

ASX ANNOUNCEMENT

16 November 2022

## DRILLING AT BROKEN HILL TO COMMENCE THIS WEEK

- IGO Limited secures diamond drill rig at short notice
- Large EM anomaly to be drill tested for high grade massive nickel-copper sulphides with PGM at Yellowstone, part of the Platinum Springs project.
- Up to two holes planned with all Statutory Approvals in place

Impact Minerals Limited (ASX:IPT) is pleased to announce that a diamond drill programme of up to 1,100m will commence this week at its newly named Yellowstone prospect and which is being funded by joint venture partner IGO Limited (ASX:IGO).

The Yellowstone prospect is part of the greater Platinum Springs project area which lies at the southern end of the Moorkai Trend, a nine kilometre long ultramafic to mafic dyke and chonolith complex that is very poorly explored (Figure 1).

Two diamond holes have been planned to test a significant electromagnetic (EM) conductor identified by IGO in an extensive ground EM survey completed across the project area earlier this year (ASX Release 3<sup>rd</sup> March 2022).

Dr Mike Jones, Impact's Managing Director said:

*"It will be great to be drilling at Broken Hill again. The EM conductor identified by IGO is of a significant size and has a similar conductance to the high-grade massive nickel-copper-PGM sulphide we discovered at Platinum Springs. The anomaly lies within a major structure that may have been a feeder zone for the entire Moorkai Trend and it is a compelling target we are looking forward to testing."*

### About the EM anomaly

The EM plate is located approximately 1,000 metres southeast along strike from the main Platinum Springs Prospect where previous drilling by Impact returned a narrow intercept of high-grade massive sulphide mineralisation in PSD002 (Figure 1 and ASX Release 23<sup>rd</sup> February 2016 ) that returned:

**0.6 metres at 11.5 g/t platinum, 25.6 g/t palladium, 1.4 g/t gold, 7.6% copper, 7.4% nickel, 44.3 g/t silver, 0.16% cobalt, 1.3 g/t rhodium, 1.7 g/t iridium, 2.0 g/t osmium and 0.8 g/t ruthenium from 57.1 metres down hole (Figure 2).**

### COMPANY DETAILS

Market Cap: A\$17m (0.007 p/s)

Issued Capital: 2,481,370,556

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### DIRECTORS

**Mr Peter Unsworth**  
Chairman

**Dr Michael Jones**  
Managing Director

**Mr Paul Ingram**  
Non-Executive Director

**Dr Frank Bierlein**  
Non-Executive Director

**Mr Bernard Crawford**  
Company Secretary

A down hole EM survey of PSD002 indicated the massive sulphide had a high conductance greater than 5,000 siemens and similar to that modelled for the new conductor.

