

# CASTLE



## Charging Ahead: The Kambale Graphite Project

Peak Asset Spotlight 2023 Investor Conference, Perth

25 October 2023

ASX: CDT



# Disclaimer & Competent Person Statement



**Cautionary Statement:** This presentation does not constitute investment advice. Neither this presentation nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sale of shares in any jurisdiction. This presentation does not take into account any person's particular investment objectives, financial resources or other relevant circumstances and the opinions and recommendations in this presentation are not intended to represent recommendations of particular investments to particular persons. All securities transactions involve risks, which include (among others) the risk of adverse or unanticipated market, financial or political developments.

To the fullest extent permitted by law, Castle Minerals Limited ("Castle" or "the Company") does not make any representation or warranty, express or implied, as to the accuracy or completeness of any information, statements, opinions, estimates, forecasts or other representations contained in this presentation. No responsibility for any errors or omissions from this presentation arising out of negligence or otherwise is accepted.

**Forward Looking Statement:** This presentation may include forward looking statements. Forward looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Castle Minerals Limited. These risks, uncertainties and assumptions include commodity prices, currency fluctuations, economic and financial market conditions in various countries and regions, environmental risks and legislative, fiscal or regulatory developments, political risks, project delay or advancement, approvals and cost estimates. Actual values, results or events may be materially different to those expressed or implied in this presentation. Given these uncertainties, readers are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this presentation speak only at the date of issue of this presentation. Subject to any continuing obligations under applicable law and the ASX Listing Rules, Castle Minerals Limited does not undertake any obligation to update or revise any information or any of the forward-looking statements in this presentation or any changes in events, conditions or circumstances on which any such forward looking statement is based.

**Competent Person Statement :** The scientific and technical information in this Report that relates to the geology of the deposits and exploration results is based on information compiled by Mr Stephen Stone, who is an Executive Director of Castle Minerals Limited. Mr Stone is a Member of the Australian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit 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'. Mr Stone is the Qualified Person overseeing Castle's exploration projects and has reviewed and approved the disclosure of all scientific or technical information contained in this announcement that relates to the geology of the deposits and exploration results. Castle Minerals Limited has a firm policy to only utilise the services of external independent consultants to estimate Minerals Resources. The Company also has established practices and procedures to monitor the quality of data applied in Mineral Resource estimation, and to commission and oversee the work undertaken by external independent consultants.

Information in this report that relates to the geological interpretation and Mineral Resources is based on information compiled by Jamie Logan, a full time employee of Palaris Australia Pty Ltd, under the direction and supervision of Dr Allan John Parker. Dr Parker is a Member of the Australasian Institute of Geoscientists, an employee of Palaris Australia Pty Ltd, Director of Geosurveys Australia Pty Ltd, a Non-Executive Director of Centrex Limited and was formerly Managing Director of Lincoln Minerals Limited. Dr Parker has sufficient experience relevant to the styles of mineralisation and to the activities which are being presented to qualify as a Competent Person as defined by the JORC code, 2012. Dr Parker consents to the release of the information compiled in this presentation in the form and context in which it appears.

In all cases Mineral Resources are estimated and reported in accordance with the "Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code. Mineral Resources reported in accordance with the 2012 Edition (Kandia 8000 Zone and Kpali) were prepared by Castle Minerals Limited and reviewed by Runge Limited.

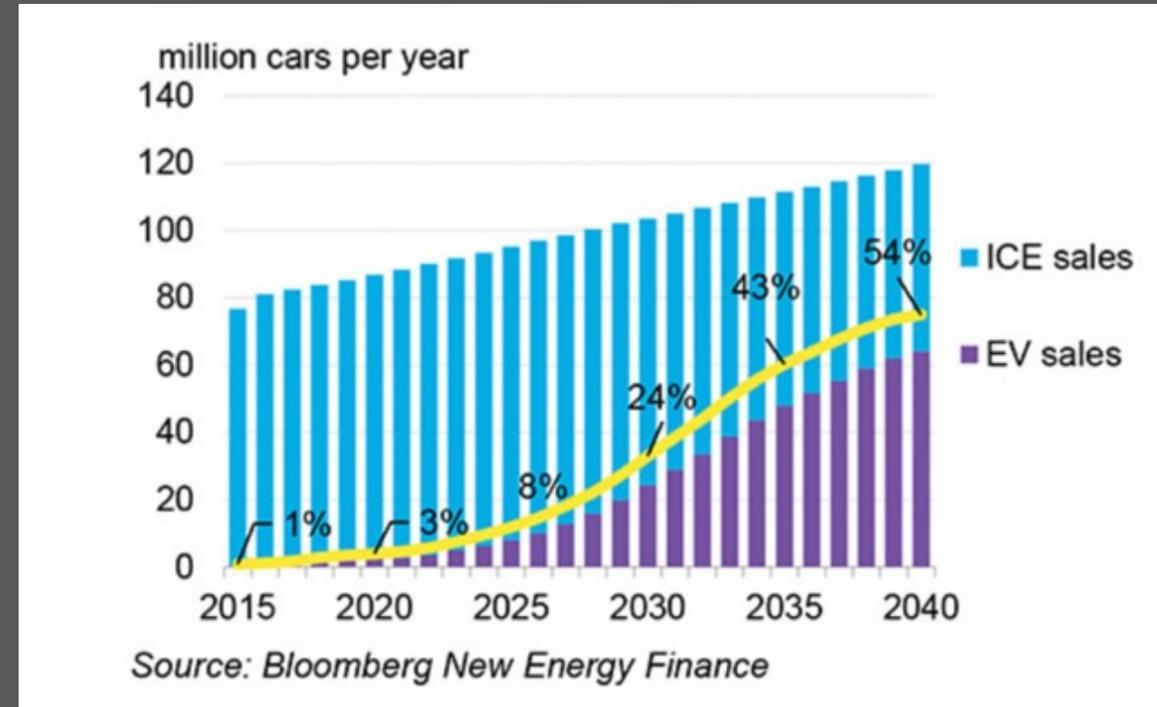
The Company confirms that all material assumptions underpinning the Mineral Resources and any forecast information continue to apply and have not materially changed. Further information on Castle Minerals Limited and its Ghana projects and Minerals Resources can be found on its website at [www.castleminerals.com](http://www.castleminerals.com) which contains copies of all continuous disclosure documents to ASX, Competent Persons' Statements and Corporate Governance Statement and Policies.

The information in this Release that relates to metallurgical test work was managed by Independent Metallurgical Operations Pty Ltd ("IMO") and is based on, and fairly represents, information and supporting documentation compiled and/or reviewed by Mr Peter Adamini BSc (Mineral Science and Chemistry) who is a member of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Adamini is a full-time employee of IMO who has been engaged by Castle Minerals Ltd to provide metallurgical consulting services. Mr Adamini consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

**Market and industry Data:** This presentation includes market share information and industry data and forecasts, which have been obtained from independent industry publications. Although these sources are believed to be reliable, no independent verification of the data has been made nor the underlying economic assumptions relied upon therein ascertained. Third-party sources generally indicate that they have obtained their information from sources believed to be reliable, but do not guarantee the accuracy and completeness of such information. It is believed that the market and industry data presented throughout this presentation is accurate, but no assurance as to the accuracy or completeness thereof is provided. Castle cannot and does not provide any assurance as to the accuracy or completeness of such included information. Market forecasts, in particular, are likely to be inaccurate, especially over long periods of time.

