

Drilling Campaign Launched at Kambale Graphite Project

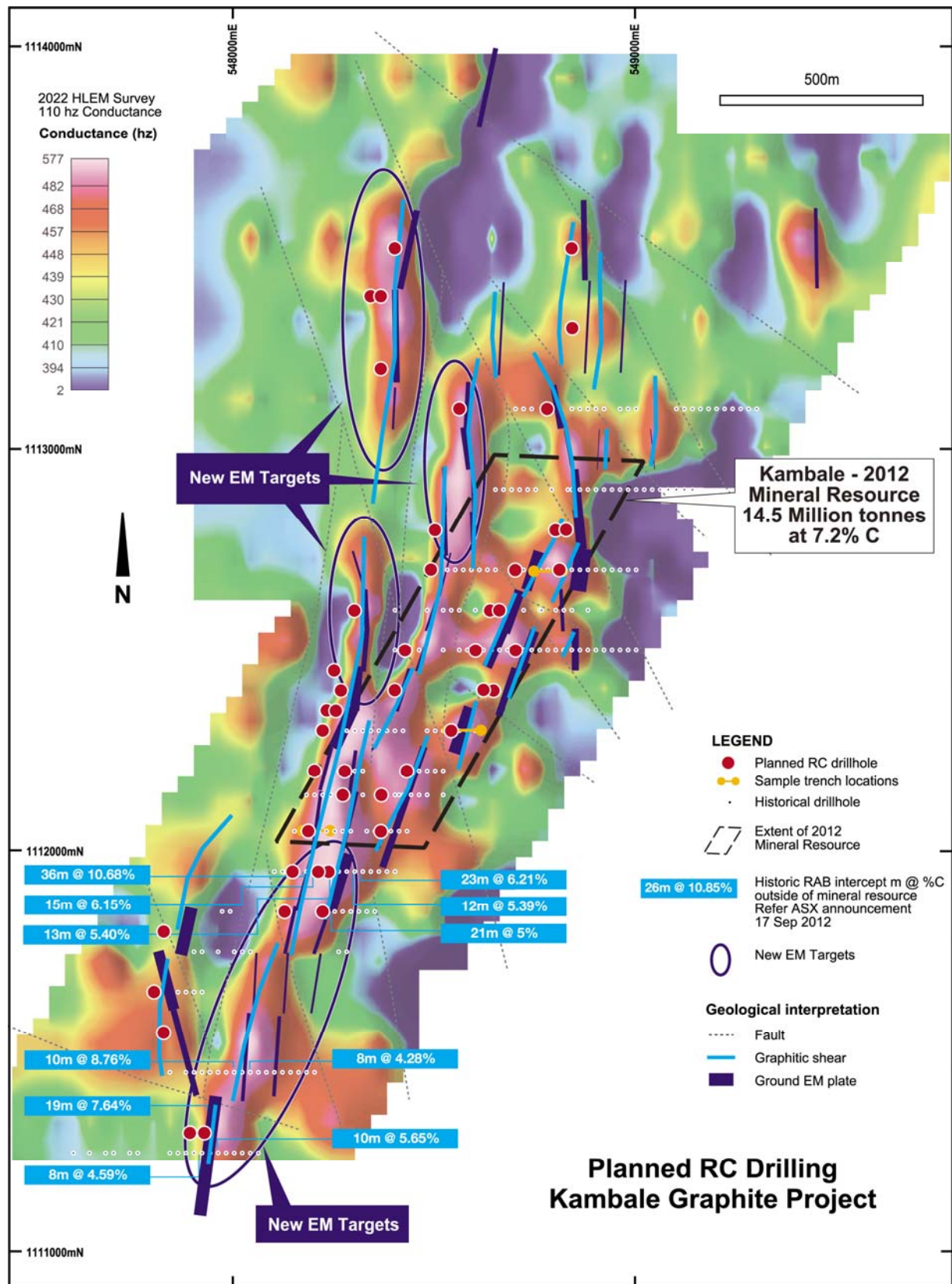
- 46-hole, 4,800m RC drilling campaign will have multiple objectives including:
 - Testing of several new high priority conductivity zones that may represent zones of graphite bearing schist extending well outside of existing Inferred Resource;
 - Extension of known mineralised zones along strike and to depth; and
 - Improved understanding of graphite quality distribution.
- 500m of HQ diamond core drilling will provide core from unoxidized zones for the next round of metallurgical test work.
- The test work will aim to produce a concentrate of unoxidized fresh material for detailed analysis and characterisation, preliminary processing flowsheet development and a high-level market positioning assessment.
- Subject to drill results, a JORC 2012 “Exploration Target” will be calculated for the Kambale graphite field and a road map drafted for an update of the current Inferred Resources of 14.4Mt at 7.2%C (graphitic carbon)(JORC 2004)(refer Table 1).
- Advance of the Kambale project coincides with a consensus view of a looming graphite supply deficit underpinned by the burgeoning growth of EV vehicles and power storage devices.

