

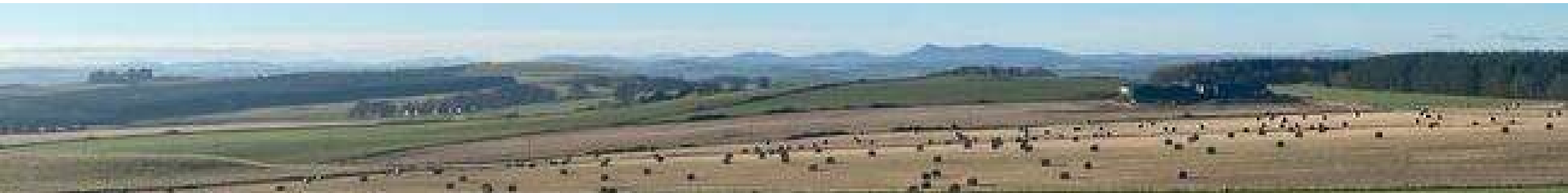


Mineral exploration in Aberdeenshire for the energy transition

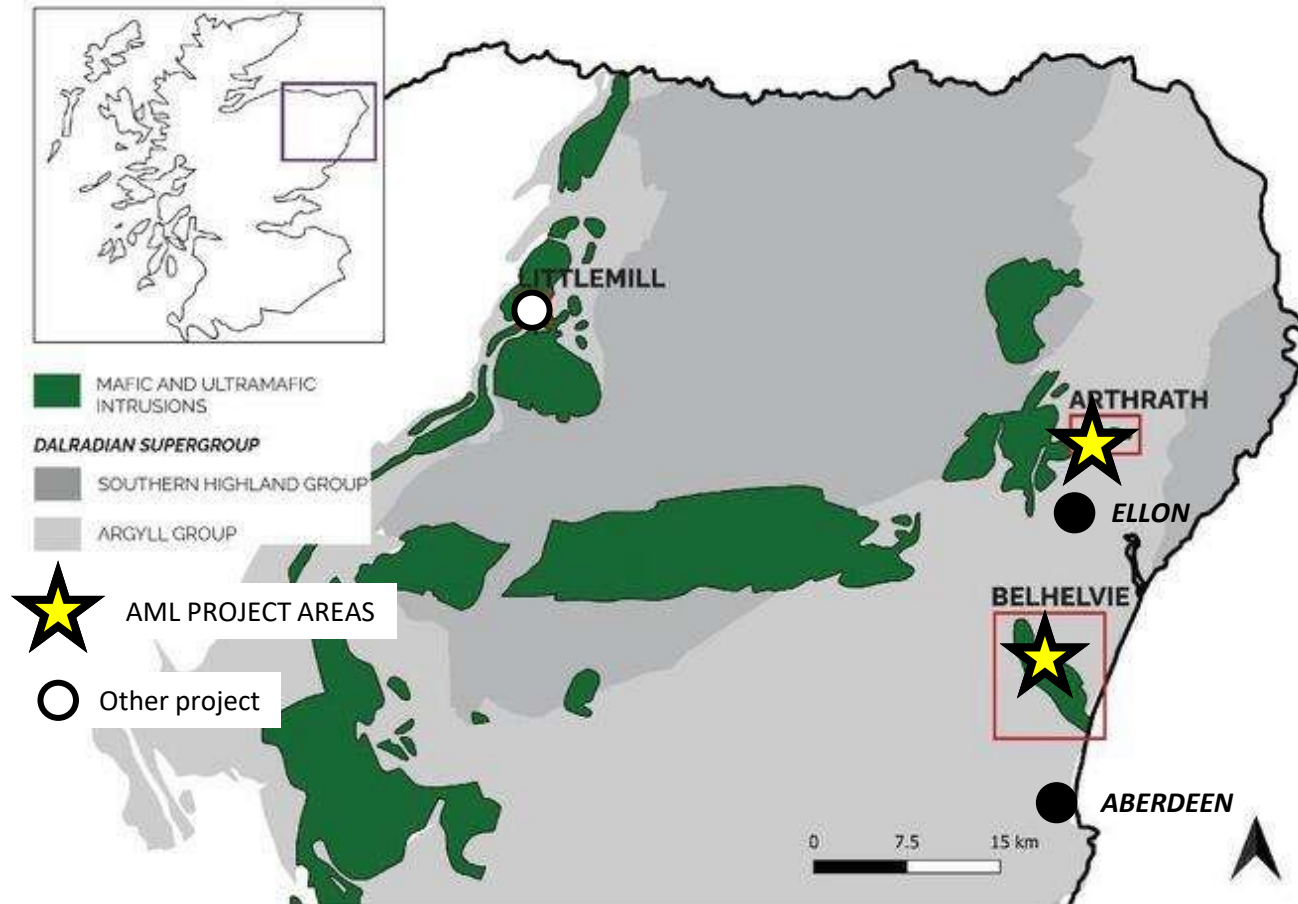
F. Gardiner, CEO

08 May 2024

North East Scotland Agriculture Advisory Group



Aberdeen Minerals

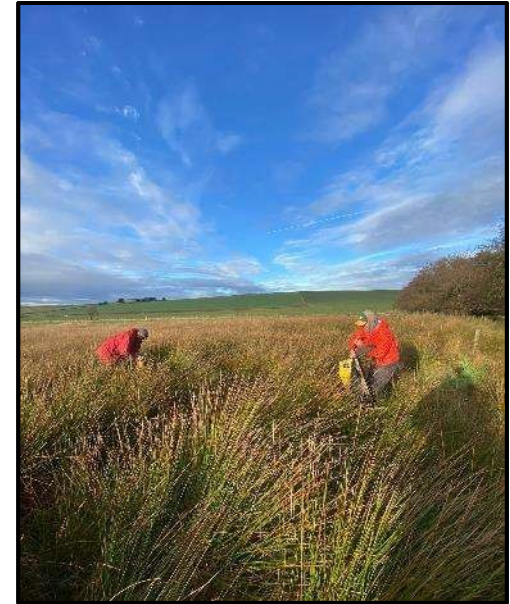


Privately held mineral exploration company investing since 2018 in exploration for nickel-copper-cobalt (Ni-Cu-Co) minerals in North East Scotland

- Headquartered & managed locally in Ellon
- 100% interest in exclusive access & exploration agreements with landowners covering >7,500 ha
- District-scale mineral exploration project centred on **Arthrath** – UK's largest nickel deposit - discovered by Rio Tinto in 1968 6km north of Ellon
- Recent financing initiatives:
 - UK Gov support via £300k grant from Automotive Transformation Fund
 - £5.5 million funding package to invest in Aberdeenshire over next 24 months

Minerals & the agricultural sector

- Minerals in the UK form part of the landowner's property
 - Sometimes minerals may be excepted (surface owners & mineral owners can be different)
- Mineral companies partner with landowners to evaluate mineral potential of their land
 - We work with Aberdeenshire farmers through ~50 exclusivity & access agreements