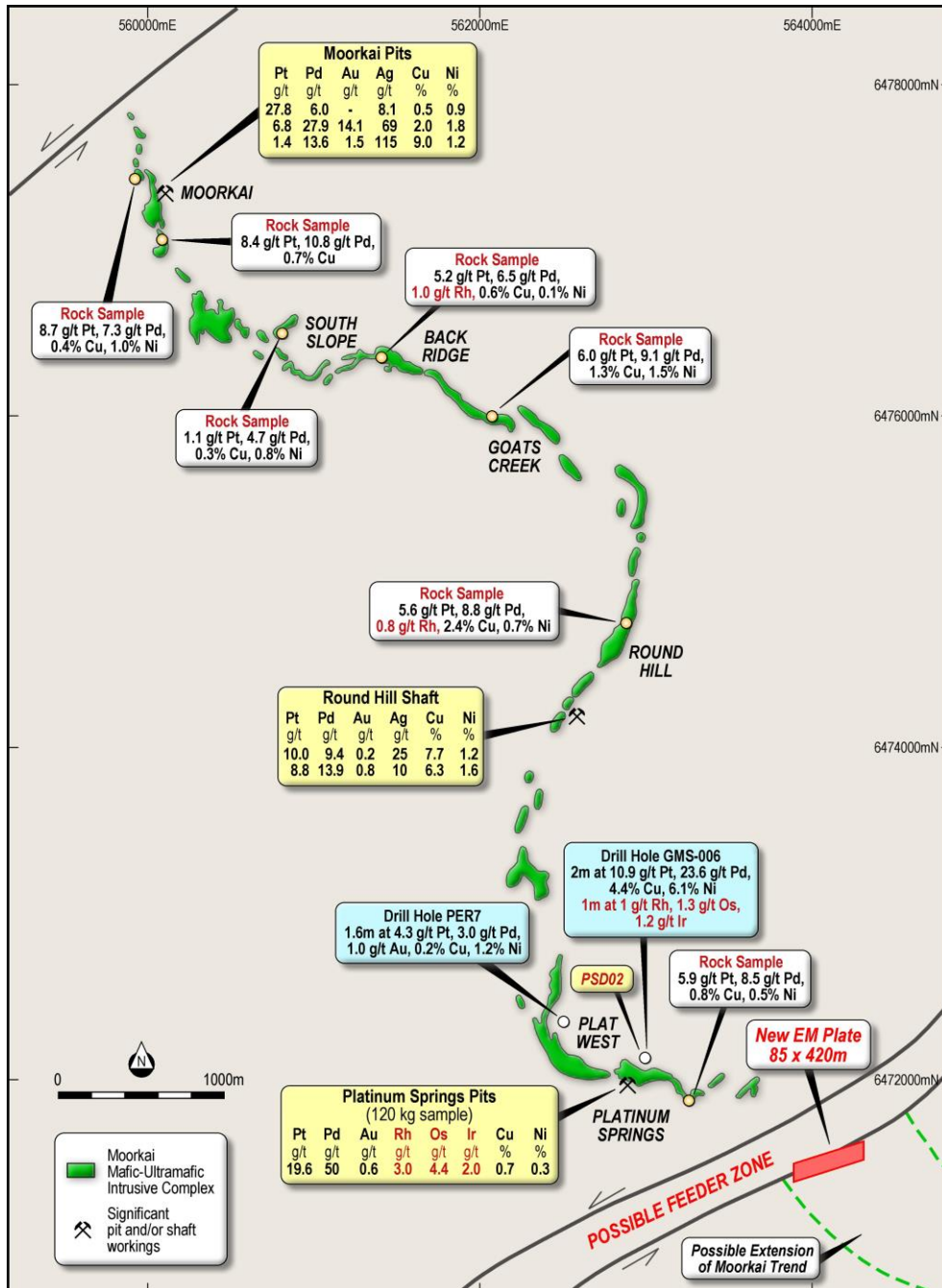
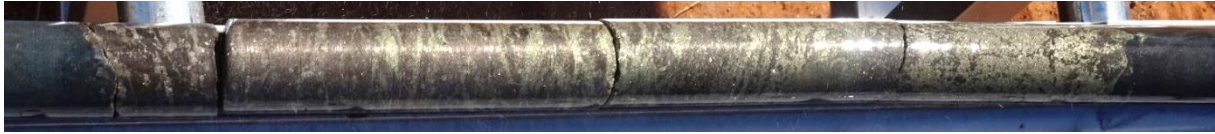


Figure 1. Location of newly identified EM plate in relation to the 9 km long Moorkai Trend with previous rock chip and drill results (pre-Impact work).



**Figure 2.** High grade massive sulphide from PSD02. The sulphide has a conductance in excess of 5,000 siemens and similar to that modelled for the new conductor.

The new EM conductor has been modelled to have a high conductance of about 8,000 siemens and with the top edge of the modelled EM plate centred at a depth of about 350 metres below surface. It has a length of about 420 metres and extends for at least 85 metres down dip moderately to the south (ASX Release 3<sup>rd</sup> March 2022).

Field checking by IGO identified ultramafic and mafic rocks that were possibly related to the target Moorkai Trend intrusion which is much younger (c. 825 Ma) than the majority of the rocks at Broken Hill (c. 1650 Ma).

### **About the Platinum Springs Prospect and Moorkai Trend**

The Platinum Springs Prospect lies at the southern end of the Moorkai Trend, a nine kilometre long ultramafic to mafic dyke and chonolith complex that is very poorly explored (Figures 1 and 3).

Although high grade rock chips occur along the entire Trend, only the southern end has been explored in detail but with limited success prior to Impact's work in the area. This is because the mineralisation appeared to be discontinuous and erratic and the controls on its distribution were poorly understood.

Work by Impact, including extensive drilling, identified high grades of nickel-copper-PGM's in a channel-like structure at the base of the ultramafic unit and which has yet to be followed up (ASX Release 9<sup>th</sup> March 2021).

The channel-like structure was identified in close-spaced drilling using Impact's proprietary ratio for PGM mineralisation and was the first coherent zone of mineralisation defined in the area in over 30 years of exploration.

