

1 August 2023

# **Additional Graphite Targets At Kambale**

# **Summary**

- 13 priority-one targets defined by a 275-line km Loupe EM geophysical survey at the Kambale Graphite Project, Ghana.
- EM has previously been successful in identifying graphite mineralisation.
- New targets are distal from the main Kambale deposit and Mineral Resource Estimate ("MRE") of 15.6Mt at 9.0% TGC containing 1.41Mt of graphite.
- Results and updated MRE from recently completed 43-hole infill and extensional RC drilling programme expected late-August.
- Any additional mineralisation delineated on the 149m<sup>2</sup> Kambale licence will improve options for optimising any future development.
- EM surveys still cover only 50% of the prospective area of the licence.
- New EM targets will be tested asap.

Castle Managing Director, Stephen Stone, commented.... "Knowing that a previous EM survey was successful in identifying additional graphitic schists at Kambale, we are naturally very keen to test this latest series of 13 priority-one targets identified by the recent Loupe EM survey.

Kambale already hosts a sizable 15.6Mt Mineral Resource grading 9.0% TGC containing 1.41Mt of graphite and we are hopeful of materially increasing this when we process the results of the just completed 43-hole, 5,335m infill RC drilling programme.

Any additional material located on the broader licence area using the Loupe EM data will improve options for optimising a mining and on-site processing operation. Plus, we have still only surveyed 50% of the available prospective area.

We will be kicking-off a Scoping Study later in the year to begin evaluating the merits of establishing a mining and processing operation at Kambale. This will incorporate results from metallurgical test work aiming to produce a fine flake graphite bulk concentrate of commercial specifications. This is due to be completed mid-August and reported in the weeks following.

Castle continues to fast-track the Kambale Graphite Project to coincide with a widely forecast looming supply deficit for fine flake concentrate which is a major input in the manufacture of electric vehicle batteries and stationary power storage units. Graphite is designated a Critical Mineral by the USA, the EU, Japan and Australia."

1120000mN **Priority Targets** Loupe EM Survey Kambale Graphite Project **July 2023** 111 000mN KAMBALE GRAPHITE DEPOSIT MRE 15.6Mt @ 9% TC (JORC2012) Area of 2022 **HLEM Survey LEGEND** Kambale licence Kambale Graphite Deposit Priority 1 1110000mN EM target Loupe line profile Interpreted conductor axis 2km Mosaic image of Loupe (Channel 5Z Component 110Hz) and HLEM results 550000mE Background - Airborne EM ex-Newmont

Fig 1: Plan showing Loupe EM geophysical survey image and priority targets.

# **Next Steps at Kambale**

- 1. Receive infill and extensional RC drilling results and update the maiden MRE;
- 2. Plan and implement the testing of the latest priority-one EM targets;
- 3. Complete metallurgical test work to produce a commercial-grade, fine flake bulk concentrate which will then be evaluated for its capability to produce high-value Battery Anode Material ("BAM");
- 4. Commence a Scoping Study; and
- 5. Identify possible Project development and offtake partners.

Castle Minerals Limited (ASX: CDT) ("Castle" or the "Company") advises that a 275-line km ground electromagnetic geophysical survey at its flagship Kambale Graphite Project, Ghana ("Project") has identified 13 priority-one targets to be evaluated for possible additional graphitic schist occurrences. (Fig 1).

The survey used state-of-the-art, low-impact Loupe EM technology to evaluate the broader 149km<sup>2</sup> Kambale licence for mineralisation additional and distal to the maiden JORC Code (2012) Mineral Resource Estimate ("MRE") of 15.6Mt at 9.0% TGC containing 1.41Mt of graphite that was delineated earlier in 2023 (ASX release 12 April 2023).

Data processing also highlighted 33 priority-two anomalies and provided very useful high-resolution information on local structural fabric and mineralisation controls.

The east-west EM survey lines extended between 200m and 3,950m and were spaced variably between 50m, 100m and 200m.

