

ASX Release: 1 July 2020

#### **NEW EXPLORATION PROJECT AREAS**

### **Highlights**

- Exploration Licence applications over three new, 100% owned projects in South West Yilgarn
- New application over Nickel-Copper-PGM target at Toolbrunup
- Extension of Dalwallinu Cu-Au exploration project
- Drilling planned to commence in current quarter

Caravel Minerals (ASX: CVV, Caravel) has recently applied for exploration licences over a number of new areas in the South West Yilgarn, Western Australia.

An evaluation of new target areas from Caravel's databases commenced in 2018 and has been ongoing over the last 18 months, however recent interest the South West Yilgarn has required Caravel to secure tenure over the main areas of interest.

The mineral potential of the region has been highlighted by Chalice Gold Mines recent high-grade Pd-Ni-Cu discovery at the Julimar Prospect. The Julimar discovery, about 60km to the southwest of the Caravel Copper Project, has shown that significant orebodies may be concealed below the surface weathering zone with no surface indications except subtle geochemical responses. The Caravel Copper deposits were discovered in 2010 by the same process of surface sampling and identification of low level anomalous geochemical responses.

Caravel owns the most comprehensive database of surface samples in the South West Yilgarn, comprising approximately 250,000 samples of which over 100,000 samples have been collected by Caravel and predecessor Dominion Mining. The geochemical database, along with Caravel's models for surface expressions of ore zones based on the Caravel deposits, have been used to identify other areas of interest with the region.

A description of each of the new Project areas is outlined below, with an illustration of some of the key features of each project in the accompanying presentation.

### **Dalwallinu Cu-Au Project**

The Dalwallinu Copper-Gold Project is located on a northern extension of the same major structural corridor as the Caravel Copper Project. This structure is interpreted by Caravel as a tectonic plate boundary between the South West Yilgarn Terrane and the Eastern Yilgarn Terrane. Porphyry copper deposits, such as the

Caravel Copper Project, are related to these types of convergent plate boundaries within the associated volcanic arcs and series of such deposits may be distributed along such boundaries over large distances. These types of settings are host to most of the world's largest copper and gold projects, such as along the Andes volcanic arc through Chile and Peru in South America.

The Dalwallinu project shows many of the geological features consistent with known porphyry copper deposits (and **IOCG** some deposits), with multiple granite intrusions and potentially large alteration systems evident from the magnetic data. Regional geochemical programmes (GSWA and Dominion) show the area to be one of the most significant broad scale anomalies in both copper and gold within the region.

There are no outcrops of fresh rock near the target areas so all sampling is from weathered regolith. The anomalies in this area for both gold and copper are consistent with Caravel exploration models for targeting over deeply weathered mineralisation. Of particular interest is a large magnetic anomaly which is concealed under laterite and has never been drill tested. This feature occurs at the apex of a major granite intrusion and has similar appearance to other examples of magnetic anomalies associated with major Cu-Au deposits.

A programme of shallow auger drilling is currently being planned in consultation with the local landowners to fit around their current cropping programme. It is expected the first phase of drilling may be undertaken in the current quarter.

### **Brookton Cu-Au (Zn) Project**

The Brookton Copper-Gold project comprises two main prospective areas which shows outcropping gossans over approx. 6km strike and a broad geochemical anomaly (rock chip and soils >300pm Cu) over a similar area and 0.5km width. The geology, alteration and surface geochemistry are similar to those at the Ninan Prospect within the Caravel Copper Project, with parallels also drawn with the deposits at Golden Grove, Western Australia and Noranda, Canada. The area was initially explored in the 1970's and 80's by Otter Exploration NL and then Shell, but has received no modern exploration.

A field programme will be undertaken after landowner consultations. Based on the current understanding of the area it is likely that airborne EM will be used in the next phase to identify direct drilling targets.

### **Toolbrunup Ni-Cu-PGM Project**

The Toolbrunup project is based on a previously unrecognised sill or dyke structure identified from recent airborne magnetic surveys. The structure is approximately 10km long but has no surface exposure due to surface weathering and shallow cover. Geochemical sampling from both open file and the proprietary Caravel database shows significant anomalies for both nickel, copper and platinum over the magnetic anomaly. The magnetic anomaly is similar in style and scale to that seen at the Julimar intrusive complex, which also has similar levels of anomalous geochemistry within the surface weathering zone.



