



# FOCUSED ON NEAR-TERM NICKEL PRODUCTION IN WESTERN AUSTRALIA

Investor Webinar  
May 2023 ASX:ESR







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The Board authorised for this presentation to be released to ASX.



## Estrella – At A Glance

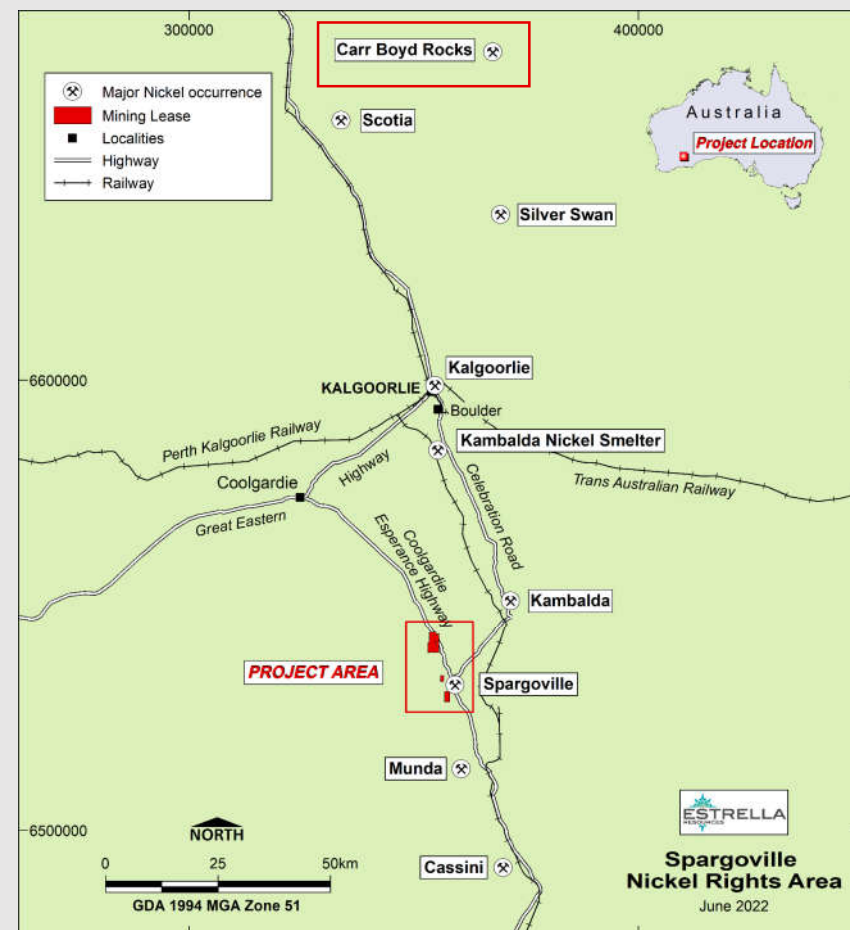
*WA-focussed nickel explorer transitioning into production in a Tier-1 mining and processing jurisdiction with highly experienced board and management team*

### Spargoville Nickel Sulphide Project (100%-owned)

- 20km South-West of Kambalda and since being identified in the 1960s, four deposits have been discovered and developed
- Estrella is **seeking to rapidly transition Spargoville project into a producing asset**

### Carr Boyd Nickel Sulphide Project (100%-owned)

- 80km from Kalgoorlie with initial drilling programs discovering **Massive Nickel Sulphide** at the T5 prospect
- Exploring to locate a world class, high quality, nickel sulphide resource

