

### Company Research

14<sup>th</sup> April 2025

**Share Price \*** **\$0.06**

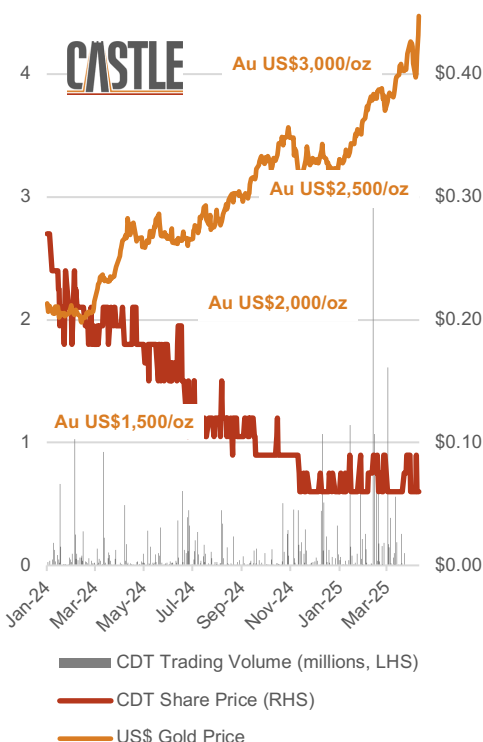
\* presented post share consolidation (30 to 1)

52-Week Range \$0.03 - \$0.21  
Shares Outstanding 116.0m  
Options 56.7m

Market Capitalisation \$7.0m  
Working Capital (post placement) \$3.6m  
Enterprise Value \$3.4m

#### Board

Stephen Stone Executive Chairman  
Matthew Horgan Non-Executive Director  
Brian Thomas Non-Executive Director



Castle Minerals Ltd (ASX: CDT) is an ASX-listed minerals exploration and development company, headquartered in Perth, Western Australia. It has interest in several projects in Ghana and Western Australia that are prospective for gold, graphite and base metals. In Ghana, Castle's 100% owned Ghanaian subsidiary, Carlie Mining Ltd, owns the Kpali Gold Project and the Kandia Gold Project both at the exploration / resource delineation stage. All occur in highly prospective Birimian geological terrane, the host to many of West Africa's and Ghana's multi-million-ounce gold mines.

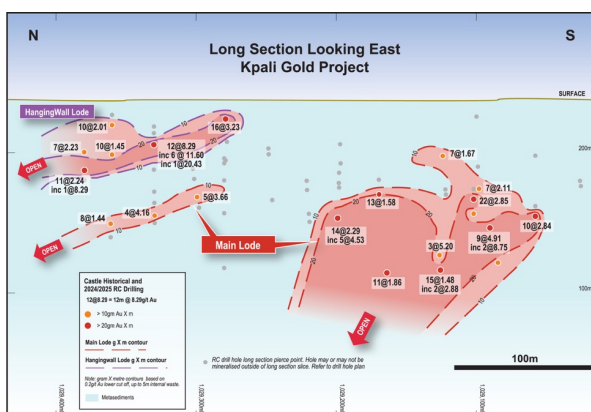
### On the Path to 1 Million Ounces or More

Research Analyst: J-François Bertincourt

**West Africa:** is where big gold discoveries can be and are still being made. Castle's **Two Flagship Gold Projects**, Kpali and Kandia, are in northern Ghana which hosts Cardinal Resources' 5.1Moz gold Namdini deposit and Azumah Resources' 2.8Moz gold Black Volta Gold Project. The latter's high-grade Julie deposit is immediately along strike from Castle's Kandia Gold Project.

**Kpali Gold Project:** Recent high grade gold intercepts have confirmed a discovery and robust mineralisation:

- 12m at 8.29g/t Au from 25m (24KPRC010)
- 7m at 2.23g/t Au from 35m (24KPRC011)
- 5m at 3.66 g/t Au from 78m
- 13m at 1.58g/t Au from 73m (24KPRC014)
- 9m at 4.81g/t Au from 107m



**Kandia Gold Project:** the most recent RC drilling programme confirmed good gold continuity with:

- 7m at 3.36g/t from 149m within 24m at 1.78g/t from 139m (24KARC002)
- 5m at 3.49g/t from 82m within 11m at 2.26g/t from 79m (24KARC002)

Beyond these standout results, very strong mineralisation has been encountered within most holes drilled, implying that with additional drilling some high value deposits may be delineated. Several other prospects are also being advanced and have returned encouraging gold intercepts.

**Project Benchmarking:** focusing on projects in West Africa, the drill hole intercepts reported so far by CDT are well in line with other projects with numerous high grade intercepts close to surface. It appears to us that expanding the mineralisation is a function of the number of drill holes and drilling depth to increase the footprint along strike and at depth.

**Management Team:** lead by Stephen Stone with a track record of gold discoveries, CDT technical team is highly qualified to continue to progress the exploration, evaluation and development of Castle's Kpali, Kandia and its other gold projects.

**Investment Perspective:** Now to be well cashed up following the recent \$3m placement, the currently low market valuation of CDT compared to its peers offers an outstanding investment opportunity. The Kpali Gold Project and Kandia Gold Project are expected to continue to deliver economic grade gold mineralisation in a context of record high gold prices.

