

**MOTO GOLD PROJECT  
IN THE DEMOCRATIC REPUBLIC OF CONGO  
INDEPENDENT TECHNICAL REPORT**

**Prepared by Cube Consulting Pty Ltd**

**For**

**Moto Goldmines Ltd**

**November 2005**

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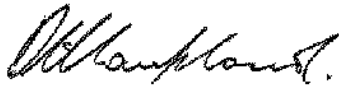
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### Glossary of Terms

/	Per.
\$	Dollars.
%	Percentage.
.csv	Comma separated file extent convention.
2D	Two Dimensional.
3D	Three Dimensional.
Ag	The chemical symbol for the element silver.
Albite	A specific feldspar mineral – product of hydrothermal alteration.
Ankerite	A specific carbonate mineral containing
Anticline	A description of folding of rocks which has produced a convex shape.
Argillaceous	A group of fine grained sedimentary rocks, including clays, shales, mudstones, siltstones and marls.
Arsenopyrite	A mineral that is made up of arsenic, iron and sulfur.
As	The chemical symbol for the element arsenic.
ATF	Area of Technical and Financial Assistance
Azurite	A mineral that is made up of copper, up to 55% Cu, with carbonate and water.
BCM	Bank Cubic Metres, a measure of volume applied to unbroken rock.
Bimodal	Statistical term for two peaks in a graph of values.
Brecciated	Describes rock made up of angularly broken or fractured rock generally indicating a fault plane.
°C	Temperature measurement in degrees Celsius (also called Centigrade).
Carbonates	Rocks made up mainly of a metal, commonly calcium or magnesium or copper, zinc and lead and carbon dioxide



Cell	A term applied to the three dimensional volume used in the mathematical modelling by computer techniques of ore bodies.
cm	Centimetre.
Co	The chemical symbol for the element cobalt.
Conglomerate	A sedimentary rock made up of various size particles from small pebbles to large boulders rounded other rock fragments cemented together.
Cut-off	The minimum concentration (grade) of the valuable component in a mass of rock that will produce sufficient revenue to pay for the cost of mining, processing and selling it.
Dilution	A term used to describe the waste or non economic materials included when mining ore.
Disseminated	Ore carrying fine particles, usually sulfides scattered throughout the rock.
Dolomite	A mineral containing calcium, magnesium and carbonate.
Domain	A term used mainly in ore resource estimation or geotechnical calculations to describe a regions of a geological model with similar physical or chemical characteristics.
DC	Diamond Core drilling
DRC	Democratic Republic of Congo.
DTM	Digital Terrain Model.
E	Easting Coordinate.
Ferric	Iron in an ionic state of three missing electrons.
Fluvial	A geological process in, or pertaining to, rivers.
Fluvio	A description applied to moving material by streams of water.
Flotation	A widely used process to concentrate valuable minerals after mining that treats finely ground rock in a water based pulp with chemicals

	that allow them to float to the surface where they are recovered in preference to waste or gangue minerals which sink.
g	grams.
g/t	grams per tonne.
Geostatistics	A term used meaning a mathematical statistical method based on geological spatial knowledge of grade distributions to estimate grades in a systematic way.
Graben	A downthrown block between two parallel faults.
HMS	Heavy Media Separation. A process that uses high density fluids to separate valuable minerals from waste or gangue by exploiting differences in specific gravity.
ID2	Inverse Distance Squared (method of estimating grades by mathematically weighting samples based on their distance away from the estimation point).
JORC	An acronym for Joint Ore Reserve Committee, an Australian committee formed by the Australian Stock Exchange and Australasian Institute of Mining and Metallurgy, the purpose of which is to set the regulatory enforceable standards for the Code of Practice for the reporting of mineral resources and reserves.
kg	Kilogram.
km <sup>2</sup>	Square kilometres.
Kt	Thousand of tonnes.
Kurtosis	Statistical term for peaked graph shape (peakedness).
Lithology	General rock description based usually on hand specimen.
Log	Natural logarithm to the base 10.
m	Metre.
m <sup>3</sup>	Cubic metre.

Massive	A term used to describe a large occurrence of a pure mineral species, often with no structure.
Mineralization	The presence of minerals of possible economic value or the description of the process by which the concentration of valuable minerals occurs.
mm	Millimetre.
MN	Magnetic North.
Moz	Million ounces.
Mt	Million tonnes.
N	Northing Coordinate.
Neoproterozoic	The term used in the geological time scale for the period from 545 million years ago to 1000 million years ago.
Ore	A natural aggregate of one or more minerals which, at a specified time and place, may be mined and sold at a profit or from which some part may be profitably separated.
Pb	The chemical symbol for the element lead.
Porphyry	An igneous rock with relatively large crystals set in a finer grained background mass.
ppm	Parts per million (same as grams per tonne).
Protolith	Original lithology
Recovery	A measure in percentage terms in the efficiency of a process, usually metallurgical, in gathering the valuable minerals. The measure is made against the total amount of valuable mineral present in the ore.
Reserve	The term for the economic quantities and grade of valuable materials as strictly applied in compliance with the definition in the National Instrument 43-101.
Resource	The term for the estimate of the quantities and grade of valuable

materials but with no economic considerations as strictly applied in compliance with the definition in the National Instrument 43-101.

RC	Reverse Circulation drilling.
RL	Reduced Level (same as elevation coordinate).
S	South Coordinate.
Sandstone	A sedimentary rock consisting of sand size grains, generally the mineral quartz, which is in a consolidated mass.
Sericite	a mica mineral – product of hydrothermal alteration
Silica	A compound of silicon and oxygen, generally occurring in the form of a mineral called quartz.
Stratiform	Describes a layered or tabular shaped body of mineralized rock within a sedimentary rock and implies that the layering of the mineralization is parallel to the bedding planes in that sedimentary rock.
Strings	A term used by SURPAC, applied to a line drawn within the program that outlines or describes a shape of an object or interpretation.
SURPAC	A proprietary computer program developed to model, view, analyse and report on geological and mining data.
Tholeiitic	A particular type of basalt composed of basic plagioclase and pigeonite with interstitial glass or quartz-alkali feldspar intergrowths
TN	True North.
Tuff	General term for rocks that consist of fragmental material thrown into the air by explosive volcanic activity.
US	United States of America.
W	Westing Coordinate.
Zn	The chemical symbol for the element zinc.

## 1.0 SUMMARY

Cube Consulting Pty Ltd (Cube) was requested by Moto Goldmines Ltd (MGL) to compile an updated independent estimation of global gold resources for several deposits within the Moto Gold Project area in The Democratic Republic of the Congo. Updated resource estimates were completed for Pakaka, Karagba, Mengu Hill, Kombokolo and Sessenge following results from an additional 12,389m of RC and 25,368.7m of DC drilling in these deposits. This report relates to the resource updates that were reported to the market on November 14<sup>th</sup> 2005. The previous resource estimation results were reported on August 9<sup>th</sup> 2005.

This independent technical report is intended to comply with disclosure and reporting requirements set forth in the Toronto Stock Exchange (TSX) Company Manual, National Instrument 43-101 Companion Policy 43-101CP, and Form 43-101F1.

The Moto Gold Project is located in the Moto Goldfields in the north east of the Democratic Republic of Congo, some 560 kms north east of the city of Kisangani and 150 kms west of the Ugandan border town of Arua. The project covers an area of approximately 5,300 sq kms.

The Moto Gold Project is mainly over metamorphic rocks of the Moto greenstone belt, which forms part of the lower Proterozoic Kibalian greenstone terrain. The Moto greenstone belt is bounded to the north by the Archean West Nile gneissic complex and to the south by the Upper Zaire granitic complex. It is estimated that approximately 11 million ounces of gold has been produced from mines within the Kilo-Moto portion of the Kibalian terrain.

The Moto Mine Area is situated on the Moto mine group located 70km south of Faradje and 570km north east of Kisangani and contains at least 10 historic gold mines. The Moto Mine Area covers a 7km by 5km area near the towns of Doko and Durba. Three of the deposits in the area, Gorumbwa, Agbarabo and Durba, which were exploited primarily in the 1950s and 1960s by the Belgians, have produced more than 60% of the +3 million ounces of recorded production from the Moto Mine Area. Most of the remainder of production has come from placer, alluvial and small oxide-zone workings.

The primary objective of the updated Cube resource estimates was to quantify the likely global in-situ gold resources and review resource classification categories after incorporating all available additional drilling data.

All the mineral resource estimates undertaken by Cube have been classified and reported in accordance with The 2004 Australasian Code for Reporting of Mineral Resources and Ore Reserves (2004 JORC Code). The 2004 JORC reporting guidelines are equivalent to the guidelines adopted for the Canadian National Instrument 43-101. A significant amount of material has been added to the Indicated category reflecting the greater degree of confidence of these resources following the inclusion of a large amount of additional drilling since the August 9<sup>th</sup> 2005 resource estimate. It should be noted that although a significant quantity of material has been added to the Indicated category the intent of these resources is to quantify the global in-situ gold resources and not to impose physical or economic mining criteria. The current Indicated resources therefore may not be directly suitable for detailed economic and mining evaluation. The next phase of resource estimation will be carried out as part of the pre-feasibility study and will incorporate important mining considerations such as mining selectivity criteria.

At this stage of the project a large proportion of the resources remain in the Inferred category defined under the 2004 JORC Code and are therefore not suitable for detailed reserve, mine planning or financial evaluation purposes.

The estimation project follows a major Reverse Circulation (RC) and Diamond Core Drilling (DC) program that commenced in February 2004 and was ongoing at the time of the November 2005 resource estimation. The resources for Pakaka, Karagba, Mengu Hill, Kombokolo and Sessenge supersede previous resource estimations undertaken by Cube in August 2005. No Mineral Reserves have yet been formulated as the bulk of the resource classification precludes the transition to reserve status and detailed pre-feasibility work is ongoing.

The scope of Cube's engagement was as follows:

- Review and update the geological/mineralisation interpretations for Pakaka, Karagba, Mengu Hill, Kombokolo and Sessenge incorporating available information as of November 2005;
- Undertake statistical and geostatistical analysis of the mineralised material;
- Estimate the Moto Gold Project global gold resources based on best information available at time of estimation. A global resource represents a reliable estimate of the total contained metal but does not account for any form of mining selectivity. For this reason the estimate may be an unreliable local predictor and should not be used for detailed mine planning and reserve evaluation purposes;
- Independently classify and report the resources in accordance with The 2004 Australasian Code for Reporting of Mineral Resources and Ore Reserves (2004 JORC Code) and the Canadian Companion Policy 43-101CP.

MGL provided Cube with the following digital information prior to or during the resource estimation project:

- Separate validated drilling data for each deposit;
- Summary details of drilling data quality including age of data, drilling method, location and survey accuracy, sampling procedures, and analytical methods;
- Description of mineralisation characteristics and geology;
- Mineralisation interpretations where available.

The estimation work started in October 2005 and was completed during November 2005.

The following key points summarise the modelling method:

- Mineralised domain interpretations were based on a combination of geological/alteration characteristics and grade. Lower grade cut-offs were typically between 0.2g/t Au and 0.5g/t Au;
- Flagging of drill holes (RC and Diamond) where a unique database code was assigned to all drill hole intervals passing through the interpreted mineralised volume.

- Statistical analysis of 2.5m geologically flagged downhole composite data and application of high grade assay limits where necessary. High grade assay limits were applied on a domain basis and were typically between 97<sup>th</sup> and 99<sup>th</sup> percentile of the composite distribution;
- Variography has been used to characterise the spatial continuity within the mineralised zones and to determine appropriate estimation inputs to the interpolation process;
- 3D block models were generated for each prospect area. The block model was constrained by the interpreted mineralised volumes. Grade interpolation was carried out using Ordinary Kriging (OK) into Y=20m X=20m Z=5m parent cells;
- Search strategies were optimised using quantitative kriging neighbourhood analysis;
- Flagging of oxide, transitional and fresh material and assignment of density;
- Depletion of historical mining activity;
- Model validation and resource classification.

Global resources have been estimated for twelve prospect areas (August 2005 and November 2005) including Pakaka, Gorumbwa, Kibali, Mengu Hill, Mengu Village, Karagba, Megi, Marakeke, Kombokolo, Sessenge, Ndala and Pamao.

A tabulation of the Moto Gold Project Mineral Resources above a nominal 1 g/t gold cut-off within the interpreted mineralised domains as of November 14<sup>th</sup> 2005 is shown in Table 1.1.

Deposit	Indicated			Inferred		
	Tonnes (Mt)	Au g/t	Au '000Oz	Tonnes (Mt)	Au g/t	Au '000Oz
Pakaka <sup>1</sup>	19.47	2.4	1,509			
Gorumbwa <sup>2</sup>				8.55	6.4	1,750
Kibali <sup>2</sup>				22.60	2.0	1,417
Mengu Hill <sup>1</sup>	8.00	3.3	844	0.98	1.4	43
Mengu Village <sup>2</sup> (Mengu)				1.83	1.6	91
Karagba <sup>1</sup>				36.70	3.1	3,634
Megi <sup>2</sup>				5.21	1.9	312
Marakeke <sup>2</sup>				1.66	1.4	74
Kombokolo <sup>1</sup>	2.08	2.3	155			
Sessenge <sup>1</sup>	4.78	2.0	301	0.92	2.3	67
Ndala <sup>2</sup>				0.49	4.0	62
Pamao <sup>2</sup>				13.93	1.6	708
<b>TOTAL</b>	<b>34.33</b>	<b>2.5</b>	<b>2,809</b>	<b>92.87</b>	<b>2.7</b>	<b>8,158</b>
1= November 14 <sup>th</sup> 2005 2= August 9 <sup>th</sup> 2005						

**Table 1.1 Moto Gold Project Mineral Resource Tabulation > 1.0 g/t gold – November 2005**

## 2.0 INTRODUCTION AND TERMS OF REFERENCE

Cube Consulting Pty Ltd (Cube) have prepared this report under the supervision of Mr Ted Coupland and Mr Rick Adams of Cube on the instruction of Mr Greg Smith (Chief Exploration Geologist) of Moto Goldmines Ltd (MGL). The report is intended to comply with the requirements of the National Instrument 43-101, “Standards of Disclosure for Mineral Properties” as required for reports to be filed under Canadian jurisdiction.

The report is based on data and information gathered by MGL during the period February 2004 to November 2005. Mr Ted Coupland and Mr Rick Adams are the qualified persons responsible for the preparation of this report and the resource estimation. The authors are both professional geologists, each with around 20 years experience in the exploration and evaluation of mineral properties in Australia and internationally. Both are Directors of Cube and Members of the Australasian Institute of Mining and Metallurgy (AusIMM) and have 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 ‘AusIMM Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr Adams visited the Moto Gold Project site in July 2005 for the purpose of independently verifying the quality of MGL’s resource evaluation work.

Cube is an Australian owned company providing geological consulting services, contract staff placements, and software systems to the resources and industrial sectors. The organisation is well resourced with an established office in Perth, Western Australia and has undertaken work for a number of substantial international mining houses. Cube Consulting comprises a team of technical professionals dedicated to providing excellence of service in their field of expertise. Neither Cube nor the authors of this report, have or have had previously any material interest in MGL or related entities or interests. Cubes relationship with MGL is solely a professional association between client and independent consultant. The report has been prepared in return for fees based on agreed commercial rates and the payment of these fees is in no way contingent on the results of this report.