- We aim to always work closely with farming community, minimise disruption
 - Very grateful for the cooperation of farmers, landowners & local communities as we carry out our work



The global & local mineral supply challenge



There is a huge global minerals supply challenge facing delivery of an energy transition

UN Trade and Development reports that to achieve 2030 net-zero emission targets, the industry may need around 80 new copper mines, 70 new lithium and nickel mines each, and 30 new cobalt mines.¹

Scotland & UK rely almost entirely on overseas supply chains for these raw materials

UK jobs and industries rely on minerals vulnerable to market shocks, geopolitical events and logistical disruptions, at a time when global demand for these minerals is rising faster than ever.²

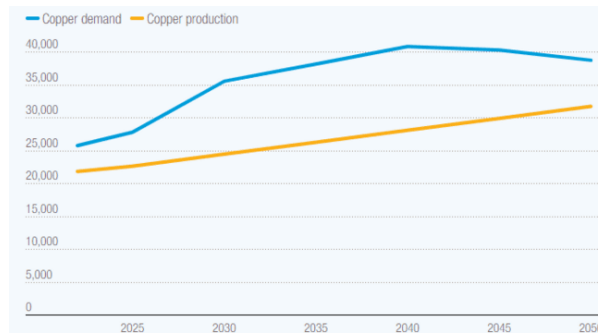
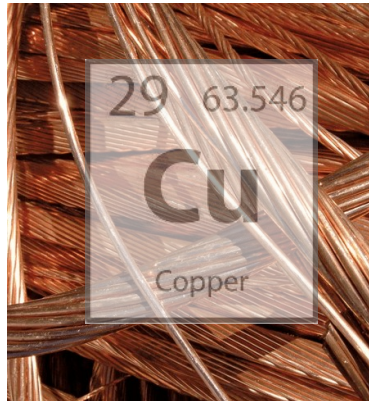
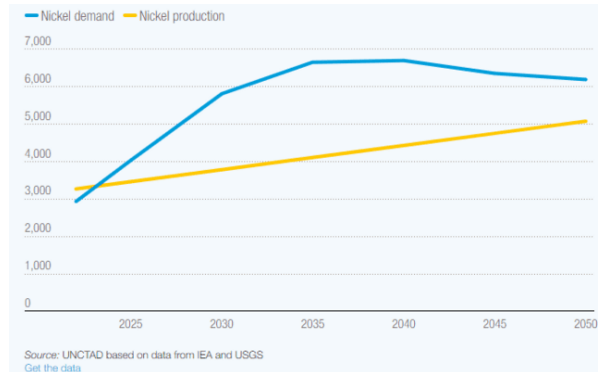
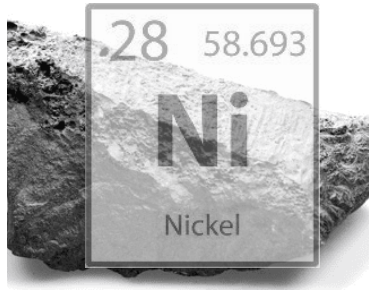
Building domestic resilience starts with mineral exploration in geologically favourable areas like Aberdeenshire

Strategic and economic opportunity to identify and measure mineral resources, and develop them if financially, environmentally and socially viable to do so.

