

6 September 2023

Castle Appoints International Mining Executive

Mr David K. Renner appointed a Non-Executive Director of Castle's wholly owned Ghanaian subsidiary, Kambale Graphite Limited ("KGL"), the holder of the Kambale Graphite Project mineral licence.

- A highly regarded Ghanaian commercial, financial and mining operations executive.
- His thirty-year career has spanned the management and development of large-scale Ghanaian and other African mining operations as well as the financing and start-up of junior indigenous resources-based companies.
- A former Managing Director of Anglogold Ashanti's Iduapriem, Sadiola and Yatela Mines in Ghana and Mali and was also the Project Manager for Ashanti Goldfields' Geita Mine in Tanzania.
- A former Managing Director of Cavalla Resources, an iron ore focused junior exploration and mine development company in Liberia.
- Currently also a member of the Investment Advisory Committee of Ghana's Mineral Income Investment Fund Director and Co-Founder of Green Africa Minerals FZCO.

Castle Managing Director, Stephen Stone, commented....**"We are delighted that someone of David Renner's business and operational stature is joining the board of Castle's wholly-owned Ghanaian subsidiary, Kambale Graphite Limited.**

David is highly regarded in international and Ghanaian business circles and his hands-on operational, managerial and financial experience, as well as his familiarity with all echelons of the government sector, will be invaluable as we fast-track the Kambale Graphite Project to coincide with the forecast global deficit in supply of fine flake graphite concentrates.

Graphite is designated a Critical Mineral if net zero emissions targets are to be achieved being a major constituent of the anode in lithium-ion batteries that power electric vehicles.

In coming weeks Castle we will be reporting the results of metallurgical test work to produce a bulk fine flake graphite concentrate meeting commercial specifications and the final results from a recently completed infill RC drilling programme. This will be followed by an updated Mineral Resource Estimate and then in Q4 this year the commencement of a high-level scoping study for the Project."

Authorised for release to ASX by the Board of Castle Minerals Limited:

Stephen Stone
Managing Director
stone@castleminerals.com
+61 (0)418 804 564

ABOUT THE KAMBALE GRAPHITE PROJECT

Geology

The Kambale graphite deposit was identified in the 1960s by Russian geologists prospecting for manganese. They undertook a limited programme of trenching and shallow drilling.

The genesis of the flake graphite in Kambale is believed to be the result of high-grade metamorphism (amphibolite-granulite facies) which has converted trapped amorphous carbon into characteristic fine crystalline layers.

2012 drilling

Encouraged by firm graphite prices in 2012, Castle undertook three consecutive phases of drilling comprising RAB (251 holes, 5,621m), aircore (89 holes, 2,808m) and reverse circulation (3 holes, 303m).

This work confirmed several zones of moderately to steeply dipping, north-east trending graphitic schists hoisted mainly in granodiorites. A JORC Code 2006 MRE was also undertaken.

A review of a wide-spaced, regional-scale electromagnetic survey dataset inherited by Castle from previous licence holder, Newmont Limited, outlined a roughly elongate, north-south orientated, ~10km-long region that could be considered prospective for graphitic schist horizons.

Castle also undertook a very limited programme of bench-scale test work on RC chips.

Thereafter, little work was undertaken until the more recent improvement in graphite prices prompted a re-evaluation of the Project in early-2021.

Phase 1 metallurgical test work

In September 2021 Castle reported that preliminary test work by Independent Metallurgical Operations Pty Ltd (IMO), Perth, on sub-optimal near-surface, weathered graphitic schists sourced from trenches yielded encouraging fine flake graphite concentrate grades of up to 96.4% and recoveries of up to 88%. A conventional multiple grind and flotation concentration flowsheet was used. The three composited samples provided for the test work graded 12.56%, 16.09% and 17.16% TGC.

Ground geophysics and follow-up drilling

In March 2022, a ground horizontal loop electromagnetic (HLEM) survey demonstrated a strong correlation between already drill confirmed graphite mineralisation and zones of high conductivity. Several high conductivity zones also extended well outside of drilled areas.

In late 2022, a 52-hole 5,353m RC programme was undertaken to test the interpreted steep dipping, shallow conductive plates derived from the HLEM survey. The results confirmed that the majority of the plates were associated with graphite mineralisation and that the graphite continued to depths of at least 100m.