Castle Managing Director, Stephen Stone commented **“We are very pleased to have commenced the next stage in the advance of Castle’s flagship Kambale graphite project comprising a multi-objective, 46-hole, 4,800m RC drill program with an additional 500m of HQ diamond core drilling which will provide fresh, unoxidised material for the next round of test work.**

We have high expectations that we can expand the footprint and size of the Kambale deposit and, whilst still early days, indications are that the project ticks a number of geological, metallurgical, logistical and jurisdictional boxes that would underpin any development ambitions.

The advance of the Kambale project coincides with a consensus view of a looming graphite supply deficit underpinned by the burgeoning growth of EV vehicles and power storage devices.”

Fig 1: Plan showing proposed RC drill hole locations, ground HLEM survey image and interpreted EM plates several of which are outside of known mineralised zones



Junior explorer and project incubator, Castle Minerals Limited (ASX: CDT) (“Castle” or the “Company”), advises that a multi-objective 46-hole, 4,800m RC drilling program has commenced at its Kambale graphite project, Ghana (“Project”)(Fig 1)(Photos 1 & 2).

A key objective of the campaign will be to expand the footprint of the deposit by testing several new high conductivity zones that extend north and south and well outside of the existing Inferred Resource (JORC 2004, refer Table 1) and known mineralisation boundary. These zones were identified during a recently completed ground electromagnetic (HLEM) survey which demonstrated a strong correlation between known graphite mineralisation and zones of high conductivity.

The drilling will also provide valuable information on graphite quality distribution and aid in identifying locations for the proposed recovery of some 500m of HQ diamond core to provide fresh, unoxidised material for the next round of metallurgical test work and bench-scale concentrate production.

Subject to test work results, a detailed analysis and characterisation of the concentrate will be undertaken as a prelude to a high-level market positioning assessment and the development of a preliminary processing flowsheet.

It is also intended, subject to drilling results, to calculate a JORC 2012 “Exploration Target” and with that a road map for a review and update of current Inferred Resources of 14.4Mt at 7.2%C (graphitic carbon) for 1.03Mt contained graphite (JORC 2004)(refer Table 1).

Photos 1 & 2: First RC drill hole underway at Kambale Graphite Project



Project background

The Kambale graphite deposit was identified in the 1960s by Russian geologists prospecting for manganese.

The Russian geologists undertook a program of trenching and drilled 25 holes to a maximum depth of 25m. A subsequent report noted “two main zones of graphitic schists averaging around 10% to 15% graphite within which there were higher grade zones and that the graphite is the flaky variety with fine crystals (usually less than 0.25mm).” (Report on the Geology and Minerals of the South Western Part of the Wa Field Sheet, Pobedash, I.D. 1991).

The mineralisation consists of north-east trending, sub-parallel zones of meta-sediment which is host to the fine flake graphite. The Lower Proterozoic Birimian (~2.2Ma) meta sedimentary rocks, namely phyllites, and quartz - biotite schists, generally trend north-easterly and dip between 50° and 75° to the north west.

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 the characteristic fine crystalline layers.

Castle reviewed this historical work and a wide-spaced, regional-scale electromagnetic survey dataset inherited from previous licence holder, Newmont Limited. This work outlined a roughly elongate, north-south orientated, ~10km-long region considered prospective for graphitic schist horizons which may host multiple lenses of graphite mineralisation, similar to what is already outlined from drilling and trenching at Kambale. These lenses or horizons can vary in length and be up to 50m wide, creating substantial deposits of graphite.

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). Mapping noted occasional outcrops of manganese and graphitic schist as well as graphite in termite mounds.

Following the completion of the first two phases of Castle’s drilling, an independent Mineral Resource estimate defined a maiden Inferred Resource (JORC 2004) of 14.4Mt at 7.2%C (graphitic carbon) for 1.03Mt contained graphite, including 6.0Mt @ 8.6%TC for 0.52Mt contained graphite (JORC 2004)(Table 1)(refer ASX release 24 July 2012). This extended over a strike of 1.25km and to a maximum depth of 110m. A the third phase of drilling extended mineralisation to a total strike length of 2km.