Following landowner consultations the initial work programme will comprise shallow auger drilling to sample through the regolith. Subject to results of the auger drilling confirming the surface sampling anomalies it is expected the area will be surveyed with EM for direct targeting of magmatic sulphide bodies.

**Caravel Copper Project: Ninan and Opie areas** 

In addition to the new projects areas a programme of exploration is planned to target higher grade ores at the Ninan and Opie areas within the Caravel Copper Project. Both projects shows previous wide intercepts over 0.5% copper and potential exists for expanding the known areas of mineralisation.

At Ninan a review of previous work has highlighted significant EM anomalies to the east of the main mineralised system with coincident geochemical anomalies in copper and cobalt. Previous drilling in this area has shown anomalous results but did not test the EM target.

At Opie a new resource model has highlighted extensions of the current resource that have not been drilled. Similar to the extensions of resource at Bindi and Dasher, the testing of the new model at Opie has potential to add significantly to current resources, with particular focus on the higher grade zones.

Planning is in progress for drilling of both these areas. Further details on these programmes will be released shortly.

This announcement is authorised for release by managing director, Steve Abbott.

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# Focus on South West Yilgarn

Caravel has added a number of new projects to our land holding around Wongan Hills, securing targets that have been under evaluation over past 18 months

## Dalwallinu - Cu, Au

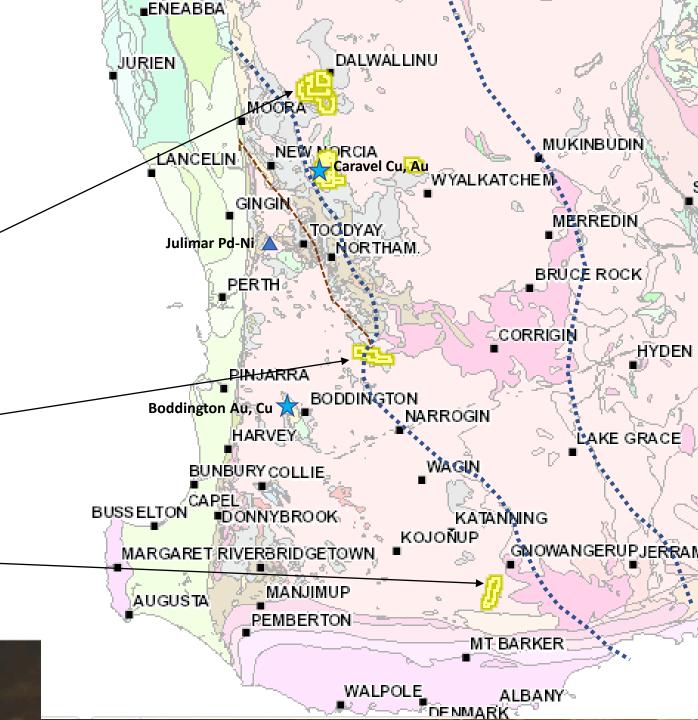
Surface geochemical anomalies and strong magnetic alteration, targets on extension of porphyry trend. No previous drilling.

### Brookton – Cu

Similar geology to Caravel deposits, high Cu - over 6km strike. Limited previous exploration.

