

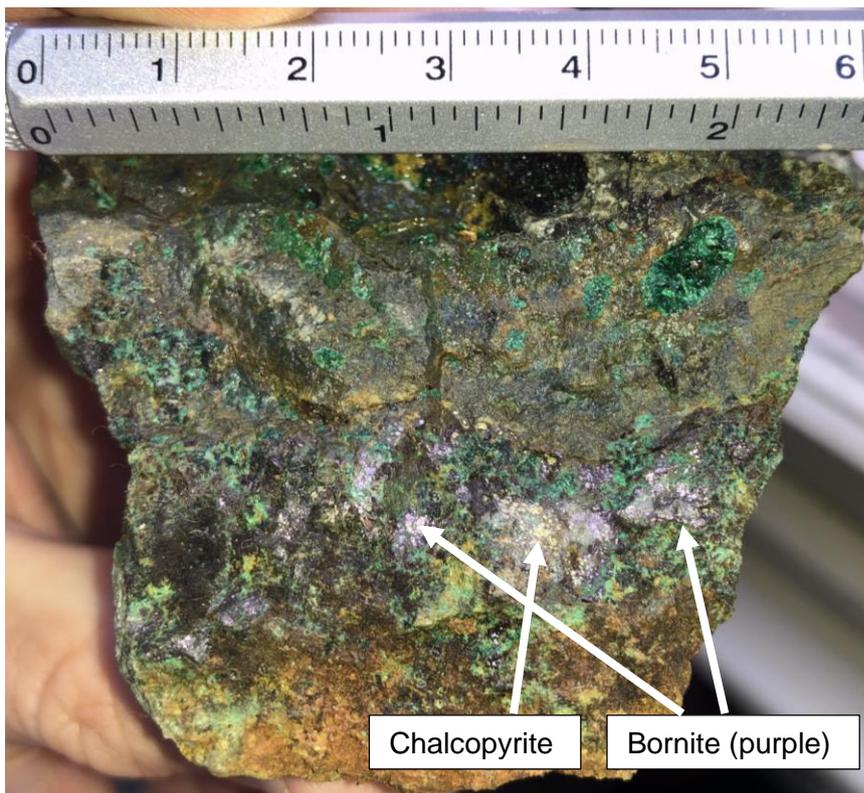
### ASX ANNOUNCEMENT

Date: 22 November 2019

Number: 650/221119

### NEW PORPHYRY-COPPER GOLD TARGETS AT THE COMMONWEALTH PROJECT NEAR THE BODA-KAISER DISCOVERY IN THE LACHLAN FOLD BELT

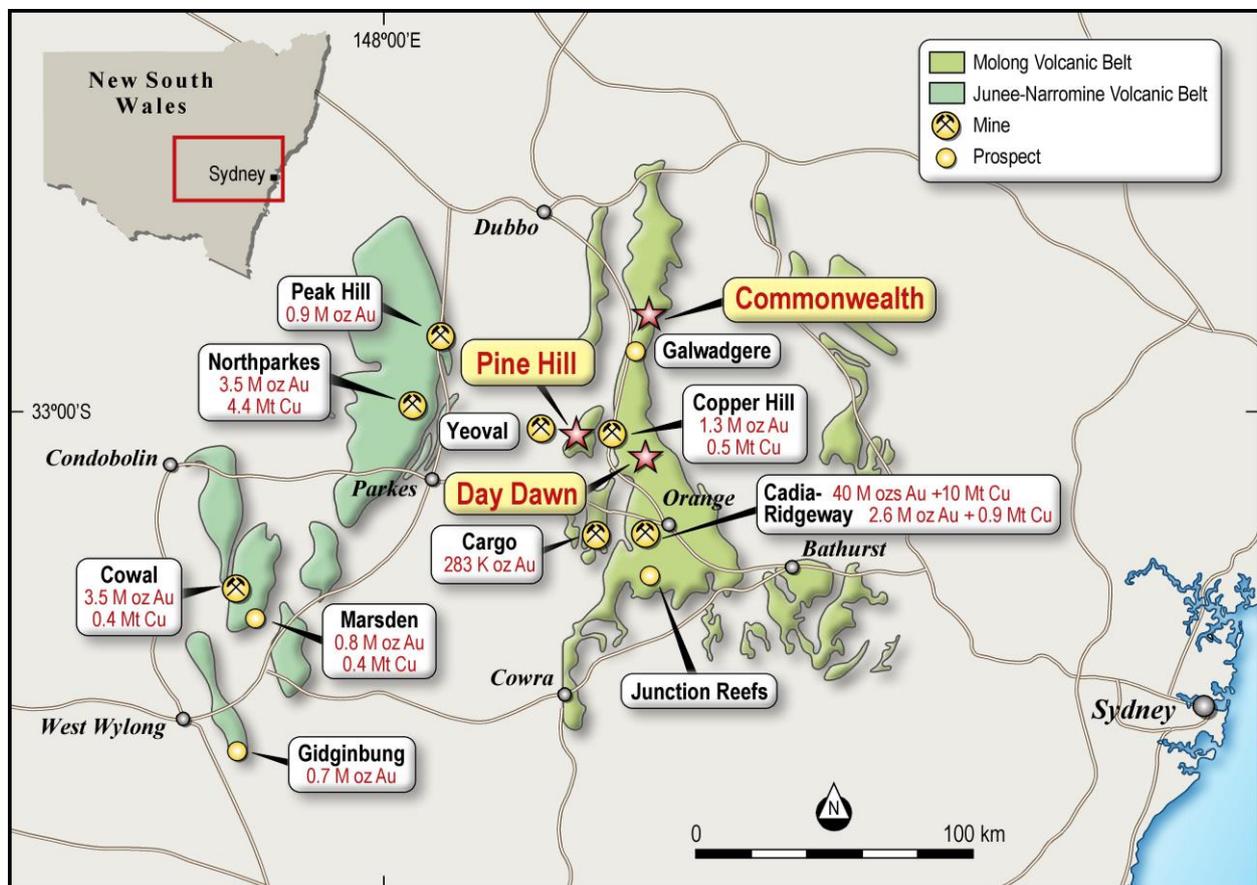
- Numerous new targets for porphyry copper-gold mineralisation have been identified at Impact’s Commonwealth project along trend from the recent Boda-Kaiser discovery (Alkane).
- A number of priority areas have been field checked including:
  - Boda South – an unexplored area of poor exposure where the Boda-Kaiser intrusive complex may extend for up to 500 metres on to Impact’s ground based on regional magnetic data;
  - Apsley – an area of magnetic anomalies in Ordovician volcanic rocks with direct similarities to the Boda Kaiser area and where fresh copper sulphides bornite and chalcopyrite occur in magnetic rocks (Figure 1: assays in progress);
  - Gunnegalderie – extensive quartz veining and weathered copper mineralisation in skarn-altered volcanics with previous high grade rock chips of 21% copper and 3.2 g/t gold were returned from weathered rocks (results are enriched by weathering processes).
- Other targets have been identified on the Day Dawn and Pine Hill projects, located south of Commonwealth and near the Copper Hill deposit (resources of 1.3 Moz gold and 0.5 Mt of copper), and at depth below the Commonwealth high sulphidation massive sulphide deposit.
- A full synthesis and review of previous exploration data is underway with a view to further field programmes as soon as practicable.



**Figure 1. Apsley Prospect:**  
 Sample of volcanic rock with extensive bornite (purple) and chalcopyrite (yellow) as well as copper oxides and carbonates (green) within moderately magnetic volcanic rock. Sample from Z55 683,854E 6,390,589.