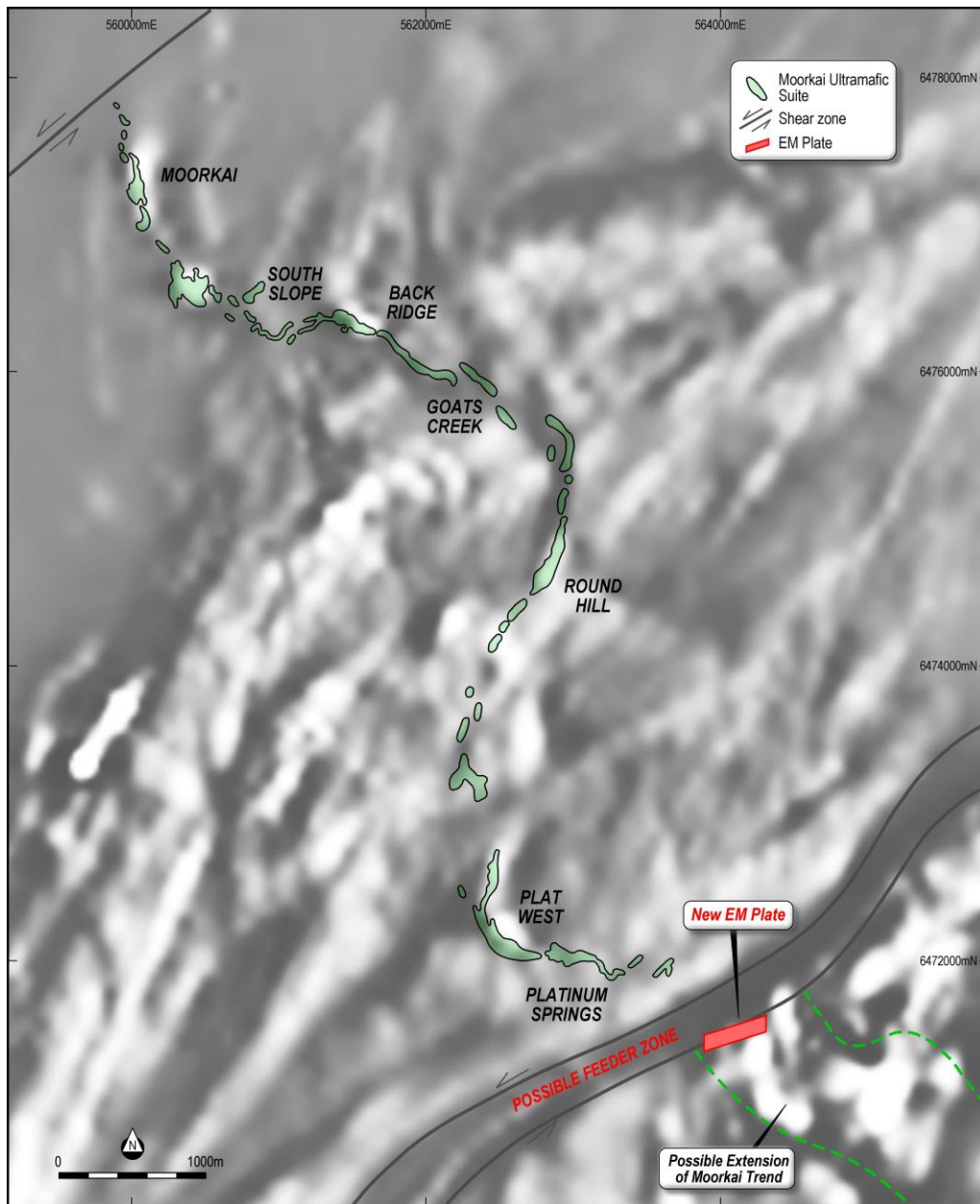
This work led to a new geological framework within which to understand the Moorkai Trend (ASX Release 9<sup>th</sup> March 2021).

The new EM conductor is located within a major structure to the southeast of the main outcrops of the Moorkai intrusive complex (Figure 1). It is possible that the Moorkai Trend formed in a large (now folded) perpendicular structure between two major shear zone structures which bound the intrusive complex (Figures 1 and 3).

These shear zones may be so-called "feeder zones" to the mafic-ultramafic rocks along the Moorkai Trend and also raise the possibility that the Trend continues to the south to southeast where similar strongly magnetic rocks occur under thin cover (Figure 3).