**Excellent Jurisdiction:** Ghana is a stable, safe and mining friendly jurisdiction governed under a democratic Westminster system with a British justice system. It has a long history of mining with some of Africa's largest gold mines operated by Newmont, AngloGold-Ashanti, Goldfields and Perseus.

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# 1. Company & Project Benchmarking

## Peer Group Selection

To select Castle Minerals' peer group, we focused on ASX-listed and TSXV-listed companies with gold projects in West Africa:

- African Gold (ASX: A1G): Didievi gold project in Côte d'Ivoire
- Asara Resources (ASX: AS1): Kada (75) gold project in Guinea
- Desert Metals (ASX: DM1): Adzope (51%) and Tengrela South (80%) projects, in Côte d'Ivoire
- Many Peaks Minerals (ASX: MPK): Ferké (65%), Odienné (65%), Baga gold projects in Côte d'Ivoire
- Pelangio Exploration Inc (TSXC: PX): Manfo gold project in Ghana
- Toubani Resources (ASX: TRE): Kobada gold project (90%) in Mali

All companies are exploring or developing gold projects within similar geological settings.

## Benchmarking Results

Figure 1.1 summarizes the market capitalisation and cash balance, as at 31 December 2024 or later subject to recent placement(s) with the companies sorted by increasing market capitalisation.

Both CDT and DM1 have raised some additional equity in recent weeks, resulting in CDT having a negative or close to zero enterprise value currently.

As CDT and other companies are currently focused on exploration (i.e. pre-mineral resource estimate), we have investigated drill hole intercepts data.