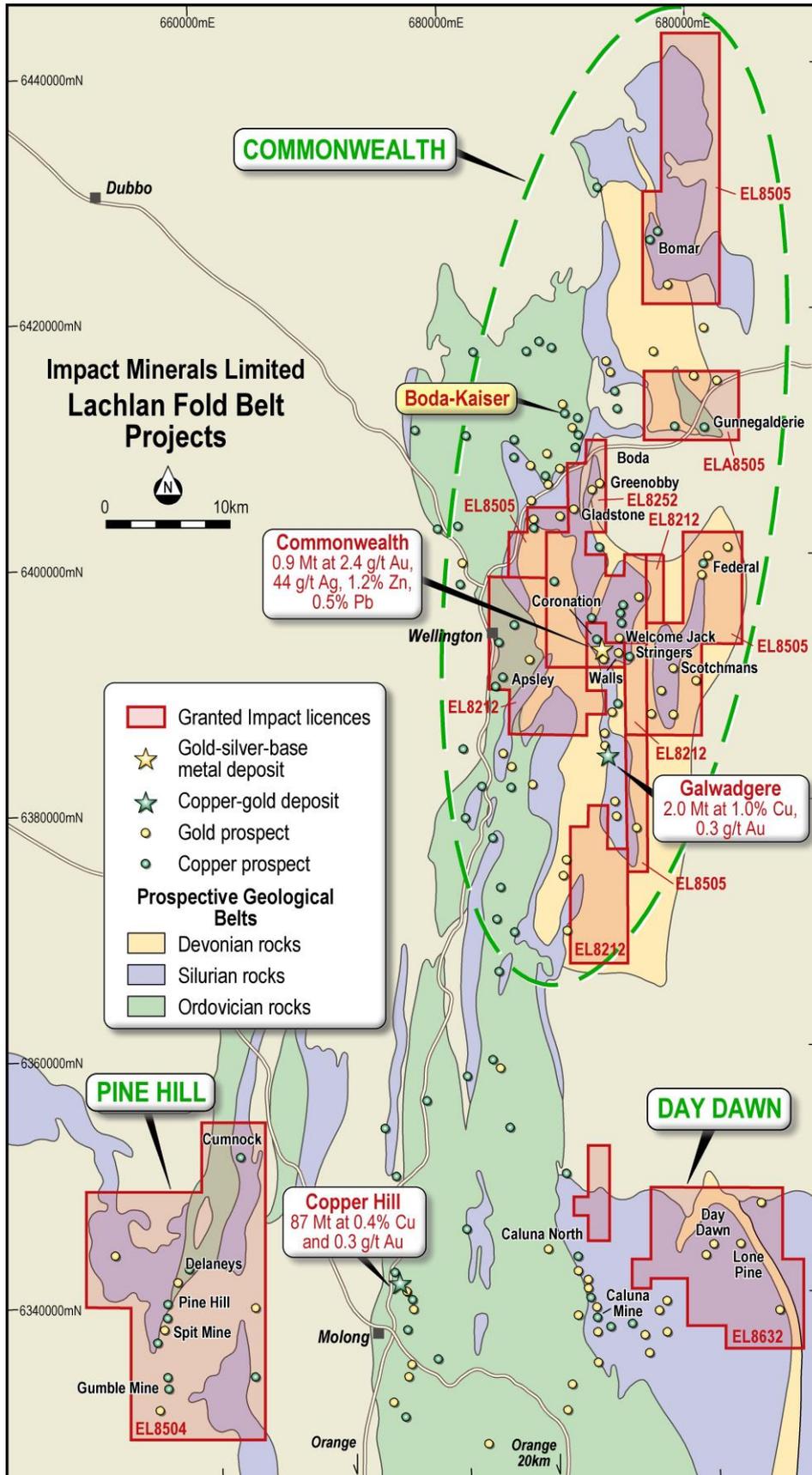
New priority targets for porphyry copper-gold mineralisation have been identified within Impact Minerals Limited's (ASX:IPT) extensive 100% owned Commonwealth project in the prolific copper-gold rich Lachlan Fold Belt in New South Wales following a review of the project prompted by the recent discoveries of porphyry copper-gold at Boda-Kaiser (Alkane Resources Limited), immediately along trend from one of Impact's targets, and Thursday's Gossan in Victoria (Stavely Minerals Limited).

