

Commercial Grade Graphite Concentrate Produced at Kambale

Highlights

- Commercial grade bulk fine flake graphite concentrate grading 95.1% successfully produced by test work using a conventional grind and flotation concentration circuit.
- Heralds a major advance in the fast-track evaluation of the Kambale Graphite Project (“KGP”) as a supplier of natural graphite concentrates for the production of Battery Anode Material (“BAM”) used in the manufacture of lithium-ion battery (“LiB”) anodes.
- Bulk concentrate being transported to Germany for appraisal which will include electrochemical and electric vehicle (“EV”) battery performance tests.
- Final results from a recent 43-hole infill RC drilling programme to be reported shortly, followed by an update to the current Mineral Resource Estimate.
- Scoping study scheduled to commence in Q4 2023.
- Project evaluation being fast-tracked to coincide with forecast massive supply deficit arising from forecasts of an additional 100M to 120M light EV’s on the road by 2030*.
- USA and EU EV producers directing billions of dollars towards establishing non-China dependent critical mineral, including natural graphite, supply chains.
- Kambale is well connected to international ports with direct access to USA and EU markets.
- Largely hydro-generated “green-grid” power close to the Kambale site and other existing infrastructure would considerably reduce Project establishment costs.

Photo 1: Flotation cells containing Kambale Graphite Project graphite concentrate



Castle Managing Director, Stephen Stone said **“We are extremely pleased to have produced using a conventional circuit a “commercial grade” bulk fine flake graphite concentrate of 95.1% TGC from a composite of drill core samples of representative mineralisation sourced from Castle’s Kambale Graphite Project, Ghana.**

This heralds a major advance in our fast-track evaluation of Kambale as a possible supplier of concentrate to be ultimately used in the production of anodes for lithium-ion batteries to power the world’s fast-growing fleet of electric vehicles. An additional 100M to 120M light EVs are forecast to be on the road by 2030.

Each vehicle contains between 30kg and 60kg of battery grade graphite and each kg of that is derived from 3kg of natural flake concentrate. So, it’s no surprise that forecasters are predicting a major natural graphite concentrate supply deficit as current supply is wholly inadequate.

More profound is the extreme reliance of USA and EU vehicle manufacturers on Chinese supplied anodes and batteries. This is being addressed by the construction of numerous battery “gigafactories” but these will need to source their graphite requirements from somewhere other than China. Graphite mines take a lot longer to find and develop than gigafactories. Hence, the Kambale Graphite Project is well positioned as a possible uncommitted supplier of material into the USA and EU markets.

A suitably large, shallow-depth deposit of 15.6Mt grading 9% TGC, installed mainly hydro-generated “green-grid” power very close to site, excellent roads and two international ports within a well-established and safe mining jurisdiction all combine to enhance the development credentials of Kambale.

Final results from a recent infill RC drilling programme will be available shortly with an update to the maiden Mineral Resource Estimate to follow. We will then initiate a scoping study that will evaluate the technical and commercial merits of developing Kambale.”

Castle Minerals Limited (ASX: CDT) (“Castle” or the “Company”) advises that test work on diamond core from the Kambale Graphite Project in Ghana’s Upper West Region has achieved a commercial specification bulk, fine flake graphite concentrate grading 95.1% Total Graphitic Carbon (“TGC”) using a conventional grind and flotation concentration circuit (“Project”)(Photo 1. Table A)(Appendix JORC Code 2012 Table 1).

The 149km² Kambale Graphite Project (“KGP”) licence is held by 100% owned Ghanaian subsidiary, Kambale Graphite Limited (“KGL”).

A 215kg diamond core sample used for the test work graded 11.7% TGC and comprised a “master” composite of fresh, unweathered core from several different graphitic lens in order to provide good representation of mineralisation.

Test work was undertaken at Metallurgy Pty Ltd (“Metallurgy”), Perth, under the supervision of Independent Metallurgical Operations Pty Ltd (“IMO”). Initial work comprised a series of bench-scale “batch tests” to assess and characterise the material supplied and to optimise the test work circuit and conditions for the main bulk concentrate production.