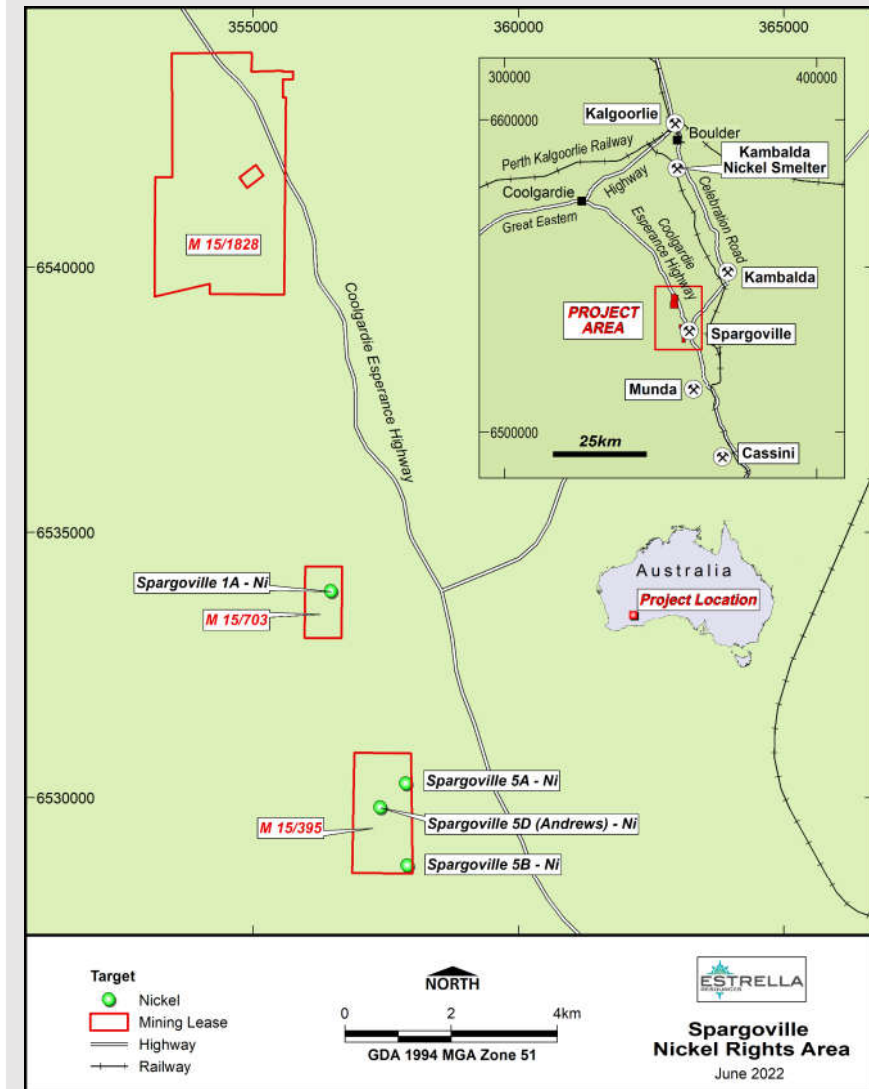


## Spargoville – Right Time For New Mine Developments

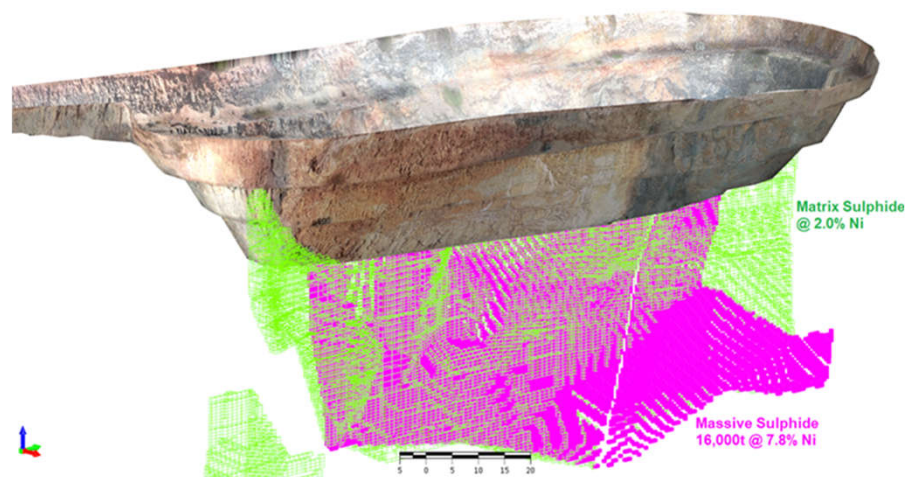
With major appreciation in the nickel price, time is right to rapidly transition 100%-owned Spargoville nickel sulphide project to a producing asset

- ❑ Acquired via the purchase of WA Nickel Pty Ltd in 2017 when nickel projects were out of favour
- ❑ Bought rights to mine and explore 4 nickel sulphide deposits, 1A, 5A, 5B, and 5D (Andrews) deposits discovered with partial development on two of the three mining leases for which the Nickel Rights were purchased
- ❑ All mines have remnant nickel sulphide mineralisation and extensive exploration potential at depth.
- ❑ 5A is priority focus and DFS is well advanced

Potential cashflows from Spargoville production to assist in continuation of exploration / development of Nickel portfolio



## 5A Nickel Deposit: DFS is well advanced



Via underground mining method, Estrella will be targeting the massive sulphide grading at 7.8% nickel and a portion of the matrix and breccia sulphides will also be mined.