### **3.0 DISCLAIMER**

Cube has based this Technical Review of the Moto Gold Project on information provided by MGL. The data includes third party technical reports and relevant published and unpublished third party information. Cube has made all reasonable endeavours, including a site visit and review of the MGL operations, to confirm the authenticity and completeness of the technical data on which this report is based, however Cube can not guarantee the authenticity or completeness of such third party information.

Cube has not independently investigated the tenement status of the project or the requirements of the Area of Technical and Financial Assistance (ATF). Neither Cube, nor the authors of this report are qualified to provide comment on the legal issues associated with the Moto Gold Project, including any agreements, joint venture terms or the legal status of the tenements included in the Borgakim Joint Venture.

Cube and the authors of this report are also not qualified to provide expert comment on the environmental issues associated with the Moto Gold Project.

Cube has not undertaken independent sampling of material from the Moto Gold Project.

## **4.0 PROPERTY DESCRIPTION AND LOCATION**

### **4.1 Project Location**

The concession areas are located in the north eastern part of the Democratic Republic of Congo (DRC) near the international borders with Uganda and Sudan (Figure 22.1). The village of Doko is centrally located within the project area, which is approximately 180km by road from Arua on the Ugandan border.

The project area is centred at approximately 3.13° North and 29.58 ° East.

### **4.2 Tenement Status**

MGL has entered into a joint venture through its wholly owned subsidiary Border Energy with the privately owned company Orgaman sprl (Orgaman) to form a number of local operating companies, including Borgakim Mining sprl, Amani Gold sprl, Rambi Mining sprl, Kibali Gold sprl, Gorumbwa Mining sprl, Tangold sprl and Blue Rose sprl. These local operating companies have in turn entered into agreements with the Offices des Mines d'Or de Kilo (OKIMO), the state-owned company that holds mineral rights in the north-east of the DRC. Essentially, MGL is the operator of the project and is earning a 60% interest in certain areas (Orgaman retains a 10% interest and OKIMO has a 30% interest) and a 68.5% interest in other areas (Orgaman retains an 11.5% interest and OKIMO has a 20% interest).

Under the terms of the agreements, MGL is required to pay a further US\$250,000 to Orgaman prior to the commencement of production, to fund exploration through to completion of a bankable feasibility study (BFS) and to provide OKIMO with loans (recoverable from production) totalling US\$1,000,000.

The mining concessions in which MGL has an interest comprise the Amani Mining Licence (MGL 68.5%) of 897km<sup>2</sup>, the Kibali Mining Licence (MGL 68.5%) of 632km<sup>2</sup>, the Borgakim Mining Licence (MGL 60%) of 472km<sup>2</sup>, the Rambi Mining Licence (MGL 68.5%) of 2,489km<sup>2</sup>, the Gorumbwa Mining Licence (MGL 60%) of 3km<sup>2</sup>, the Agbarabo Mining Licence (MGL 68.5%) of 2km<sup>2</sup>, the Tangold Mining Licence (MGL 68.5%) of 585km<sup>2</sup> and the Area of Technical and Financial Assistance (ATF, MGL 60%) of 295km<sup>2</sup>. The ATF includes the Durba/Chauffeur/Karagba mineralised trend.

Cube has not independently investigated the tenement status of the project or the requirements of the ATF. Cube has sourced this information directly from MGL corporate management.

### **4.3 Royalties and Agreements**

The only known royalty is a mining levy of 2.5% payable to the Government of the DRC.

Cube has not independently investigated the terms of any royalties and agreements and has sourced this information directly from MGL corporate management.

#### **4.4 Environmental Liabilities**

RSG Global (Jones, June 2005) identified a number of potentially significant environmental issues in the area caused by past mining operations and current artisan workings. In response, MGL have engaged SGS Ghana to undertake a baseline environmental study leading up to the pre-feasibility study. Their general feeling is that the entire area is generally degraded from the original rainforest. SGS have made two visits to the Moto site to gather samples for the study and no high levels of heavy metals were found with the exception of one creek draining the old tailings area. The study is ongoing and no report was available at the time of this document.

## **5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

### **5.1 Project Access**

Access is by charter flight from Entebbe in Uganda to the airstrip at Doko (1,100m in length), a flying time of approximately 2 hours (470km). Entebbe is an international airport with good commercial links to Nairobi, Johannesburg and London.

Access by road is from Entebbe via Arua on the Uganda/DRC border. Heavy trucks with freight are required to drive via the Sudan from Kampala in order to avoid the local roads, which are generally in poor condition and often impassable when wet.

### **5.2 Physiography and Climate**

Topography ranges in elevation between 700masl to 1,500masl. Annual rainfall varies between approximately 800mm and 1,600mm, most of which falls in two wet periods, from April to May and from August to November. Diurnal temperatures vary between 18°C and 30°C. Vegetation is dominated by elephant grass with forested areas along drainages. It is likely that the entire area comprised rainforest prior to modification by human activity.

### **5.3 Local Infrastructure and Services**

Local infrastructure is typical of remote rural Africa, with poorly maintained unsealed roads and no manufacturing or engineering services available. An unreliable and intermittent power supply is provided by the local grid system from the Nzoro Hydroelectric Dam, approximately 35km to the north. This power supply would not be adequate for any ore processing operation. Water would be readily available from the Kibali River.

The old mining infrastructure was partly rehabilitated by previous project operators, and includes a number of houses used for accommodation and office and sample preparation facilities. Other infrastructure includes power generators, water supply (from bores) and other equipment including diamond drill rigs and a bulldozer.

Upgrading of roads to all-weather routes and the transport of major mining and processing equipment will be a major requirement for project development. Similar projects have been developed in other remote areas of Africa in recent times. The investigation and cost estimates required for the provision of infrastructure to service a major mining operation will be a large component of a feasibility study. It is likely that capital costs will be higher than normally expected due to infrastructure and transport requirements.

## 6.0 HISTORY

The discovery of gold in the region is attributed to Hannan and O'Brien in 1903. Historical gold production from the Kilo and Moto areas since 1906 is estimated at approximately 11 Moz, half of which came from alluvial deposits. Mining operations were conducted by the Belgian Government via the Société des Mines d'Or de Kilo-Moto, which was established in 1926. Most of the mining activity within the Moto Gold Project areas was undertaken during the 1950's.

After independence in 1960, gold production dropped sharply. Negligible amounts of gold are currently produced by artisan workers (orpailleur) and small scale alluvial operations. The Société changed its name to Offices des Mines d'Or de Kilo-Moto (OKIMO) in 1966.

Davy McKee undertook a detailed assessment of the area on behalf of the Government of Zaire in 1991, with funding from the African Development Bank. This assessment included a significant amount of drilling to verify historical data at some of the deposits currently held by MGL.

Barrick Gold Corporation (BGC) acquired exploration rights over most of the Kilo-Moto belts in 1996 in joint venture with OKIMO, and drilled a number of targets as well as completing regional and detailed soil sampling programs. This work indicated that previous OKIMO drill assays may have been over-reported due to contamination during sample preparation and analysis, and also resulted in the definition of the soil anomaly at Kibali.

In 1998, BGC entered into a joint venture with Anglo American Corporation (AAC), and AAC became the operator of the project. The BGC/AAC joint venture completed a number of drilling programs, mainly concentrated at Kibali and Pakaka.

AAC completed a resource estimate for the Kibali deposit. The resource comprised 38Mt at a grade of 1.8g/t Au for approximately 2Moz of contained gold. The resource was not classified and due to the drill spacing, it is unlikely that the resource could be appropriately classified using JORC or CIM guidelines.

The joint venture also carried out soil sampling over most of the concession area, and a regional aeromagnetic survey was completed by World Geoscience Limited (WGC). The survey was undertaken at 200m line spacings and the data were interpreted by WGC. This interpretation forms the basis of the current geological knowledge of the area. The raw aeromagnetic data have yet to be acquired by MGL. AAC and BGC withdrew in 1998 due to local unrest and civil war.

The OKIMO processing plant is located near the old Durba mine. The plant comprised crushing and ball milling circuits, followed by gravity, cyanide leach and mercury amalgamation circuits. The plant is currently in poor condition and rehabilitation is unlikely to be cost effective.

A number of artisan workings are currently being excavated at Karagba, Camp Chauffer, Megi and a number of other locations. Old waste dumps and tailings from previous operations at Gorumbwa and Durba are also being worked.

MGL is currently completing an extensive drilling program involving 4 drill rigs. Resource estimates have been undertaken for the all major identified deposits. MGL intends to continue infill drilling in order to upgrade the resource classifications to allow conversion to reserve and to continue exploration drilling over the remaining targets in the area. MGL plans to progress through a pre-feasibility to full feasibility study during 2006 and 2007.

## 7.0 GEOLOGICAL SETTING

### 7.1 Regional Setting

The Moto Goldfields are located within the Moto greenstone belt, which comprises Lower Proterozoic Kibalian volcano-sedimentary rocks and banded iron formations (BIF) metamorphosed to greenschist facies. It is cut by north to northeast trending faults and is bounded to the north by Archaean West Nile granite-gneiss complex and to the south by the Upper Zaire granitic complex (Figure 22.2).

The geological model of the Moto Gold Project area has undergone a significant reassessment during the recent drilling by MGL. The MGL geological staff have published initial and broad scale interpretations (MGL, June 2005) from which much of the following is drawn and upon which the resource models have been based.

The stratigraphy consists of a volcano-sedimentary sequence comprising fine-grained sedimentary rocks, several varieties of pyroclastic rocks, basaltic flow rocks, mafic-intermediate intrusions (dykes and sills) and intermediate-felsic intrusive rocks (stocks, dykes and sills). Each identified lithological unit has been assigned a name and unique code for logging. Existing geological logs are being systematically reinterpreted to conform to the newly designed system.

The rocks are variably altered, from slight (texture benign) to intense (texture destructive), such that in some cases the protolith rock is unrecognisable.

A summary of the main points of the current geological interpretation are presented in the report and reproduced below:

1. It is clear from the lithologies and textures of the rocks of the Moto Gold Project area that they were all laid down in an aqueous environment (e.g., pillowed basalt, fine-grained sedimentary rocks, etc.).
2. The majority of the primary lithologies are volcanic in origin and bimodal in geochemistry (e.g., tholeiitic basalt, quartz-feldspar crystal tuff, quartz-feldspar porphyry) permissive of their development in an extensional environment (e.g., rift graben or half graben).
3. Felsic volcanoclastic rocks include various tuffaceous rocks (ash, crystal, breccia, etc.) and a distinctive coarse fragmental rock identified as a volcanic agglomerate.
4. The graben or 'basin' environment was sequentially filled with mafic volcanic products at the base, followed by intermediate to felsic volcanic products (and sedimentary equivalents), followed by additional mafic volcanic products. Sedimentation, represented by argillaceous and other fine-grained sediments, continued throughout the history of basin fill and these products are found as interflow sedimentary horizons within the basaltic domains and as relatively thick mudstone-argillite sequences within the intermediate to felsic volcanoclastic sequence.
5. The distribution of lithologies, as noted in the various sections developed for the deposit areas, represents a key for the understanding of the original topography and, thus, the possible structural environment relative to the siting of gold mineralization.

6. Several major mineralized trends are apparent in the soil geochemistry data and in the distribution of known gold mineralization. However, the Kibali-Durba-Karagba and the Gorumbwa-Kombokolo-Pakaka trends are anomalous with respect to gold endowment and together define a well mineralized, NE-striking corridor, 1.5km wide and 8km long.
7. The geologic sections of Kibali, Gorumbwa, Durba, Karagba and Pakaka all contain thick sections of a coarse fragmental rock variably known as conglomerate (Barrick maps and drill reports) or volcanic agglomerate (MGL interpretation). Very little volcanic agglomerate has been noted outside this corridor (with the exception of Mengu Hill). Away from the Kibali-Gorumbwa-Durba-Karagba-Pakaka corridor the sections are dominated by fine-grained units such as ironstone-chert and mudstone, which generally overlie a basalt footwall unit. The fundamental point is that the distribution of the coarse fragmental rock probably marks a significant topographic anomaly, NE striking and linear in geometry, and interpreted as a graben structure that has focused proximal volcanic units, widespread pervasive alteration, and the highest grade deposits in the project area.
8. The areas and sections dominated by fine-grained sedimentary units may mark more distal units deposited outside the major graben structure. Alteration and gold mineralization associated with these areas (e.g., Megi, Marakeke, Pamao, and Memekasi) may be related to normal fault structures but not major extensional structures forming district-scale ‘corridors of permeability’.
9. Au-in-soil anomalism exists on a vast scale and forms linear patterns suggestive of structural control at the district scale. This widespread anomalism could only be caused by an operative mechanism of great scale suggested to have been a thermal plume. This would also serve to explain the extensional features formed at the crustal surface, as well as the temporal bimodal volcanism.
10. An enigmatic part of the stratigraphy in the Moto Gold Project area is the ‘ironstone-chert’ sequence which is sporadically developed but which forms prominent hills and ridges over 10s of kilometers.

This systematic reinterpretation of the Moto Gold Project geological setting has resulted in a high proportion of targeted holes intersecting significant mineralisation during the latest (2005) phase of drilling.

## 8.0 DEPOSIT TYPES

Gold mineralisation at the Moto Gold Project is associated with epigenetic mesothermal style mineralisation, consistent with the majority of Archaean and Proterozoic greenstone terranes worldwide, including the Birimian rocks of West Africa, the Yilgarn Block in Western Australia, the Lake Victoria region in Tanzania and the Atibiti Belt in Canada. This style of mineralisation is generally associated with regionally metamorphosed terrains that have experienced considerable deformation. As such, the deposits are strongly structurally controlled. The most common style of mineralisation in this setting is fracture and vein hosted gold mineralisation in zones of brittle fracture.

Brittle fracture regimes can be formed in a number of ways, commonly along jogs within more ductile shear zones, particularly where there is a rheological contrast between two rock types. This is particularly common where ductile shear zones within schistose rocks are in contact with zones of silicification and/or felsic and mafic intrusions, which provide the necessary host for extensive brittle fracture during deformation.

Hydrothermal alteration is usually associated with these deposits, caused by the migration of hot hydrothermal fluids along favourable pathways such as faults, bedding planes and geological contact zones.



## **9.0 MINERALISATION**

### **9.1.1 Introduction**

Gold mineralisation in the Moto Gold Project area comprises a series of prospects that have been identified by a variety of methods, including previous exploration and mining, the presence of artisanal diggings, soil geochemistry, aeromagnetic anomalies and MGL drilling using the current geological model.

The prospects being considered in this study occur within two broad groups, the first group are within a north east trending structural corridor from Kibali in the southwest to Ndala North in the northeast (Figure 22.3). The second group lie northwest of Ndala and extend in a northwest corridor from Pakaka to Mengu Hill. Each individual prospect exhibits a low angle plunge to the northeast.

Mineralisation occurs in a number of rock types, and highest gold grades show a strong spatial association with zones of variably silicified±albitised rock. These alteration-mineralisation zones appear to be broadly conformable with the regional S1 fabric.

Visible gold has been noted in drill core from most prospects.

### **9.1.2 Pakaka**

Mineralisation is associated with albite-carbonate-pyrite alteration in strongly foliated quartz-mica schists. Inspection of drill core indicates that mineralised zones are associated with pervasive silicification with local preservation of breccia textures that have been overprinted by the dominant S1 fabric.