Several stages of grinding and flotation successfully separated the graphite from other mineral phases and removed the majority of the gangue. This resulted in a predominantly fine size flake graphite concentrate (<75um) being produced. Graphite recovery to the concentrate was 79%.

*IEA Global EV Outlook 2023.

A previous phase of batch-scale test work was successfully completed in 2022 on weathered material extracted from three surface trenches (refer ASX 21 September 2021).

The bulk concentrate sample produced from this latest test work will now be transported to ProGraphite GmbH, Germany (“ProGraphite”) to be assessed for its ability to be converted to Battery Anode Material (“BAM”) used to manufacture the anodes of lithium-ion batteries (“LiBs”).

The concentrate will undergo micronisation, spheronisation, purification and coating before being subjected to a series of electrochemical and battery performance tests to determine its suitability.

Final RC drilling results

Final results from a recent 43-hole infill RC drilling programme will be reported shortly. These will then be provided to an independent consulting geologist who will undertake an update to the maiden Mineral Resource Estimate (“MRE”) of 15.6Mt at 9.0% TGC containing 1.41Mt of graphite (refer ASX 12 April 2023).

The RC drilling programme was designed to infill drill several large zones of mineralisation that could not be included in the maiden MRE.

Scoping Study

A high-level scoping study is scheduled to commence in Q4 2023 to assess the commercial merits of establishing at Kambale a mining and concentration operation. This will also consider the production at site of value-added precursor BAM which exercise will be ultimately dependent on the results of the forthcoming test work in Germany.

ESG activities

In conjunction with Savannah Alliance Ghana Limited, KGL has supported a recent application for Development Aid Programme funding provided by AusAid, an initiative of the Australian Government in West Africa. If successful, the funds provided, along with a contribution of additional funds and logistics by KGL, will be used to install a source of fresh bore water and medical facilities at the request of a local village community in the Kambale licence area.

KGL has already installed a water bore, storage tank and a powered pump to another community in the Kambale region which is now seeing immediate health benefits.

It is also evaluating quotations from consulting firms to undertake an ESG Baseline Assessment of the Kambale Graphite Project. This work is expected to be awarded in Q4 2023.

ABOUT THE KAMBALE GRAPHITE PROJECT

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.

Geology

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.

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.

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 bench-scale 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, Palaris (Australia) Pty Ltd.

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 A: 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 has been drill proven to at least 120m depth 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. Bench-scale and then pilot plant scale test work used 215kg of the original sample. A commercial specification bulk fine flake concentrate grade of 95.1% TGC was achieved with a recovery of 79% of the graphite to the concentrate. This will undergo assessment at a specialist facility at ProGraphite GmbH, Germany, for its ability to be used in the manufacture of precursor and Battery Anode Material (BAM).

Loupe EM survey

A Loupe EM ground geophysical survey completed in June 2023 identified a series of targets on the boarder Kambale licence that require evaluation for the presence of additional graphitic schist mineralisation separate from the main Kambale deposit.

ESG and Social licence

KGL’s key 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. KGL has ensured that its activities meet the highest expectations in regard to environmental, social and governance standards. Resources have been directed to ensuring that all activities are undertaken with the prior, free and fully informed consent of impacted communities.

Prior to embarking on any specific exploration programme the Company’s conducts comprehensive discussions and information sessions in local dialects with all stakeholders to fully inform them as to the Company’s proposed 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.

KGL will continue to contribute to the improvement of the well-being of its communities and has, at the request of the communities, already installed fresh water well, pump and storage facilities and is planning to continue with other critical health improvement initiatives.

The Company’s Ghana-based team is 100% Ghanaian and it aims to include where possible 100% of locally sourced content in all aspects of its operations.

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.

