ASX Announcement

16 November 2022

DRILLING RECOMMENCES AT POLAR BEAR ON NEW ELECTROMAGNETIC CONDUCTORS AND EXISTING NICKEL PROSPECTS

Key Points

- **Nickel drilling is recommencing at Polar Bear**
- **Drilling will test several electromagnetic (EM) conductors identified in the recent (August) EM survey**
- **Drilling will also test for extensions and repetitions of nickel sulphide mineralisation along the partially drilled Halls Knoll-Taipan-Gwardar trend**
- **Drilling likely to continue until January/February 2023**

S2 Resources Ltd ("S2" or the "Company") advises that diamond drilling will commence in the next few days on Lake Cowan to test the electromagnetic (EM) conductors identified in an electromagnetic (EM) survey undertaken in July, as well as repetitions and extensions of nickel sulphide mineralisation along the partly drilled trend containing the previously discovered Halls Knoll, Taipan and Gwardar nickel prospects.

The conductors identified in the recent EM survey will be drilled in a program scheduled to run through to January/February 2023. These conductors were identified beneath Lake Cowan, a large salt lake, using the low temperature superconducting quantum interference device ("SQUID") EM technology, which can "see" more clearly through the conductive lake surface (see S2 ASX announcement of 1st August 2022). These conductors are spatially associated with strongly anomalous nickel, copper and platinum-palladium levels in aircore holes previously drilled by the Company for both gold and nickel, and in rock chip samples collected from outcropping gossans (see Figure 1).

Drilling will also follow up significant nickel sulphide mineralisation at the Taipan, Gwardar and Halls Knoll prospects, on the shores of Lake Cowan, where previous aircore, reverse circulation (RC) and diamond drilling by the Company has intersected zones of disseminated and massive nickel sulphides (see S2 ASX announcement of 22 July 2019 and Sirius Resources ASX announcement of 29 October 2014).

All of these targets fall within areas previously cleared for drilling by heritage surveys and all proposed drill sites have been approved by the Western Australian Department of Mines.

