



## Operational Update

**Dated: 7 October 2011**

Kibo Mining plc (“Kibo” or the “Company”) (AIM: KIBO, AltX: KBO) the mineral exploration and development company focused on gold and nickel projects in Tanzania, is pleased to provide an operations update. The Company has more than doubled its licence area in Tanzania to over 18,000 square kilometres in the last six months gaining a strategic position in both the Lake Victoria Goldfields and the emerging gold districts of eastern Tanzania. This has necessitated a major re-organisation of its operations in Tanzania to meet the demands of exploring and managing a large geographically dispersed licence portfolio effectively. This re-organisation is now complete and field exploration programmes have recommenced.

### Summary Highlights

- the Board has approved a £5.3M exploration programme to evaluate the Lake Victoria, Haneti and Morogoro projects;
- Stage 1, with a budget of £1.3M, is now being implemented. Gold and nickel are the primary targets;
- the Company has completed the integration of its exploration office and staff with Mzuri Exploration Services (“MXS”). This will increase its capacity to implement fully supported contemporaneous multi-project field programmes;
- the Company has received the final results from metallurgical testing at the Golden Horseshoe Reef deposit (the “GHR”) which indicate high gold recoveries; and
- negotiations are underway with Tanzanian Royalty Exploration Corporation Limited (“TREC”) and a financial institution to allow the Company to immediately exercise its option over the Itetemia and Luhala projects and to work on securing debt and equity financing to advance mine development at the GHR.

The Company is progressing on two fronts:

(a) exploration to evaluate its large ground holding and focus on priority areas to quickly define target areas for Stage 2 drilling; and

(b) evaluation of whether it can bring forward the immediate exercise of its option over the Itetemia and Luhala projects and proceed with developing a mine on the the GHR deposit which has a JORC-compliant mineral resource of 422,000 oz. of gold.

The exploration is underway as are negotiations of the terms of its agreement with TREC for immediate exercise of its option on Itetemia and Luhala and with a financial institution to secure debt financing for the development of the GHR.

Noel O’Keeffe, CEO of Kibo commented:

*“The Board is pleased to provide this operational update following a period of corporate and operational re-structuring during 2011 to meet the demands of a significantly expanded exploration property foot print in Tanzania.*

*We are excited by the exploration opportunities offered by our expanded licence portfolio both in the gold prolific Lake Victoria Goldfield and the newly emerging areas in eastern Tanzania. Now that field programmes have re-commenced, we look forward to updating the Shareholders on a regular basis as exploration results emerge.*

*We will also update Shareholders on the results of our on-going negotiation with TREC and a financial institution which will allow the Board to make a definitive decision on its plans for Itetemia and Luhala”.*

### **Tanzanian operations overview**

The Company has appointed Dar es Salaam based MXS to manage its field programme implementation and tenement portfolio. Kibo’s Tanzanian employees have been integrated into the MXS operational structure where they will continue in their previous roles providing geological and financial management for Kibo’s operations. MXS provide strong project and financial management, IT and government liaison skills which will be crucial to Kibo’s success as one of the largest licence holders in the country.

The Board has approved a £5.3M exploration programme (Table 1) to be implemented in two stages over a 3 year period. Stage 1 has commenced with the mobilisation of field teams for a £1.3M work programme to be implemented over the next 7 months on the Lake Victoria, Haneti and Morogoro projects. These projects encompass a substantial land area in excess of 18,000 square kilometres and the programmes will concentrate on the most prospective licences prioritised by a combination of geological setting, proximity to existing deposits and areas of anomalous geochemical results from previous surveys. The programmes will be conducted by three exploration teams assigned to ensure contemporaneous progress on all projects and staffed by the Company’s existing employees with recruitment of additional personnel as required. The field teams will be under the direct supervision of MXS Exploration Manager, Bertie Pepler, a South African geologist with significant Tanzanian experience.

