jamieson Project is located near the township of Jamieson in the northeastern Victorian Goldfields and comprises granted exploration licences EL5523 and EL6622, covering an area of about 120 km$^2$ and containing the Hill 800 gold-copper and Rhyolite Creek zinc-gold-silver prospects within Cambrian-aged felsic to intermediate volcanics.

Hill 800 was discovered by New Holland Mining NL (New Holland) in 1994, following sampling of outcropping gold-rich gossans, with drilling returning results with significant widths and high gold grades. The Rhyolite Creek Prospect, located about 5km south of Hill 800, was discovered in 2008, with diamond drilling intersecting a zone of strong alteration and sulphide mineralisation returning high grade zinc, gold and silver from an interpreted seafloor Volcanogenic Massive Sulphide (VMS) system.

### PATERSON PROJECT (Au-Cu, Cu-Co)

The Paterson Project, situated in the Paterson Province at the eastern edge of the Pilbara Craton, is dominated by Proterozoic age rocks of the Rudall Metamorphic Complex and the overlying Yeneena Supergroup. The Paterson area is host to the Telfer Au-Cu deposit, and the Nifty and Maroochydore stratabound Cu-(Co) deposits. Carawine's Paterson Project comprises six granted exploration licences and ten exploration licence applications (subject to ballot) over an area of about 1,560km$^2$ held 100% by the Company across five regions: Lamil Hills, Trotman South, Red Dog, Baton and Sunday.

### OAKOVER PROJECT (Cu, Co, Mn, Fe)

Located in the highly prospective Eastern Pilbara region of Western Australia, the Oakover Project comprises fourteen granted exploration licences and one exploration licence application with a total area of about 2,500km$^2$, held 100% by the Company. The Oakover Project is centred on the Proterozoic Oakover Basin and is prospective for copper, cobalt, manganese and iron.

### FRASER RANGE PROJECT (Ni-Cu-Co)

The Fraser Range Project includes 6 granted exploration licences in five areas: Red Bull, Bindii, Big Bullocks, Similkameen and Big Bang in the Fraser Range region of Western Australia. The Project is considered prospective for magmatic nickel-sulphide deposits such as that at the Nova nickel-copper-cobalt operation. Carawine has a joint venture with Independence Group NL (IGO) over the Red Bull, Bindii, Big Bullocks and Similkameen tenements (the Fraser Range Joint Venture). IGO currently hold a 51% interest and can earn an additional 19% interest in the tenements by spending $5 million by the end of 2021.