¹ <https://unctad.org/news/critical-minerals-boom-global-energy-shift-brings-opportunities-and-risks-developing-countries>

² <https://www.gov.uk/government/publications/uk-critical-mineral-strategy/resilience-for-the-future-the-uks-critical-minerals-strategy>

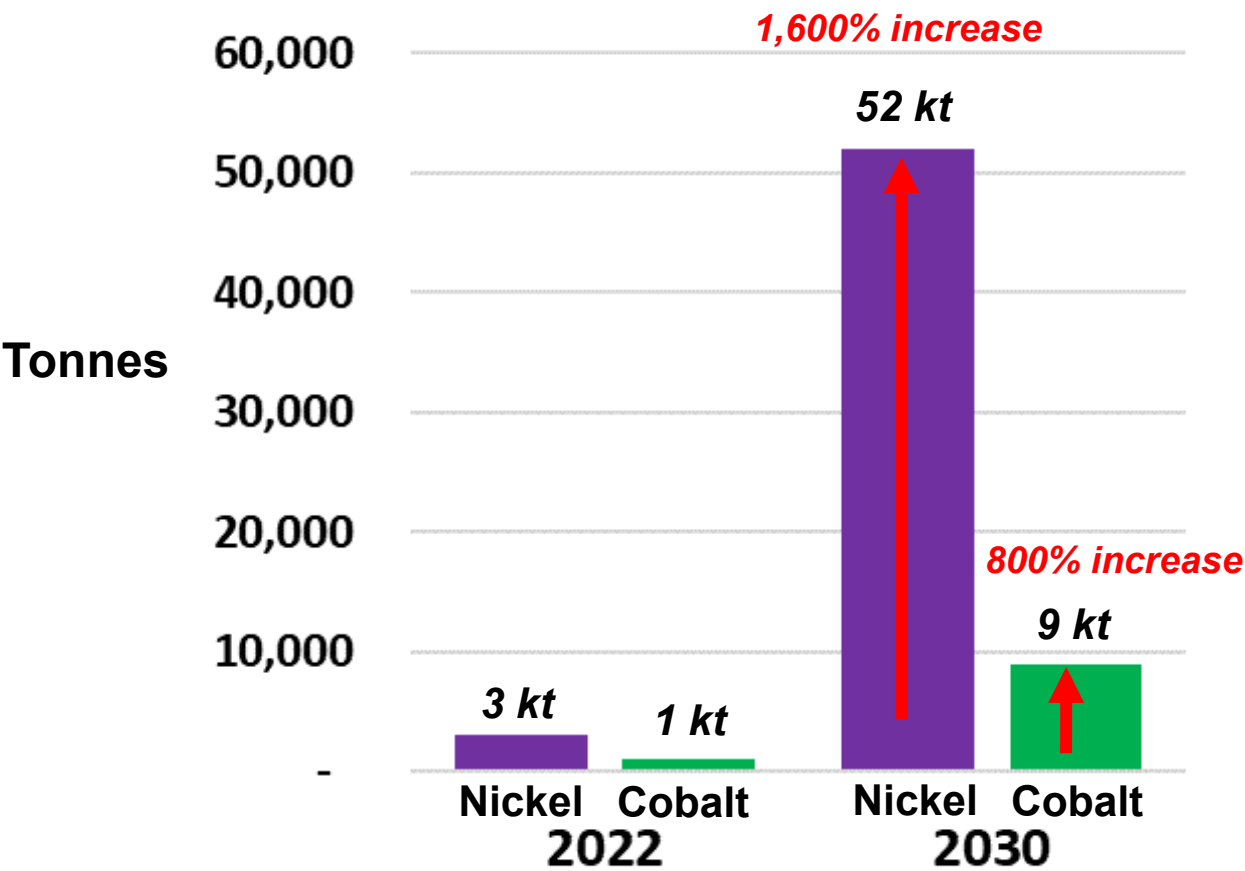
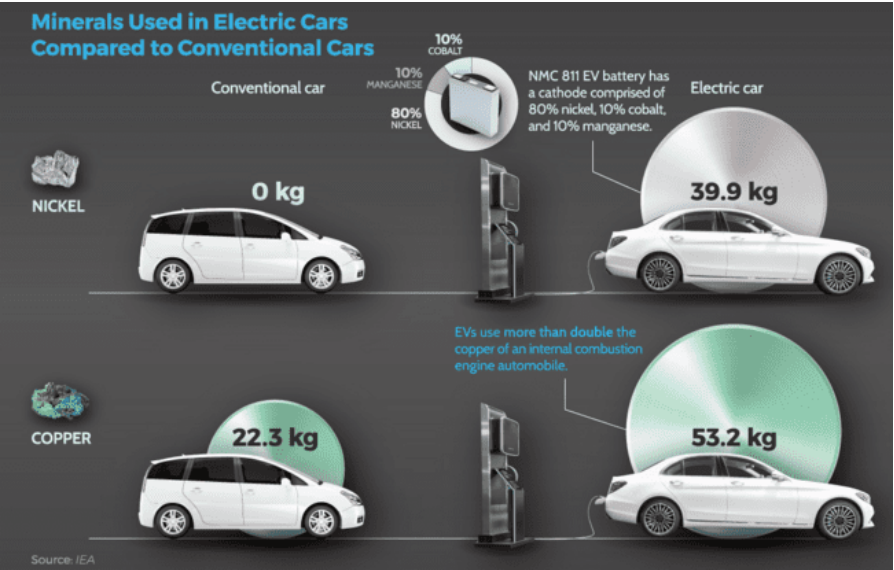
Why explore for nickel, copper & cobalt



