

3<sup>rd</sup> September 2012



## ASX Announcement

# Metallurgy Test Work Confirms Commercial Potential of Kambale Graphite Deposit

Castle Minerals Limited (ASX: CDT), the Ghana gold explorer, is pleased to announce that metallurgy test work has confirmed the commercial potential of its Kambale graphite deposit. Flotation tests conducted on fresh and weathered graphitic schist from the Kambale deposit in north-west Ghana indicate that graphitic carbon can be easily recovered through simple flotation.

Flotation recovery results for +75 micron (flake graphite) were estimated at nearly **70% for fresh material and 34% recovery from weathered material**. Flake graphite has high value and is currently priced at \$1500-\$3000/tonne<sup>1</sup>.

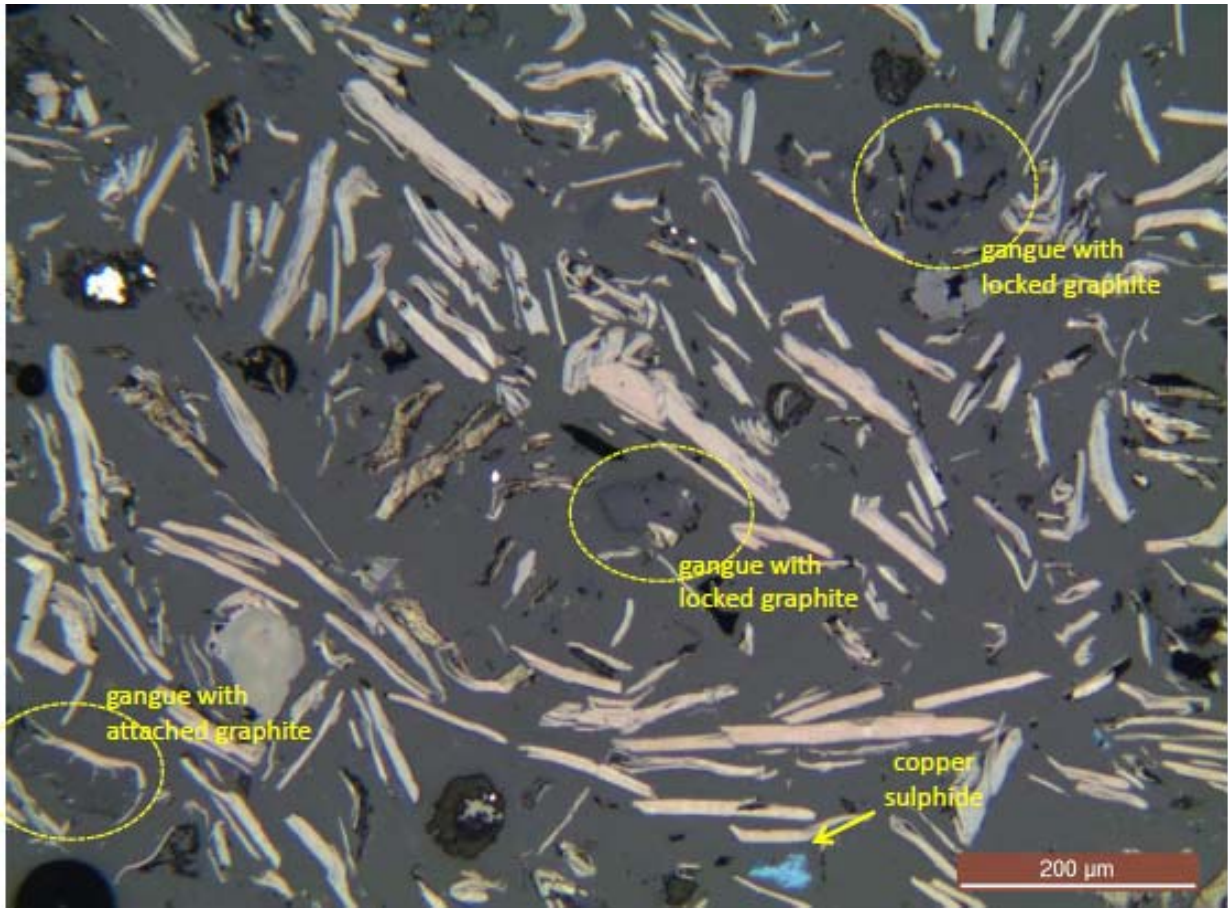
Flotation recoveries for -75 micron (amorphous graphite) were **93% for fresh and 62% for weathered material**.