Preliminary field work on several of the targets has identified significant copper mineralisation at surface including for example the Apsley prospect where extensive primary copper sulphides (bornite and chalcopyrite) and copper oxides have been identified (Figure 1). The rock chip samples have been sent for assay with results expected in December.



**Figure 2.** Location of Impact's Commonwealth Pine Hill and Day Dawn Projects in the Lachlan Fold Belt of NSW, home to many significant gold and copper mines.

The new targets have been identified directly by Impact and also by a prospectivity analysis of the licences completed by well respected consultants Kenex Limited using "Weights of Evidence", spatial data computer modelling across Impact's entire portfolio covering 900 square kilometres in the Lachlan Fold Belt. This portfolio also includes the Day Dawn and Pine Hill Projects to the south of Commonwealth where the targets are still being assessed (Figures 2 and 3).



**Figure 3.** The geology, gold and copper mineral occurrences and Impact’s Projects in the Lachlan Fold Belt.

Weights of evidence modelling provides an excellent “first pass” filter to identify areas of interest based mostly on the presence or absence of key geological parameters such as major faults, prospective host rock and previous geochemical anomalies etc.

As well as targets for porphyry copper-gold mineralisation, Kenex also identified targets for copper-gold skarn and volcanogenic massive sulphide mineralisation and these are also being assessed.

In addition an assessment of the potential for porphyry copper gold mineralisation is underway at depth beneath the Commonwealth massive sulphide deposit where Impact recently announced an upgrade to the Inferred Resource of **912,000 tonnes at 2.4 g/t gold, 44 g/t silver, 1.2% zinc and 0.5% lead** (ASX Release August 22<sup>nd</sup> 2019). Numerous narrow high grade intercepts of copper occur at depth below the massive sulphide body and Impact has interpreted the entire system as having formed by submarine venting of fluids from a porphyry copper gold system at depth (ASX Release April 13<sup>th</sup> 2018).

## **PRIORITY TARGETS FOR PORPHYRY COPPER-GOLD AT THE COMMONWEALTH PROJECT**

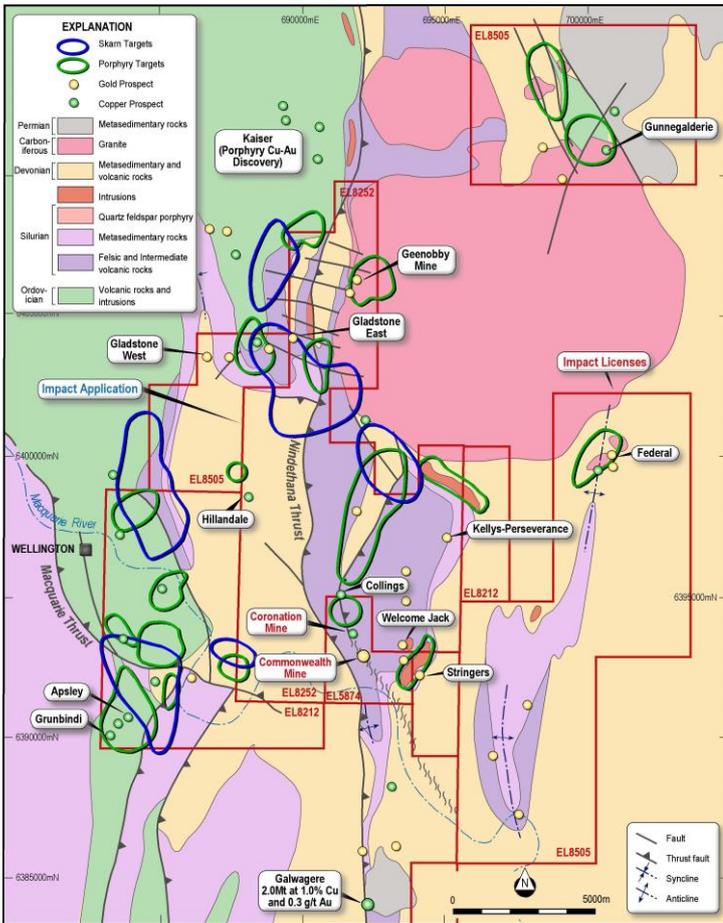
Key features of the priority targets for porphyry copper gold and copper-gold skarn deposits in the Commonwealth project area are described below and shown on a geology map in Figure 4 and a corresponding image of regional government magnetic data in Figure 5. Further synthesis and review of previous exploration data and ranking of targets for follow up is in progress.