Type	Total Mineral Resource						
	Tonnage kt	Ni%	Cu%	Co%	Ni T	Cu T	Co T
Disseminated	76	0.6	0.07	0.02	490	50	10
Matrix/Breccia	32	2.0	0.14	0.03	650	40	10
<b>Massive</b>	<b>16</b>	<b>7.8</b>	<b>0.59</b>	<b>0.19</b>	<b>1,230</b>	<b>90</b>	<b>30</b>
<b>Total</b>	<b>124</b>	<b>1.9</b>	<b>0.15</b>	<b>0.04</b>	<b>2,370</b>	<b>190</b>	<b>50</b>

October 2022 Mineral Resource Estimate - Mineralisation Type (0.5% Ni Cut-off)

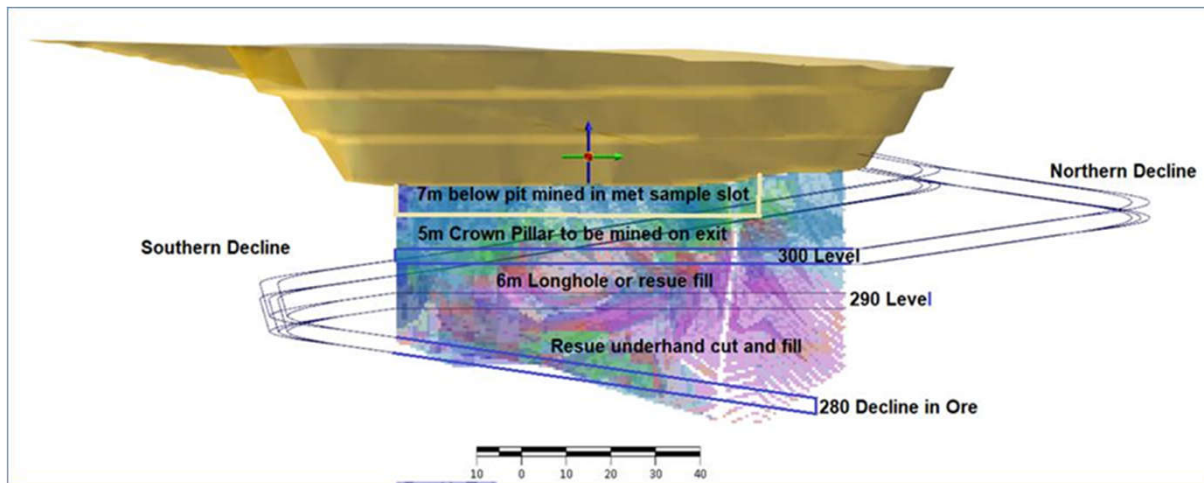


- ❑ 2,413 WMT of 5A Ore delivered to Glencore. Bulk sample performed as expected through Murrin Murrin HPAL Plant
- ❑ All deleterious elements within Glencore off-take agreement specifications
- ❑ Final nickel grade and performance expected to be reported in current quarter
- ❑ Scheduling and capital/operating expenditure to complete DFS is near completion
- ❑ Underground drill position to be established to test depth extensions of the 5A channel



BKay haulage truck exiting the Murrin Murrin Operations after delivery

## 5A Nickel Deposit: A potential early nickel producing opportunity



*Current Planning: Develop both north and south decline simultaneously to maximise utilisation. Mine the 300 level to establish crown pillar of lower grade material and to safeguard the lower stopes. Mine the 280 level and cut-and-fill the best grade massive sulphide to the 290 level. Short 6m longhole cut and fill to the 300 level. Fill stope from the 300 drive and drop the crown pillar.*

### Definitive Feasibility Study (DFS) well advanced

- ❑ Progressing with underground mining method after evaluation against an open pit cut-back
- ❑ Clear advantages to underground mining which assist project economics and grade of ore produced when compared to the open pit cut-back option
- ❑ Underground extraction offers less dilution of the high-grade ore to assist optimum product blending





## Spargoville – Other Potential Near-Term Production Assets

### 5B Deposit

- ❑ Kambalda-style komatiite deposit similar to 5A with massive and matrix sulphides accumulating at base of a lava channel.
- ❑ **A 600m long decline (120m vertical depth) remains intact and accessible for refurbishment to allow mining activities to commence**
- ❑ Mined between 1975 - 1982 & 1992 - 1993 via open pit