A shallow open pit comprising a series of artisan workings has been excavated over the southern part of the Pakaka deposit where the mineralisation reaches surface. The workings extend over a strike length of approximately 100m.

The weathering profile at Pakaka is relatively deep, with oxidation extending to depths of approximately 50m below surface.

### **9.1.3 Gorumbwa**

Mineralisation is hosted within a sequence of meta-tuffs and agglomerates. Silicification and sericitisation is pervasive. Visible gold has been noted within late, strongly silicified structures, which appear to frequently exploit the pre-existing foliation planes. Previous mining concentrated on the middle (main) lode between the upper and the lower lode. The main lode is capped and divided from the upper lode by a barren basaltic sill (“banc vert”).

The weathering profile at Gorumbwa is shallow.

### **9.1.4 Kibali**

Gold mineralisation at Kibali occurs in a different structural setting to most of the other known deposits. The mineralised zone is hosted in a shear zone within basalt country rock with interpose

conglomerate units. The shear zone has a northeast strike and dips to the northwest at approximately 40 degrees over a strike length of approximately 1.6km. Mineralisation appears to be open in most directions, however grades become lower and less continuous. Gold mineralisation is reportedly associated with zones of bleaching (sericite-albite alteration) within shears and schists, in the basalt, and within conglomerate units. The sulphide content can reach 15%, comprising mainly pyrite and arsenopyrite.

There is very little surface oxidation at Kibali, and most of the area has fresh rock almost to surface.

#### **9.1.5 Mengu Hill**

Mineralisation at Mengu Hill has not been described in detail as yet. Work on the geological stratigraphy is on going. The mineralisation is located 500m west of the Mengu Village mineralisation and occurs as a northeast plunging high grade shoot interpreted to be altered ironstone.

#### **9.1.6 Mengu Village**

Mineralisation at Mengu Village has not been described in detail as yet. Work on the geological stratigraphy is on going. The mineralisation is similar to that found elsewhere on the project and occurs as stacked lenses representing the redox and lithological boundaries.

#### **9.1.7 Karagba**

The mineralisation at Karagba is predominately within a volcanic agglomerate lithology. Alteration in the volcanic agglomerate is dominated by chlorite in the matrix (greenschist facies), which is variably overprinted by sericite, ankerite, silica and albite.

#### **9.1.8 Megi**

The Megi Prospect mineralisation is characterized by interlayering of iron-rich units (ironstone and ferruginous 'chert') and 'bleached' units with variable percentages of silica, sericite and carbonate with minor horizons of albite, pyrite, and arsenopyrite.

#### **9.1.9 Marakeke**

The Marakeke mineralisation is proximal to the Megi Prospect to the East, it is postulated that the mineralisation is similar to that of Megi but work is ongoing.

#### **9.1.10 Kombokolo**

Mineralisation is present in a moderately to pervasively altered (carbonate-sericite-silica) unit whose protolith is open to conjecture, underlying an ironstone horizon. Clarification of this unit awaits diamond drill core evaluation.

The depth of oxidation differs from hole to hole but averages about 40m in depth.

### **9.1.11 Sessenge**

The Sessenge mineralisation occurs in a zone of intermixed ironstone and variably bleached/altered rock possibly a tuff sediment sequence. The ironstone is interpreted as a product of metasomatism. Where highly altered and mineralized with sulphides-albite-Fe carbonate the unit takes on a brownish to orange colouration.

### **9.1.12 Ndala**

The Ndala mineralisation is located within the basalt unit to the north of Pakaka and is a supergene enrichment sited at the transition for weathered to fresh material.

### **9.1.13 Pamao**

The mineralisation at Pamao is closely related to that of Pakaka immediately adjacent.

### **9.1.14 Exploration Potential**

It is considered that the exploration potential of the area is extremely good. The main zone of potential high grade mineralisation is the Durba Prospect, through to Kanga in the northeast. A number of stacked ore shoots may be defined in this zone and infill drilling over the entire strike length is warranted. Infill drilling is also required at Kibali and Gorumbwa to enable high confidence resource estimates to be completed.

There is obvious potential to define additional mineralisation at all known occurrences, and it can reasonably be expected that new deposits will be located within the main structural corridor as the geological and structural knowledge of the area is improved. It will be vital for all data to be compiled and interpreted effectively as drilling progresses if this potential is to be realised.

Detailed aeromagnetic data will be very useful for exploration target generation. Persistence with drilling at relatively close spacing will also be required in order to effectively define the higher grade ore shoots.

Cube considers that the current work programs and schedules as proposed by MGL are realistic and appropriately reflect the very good exploration and resource potential of the area.

## **10.0 EXPLORATION**

### **10.1 Introduction**

MGL has primarily used the BGC/AAC aeromagnetic interpretation and 1950's OKIMO drill results to define initial drill targets. MGL is also in possession of the BGC/AAC drilling data from Kibali.

Resource estimations were reported for the Pakaka, Karagba, Sessenge, Komokolo, Marakeke, Gorumbwa, Megi, Mengu, Mengu Hill, Ndala, Pamao and Kibali deposits by Cube in August 2005. All resources were classified as Inferred with the exception of around 40% of Pakaka which was classified as Indicated. The primary focus of the MGL drilling strategy for the ensuing months has been to reduce drilling spacing to approximately 40m by 40m on several key deposits suitable for the estimation of Indicated resources. Inferred resources have been typically defined on variable drilling spacing ranging from 80m by 40m to 200m by 40m. A large amount of additional drilling has also been carried out at Karagba (including Chauffeur) to test depth extensions of these mineralised zones.

MGL is currently operating 4 drill rigs with an ongoing program of infill drilling aimed at increasing resource confidence at the main deposits and to continue exploration drilling of other targets.

### **10.2 Pakaka**

OKIMO and Davy McKee drilled the Pakaka Prospect on drill lines orientated north-south, which is along the strike of the mineralisation and therefore sub-optimal. MGL is in possession of the drill hole data from the Davy McKee holes, and drill hole collar positions, composited assay data and depths are available from the OKIMO holes. These data are of low confidence due to grid conversion problems and associated sample location uncertainties.

OKIMO drilled approximately 100 DC holes at Pakaka prior to about 1960. Davy McKee drilled 10 DC holes as part of the project evaluation exercise in 1990, and BGC completed limited DC drilling at Pakaka in 1996.

RC drilling by MGL has been completed to a nominal spacing of 40m by 40m over the majority of the shallower western half of the deposit. This includes a small area of 20m by 20m spaced drilling. DC drilling by MGL has also been completed to a nominal spacing of 40m by 40m over the majority of the deeper eastern half of the deposit. Only a small proportion of the overall Pakaka deposit has not been drilled to 40m by 40m spacing. Maximum drill spacing at Pakaka is no greater than 80m by 80m and these areas are internal to the 40m by 40m spaced drilling. It is likely that only limited additional drilling will be required at Pakaka prior to completion of the pre-feasibility and feasibility studies. Cube is currently in the process of recommending a small program of DC holes to be drilled as twin holes to RC drilling at selected locations within the Pakaka deposit. This program is of a due diligence nature and is unlikely to have a material impact of the resource estimate.

August 2005			November 2005		
Drill type	# Holes	Meters	Drill type	# Holes	Meters
RC	164	12,516	RC	217	15,299
DC	36	8,263.3	DD	89	18,337.2

**Table 10.1 MGL Pakaka Drilling Summary – November 2005**

### 10.3 Gorumbwa

The Gorumbwa deposit was mined by OKIMO commencing in 1955 from underground and via a small open pit. Total production from this mine is estimated at approximately 2.8Mt at grades of approximately 12g/t Au to 15g/t Au. The underground and open pit workings are now collapsed and flooded. Two old head frames remain. Underground workings extend to 380m below surface.

At the time of the November 2005 resource estimate MGL was actively carrying out an RC infill drilling program at the Gorumbwa Prospect to a nominal spacing of 20m by 20m. Drilling logistics at Gorumbwa are difficult due to the presence of a historic open pit and extensive underground workings. One aim of the close spaced RC drilling was to identify the extent and location of underground workings of which many of the RC holes have intersected as expected. MGL have drilled three lines of DC at a nominal drill spacing of 120m by 40m to test the down plunge extent of mineralisation as well as some holes to test the shallower parts of the deposit.

An updated resource was not carried out for Gorumbwa in November 2005 due to the incomplete nature of the current drilling program. However at the time of the November 2005 resource updates MGL had completed 41 RC drill holes for a total of 4,953.45m and 31 DC drill holes for a total of 6,734.27m at Gorumbwa. Additional drilling is still required at Gorumbwa before an updated resource estimate can be undertaken.

August 2005			November 2005		
Drill type	# Holes	Metres	Drill type	# Holes	Metres
RC	7	374	RC	41	4,953.45
DC	29	6282.8	DC	31	6,734.27

**Table 10.2 MGL Gorumbwa Drilling Summary – November 2005**

### 10.4 Kibali

The BGC drill holes were vertical DC holes drilled at a nominal spacing of 160m by 80m on drill fences orientated at 135°. Of the BGC DC holes drilled, 44 have been used in the August 2005 Cube resource estimate.

MGL has completed an initial program of infill RC drilling at Kibali comprising 42 RC holes for approximately 2,400m. Most of the MGL RC holes were drilled vertically. Given that the mineralised zone dips at approximately 40° to 45° to the east, inclined drill holes will be required,

although the relatively steep topography will create access difficulties in places. RC drilling by MGL was reportedly slow due to the hard ground, and drill hole dips deviated significantly.

Unfortunately, the BGC diamond core was vandalised during previous unrest in the area, and cannot be used to confirm the geology or to obtain bulk density readings.

No additional drilling has taken place at Kibali since the August 2005 resource estimate.

## 10.5 Mengu Hill

MGL have completed six 80m by 40m spaced section lines covering the extent of the Mengu Hill deposit. The Mengu Hill resource extents and continuity of mineralisation appear to be well defined with the current drilling coverage. Some additional drilling may be required for pre-feasibility resource estimations.

August 2005			November 2005		
Drill type	# Holes	Metres	Drill type	# Holes	Metres
RC	45	2,700	RC	46	2,760
DC	17	3,163.79	DC	39	6,240.14

**Table 10.3 MGL Mengu Hill Drilling Summary – November 2005**

## 10.6 Mengu Village

At Mengu Village, MGL has completed 51 RC drill holes totalling 2,702 metres.

No additional drilling has taken place at Mengu Village since the August 2005 resource estimate.

## 10.7 Durba, Chauffeur and Karagba

The Durba/Chauffeur/Karagba mineralised trend is proving to be a very significant system capable of hosting large gold resources. Recent deep drilling at the Karagba/Chauffeur prospect has demonstrated the existence of a very large mineralised system of stacked shoots as shown in Figure 22.4. The up-dip extension of these mineralised shoots has been poorly tested at this stage and will become the primary exploration focus in the coming months. There is clearly excellent potential for significant additional near surface resources to be defined in the Durba/Chauffeur/Karagba prospect area.

August 2005			November 2005		
Drill type	# Holes	Metres	Drill type	# Holes	Metres
RC	26	2,245	RC	44	3,788
DC	4	1,543.95	DC	36	13,499.1

**Table 10.4 MGL Karagba Drilling Summary – November 2005**

## 10.8 Megi

MGL has completed 116 RC drill holes at Megi since early 2005 for a total of 9,280 metres. The prospect was discovered in one of the original holes of the reconnaissance drill traverses completed at 200m line spacing across the 6.5km long Pakaka to Mengu gold in soil geochemical anomaly.

No additional drilling has taken place at Megi since the August 2005 resource estimate.

## 10.9 Marakeke

At Marakeke, MGL has completed 56 RC drill holes totalling 3,917 metres.

No additional drilling has taken place at Marakeke since the August 2005 resource estimate.

## 10.10 Kombokolo

The entire Kombokolo resource area has been drilled by RC to a nominal spacing of 40m by 40m. This spacing is considered by Cube to be sufficient for defining Indicated resources. It is recommended that selective DC drilling be carried out to twin some RC holes for the purposes of due diligence.

August 2005			November 2005		
Drill type	# Holes	Metres	Drill type	# Holes	Metres
RC	12	1,160	RC	30	3,479
DC	-	-	-	-	-

**Table 10.5 MGL Kombokolo Drilling Summary – November 2005**

## 10.11 Sessenge

The entire Sessenge resource area has been drilled by RC to a nominal spacing of 40m by 40m. This spacing is considered by Cube to be sufficient for defining Indicated resources. It is recommended that selective DC drilling be carried out to twin some RC holes for the purposes of due diligence.

August 2005			November 2005		
Drill type	# Holes	Metres	Drill type	# Holes	Metres
RC	73	5,330	RC	128	10,498
DC	-	-	-	-	-

**Table 10.6 MGL Kombokolo Drilling Summary – November 2005**

## 10.12 Ndala

RC drilling has been completed at the Ndala Prospect, west of Pakaka. The Ndala Prospect was pitted extensively by OKIMO, however the grades obtained by OKIMO were not confirmed by the Davy McKee drilling. BGC/AAC drilled some DC holes on the prospect and reported some

significant results. MGL completed two fences of RC holes orientated north-south and east-west across the area pitted by OKIMO at 40m spacings, and obtained some high grade results including 20m/32.7g/t Au and 4m/66.6g/t Au. MGL have completed 28 RC drill holes for a total of 1,718 metres and 6 DC drill holes for a total 844 metres.

No additional drilling has taken place at Ndala since the August 2005 resource estimate.

### **10.13 Pamao**

MGL has completed 168 RC drill holes for 12,475 metres and 27 DC drill holes totalling 3,808 metres at Pamao since early 2005.

Pamao lies 500m west of Pakaka on the Pakaka - Mengu gold in soil geochemical anomaly.

No additional drilling has taken place at Pamao since the August 2005 resource estimate.

### **10.14 Other Prospects**

Other prospects investigated by MGL include Tete Bakangwe located northwest of Pakaka and Aindi which lies west of Pamao.

MGL has also completed some RC drilling at Aerodrome, Kanga Moke and an area of extensive artisan workings east of Gorumbwa and northwest of Durba. In addition, RC drilling has been completed at the Ndala and Ndala North Prospects, east and northeast of Pakaka.

A small high grade open pit was excavated by OKIMO at Bakangwe Aval, however drilling by BGC and MGL did not obtain any significant results apart from a small zone to the northeast of the prospect.



## **11.0 DRILLING**

### **11.1 Drilling by Previous Owners**

Very little information is available regarding drilling by OKIMO, BGC or AAC. Inspection by RSG Global of the vandalised BGC drill core suggests that the majority of the core is NQ diameter.

### **11.2 Drilling by Current Owners**

DC and RC drilling have been undertaken on behalf of MGL by GeoSearch Limited (GeoSearch), an experienced drilling contract company based in South Africa. At the time of this study there were three DC rigs and one RC rig operating at the Moto Project.

The RC drilling equipment is appropriate and adequate for the duty. Compressors have adequate air pressures and volumes.

Core recovery is generally very good with the exception of shallow intensely oxidised material. Most DC holes commence in HQ diameter, which is reduced to NQ when fresh rock is reached or when difficulties are encountered (such as old stope voids). There has been a limited amount of DC drilling using PQ and BQ core diameters.

