## **ASX** Announcement



## **Akoko North Resource Grade Increased by 37%**

- New JORC Mineral Resource estimate for the Akoko North deposit totals
   1.1mt @ 2.2g/t gold for 77,400 ounces
- Combined JORC Mineral Resource estimate for Akoko North and Akoko South deposits totals 1.7mt @ 1.9g/t gold for 103,300 ounces
- Resource grade at Akoko North has increased by 37% due to higher grade mineralisation being intersected in new RC drilling (reported earlier this year)
- Pit optimisation scoping studies at Akoko North captures 1.07mt @ 2.0g/t gold (68,000 ounces) at a cash cost of US\$575/ounce
- At a gold price of US\$1,750/ounce the study indicates that the deposit could generate an operating surplus of ~US\$70M
- Shallow gold mineralisation with 80% of the resource above 50m
- Deposit is open to the south, west and east
- Strong potential to host additional shallow gold resources

Castle Minerals Limited (ASX: CDT, "Castle") is pleased to announce a new JORC compliant Resource Estimate for its 100% owned Akoko North Project, located 25km south of Tarkwa in south west Ghana.

The new resource estimate was completed following positive results of reverse circulation drilling completed in 2011 and has seen the grade increase by 37% - a result of the new drilling intersecting zones of higher grade gold mineralisation in both oxide and fresh domains.

Castle's Managing Director, Mr Mike Ivey, said "the combination of increased grade and increasing gold price has added very significant value to the Akoko North deposit and we now plan to commence environmental, feasibility and social impact studies towards application for a Mining Lease over both the Akoko North and South gold deposits."

### **Akoko North Deposit**

#### 2011 Mineral Resource Estimate 0.8g/t Cut-off

	Indicated		Inferred		Total		
Type	Tonnes	Gold	Tonnes	Gold	Tonnes	Gold	Gold
	t	g/t	t	g/t	t	g/t	Ounces
Laterite	1,200	2.0	700	1.9	1,900	1.9	120
Oxide	515,700	1.6	351,000	2.1	866,700	1.8	50,200
Transition	8,400	1.2	44,000	1.4	52,000	1.4	2,300
Fresh			183,000	4.2	183,000	4.2	24,700
Total	525,000	1.6	578,000	2.7	1,103,000	2.2	77,400

Akoko Project Total							
Akoko North and South Deposits							
	Indicated		Inferred		Total		
Deposit	Tonnes	Gold	Tonnes	Gold	Tonnes	Gold	Gold
	t	g/t	t	g/t	t	g/t	Ounces
Akoko South			610,300	1.3	610,300	1.3	25,900
Akoko North	525,000	1.6	578,000	2.7	1,103,000	2.2	77,400
Total	525,000	1.6	1,188,300	2.0	1,713,300	1.9	103,300

A scoping study at Akoko North including open pit optimisation using Whittle4d software (using US\$1250/ounce shell) captures 1.07mt @ 2.0g/t gold (68,000 ounces) at a cash cost of US\$575/ounce. At today's spot gold price of ~US\$1,750/ounce the study indicates that the deposit could generate an operating surplus of ~US\$70M (pre capex and tax).

See Appendix 1 for resource and optimization parameters and assumptions.