On 24 July 2012 Castle announced a maiden Mineral Resource Estimate for Kambale of 14.4Mt @ 7.2% C (graphitic carbon) for 1.03Mt contained graphite, including 6.0Mt @ 8.6% C for 0.52Mt contained graphite. Kambale ranks as one of the world's larger global graphite deposits.

Castle's Managing Director, Mr Mike Ivey, said; "We are very pleased to report these first flotation tests that confirm the commercial potential of Kambale to be a low cost producer of flake graphite. Kambale now justifies detailed metallurgical investigation to define the optimum processing, recovery and concentrate treatment path for the very large resource that we have outlined so far.

"As well as expanding the Kambale deposit and conducting detailed metallurgical test work, Castle remains committed to the Company's core focus of building on the gold exploration successes achieved to date on its highly prospective and proven licences."

Fresh and primary drill composite samples were submitted to AMMTEC metallurgical laboratory in Perth under the supervision of consultants Mineral Engineering Technical Services (METS) for sizing and flotation test work.



Photograph of polished section of fresh sample flotation concentrate showing predominantly liberated flakes of grey graphite (100-250 micron).

Fresh sample flotation concentrates



-150 +75 micron concentrate



-180+150 micron concentrate

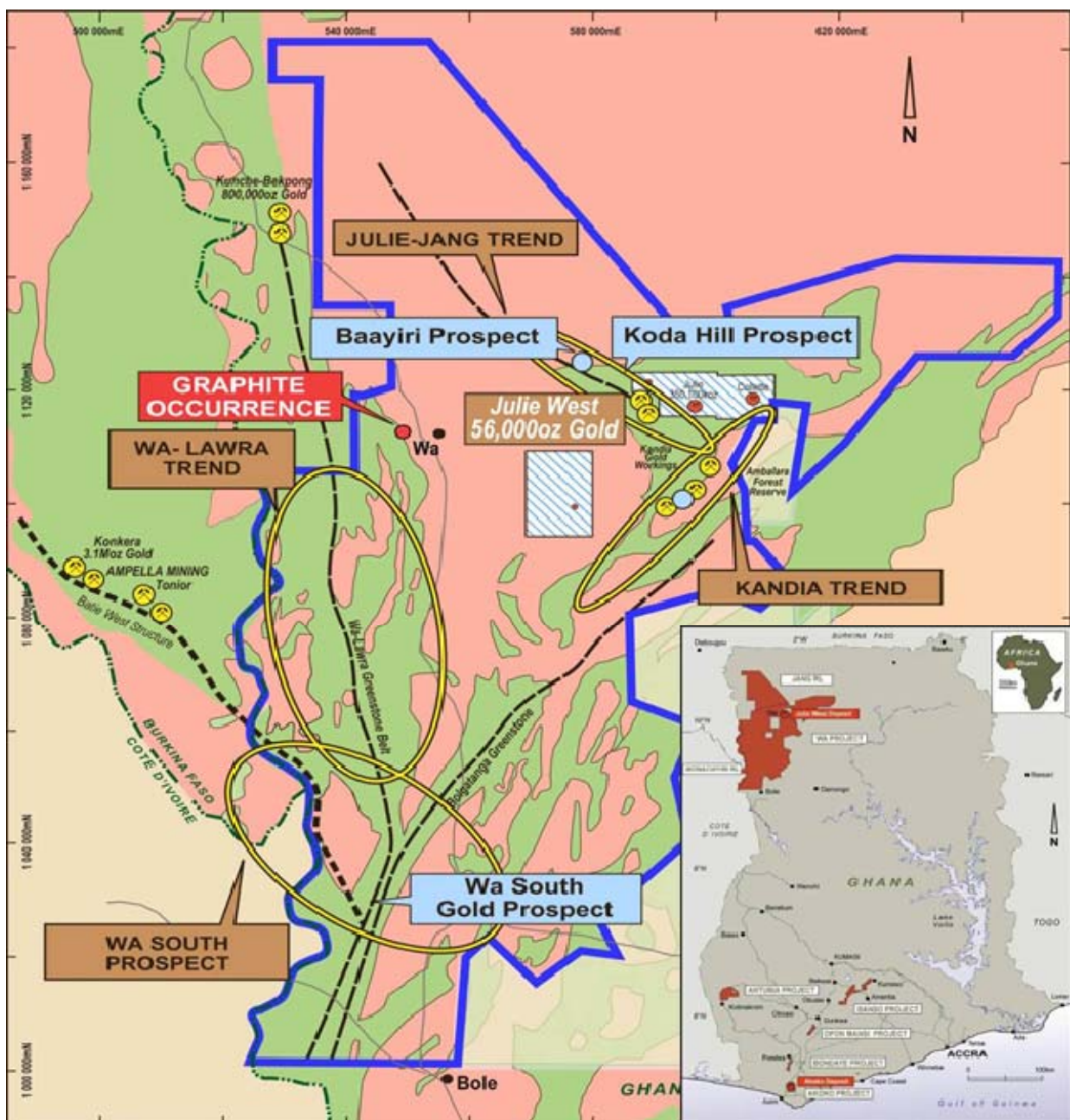
Fresh and weathered drill samples were crushed screened and subject to flotation and produced the following distributions and recoveries.