## **12.0 SAMPLING METHOD AND APPROACH**

### **12.1 Diamond Drilling**

Drill core is marked up by the geologist responsible and cut in half lengthways using a diamond saw. Half core is crushed and pulverised on site and the other half is retained for future reference. All diamond core is logged and photographed.

### **12.2 Reverse Circulation Drilling**

RC samples are collected at the drill site via a cyclone for each metre drilled. Samples are combined at the rig to create a 2 metre composite. The sample is then split using a riffle splitter to produce a representative sub-sample of approximately 4kg to 5kg. Wet RC sampling was being undertaken when necessary at the time of Cube's June 2005 site visit. Excess water in the wet RC samples is decanted prior to sample reduction using a small scoop inside the sample bag. The decanting of excess water will have implications for grade, which will be downgraded if the gold is fine, or upgraded if the gold is coarse. Detailed logging of the intervals that are water affected is being undertaken as a routine in all new MGL RC and DC drilling. This will enable the assessment of the significance of wet RC drilling as the project moves forward.

The RC bulk rejects are stored on site in plastic bags and are exposed to the weather. Individual samples can be located, however many bags are in poor condition and inter-sample contamination will occur with time. Whilst it is not practical to store all samples under cover, mineralised intervals are being stored such that deterioration of the bags is minimised.

Chip boards are prepared for RC drilling prior to geological logging.

## 13.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

A comprehensive audit report regarding sampling method, sample preparation, analysis and security was prepared by Michel M. Mercier (Mercier, September 2005) at the request of Moto Gold Mines Ltd during September 2005. This report represents the most detailed, up to date and accurate account of procedures, methods, quality assurance and sample preparation facilities currently adopted for all forms of sampling at the Moto Gold Project. Descriptions contained in this report are consistent with Cube's previous observations and understanding of the same.

The full Mercier, September 2005 Audit Report is included for reference in Appendix 1.

### 13.1 Sample Preparation Areas

The following description has been drawn directly from the Mercier, September 2005 Audit Report.

The sample preparation areas are housed in a large building of 441m<sup>2</sup> divided into various sections for the processing and preparation of different types of samples. The building also has a small core storage area and an office for the senior lab technician. The areas are clean and well laid out with activities separated from each other. The various preparation sections of the laboratory are: crusher section, pulverizer section, core saw section, chipboard section, core drying section and soil preparation section.

### 13.2 Sample Preparation Equipment

The following description has been drawn directly from the Mercier, September 2005 Audit Report.

The main equipment in use at the Doko preparation laboratory consists of:

- Jaw crushers;
- Pulverizers (both saucer style puck and ring type);
- Drying oven;
- Diamond saws;
- Riffle splitters;
- Various stainless steel screens;
- Ultrasonic sieve cleaners;
- Compressed air connections;
- Work stations equipped with dust exhausts;
- Dust extractor system

Jaw Crushers: two TM Engineering jaw crushers are used in the Doko preparation laboratory. Each machine can crush  $\pm$  6kg of material (approximately 2m of core) in about 4 minutes, so that 90% of the sample is less than 2mm. The jaws can be cleaned very easily with compressed air or, when necessary, with 'barren' granitoid rock material (see section on Pulverisers below for details about the goldbarren material). The jaw crushers are also used to prepare the blank material to clean the LM2 and the TM Engineering pulverizer bowls.

Pulverizers: two types of pulverizers are used; the flying saucer style puck (LM2) and the ring type (TM Engineering). The two TM Engineering pulverisers with a bowl capacity of approximately 250g (which were used at the beginning of the project) have been replaced by three LM2 machines with a bowl capacity of approximately 1.5kg. Both models pulverize samples to the point that 85% of the material passes through a 75 micrometer mesh. A crushed gold-barren material, obtained from fresh granitoid rock, is used to clean the bowls. Analyses carried out on the 'barren' granitoid material have consistently returned values of  $\leq$  0.03ppb Au with the majority of samples giving  $<$  0.01ppb Au.

This gold-barren granitoid material is collected from an area 14km north of Doko, at the following UTM locations:

- N395654/E785046;
- N395620/E785240;
- N359597/E785091;
- N359641/E785181;
- N359655/E785062;
- N395644/E785190;
- N359595/E785090.

Drying oven: a Marc ventilated electric drying oven (0° to 300°C) is used in the Doko preparation laboratory. This oven permits the control of the temperature to accommodate different types of sample material (drying of 48 core samples in about 1 hour at 120°C; drying of 24 RC samples in about 6 hours at 120°C; drying of 40 to 48 soil samples in about 6 or 7 hours at 120°C).

Diamond saws: two types of diamond saw are used to split the diamond core, a Vancon core saw that can split one meter of core in about 5 minutes and a *Corstor* core splitter that can split one meter of core in about 10 minutes.

Riffle splitters: different types of stainless steel riffle splitters (Geneq and Controlab) are available on site. They are used to prepare sub-samples.

Various stainless steel screens: different types of stainless steel screens (Controlab and Madison) are available on site. They are used to test the quality of crushing and pulverization, and also to obtain the fine fraction from soil for analysis.

Ultrasonic sieve cleaners: two Controlab ultrasonic sieve cleaners are used to clean the screens. They are very efficient and after the cleaning no particles are left in the mesh.

Compressed air connections: numerous compressed air connections are available in the preparation laboratory to do the cleaning of the different apparatus and material used.

Work stations equipped with dust exhausts: four work stations are present in the laboratory and these are equipped with dust exhausts that connect to a dust extraction system (*Donaldson Torit Downflo Oval*). The work stations are used for sample splitting and for recuperation of the pulverized samples from pulverizer bowls.

### 13.3 Quality Control and Quality Analysis

The following description has been drawn directly from the Mercier, September 2005 Audit Report.

For the Moto Goldmines Ltd project in Doko, a program of external quality control (QC) and quality analysis (QA) is applied to check for contamination, accuracy and precision. This consists of three types of check samples that are introduced into the sample stream, which include gold “blanks”, standards and laboratory duplicates. In addition, for RC samples, field duplicates are also introduced in the sample stream. For the Diamond drill program, the check samples introduced into the batch stream total 12% which is very high when compared to the 5-6% that is considered as adequate for most exploration projects. For the RC program, the check samples introduced into the batch stream total 15%.

As a test, for the Gorumbwa deposit, where coarse gold was observed, Screen Fire Assay is also performed for all RC samples that return Au values over 1g/t. The preliminary results show that Screen Fire Assay results are higher than the usual Au Fire Assay analyses. The results of QC/QA will be discussed in a different report that will be produced later this year.

### 13.3.1 Gold “blanks”

Gold “blanks” are used to check the possibility of gold contamination during the analytical procedure. This blank material is prepared on site with reverse circulation cuttings of hole PMRC 089 (from 58m to 80m) that returned values  $\leq 5$ ppb Au. For Diamond drill samples, one ‘blank’ is introduced randomly into the sample stream for each group of 25 samples (4%).

### 13.3.2 Standards

Various standards are used to verify the ability of the laboratory to accurately detect gold values. For Diamond drill samples, one ‘standard’ is introduced randomly into the sample stream for each group of 25 samples (4%). For RC samples, one standard is introduced randomly into the sample stream for each group of 20 samples (5%). The eight different ‘assay-certified’ reference materials used were obtained from the following companies.

Western Mineral Standards, 28 Irwin St, Bellevue, WA 6056:

- AUOH-1 (recommended value 1.197ppm Au, lower limit 1.169ppm Au, upper limit 1.225ppm Au)
- AUOI-1 (recommended value 1.763ppm Au, lower limit 1.729ppm Au, upper limit 1.796ppm Au)
- AUOJ-1 (recommended value 2.413ppm Au, lower limit 2.378ppm Au, upper limit 2.448ppm Au)
- AUSK-1 (recommended value 3.680ppm Au, lower limit 3.613ppm Au, upper limit 3.747ppm Au)

Gannet Holdings PTY Ltd., 43 Frederic St., Naval Base, WA 6165:

- ST16/1291 (recommended value 0.500ppm Au, Standard deviation 0.440)
- ST10/0301 (recommended value 3.400ppm Au, Standard deviation 0.15)
- ST04/2264 (recommended value 4.780ppm Au, Standard deviation 0.210)
- ST44/0294 (recommended value 13.900ppm Au, Standard deviation 0.530)

### 13.3.3 Duplicates

Duplicates are used to verify the degree of precision of the analyses. They can also be used to verify the quality of the preparation of samples in the preparation laboratory or to verify if mixing of samples occurred during batch processing. For Diamond drill samples, one duplicate is introduced randomly into the sample stream for each 25 samples (4%). For RC samples one field duplicate and one laboratory duplicate are introduced into the sample stream for each 20 samples (10%).

### 13.4 Sample Shipments to the Analytical Laboratories

The following description has been drawn directly from the Mercier, September 2005 Audit Report.

Two analytical laboratories are used by Moto Goldmines Ltd.: *Genalysis* analytical laboratory in Perth (Australia) for Diamond drill samples, and *SGS* analytical laboratory in Mwanza (Tanzania) for RC and Soil samples.

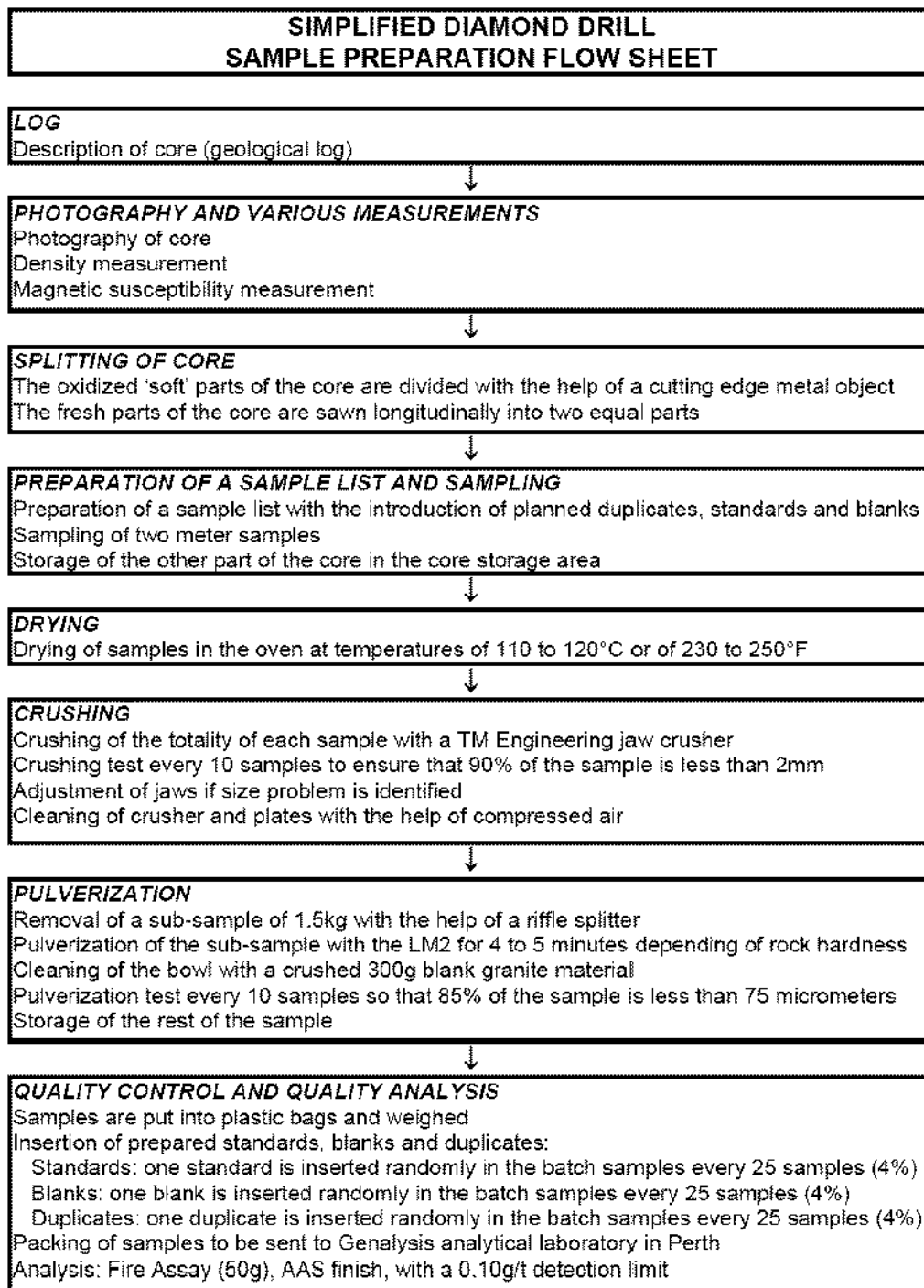
The RC and Soil samples are sent to *SGS* laboratory in Mwanza. They are packed in new polyweave bags (between 50 and 90 RC samples) or in cardboard boxes inserted into new polyweave bags (approximately 50 to 60 Soil samples), and sent from the Doko airport in the DRC to Mwanza, Tanzania on an airplane belonging to Kilwa Air (a company associated with Geosearch Ltd. that is engaged in the contract drilling for the Moto project). The parcels are then picked up by *SGS* staff at the airport in Mwanza.

The Diamond drill samples, sent to *Genalysis* laboratory in Perth, are packed in cardboard boxes (100 to 110 samples per cardboard box) that are closed with packing tape. The boxes are sent from Doko airport with the Kilwa Air plane to Entebbe airport in Uganda and then picked up by *DHL* staff at the airport and redirected by *DHL* (air service) to the *Genalysis* laboratory in Perth.

To this point in time, it appears that ‘best-practice’ security assurance of the samples during transport between Doko and the various external laboratories has not been addressed. As a consequence, it is recommended that the samples be packed in new polyweave bags protected by bag ‘seals’ in order to ensure their security. The polyweave bags can then be inserted into cardboard boxes where necessary. A receiving form would then be sent with the parcels and be returned signed to Moto Goldmines Ltd.