- Metals essential to **electrification of the economy**
 - Nickel & cobalt – cathode materials for EV batteries
 - Copper – electrical transmission
- UK currently **100% reliant on imports**
- Known occurrences in bedrock deposits in North East Scotland since 1960s, but remain undeveloped
 - High value, prospective metals to target

UK battery metals in high demand

Forecast of UK cathode material demand
(1.3 million EVs per yr by 2030)



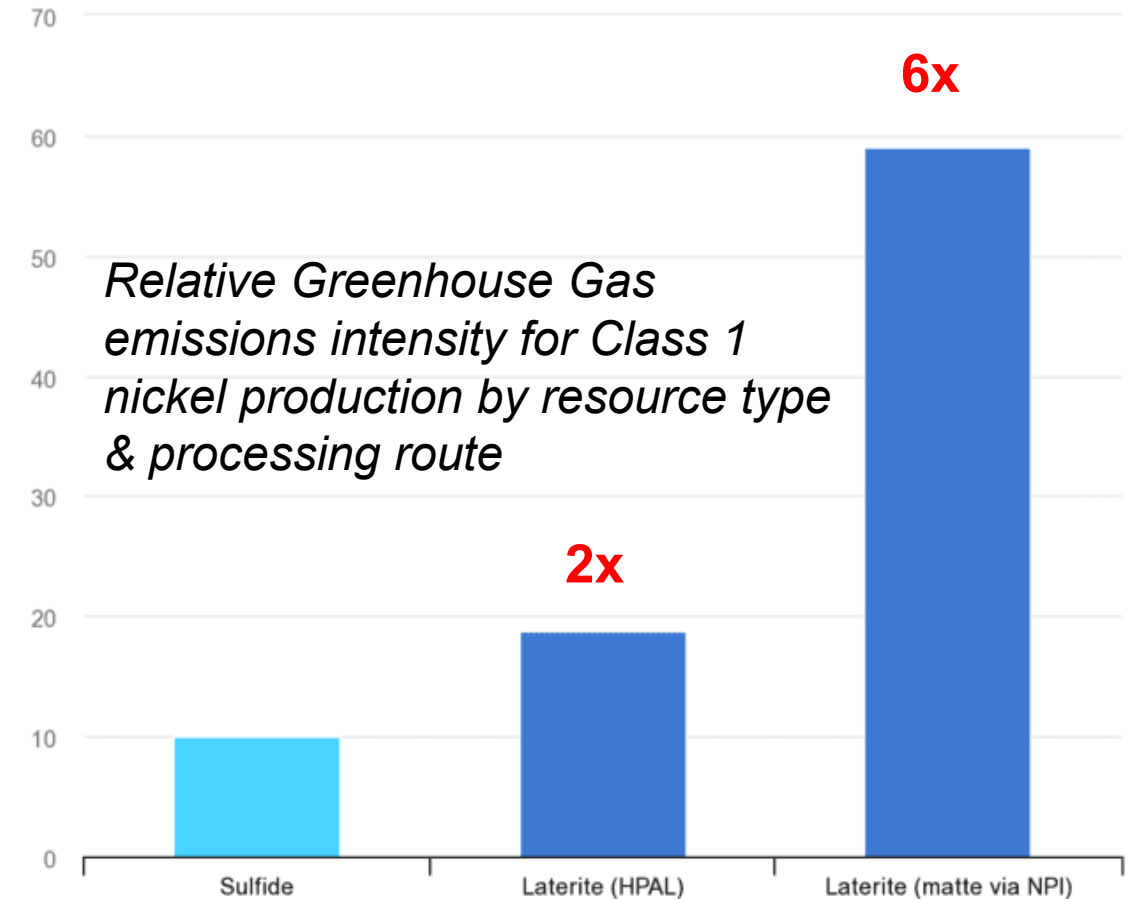
Source: Advanced Propulsion Centre

Indonesia is the dominant producer of nickel



Source: IEA

High carbon footprint of Indonesian nickel

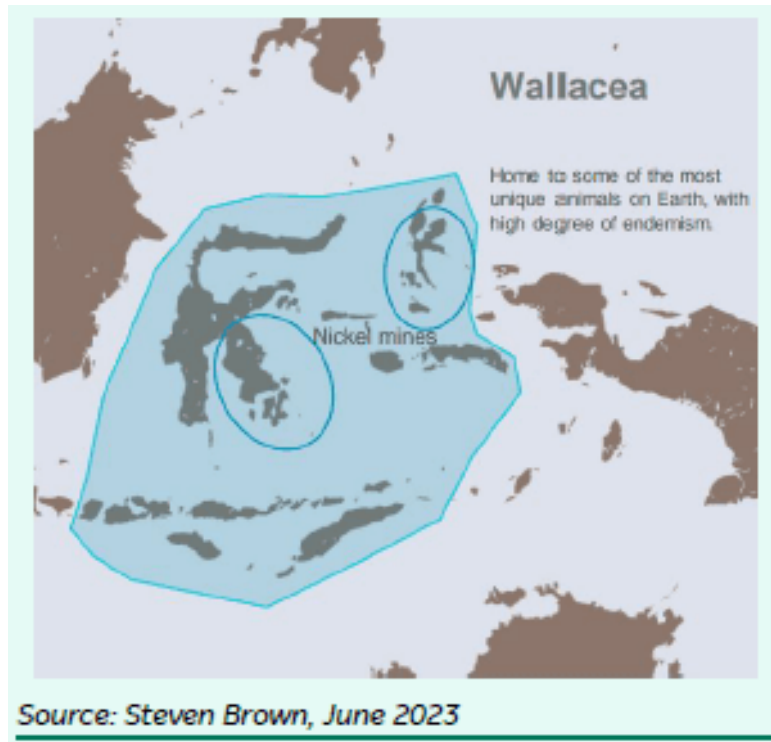


**Sulphide nickel,
e.g., Scotland**

Indonesian nickel

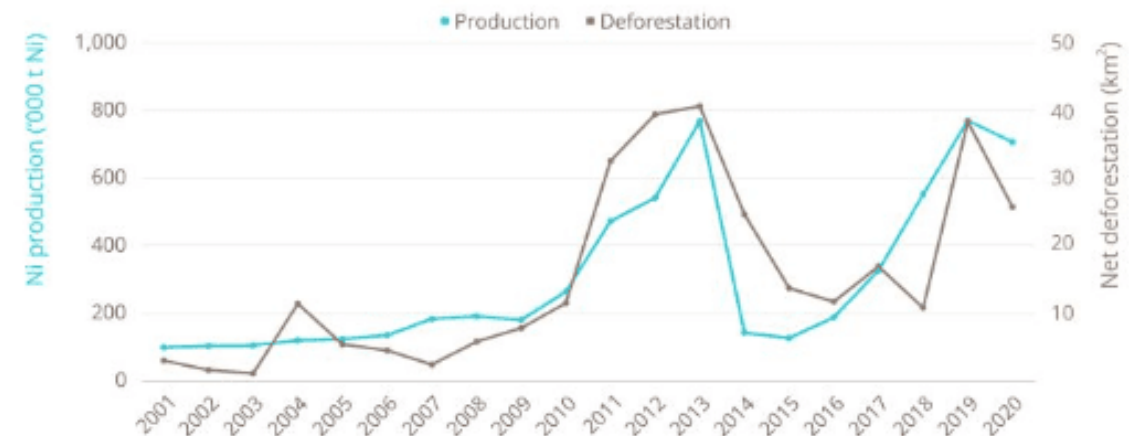
Indonesian nickel production & biodiversity loss

Indonesian nickel mining & refining takes place in one of the most biodiverse places on Earth