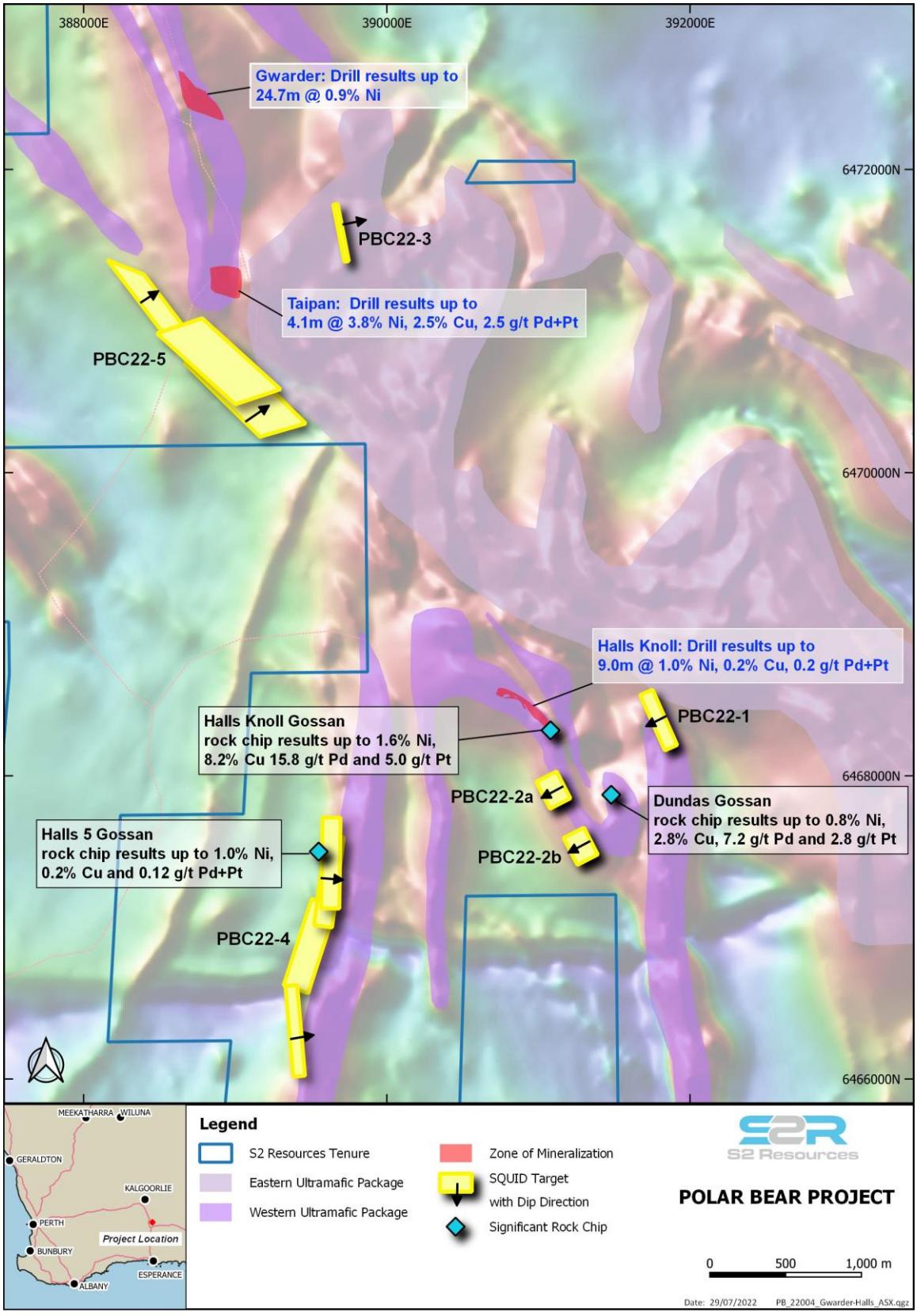

Figure 1. Location of electromagnetic conductors identified in the July SQUID EM survey at the Polar Bear Project, over regional magnetics and interpreted geology. Selected drill intercepts at the Gwardar, Taipan and Halls Knoll prospects and rockchip assays of outcropping gossans are also shown.

Commenting on the program, S2's Executive Chairman Mark Bennett said "It is exciting to be drilling these new EM conductors, which are the latest targets in our ongoing exploration at Polar Bear, where our previous drilling over the last twelve years has identified the right rocks with significant nickel sulphide accumulations. The SQUID EM system has at last enabled us to reliably identify conductors and pinpoint specific drill targets beneath the salt lake, and it is encouraging that these are spatially associated with strong nickel, copper, platinum and palladium anomalism in nearby aircore holes which we previously drilled searching for both gold and nickel."

EM targets

Prior to the recent EM survey, nickel focussed drilling on the lake was disadvantaged by the lack of reliable EM data, and prior holes were drilled on poorly spatially constrained targets. However, the recent SQUID survey has identified a number well defined compelling EM conductors located at depth beneath nickel, copper and PGE anomalous intercepts in shallow aircore holes previously drilled by the Company for gold and nickel reconnaissance exploration. A full explanation of these targets is provided in S2's previous ASX announcement of 1st August 2022, and a summary of their location is shown in Figure 1.

Taipan prospect

The Taipan prospect was first drilled by the Company in 2014 (see SIR ASX announcements of 16 July 2014, 24 September 2014) and comprises two zones of nickel sulphide mineralisation within a thick shallow northerly plunging cumulate ultramafic channel. The west zone is characterised by the typical Kambalda style zonation with massive sulphide on the basal contact grading upward into matrix / net-textured sulphide then into disseminated sulphides. The east zone is primarily disseminated sulphides. Better intercepts from previous drilling at the Taipan prospect include:

- **4.1 metres at 3.8% Ni, 2.5% Cu, 0.08% Co, 2.5g/t Pd+Pt** from 104.4 metres, including **2.2 metres at 5.8% Ni, 3.7% Cu, 0.12% Co 2.8g/t Pd+Pt** from 106 metres in SPBD0046 (Taipan – West Zone),
- **20 metres at 0.62% Ni**, 0.10 % Cu, 0.02% Co, 0.59g/t Pd+Pt platinum from 113 metres including **2.0 metres at 1.5% Ni, 0.4% Cu**, 0.03% Co, 2.4g/t Pd+Pt from 131 metres in SPBC0062 (Taipan – West Zone),
- **53 metres at 0.5% Ni**, 0.05% Cu and 0.01% Co, 0.29g/t Pd+Pt from 23 metres in SPBC0070 (Taipan – East Zone), and
- **10 metres at 0.7 g/t Ni**, 0.1% Cu, 0.01% Co, 0.34g/t Pd+Pt 90 metres in SPBC0074 (Taipan – East Zone).

Mineralisation at Taipan has been defined over a 250 metres strike length, with a dip extent of at least 150 metres and remains open both north and south. Previous drilling intersected a narrow zone of remobilised nickel sulphide within the ultramafic sequence 300 metres north of the prospect, with no drilling in-between (see Figure 1).

