

## ASX Release

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Monday 13<sup>th</sup> September 2010

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LIMITED**

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**Issued Capital:**  
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**ASX Symbol:** SBL

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# EXPLORATION UPDATE

Signature Metals Limited is very pleased to update the market on the progress of its exploration programmes at the Konongo Gold Project, located in the world class Ashanti Gold Belt of Ghana.

## HIGHLIGHTS

- **Several new discoveries made within the project area.**
- **Numerous drill targets identified, to be tested later in 2010.**
- **Trenching results include:**
  - **2 metres at 39.8g/t gold, 2 metres at 4.80g/t gold and 54 metres at 0.22g/t gold at Bimma South.**
  - **8 metres at 3.84g/t gold and 22 metres at 1.52g/t gold at Kyereben.**
  - **2 metres at 11.7g/t gold, 2 metres at 4.24g/t gold, 14 metres at 0.3g/t gold and 30 metres at 0.24g/t gold at Boabedroo West.**
  - **6 metres at 0.41g/t and 4 metres at 0.89g/t gold at Konongo East.**
- **Rockchip samples return maximum assays of:**
  - **19.7g/t gold at Kyereben.**
  - **14g/t gold at Triple Lane.**
  - **3.47g/t gold at Kwareju.**
- **Intensive greenfields exploration campaign continues encompassing mapping, sampling and trenching of targets outside current resource area.**

Exploration programmes have focussed on areas outside the known Indicated and Inferred JORC resources of 1.27 million ounces (Table 1). Specific target areas are shown on Figures 1 and 2 and include:

- Over 20 kilometres of Birimian – Tarkwaian contacts in the eastern part of the license area with similar geological settings to the areas which host the known deposits in the project,
- Gold in soil anomalies within the Birimian sequence adjacent to known deposits which may indicate mineralised lodes parallel to delineated mineralisation trends,
- Mineralisation along 12 kilometres of the Ashanti Shear Zone in the western portion of the license area which hosts the +50Moz Obuasi Deposit along strike to the south.

## Bimma

The Bimma prospect area is located in the north-east of the Konongo mining license (Figures 1 and 2). The prospect is separated into three separate areas, Bimma, Bimma South and Bimma North.

The Bimma South Prospect is hosted within the eastern Birimian metavolcanics. Regional soil geochemistry highlighted an isolated soil anomaly with peak values of 480ppb. Two 400m long trenches, 2m deep, were dug across the anomaly. The trenches intersected saprolite clays, hardpan, laterite, and transported sand, silt and clay. Assays results for BIMS001 were excellent with intersections of **54m at 0.22g/t gold, 2m at 39.8g/t gold, 2m at 4.80g/t gold** and 2m at 1.38g/t gold. Results for the second trench, BIMS002, are pending.

The Bimma North prospect is hosted within the Tarkwaian metavolcanics. Regional soil geochemistry highlighted an isolated soil anomaly with peak values of 170ppb. One 400m long trench, 2m was dug across the anomaly. Assay results are pending.

## Kyereben

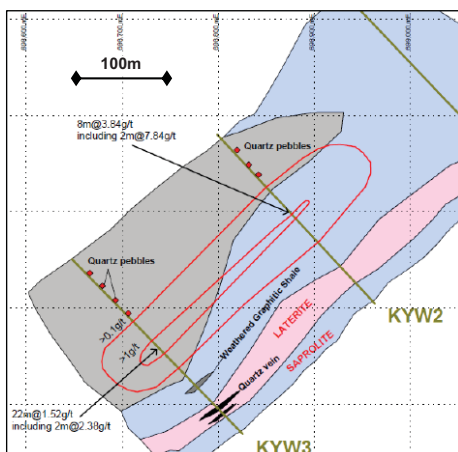
The Kyereben prospect is hosted with Birimian metavolcanics proximal to a regional NW trending dolerite dyke. Three 250m-long trench lines were dug 200m apart across a moderate soil anomaly. Trenches KYW2 and KYW3 returned results of **8 metres at 3.84g/t gold (including 2 metres at 7.84g/t gold)** and **22 metres at 1.52g/t gold** respectively. These results indicate the presence of a 200 metre long north-east trending gold anomaly above 1 g/t gold which is open to the south. Aircore drilling is planned to test this anomaly and possible strike extensions.