### 5D (Andrew's) Deposit

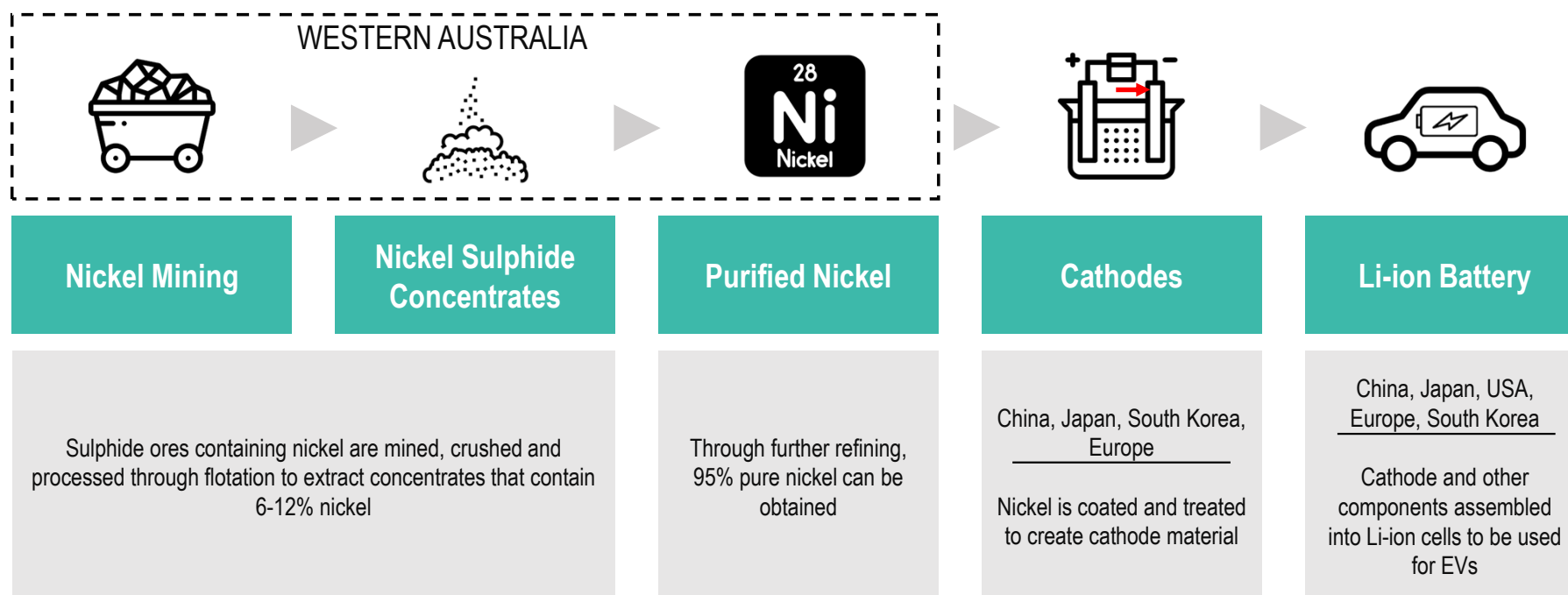
- ❑ Potential westerly continuation of the 5A komatiite channel and larger and more continuous than both 5A and 5B Deposits.
- ❑ Estimated pre-mining resource of ~18,000t Ni @ 2.48% Ni (Minotaur 2016) of which around 7,800t Ni were extracted.
- ❑ Deposit was mined via a 250m deep shaft. Previous work identified several remnant pillars left behind, including the unmined oxide zone at surface

### 1A Deposit

- ❑ Lies 4km north of 5A, 5B & 5D and is another Kambalda-style channel deposit
- ❑ Mined 1990 - 1992 via a 150m shaft and an internal decline down to 175m, seeing almost 4,300t Ni extracted @ 3.8% Ni.
- ❑ Drill data shows good down-plunge intercepts close to the workings.
- ❑ Deeper intersections down to 550m below surface confirm continuation of mineralisation at depth

## Spargoville - In the Nickel Supply Chain for Green Energy Solutions

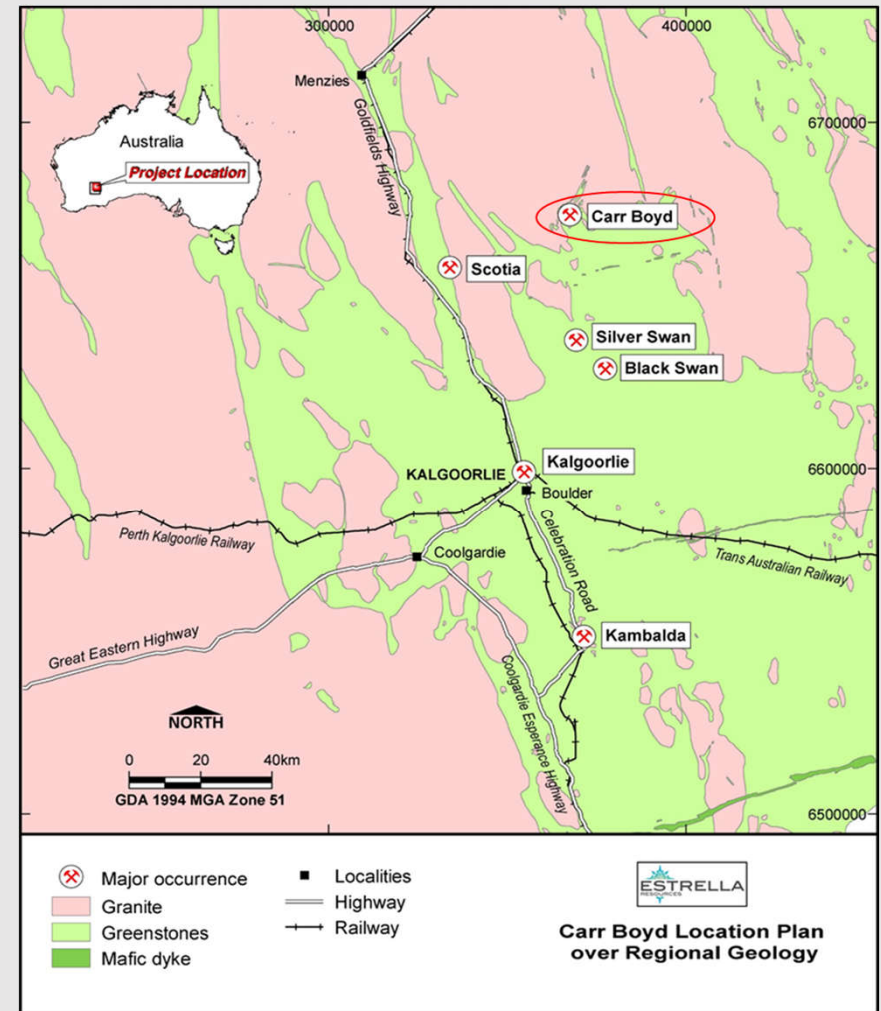
Estrella is focusing efforts toward the production of nickel sulphide, used for green energy solutions, starting with the development of the 5A nickel mine