**Table 1: Kibo Exploration Budget 2011 -2014**

| <b>Project</b>           | <b>Sub-project</b> | <b>Stage1<br/>Budget</b> | <b>Stage 2<br/>Budget</b> | <b>Total</b> |
|--------------------------|--------------------|--------------------------|---------------------------|--------------|
|                          |                    | <b>£</b>                 | <b>£</b>                  | <b>£</b>     |
| <b>Lake<br/>Victoria</b> | Mahangu            | 141,000                  | 1,180,000                 | 1,321,000    |
|                          | UN Road            | 57,000                   | 500,000                   | 557,000      |
|                          | Geita East         | 57,000                   | 110,000                   | 167,000      |
|                          | Geita West         | 57,000                   | 80,000                    | 137,000      |
|                          | Geita North        | 57,000                   | 140,000                   | 197,000      |
|                          | Central            | 57,000                   | 130,000                   | 187,000      |

|                 |                                  |                  |                  |                  |
|-----------------|----------------------------------|------------------|------------------|------------------|
|                 |                                  |                  |                  |                  |
| <b>Haneti</b>   |                                  | 450,000          | 700,000          | 1,150,000        |
|                 |                                  |                  |                  |                  |
| <b>Morogoro</b> | Morogoro South                   | 200,000          | 600,000          | 800,000          |
|                 | Morogoro North<br>(Dodoma Block) | 200,000          | 600,000          | 800,000          |
| <b>Total</b>    |                                  | <b>1,276,000</b> | <b>4,040,000</b> | <b>5,316,000</b> |

The field teams will operate from the Company's exploration office in Mwanza which is convenient to the Lake Victoria project and from temporary exploration camps which are being established in the Morogoro-Dodoma area to facilitate work on the Morogoro and the Haneti projects.

Maps and more detailed descriptions of the projects are available on the Kibo website (<http://kibominig.com/en/home>) under the "Project" sub-menu and within the Venmyn Competent Person's Report (Corporate /Documents sub-menu) which forms part of the Pre-Listing Document prepared for the Company's admission to the JSE in June this year. This link should be consulted to accompany the summary of the Company's near-term exploration plans discussed below.

### **Haneti**

Field exploration at Haneti will follow up on the anomalous nickel values obtained to date from soils, pitting and trenching in the Kwahemu, Yobo, Mihanza and Mwaka hill areas east of Haneti Village. Previously reported results include 93m at 0.4% nickel from Mwaka Hill and an open soil anomaly with values of 0.1% to 0.3% nickel at Kwahemu Hill. The programme will focus on establishing the depth, composition and nickel concentrations in the laterite profiles preserved on these hills by extension of previous soil sampling grids, pitting, trenching and RAB drilling. Ground EM surveying over Mihanza and Mwaka Hill will also be carried out in order to more accurately assess nickel sulphide targets for drilling. Results emerging from work on these areas will be used to set the technical specifications for an aerial geophysical survey which is planned to locate additional nickel sulphide drill targets within the 80 kilometre long Haneti-Itiso Ultramafic Complex.

The work proposed for Haneti provides for a focused follow up programme in an area which the Company has been exploring over the last few years and which will now receive the more sustained field programme that it warrants. The Dutwa laterite deposit (African Eagle Resources), and the nickel sulphide Kabanga (Barrick/Xstrata) and Nachingwea (Continental Nickel) deposits in Tanzania provide strong evidence for the prospectivity of Haneti for similar styles of mineralisation.

The southern and western part of the Haneti project is prospective for gold mineralisation as evidenced by Shanta Gold's Singida deposit (approx. 1M oz. at 1.5 grams per tonne) located just outside the western border of the project, artisanal gold mining activity within the westernmost project tenement and evidence from recent geological mapping by the Company for the extension of the gold hosting Londoni Greenstone Belt south-eastwards into the southern part of the Haneti block. The Company is awaiting the issue of prospecting licences on two long outstanding Letters of Offer for the two westernmost Haneti tenements.