# Graphite: Did you know?

- A 'Critical Mineral' for achieving "clean energy", "net zero" ambitions.
- Lithium-Ion Batteries ("LiB") dominate EV batteries, stationary power storage units and other applications.
- Graphite **95%** of an LiB anode. **30kg - 60kg** per EV.
- ~**3kg** of fine-flake concentrate reqd. to produce **1kg** of micronised, spheronised, purified, coated Battery Anode Material (BAM).
- **Another 100M – 120M passenger EVs by 2030\***. Others say many more.....
- Current production of natural fine flake graphite wholly inadequate to meet forecast EV sales.
- Forecast demand to 2030 for natural graphite 4x current supply.
- Natural flake graphite likely to exceed synthetic graphite use in anodes (very high CO<sub>2</sub> footprint), outside of China.



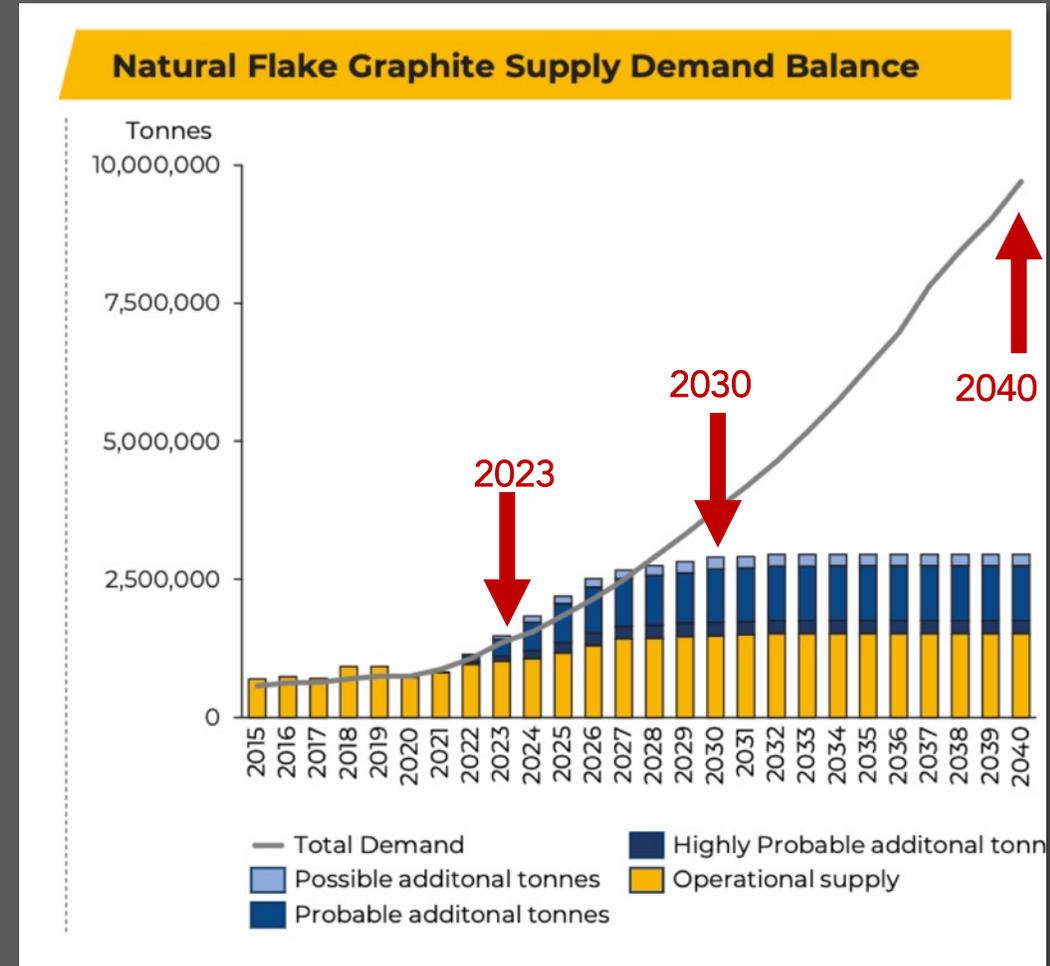
Forecast annual global light duty vehicle sales

\*IEA Global EV Outlook 2023.

# Major Demand – Supply Disconnect

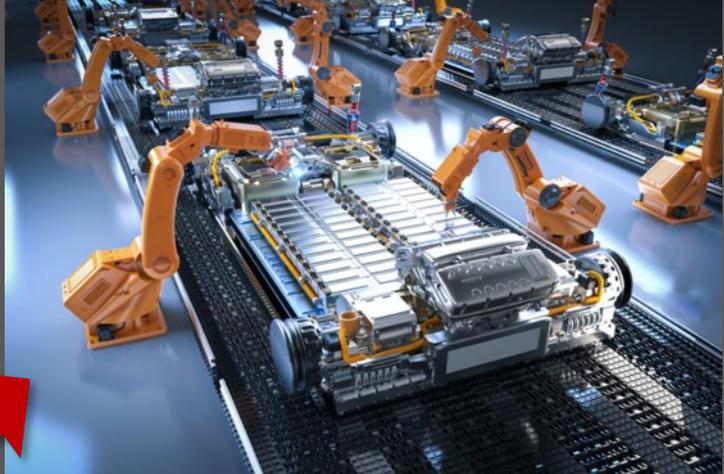
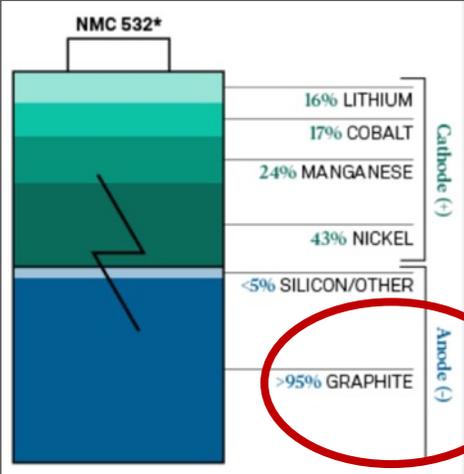
- ~400 'gigafactories' (LiB manufacturing plants) planned by 2030.
- Many more new graphite mines needed to meet demand.
- **Supply disconnect:** Gigafactories much faster to build than mines are to find, develop and to have their BAM 'qualify'.
- Most possible / probable mining projects way-off development decisions and/or financing.
- Massive over reliance on China (~95% BAM production) by USA, EU and other EV producers.
- Much of proposed new non-China located production already contracted to Chinese off-takers.
- **China now importing natural graphite.**
- Billions US\$ (IRA\*) and Euros (CRMA\*) being directed to ensure supply chain security.
- EV producers beginning to step down the chain (ref. lithium).