Rockchip samples were taken in the vicinity of the haul road in this area from exposures of weathered graphitic shale and mafic volcanic. One sample assayed at **19.6g/t gold**. Further mapping and trenching is planned to determine the extent of this mineralisation.

## Konongo East

The Konongo East prospect is located to the east of the Konongo mining area adjacent to the eastern Tarkwaian/Birimian contact (parallel to the mineralised trend which hosts the known deposits;

Plan showing trenching results from Kyereben



Figures 1 and 2). The prospect is hosted by the metasediments of the Tarkwaian. Regional soil geochemistry highlighted a broad soil anomaly with peak values of 4.24g/t and broad zones of >100ppb.

Five trenches, of variable length, were dug at 300 metre spacing across the soil anomaly. Trench KOE3 returned significant results of 6m at 0.41g/t, 4m at 0.89g/t, and 6m at 0.41g/t. Other trenches intersected low level anomalism averaging 0.1g/t gold. The broad anomalous zones in the trenching results together with the elevated soil geochemistry make this prospect highly prospective for exploration. Further trenching along strike of KOE3 together with an AC drilling program is needed to develop this prospect.

### **Boabedroo West**

The Boabedroo West area is located to the east of the Boabedroo deposits drilled earlier in the year by Signature (Figures 1 and 2). The area is located around a prominent ridge of hills within the Konongo concession. Historic underground mining/development by the State Gold Mining Corporation at a single shaft within the area reported grades up to 147g/t gold from narrow quartz veins. Soil geochemistry over the area in the 1990's gave poor results however follow up trenching returned encouraging results including **5m at 5.1g/t gold** and **15m at 1.33g/t gold**.

Five 2 metre deep trenches, 100m apart, were dug at Boabedroo West for a total of 885m to validate the earlier trenching and test extensions to the results. Significant results were **2m at 4.24g/t gold**, **14m at 0.3g/t gold**, **2m at 11.7g/t gold** and **30m at 0.24g/t gold**. Aircore drilling is planned to target the anomalous zones and determine the size of any underlying mineralisation.

### **Triple Lane**

The Triple Lane prospect is located immediately north of the Konongo-Kumasi highway (Figures 1 and 2). The prospect is hosted by a westerly dipping quartzite within the Tarkwaian sequence. Historic work by artisanal miners consists of numerous shallow shafts that mined narrow (1m thick) quartz veins with strike lengths of 10 to 100m.

Mwana Africa carried out a trenching program which intersected several anomalous zones. Results included **12 metres at 3.54g/t gold**

**Trenching at Konongo**



(including **2 metres at 14.6g/t gold**) and **16 metres at 0.73g/t gold**. Follow up RC drilling had limited success with a best intersection of 1m at 13.88g/t. A review of this drilling has identified that the regular spacing and orientation of the drilling missed several of the high grade quartz veins since these pinch and swell and also change orientation within the overall north-east trend.

The Company has conducted an extensive mapping and sampling program to determine the controls on mineralisation and potential for mining the historic waste stockpiles or primary high-grade ore. A total of 57 samples were collected from quartz veins and waste stockpiles. Waste stockpiles typically graded less than 1g/t gold but there were results up to a maximum grade of 7.03g/t gold. Quartz vein samples taken from surface and from shafts graded between 1 and 14g/t gold. Mapping has more accurately delineated the location of the veins hosting mineralisation and will enable drilling to target the positions where these veins are thickest.

Further work at Triple Lane will concentrate on determining the grade variability and possible strike length of the lodes either by a close spaced drilling program or by small scale trial underground mining (which will provide a bulk sample). The prospect provides an opportunity to mine high-grade material for blending at the mill.

The Kwawureju prospect is located along strike from the Triple Lane area. The prospect is hosted within sheared quartzite and metasediments and consists of numerous historic small shafts and shallow workings. Six samples of quartz were taken from waste dumps adjacent to the shafts with the best result of 3.47g/t gold. Given the similarities with the Triple Lane prospect the prospect warrants a reconnaissance AC program to determine the grade and width of mineralisation.