In 2012 Castle undertook a very limited program of test work on RC chips, which was not an ideal sample, and returned mixed results. Thereafter, little work was undertaken until the more recent improvement in graphite prices prompted a re-evaluation of the Project in early 2021.

In September 2021 Castle reported that preliminary test work on sub-optimal near-surface, weathered graphitic schists yielded very encouraging fine flake graphite concentrate grades of up to 96.4% and recoveries of 88% using a conventional multiple grind and flotation concentration flowsheet. Three excavated and composited samples provided for the test work graded 12.56%, 16.09% and 17.16% total carbon.

In March 2022, a ground electromagnetic (HLEM) survey demonstrated a strong correlation between drill confirmed graphite mineralisation and zones of high conductivity. Several high conductivity zones extending well outside of the existing Inferred Resource boundary were also highlighted indicating the likelihood of substantial extensions of graphitic schists into sparsely or undrilled areas.

Logistics

The Project is located 6km west of the Upper West region capital of Wa which is 400km north, via good sealed roads, of a major rail head at Kumasi. It is then approximately 240km by rail to the international port of Tema, 30km west of the capital Accra, which provides direct access to global export markets. An alternative international port at Sekondi - Takoradi is located approximately 230km west of Accra.

The Wa region has an excellent infrastructure comprising a commercial airport, reliable grid power, water and many other services.

Ghana is an established and safe mining jurisdiction with a well-trained and very capable minerals industry workforce. Its mining services and supply sector is strong and the national and local infrastructure is generally excellent with grid power, water, sealed roads, transport and commercial air services locally at Wa.

ESG

Castle management has spent over 14 years successfully operating in Ghana and in particular its Upper West region. It has established an excellent reputation for creating numerous employment and small business opportunities and for its pro-active commitment to community engagement, the promotion of youth and women's development, managing community expectations, sustainability and maintaining the highest environmental operating standards.

Prior to embarking on any specific exploration activities the Company's in-country Ghanaian team conducts comprehensive discussions 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.

Licensing

The Project is located within a 137km² prospecting licence (PL10/47) held by Carlie Mining Limited, a wholly owned subsidiary of Castle, registered in Ghana. The Government of Ghana has the right to acquire a 10% free carried interest in all licenses in Ghana and is entitled to a 5% Gross Royalty on production.

The Kambale licence is currently progressing through a renewal process. An offer of a licence renewal by Ghana MINCOM has been received and requested statutory consideration and annual ground rents paid. Formal receipt of the licence agreement from the Minister's office is now awaited.

Graphite market

The graphite market is diverse across industrial, metallurgical, chemical and specialised areas with each sector requiring graphite concentrates with specific qualities. Deposit type, size and geometry, flake size, shape, grade and purity / impurity type of the graphite, along with production costs, proximity to specific market, supply logistics, jurisdiction 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 essential use in the fast-growing EV battery and power storage sectors.

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.

Iguana farm out update

The farm-out of the Degbiwu and Gbiniyiri licences to Ghanaian company, Iguana Resources Limited, has been terminated by mutual agreement whereby Castle 100% owned Ghanaian subsidiary, Carlie Mining Limited, will retain 100% ownership of the licences. The Degbiwu licence hosts the Kpali and Bundi gold prospects.

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

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MINERAL RESOURCE ESTIMATE

Table 1: Kambale Project Inferred Mineral Resource Estimate (5%C cut-off grade) (JORC 2004)

Type	Tonnes (Mt)	Graphitic Carbon (%)	Contained Carbon (t)
Oxide Material	3.4	7.1	243,000
Fresh Material	11.0	7.2	793,000
Total	14.5	7.2	1,036,000

Refer ASX release 24 July 2012. Errors may occur due to rounding

The Mineral Resource estimate was made in July 2012 and complied with recommendations in the Australasian Code for Reporting of Mineral Resources and Ore Reserves (2004) by the Joint Ore Reserves Committee (JORC). Castle is not aware of any new information or data that materially affects the information included in the JORC 2004 Mineral Resource estimate and that all material assumptions and technical parameters underpinning the Mineral Resource estimate continue to apply.

The resource estimate released in July 2012 did not include any assumptions about mining, mining dilution, metallurgy or processing methods. No bulk density measurements were undertaken.

The Mineral Resource estimate is not compliant with Australian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserves - 2012 edition. No additional technical work has been done since the Mineral Resource estimate was made. There is insufficient information available for the resource to be re-estimated to be compliant with the Australian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserves - 2012 edition. It is possible that following additional technical work, and should a Competent Person be able to undertake a re-estimation of the Mineral Resource to comply with JORC Code 2012, that the Mineral Resource may materially change and/or reduce.