Targets have been identified in rocks of Ordovician, Lower Silurian and Devonian aged rocks, all of which are host to significant porphyry copper mineralisation in eastern Australia.

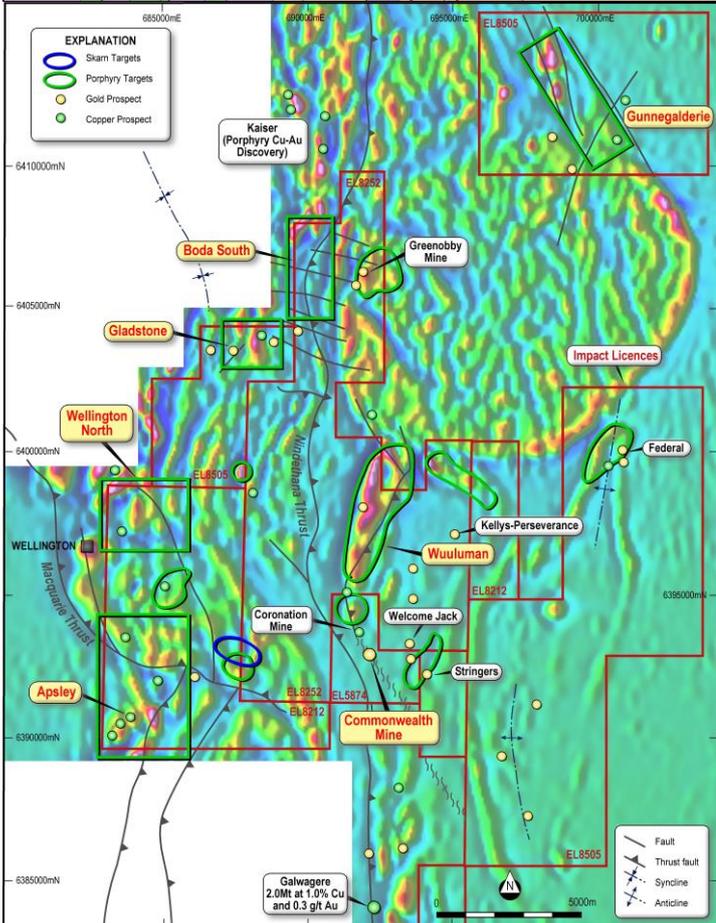
All rock chip results quoted have been reported to the Geological Survey of New South Wales and are from public databases.

**Boda South:** This area lies immediately along trend from the Boda discovery and is poorly exposed. The regional magnetic data suggests that the southern end of the Boda-Kaiser intrusive complex extends on to Impact’s ground for up to at least 500 metres where it is then truncated by the Nindethanna Thrust, a major deep-seated structure that traverses much of the central part of the project area (Figures 4 and 5). This thrust may have buried extensions to the Boda-Kaiser complex.