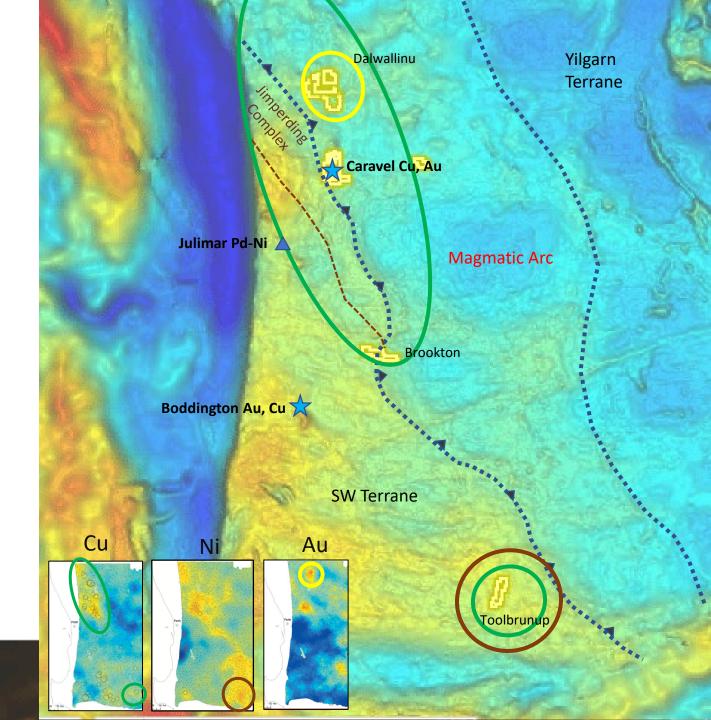
# Toolbrunup – Ni-Pt-Cu

High Ni, Cu and Pt in surface samples over large magnetic feature. No previous drilling.



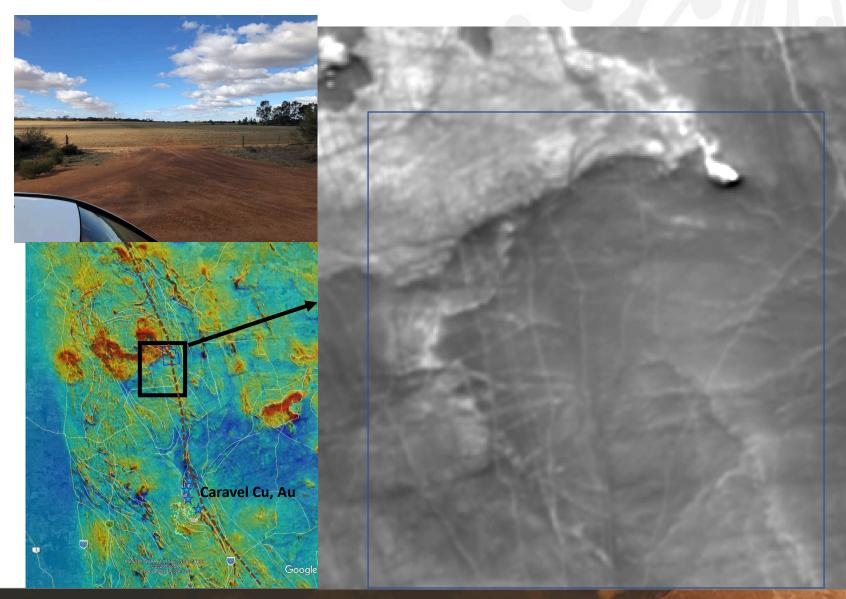
# **Emerging Mineral Province**

- Recent discovery by Chalice of Ni-PGM at Julimar has highlighted the potential for new discoveries in the South West Yilgarn
- In addition to the Caravel porphyry copper deposits the region is also host to Australia's largest gold deposit at Boddington
- A regional scale copper anomaly follow the SW Terrane margin from Brookton through the Caravel Copper project and up to Dalwallinu.
- Discrete district scale Au anomaly at Dalwallinu
- Anomalous Cu and Ni at Toolbrunup in similar geological setting as Julimar discovery
- Prospectivity of this region is only recently being appreciated