## Carr Boyd Nickel Project (100% owned)

- ❑ Continuous tenure covering 259km<sup>2</sup>
- ❑ Tenements cover a large mafic igneous complex with multiple nickel and copper sulphide occurrences – most significant being the Carr Boyd mine
- ❑ Carr Boyd has delivered total production of 202,100t at 1.43% Ni and 0.46% Cu)
- ❑ Comprises:
  - ❑ 3 Mining Licences
  - ❑ 6 Exploration Licences
  - ❑ 1 Miscellaneous Licence
- ❑ Massive nickel sulphides identified from follow-up exploration, particularly at the T5 prospect
- ❑ Recent exploration review highlights multiple new high priority targets for drill testing



## Carr Boyd: A Large-Scale Opportunity

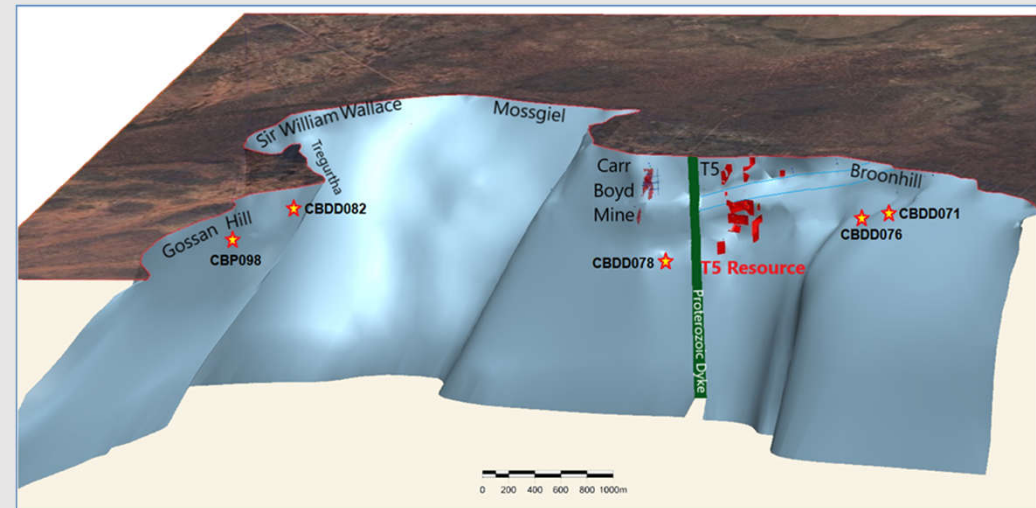


Relative size of Carr Boyd with respect to the City of Kalgoorlie-Boulder

- ❑ The Carr Boyd Igneous Complex is a major structural anomaly covering approximately 75km<sup>2</sup>
- ❑ While the Carr Boyd nickel deposit first discovered in 1968 it has received limited further exploration
- ❑ Historical work at Carr Boyd consisted of 2,250 holes for 161,000m which tested just 10% of the prospective basal contact “window”
- ❑ In 2018 Estrella acquired rights to the entire Carr Boyd Igneous Complex with the aim of bringing modern, systematic exploration
- ❑ The T5 discovery was made in 2019 by targeting the basal contact ~1,000m away from the initial Carr Boyd discovery
- ❑ Since then, numerous nickel-copper discoveries have been made across the Complex