Maiden MRE

In early-March 2023 Castle reported that robust lenses of graphitic mineralisation containing high-grade zones with excellent continuity had been delineated by a 30-hole, 2,622m RC infill and 4-hole, 365.2m diamond core drilling campaign.

In April 2023 a maiden JORC Code (2012) Mineral Resource Estimate ("MRE") of 15.6Mt at 9.0% TGC containing 1.41Mt of graphite was provided by independent consultants.

The MRE is hosted by sub-parallel, steep to moderately dipping graphitic schist zones. These were delineated using data from the several phases of trenching and drilling which comprised 386-holes for a combined 16,018m of RAB, aircore, RC and diamond core drilling. Of this database, 85 RC and 4 diamond core holes for a total of 8,644m were used in the actual estimation.

Table 2: Summary JORC Code (2012) Mineral Resource Estimate (5% TGC cut-Off):

Classification	Tonnes (kt)	Contained TGC (kt)	TGC (%)
Indicated	5,979	542	9.1%
Inferred	9,632	863	9.0%
Total	15,611	1,405	9.0%

Mineralisation commences at or close to surface and extends to at least 120m below surface and most likely even deeper. The MRE excluded any mineralisation below the 200mRL, or approximately 100m below the topographic surface. A substantial proportion of mineralisation intersected by drilling, in particular that new mineralisation highlighted by the HLEM survey, did not qualify for inclusion in the MRE due to a low drilling density.

Phase 2 test work

A 300kg sample of fresh, unweathered graphitic schist, sourced from the four diamond drill core holes drilled into various representative areas of the deposit, was delivered to IMO in late December 2022. It is presently undergoing testing to produce a bulk concentrate meeting commercial specifications. This will then be sent to a specialist facility in Europe that will assess its ability to be used in the manufacture of precursor and Battery Anode Material (BAM).

ADDITIONAL INFORMATION

Ghana

Ghana has a well-established mining industry including several Tier-1 mining operations. It is now Africa's largest gold producer and the World's sixth largest. Accordingly, it has a well-trained and very capable workforce supported by an excellent mining services and supply sector. It is a safe and politically stable jurisdiction based on the Westminster system of government.

Logistics and infrastructure

The Project is located 6km west of the Upper West region capital of Wa which is 400km north, via good sealed roads, of Kumasi. From Kumasi it is approximately 240km south east by rail or road to the international port of Tema, 30km west of the capital Accra, which provides direct access to global export markets.

The Wa region has an excellent infrastructure including a commercial airport only a few kilometres from the Project, numerous well maintained sealed and unsealed roads, plenty of potable water and reliable grid power largely fed with electricity generated by the 400MWh Bui hydroelectric dam. These will all combine to represent a large saving in Project establishment capital costs.

Social licence

Castle management has some 16 years of successfully operating in Ghana and in particular its Upper West region. It has established a good reputation for its pro-active commitment to community engagement, local employment and training and aims to apply best practise ESG standards.

Prior to embarking on any specific exploration programme the Company's Ghanaian team conducts comprehensive discussions and information sessions in local dialects with all stakeholders to fully inform them as to the Company's activities and to identify sites of cultural, religious, social and economic sensitivity and to appropriately mitigate any matters of concern. Compensation for access and any disruptions caused is provided in close consultation with landowners. All site disturbances are rehabilitated immediately after use.

Graphite market

The graphite market is diverse across industrial, metallurgical, chemical and specialised areas with each sector requiring reliable long term supplies of graphite concentrates with very specific qualities. Deposit

type, size and geometry, flake size, flake shape, grade, impurities, capital and operating costs, ability to be refined, proximity to specific markets, supply logistics, jurisdiction, fiscal regime and many other factors all combine to determine the commercial viability of a particular deposit.

The current medium to long term outlook for the broader graphite concentrates market is one of escalating demand and a looming supply deficit driven in particular by its use in the fast-growing EV battery and stationary power storage sectors. At present, there is no viable high-volume substitute for graphite whether that be natural flake or its synthetically manufactured form which involves a considerably more costly and higher CO₂ generating process. Given the wide variety of uses and required specifications and volumes, the market and pricing for graphite is very opaque.