**Figure 1.1 – Company Benchmarking**

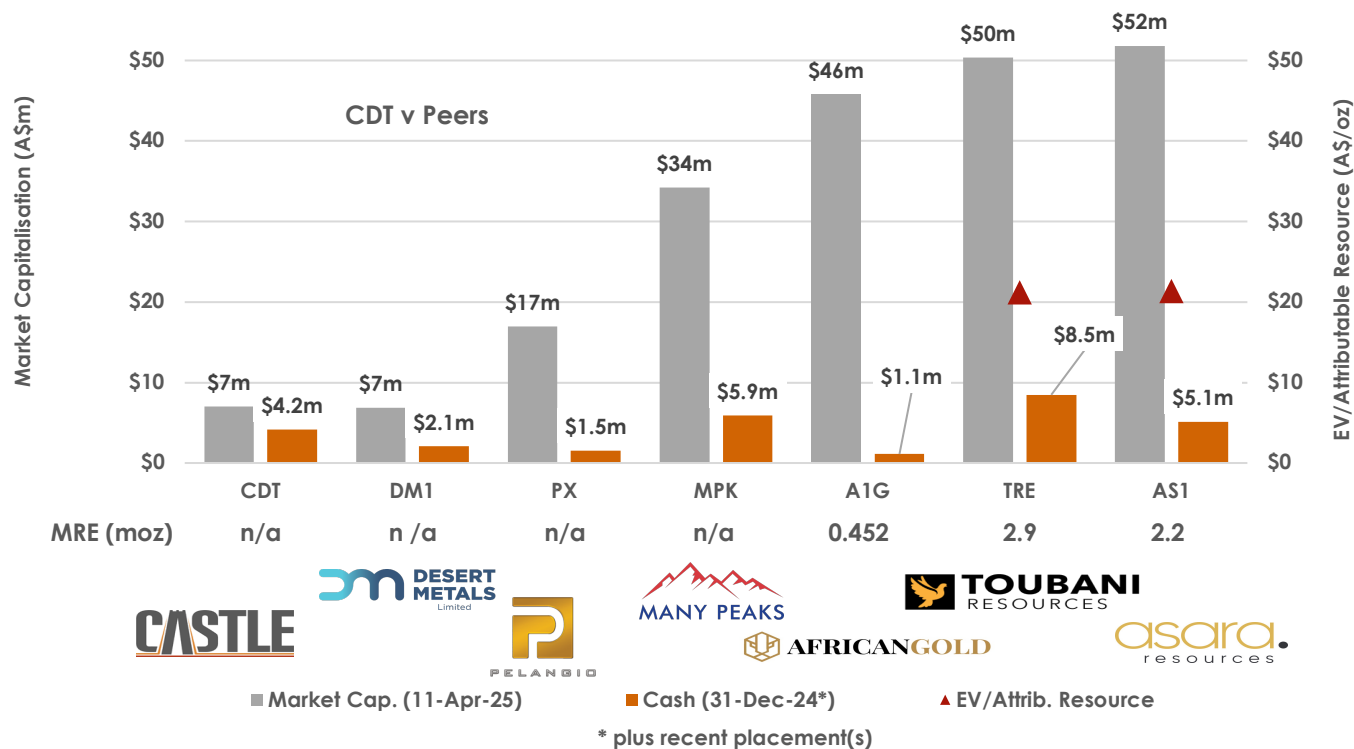