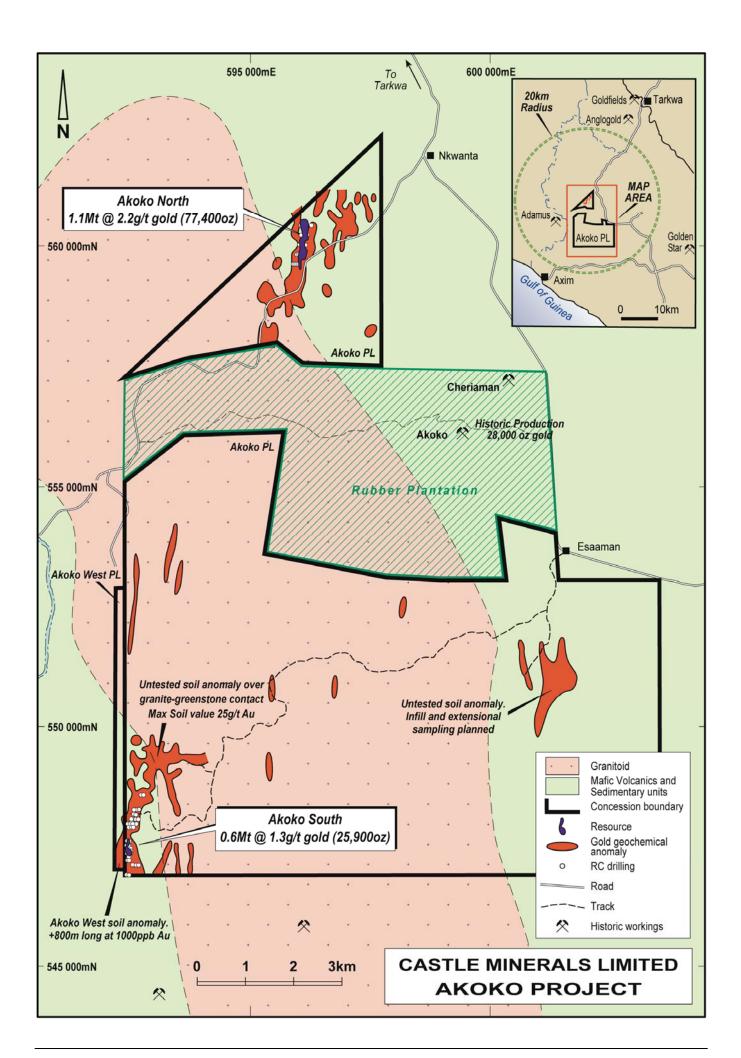
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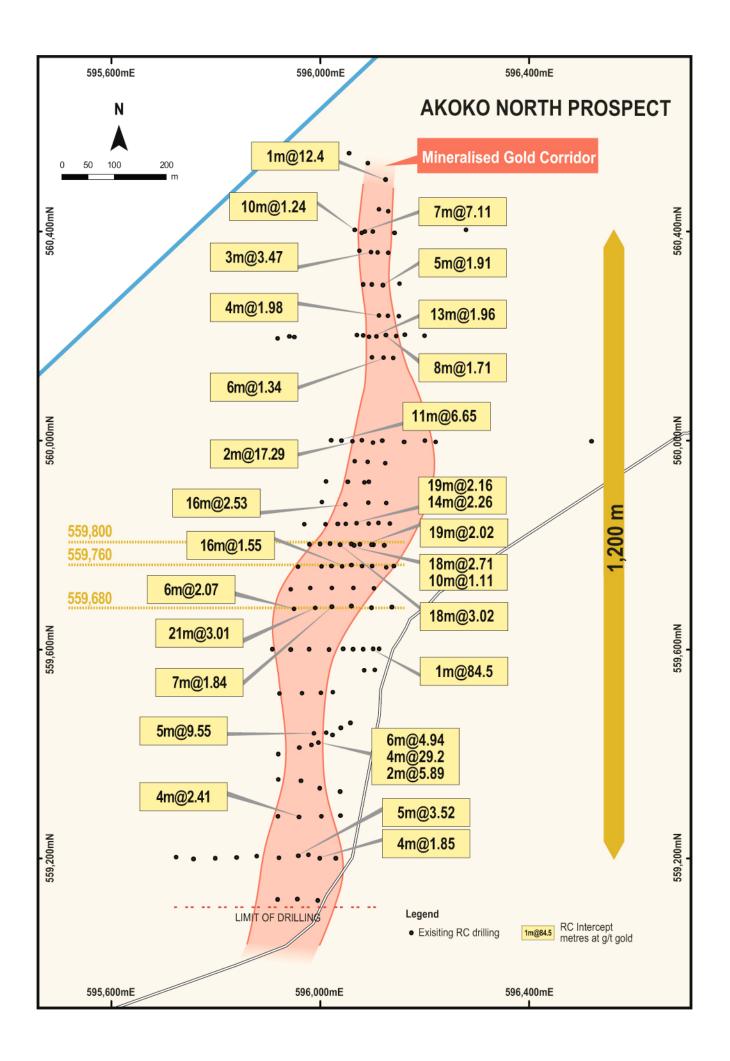
#### About Castle:

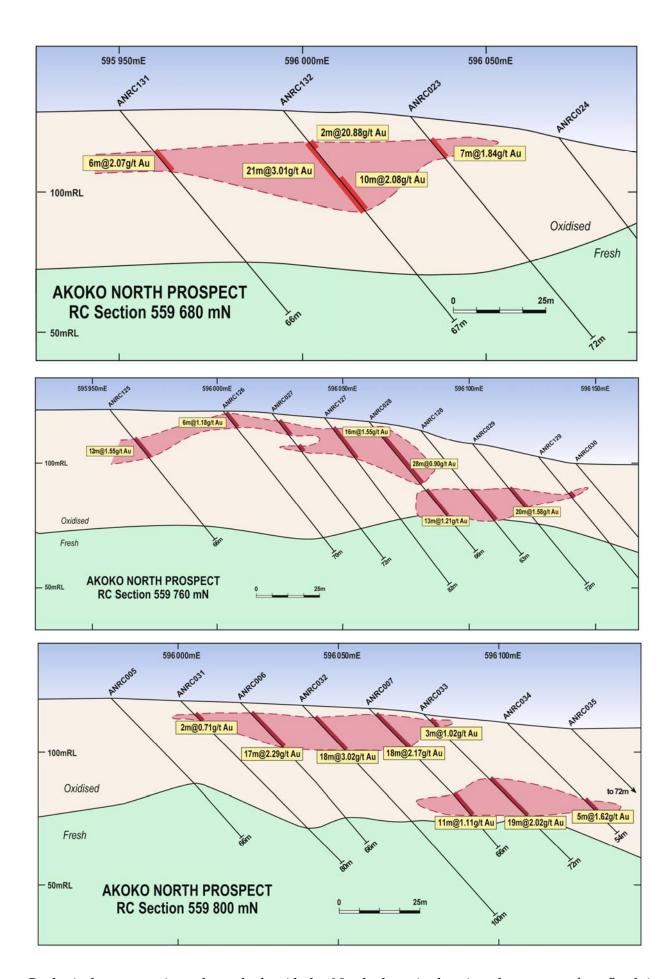
Castle Minerals listed on the Australian Stock Exchange in May 2006 (ASX code 'CDT') and has since acquired the rights to six mineral projects in Ghana, West Africa including Akoko, Antubia, Banso, Bondaye, Opon Mansi (application) and Wa covering more than 11,000km<sup>2</sup>.