Where there was overlap, the Loupe EM survey data compared well with data from a more focused HLEM survey undertaken in early-2022 (ASX release 31 March 2022). Processing of the HLEM data highlighted a series of modelled conductor plates that proved, in a majority of cases when drill tested, to be associated with graphitic mineralisation.

The results of a recently completed infill 43-hole, 5,355m RC drilling programme, also guided largely by the HLEM, will be available later in August along with an update to the current MRE. This is expected to deliver a material increase in the MRE for the deposit (ASX release 16 May 2023).

EM is clearly a very useful tool in identifying graphitic schists at Kambale. With still only half of the available prospective area covered by EM surveys, there remains considerable scope for more anomalies to be identified.

A concurrent metallurgical test work programme is evaluating the Kambale graphitic material to produce a fine flake graphite bulk concentrate of commercially acceptable specifications. This is forecast to be completed mid-August and results reported in the weeks following.

Castle has a well-defined strategy to fast-track the Project to coincide with the widely forecast looming supply deficit for fine flake concentrate which is a major input in the manufacture of electric vehicle batteries and stationary power storage units. Graphite is designated a Critical Mineral by the USA, the EU, Japan and Australia.

## KAMBALE PROJECT BACKGROUND

## 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 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 twelve modelled, 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.

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%

Table 1: Summary JORC Code (2012) Mineral Resource Estimate (5% TGC cut-Off):

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.

## **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 higher CO<sub>2</sub> 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**

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# 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
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
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

Headline	Date
Large High Grade Deposit Confirmed at Kambale	6 July 2012
Extensive Zones of High Grade Graphite Intersected	9 May 2012

#### **About Castle Minerals Limited**

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 and one application covering a graphite occurrence at **Mt. Barrow**.

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.

Kambale Graphite Project: Loupe EM Survey July 2023

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

(Criteria in this section apply to all succeeding section)

Criteria	JORC Code explanation	Certified Person Commentary
	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the 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.	Ground electromagnetic surveying is an industry standard technique. The technique is applicable for graphite exploration due to the anomalous electrical conductivity of graphite.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Geophysical readings are taken continuously during operation. The contractor trained local operators in the field in the use of the equipment. The equipment has internal calibration procedures which ensures the accuracy of the readings.
Sampling techniques	Aspects of the determination of mineralisation that are Material to the Public Report.	The principal target for the survey was to locate zones of graphite schist for drill testing. Graphite has a high electrical conductance which is measured by the equipment. Other sources of high conductance not related to graphite could also register as anomalous include man made cultural features, ground water, and sulfide rich lithologies or shear zones.
	In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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	The Loupe EM system is a standard geophysical technique' which has applications in the exploration for minerals with a high conductivity as well as engineering and site remediation activities.

Criteria	JORC Code explanation	Certified Person Commentary
	problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).	No drilling information in release.
	Method of recording and assessing core and chip sample recoveries and results assessed.	No drilling information in release.
Drill sample	Measures taken to maximise sample recovery and ensure representative nature of the samples.	No drilling information in release.
recovery	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.	No drilling information in release.
	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.	No drilling information in release.
Logging	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	No drilling information in release.
	The total length and percentage of the relevant intersections logged.	No drilling information in release.
	If core, whether cut or sawn and whether quarter, half or all core taken.	No drilling information in release.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	No drilling information in release.
Sub- sampling	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	No drilling information in release.
techniques and sample preparation	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	No drilling information in release.
	Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.	No drilling information in release.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	No drilling information in release.
	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	No drilling information in release.
Quality of assay data and laboratory tests	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.	Used a Loupe EM system, a portable and mobile time domain EM system (TEM) that utilises a transmitter and receiver units housed within backpacks with a small horizontal loop protruding from the back of the transmitter unit. The Loupe receiver comprises a three-component coil sensor, and transmitter operating at 75Hz base frequency. Positioning is by an in-built RPK GPS and real time processing is carried out during the survey to check on errant or anomalous results to assure quality control. The units are tethered by cable