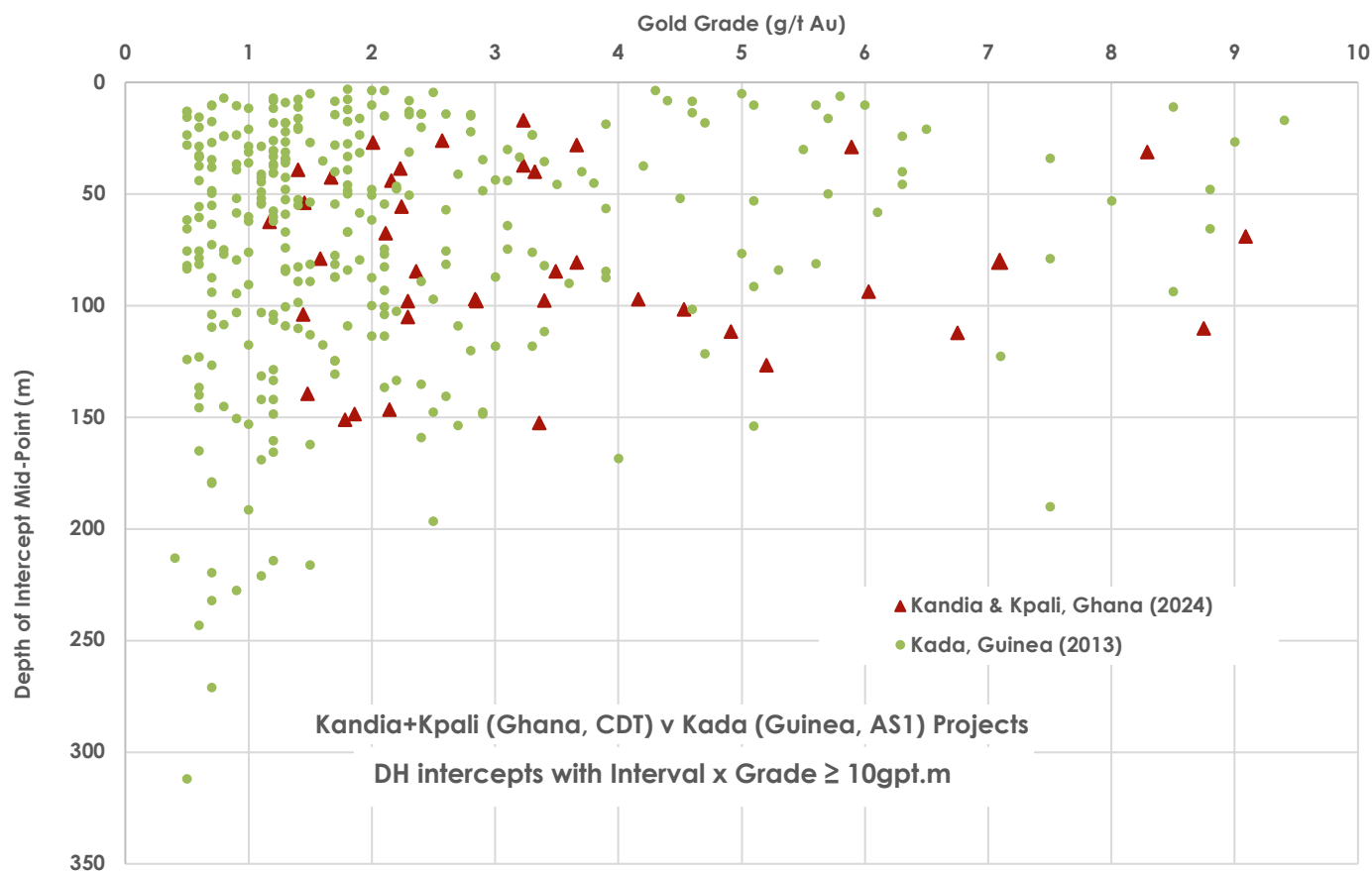
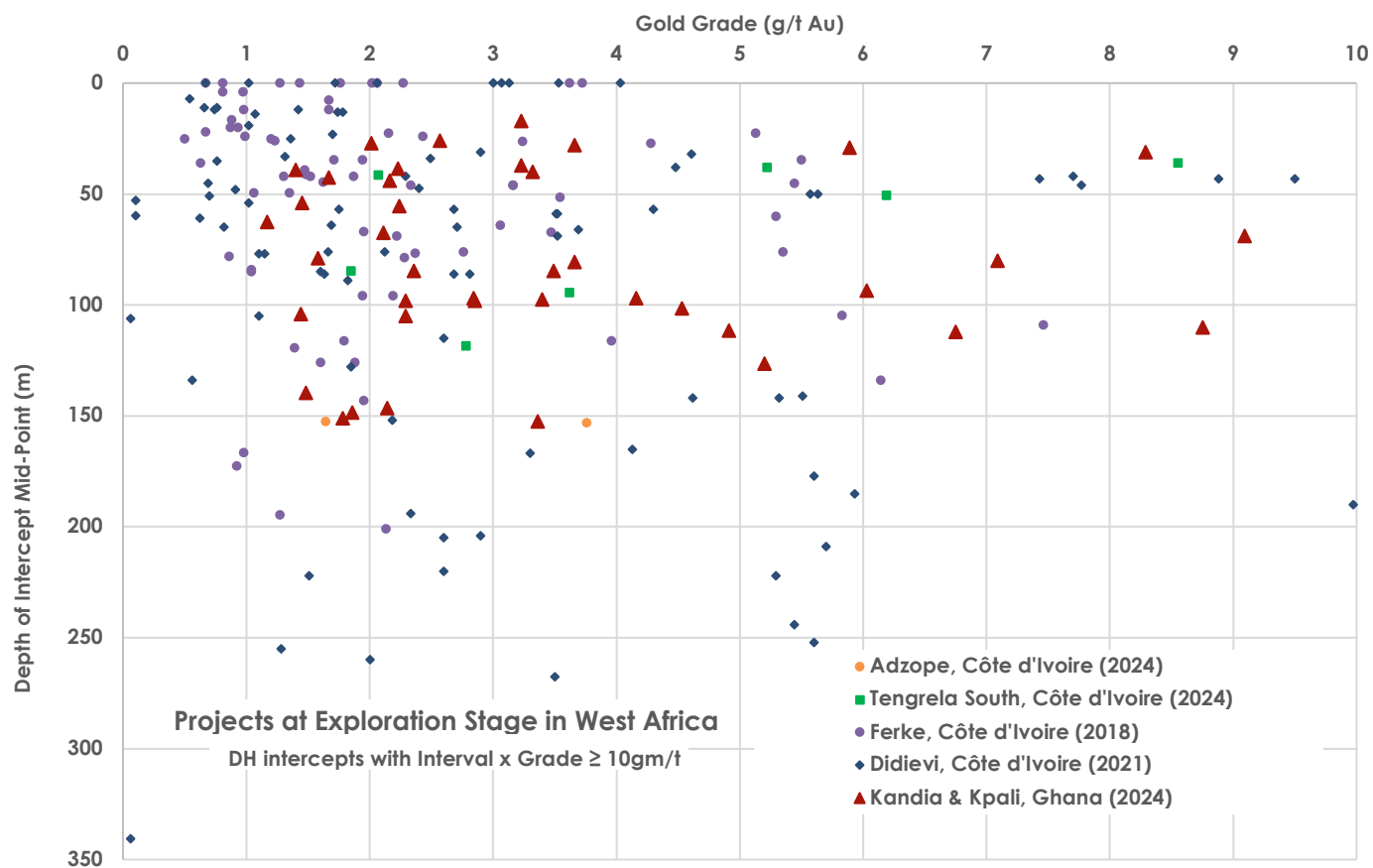