### **Domiabra West**

The Domiabra West is located north of the Obenemase and Kwakawkaw Deposits (Figures 1 and 2) in the northern part of the license. The prospect is hosted within the Upper and Lower Birimian and Tarkwaian in an area of structural complexity close to the Ashanti Shear Zone. The area corresponds to a flexural bend in the stratigraphy north of Obenemase. The area has been poorly explored given it is located in a similar stratigraphic position as the rest of the known deposits in the Konongo Gold Project.

**Gold in rock sample**



Soil geochemistry within the prospect shows patchy high values with a peak value of 1000ppb with numerous samples with values of 100-300ppb. Trenching in the prospect focussed solely on the higher soil geochemistry values instead of testing the overall anomaly. The trenching showed consistently higher results than the soil geochemistry results with a peak value of 960ppb with numerous samples with values of 300-500ppb. Little is known of the regolith development in area but historic reports comment on widespread laterite development in the north of the Konongo concession. Wide spaced aircore drilling is planned to test below the laterite and identify extensions to mineralisation from Kwakawkaw and Obenemase.

### **Kyekyewere**

The Kyekyewere and Kyekyewere South prospects are located west of the Konongo mining area on and adjacent to the Ashanti Shear (Figures 1 and 2). The geology is similar to the Domiabra West target along strike to the north with the Lower Birimian contact with the graphitic shale unit the prime target.

Soil geochemistry within the prospect shows a northerly trending anomaly with a peak value of 400ppb with numerous samples with values of 50-100ppb. Trenching in the prospect that focussed on the higher soil geochemistry values consistently showed higher results than the soil geochemistry results with a peak value of 3540ppb with numerous samples with values of 200-1000ppb. An AC program is planned to test the Kyekyewere and Kyekyewere South prospects.

### **SIGNATURE METALS**

- Aiming to develop the Konongo Gold Project into a +100,000 ounce per annum gold producer.
- The Konongo Gold Project consists of a mining license and prospecting license covering 192km<sup>2</sup> in the Ashanti Gold Belt of Ghana. Extension of mining license to 2023 recently granted.
- Past production from Konongo Gold Project of 1.6 million ounces at a head grade of 11.8g/t gold.
- JORC Resources of over 1.27 million ounces (Table 1).
- Exploration Target<sup>1</sup> of 1.5 - 2.5 million ounces of gold (20 – 25 million tonnes at a resource grade of 2 - 4g/t gold).