**STOP PRESS:**  
 China announces export restrictions on natural and synthetic graphite and related products.



Commentary sources: Bloomberg, Fastmarkets, McKinsey, Macquarie, Benchmark, Reuters, International Energy Agency, S&P Global.  
 \* Inflation Reduction Act and Critical Raw Materials Act

# Looming Supply Chain Bottleneck



Tesla's Berlin Gigafactory has lodged plans to expand from 500,000 cars per year to 1,000,000.



~400 Gigafactories Operating by 2030?

Commentary sources: Bloomberg. Fastmarkets. McKinsey. Macquarie. Benchmark. Reuters. International Energy Agency. S&P Global.

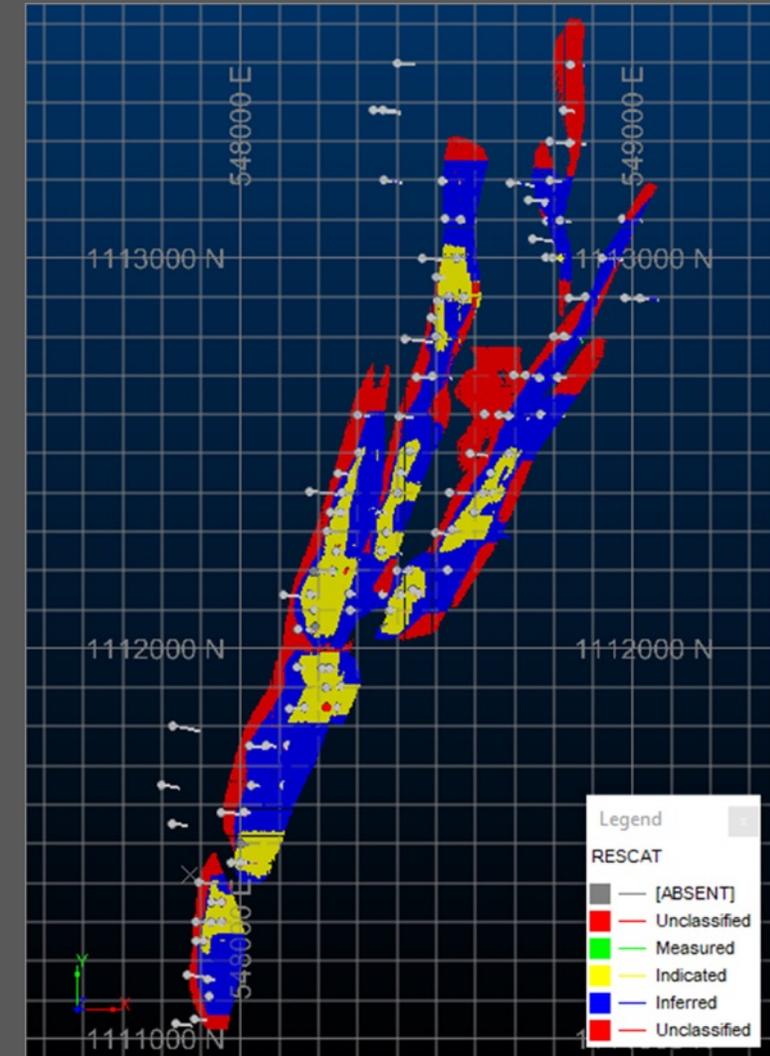
# MRE Update: 22.4Mt and 1.9Mt Contained Graphite

Plan view of resource classification with drilling

Classification (5% TGC Cut-Off)	Tonnes (kt)	Contained TGC (kt)	TGC	%
Indicated	9,556	843	8.8%	43%
Inferred	12,872	1,096	8.5%	57%
<b>Total</b>	<b>22,438</b>	<b>1,939</b>	<b>8.6%</b>	

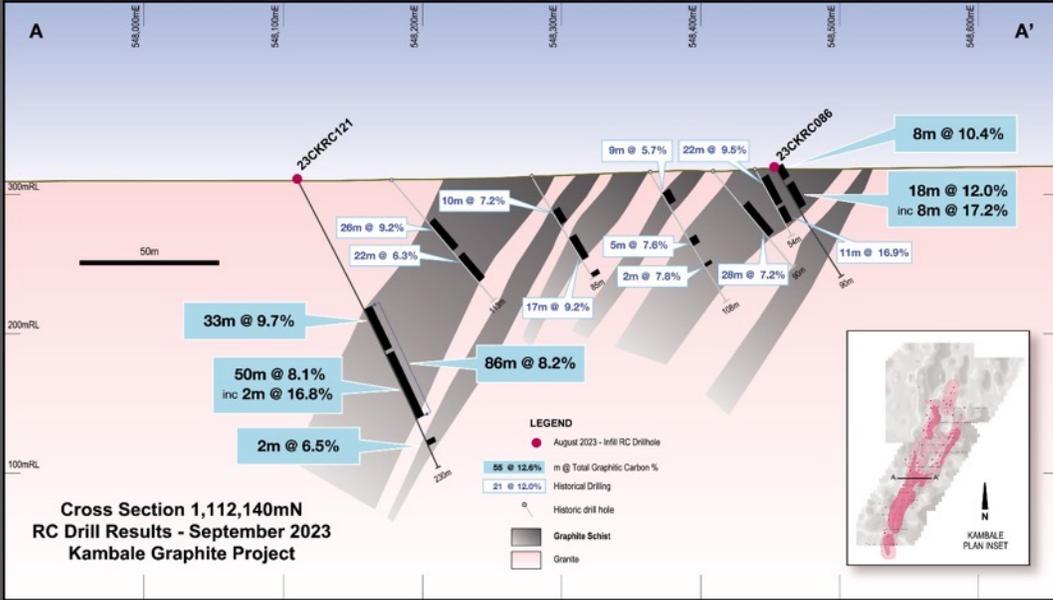
Independent JORC Code 2012 Mineral Resource Estimate<sup>1,2</sup>  
 (Refer ASX release 23 October 2023)

- **38%** increase in contained graphite.
- **43%** Indicated JORC classification (**55%** increase in contained graphite).
- **424 holes for 21,600m** has confirmed multiple, sub-parallel, thick, consistently mineralised graphitic schist zones. 2.5km N-S and <0.5km E-W.
- Shallow depth and good widths conducive to lower-cost open-cut mining.
- MRE to 120m below surface (mineralisation extends to at least 150m below surface and remains open).