Figure 1.2 summarises the drill hole intercepts with grade x interval  $\geq 10\text{g.m/t}$  for the selected exploration projects in West Africa (first chart) and a development project Kada (second chart). While the most recent phase of Castle drilling only started last year, the reported intercepts are abundant and displaying good tenor in comparison to Adzope and Tengrela South, where drilling started about the same time.

**Figure 1.2 – Drill Hole Intercepts Benchmarking**



The drill hole hits are very much in line with the Kada project.

## 2. Exploration Upside

### The Right Address

Castle's 100% owned Ghanaian subsidiary Carlie Mining Ltd, holds a substantial and contiguous 2,686km<sup>2</sup> tenure position in the Upper West Region of Ghana, West Africa. This encompasses large tracts of highly prospective Birman geological terrane, the host to many of West Africa's and Ghana's multi-million-ounce gold mines.

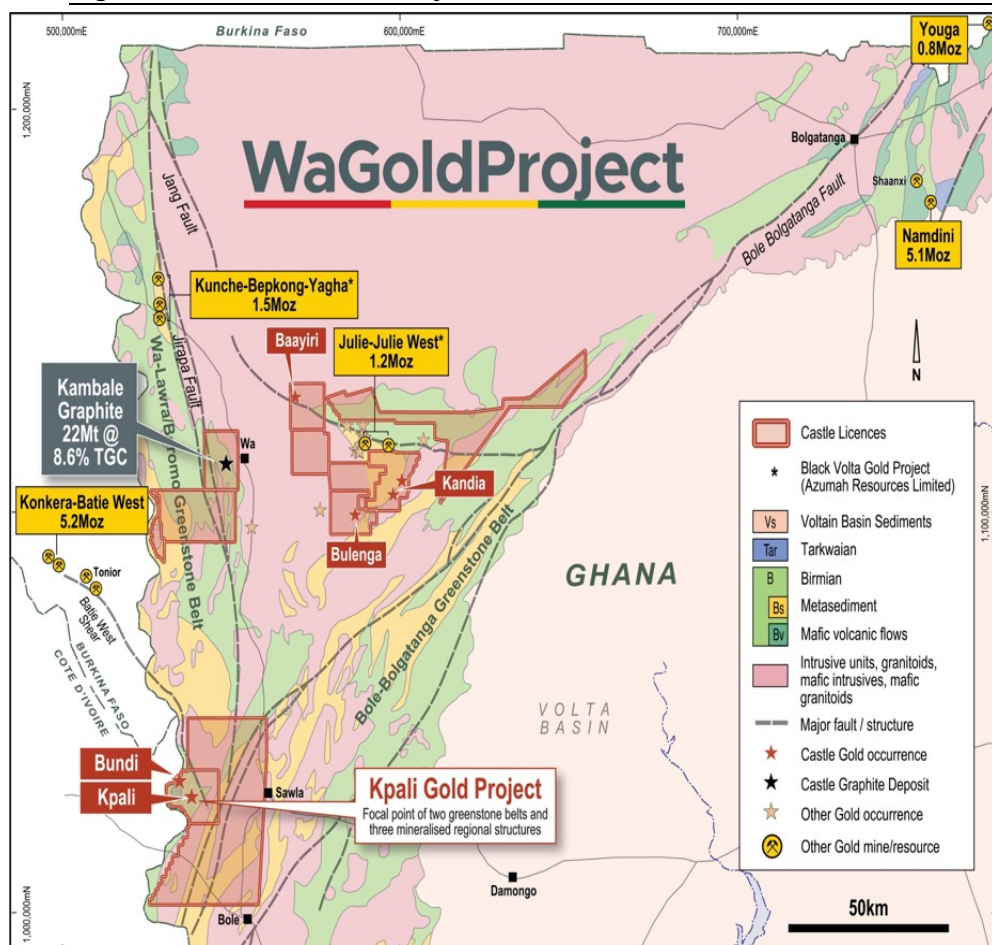
### Kpali Gold Project

The main driver for investigating the Kpali area in particular is the compelling geological focal point provided by the convergence of two major fertile greenstone belts (Bole-Bolgatanga and Wa-Lawra/Boromo) and three regional-scale structures being:

- 1) 30km Batie West Shear, host to the 5.2Moz Konkera deposit, 60km NW across the border in Burkina Faso;
- 2) 15km Wa-Lawra shear zone, host to the 1.8Moz Kunche/Bepkong/Yagha deposits, 110km N and now awaiting a development decision; and
- 3) 53km Bole-Bolgatanga shear zone, host to the 5.1Moz Namdini deposit, 300km NW where mine development has commenced.

Castle's separate Kandia prospect comprises a 16km corridor of intermittent anomalous gold mineralisation extending north east to the Black Volta Gold Project's high-grade Julie deposit. Several zones of primary mineralisation have been delineated.

**Figure 2.1 – Castle Minerals Project Areas**



Source : CDT

### Discovery Track Record

Castle's Stephen Stone, as former MD of Azumah Resources Limited, grew the nearby Black Volta Gold Project from a minor isolated prospect into a series of major, mainly non-outcropping discoveries now totaling:

- 2.80 million ounces Mineral Resource at 1.7 g/t gold and
- 1.37 million ounces Ore Reserve at 1.8 g/t

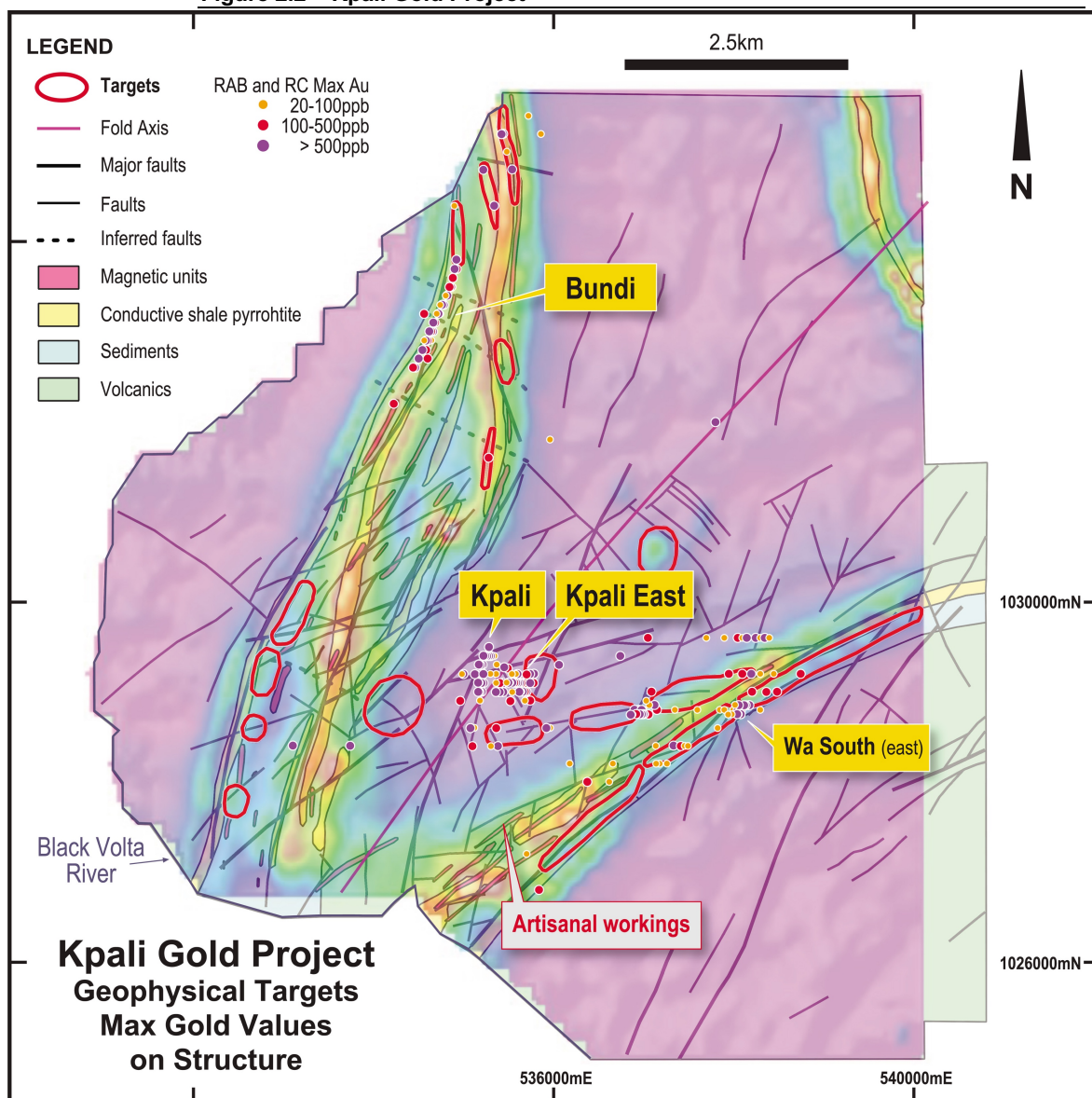
The 934km<sup>2</sup> BVGP is earmarked for development as an 11-year, +148,000oz/year at 1.63g/t Au mine operation.