### 13.5 Diamond Drill Sample Preparation

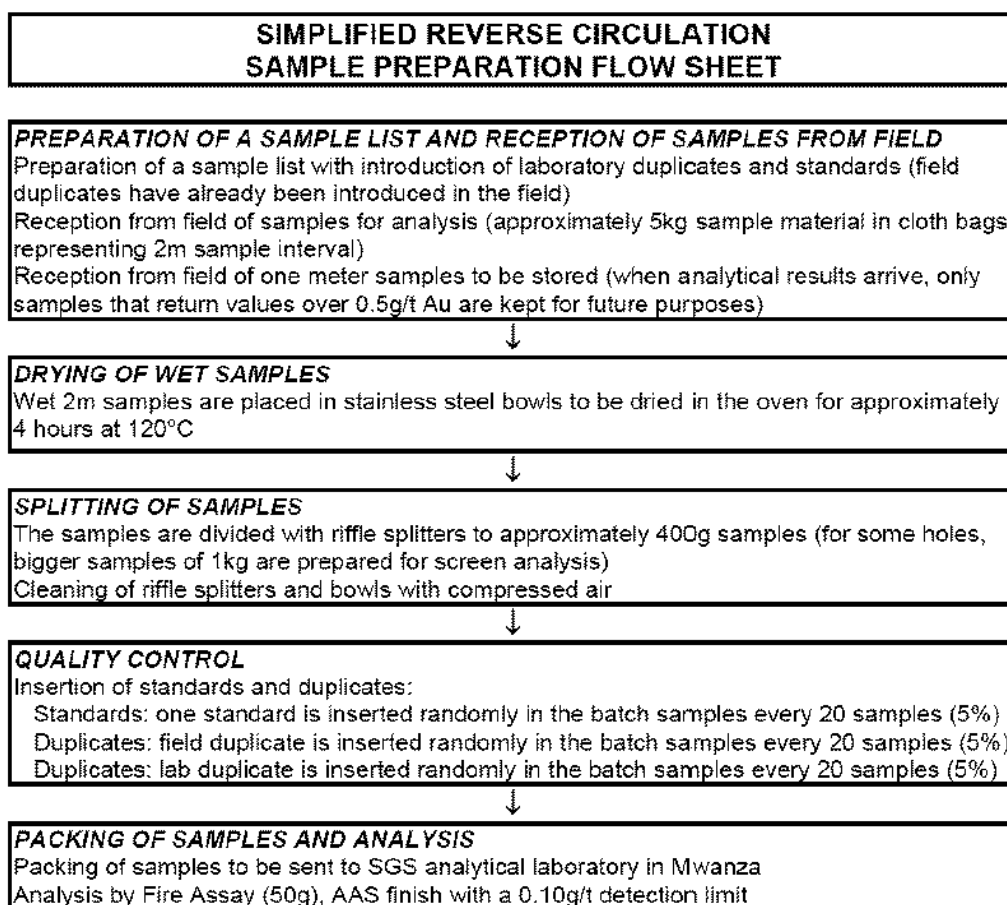
The following description has been drawn directly from the Mercier, September 2005 Audit Report. The diamond drill samples are logged, photographed, split and pulverized on site and then packed and sent to Genalysis laboratory in Australia for a Fire Assay gold analysis. The following flow sheet summarizes the different stages of diamond drill sample processing.



### 13.6 Reverse Circulation Sample Preparation

The following description has been drawn directly from the Mercier, September 2005 Audit Report.

In the field, Reverse Circulation (RC) samples are collected on a metre basis while the sample collected at the drill for analysis represents a 2m sample. In the Doko preparation laboratory, only the splitting of each two meter sample received from the field and the introduction of standards and duplicates are performed. The rest of the preparation (drying, crushing and pulverization) is handled at the SGS laboratory in Mwanza. The RC samples are analyzed by SGS in Mwanza for Au, Fire Assay, AAS finish. Chipboards are prepared on site. The following flow sheet summarizes the different stages of RC sample processing.





## 14.0 DATA VERIFICATION

### 14.1 Assessment of Quality Control Data

Cube Consulting took over management of the MGL drillhole database in October 2005. A significant effort was required to compile all relevant information so as to be able to perform time based QAQC analysis for all data. Cube has completed a preliminary review of data QAQC for drilling undertaken by MGL since February 2004.

The following comments summaries the results of this assessment:

- Analysis of the RC field duplicate assay pairs shows that precision is lower than expected, with approximately 60% of the assay pairs (>0.3g/t Au) having a Relative Paired Difference (RPD) of 25% or less. For RC field duplicates, it is not unreasonable to expect greater than 70% of the assay pairs to have a RPD of 25% or less.
- Given that the RC sample intervals are 2m and are being split down to a final sample size of approximately 400g with no particle size reduction, the precision levels of 60% are not considered unreasonable.
- At this stage Cube would suggest that the relatively poor precision between original and field duplicates is largely due to the small size of the sample splits that are sent for analysis. It is likely that the precision could be significantly improved through a change in sample preparation where the 400g split is taken from a 4-5kg pulverised sample rather than unpulverised RC chips prior to laboratory submission. This would suggest that the majority of sample preparation could be done onsite.
- Cube recommends that some testwork be carried out where 400g unpulverised RC chips can be directly compared to similar sized sub-sample taken from a completely pulverised 4-5kg original.
- Cube compared Q-Q plots of RC field duplicates which showed that there is no systematic bias between original and duplicates for grades below 5g/t Au. A slight bias was observed with the original field sample having a slightly higher grade than the duplicate for grades greater than 5.0g/t Au. Cube would not consider the observed differences material to the estimated resources.
- Statistical comparison of the DC splits made on site following primary crushing show acceptable levels of precision and accuracy.
- Analysis of reference standards (outliers filtered) across all deposits, laboratories and drilling methods show that 83% of standards submitted with RC samples and 93% of standards submitted with DC samples are within 2 standard deviations of the expected reference value. Cube have removed a small number of assay results that could be attributable to mislabelled or incorrectly identified reference standards. The lower precision demonstrated for RC may reflect a lower precision of the SGS laboratory in Mwanza compared to Genalysis in Perth, WA.
- Reference standards show no material systematic bias with time over the life of the project. However, Cube has identified a number specific reference standard sequences that warrant further investigation and may involve some selective check sampling.

## **14.2 Assessment of Project Database**

Data is initially compiled and validated on site by MGL geologists. Logging data are entered manually from the drill logs. Assay data are received from SGS and Genalysis in an electronic format that can be imported into the site database directly.

Wet RC samples are noted as such in the drilling logs and are routinely entered into the database. Similarly, core recoveries are routinely entered into the digital database.

Cube Consulting are routinely supplied with site validated ASCII files representing collar, downhole survey, assay and geology data together with original electronic lab assay files. Cube maintains the data in a SQL Server relational drill hole database.

Cube considers the data management processes in place are robust and adequate.

## **15.0 ADJACENT PROPERTIES**

Exploration tenements near to and adjacent to the MGL tenements are held by AngloGold Ashanti and Mwana Africa to the southeast and by AS Gold Gem to the west. AngloGold have recently been operating one diamond drill rig on the Mongbwalu property located 40km North-West of Bunia.

## 16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Gold extraction from weathered mineralised material as carried out by the artisan miners comprises a combination of washing and mercury amalgamation. Previous colonial mining used an ore treatment circuit comprising crushing, milling, gravity extraction and mercury amalgamation. More recent OKIMO ore processing involved a combination of gravity and cyanide leach extraction. Infrastructure from the previous OKIMO operations is in existence and partly operational, however the poor condition and the age of the plant will preclude refurbishment if a moderate to large tonnage throughput is envisaged.

As reported by RSG Global (Jones, June 2005) a preliminary metallurgical test work program has been completed from samples collected during the current phase of infill drilling. Samples were obtained from the following pits:

- Gorumbwa
- Kibali
- Pakaka
- Megi
- Pamao

The test work program was conducted at the laboratory of Independent Metallurgical Laboratories (IML) in Perth, Western Australia and included comminution and whole ore leach test work. The test work was designed to provide sufficient information for inclusion in to a preliminary study to assess the project economics. The test work results are re-produced from the RSG Global report below.

Based on the results of the initial test work as well as the large range of deposits to be mined, as identified in the conceptual study (Section 18.2), a second, extensive phase of metallurgical test work, also conducted by IML, has been undertaken. This second round of test work is in the final stages of completion and includes samples from the following deposits and oxidation horizons.

- Sessenge (oxide and fresh);
- Mengu Hill (oxide and fresh)
- Karagba (semi-oxide, oxide, fresh)
- Mengu (fresh)
- Megi (oxide and fresh)
- Marakeke (fresh)
- Pamao (oxide and fresh)
- Kombokolo (semi-oxide and fresh)

- Pakaka (fresh)
- Memekasi (oxide)

It is understood that as the project matures, the amount of metallurgical test work will increase, with the third round of test work currently in the planning stage to be finalised once the report of the above mentioned second stage is completed.

### **16.1 ICP Scans**

The oxide ore samples and many of the fresh samples are generally low in deleterious impurities. Total sulphur levels in the oxide samples were generally under 1%, with low arsenic and mercury levels. Some of the fresh samples contain higher levels of total sulphur at approximately 2%.

The Pakaka samples contained moderate copper levels ranging between 88 and 125ppm, whilst the Kibali samples contained between 59 and 99ppm copper. At these copper levels the impact on the cyanide consumption is not significant, however, pending copper dissolution by the cyanide, could impact on the elution circuit. Copper grades for the Gorumbwa, Megi and Pamao samples were less than 50ppm.

## 16.2 Comminution Testwork

The comminution testwork was conducted on composite samples made up from the available diamond drill core from the Gorumbwa and Pakaka deposits. Comminution testwork was not conducted on samples from the other deposits as diamond core was not available. The average abrasion index of the 3 Gorumbwa composites was 0.1056, with an average bond rod mill work index of 12.8kWh/t and an average bond ball mill work index of 7.2kWh/t. For the 2 Pakaka composites only bond ball mill work index work was completed, with the average of these tests being 7.6kWh/t.

The bond ball mill work index results for both deposits represent ore that would typically be classified as low to medium hardness. This ore is soft and the low abrasion index suggest the ore is highly amenable to primary SAG or ball milling with relatively low power consumption.

However, the rod mill to ball mill work index ratio is high, at 1.6-1.9, suggesting there is potential for a critical size build up which should be confirmed with further testwork, such as advanced media competency testing.

## 16.3 Whole Ore Cyanide Leach Testwork

Whole ore cyanide leach testwork was conducted on composite samples from Gorumbwa (3 composites), Kibali (6 composites), Pakaka (6 composites), Megi (single composite) and Pamao (single composite). As both diamond core and RC drill chips are suitable samples for cyanide leach testwork a larger number of deposits and composites were tested.

Preliminary testwork was performed on the Gorumbwa samples for cyanide recovery against P80 grind size. From this work a P80 of 75microm was selected to give optimal recoveries.

Subsequent testwork, on all samples was conducted using a P80 of 75microm, a pH of 10.5 (maintained using lime) and 500ppm NaCN concentration, for a leach test period of 48 hours. In all of the tests, excess residual cyanide was present at all times, to ensure gold leaching continued until the end of the tests. As a result the cyanide additions were moderately high and there may be significant scope to reduce the additions in future optimisation testwork.

### 16.3.1 Gorumbwa

Gold extraction for the Gorumbwa composites was consistent and in the range of 91.9 to 93.3%. The gold head grade for the composites was in the range 2.10 to 6.87g/t Au, with an average of 4.37g/t Au. Reagent consumptions for the Gorumbwa composites were low to moderate, at around 1kg cyanide per tonne of ore and around 0.6kg lime per tonne of ore. The Gorumbwa gold extraction is good to excellent with modest reagent consumption.

### 16.3.2 Kibali

Results for the Kibali deposit were variable as samples of oxide, semi-oxide and fresh ore were tested. Gold extraction for the two Kibali oxide samples was between 90.2 and 94.0%. Cyanide consumption was similar to Gorumbwa at around 1kg per tonne ore, however the lime consumption was moderately high at around 3.0kg per tonne of ore. The grade of the Kibali oxide composites was in the range of 2.92 to 3.43g/t Au.

Gold extraction for the two Kibali semi-oxide samples was between 64.9 and 87.7%, with cyanide and lime consumption at around 1. One kg per tonne ore and 3.0kg per tonne of ore respectively. The grade of the Kibali semi-oxide composites was in the range of 2.65 to 2.99 gram Au/t

Gold extraction for the two Kibali fresh samples was between 36.0 and 40.4%, with cyanide and lime consumption being low at around 0.65kg per tonne ore and 0.6kg per tonne of ore respectively. The grade of the Kibali fresh composites was in the range of 2.86 to 2.93g/t Au.

The trend of decreasing gold extraction for the Kibali composites as the ore type changes from oxide to semi-oxide to fresh correlates with increasing total sulphur grades, less than 0.05% (oxide) to 0.60% (for semi-oxide) up to 1.84% (for fresh samples). There is generally a similar trend for increasing arsenic and mercury content of the ore indicating the possible presence of arsenopyrite and an increasing refractory nature. Further testwork will be required on the Kibali semi-oxide and fresh ore types to fully optimise gold extraction and recovery.

### **16.3.3 Pakaka**

Results for the Pakaka deposit were more variable as samples of oxide and fresh ore were tested. Gold extraction for the 3 Pakaka oxide samples was between 89.8 and 93.8%, with cyanide consumption being modest at around 1kg per tonne. Lime consumption was moderately high at 3.5kg per tonne of ore. The grade of the Pakaka oxide composites was in the range of 4.03 to 6.15g/t Au.

Gold extraction for the 3 Pakaka fresh samples was between 80.5 and 97.6%, with cyanide and lime consumption being modest at around 1.3 and 0.3kg per tonne of ore respectively. The grade of the Pakaka fresh composites was in the range of 2.36 to 2.93g/t Au.

Despite the presence of both oxide and fresh samples from the Pakaka deposit, gold extraction was consistently above 80% and generally at or above 90%. Total sulphur levels were less than 0.7% for the oxide samples, whilst the fresh ore, contained 0.7-2%. The fresh sample with the lowest gold extraction (80.5%), had the highest sulphur content (around 2%). The presence of sulphur in the Pakaka samples does not appear to significantly impact on gold extraction and therefore may not be related to refractory gold minerals. Further testwork will need to be completed to optimise gold recovery and understand this aspect.

### **16.3.4 Megi and Pamao**

Single, fresh ore composite samples were tested from the Megi and Pamao deposits. Recovery from the Megi sample was low at 66.3 % with modest reagent consumptions, a head grade of 1.06g/t Au and a total sulphur grade of 1.23%.

The recovery from the Pamao fresh composite was higher at 90.4% with again modest reagent consumption and a head grade of 2.15g/t Au.

Further testwork is required to characterise the likely recovery from these ores, including the submission of a number of samples of different oxidation state.

## 17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

### 17.1 Introduction

Cube Consulting Pty Ltd (Cube) was requested by Moto Goldmines Ltd (MGL) to compile an updated independent estimation of global gold resources for several deposits within the Moto Gold Project area in The Democratic Republic of the Congo. Updated resource estimates were completed for Pakaka, Karagba, Mengu Hill, Kombokolo and Sessenge following results from an additional 12,389m of RC and 25,368.7m of DC drilling in these deposits. This report relates to the resource updates that were reported to the market on November 14<sup>th</sup> 2005. The previous resource estimation results were reported on August 9<sup>th</sup> 2005.

The primary objective of the updated Cube resource estimates was to quantify the likely global in-situ gold resources and review resource classification categories after incorporating all available additional drilling data.

All the mineral resource estimates undertaken by Cube have been classified and reported in accordance with The 2004 Australasian Code for Reporting of Mineral Resources and Ore Reserves (2004 JORC Code). The 2004 JORC reporting guidelines are equivalent to the guidelines adopted for the Canadian National Instrument 43-101. A significant amount of material has been added to the Indicated category reflecting the greater degree of confidence of these resources following the inclusion of a large amount of additional drilling since the August 9<sup>th</sup> 2005 resource estimate. It should be noted that although a significant quantity of material has been added to the Indicated category the intent of these resources is to quantify the global in-situ gold resources and not to impose physical or economic mining criteria. The current Indicated resources therefore may not be directly suitable for detailed economic and mining evaluation. The next phase of resource estimation will be carried out as part of the pre-feasibility study and will incorporate important mining considerations such as mining selectivity criteria.

At this stage of the project a large proportion of the resources remain in the Inferred category defined under the 2004 JORC Code and are therefore not suitable for detailed reserve, mine planning or financial evaluation purposes.