## Carr Boyd Exploration Target, Maiden T5 MRE

- ❑ Carr Boyd Exploration Target of:
  - ❑ 5Mt to 7Mt at 0.7% to 1.5% Nickel and 0.3% to 0.5% Copper
  - ❑ Between 35,000 to 105,000 Nickel tonnes and 15,000 to 35,000 Copper tonnes
- ❑ Target supported by maiden T5 Inferred MRE
  - ❑ 0.86 Mt @ 0.66% Nickel and 0.42% Copper, T5 is open at depth
  - ❑ Contains an additional >12,000oz platinum and palladium and ~55,000 oz silver
- ❑ Carr Boyd boasts 16km of basal contact to be targeted by drilling and geophysics



*Location of the T5 MRE in red with respect to the 16km prospective basal contact imaged by seismic*

- ❑ **Broonhill:** CBDD076 – 6.23m (True Width) @ 0.6% Ni & 0.7% Cu including 1.2m @ 1.2% Cu
- ❑ **Gossan Hill:** CBP098 – 3m\* @ 0.6% Ni & 0.3% Cu, 0.8g/t 3PGE's at 114m
- ❑ **Gossan Hill:** CBDD082 intersects 5.5m\* of cloud sulphides at 531.5m, awaiting assays
- ❑ **T5 Extended:** CBDD078A hits 1.8m\* of remobilised, semi-massive sulphides within dyke awaiting assays

\* Down hole length quoted, true width cannot be estimated at this stage



## Carr Boyd: A Well-endowed Mineralised Complex



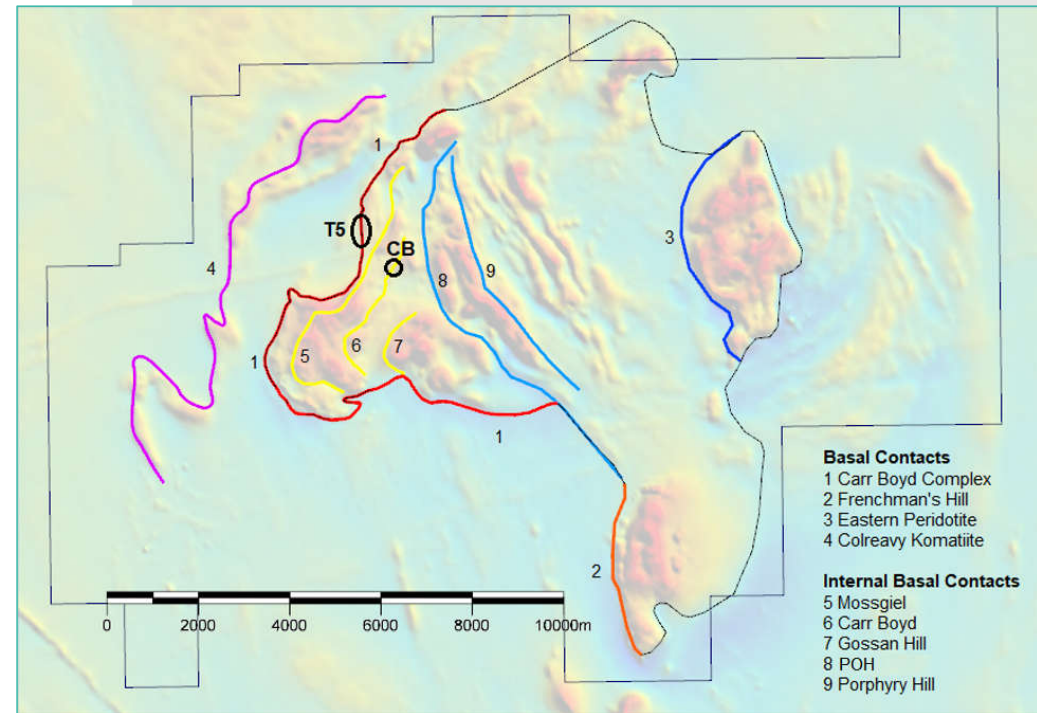
- ❑ Carr Boyd is a well-endowed mineralised complex, however the source of this mineralisation has historically been poorly understood
- ❑ Follow-up exploration has identified massive nickel sulphides throughout the complex and particularly at the T5 prospect.
- ❑ Shortly after T5 discovery, a scientific program to understand the fundamentals of the igneous complex began.
- ❑ Aim was to test assumptions made about several historical nickel-copper discoveries and identify and address the gaps in knowledge that remained.