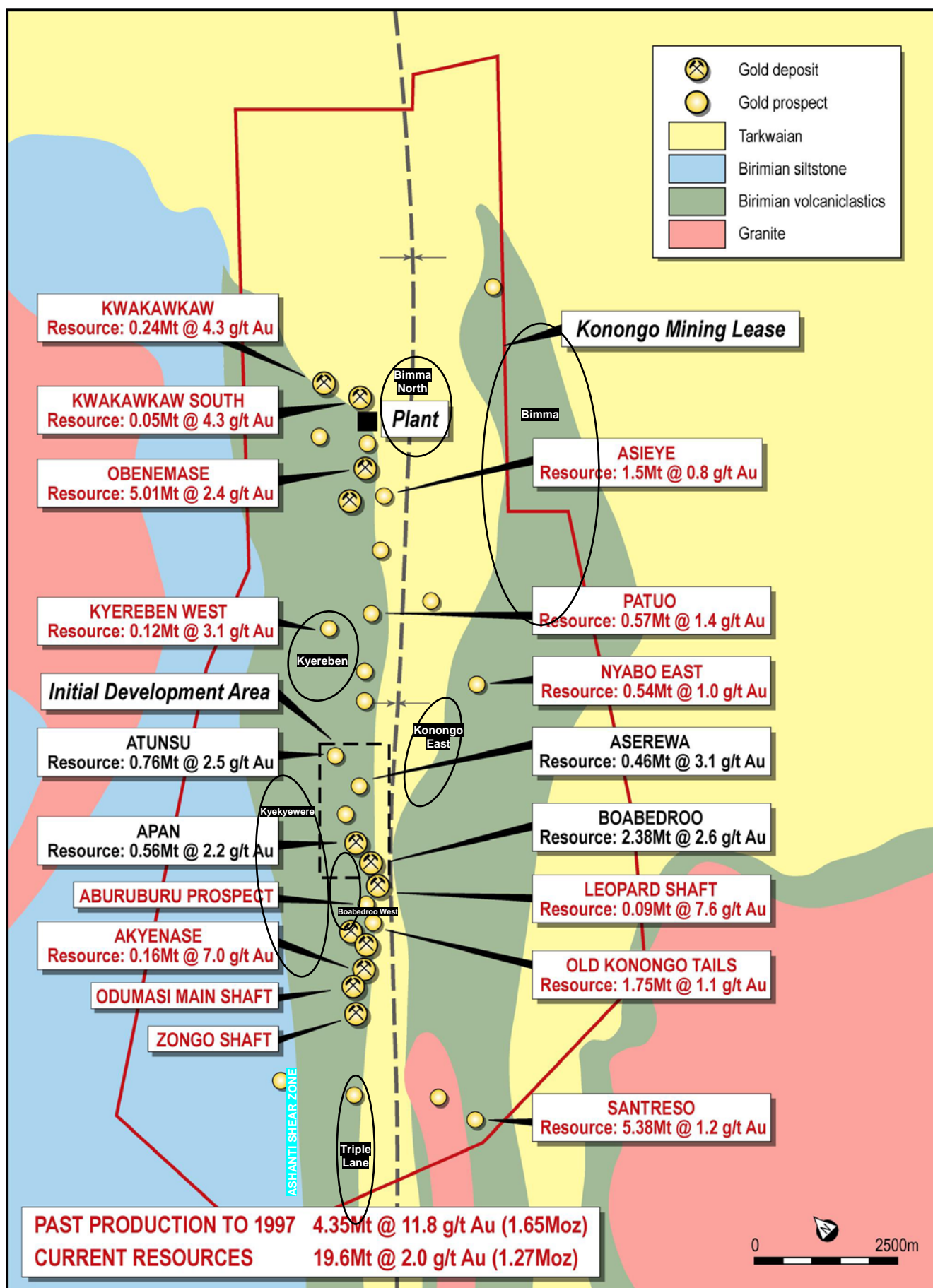
- Exploration programmes progressing well, with over 15,000 metres of drilling completed and a substantial number of high grade results received.
- Numerous additional drill targets generated through successful greenfields exploration.
- Mining designs and schedule being re-optimised to maximise operating margins.
- Onsite CIL plant being refurbished at a fraction of the cost of purchasing a new/second hand plant. Lead time to commissioning scheduled within six months.
- Environmental studies progressing rapidly. Environmental Impact Study to be submitted to the EPA this quarter.
- Significant Manganese discovery.