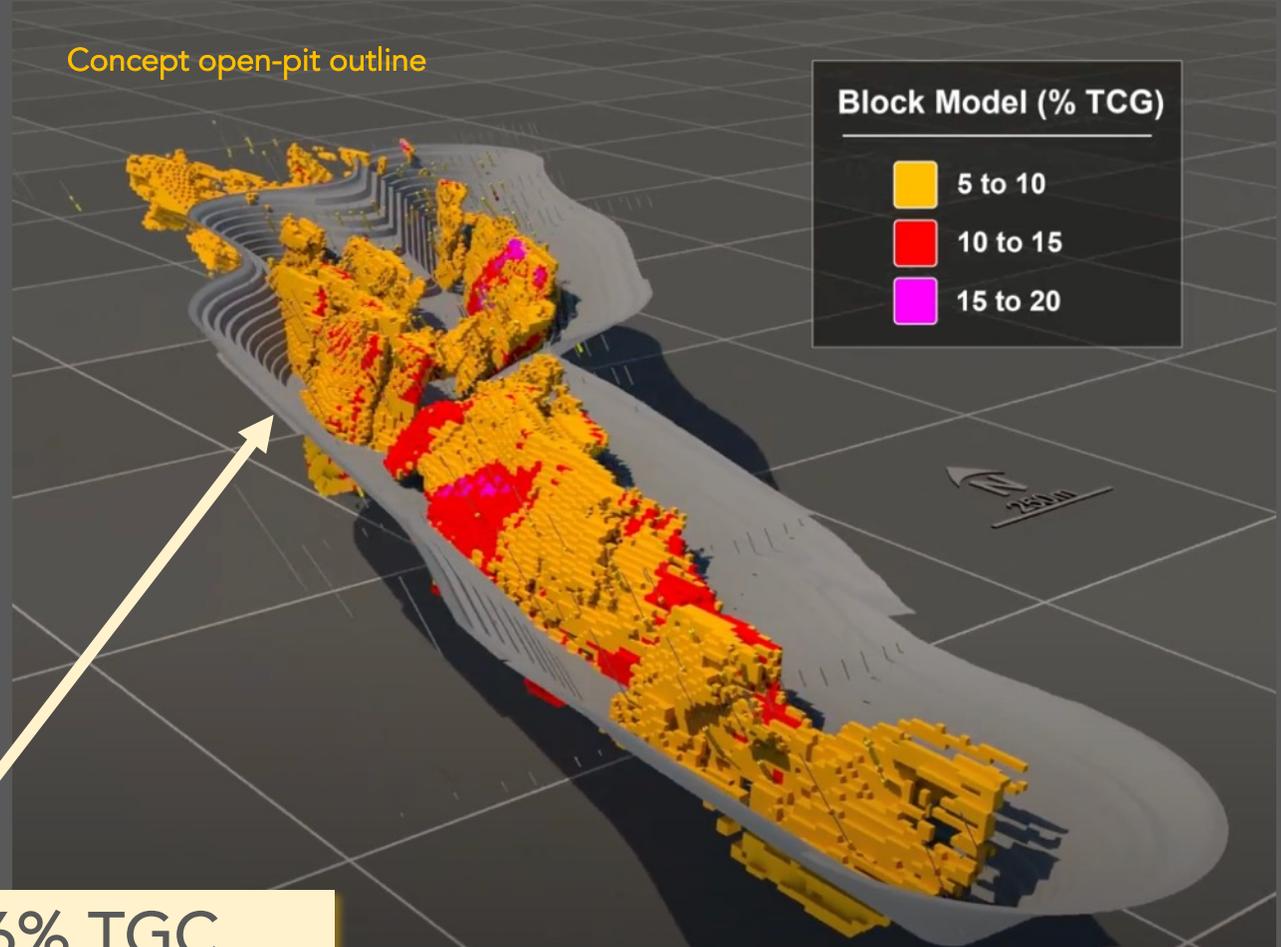


1. 23 October 2023 MRE based on 424-hole, 21,600m database  
 2. Undertaken by Palaris (Australia) Ptd Ltd

# Shallow, Multiple, Wide Lens



Mineralisation from surface.  
Open at depth. Robust, thick intercepts



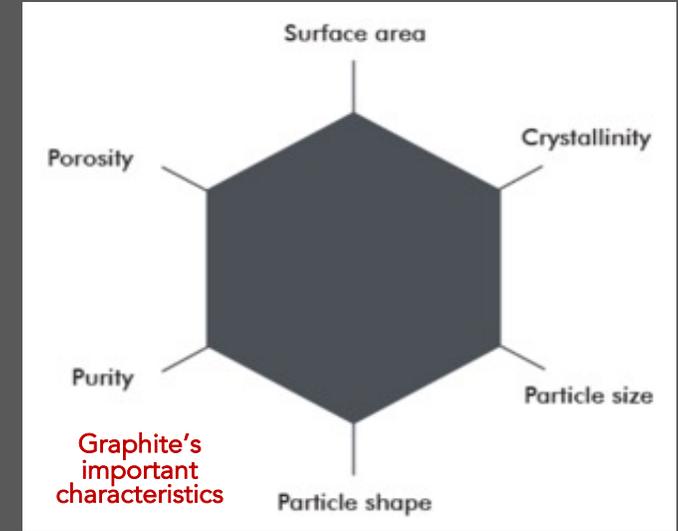
22.4Mt at 8.6% TGC  
(1.9Mt contained graphite)

Q-Code for access to YouTube  
project fly-through animation



# Commercial Grade Bulk, Fine Flake Concentrate Produced

- **95.1% TGC commercial specification** bulk fine flake graphite concentrate produced using conventional grind-flotation circuit (IMO P/L and Metallurgy P/L, Perth)
- Used 215kg unweathered, composited diamond core samples extracted from representative mineralised zones.
- Concentrate now with ProGraphite laboratories, Germany, for advanced testing to confirm use in battery anode manufacture.
- Concentrate will undergo micronisation, spheronisation, purification, coating, electrochemical and other battery performance tests.



# Excellent Development Credentials



- **Minimal infrastructure capital requirements:**

- ✓ Largely green-grid power from 400MW Bui hydro dam.
- ✓ Plentiful potable water.
- ✓ Quality local and regional roads.
- ✓ Daily commercial flights from Accra to nearby Wa.

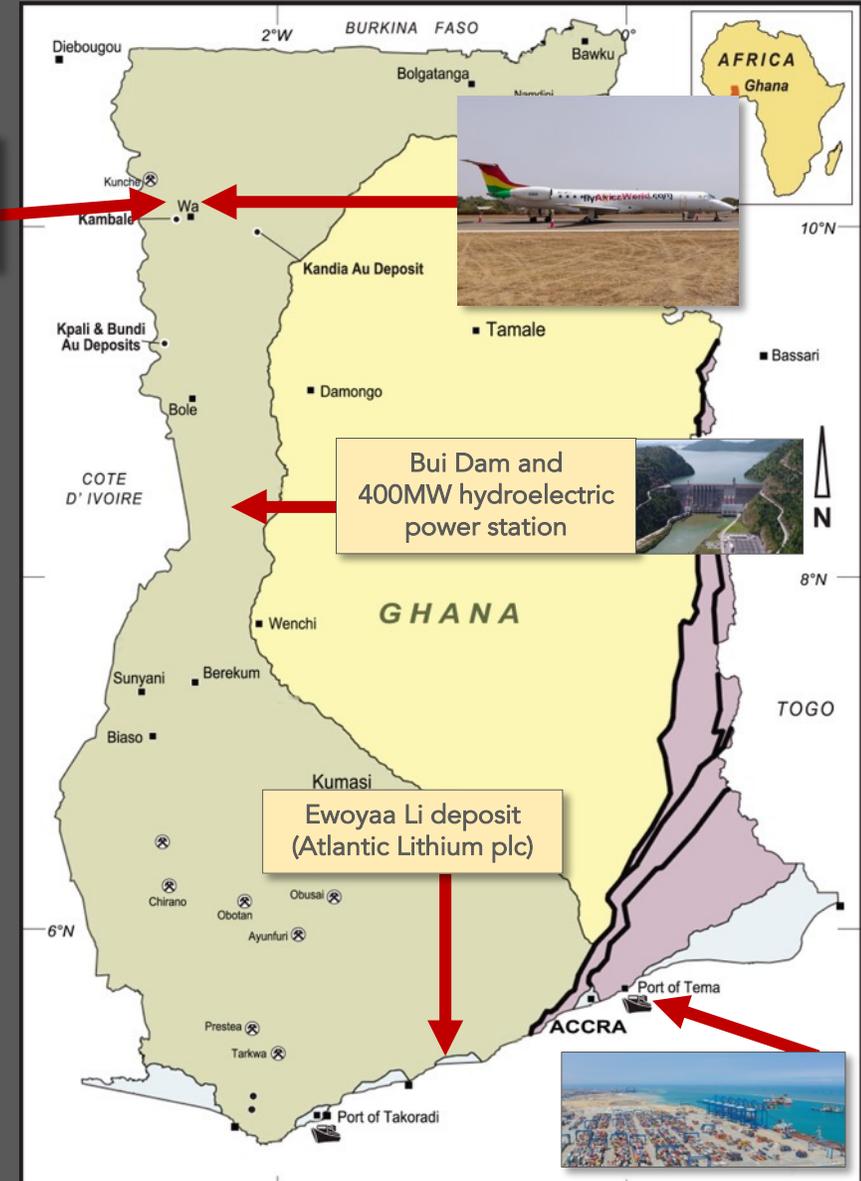
- **Ghana: A favourable operating and mining jurisdiction:**