Castle's extensive tenure provides an excellent opportunity to replicate this success.

### New West African Gold District

At the Kpali prospect, there are no artisanal workings or outcrop to lead the geologists in, making this 'blind' discovery all the more exciting.

**Figure 2.2 – Kpali Gold Project**



Source: : CDT

The geological setting at Kpali is similar to the Afema project (2.52 Moz) developed by Turaco Gold (ASX: TCG, Market Cap \$384 million) which also lies located at the convergence of two Birimian belts/shear zones extending southwest from Ghana into Côte d'Ivoire.

**2024 RC Drilling Section**  
 1:10,480N  
 Kpali Gold Project

**Legend**

- Current RC Drilling
- Significant assay
- Mineralised zone
- Weakly mineralised zone
- Saprophyte horizon
- Metasediment

**Drill Results:**

- 17m @ 1.34g/t Au
- 10m @ 1.32g/t Au
- 10m @ 1.32g/t Au
- 8m @ 1.18g/t Au
- 11m @ 1.14g/t Au
- 11m @ 2.36g/t Au incl 5m @ 3.49g/t Au and 2m @ 1.29g/t Au
- 24m @ 1.78g/t Au incl 7m @ 3.36g/t Au
- 3m @ 1.64g/t Au
- 5m @ 1.32g/t Au
- 10m @ 2.98g/t Au

**Scale:** 50m

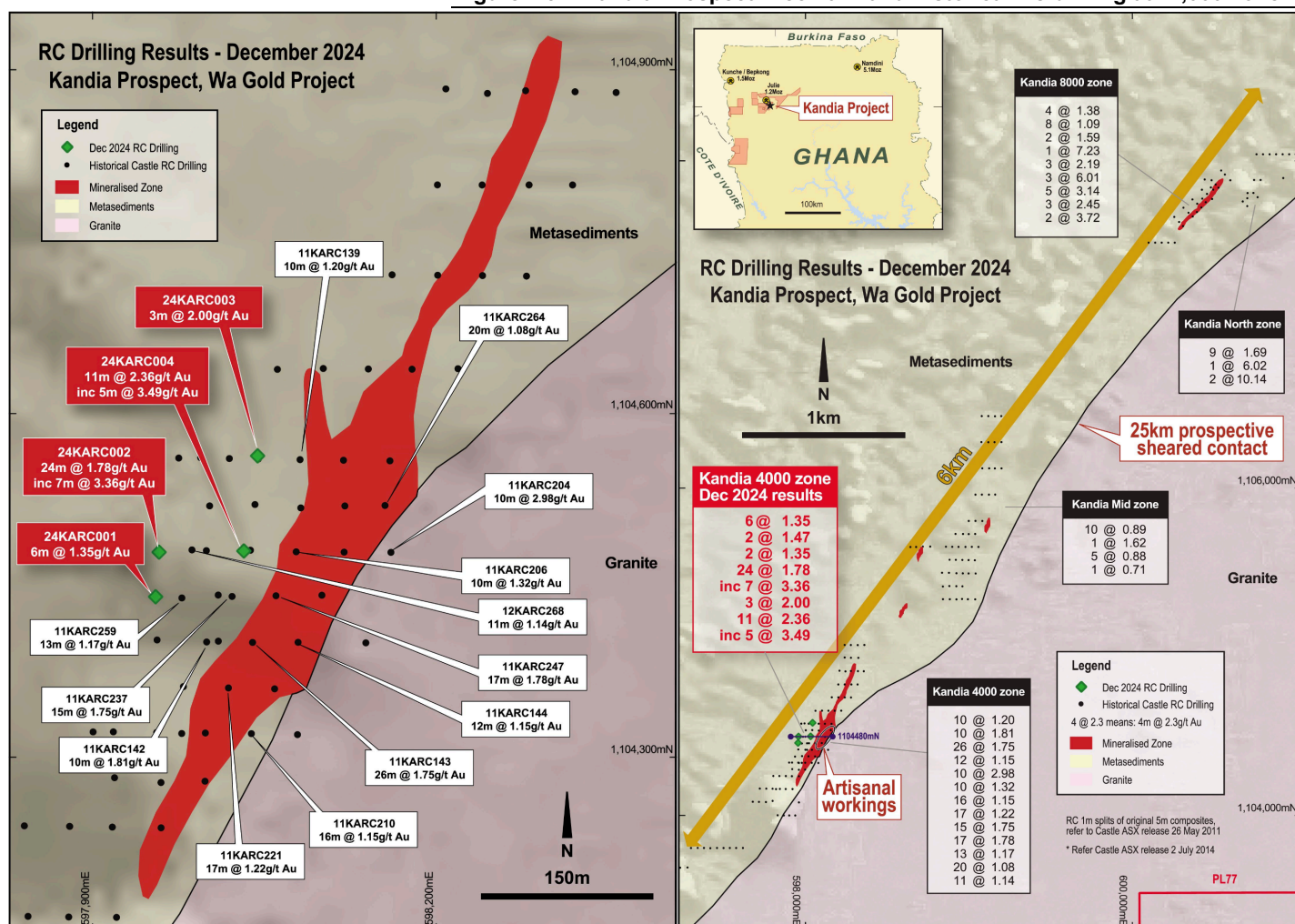
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Drilling was confined to the “4,000-Zone” where mineralisation has previously been confirmed over a strike of ~850m. This zone is one of several prospects that have been outlined by a series of soil sampling, RAB and RC drilling campaigns. These were conducted over an area of initial focus extending for **some 6km** along the sheared contact between Birimian metasediments (mineralised) and a regional-scale granodiorite intrusion (unmineralised).