### **Lake Victoria**

Work on the Lake Victoria project will focus on areas where previous reconnaissance soil, stream and regolith sampling has produced anomalous gold values. The areas selected for initial follow up occur within the Mhangu sub project tenement block. Specific work activity on these areas will comprise detailed infill soil sampling, pitting, further regolith mapping and geological mapping. Concomitant with the work on these priority areas, geological appraisal of the remaining large number of licences within the other sub-project tenement blocks is on-going in order to streamline the portfolio and generate a pipeline of projects for systematic detailed sampling and definition of drill targets. The Stage 1 budget for Lake Victoria and Morogoro does not provide for drilling expenditure which is contingent on encouraging results emerging from the first pass surveying. Operational flexibility will allow for early drilling of gold targets where warranted.

The primary objective of stage 1 exploration on the Lake Victoria project is to follow up on areas of high gold-in-soil anomalies from licences within the Mhangu block in order to establish robust targets for drilling and most expenditure is allocated to this block which is adjacent to significant gold deposits at Nyanzaga (4.1 M oz. gold resource), Kitongo (300,000 oz. gold resource) and Kibo's option property Luhala (112,000 oz. gold resource). Expenditure on the other sub-project blocks will be directed towards first pass geological evaluation by prospecting and mapping on licence areas that have not been field checked and infill soil geochemical surveys in areas showing regional gold anomalism from previous surveys.

## **Morogoro**

Kibo's Morogoro project is located in one of the most exciting new non-traditional gold exploration areas to emerge in Tanzania in the last few years. The Company holds, licences, offers and applications covering an area of almost 9,000 square kilometres separable into two regional blocks, Morogoro South and Morogoro North (Dodoma Block). The geology of these areas differs from the Lake Victoria area further north in that higher grade metamorphic rocks such as gneisses, granulites and marbles dominate.

Morogoro South comprises tenement areas south and west of the regional town of Morogoro covering approximately 4,900 square kilometres. The Company's initial exploration focus will be on a regional geological structure, the Ruvu Nappe, located circa 30 km southwest of Morogoro. Previous reconnaissance geological mapping and stream sediment sampling have revealed gold mineralisation associated with this structure along 45 kilometres of its length and both artisanal hard rock and placer gold mining is on-going. Stage 1 field exploration in this area will comprise regional stream sediment sampling, prospecting and geological mapping to resolve areas for follow-up geophysical surveying, trenching and drilling. A large anorthosite body approximately 25 kilometres west of the Ruvu Nappe, is possibly indicative of nickel-PGM mineralisation potential in this region and will also be prospected and sampled during the field programme. Company licence applications and offers in the western part of the Morogoro Block cover part of a copper mineralised province with numerous copper occurrences and some artisanal copper production. Data on the detailed geology and copper mineralisation styles will be compiled as they also represent an excellent mineral exploration opportunity for the Company in this region.

Morogoro North (Dodoma Block) comprises mineral tenements east of Dodoma covering approximately 4,000 square kilometres adjacent to Government designated artisanal gold

mining blocks. Gold mining within these blocks is from quartz reefs within high grade gneisses and granulites of high metamorphic grade. These reefs extend on to Company licences and applications where some artisanal mining is on-going. The detailed geology and gold mineralisation in these areas has not yet been thoroughly evaluated but the data that is available is consistent with geology and mineralisation styles similar to those present at the Canaco Resources, Magambazi gold deposit some 50 kilometres to the northeast. Stage 1 field exploration at Morogoro North will comprise detailed infill soil sampling and mapping on prospecting licences around the villages of Gairo, Kilama and Berega where gold-in-soil anomalies from previous reconnaissance sampling occur.

### Metallurgical Testing of the GHR Deposit

Metallurgical test work was carried out by Mintek in South Africa on four samples of the GHR ore recovered from artisanal pits at the site. The samples were carefully selected to represent oxidised, transitional and fresh ore types and dispatched to Mintek in Johannesburg in accordance with Kibo's quality procedures for secure transport of mineralised material for testing. The test work carried out by Mintek comprised chemical analyses, excess preg-robbing leaching, diagnostic leaching and gravity concentration tests. The results from the key excess preg-robbing leaching tests are summarised in the table below.