- ✓ Safe, democratic, stable government.
- ✓ Regional base for international diplomatic missions.
- ✓ Established world-class mining laws and regulations.
- ✓ Mature mining industry (Africa's no.1 gold producer).
- ✓ Skilled, well-trained and very experienced work force.
- ✓ Full range of support services.
- ✓ Strong endorsement from local communities and government.

- **Strategic importance:**

- ✓ Only sizable graphite project in Ghana and one of only two in West Africa.
- ✓ Uncommitted production.
- ✓ Excellent national highways to international ports of Tema and Takoradi, providing easy direct access to US, European and other markets.
- ✓ Good access via Ghana's international ports to USA, EU and other markets.

**Kambale  
Graphite Project**



<sup>1</sup>Government of Ghana has the right to acquire 10% free carried interest in all licences and is entitled to 5% Gross Royalty on production. Kambale Graphite Project is located on prospecting Licence PL10/47 held by Castle's wholly owned Ghanaian subsidiary, Kambale Graphite Limited.

# ESG & Social Licence to Operate

- Many years successful local operational experience:
- Acting and communicating respectfully, transparently, inclusively and constructively with all stakeholders.
- Honouring and awareness of traditions, heritage and rural practices.
- Maximising local content, local employment and training opportunities.
- Minimising environmental impact and operational footprint, continuously rehabilitating and appropriately compensating.
- Adhering to Ghana's regulations, World Bank IFC Guidelines and Equator Principles.
- Baseline Community Assessment Study commenced.



MD meeting with Chief and Elders of Sombo Village



MD meeting with Lawra Naa Karbo III, Vice President of Ghana's National House of Chiefs



Castle installed bore hole, pump and storage tank at Sombo village



MD meeting with Chief and Elders of Jingu Village

# Maximising Local Content

- 100% in-country management and technical team.
- 100% in-country procurement.
- Proposed 100% mining, construction and other services.



## TERREX LIMITED

Consultants & Contractors in Minerals Exploration & Hydrogeological Services

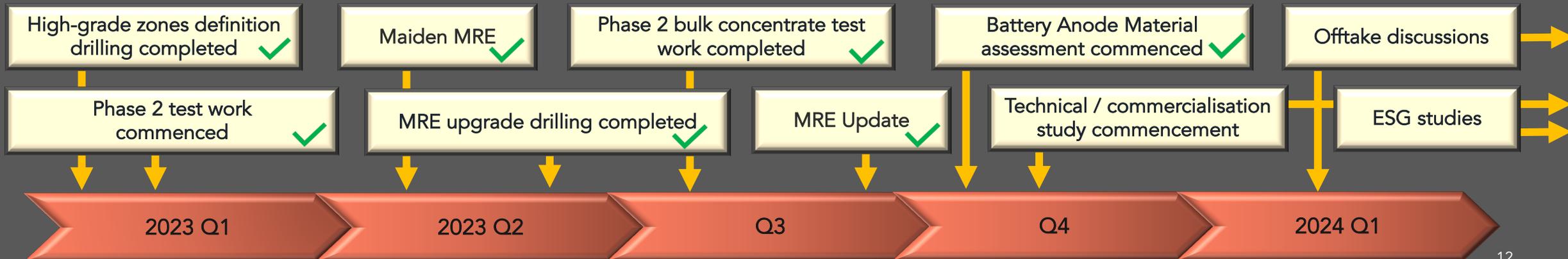


Georgette Barnes Ltd.  
GEOLOGICAL • EXPLORATION • MINING & DRILLING SUPPLIES



# Fast-Tracking

- Considerable de-risking progress in last 18 months: 21,000m drilling + maiden and updated MRE + 2 phases successful test work + geophysics to expand footprint.
- Immediate milestones:
  - ✓ Specialist assessment of Phase 2 bulk fine flake concentrate for anode production.
  - ✓ Appointment of mining and process engineers.
  - ✓ Development concept and studies commencement.
  - ✓ Offtake partnership(s) and financing.
  - ✓ ESG benchmarking, implementation and auditing.





**Michael Atkins**  
Non-Executive Chair  
(Corporate & Finance)



**Stephen Stone**  
Managing Director  
(Corporate & Geology)



**James Guy**  
Non-Executive Director  
(Geology and Mining)



**Paul Amoako Atta**  
Director, In-Country Manager &  
Founder Carlie Mining Ltd  
(Geology and Licencing)



**David Renner**  
Director – Kambale Graphite Ltd  
(Geology, Operations & Corporate)

**1,175.7M**

Ordinary Shares (CDT)

**205.5M**

Options Listed (CDTO &  
CDTOA)

**36.0M**

Options (Unlisted)

**A\$11.8M**

Market Cap (\$0.01/ share)

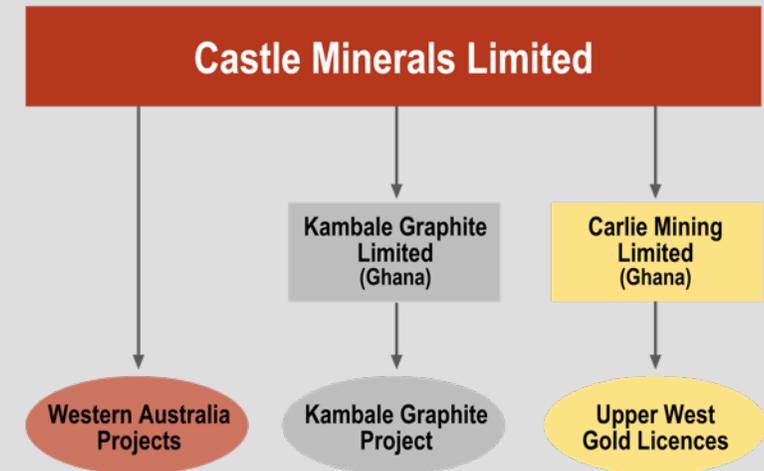
**A\$1.6M**

Working Capital

**A\$10.2M**

Enterprise Value

Major Shareholders	
Stephen Stone	4.6%
George Bonney	4.1%
Michael Atkins	1.9%
Citicorp Nominees	1.6%
Top 20	24.0%
Total Shareholders	3,252