### **The Importance of Feeder Zones**

Recently published scientific work, and by the CSIRO in particular, has shown that many chonoliths and other steeply dipping mafic-ultramafic intrusions that host significant massive sulphide deposits, commonly have mineralisation within conduits that act as feeder zones to the entire intrusive complex.



**Figure 3.** Image of the first vertical derivative of regional magnetic data showing the location of the new EM plate in relation to the Moorkai intrusive trend with interpreted feeder zone.

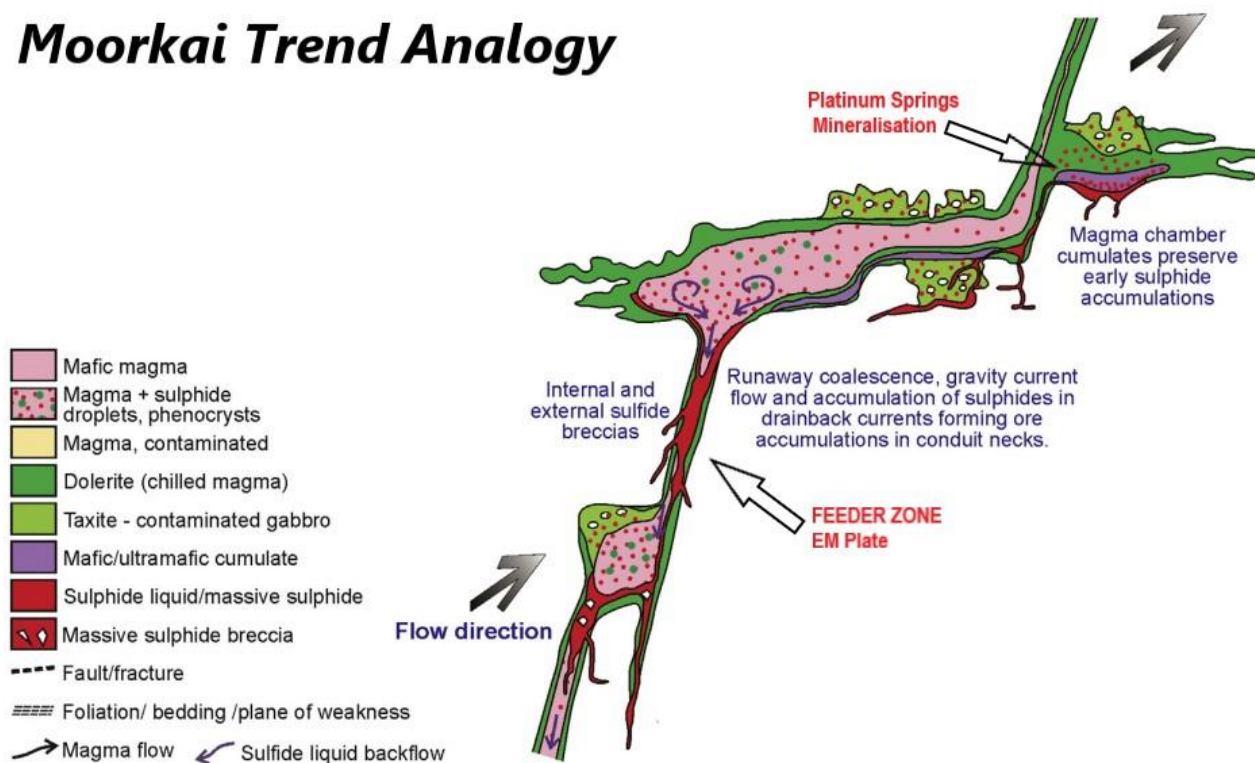
These feeder zones are priority target areas because the research work has also shown that within intrusions with strong vertical magma flow, massive sulphides are often deposited as the magma slows its ascent and drains back down into the main conduit.

This “back flow” can cause deposition of massive sulphides in the feeder zone as proposed in a very elegant model for chonolith development developed by Professor Steve Barnes and co-workers at CSIRO (Figure 4).

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Impact has been using this model to help drive its exploration programme at Broken Hill (ASX Release 21<sup>st</sup> January 2021). Accordingly, the Company views the new conductor identified by IGO as a compelling target.

## Moorkai Trend Analogy



**Figure 4.** Model for the formation of nickel-copper-PGM deposits within evolving magma conduits including chonoliths.

Note the massive sulphide within the feeder zones/conduit necks  
(from Barnes, S.J. et al. Ore Geology Reviews Volume 76, July 2016, Pages 296-316).

Dr Michael G Jones  
Managing Director

### Competent Persons Statement

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