Deforestation and nickel mining correlation

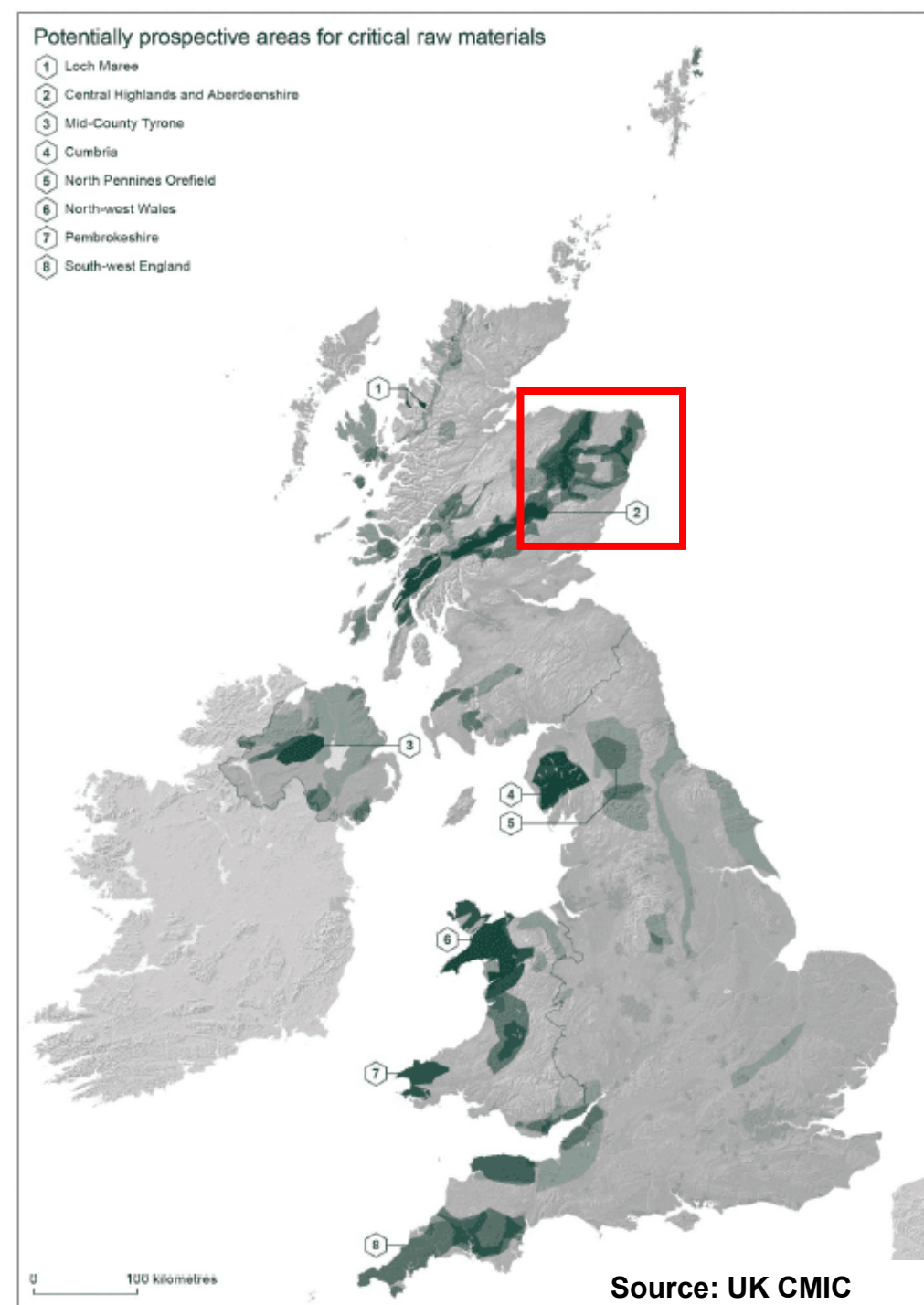
Source: Steven Brown, Feb-24



UK & NE Scotland economic opportunity

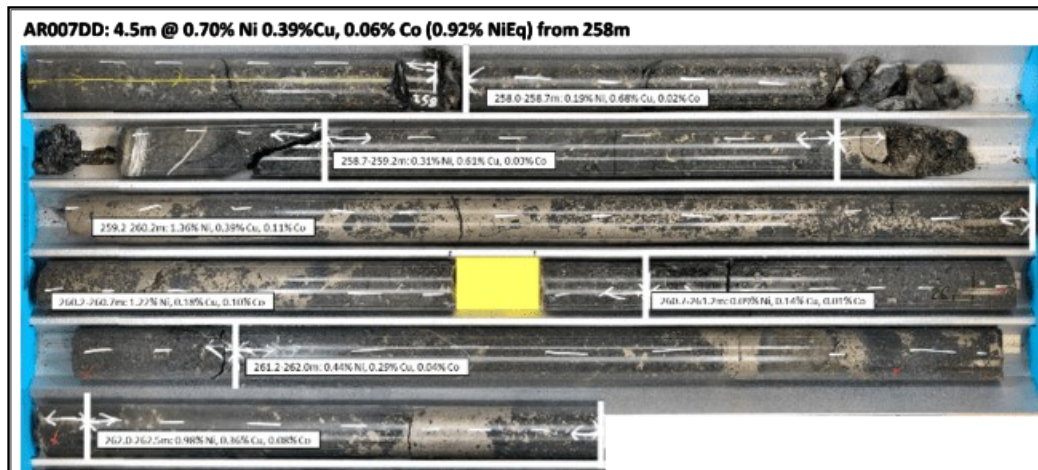
Opportunity to explore for & produce raw materials for the energy transition:

- Develop **domestic capacity** & manufacturing **supply chain resilience**
- Meet *some* of our long-term mineral requirements
- Onshore environmental & social responsibilities of mining & processing
- Onshore **economic benefits**, diversify rural economies
- NE Scotland – identified by BGS as one of the **top UK targets for critical raw materials**

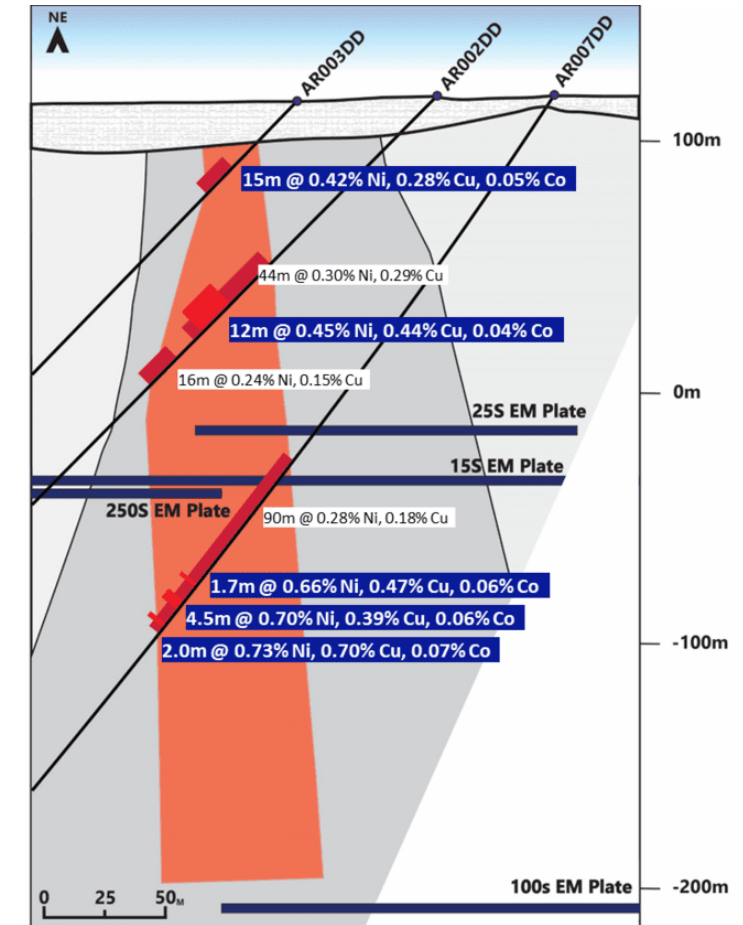


Favourable geology for nickel deposits

- Deposit discovered at Arthrath in 1960s, but only limited drilling
 - Aberdeen Minerals drilling shows deeper potential
- Deposits & host rocks formed **470 million years ago** below massive mountain range joining N. America, Scotland & Scandinavia
- New geological models, new exploration technologies & strategic incentive = **compelling environment for mineral discoveries**