# Carr Boyd Exploration Review

- ❑ Exploration review conducted in partnership with CSIRO to better understand Carr Boyd mineralisation
- ❑ Review incorporates CSIRO study and results from innovative seismic technology to create a more holistic understanding of when and where nickel mineralisation was distributed around Carr Boyd complex

## Findings:

- ❑ 30 targets prospective for economic nickel sulphides + PGEs identified for further exploration
- ❑ Nearby 16km Colreavy Komatiite now considered an additional high priority exploration target
- ❑ The study successfully identified:
  - ❑ Controls and ages of multiple nickel mineralisation events
  - ❑ All sulphides confirmed as magmatic in origin without tectonic remobilisation
  - ❑ Carr Boyd nickel deposit as in-situ and later than T5-Broonhill deposits
  - ❑ Trace element chemistry demonstrates potential for multiple deposits within the complex
- ❑ ESR investigating potential JV partners to fund concerted exploration effort



*The nine external and internal basal contacts as interpreted from all available datasets*



## R&D Refund Advance Received

- ❑ Radium Capital has recently provided a \$1M advance to Estrella's future refundable tax offset for eligible R&D expenditure conducted at Carr Boyd during FY2022-23.
- ❑ R&D activities primarily focused on:
  - ❑ Testing hypothesis relating to the formation and emplacement processes responsible for the Carr Boyd Igneous Complex.
  - ❑ The activities resulted in the formation of an improved genesis model that improves the identification of mineralisation.
  - ❑ Additional seismic work by Ultramag using cutting-edge technology with geophysical interpretation from Australia's leading hard-rock interpreter at Hard Rock Seismic have enabled Estrella to target the 16km long basal contact with unprecedented accuracy.







Contact:  
Chris Daws  
Managing Director  
M: +61 8 9481 0389

E: [info@estrellaresources.com.au](mailto:info@estrellaresources.com.au)







# APPENDICES

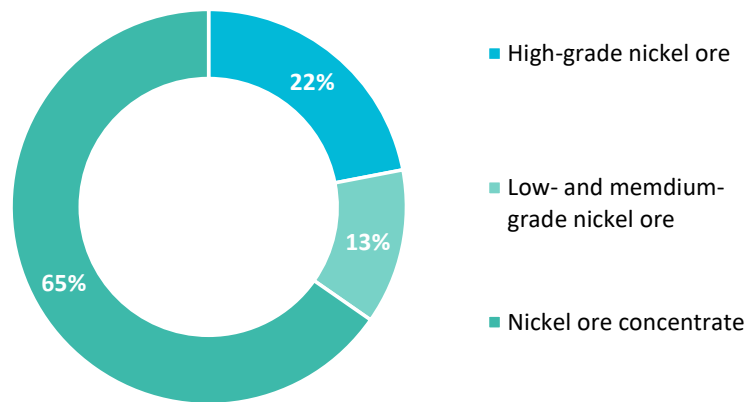


## Overall Nickel Market

Nickel output declines over the past years driven by slowdowns in infrastructure projects and production of nickel-based stainless steel goods in China is being offset by stronger nickel prices and demand outlook. This positive outlook includes new mines starting production, existing mines recommencing production, and other mines expand output. Further, nickel prices are anticipated to rise due to improved economic activity and demand for steel.

### EVs and other general battery usage drive significant Nickel demand

Product Segmentation for Nickel Ore Mining in Australia



Source: Ibisworld

#### Uses for Nickel

- Nickel is most commonly used in making alloys such as **stainless steel**
- Nickel is used in **batteries** including those used in hybrid and electric vehicles
- Nickel resists corrosion hence is used to plate other metals as protection such as in **toasters** and **electric ovens**
- A copper-nickel alloy is commonly used in **desalination plants**, which convert seawater into fresh water
- Nickel steel is used for **armour plating**, and other alloys of nickel are used in **boat propeller shafts** and **turbine blades**
- Nickel has a long history of being used in **coins**
- Nickel is used as a catalyst for **hydrogenating vegetable oils**

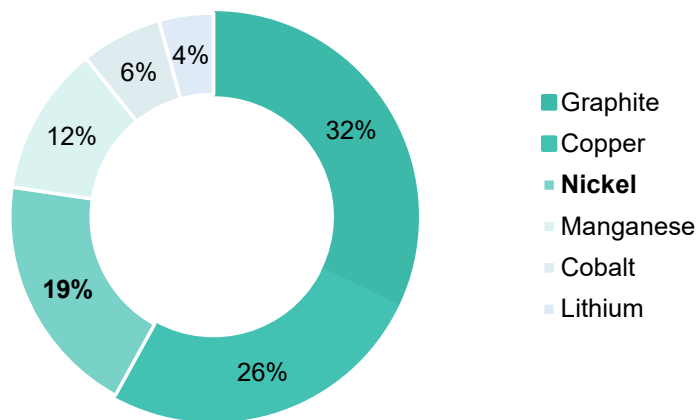


## Cathode and nickel demand are directly linked to EV battery demand growth

Nickel is a fundamental raw material in lithium-ion battery cathodes, and adding more nickel can boost a battery's energy density, translating into more range per pound of battery