This prospective contact has been recognised for **over 16km** on Castle’s tenure providing ample opportunity for more mineralisation to be outlined through systematic exploration.

Many of the major discoveries in the Upper West Region, Ghana and West Africa generally commence life as what at first appear to be just shallow zones of low-grade anomalism. Persistence and a careful attention to all available data can often see these grow into substantial discoveries extending to great depth.

**Figure 2.3 – Kandia Prospect: Dec 2024 and historical RC drilling at “4,000-zone”**



### 3. KAMBALE GRAPHITE PROJECT

#### High Grade Mineral Resource

Castle owns the Kambale Graphite Project, one of the highest grade graphite projects in Africa and the only one in Ghana. Table 3.1 summarises the Mineral Resource Estimate for the Kambale Graphite Project. 43% of the contained graphite is in the Indicated category.

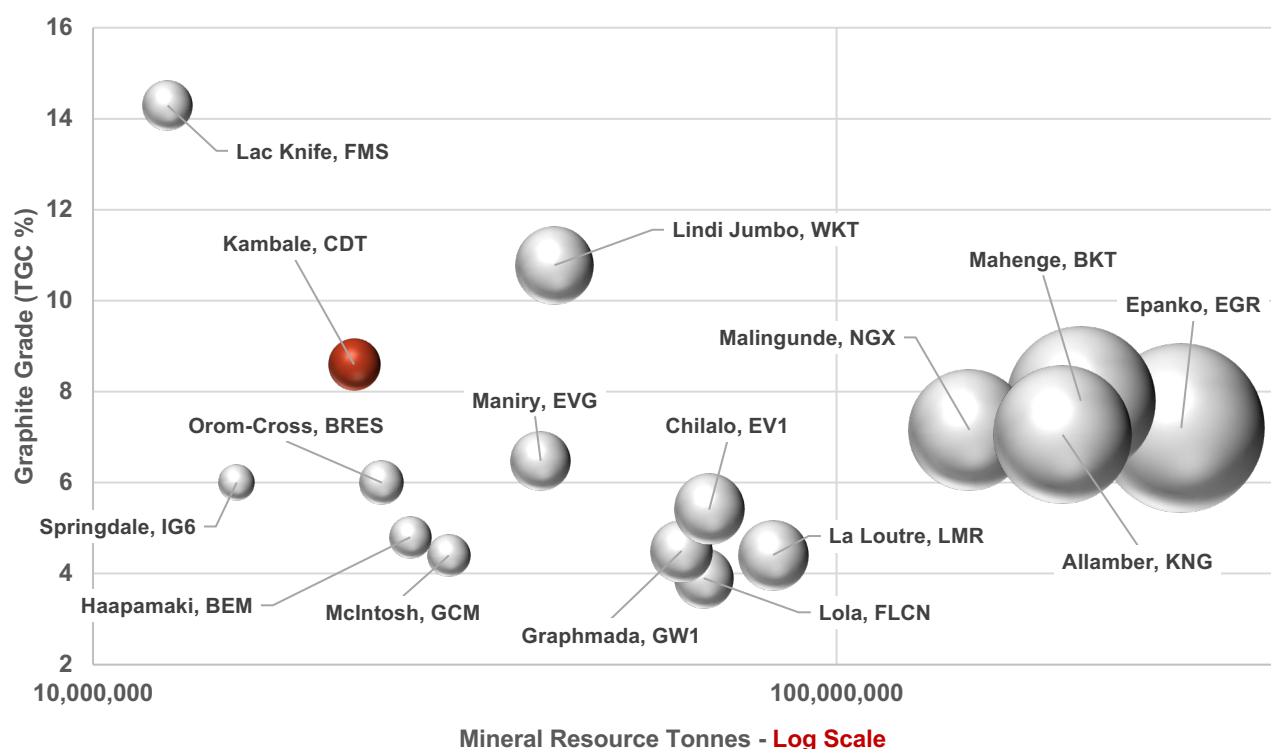
**Table 3.1 Kambale Graphite Project – Mineral Resource Estimate**

Category	Tonnes	TGC	Contained TGC
Indicated	9,556,000 t	8.8%	843,000 t
Inferred	12,872,000 t	8.5%	1,086,000 t
Total	22,438,000 t	8.6%	1,939,000 t

Source: CDT

Figure 3.1 highlights the position of the Kambale MRE against its peer group.