Bill Oliver  
Managing Director  
**SIGNATURE METALS LIMITED**

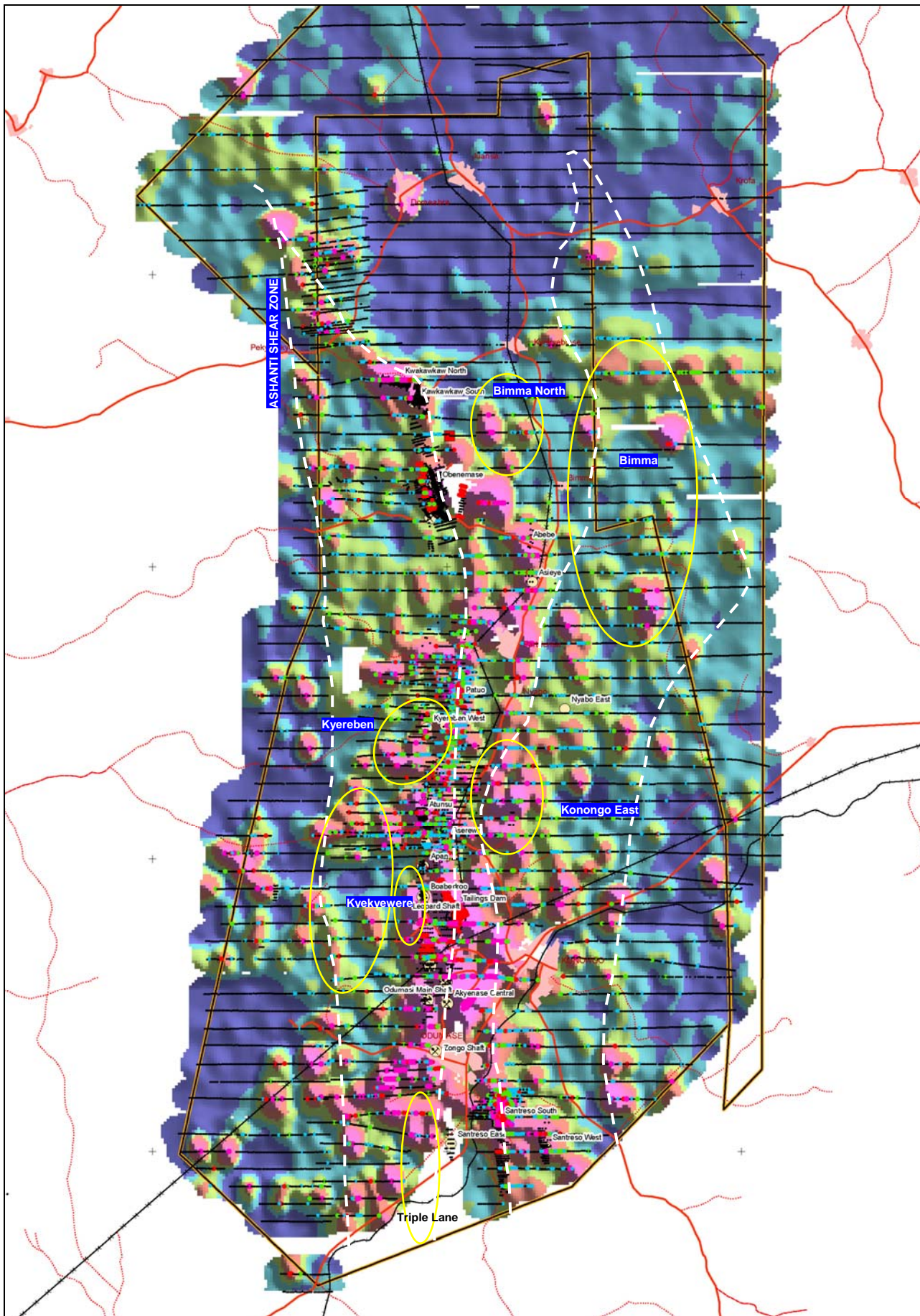
*The information in this release which relates to Exploration Results and Exploration Targets is based on information compiled by Mr Bill Oliver. Mr Oliver is a Member of the Australian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists and has sufficient experience which 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 2004 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Oliver is the Managing Director of Signature Metals and consents to the inclusion in this release of the matters relating to Exploration Results and Targets in the form and context in which it appears based on the information presented to him.*

*Results presented are all intersections over 2 metres in width containing more than 0.3g/t gold, using a 0.1g/t gold cut-off. Samples are analysed by 50g Fire Assay method at internationally accredited laboratories in Ghana. QA/QC samples are inserted regularly by the Company including certified reference samples, blanks and duplicates and intersections are not reported unless results from these samples meet acceptable standards.*

**Figure 1.** Plan showing interpreted geology within the Konongo Gold Project and exploration prospects assessed to date.