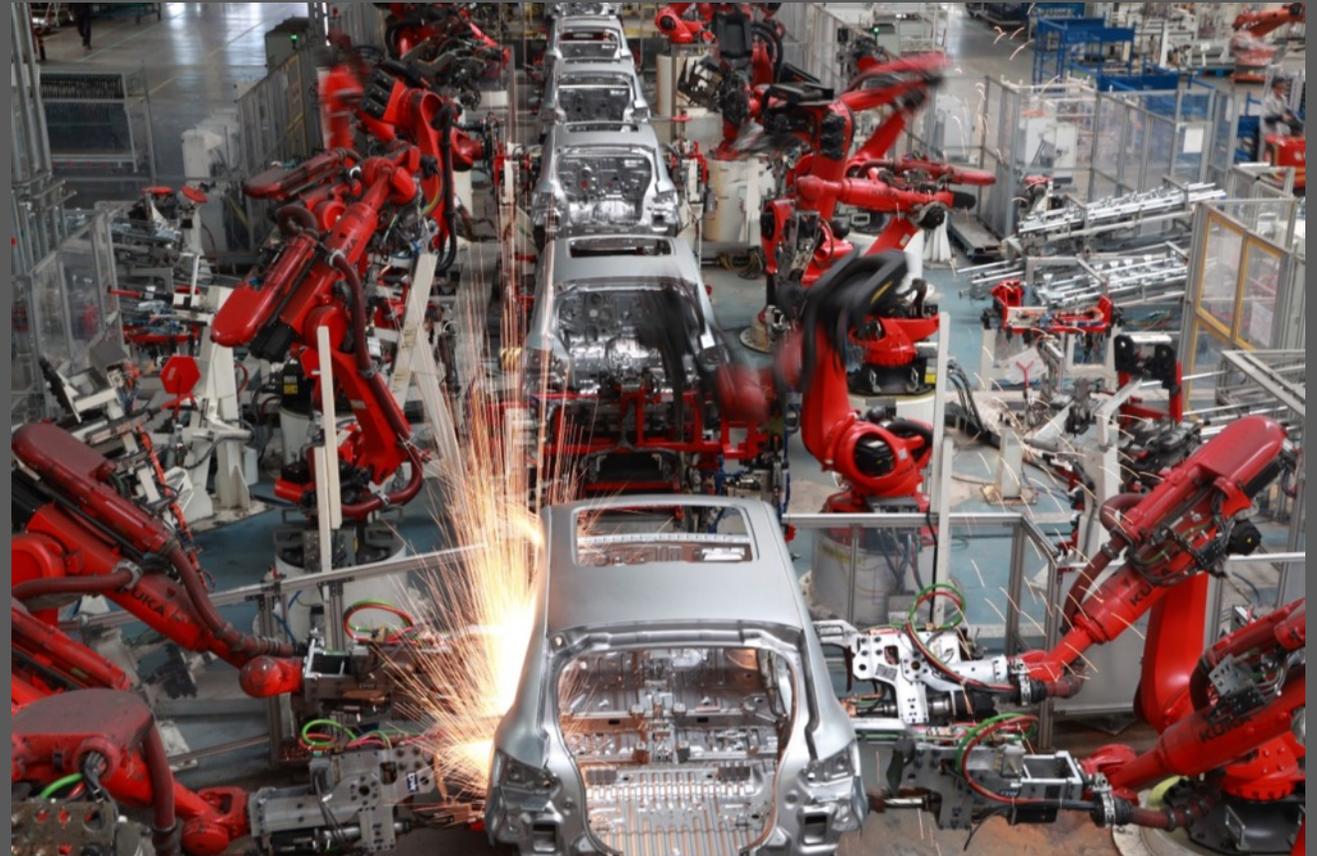
# Considerable Value Compressed Into A Modest Market Cap

“The Kambale Graphite Project is rapidly emerging as a credible entrant into the Critical Minerals supply chain to coincide with forecasts for a major graphite supply deficit.”

“Castle’s investors can look forward to a high-level of value-adding news flow and investment catalysts from Kambale and the Company’s other project interests.”



*Castle Managing Director,  
Stephen Stone*



# CASTLE



Thank You

Contact:

Stephen Stone, Managing Director

[stone@castleminerals.com](mailto:stone@castleminerals.com)

[admin@castleminerals.com](mailto:admin@castleminerals.com)