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

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

PREVIOUSLY REPORTED INFORMATION RELATING TO THIS RELEASE

Additional details, where applicable, can be found in the releases referenced in this Report and/or in the following releases lodged by the Company with the ASX:

Headline	Date
Castle Appoints International Mining Executive	6 September 2023
Additional High Grade Intercepts at Kambale Graphite project	14 August 2023
Additional Graphite Targets at Kambale	1 August 2023
Kambale Drilling, Geophysics and Metallurgical Test Work Update	27 June 2023
Castle Commences Geophysical Survey to Locate Additional Graphite Occurrences	22 May 2023
Castle Commences Resource Upgrade Drilling at Kambale	16 May 2023
Castle's Kambale Project Exceeds 1.4Mt Contained Graphite	12 April 2023
Excellent High-Grade Continuity Confirmed at Kambale Graphite Project	13 March 2023
Kambale Graphite Project RC Drilling Completed	4 January 2023
Kambale Graphite Diamond Core Drilling Completed (Amended)	23 December 2022
Kambale Graphite Diamond Core Drilling Completed	20 December 2022
Independent Exploration Target Estimate Highlights Kambale as a Large-Scale Graphite Deposit	28 November 2022
Kambale Core Drilling Underway	10 November 2022
Kambale Graphite Deposit Extended	3 November 2022
Encouraging Kambale Graphite project Interim Drill Results	29 September 2022
Kambale Graphite RC Drilling Programme Completed	24 August 2022
More Graphite Zones at Kambale	11 July 2022
Drilling Campaign Launched at Kambale Graphite Project	14 June 2022
Kambale Graphite EM Survey Increases Size Expectations	31 March 2022
EM Survey Commences at Kambale Graphite Project Ghana	14 March 2022
Encouraging Graphite Test Work Results	21 September 2021

Headline	Date
Kambale Graphite Test Work Update	5 August 2021
Graphite Test Work Underway	3 June 2021
Castle to Reappraise Kambale Graphite Project, Ghana	15 March 2021
Drilling Doubles Strike length of Kambale Graphite Deposit	17 September 2012
Metallurgy Test Work Confirms Commercial Potential of Kambale Graphite Deposit	3 September 2012
High Grade Graphite intercepts Extend Kambale Deposit	24 August 2012
Maiden Resource Confirms Kambale as One of World’s Largest Graphite Deposits	24 July 2012
Large High Grade Deposit Confirmed at Kambale	6 July 2012
Extensive Zones of High Grade Graphite Intersected	9 May 2012

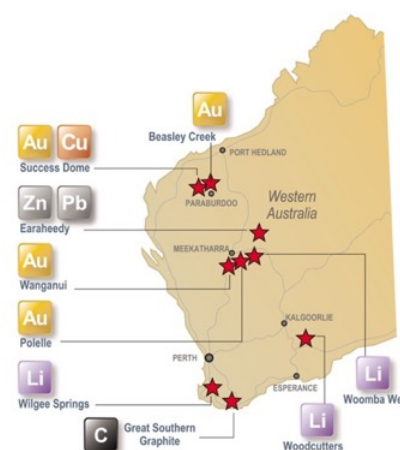
ABOUT CASTLE MINERALS

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

In **Ghana, West Africa**, Castle’s 2,686km² 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. It has delineated several advanced gold exploration targets including at **Kpali, Bundi and Kandia**. Castle also 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. The emerging flagship **Kambale Graphite Project** is also located in the same region.



In **Western Australia**, The **Eraheedy Basin** project comprises the **Withnell and Terra Rossa** sub-projects. The Withnell licence is 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 is also prospective for lithium bearing pegmatites.

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

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.

The information in this Release that relates to metallurgical test work 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.

KAMBALE DIAMOND CORE SAMPLING AND METALLURGICAL TEST WORK RESULTS - SEPTEMBER 2023

Appendix: JORC Code 2012 Edition – Table 1 Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Certified Person Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the	The ~215kg metallurgical test work sample was selected from a total of 300kg of samples of HQ

Criteria	JORC Code explanation	Certified Person Commentary
	minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	(22CKDD001 – 004) diamond drill core retrieved during a combined RC and DDH programme in 2022.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Senior site geological personnel selected representative material for the samples for metallurgical test work based on visual classification of the graphite mineralisation and assay results of twinned RC holes
	Aspects of the determination of mineralisation that are Material to the Public Report.	
	In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3kg was pulverised to produce a 30g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	The DDH sites were selected on the basis of previously drilled zones that were considered to provide a good representation of mineralisation and its geological variability throughout the deposit.
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	The metallurgical sample was composited from selected assayed HQ core samples.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	The average core recovery over the four DDH was 98% which is considered excellent. There does not appear to be a relationship between sample recovery and grade.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged.	The DDH core material was geologically logged at site by qualified and experienced geologists. Logging was qualitative. Photographs of the material and sampling at each site were taken and stored.