The estimation project follows a major Reverse Circulation (RC) and Diamond Core Drilling (DC) program that commenced in February 2004 and was ongoing at the time of the November 2005 resource estimation. The resources for Pakaka, Karagba, Mengu Hill, Kombokolo and Sessenge supersede previous resource estimations undertaken by Cube in August 2005. No Mineral Reserves have yet been formulated as the bulk of the resource classification precludes the transition to reserve status and detailed pre-feasibility work is ongoing.

The scope of Cube's engagement was as follows:

- Review and update the geological/mineralisation interpretations for Pakaka, Karagba, Mengu Hill, Kombokolo and Sessenge incorporating available information as of November 2005;
- Undertake statistical and geostatistical analysis of the mineralised material;
- Estimate the Moto Gold Project global gold resources based on best information available at time of estimation. A global resource represents a reliable estimate of the total contained metal but does not account for any form of mining selectivity. For this reason the estimate may be an



unreliable local predictor and should not be used for detailed mine planning and reserve evaluation purposes;

- Independently classify and report the resources in accordance with The 2004 Australasian Code for Reporting of Mineral Resources and Ore Reserves (2004 JORC Code) and the Canadian Companion Policy 43-101CP.

MGL provided Cube with the following digital information prior to or during the resource estimation project:

- Separate validated drilling data for each deposit;
- Summary details of drilling data quality including age of data, drilling method, location and survey accuracy, sampling procedures, and analytical methods;
- Description of mineralisation characteristics and geology;
- Mineralisation interpretations where available.

The estimation work started in October 2005 and was completed during November 2005.

All estimation work was carried out using SURPAC Version 5.0 mining software. Geostatistical analysis and variography was carried out in Isatis Version 5.1 geostatistical software.

The following key points summarise the modelling method:

- Mineralised domain interpretations were based on a combination of geological/alteration characteristics and grade. Lower grade cut-offs were typically between 0.2g/t Au and 0.5g/t Au;
- Flagging of drill holes (RC and Diamond) where a unique database code was assigned to all drill hole intervals passing through the interpreted mineralised volume.
- Statistical analysis of 2.5m geologically flagged downhole composite data and application of high grade assay limits where necessary. High grade assay limits were applied on a domain basis and were typically between 97<sup>th</sup> and 99<sup>th</sup> percentile of the composite distribution;
- Variography has been used to characterise the spatial continuity within the mineralised zones and to determine appropriate estimation inputs to the interpolation process;
- 3D block models were generated for each prospect area. The block model was constrained by the interpreted mineralised volumes. Grade interpolation was carried out using Ordinary Kriging (OK) into Y=20m X=20m Z=5m parent cells;
- Search strategies were optimised using quantitative kriging neighbourhood analysis;
- Flagging of oxide, transitional and fresh material and assignment of density;
- Depletion of historical mining activity;
- Model validation and resource classification.

Global resources have been estimated for twelve prospect areas (August 2005 and November 2005) including Pakaka, Gorumbwa, Kibali, Mengu Hill, Mengu Village, Karagba, Megi, Marakeke, Kombokolo, Sessenge, Ndala and Pamao.

A tabulation of the Moto Gold Project Mineral Resources above a nominal 1 g/t gold cut-off within the interpreted mineralised domains as of November 14<sup>th</sup> 2005 is shown in Table 17.1.

Deposit	Indicated			Inferred		
	Tonnes (Mt)	Au g/t	Au '000Oz	Tonnes (Mt)	Au g/t	Au '000Oz
Pakaka <sup>1</sup>	19.47	2.4	1,509			
Gorumbwa <sup>2</sup>				8.55	6.4	1,750
Kibali <sup>2</sup>				22.60	2.0	1,417
Mengu Hill <sup>1</sup>	8.00	3.3	844	0.98	1.4	43
Mengu Village <sup>2</sup> (Mengu)				1.83	1.6	91
Karagba <sup>1</sup>				36.70	3.1	3,634
Megi <sup>2</sup>				5.21	1.9	312
Marakeke <sup>2</sup>				1.66	1.4	74
Kombokolo <sup>1</sup>	2.08	2.3	155			
Sessenge <sup>1</sup>	4.78	2.0	301	0.92	2.3	67
Ndala <sup>2</sup>				0.49	4.0	62
Pamao <sup>2</sup>				13.93	1.6	708
<b>TOTAL</b>	<b>34.33</b>	<b>2.5</b>	<b>2,809</b>	<b>92.87</b>	<b>2.7</b>	<b>8,158</b>
1= November 14 <sup>th</sup> 2005 2= August 9 <sup>th</sup> 2005						

Table 17.1 Moto Gold Project Mineral Resource Tabulation > 1.0 g/t gold – November 2005

## 17.2 Geological Interpretation and Modelling

### 17.2.1 Introduction

Mineralised outlines have been broadly defined using a combination of geological and low grade cut-off criteria based on available DC and RC drilling within each prospect area. In all cases a lower cut-off grade of 0.2-0.5g/t Au has been applied depending on the deposit. Some proportion of lower grade material is inevitably included as internal dilution in order to preserve overall continuity of the mineralised zone. The mineralisation interpretations used in these estimates are an attempt to encompass the complete mineralised distribution and produce a model that reduces the risk of conditional bias often introduced where the constraining interpretation and data selection is based on a significantly higher grade than the natural geological cut-off.

Criteria used in defining mineralised outlines can be summarised as follows:

- Determine a nominal low grade ‘geological’ cut-off to assist in defined mineralised outlines;
- Incorporate lithology, alteration, veining and mineralisation characteristics where available;
- No minimum width or downhole length criteria was applied;
- No internal dilution criteria was applied;
- No additional dilution was applied.

The estimates produced by Cube at this stage of the project are best considered as global resources aimed at quantifying the current magnitude of the project resource inventory. All resources have been estimated using Ordinary Kriging with minimal consideration being given to likely mining scenarios and mining selectivity. The grade/tonnage relationship resulting from Ordinary Kriging is likely to generate a smoothed estimate that will understate the grade and quantity of metal that will be recovered when applying typical open pit mining selectivity and economic cut-off grade criteria.

Cube recommends that the next phase of resource evaluation (pre-feasibility and feasibility) include estimating recoverable resources with a non-linear geostatistical technique. Such an approach will allow more effective optimisation of recoverable metal incorporating important issues such as mining selectivity, bench height optimisation and economic cut-off grade parameters.

### 17.2.2 Pakaka

The Pakaka deposit comprises an Indicated Resource of 19.47Mt at 2.4g/t Au at a lower block cut-off of 1.0g/t Au.

The drilling database for Pakaka consists of:

- 1956-1958: 101 surface diamond drill holes totalling 13,645.4m drilled by the Belgians;
- 1990: 10 surface diamond drill holes totalling 2,000m drilled by Davy McKee;
- 1996: 5 surface diamond drill holes totalling 467m drilled by Barrick Gold Corporation (BGC);
- 2004-2005: 217 reverse circulation drill holes totalling 15,299m drilled by MGL;
- 2004-2005: 89 surface diamond drill holes totalling 18,337.2m drilled by MGL.

Only data drilled by MGL has been included in the resource estimation.

The Pakaka deposit occurs as a relatively narrow laterally extensive structure ranging in true thickness from 6 - 45m. The main higher grade mineralised zone plunges at approximately 10° to the northeast and dips approximately 20° to the southeast. This mineralised zone is known to extend up to 1100m along strike with widths across strike of between 150-250m. The lode has been tested to a vertical depth of 300m and is open down-dip and along strike. The mineralisation is thicker and lower grade in the north eastern area.

Statistical and visual analysis of the data showed that a suitable ‘geological’ cut-off grade was around 0.5g/t Au or less. Approximately 8% of composites within the mineralised interpretation are less than 0.5g/t Au. Interpretations were mostly carried out on E-W 20m spaced sections. At this grade cut-off and section spacing the resulting interpretation demonstrates consistent geometry and excellent continuity. A 3D wireframe was generated defining the interpreted mineralised volume. Drill hole locations and mineralised domains are illustrated in Figure 22.5 to Figure 22.7.

Grade estimation was by Ordinary Kriging (OK) of 5m downhole composites into 20mN x 20mE x 5mRL parent blocks. A high grade cut of 25g/t Au was applied to the 2.5m downhole composites representing approximately the 99<sup>th</sup> percentile of the mineralised gold population. Only 3 composites out of 1538 were affected by the top cut.

### 17.2.3 Gorumbwa

The Gorumbwa deposit comprises an Inferred Resource of 8.55Mt at 6.4g/t Au at a lower block cut-off of 1.0g/t Au.

The drilling database for Gorumbwa consists of:

- Pre-1960: 157 surface diamond drill holes totalling 25,202.87m drilled by the Belgians;
- Post-1960: 63 underground diamond drill holes totalling 1,314.45m drilled by OKIMO;
- 1996: 3 surface diamond drill holes totalling 907m drilled by Barrick Gold Corporation (BGC);
- 2004: 7 Reverse circulation drill holes totalling 307m drilled by MGL;
- 2004: 29 surface diamond drill holes totalling 6,282.8m drilled by MGL.

All available drilling data has been included in the resource estimation.

The mineralisation interpretation was broadly separated into a single continuous main zone and a series of flat-lying stacked discontinuous hangingwall or upper lodes. Statistical and visual analysis of the data showed that a suitable ‘geological’ cut-off grade was around 0.5g/t Au or less. The encompassing mineralised envelope incorporates significant amounts of internal sub-grade <0.5g/t Au material. Approximately 21% of composites within the mineralised interpretation for both the hangingwall lodes and main zone are less than 0.5g/t Au. Interpretations were carried out on ~20-30m spaced NW-SE sections lines in the south-western half of the deposit and ~60-120m spaced NW-SE sections in the north-eastern half.

At this grade cut-off and section spacing the resulting interpretation demonstrates consistent geometry and good continuity of the main mineralised zones. A 3D wireframe was generated defining the interpreted mineralised volume. Drill hole locations and mineralised domains are illustrated in Figure 22.8 to Figure 22.10.

Grade estimation was by Ordinary Kriging (OK) of 3.0m downhole composites into 20mN x 20mE x 5mRL parent blocks. A high grade assay cut of 100g/t Au or approximately 98<sup>th</sup> percentile was applied to the main zone and a high grade assay cut of 30g/t Au or approximately 99<sup>th</sup> percentile was applied to the upper zones. The high grade assay cuts affected 17 composites out of 941 for the main zone and 4 composites out of 378 for the upper zones. .

#### 17.2.4 Kibali

The Kibali deposit comprises an Inferred Resource of 22.60Mt at 2.0g/t Au at a lower block cut-off of 1.0g/t Au.

The drilling database for Kibali consists of:

- 1998: 44 surface diamond drill holes totalling 5,483.5m drilled by Barrick Gold Corporation (BGC);
- 2004: 42 reverse circulation drill holes totalling 2,397m m drilled by MGL.

Both the BGC and MGL data has been included in the resource estimation as both data sets are considered to be of high reliability.

The Kibali deposit is hosted in an N-E trending shear zone situated over meta-basalts and basaltic flows and overlies meta-conglomerates in the northern portion. The main mineralised zone is known to extend over 1300m along strike and 300m vertically below the surface. True thickness ranges from <5m - >80m. Other less continuous mineralisation occurs as parallel lodes in the hangingwall. The shear zone strikes northeast and dips approximately 40<sup>0</sup> to the northwest.

Statistical and visual analysis of the data showed that a suitable ‘geological’ cut-off grade was around 0.5g/t Au or less. The encompassing mineralised envelope incorporates significant amounts of internal sub-grade <0.5g/t Au material. Approximately 22% of composites within the mineralised interpretation are less than 0.5g/t Au. Interpretations were mostly carried out on NW-SE 100m or 200m spaced sections depending on drilling spacing. At this grade cut-off and section spacing the resulting interpretation demonstrates consistent geometry and good continuity of the main mineralised zone. The main zone appears to have a very clearly defined footwall contact. Other more discontinuous mineralisation is developed in the hangingwall making a consistent interpretation difficult due to the wide data spacing. A 3D wireframe was generated defining the interpreted mineralised volume. Drill hole locations and mineralised domains are illustrated in Figure 22.11 to Figure 22.13.

Grade estimation was by Ordinary Kriging (OK) of 2.5m downhole composites into 20mN x 20mE x 5mRL parent blocks. A high grade assay cut of 10g/t Au or approximately 99<sup>th</sup> percentile was applied. Only two composites out of 387 were affected by the top cut.

#### 17.2.5 Mengu Hill

The Mengu Hill deposit comprises an Inferred Resource of 0.98Mt at 1.4g/t Au and an Indicated Resource of 8.0Mt at 3.3gt/ Au at a lower block cut-off of 1.0g/t Au.

The drilling database for Mengu Hill consists of:

- 2004-2005: 46 reverse circulation drill holes totalling 2,760m drilled by MGL;
- 2004-2005: 39 surface diamond drill holes totalling 6,240.14m drilled by MGL.

Only MGL data has been used in the estimation.

The Mengu Hill deposit occurs as a lenticular high grade shoot plunging shallowly to the northeast. The mineralised zone tested by drilling extends over 500m down plunge and 250m vertically below the surface. The shoot is up to 150m in width with true thicknesses typically in the range of 20m - 80m.

Statistical and visual analysis of the data showed that a suitable 'geological' cut-off grade was around 0.4g/t Au or less. The encompassing mineralised envelope incorporates small amounts of internal sub-grade <0.4g/t Au material. Approximately 15% of composites within the mineralised interpretation are less than 0.4g/t Au. Interpretations were carried out on E-W 80m to 100m spaced sections depending on drilling spacing. At this grade cut-off and section spacing the resulting interpretation demonstrates consistent geometry and excellent continuity of the plunging shoot. A 3D wireframe was generated defining the interpreted mineralised volume. Drill hole locations and mineralised domains are illustrated in Figure 22.14 to Figure 22.16.

Grade estimation was by Ordinary Kriging (OK) of 2.5m downhole composites into 20mN x 20mE x 5mRL parent blocks. A high grade assay cut of 20g/t Au or approximately 98<sup>th</sup> percentile was applied. Only 7 composites out of 430 were affected by the top cut.

#### 17.2.6 Mengu Village

The Mengu Village deposit comprises an Inferred Resource of 1.83Mt at 1.6g/t Au at a lower block cut-off of 1.0g/t Au.

The drilling database for Mengu Village consists of:

- 2004-2005: 51 reverse circulation drill holes totalling 2,702m drilled by MGL.

Only MGL data has been used in the estimation.

The Mengu Village deposit occurs as a single tabular zone typically between 4m-10m thick, which trends northwest and dips gently to the northeast. The mineralised zone tested by drilling has a strike length of approximately 500m and extends some 360m down dip.

A statistical and visual analysis of the data showed that a suitable 'geological' cut-off grade was around 0.3g/t Au or less. The encompassing mineralised envelope incorporates small amounts of internal sub-grade <0.3g/t Au material. Approximately 9% of composites within the mineralised interpretation are less than 0.3g/t Au. Interpretations were carried out on N-S 60m to 80m spaced sections depending on drilling spacing. At this grade cut-off and section spacing the resulting interpretation demonstrates consistent geometry and excellent continuity of the mineralised zone. A 3D wireframe was generated defining the interpreted mineralised volume. Drill hole locations and mineralised domains are illustrated in Figure 22.17 to Figure 22.19.