**Figure 2.**



**Table 1. Resources contained within the Konongo Gold Project. Re-estimated resources highlighted in bold.**

Deposit	Measured			Indicated			Inferred			Total		
	Tonnes	Grade (g/t)	Contained Ounces	Tonnes	Grade (g/t)	Contained Ounces	Tonnes	Grade (g/t)	Contained Ounces	Tonnes	Grade (g/t)	Contained Ounces
<b>Obenemase</b>				<b>3,267,000</b>	<b>3.08</b>	<b>323,605</b>	<b>1,739,000</b>	<b>2.37</b>	<b>132,695</b>	<b>5,006,000</b>	<b>2.83</b>	<b>456,300</b>
Asieye							1,500,000	0.80	38,580	1,500,000	0.80	38,580
Kwakawkaw							344,000	4.31	47,675	344,000	4.31	47,675
Nyabo East							540,000	1.03	17,940	540,000	1.03	17,940
<b>Patuo</b>				<b>128,000</b>	<b>1.43</b>	<b>5,905</b>	<b>445,000</b>	<b>1.44</b>	<b>20,660</b>	<b>573,000</b>	<b>1.44</b>	<b>26,565</b>
Kyereben West							124,000	3.10	12,360	124,000	3.10	12,360
<b>Aserewa</b>				<b>324,000</b>	<b>2.42</b>	<b>25,130</b>	<b>136,000</b>	<b>4.66</b>	<b>20,355</b>	<b>460,000</b>	<b>3.10</b>	<b>45,485</b>
<b>Atunsu</b>				<b>99,000</b>	<b>2.01</b>	<b>6,415</b>	<b>659,500</b>	<b>2.61</b>	<b>55,435</b>	<b>758,500</b>	<b>2.54</b>	<b>61,850</b>
<b>Apan</b>				<b>39,000</b>	<b>2.03</b>	<b>2,565</b>	<b>526,000</b>	<b>2.22</b>	<b>37,620</b>	<b>565,000</b>	<b>2.21</b>	<b>40,185</b>
Leopard Shaft							95,000	7.55	23070	95,000	7.55	23,070
<b>Boabedroo</b>				<b>192,500</b>	<b>2.63</b>	<b>16,295</b>	<b>2,184,500</b>	<b>2.58</b>	<b>180,900</b>	<b>2,377,000</b>	<b>2.58</b>	<b>197,195</b>
Akyenase Central				58,000	4.00	7,460	96,000	8.80	27,160	154,000	6.99	34,620
Santreso West				3,520,000	1.20	135,810	810,000	1.25	32,555	4,330,000	1.21	168,365
Santreso South							340,000	1.16	12,680	340,000	1.16	12,680
Santreso East							700,000	1.27	28,610	700,000	1.27	28,610
<b>Old Tailings Dam</b>				<b>1,177,000</b>	<b>1.19</b>	<b>45,050</b>	<b>575,000</b>	<b>0.87</b>	<b>16,100</b>	<b>1,752,000</b>	<b>1.09</b>	<b>61,150</b>
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,804,500</b>	<b>2.01</b>	<b>568,235</b>	<b>10,814,000</b>	<b>2.03</b>	<b>704,395</b>	<b>19,618,500</b>	<b>2.02</b>	<b>1,272,630</b>

The Mineral Resources presented in this table for the Obenemase, Boabedroo, Aserewa, Atunsu, Apan and Patuo Deposits, and the Old Konongo Tailings Dam, is based on information compiled by Mr Peter Ball who is a Member of the Australian Institute of Mining and Metallurgy and is the Manager of Data Geo. Mr Ball 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 2004 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Ball consents to the inclusion of this table in the report in the form and context in which it appears based on the information presented to him.

The Mineral Resources for the Obenemase, Boabedroo, Aserewa, Atunsu, Apan and Patuo Deposits were derived from solid models of mineralised zones defined by geology and Au grade. Au grade was estimated into block models created from these zones using Inverse Distance<sup>2</sup>. Tonnage was assigned by weathering condition (oxide, transition, fresh) using default SG values generated from historical drill core measurements. The Mineral Resources are classified according to geological continuity, grade continuity and geostatistical parameters relating to sample density. The Mineral Resource is reported below the recorded extents of open cut mining at a 1.0g/t cutoff for fresh rock material and a 0.5g/t cutoff for oxide & transition material. Material recorded as being mined by underground methods has also been removed from the Mineral Resource.

Other Mineral Resources presented in this table have been compiled and reviewed by Mr Bill Oliver from publically stated JORC-compliant information originally prepared in 2005 by RSG Global for Mwana Africa's AIM-listing document. This information, in the opinion of Mr Oliver, complies with the reporting standards of the 2004 JORC Code. Mr Oliver is a Member of the Australian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists 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 2004 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Oliver is a Director of Signature Metals and consents to the inclusion of this table in the form and context in which it appears based on the information presented to him.