Mb +61 (0) 418 804 564 or Ph +61 8 9322 7018

ASX: CDT

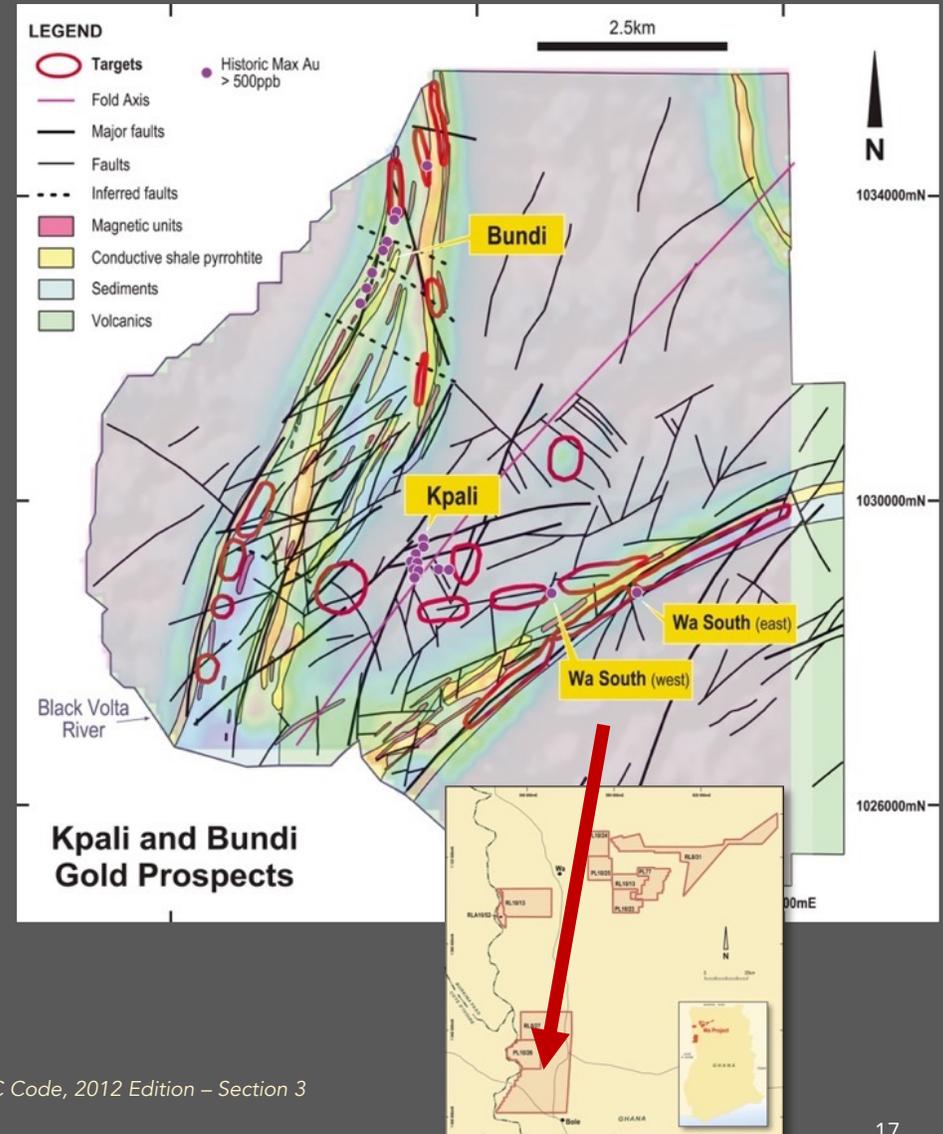
# APPENDIX



# GHANA: Carlie Mining Limited - Quality Gold Assets



- **100% Carlie Mining Limited**
  - A focused consolidation (2,686km<sup>2</sup>) of Birimian age geological terrane prospective for structurally controlled orogenic-style gold.
  - Adjacent to Azumah Resources Limited's Black Volta Gold Project (1.37Moz Ore Reserve & 2.8Moz Mineral Resource)<sup>1</sup>.
- **Royalty:**
  - **4% NSR** on Azumah's Julie West **73,100oz Ore Reserve** (M&I @ US\$1,250/oz)<sup>1</sup>.
- **Kandia prospect:**
  - **62,900oz** Indicated and **44,600oz** Inferred in two zones<sup>2</sup> incl. 15m at 2.39g/t Au from surface and 40m at 1.17g/t Au from 20m.
- **Kpali & Bundi prospects:**
  - **107,200oz** Inferred<sup>3</sup>.
  - Castle intercepts incl: 28m at 2.26g/t Au from 81m, 15m at 2.08g/t Au from 87m, 3m at 6.52g/t Au from 97m, 14m at 2.29g/t Au from 98m, 16m at 3.23g/t Au from 9m and 10m at 2.10g/t Au from 22m.<sup>4</sup>



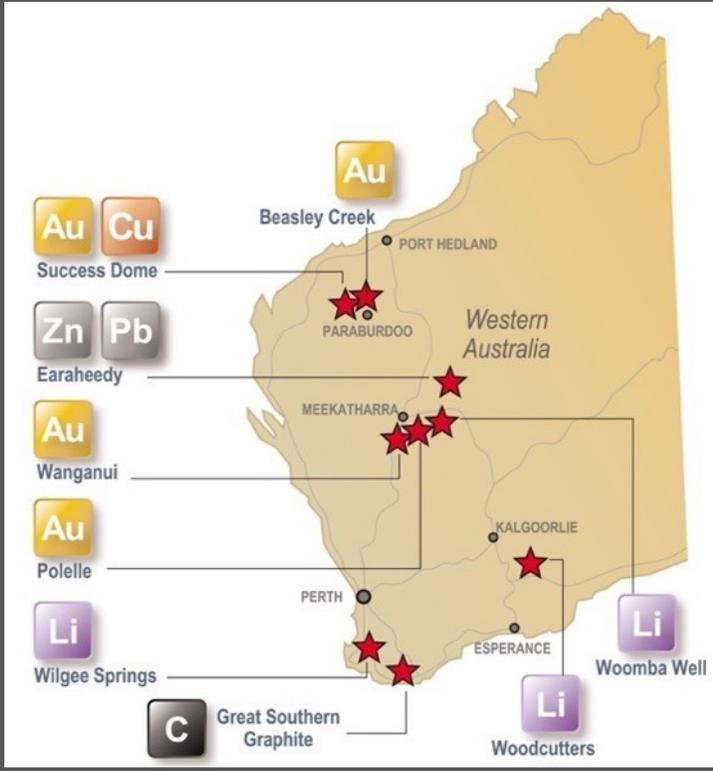
1. Refer Ibaera Capital website - 04.09.2023).

2. Refer Azumah Resources Limited (now delisted) ASX release dated 2 July 2014 re reporting of Kandia 8000 Zone Mineral Resource and appended JORC Code, 2012 Edition – Section 3

3. Refer ASX release dated 2 July 2014 re reporting of Kpali Mineral Resource and appended JORC Code, 2012 Edition – Section 3

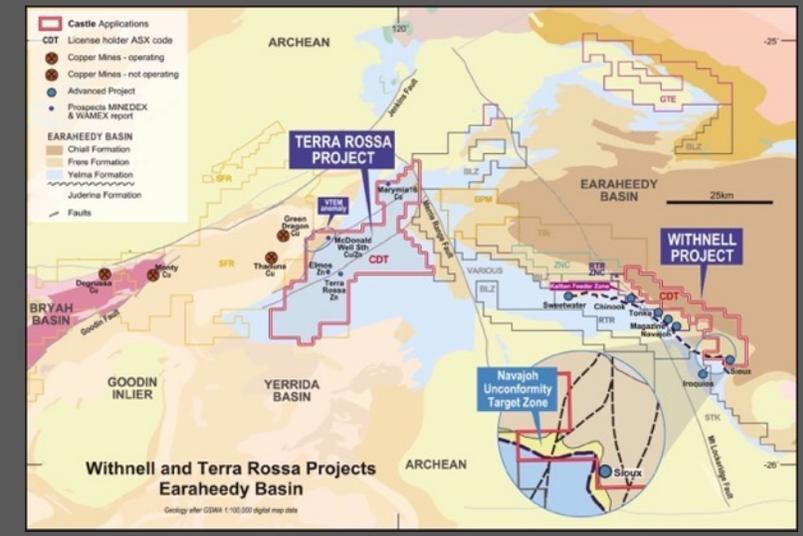
4. Refer ASX release dated 18 January 2014 re "Kpali Drilling Results" incl. of JORC Code, 2012 Edition - Table 1

# AUSTRALIA: Future Metals & Gold Projects

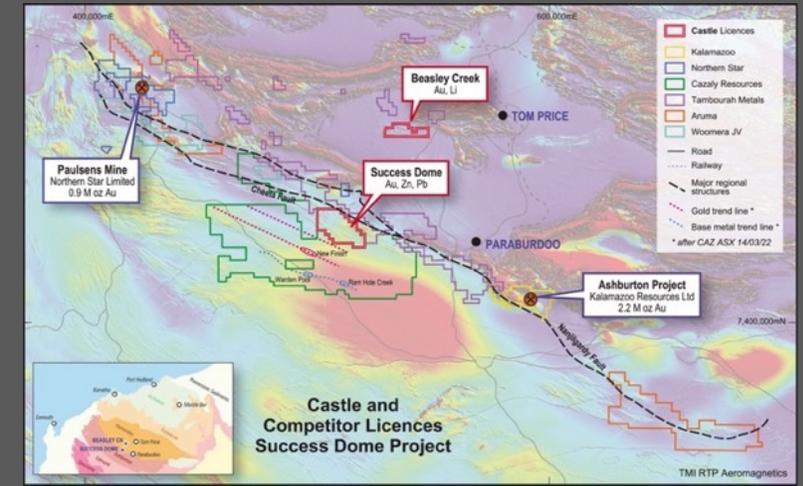


Castle has accumulated an enviable position in the rapidly emerging **Earaheedy Basin** base metals province where Rumble Resources Limited has made a Tier-1 scale, open-ended SEDEX and MVT-style zinc-lead-copper discovery."