Gwardar prospect

The Gwardar prospect was drilled in 2019 (see S2 ASX announcement of 22 July 2019) and is located approximately one kilometre north of Taipan (see Figure 1). It comprises thicker zones of disseminated sulphides with narrow zones of massive sulphide on the basal contact. Drilling has also identified

localised zones of remobilised vein and stringer sulphide extending up to 30 metres into the footwall sequence. Better drill results from the Gwardar prospect include:

- **17.8 metres at 0.75% Ni** from 183 metres, including **0.8 metres at 2.4% Ni** from 194.53 metres and **0.7 metres at 3.3% Ni**, 0.4% Cu from 200.1 metres and **3.3 metres at 1.4% Ni**, 0.2% Cu from 223.67 metres, and
- **24.7 m at 0.9% Ni** from 241.0 metres, including **8.1 metres at 1.3% Ni** from 241.94 metres and 7.8 metres at 0.6% Ni from 306.0 metres.

Drilling to date has defined a 100 metre thick channel with multiple mineralised flows over a strike of at least 150 metres and at least 400 metres down plunge. The mineralisation remains open at depth and along strike, however to the north, the basal contact of the ultramafic channel has been partially stoped out by felsic porphyry which has to date obscured continuity.

Halls Knoll prospect

The Halls Knoll prospect is located near a fold hinge in the ultramafic sequence, proximal to a regional northwest trending fault. It occurs as primary blebby and disseminated sulphides within the cumulate ultramafic rocks, as well as remobilised veins of semi-massive sulphide. Better grades from drilling at Halls Knoll include:

- **9.0 metres at 1.0% Ni**, 0.2% Cu and 0.17 g/t Pd+Pt from 2.0 metres, and
- 10.2 metres at 0.4% Ni, 0.1% Cu, 0.4 g/t Pd+Pt from 60.8 metres

This prospect is situated along strike from two high-grade gossans (the Halls Knoll and Dundas gossans) which crop out on a small island in the salt lake (see Figure 1). The Halls Knoll gossan grades up to 15.8g/t Pd, 5.0g/t Pt, 8.2% Cu and 1.6% Ni (see Figure 2) and, although structurally remobilsed, provides good evidence for the presence of a potential body of nickel sulphides in the vicinity.

Figure 2. Rock chip sample of the Halls Knoll Gossan

Project background

S2, through various wholly owned subsidiary companies, has been exploring the Polar Bear ground since 2010, during which time five heritage surveys have been undertaken and over 4,000 holes drilled primarily for gold and to a lesser extent for nickel.

The earlier exploration, undertaken by Polar Metals Pty Ltd ("Polar Metals"), which was a wholly owned subsidiary of Sirius Resources and, post-demerger, of S2, led to the discovery of the Taipan nickel prospect in 2014 and the discovery, drillout and mineral resource estimate of the Baloo gold deposit between 2015 and 2017.

In February 2018, Polar Metals was sold to Westgold Resources Ltd ("Westgold"), with S2 via another wholly owned subsidiary, Southern Star Exploration Pty Ltd ("Southern Star"), retaining the right to explore, develop and mine nickel together with associated base metals (eg, copper and cobalt) and associated platinum group metals ("PGM's) on those tenements owned by Polar Metals ("nickel rights").

S2 retains 100% of the nickel rights in a core holding of tenements held 100% by Polar Metals which cover the majority of the nickel prospective stratigraphy (the Polar Bear project *sensu stricto*), and 80% of the nickel rights in additional tenements which cover a smaller part of the nickel prospective stratigraphy, by virtue of these tenements being held 80% by Polar Metals in a joint venture known as the Eundynie JV (see Figure 3).

Westgold sold its Higginsville operations and Polar Metals to Karora Resources ("Karora"), which then developed the Baloo gold deposit as an open pit mine on Lake Cowan.

Since the sale of Polar Metals, S2, through its subsidiary Southern Star, has continued to explore the Polar Bear project for nickel through its nickel rights, with exploration drilling leading to the discovery of the Gwardar prospect in 2019, and the recent SQUID survey leading to the identification of new EM conductors beneath the salt lake.

S2 has recently transferred its nickel rights from its Southern Star subsidiary to another wholly owned subsidiary, Dark Star Exploration Pty Ltd ("Dark Star").

This announcement has been provided to the ASX under the authorisation of the S2 Board.