Criteria	JORC Code explanation	Certified Person Commentary
<p>Sub-sampling techniques and sample preparation</p>	<p>If core, whether cut or sawn and whether quarter, half or all core taken.</p> <p>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</p> <p>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</p> <p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</p> <p>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.</p> <p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	<p>Half drill core through zones of graphite schist was used for metallurgical test work</p> <p>Sample preparation for test work was conducted by Metallurgy Pty Ltd (“Metallurgy”) upon receipt of the samples. Sample preparation included core selection and compositing, stage crushing to P100 3.35mm, homogenising three times utilising a Rotary Splitter and then splitting into discrete charges required for the characterisation, confirmatory batch and bulk test work.</p> <p>The sample size is considered representative for the material sampled and the for test work application.</p>
<p>Quality of assay data and laboratory tests</p>	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</p> <p>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</p>	<p>TGC measurements were conducted by Intertek Group plc (Intertek).</p> <p>Flake concentrate TGC measurements were determined by the difference between Loss on Ignition (LOI) 1000 degree and LOI425 degree results.</p> <p>All other test work products TGC measurements were conducted using a Carbon and Sulphur Analyser.</p>
<p>Verification of sampling and assaying</p>	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p> <p>Discuss any adjustment to assay data.</p>	<p>No drill assay results are being reported.</p>
<p>Location of data points</p>	<p>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</p> <p>Specification of the grid system used.</p> <p>Quality and adequacy of topographic control.</p>	<p>A GPS receiver was used to record the location of DDH collars. The accuracy of the receiver is 3 - 5m which is appropriate for the purposes of the program. A drone LIDAR survey was undertaken subsequently.</p> <p>WGS1984 Complex UTM Zone 30N</p> <p>The diamond core holes were distributed spatially throughout the deposit to give a good representative sample of the graphite schist</p>

Criteria	JORC Code explanation	Certified Person Commentary
Data spacing and distribution	<p>Data spacing for reporting of Exploration Results.</p> <p>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</p> <p>Whether sample compositing has been applied.</p>	
Orientation of data in relation to geological structure	<p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</p> <p>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</p>	No sampling bias is considered to have been introduced.
Sample security	<p>The measures taken to ensure sample security.</p>	<p>Chain of custody was managed by Castle Minerals on behalf of 100% wholly owned subsidiary, Kambale Graphite Limited, the owner of the Kambale licence. PL10/47.</p> <p>The process was overseen by Castle’s in-country director and contract geological manager under the supervision of Castle’s Perth-based exploration manager. Samples were sealed in drums by a contract geological team employed by Castle. The drums were transported to Accra and then shipped directly to Metallurgy Pty Ltd in Welshpool, Australia by Castle.</p> <p>Upon arrival in Perth, custody was transferred to Metallurgy Pty Ltd.</p>
Audits or reviews	<p>The results of any audits or reviews of sampling techniques and data.</p>	<p>The Company engaged a consultant to review procedures for the drill programme. No major issues were reported.</p>

Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Certified Person Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. 	<p>Work was completed on PL 10/47 which is to be held 100% by Kambale Graphite Limited, a Ghanaian registered company 100% owned by Castle Minerals Limited. The licence is a conversion of a Retention Licence and the licence contract has been issued by MINCOM, executed by KGL, all statutory payments made and is awaiting the signature of the Minister who administers the country’s Mining Act.</p> <p>The Government of Ghana has the right to acquire a 10% free carried interest in all licences and is entitled to a 5% gross profit royalty on mineral production. There are no other encumbrances on the title.</p> <p>The project is on traditional lands on the outskirts of the provincial city of Wa. Much of the project area is under cultivation by subsistence farmers. Prior to</p>