**Table 2 Results of Metallurgical Testing of the GHR Ore Samples**

| Sample No | Ore Type                 | Gold Head Grade (grams per tonne) | Cyanide Consumption (NaCn in kg/t) | Lime Consumption (CaO in kg/t) | Gold Recovery (% Dissolution) |
|-----------|--------------------------|-----------------------------------|------------------------------------|--------------------------------|-------------------------------|
| IMET-01   | Oxidised                 | 7.48                              |                                    |                                |                               |
|           | Direct Cyanidation       |                                   | 0.22                               | 3.76                           | 93.8                          |
|           | Carbon –in leach         |                                   | 0.48                               | 3.76                           | 94.3                          |
| IMET-02   | Transitional             | 7.38                              |                                    |                                |                               |
|           | Direct Cyanidation       |                                   | 0.37                               | 2.26                           | 94.4                          |
|           | Carbon –in-leach         |                                   | 0.62                               | 2.25                           | 95.4                          |
| IMET-03   | Fresh (minor sulphide)   | 5.93                              |                                    |                                |                               |
|           | Direct Cyanidation       |                                   | 0.63                               | 1.51                           | 89.6                          |
|           | Carbon –in-leach         |                                   | 0.89                               | 1.51                           | 89.7                          |
| IMET-04   | Fresh (massive sulphide) | 10.95                             |                                    |                                |                               |
|           | Direct Cyanidation       |                                   | 1.32                               | 15.12                          | 93.5                          |
|           | Carbon –in-leach         |                                   | 1.53                               | 15.12                          | 93.9                          |

The high gold recoveries and low reagent (cyanide & lime) consumptions obtained from these tests indicate that all ore types at the GHR are amenable to conventional cyanide and carbon-in-leach extraction. The diagnostic leaching tests also confirmed that all ore types can be expected to yield high recoveries from carbon-in-leach processing with recoveries of 94.03%, 94.02%, 89.26% and 94.53% obtained for samples IMET-01 to IMET-04 respectively. The gravity recovery test work (Knelson gravity concentration tests) showed recoveries in the primary concentrate of 20.4%, 26%, 16.4% and 32.2% for samples IMET-01 to IMET-04 respectively and these value are sufficiently high to consider a cost efficient

gravity gold recovery circuit prior to cyanide treatment in the design of an ore processing flow sheet.

This metallurgical testing at the GHR is part of the evaluation process that the Company has been undertaking to assist with a decision as to whether to proceed with a development plan for the GHR. A favourable decision is contingent on the outcome of negotiations with TREC and development funding being available as discussed in the next section.

### **Itetemia & Luhala**

The Company believes that in order to undertake further work on the Itetemia and Luhala projects, it needs to exercise its option and vest its interest in the properties. Kibo is currently in discussion with TREC, from whom it holds its interest in Itetemia and Luhala under a 2007 Option & Royalty Agreement, to re-negotiate terms of the Agreement to allow the Company to accelerate the exercise of this option. Exercise of the option is particularly relevant for the GHR, which Kibo believes can be developed quickly. Simultaneously with discussions with TREC the Board is also in negotiations with a financial institution to provide debt finance to develop the GHR.

Upon completion of these negotiations the Company will be in a position to make a decision on the development of these properties. Meanwhile no significant expenditure will be incurred on the projects. The Company's near term focus will be on the exploration in advancing the projects at Lake Victoria, Haneti and Morogoro which it considers to have excellent discovery potential for significant mineral deposit

### **Review by qualified person**

*The information in this report that relates to exploration results, mineral resources or ore reserves is based on information reviewed by Noel O'Keeffe, PGeo, who is a Member of the Institute of Geologists of Ireland. Noel O'Keeffe is a director of Kibo. Noel O'Keeffe has at least five years experience within the sector 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 qualified person. Noel O'Keeffe consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

### **Enquiries:**

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Updates on the Company's activities are regularly posted on its website  
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