Grade estimation was by Ordinary Kriging (OK) of 2.5m downhole composites into 20mN x 20mE x 5mRL parent blocks. No high grade assay cut was necessary.

### 17.2.7 Karagba

The Karagba deposit comprises an Inferred Resource of 36.7Mt at 3.1g/t Au at a lower block cut-off of 1.0gt/ Au.

The drilling database for Karagba consists of:

- 2004-2005: 44 reverse circulation drill holes totalling 3,788m drilled by MGL;
- 2004-2005: 36 surface diamond drill holes totalling 13,499.1m drilled by MGL.

Only MGL data has been used in the estimation.

Mineralisation at Karagba occurs as a series of stacked lenticular shoots trending northeast and dipping gently to the northeast. The three main mineralised shoots tested by drilling extend up to 700m down plunge and 400m vertically below the surface. The shoot is up to 300m in width with true thicknesses typically in the range of 4m - 50m.

Statistical and visual analysis of the data showed that a suitable 'geological' cut-off grade was around 0.3g/t Au or less. The encompassing mineralised envelope incorporates small amounts of internal sub-grade <0.3g/t Au material. Approximately 9% of composites within the mineralised interpretation are less than 0.3g/t Au. Interpretations were carried out on NW-SE 80m to 100m spaced sections where drilling is available. At this grade cut-off and section spacing the resulting interpretation demonstrates consistent geometry and excellent continuity of the plunging shoots. A set of 3D wireframes were generated defining the interpreted mineralised volume.

There is a significant gap in the drilling between the deepest known mineralisation and material closer to the surface at the time of this resource estimate. The deepest drilling does however confirm the likelihood that mineralisation is well developed to a vertical depth of at least 400m. The reported resources for Karagba are restricted to areas that are within an acceptable distance of recent drilling and where geological confidence is high. Drill hole locations and mineralised domains are illustrated in Figure 22.20 to Figure 22.22.

Grade estimation was by Ordinary Kriging (OK) of 5m downhole composites into 20mN x 20mE x 5mRL parent blocks. A high grade assay cut of 15g/t Au or approximately 97<sup>th</sup> percentile was applied. Only 34 composites out of 1104 were affected by the top cut.

### 17.2.8 Megi

The Megi deposit comprises an Inferred Resource of 5.21Mt at 1.9g/t Au at a lower block cut-off of 1.0gt/ Au.

The drilling database for Megi consists of:

- 2004-2005: 116 reverse circulation drill holes totalling 9,280m drilled by MGL.

Only MGL data has been used in the estimation.

The Megi deposit occurs as a series of stacked tabular lenses typically between 4m-30m thick, that trend northwest and dip gently to the northeast. The mineralised zones tested by drilling have a strike length of approximately 700m and extend some 350m down dip.

Statistical and visual analysis of the data showed that a suitable ‘geological’ cut-off grade was around 0.3g/t Au or less. The encompassing mineralised envelope incorporates small amounts of internal sub-grade <0.3g/t Au material. Approximately 12% of composites within the mineralised interpretation are less than 0.3g/t Au. Interpretations were carried out on N-S 40m spaced sections depending on drilling spacing. At this grade cut-off and section spacing the resulting interpretation demonstrates consistent geometry and excellent continuity of the mineralised zones. A set of 3D wireframes were generated defining the interpreted mineralised volume. Drill hole locations and mineralised domains are illustrated in Figure 22.23 to Figure 22.25.

Grade estimation was by Ordinary Kriging (OK) of 2.5m downhole composites into 20mN x 20mE x 5mRL parent blocks. A high grade assay cut of 15g/t Au or approximately 99<sup>th</sup> percentile was applied. Only three composites out of 628 were affected by the top cut.

### 17.2.9 Marakeke

The Marakeke deposit comprises an Inferred Resource of 1.66Mt at 1.4g/t Au at a lower block cut-off of 1.0g/t Au.

The drilling database for Marakeke consists of:

- 2004-2005: 56 reverse circulation drill holes totalling 3,917m drilled by MGL.

Only MGL data has been used in the estimation.

The Marakeke deposit occurs as a single tabular lens typically between 10m-30m thick, that trends northwest and dips gently to the northeast. The mineralised zone tested by drilling has a strike length of approximately 700m and extends some 350m down dip.

Statistical and visual analysis of the data showed that a suitable ‘geological’ cut-off grade was around 0.2g/t Au or less. The encompassing mineralised envelope incorporates significant amounts of internal sub-grade <0.2g/t Au material. Approximately 21% of composites within the mineralised interpretation are less than 0.2g/t Au. Interpretations were carried out on N-S 80m spaced sections depending on drilling spacing. At this grade cut-off and section spacing the resulting interpretation demonstrates consistent geometry and excellent continuity of the mineralised zone. A 3D wireframe was generated defining the interpreted mineralised volume. Drill hole locations and mineralised domains are illustrated in Figure 22.26 to Figure 22.28.

Grade estimation was by Ordinary Kriging (OK) of 2.5m downhole composites into 20mN x 20mE x 5mRL parent blocks. A high grade assay cut of 5g/t Au or approximately 99<sup>th</sup> percentile was applied. Only three composites out of 304 were affected by the top cut.



### 17.2.10 Kombokolo

The Kombokolo deposit comprises an Indicated Resource of 2.08Mt at 2.3g/t Au at a lower block cut-off of 1.0gt/ Au.

The drilling database for Kombokolo consists of:

- Pre-1960: 12 surface diamond drill holes totalling 1,813.66 drilled by OKIMO;
- 2004-2005: 30 reverse circulation drill holes totalling 3,479m drilled by MGL.

MGL and OKIMO data has been used in the estimation.

The Kombokolo deposit occurs as a series of stacked tabular lenses typically between 4m-25m thick, that trend northwest and dip gently to the northeast. The mineralised zones tested by drilling have a strike length of approximately 250m and extend up to 180m down dip.

Statistical and visual analysis of the data showed that a suitable 'geological' cut-off grade was around 0.3g/t Au or less. The encompassing mineralised envelope incorporates a small amount of internal sub-grade <0.3g/t Au material. Approximately 13% of composites within the mineralised interpretation are less than 0.3g/t Au. Interpretations were carried out on NW-SE 40m spaced sections depending on drilling spacing. At this grade cut-off and section spacing the resulting interpretation demonstrates consistent geometry and excellent continuity of the mineralised zones. A 3D wireframe was generated defining the interpreted mineralised volume. Drill hole locations and mineralised domains are illustrated in Figure 22.29 to Figure 22.31.

Grade estimation was by Ordinary Kriging (OK) of 2.5m downhole composites into 20mN x 20mE x 5mRL parent blocks. A high grade assay cut of 20g/t Au or approximately 99<sup>th</sup> percentile was applied. Only 4 composites out of 350 were affected by the top cut.

### 17.2.11 Sessenge

The Sessenge deposit comprises an Inferred Resource of 0.92Mt at 2.3g/t Au and an Indicated Resource of 4.78Mt at 2.0g/t Au at a lower block cut-off of 1.0gt/ Au.

The drilling database for Sessenge consists of:

- 1998: 25 surface diamond drill holes totalling 3,438.02m drilled by Barrick Gold Corporation (BGC);
- 2004-2005: 128 reverse circulation drill holes totalling 10,498m drilled by MGL.

MGL and BGC data has been used in the estimation.

The Sessenge deposit occurs as a series of stacked tabular lenses typically between 4m-30m thick, that trend north-northwest and dip gently to the east-northeast. The mineralised zones tested by drilling have a strike length of approximately 700m and extend up to 300m down dip.

Statistical and visual analysis of the data showed that a suitable ‘geological’ cut-off grade was around 0.3g/t Au or less. The encompassing mineralised envelope incorporates a moderate amount of internal sub-grade <0.3g/t Au material. Approximately 11% of composites within the mineralised interpretation are less than 0.3g/t Au. Interpretations were carried out on E-W 80m spaced sections depending on drilling spacing. At this grade cut-off and section spacing the resulting interpretation demonstrates consistent geometry and excellent continuity for three main mineralised zones and lesser continuity for up to nine other discontinuous zones. A 3D wireframe was generated defining the interpreted mineralised volume. Drill hole locations and mineralised domains are illustrated in Figure 22.32 to Figure 22.34.

Grade estimation was by Ordinary Kriging (OK) of 2.5m downhole composites into 20mN x 20mE x 5mRL parent blocks. A high grade assay cut of 15g/t Au or approximately 99<sup>th</sup> percentile was applied. Only 5 composites out of 814 were affected by the top cut.

#### 17.2.12 Ndala

The Ndala deposit comprises an Inferred Resource of 0.49Mt at 4.0g/t Au at a lower block cut-off of 1.0g/t Au.

The drilling database for Ndala consists of:

- 2004-2005: 28 reverse circulation drill holes totalling 1,718m drilled by MGL;
- 2004-2005: 6 surface diamond drill holes totalling 844m drilled by MGL.

Only MGL data has been used in the estimation.

The Ndala deposit occurs as a single lens typically between 4m-20m thick, that trends north-northwest and dips gently to the east-northeast. The mineralised zone tested by drilling has a strike length of approximately 220m and extends some 120m down dip.

Statistical and visual analysis of the data showed that a suitable ‘geological’ cut-off grade was around 0.3g/t Au or less. The encompassing mineralised envelope incorporates small amounts of internal sub-grade <0.2g/t Au material. Approximately 7% of composites within the mineralised interpretation are less than 0.2g/t Au. Interpretations were carried out on E-W 40m spaced sections depending on drilling spacing. At this grade cut-off and section spacing the resulting interpretation demonstrates consistent geometry and excellent continuity of the mineralised zone. A 3D wireframe was generated defining the interpreted mineralised volume. Drill hole locations and mineralised domains are illustrated in Figure 22.35 to Figure 22.37.

Grade estimation was by Ordinary Kriging (OK) of 2.5m downhole composites into 20mN x 20mE x 5mRL parent blocks. A high grade assay cut of 20g/t Au or approximately 93<sup>rd</sup> percentile was applied. Only five composites out of 70 were affected by the top cut.

### 17.2.13 Pamao

The Pamao deposit comprises an Inferred Resource of 13.94Mt at 1.6g/t Au at a lower block cut-off of 1.0g/t Au.

The drilling database for Pamao consists of:

- 2004-2005: 168 reverse circulation drill holes totalling 12,475m drilled by MGL;
- 2004-2005: 27 surface diamond drill holes totalling 3807.88m drilled by MGL.

Only MGL data has been used in the estimation.

The Pamao deposit occurs as a series of stacked tabular lenses typically between 2m-20m thick, that trend northwest and dip gently to the northeast. The mineralised zones tested by drilling have a strike length of approximately 1,300m and extend up to 600m down dip.

Statistical and visual analysis of the data showed that a suitable 'geological' cut-off was around 0.3g/t Au or less. The encompassing mineralised envelope incorporates a small amount of internal sub-grade <0.3g/t Au material. Approximately 9% of composites within the mineralised interpretation are less than 0.3g/t Au. Interpretations were carried out on E-W 40m spaced sections depending on drilling spacing. At this grade cut-off and section spacing the resulting interpretation demonstrates consistent geometry and excellent continuity for two main mineralised zones and lesser continuity for up to eight other discontinuous zones. A 3D wireframe was generated defining the interpreted mineralised volume. Drill hole locations and mineralised domains are illustrated in Figure 22.38 to Figure 22.40.

Grade estimation was by Ordinary Kriging (OK) of 2.5m downhole composites into 20mN x 20mE x 5mRL parent blocks. High grade assay cuts were applied on a domain by domain basis and were typically in the 97<sup>th</sup> to 99<sup>th</sup> percentile range of the distribution. Only eight composites out of 896 were affected by the top cut.

### 17.3 Variography

Variography has been used to analyse the spatial continuity within the mineralised zones and to determine appropriate estimation inputs to the interpolation process. The variogram modelling process followed by Cube involves the following steps:

- Calculate and model the omnidirectional or downhole variogram on raw composite gold grade to characterise the Nugget Effect;
- Calculate variograms in 3D to identify the plane of greatest continuity.
- Calculate a fan of variograms within the plane of greatest continuity to identify the direction of maximum continuity within the plane. Model the variogram in the direction of maximum continuity and the orthogonal directions;
- During the directional variography step, techniques such as modelling the relative and transformed variograms (Pairwise, Logarithmic and Gaussian) and the exclusion of the highest one or two data were used to improve the clarity of raw variograms when models were difficult to fit.

Variogram parameters were derived for individual mineralised domains where drilling density was sufficient. In some cases where drilling density is sparse variogram parameters have been modified from geologically and statistically similar mineralised domains. Where variogram parameters have been ‘borrowed’ from similar mineralised domains the directions and anisotropy ratios have been modified to best suit the geometry of the domain under consideration. Cube believes that this is a reasonable approach until such time as drilling density is sufficient for robust individual variogram parameters to be established.

Variogram relative nugget effects were typically in the range of 35-45% indicating a moderate degree of short scale variability as would be expected in gold deposits such as those in the Moto Gold Project area. Variogram ranges were typically in the order of 120m-180m indicating maximum spatial continuity is significantly greater than the average drill hole spacing.

Variogram parameters will continually be updated as drilling density increases and other variography techniques such as Indicator variography may be used when more sophisticated estimation methods such as non-linear geostatistics for recoverable resources are applied. It is anticipated that the next resource estimation phase at the Moto Gold Project will involve recoverable resource/reserve estimation incorporating important mining considerations as mining selectivity issues.

Table 17.2 summarises the variogram parameters used in the estimation project.

	Structure	Sill	Relative Variance %	Range	Azimuth	Plunge	Dip	Major/Semi Major	Major/Minor Ratio
Pakaka	Nugget	0.39	39%						
	S1	0.41	41%	40	30	-15	-20	2	8
	S2	0.20	20%	120	30	-15	-20	2	6
Gorumbwa Main Lode	Nugget	69	35%						
	S1	92	47%	24	0	0	0	1	1
	S2	36	18%	80	0	0	0	1	1
Gorumbwa Upper Lodes	Nugget	6.5	55%						
	S1	2.1	17%	21	0	0	0	1	1
	S2	3.3	28%	150	0	0	0	1	1
Kibali	Nugget	0.75	33%						
	S1	1.00	43%	150	45	0	45	1	9
	S2	0.55	24%	180	45	0	45	1	2
Mengu Hill	Nugget	0.31	31%						
	S1	0.21	21%	70	30	-20	0	2	6
	S2	0.48	48%	200	30	-20	0	2	6
Mengu Village	Nugget	0.35	35%						
	S1	0.33	33%	60	40	-30	0	1	3
	S2	0.32	32%	120	40	-30	0	1	3
Karagba	Nugget	0.37	37%						
	S1	0.63	63%	160	45	-30	-30	1	5
	S2								
Megi	Nugget	0.53	53%						
	S1	0.15	15%	55	29	0	0	1	10
	S2	0.32	32%	200	29	0	0	1	10
Marakeke	Nugget	0.53	53%						
	S1	0.15	15%	55	29	0	0	1	10
	S2	0.32	32%	200	29	0	0	1	10
Kombokolo	Nugget	0.30	30%						
	S1	0.23	23%	50	45	-25	5	1	6
	S2	0.47	47%	120	45	-25	5	1	6
Sessenge	Nugget	0.31	31%						
	S1	0.25	25%	50	0	-5	-15	1	6
	S2	0.44	44%	120	0	-5	-15	1	6
Ndala	Nugget	65	39%						
	S1	100	61%	120	0	-20	0	1	10
	S2								
Pamao	Nugget	0.42	42%						
	S1	0.27	27%	60	36	-12	5	1.2	3
	S2	0.31	31%	180	36	-12	5	1.8	3

Table 17.2 Moto Gold Project Variogram Parameters – November 2005

## 17.4 Block Modelling

A 3D block model for each resource area was created using Surpac 5.0 software. An individual block model constraint was created for each mineralised zone. A list of field names and descriptions in the block model are shown in Table 17.3. All estimations and geological constraints for each resource area were based on a subset of the block model prototype definition shown in Table 17.4.