Criteria	JORC Code explanation	Certified Person Commentary
		<p>undertaking works the Company negotiated suitable compensation arrangements with traditional owners and farmers for any disturbances created by the Company and upon completion rehabilitated the holes, drill sites and access ways.</p>
	<p>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</p>	<p>The licence is a conversion to a Prospecting Licence from an original Retention Licence and is considered to be secure and in good standing (refer above).</p>
<p>Exploration done by other parties</p>	<p>Acknowledgment and appraisal of exploration by other parties.</p>	<p>Graphite mineralisation on the tenement was initially discovered by geologists in the 1960's exploring for manganese. Work was restricted to trenching. In 2012 Castle Minerals completed programmes of air core and RC drilling specifically testing the graphite occurrences on the tenement and completed preliminary metallurgical test work on the ores. A maiden resource was released on the 24/07/2012 based on 54 air core and 3 RC drill holes.</p> <p>Due to increased interest in graphite the Company commenced re-evaluating exploration on the project in 2021. A programme of trenching and bulk sampling was completed, and detailed metallurgical test work completed, the results of which were announced on 05/08/2021.</p> <p>The Company completed a HLEM ground geophysical survey in 2022. An initial RC programme of 52 drill holes was completed in July 2022 targeting conductor plates identified by the HLEM survey was completed.</p> <p>A further programme of 4 DD and 30 infill RC holes were completed in December 2022.</p> <p>Core from the diamond programme was sampled and used for test work to produce a bulk fine flake graphite concentrate.</p>
<p>Geology</p>	<ul style="list-style-type: none"> Deposit type, geological setting, and style of mineralisation. 	<p>The Kambale project lies within Paleoproterozoic supercrustal and intrusive rocks of the Birimian Supergroup (ca 2195-2135Ma). The licence area is underlain by metamorphosed volcanic, pyroclastic and sediments of the Upper Suite of the Middle Birimian suite. Granitoids of the Cape Coast Suite have intruded metasediment sequences. Close to the contact the metamorphic grade is amphibolite dropping to upper greenschist away from the contact.</p> <p>The precursor rocks to the graphite schist are believed to be carbonaceous shales of the Middle Suite that have been metamorphosed due to the intrusion of the granitoid.</p>

Criteria	JORC Code explanation	Certified Person Commentary
Drill hole Information	<ul style="list-style-type: none"> • A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<p>No drill assay results are being reported in this release. Refer ASX release 13 March 2023 for drilling results.</p> <p>All drill collar information has been released including holes that did not encounter graphite mineralisation (refer ASX release 13 March 2023).</p>
Data aggregation methods	<ul style="list-style-type: none"> • In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<p>No drill assay results are being reported in this release. Refer ASX release 13 March 2023 for drilling results.</p>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg. 'down hole length, true width not known'). 	<p>No drill assay results are being reported in this release. Refer ASX release 13 March 2023 for drilling results.</p>
Diagrams	<ul style="list-style-type: none"> • Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<p>Appropriate maps including the location of the four DDH have been provided in ASX release 13 March 2023.</p>
Balanced reporting	<ul style="list-style-type: none"> • Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<p>All DDH holes drilled in the programme have been reported in ASX release 13 March 2023.</p>
Other substantive exploration data	<ul style="list-style-type: none"> • Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test 	<p>The Company has previously undertaken preliminary metallurgical test work on oxides graphite ores which indicate a suitable grade concentrate can be achieved. It also examined flake size, gangue inclusions and other physical properties not</p>

Criteria	JORC Code explanation	Certified Person Commentary
	results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	measured by TGC assays that can have a significant bearing on economic value of graphite.
Further work	<ul style="list-style-type: none"> • The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<p>The Company has completed a 43-hole infill RC drill programme with results to be reported shortly.</p> <p>An update to the April 2022 maiden JORC 2012 MRE will then be undertaken by an independent consultant.</p> <p>Bulk fine flake graphite concentrate produced by the completed test work is being sent to a specialist German metallurgical laboratory, ProGraphite GmbH, to evaluate its suitability to be used in the manufacture of Battery Anode Material.</p>