Criteria	JORC Code explanation	Certified Person Commentary
		and a person carrying the transmitter walks approximately 10m ahead of the person with the receiver. The data is collected continuously at ~2 sec intervals. Lines were spaced 50m - 200m apart.
	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.	Operators noted any anthropogenic noise sources in the survey area that could affect the readings.
	The verification of significant intersections by either independent or alternative company personnel.	No drill intersections in release
Verification of sampling	The use of twinned holes.	No drilling information in release.
and assaying	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data acquisition was carried out continuously and digitally by on board processing from the receiver unit.
	Discuss any adjustment to assay data.	No drilling information in release.
Location of	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.	Instrument positioning is by an in built RTK GPS.
data points	Specification of the grid system used.	Data locations are supplied in WGS84 / UTM zone 30N (ESPG: 32630).
	Quality and adequacy of topographic control.	Accuracy of the GPS unit is approximately 0.1m which is sufficient for the purposes of the survey.
	Data spacing for reporting of Exploration Results.	Readings were collected continuously along the lines. Line spacing was 50 - 200m.
Data spacing and distribution	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.	Data collected in the survey will not be used for the purposes of an Mineral Resource Estimate.
	Whether sample compositing has been applied.	Not Applicable.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The EM lines were orientated perpendicular to the strike of the graphite mineralisation at variable 50m – 200m line spacings, which is considered adequate for shear hosted graphite mineralisation.
	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.	The EM lines were orientated perpendicular to the strike of the local stratigraphy.
Sample security	The measures taken to ensure sample security.	Data collected in the field was sent electronically to the Company's service provider and checked for quality and accuracy. Local company representatives were on site to check on the work.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No external reviews of the data where data were completed.

Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Certified Person Commentary
Mineral tenement and land tenure status	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.	Work was completed on PL10/47 which is held 100% by Kambale Graphite Limited, a wholly owned Ghanaian registered company of Castle Minerals Limited.  The Government of Ghana has the right to acquire a 10% free carried interest in all mining leases / projects and is entitled to a 5% gross profit royalty on mineral production. There are no other encumbrances on the title.  The Project is located 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 undertaking works the Company negotiated suitable compensation arrangements with traditional owners and farmers for any disturbances created by the Company and upon completion rehabilitates the holes, drill sites and access ways.
	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.	The licence is in good standing.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Graphite mineralisation on the tenement was initially discovered by Russian 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 24/07/2012 based on 54 air core and 3 RC drill holes.  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.  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.  Based on the interpretation of the HLEM and RC drill results, the 2012 Inferred Resource was considered outdated and an Exploration Target for the Kambale Deposit was estimated by an independent geologist.  A further programme of 4 DD and 30 infill RC holes was completed in December 2022.  Based on the drilling completed on the 12th April 2023 the company released a maiden JORC Code 2012 MRE for the Kambale Graphite Deposit.  The Company completed an infill and extensional 43-hole drill programme on the main Kambale Deposit in July 2023. Assay results for this work will be reported once assay results are received.

Criteria	JORC Code explanation	Certified Person Commentary
		The Company is progressing a programme of metallurgical test work using drill core from the December 2022 programme. This work is expected to be completed in August 2023.
Geology	Deposit type, geological setting and style of mineralisation.	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.
		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.
	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:	No drilling information in release.
Drill hole Information	<ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul>	
	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.	No drilling information in release.
	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.	No drilling information in release.
Data aggregation methods	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.	No drilling information in release.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not relevant.
Relationshi	These relationships are particularly important in the reporting of Exploration Results.	The geophysical survey was orientated approximately perpendicular to the strike of the stratigraphy.
p between mineralisati on widths and intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	No drilling information in release.
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	No drilling information in release.
Diagrams	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.	Appropriate maps are provided in the body of this report.

Criteria	JORC Code explanation	Certified Person Commentary
Balanced reporting	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.	No drilling information in release.
Other substantive exploration data	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 results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	All substantive data has been released.
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Geophysical anomalies identified by the survey as likely indicators of graphite will be field checked to rule out cultural features. Validated anomalies will be tested by shallow auger or air core drilling to determine the presence of graphite. Deeper RC drilling will be completed to further test any anomalies with confirmed mineralization.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Plans included in this release.