Nickel-copper-cobalt
mineralised rocks in
drill core from
Arthrath

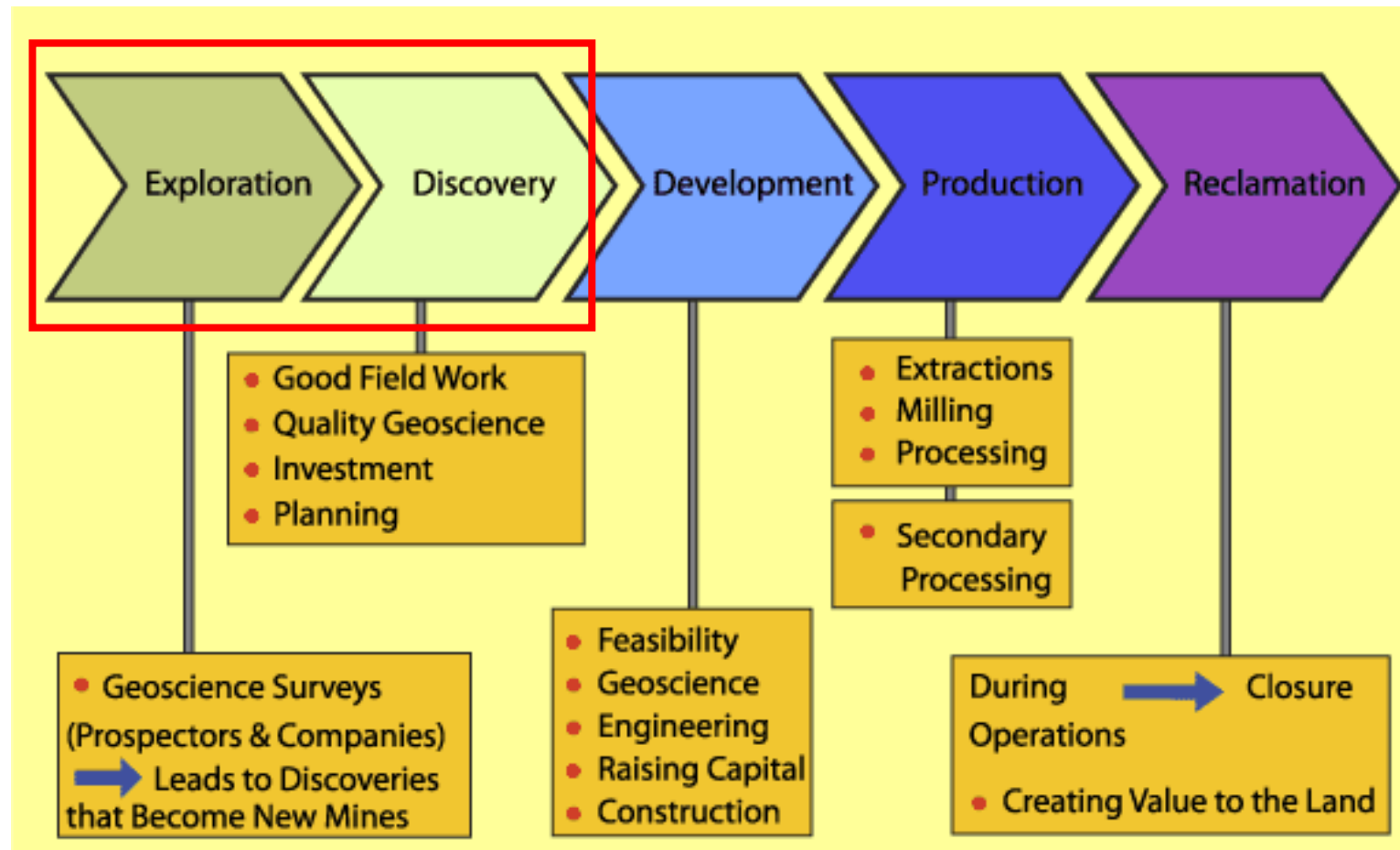


Arthrath cross-section

Managing expectations: the Mining Cycle

*Our projects are currently
at the Exploration /
Discovery stage*

*A lot of studies & planning to be
done before being ready with any
development decision*

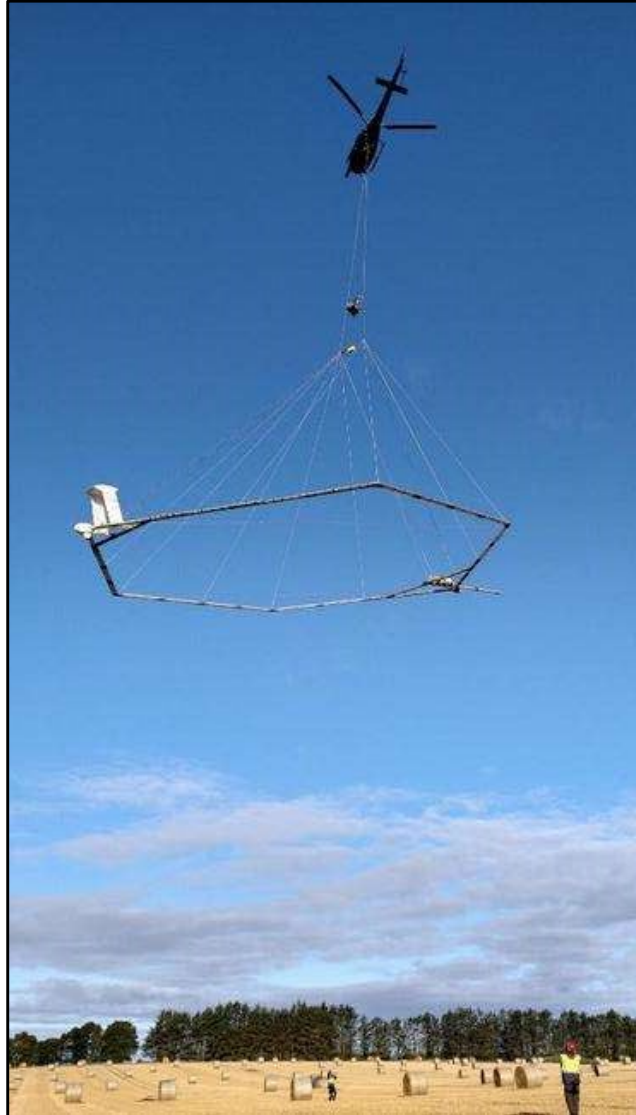


Geochemical exploration & prospecting



Geophysical exploration

Airborne geophysical survey, Sep-22



Ground geophysical survey, Dec-23



Drilling



Progress & plans

- Positive results at Arthrath warrant further investments in exploration drilling:
 - **Next round due to commence in June/July 2024**
- Further exploration survey work to test earlier stage targets across district
- Grow land position with new landowner agreements
- Expand staff & facilities to support increase in survey work
- Increase community & stakeholder engagement commensurate with project progress



Thank you