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.

Information in this announcement that relates to Exploration Results is based on information compiled by Michael Ivey, Castle Minerals Limited Managing Director, who is a Member of The Australasian Institute of Mining and Metallurgy. Michael Ivey 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. Michael Ivey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.







Geological cross sections through the Akoko North deposit showing the near surface flat lying geometry of the deposit.

### Appendix 1 - Resource Statement and Parameters

The deposit is hosted within metasediments and metavolcanics. The mineralised zones are flat lying with a slight plunge to the north. Elevated gold is often associated with quartz veining but shows no obvious lithological constraint.

The Mineral Resource is summarised in the Table below:

Akoko North Deposit
2011 Mineral Resource Estimate 0.8g/t Cut-off

	Indicated		Inferred		Total		
Туре	Tonnes	Gold	Tonnes	Gold	Tonnes	Gold	Gold
	t	g/t	t	g/t	t	g/t	Ounces
Laterite	1,200	2.0	700	1.9	1,900	1.9	120
Oxide	515,700	1.6	351,000	2.1	866,700	1.8	50,200
Transition	8,400	1.2	44,000	1.4	52,000	1.4	2,300
Fresh			183,000	4.2	183,000	4.2	24,700
Total	525,000	1.6	578,000	2.7	1,103,000	2.2	77,400

The resource estimate was completed using the following parameters:

- The resource has a 1,000m lateral extent from 559,200mN to 560,500mN. The vertical extent of the resource is 135m from surface at 115mRL to 20mRL.
- 142 surface RC holes were used in the resource estimate. Drilling density varies from 40m to 160m section spacings with 20m to 40m hole spacings over the deposit. The majority of holes are orientated at 50° to the east.
- Samples were collected at 1m intervals via a riffle splitter at the time of drilling. These were used to prepare 5m composites which were submitted to the laboratory. If the 5m composite returned an assay greater than 0.1g/t Au, the individual 1m samples in the interval were assayed. The 1m riffle splits were collected prior to composite sampling.
- Samples were sent to Transworld laboratory in Tarkwa, Ghana for analysis. Au was assayed by 50g Fire Assay with an atomic absorption spectrometry (AAS) finish.
- Quality control samples were collected on a regular basis and the results show no bias is evident.
- Drillhole collars were located in UTM WGS84 Zone 30N coordinates by Coffey Mining using a DGPS system accurate to +-10mm.
- The majority of drillholes have been downhole surveyed at 30m intervals using a single shot down hole camera.
- Wireframes were constructed using cross sectional interpretations based on a nominal 0.5g/t Au cut-off grade.
- Samples within the wireframes were composited to even 1.0m intervals. A 15g/t Au high grade cut was
  determined by statistical analysis and applied to the 1m composite values
- A Surpac block model was used for the estimate with a block size of 20m NS by 10m EW by 5m vertical with sub-cells of 10m by 5m by 2.5m.
- Inverse Distance Squared (ID²) was used for grade interpolation with an oriented search ellipse based on individual lode geometry.
- No bulk density test work has been completed. However a bulk density of 2.1t/m³ was applied to the laterite, 2.1t/m³ to the oxide, 2.4t/m³ the transitional and 2.7t/m³ to the fresh material. These values were estimated with reference to similar style deposits in the area.
- The portion of the resource defined by 20m by 40m spaced drilling has been classified as Indicated Mineral Resource due to the demonstrated continuity of the mineralisation. The remainder of the deposit has been drilled on approximately 80m section spacings (max 160m) and has been classified as Inferred Mineral Resource.

# Pit Optimisation Parameters and Assumptions

Overall Slope Angle			45
Mining Recovery Mining Dilution			100 10
Mining Cost			
Load and Haul, Drill and Blast	0-30m	\$/bcm	5.0
Load and Haul, Drill and Blast	>30m	\$/bcm	6.0
Grade Control		\$/t ore	0.6
Rehabilitation		\$/t ore	0.2
Mine Supervision		\$/t ore	0.75
Haulage		\$/t ore	1.45
Total		\$/t ore	3.00
Processing Costs			
Oxide		\$/t ore	12.5
Transitional		\$/t ore	15.1
Primary		\$/t ore	15.3
<b>Processing Recoveries</b>			
Oxide		%	96
Transitional		%	96
Primary		%	92
Royalty		%	3
All Currency		US\$	
Bulk Densities			
laterite		t/m³	2.1
oxide		t/m³	2.1
transitional		t/m³	2.4
fresh		t/m³	2.7
Top Cut		g/t gold	15