Fresh Material Combined +75 micron Material with Flotation Recovery as Reported -150 +75 micron

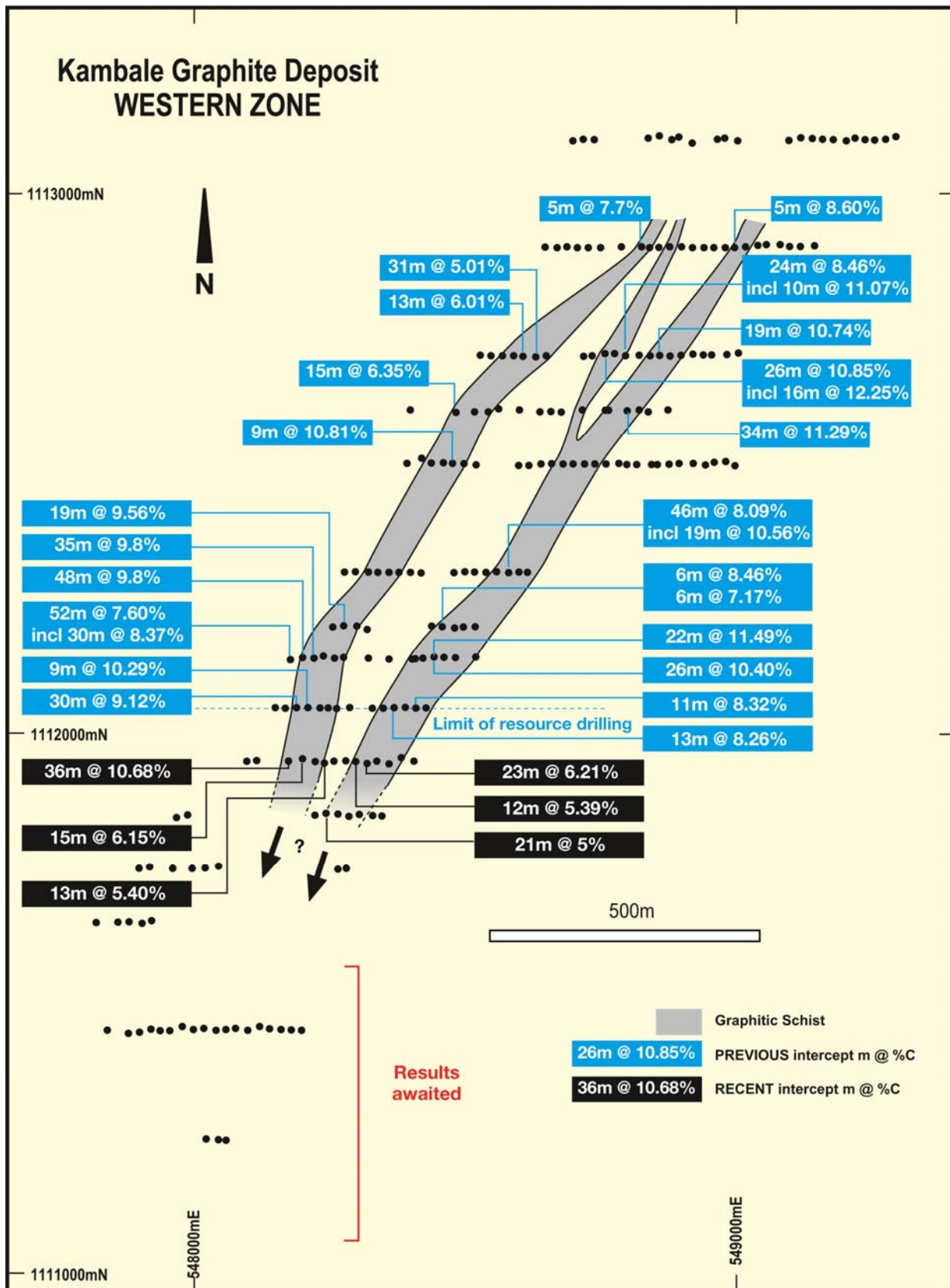
Size Fraction (micron)	CGRAPHITE Calc'd Feed Grade (%)	Mass Distribution (%)	Flotation Recovery (%)	t Graphite
+75	10.6	53.0	69.8	0.039
-75	14.0	47.0	93.4	0.061