"**Beasley Creek and Success Dome** provide additional quality gold and base metals exposure that have been incubated to a stage where several targets are ready for testing"



Earaheedy Basin: Withnell and Terra Rossa

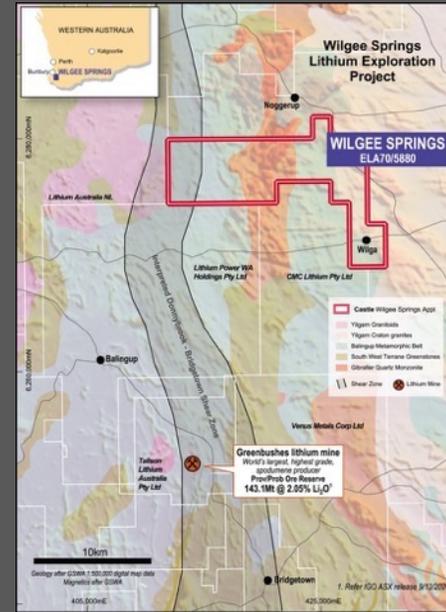
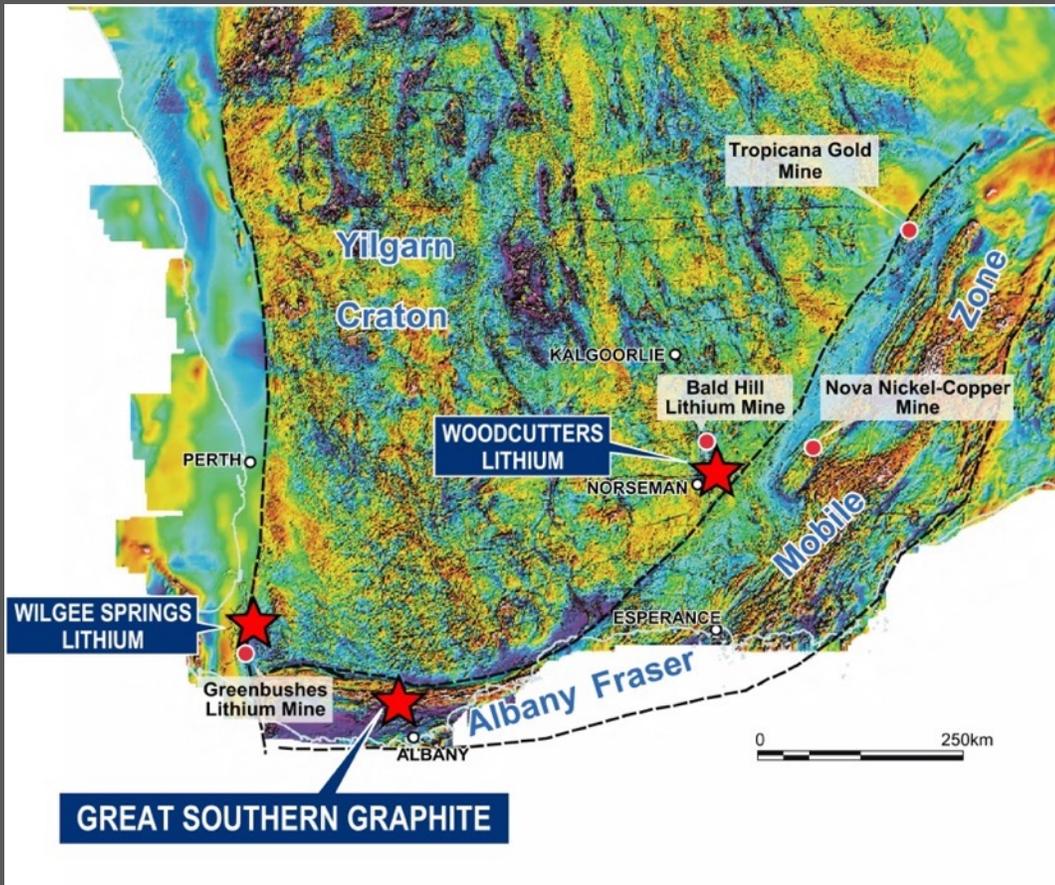


Beasley Creek and Success Dome

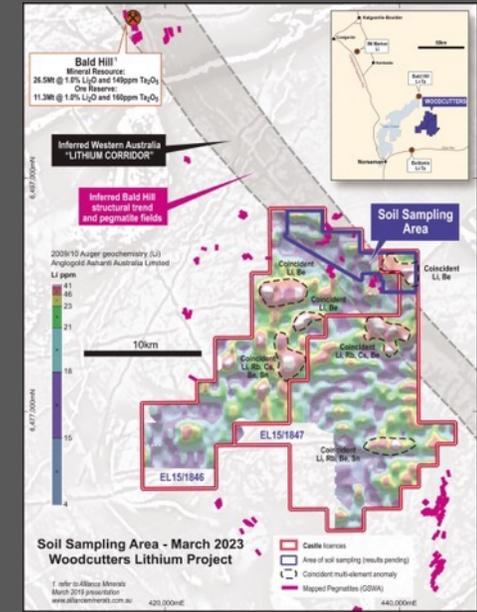
# AUSTRALIA: Incubating Lithium and Graphite Opportunities



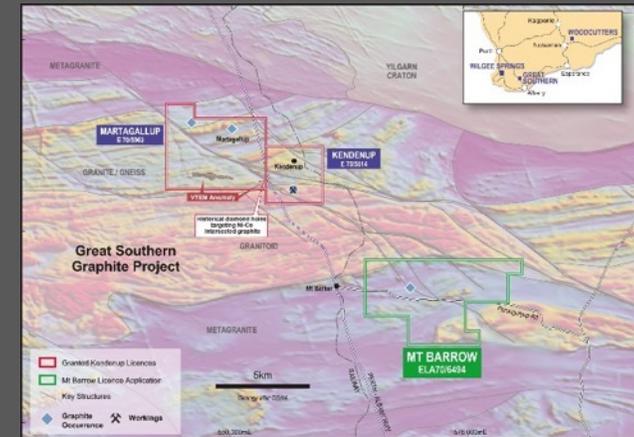
*"Castle is incubating a portfolio of quality, early-stage Future Metals projects in the Great Southern Region of Western Australia"*



Wilgees Springs (Lithium)



Woodcutters (Lithium)



Kendenup & Martagallup (Graphite)