The target also contains Lower Silurian Volcanics in the immediate hanging wall (eastern side) of the thrust which are prospective for porphyry copper-gold deposits similar to North Parkes where the intrusions which are of the same age and chemical affinity as the Volcanics, are non-magnetic and not mappable in regional magnetic data.



**Figure 4.** Geology of the Commonwealth Project. Targets have been identified in Ordovician, Silurian and Devonian aged rocks. Ordovician and Lower Silurian aged rocks are key periods of time for porphyry copper-gold deposits in the Lachlan Fold Belt.



**Figure 5.** Commonwealth Project: Image of regional magnetic data with more magnetic rocks in warmer colours. Note the magnetic anomalies associated with the Kaiser-Boda discovery where magnetite occurs in skarns and in the host intrusion. The magnetic anomalies extend into Impact's ground at Boda South.

**Apsley:** This target is centred 8 km south of Wellington and covers a number of magnetic anomalies within Ordovician basalts and andesites. These are direct analogies to the magnetic response at Boda-Kaiser associated with the skarn mineralisation and parent porphyry intrusion. Previous explorers reported rock chips up to 6.5% copper and 13 g/t silver. Recent field checking by Impact has found extensive areas of copper mineralisation in the area including primary copper sulphides such as bornite and chalcopyrite (Figure 1). This is encouraging for the presence of near surface significant porphyry copper-gold mineralisation.

**Gunnegalderie:** This target occurs in the north east of the Commonwealth project and comprises magnetic anomalies within Ordovician and Devonian rocks. Field checking by Impact has identified copper mineralisation associated with quartz veins within mafic schists, hornfels and epidote-garnet skarn. The rocks are cut by porphyry dykes. Previous rock chip results of up to 21% copper and 3.2 g/t gold were recorded in weathered samples.

**Gladstone:** This target lies south west of Boda South and is along trend from and extension of the Lady Ilse prospect of Magmatic Resources Limited. It covers multiple magnetic anomalies in the Lower Silurian volcanics with numerous recorded copper-gold occurrences that returned historic rock chip results of up to 9.9 g/t gold, 3.2% copper and an exceptional silver result of 4,550 g/t silver.

**Wuuluman:** This target is a magnetic anomaly in Devonian rocks associated with numerous gold and lesser copper occurrences. It is along trend from Impact's Commonwealth deposit and has been poorly explored.

**Federal:** This target covers a magnetic anomaly in the core of a fold hinge in Devonian rocks. There are several copper-gold occurrences in the area. A small gold mine operated intermittently here from 1907 to 1942 with a recorded production of 797 ounces of gold at an average grade of 21 grams per tonne. Historic rock chip samples returned assays up to 48 g/t, 188 g/t silver and 4.3% lead.