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 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 Deposits	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 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 and gold.

The **Earaheedy Basin** project encompasses terrane prospective for base and precious metals in the Earacheedy and Yerrida basins base metals provinces. The project comprises the **Withnell, Terra Rossa** and **Tableland** sub-projects. The Withnell application is adjacent to the evolving Chinook-Magazine zinc-lead project of Rumble Resources Ltd (ASX: RTR) and north of the Strickland Metals Limited (ASX: STK) Iroquois prospect. The four Terra Rossa applications are east of the Thaduna copper deposits.

The **Beasley Creek** project lies on the northern flanks of the Rocklea Dome in the southern Pilbara. The strategy is to define orogenic-style, structurally controlled gold targets within the various Archean sequences. Lithium anomalism is also being followed-up.

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

The **Polelle** project (E51/1843, 162.5km²), 25km south of Meekatharra and 7km southeast of the operating Bluebird Mine, hosts a mainly obscured and minimally explored greenstone belt. The belt is comprised of a combination of prospective lithological units and major structural features including the Albury Heath shear which hosts the Albury Heath deposit immediately adjacent to the east boundary of Castle's licence.

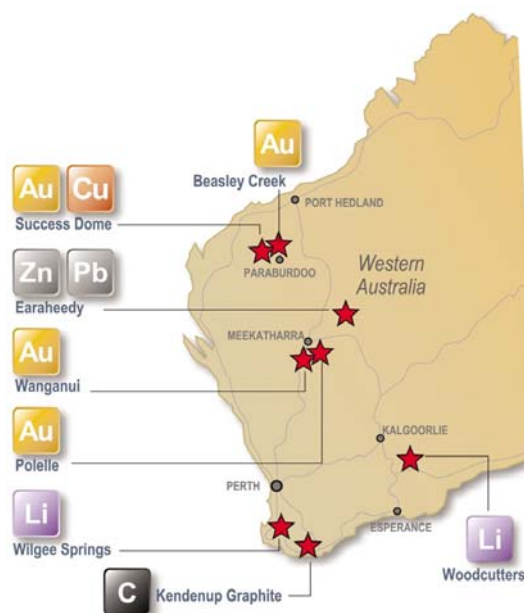
At the **Wanganui** project (E51/1703, 18.4km²), 33km south-west of the active Meekatharra mining centre and 15km south-west of the operating Bluebird gold mine, the opportunity is to test for down-plunge and along strike extensions to the existing Main Lode North and South deposits, as well as for other similar targets.

The **Wilgee Springs** project (ELA70/5880, 120km²), along strike from and within the same metamorphic belt as the World-Class Greenbushes lithium mine, 25km to the south in Western Australia's South-Western region, provides an opportunity to explore using the latest geochemical and geophysical techniques for spodumene bearing pegmatites beneath a lateritic cover that has previously hampered exploration.

The **Woodcutters** project (ELA15/1847/1847, 242km²) is prospective for lithium bearing pegmatites, 25km southeast of the Bald Hill lithium mine in the Bald Hill pegmatite field region and 25km northwest of the Buldania lithium deposit.

The **Great Southern Graphite** project (EL70/5514/5963) comprises two granted licences encompassing the historical **Kendenup** graphite workings and the adjacent **Martigallup** graphite occurrences and one application (ELA70/6116) covering a graphite occurrence at **Mt. Barrow**.

In **Ghana, West Africa**, Castle has a substantial and contiguous tenure position in the country's Upper West region. Ghana has a long history of gold exploration and mining with several world-class gold mining operations owned by Tier 1 mining companies. Castle's Ghana licence holdings encompass 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 project area is also host to the open-ended **Kambale** graphite project for which test work on near-surface samples produced a 96.4% total carbon fine flake graphite concentrate.



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

The **Kambale graphite deposit** is at an early stage in its evaluation with little known about how extensive the deposit is or how the graphite quality varies within it. Drilling and preliminary test work has been undertaken on an easily accessible area which may or may not be representative of the broader deposit once that is known. A fine flake size concentrate of a potentially commercially acceptable grade at a reasonably high recovery was produced. Definitive test work on fresh material and material from other parts of the deposit has yet to be undertaken.

Cautionary Statement

All of Castle's projects in Australia are considered to be of grass roots or of relatively early-stage exploration status. 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 programs 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 Statement

The scientific and technical information in this Report that relates to the geology of the deposits and exploration results is based on information compiled by Mr Stephen Stone, who is 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.