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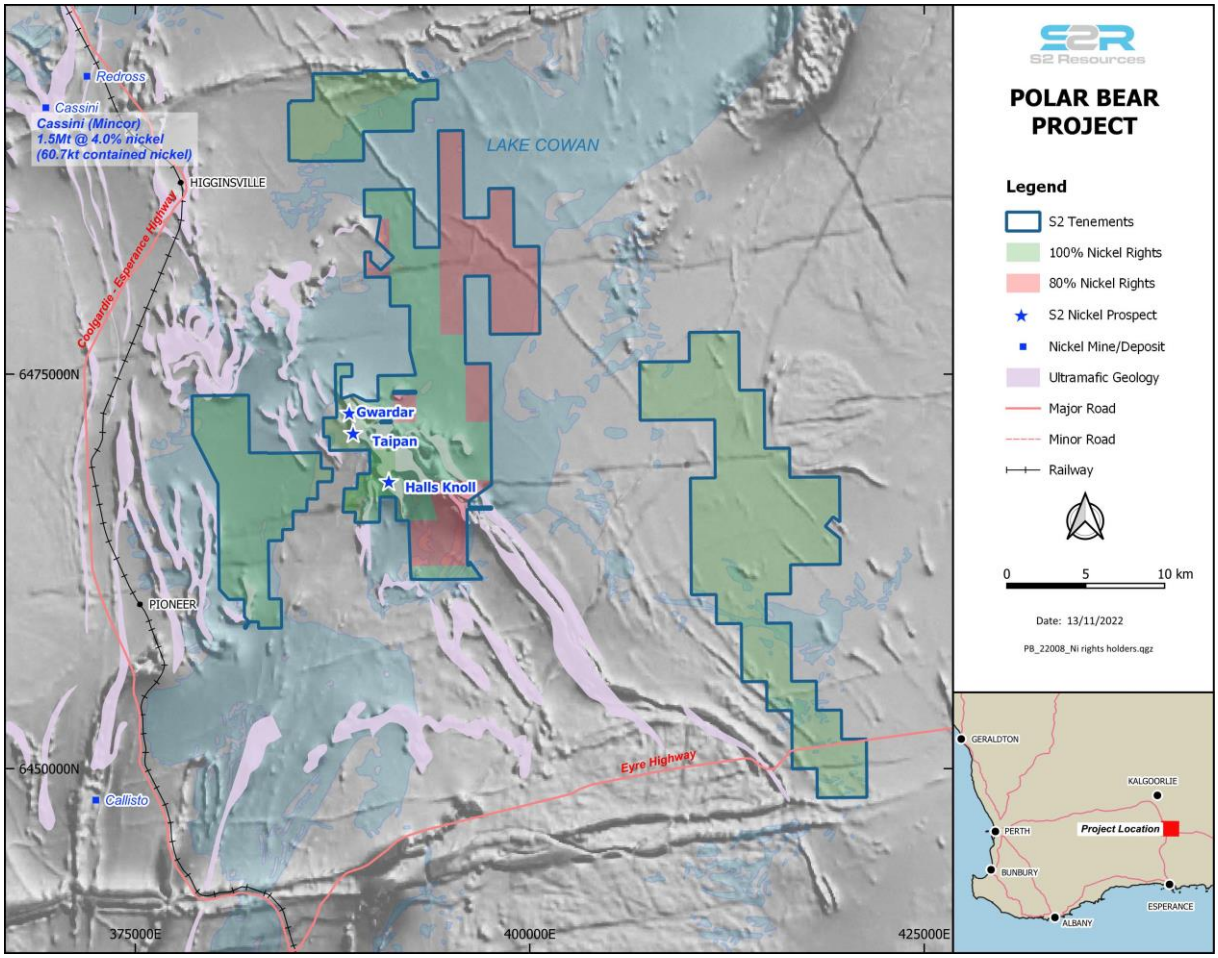

Figure 3. Map of tenure, nickel prospective stratigraphy and prospects at Polar Bear showing area of 100% nickel rights and 80% nickel rights.

Past Exploration results reported in this announcement have been previously prepared and disclosed by S2 Resources Ltd in accordance with JORC 2012. The Company confirms that it is not aware of any new information or data that materially affects the information included in these market announcements. The Company confirms that the form and content in which the Competent Person's findings are presented here have not been materially modified from the original market announcement. Refer to www.s2resources.com.au for details on past exploration results.

Competent Persons statements

The information in this report that relates to Exploration Results from Australia is based on information compiled by John Bartlett, who is an employee and shareholder of the Company. Mr Bartlett is a member of the Australian Institute of Mining and Metallurgy (MAusIMM) and has sufficient experience of relevance to the style of mineralization and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Bartlett consents to the inclusion in this report of the matters based on information in the form and context in which it appears.