**Figure 3.1 – Benchmarking of Graphite MRE**



Source: : company announcements, Terra Studio

#### Metallurgy

Beyond the grade, the graphite quality and the metallurgy are keys to potential development of the project.

Kambale graphite is almost entirely fine grained which is the main from of graphite used in lithium-ion battery manufacture. Not the jumbo and large flake material

Electrochemical tests on material from its Kambale Graphite Project have confirmed its high performance characteristics and suitability for use in the manufacture of lithium-ion battery anodes and in other battery chemistries and formats:

- 95.1% LOI bulk fine flake graphite concentrate produced using conventional grind-flotation circuit. This can be sold as-is.
- Successfully upgraded to an above benchmark requirement to 99.97% LOI purity following micronisation, spheronisation and purification. This is a very high value product.
- No impurities of concern.

## Ghana Government Support

The Ghanaian Government has expressed a high level of support for the Kambale Graphite Project especially given Ghana's ambition to establish a local critical minerals based industry hub incorporating the Atlantic Lithium's Ewoyaa lithium deposit.

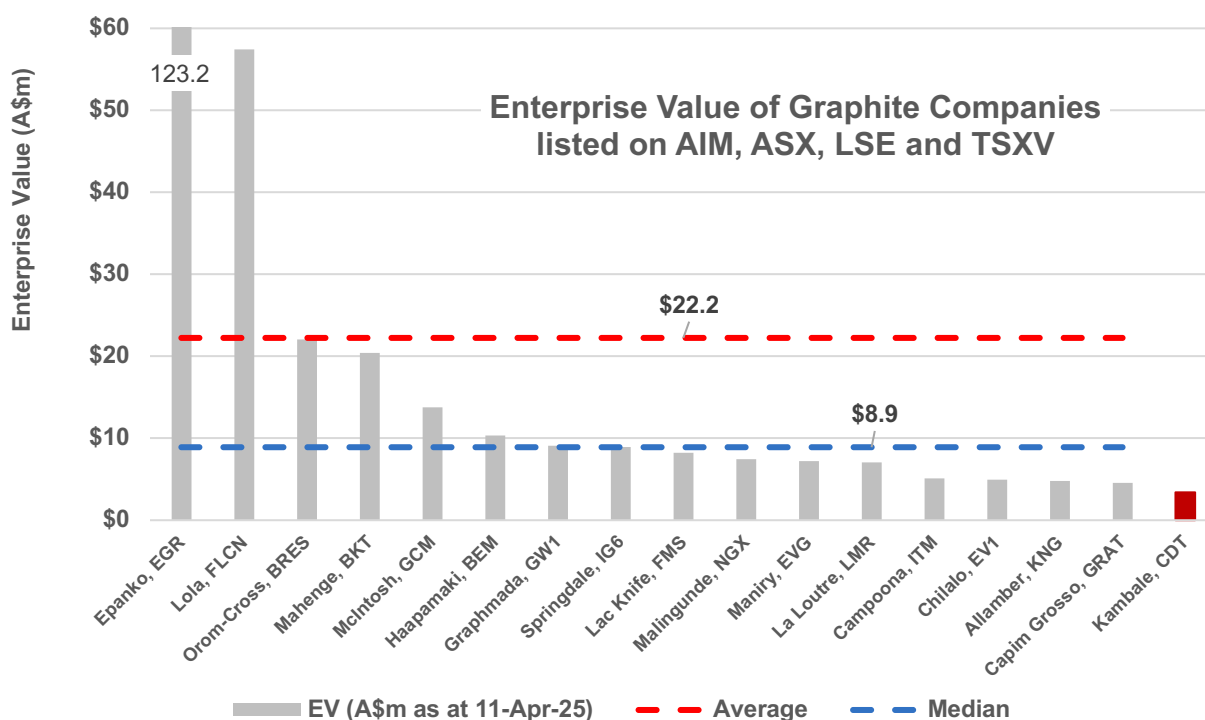
On 5 November 2024, CDT announced that it had executed a non-binding indicative term sheet with Ghana's sovereign Minerals Income Investment Fund to invest US\$0.5 million into Castle and ~US\$1.5 million directly in the Kambale Graphite Project, which will enable it to be progressed through to a Pre-Feasibility Study.

The Minerals Income Investment Fund receives the royalties and dividends generated by mining companies operating in the country. These include Newmont, Goldfields, AngloGold Ashanti, Perseus, Asanko and Asante Gold.

MIIF presently has over US\$500 million of assets under management and is expected to invest a total of US\$32.9 million in Atlantic Lithium (ASX: A11) and its Ghanaian subsidiaries to expedite the development of Ewoyaa. Current Market Valuation of Peers.

Figure 3.2 summarises the Enterprise Value of Castle's graphite peers. Despite graphite companies not being in favour by the market right now, any of the companies' enterprise value included in the chart is a multiple of the current enterprise value of CDT at only \$3.4 million.

**Figure 3.2 – Benchmarking of Graphite Companies**



Source: : company announcements, Terra Studio

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