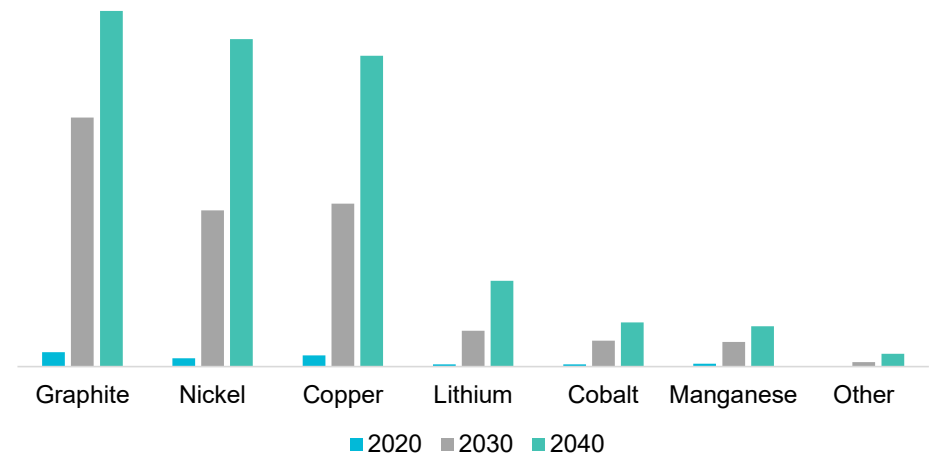
Given the commoditised nature of nickel, the nickel supply chart slopes downwards. However, nickel demand is increasing primarily driven by growing prevalence of EVs and nickel's importance in EV battery production. Hence, the demand for nickel will overtake supply in the near future, and result in rising nickel prices.

**Primary Minerals Segmentation per EV**  
%



Source: MiningTechnology, IEA

**Mineral Demand from EV Sector Forecast**  
thousand tonnes



Source: MiningTechnology, IEA

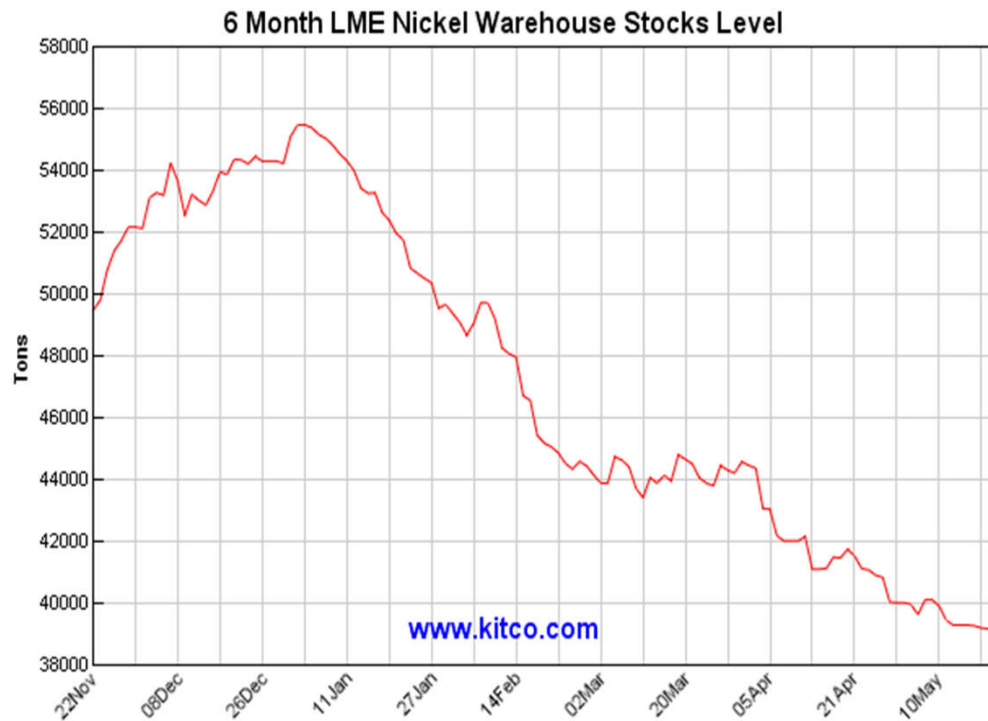
## Capital Structure

<b>ASX Tickers</b>	<b>ESR &amp; ESROA</b>
<b>Share Price</b>	A\$0.01
<b>Market Cap</b>	A\$14.8M
<b>Cash</b>	~ A\$1.3M (as at 25 <sup>th</sup> May 23)
<b>Enterprise Value</b>	\$13.5M
<b>FPOS</b>	1,483,571,869
<b>Options</b>	389,363,575 2c exercise July 2023 (ASX:ESROA) 16,600,000 20c exercise Nov 2023 63,391,928 4c exercise Oct 2023 45,750,000 6c exercise Jan-April 2025 25,000,000 3c exercise Dec 2025
<b>Major Shareholders</b>	Board & Management 9.2% Apollo Phoenix Resources 2.7%



## LME Ni Stocks vs Ni Price – what is about to give?

Significant battery demand generated by rapid uptake of EVs and other supply chain issues should drive price increases



### LME Cash Nickel Price

LME Nickel Official Prices graph