# Dalwallinu Project

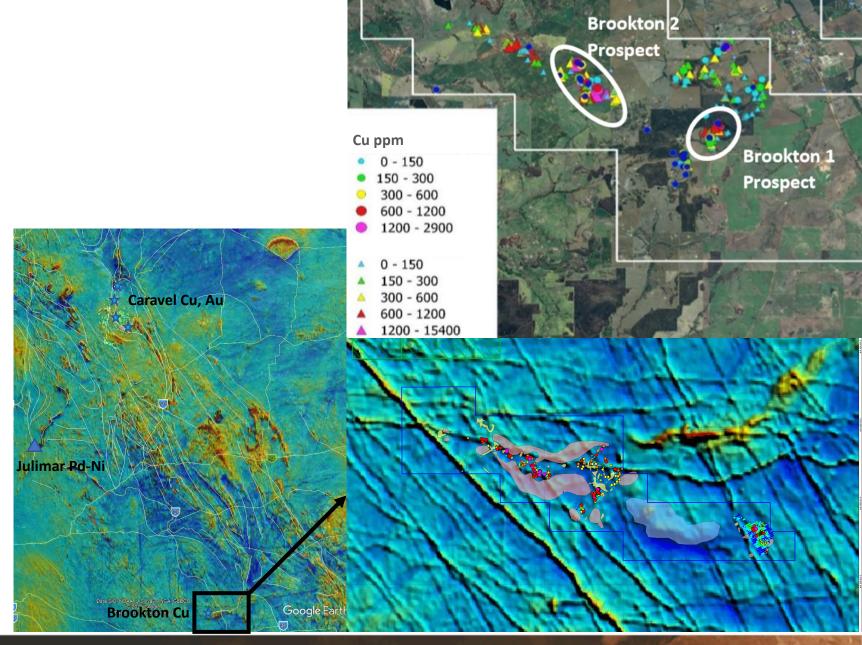
- Located 50km north of Caravel Copper Project on the same major structural trend
- On margin of large, multi-phase granite intrusive complex
- Strong magnetite alteration
- Anomalous copper and gold in regional sampling
- No previous exploration for copper (only iron and bauxite)
- No previous drilling
- Good access
- Planned auger sampling programme in July





# **Brookton Project**

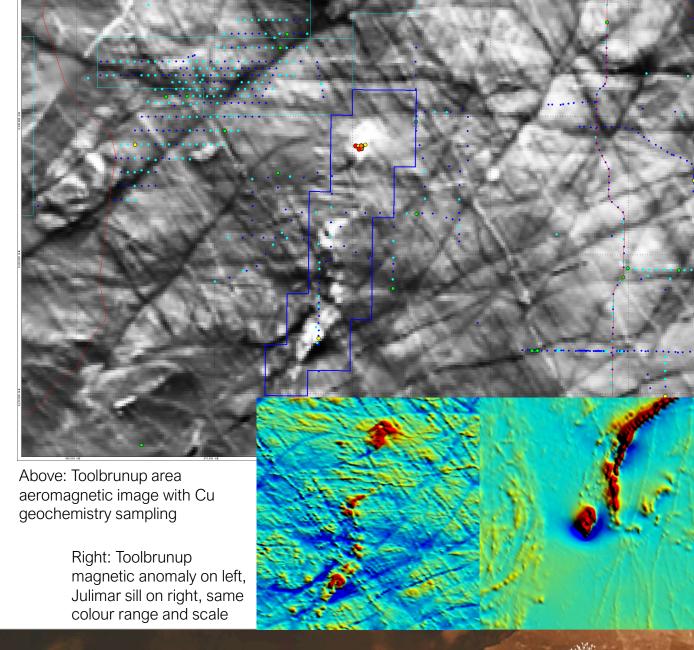
- Cu prospect first explored in 1970's – 80's by Otter and Shell
- No significant work since 80's
- Similarities in mineralisation to Caravel, Ninan prospect.
- Over 6km trend of anomalous Cu with ~3km strike of gossanous horizon
- Airborne EM planned for next stage of work





# Toolbrunup Project

- Magnetic anomaly with similarity appearance to Julimar sill complex, similar geological setting
- Anomalous Cu and Ni in regional surface sampling
- Very anomalous Ni, Cu and Pt from surface sampling over anomaly, not followed up
- Landowner engagement in process
- Planned auger sampling over magnetic anomaly





# Caravel Copper Project

# Targeting higher grade ores at Ninan and Opie

- Review of potential for higher grade ores within the Caravel Project area has identified targets at Ninan and Opie prospect
- Ninan targets coincident EM anomalies and high Cu, Co in soils
- Opie targeting down-plunge of high grade zones in shallow drilling

### Overview of prospects within the Wongan Batholith