Weathered Material - Combined +75 micron Material with Flotation Recovery as Reported -150 +75 micron

Size Fraction (micron)	CGRAPHITE Calc'd Feed Grade (%)	Mass Distribution (%)	Flotation Recovery (%)	t Graphite
+75	14.9	57.1	34.5	0.029
-75	20.1	42.9	61.9	0.053



Castle's Wa Project in north west Ghana



Drill hole location plan of Kambale graphite deposit with significant graphite intercepts. Results in blue were used in the July 2012 resource estimate whilst those in black are from new drilling testing the southern strike extension

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About Castle:

Castle Minerals listed on the Australian Stock Exchange in May 2006 (ASX code 'CDT') and has since acquired the rights to six mineral projects in Ghana, West Africa including Akoko, Antubia, Bansa, Bondaye, Opon Mansi (application) and Wa covering more than 11,000km<sup>2</sup>.

All granted projects are 100% owned by Castle Minerals (subject to Ghanaian Government right to a free-carried 10% interest). Castle's corporate objectives are exploration and development of its six projects in Ghana and the acquisition and exploration of other mineral resource opportunities, particularly in West Africa. The country of Ghana has a long history of gold mining and exploration and is Africa's second largest gold producer behind South Africa.

The Kambale graphite prospect is within the Wa-Lawra greenstone belt and is being explored for gold and base metals by Castle. Under the terms of Castle's Licence conditions the company has first option to explore for and work other minerals subject to satisfactory arrangements between the Government and Castle. In July 2012 The Ghana Minerals Commission provided written notice that it has recommended to the Minister of Lands and Natural Resources to grant Castle a new licence over and including the Kambale graphite deposit.

<sup>1</sup> Graphite Prices sourced from Industrial Minerals, www.indmin.com

### Kambale Deposit July 2012 Inferred Mineral Resource Estimate (5% C cut-off grade)

Type	Tonnes Mt	C %	Contained C t
Oxide	3.4	7.1	243,000
Fresh	11.0	7.2	793,000
<b>Total</b>	<b>14.5</b>	<b>7.2</b>	<b>1,036,000</b>

\*Errors may occur due to rounding

Mineral Resource Summary for the Kambale Graphite Deposit

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*Information in this announcement that relates to Exploration Results is based on information compiled by Haydn Hadlow, Castle Minerals Limited Exploration Manager, who is a Member of The Australasian Institute of Mining and Metallurgy. Haydn Hadlow is a permanent employee of Castle Minerals Limited and has sufficient experience that 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 2004 JORC Code. Haydn Hadlow consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*Information in this announcement that relates to the Kambale Mineral Resource Estimate is based on information compiled by Aaron Green, Operations Manager WA, Runge Limited. Aaron Green is a full time employee of Runge Limited, a Member of the Australian Institute of Geoscientists (AIG), and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code for the Reporting of Mineral Resources and Ore Reserves. Aaron Green consents to the inclusion in the announcement of the matters based on the information in the form and context in which it appears.*