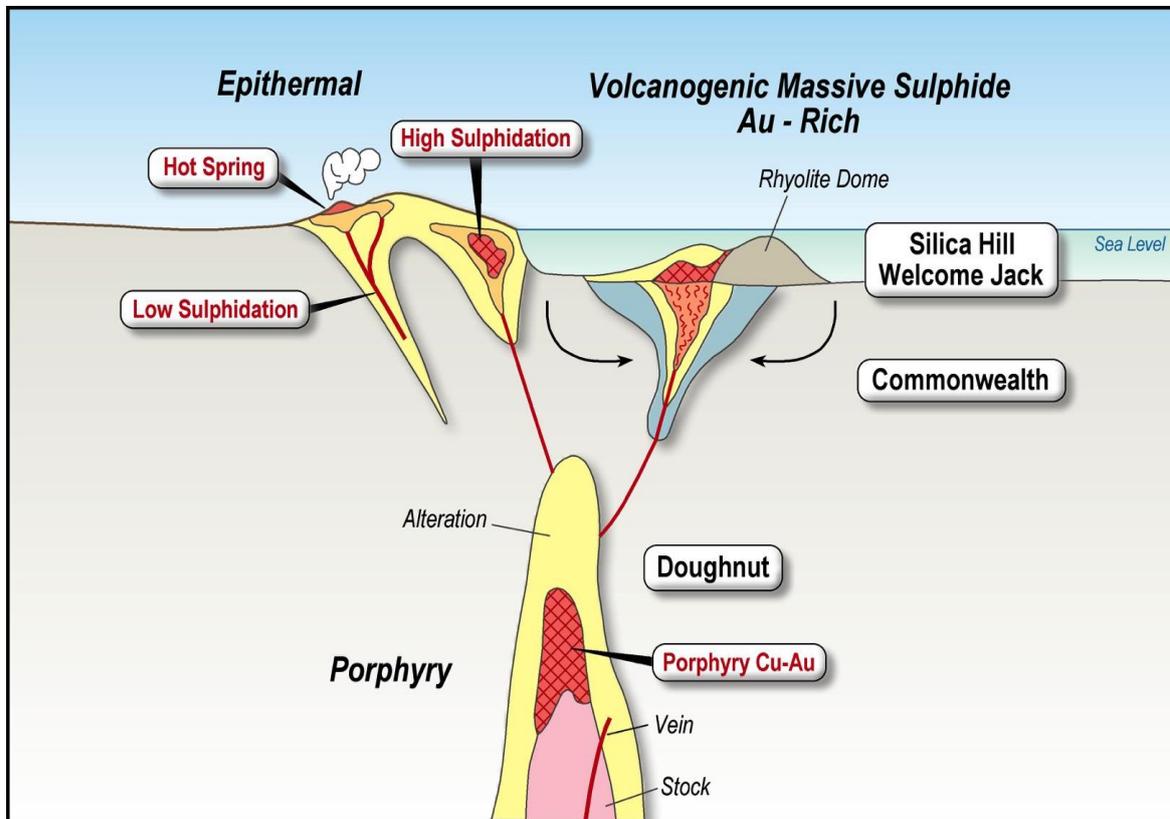
## NEXT STEPS

Impact's review of its Lachlan Fold Belt portfolio has reinforced the Company's belief that its tenements have significant prospectivity for the discovery of a major porphyry copper gold deposit. This is in addition to the potential for the discovery of further massive sulphide deposits similar to Commonwealth and which shows strong similarities to the world class Eskay Creek project in the famous Golden Triangle of British Columbia (ASX Release April 13<sup>th</sup> 2018).

Preliminary field work on some of the priority targets has already identified areas of copper-gold-silver mineralisation that require follow up soil geochemistry programmes and further synthesis and review of previous exploration data. Work thus far has focussed on the Commonwealth project but work is also required on the Pine Hill and Day Dawn projects to the south.

In addition research continues into the possible genetic links between porphyry copper gold mineralisation in the Lachlan Fold Belt and the unique high sulphidation massive sulphide deposit at Commonwealth. Impact has previously proposed that the Commonwealth deposit is the product of submarine venting of fluids from a buried porphyry copper system (Figure 6 and ASX Release April 13<sup>th</sup> 2018).

This is a potentially powerful model for generating new exploration targets in rocks of Lower Silurian age, extensive tracts of which are present on Impact's licences in the region.



**Figure 6.** Conceptual model for the upper parts of porphyry copper-gold systems: most models for porphyry-to-epithermal transitions are based on work done in sub-aerial environments. In submarine environments the epithermal mineralisation may be characterised by gold rich high sulphidation volcanogenic massive sulphide deposits such as Commonwealth.

## COMPLIANCE STATEMENT

This report contains no new Exploration Results generated by Impact Minerals Limited.

**Dr Michael G Jones**  
**Managing Director**

*The review of exploration activities and results contained in this report is based on information compiled by Dr Mike Jones, a Member of the Australian Institute of Geoscientists. He is a director of the company and works for Impact Minerals Limited. He has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which he is undertaking 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 (the JORC Code). Mike Jones has consented to the inclusion in the report of the matters based on his information in the form and context in which it appears.*