The reader is directed to numerous recent publications, conference proceedings, market research papers and corporate websites of companies engaged in graphite exploration, project development or production for informed commentary and analysis of the graphite market.

ABOUT CASTLE MINERALS

Castle Minerals Limited is an Australian Securities Exchange (ASX: CDT) listed and Perth, Western Australia headquartered company with interests in several projects in Western Australia and Ghana that are prospective for Battery Metals (lithium and graphite), base metals (zinc, lead and copper) and gold.

The **Earaheedy Basin** project comprises the **Withnell and Terra Rossa** sub-projects with the Withnell licence strategically located adjacent to the evolving World-Class Chinook-Magazine zinc-lead project of Rumble Resources Ltd (ASX: RTR) and north of the Strickland Metals Limited (ASX: STK) Iroquois prospect. The Terra Rossa licences have additional prospectivity for copper.

The **Beasley Creek** project is prospective for gold and lithium and lies on the northern flanks of the Rocklea Dome in the southern Pilbara.

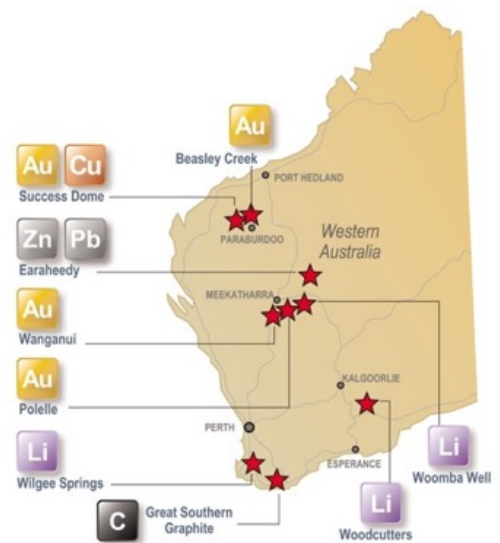
The **Success Dome** project lies in the Ashburton structural corridor midway between the Paulsen's and Ashburton gold deposits and is prospective for gold and base metals.

The **Polelle** project, 7km southeast of the operating Bluebird gold mine near Meekatharra, hosts a mainly obscured and minimally explored greenstone belt prospective for gold and possibly base metals whilst the **Wanganui** project is prospective for down-plunge high-grade gold shoots.

The **Wilgee Springs** project, along strike from and within the same metamorphic belt as the world-class Greenbushes lithium mine 25km to the south, is prospective for spodumene bearing pegmatites as is the **Woodcutters** project, 25km south east of the Bald Hill lithium mine and 25km north west of the Buldania lithium deposit. The **Woomba Well** project will also be evaluated for lithium bearing pegmatites.

The **Great Southern Graphite** project comprises granted licences encompassing the historical **Kendenup** graphite workings and the adjacent **Martagallup** graphite occurrences.

In **Ghana, West Africa**, Castle's substantial and contiguous tenure position in the country's Upper West region encompasses large tracts of highly prospective Birimian geological terrane, the host to many of West Africa's and Ghana's multi-million-ounce gold mines. The emerging flagship **Kambale Graphite Project** lies within the Ghana tenure.



Castle retains a **4% net smelter precious metal royalty** over the Julie West licence, a key component of Azumah Resources Limited's Wa Gold Project, Upper West region, Ghana.

STATEMENTS

Cautionary Statement

All of Castle's projects are considered to be of grass roots or of relatively early-stage exploration status. Other than for the Ghana projects, there has been insufficient exploration to define a Mineral Resource. No Competent Person has done sufficient work in accordance with JORC Code 2012 to conclusively determine or to estimate in what quantities gold or other minerals are present. It is possible that following further evaluation and/or exploration work that the confidence in the information used to identify areas of interest may be reduced when reported under JORC Code (2012).

Forward Looking Statement

Statements regarding Castle's plans, forecasts and projections with respect to its mineral properties and programmes are forward-looking statements. There can be no assurance that Castle's plans for development of its mineral properties will proceed. There can be no assurance that Castle will be able to confirm the presence of Mineral Resources or Ore Reserves, that any mineralisation will prove to be economic or that a mine will be successfully developed on any of Castle's mineral properties. The performance of Castle may be influenced by a number of factors which are outside the control of the Company, its Directors, staff or contractors.

Competent Persons Statements

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 Managing 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.