Field Name	Description
x	X Block Centroid
y	Y Block Centroid
z	Z Block Centroid
au	Gold Grade Estimate (top cut)– Ordinary Kriging
density	Density g/cm <sup>3</sup>
oxidation	Oxidation State 1=Sul 2=Trans 3=Oxide
rescat	1=Measured 2=Indicated 3=Inferred 4=Undefined
zonecode	Estimation Domain Flag
kv_au	Kriging Variance
abs_au	Average Distance to Composite
dns_au	Distance to Nearest Composite
nds_au	Number of Composites used to Estimate a Block

**Table 17.3 Block Model Field Names**

	Minimum	Maximum	Model Extent
Easting	782010	790710	8700
Northing	341910	352010	10100
RL	300	1000	700
<b>Parent Cell X m</b>	20	<b>Min Sub-Cell X m</b>	5
<b>Parent Cell Y m</b>	20	<b>Min Sub-Cell Y m</b>	5
<b>Parent Cell Z m</b>	5	<b>Min Sub-Cell Z m</b>	2.5

**Table 17.4 3D Block Model Definition**

## 17.5 Density and Oxidation

Depth of the weathering interfaces have been interpreted from drill logging. Depth of weathering logging was not complete for all drilling as the time of modelling therefore some inferences have been made. Bulk density determinations have been taken for a number of the prospect areas however this work was ongoing at the time of the estimate and the data is incomplete. As with oxidation, some inferences have been made in the assignment of density. In the absence of actual determinations, density has been assigned on the basis of other prospects with similar geological and mineralisation characteristics.

No additional bulk density data was available since the August 2005 resource estimate. Bulk density values were assigned to the various weathering regimes according Table 17.5.

Prospect Area	# Observations	Oxide t/m <sup>3</sup>	Transitional t/m <sup>3</sup>	Fresh t/m <sup>3</sup>
Pakaka	165	1.65	2.3	2.8
Gorumbwa	319	-	-	2.81
Kibali	Based on Pakaka	1.65	2.3	2.8
Mengu Hill	127	2.92	3.0	3.16
Mengu Village	Based on Pakaka	1.65	2.3	2.8
Karagba	103	1.75	2.15	2.8
Megi	Based on Pakaka	1.65	2.3	2.8
Marakeke	Based on Pakaka	1.65	2.3	2.8
Kombokolo	Based on Pakaka	1.65	2.3	2.8
Sessenge	Based on Pakaka	1.65	2.3	2.8
Ndala	Based on Pakaka	1.65	2.3	2.8
Pamao	130	1.65	2.3	2.8

**Table 17.5 Moto Gold Project Density Parameters – November 2005**

## 17.6 Estimation Block Size, Grade Interpolation and Search Strategies

A number of issues have been taken into consideration when deciding on an appropriate search strategy and estimation block size, including data spacing, variogram nugget effect and model ranges, estimation quality and resource classification.

### 17.6.1 Estimation Block Size

Data spacing was the primary consideration taken into account when selecting an appropriate estimation block size. Data spacing within the mineralised zones is quite variable. Cube considers it good geostatistical practice to use an estimation parent cell size that approaches the data spacing where possible while at the same time being mindful of potential mine design and selectivity implications. Cube reviewed the ‘physical’ data spacing relative to the mineralised zones to be estimated when deciding on the appropriate estimation block size. Cube decided that an estimation parent block size smaller 20mN x 20mE x 5mRL would result in excessive smoothing of the estimates and be less than desirable from an estimation quality perspective.

### 17.6.2 Grade Interpolation and Search Strategies

Grade interpolation was carried out using Ordinary Kriging (OK) for each mineralised zone using the uniquely coded 2.5m downhole composite data specific to that zone. All block estimates were based on grade interpolation into parent cells of 20mN x 20mE x 5mRL.

The following discussion relating to search strategies is relevant to all estimations undertaken by Cube for the Moto Gold Project.

Cube has attempted to characterise the spatial relationship of the data using variography and have sought to implement search strategies aimed at producing a robust block estimate whilst at the same time minimising estimation error and conditional biases. Cube routinely tests several search iterations before determining the most appropriate search strategy. Fundamental to the search strategy is the determination of appropriate minimum and maximum numbers of composites for estimation. The minimum number of composites has been considered by Cube as a key component of the criteria applied in determining the resource classification.

Cube initially bases search distances for the first search iteration on the analysis of theoretical kriging weight charts. An examination of these kriging weight charts provides a good starting point for testing a search strategy as they provide a guide as to the distribution of kriging weights for a given variogram with respect to distance along the major axis of the search volume. Of particular interest is the approximate distance that kriging weights tend towards zero. Cube believes that it good estimation practice to use a search volume that ensures that kriging weights allocated to composites tend toward zero or slightly negative on the periphery of the search.

Cube generally extends the search where there are large positive weights at the periphery and reduces the search where there are a large proportion of negative kriging weights involved. A limitation of these charts is that they are based on an assumption that each block is directly informed by a composite at the block centroid and they will, therefore generally understate the required search with respect to actual data spacing to achieve a robust block estimate.

A Quantitative Kriging Neighbourhood Analysis (QKNA) of all zones was undertaken to assist in optimising the search parameters.

The procedure of search optimisation adopted by Cube involves selecting several individual blocks representing data configurations ranging from poorly to well informed. The aim of these tests is to optimise the kriging search neighbourhood and maximise the quality of the kriging when dealing with a non-exhaustive data set. A number of key criteria were captured for each selected block as follows:

- Block coordinates and dimensions;
- Estimated grade;
- Kriging variance;
- Block Dispersion variance;
- Slope of Regression of estimated blocks  $z^*(v)$  and theoretical true blocks  $z(v)$ ;
- A listing of the actual informing composites within the search volume of the block including coordinates, grades, distance from block and kriging weight;
- Statistics of the informing composites including number of composites, minimum, maximum, mean, standard deviation, variance and coefficient of variation.

An important feature of Ordinary Kriging is its inherent property to minimise estimation error. It is a fact that estimation error will increase substantially as the amount of informing data decreases.



Ordinary Kriging can calculate the estimation error on a block by block basis as a function of the variogram model and the specific data configuration informing each block. A comparison can be made of actual block estimates and a theoretically unbiased block estimate in terms of estimation error as a quantitative way of assessing the quality of a kriged block estimate. This comparison is the basis for QKNA mentioned above and is expressed in terms of slope of regression of estimated blocks  $z^*(v)$  and theoretical true blocks  $z(v)$ . The slope of regression provides a consistent and robust way of comparing the relative quality of kriged estimates and should be considered as an input into decisions regarding resource classification. The closer the slope of regression is to 1 the more robust the block estimate.

Generally, in moderately to well-informed areas of all models, the slope of regression was close to 1.0 indicating that the potential for conditional bias is minimal using the chosen search strategy. The slope of regression was often considerably lower around the periphery of the model where data spacing is sparse and irregular.

Estimation search parameters are summarised in Table 17.6 and Table 17.7.

Mineralised Domain	Search Type	Maximum Number of Adjacent Empty Octants	Minimum Number of Composites	Maximum Number of Composites
Pakaka	Ellipsoid	-	6	30
Gorumbwa Main Lode	Octant	4	6	48
Gorumbwa Upper Lodes	Octant	4	6	48
Kibali	Ellipsoid	-	4	30
Mengu Hill	Ellipsoid	-	6	30
Mengu Village	Ellipsoid	-	8	30
Karagba	Ellipsoid	-	4	40
Megi	Ellipsoid	-	8	30
Marakeke	Ellipsoid	-	8	30
Kombokolo	Ellipsoid	-	6	30
Sessenge	Ellipsoid	-	6	30
Ndala	Ellipsoid	-	4	30
Pamao (100; 400; 600; 800-1000)	Ellipsoid	-	6	30
Pamao (200; 500)	Ellipsoid	-	4	30
Pamao (300; 700)	Ellipsoid	-	2	30

**Table 17.6 Moto Gold Project Estimation Search Parameters Part 1– November 2005**

Mineralised Domain	Search Radius	Azimuth of Major Axis	Plunge of Major Axis	Dip of Semi-major Axis	Major/ Semi Major Ratio	Major/ Minor Ratio
Pakaka	150	30	-15	-20	6	6
Gorumbwa Main Lode	200	0	0	0	1	1
Gorumbwa Upper Lodes	250	0	0	0	1	1
Kibali	250	45	0	45	1	3
Mengu Hill	200	30	-20	0	2	6
Mengu Village	150	40	-30	0	1	3
Karagba	250	45	-30	-30	1	5
Megi	200	29	-20	-4	1	10
Marakeke	200	29	-20	-4	1	10
Kombokolo	150	45	-25	5	1	6
Sessenge	150	0	-5	-15	1	6
Ndala	150	0	-20	0	1	10
Pamao	250	36	-12	5	1.5	3

**Table 17.7 Moto Gold Project Search Parameters Part 2– November 2005**

## 17.7 Model Validation

Modelled estimates have been visually validated and locally compared to downhole composite grades for each mineralised zone. There appears to be no systematic bias evident in the estimated model outcomes.

## 17.8 Resource Reporting

All the mineral resource estimates undertaken by Cube have been classified and reported in accordance with The 2004 Australasian Code for Reporting of Mineral Resources and Ore Reserves (2004 JORC Code). The 2004 JORC reporting guidelines are equivalent to the guidelines adopted for the Canadian National Instrument 43-101.

### 17.8.1 Pakaka

The entire Pakaka deposit has been classified as an Indicated resource. The deposit has been defined by 217 RC and 89 DC holes drilled by MGL. Only a small proportion of the Pakaka deposit has been drilled at greater spacing than 40m by 40m. Maximum drill spacing at Pakaka is no greater than 80m by 80m and these areas are internal to the 40m by 40m spaced drilling. The recent drilling by MGL confirms the mineralised widths, grade tenor and continuity of mineralisation defined by previous resource estimates. Cube believes that the continuity of mineralisation and volume controls are very well established throughout the Pakaka deposit.

Some further drilling may be required to improve the local precision of the resource estimate but is unlikely to have a significant material impact on the overall geometry, grade tenor or metal content of the deposit. Any additional drilling will be focused on areas of the resource where economic and pit optimisation considerations are most critical.

In general, drilling, surveying, sampling and analytical methods and controls currently employed by MGL are suitable and adequate for the style of deposits under consideration. Cube considers that that Ordinary Kriging is an appropriate method of estimation at this stage of the project evaluation. Kriging quality tests confirm that high quality block estimates were achieved throughout the Indicated area.

### **17.8.2 Mengu Hill**

Approximately 90% of the interpreted mineralised volume of the Mengu Hill deposit has been classified as an Indicated resource. The deposit has been defined by 46 RC and 39 DC holes drilled along six 80-120m by 40m fences by MGL. The recent drilling by MGL confirms the mineralised widths, grade tenor and continuity of mineralisation defined by previous resource estimates. Continuity of the interpreted mineralised is excellent and volume is well established by the current drilling density.

Some further drilling may be required to improve the local precision of the resource estimate but is unlikely to have a significant material impact on the overall geometry, grade tenor or metal content of the deposit. Any additional drilling will be focused on areas of the resource where economic and pit optimisation considerations are most critical.

In general, drilling, surveying, sampling and analytical methods and controls currently employed by MGL are suitable and adequate for the style of deposits under consideration. Cube considers that that Ordinary Kriging is an appropriate method of estimation at this stage of the project evaluation. Kriging quality tests confirm that high quality block estimates were achieved throughout the Indicated area.

### **17.8.3 Kombokolo**

The entire Kombokolo deposit has been classified as an Indicated resource. The deposit has been defined by 30 RC holes drilled on a consistent 40m by 40m pattern by MGL. The recent drilling by MGL confirms the mineralised widths, grade tenor and continuity of mineralisation defined by previous resource estimates. Cube believes that the continuity of mineralisation and volume controls are very well established throughout the Kombokolo deposit.

Some further drilling may be required to improve the local precision of the resource estimate but is unlikely to have a significant material impact on the overall geometry, grade tenor or metal content of the deposit. Any additional drilling will be focused on areas of the resource where economic and pit optimisation considerations are most critical.

In general, drilling, surveying, sampling and analytical methods and controls currently employed by MGL are suitable and adequate for the style of deposits under consideration. Cube considers that that Ordinary Kriging is an appropriate method of estimation at this stage of the project evaluation. Kriging quality tests confirm that high quality block estimates were achieved throughout the Indicated area.

#### **17.8.4 Sessenge**

Approximately 84% of the interpreted mineralised volume of the Sessenge deposit has been classified as an Indicated resource. The deposit has been defined by 128 RC holes where the majority of the deposit has been drilled on a consistent 40m by 40m pattern by MGL. The recent drilling by MGL confirms the mineralised widths, grade tenor and continuity of mineralisation defined by previous resource estimates. Cube believes that the continuity of mineralisation and volume controls are very well established throughout the Sessenge deposit.

Some further drilling may be required to improve the local precision of the resource estimate but is unlikely to have a significant material impact on the overall geometry, grade tenor or metal content of the deposit. Any additional drilling will be focused on areas of the resource where economic and pit optimisation considerations are most critical.

In general, drilling, surveying, sampling and analytical methods and controls currently employed by MGL are suitable and adequate for the style of deposits under consideration. Cube considers that that Ordinary Kriging is an appropriate method of estimation at this stage of the project evaluation. Kriging quality tests confirm that high quality block estimates were achieved throughout the Indicated area.

#### **17.8.5 Karagba**

The Karagba deposit has been defined by 44 RC and 36 DC holes drilled on a variable grid where average drill spacing is around 80-120m. Although the continuity of mineralised zones appears to be well established it is Cube's opinion that the current drill spacing is insufficient to estimate grade to a level of precision that would be considered appropriate for Indicated resource. For this reason the entire Karagba resource has been classified as Inferred.

#### **17.8.6 Gorumbwa**

Approximately 43% of the reported Gorumbwa resources have been defined by drilling spacing closer than 30m x 30m with the remainder defined by variable spacing ranging from 60m x 30m to 120m x 30m. The current drilling spacing clearly defines a well developed and continuous main mineralised zone and numerous less continuous sub-parallel hangingwall zones.

The resource classification of the Gorumbwa deposit is complicated by a number of factors, including the following:

- The majority of the estimation is based on surface and underground diamond drill holes drilled during the 1950's and 1960's (collectively referred to pre-1960 holes);
- Details of pre-1960 assay analytical method are unknown though thought to be fire assay;
- Digital records of pre-1960 drill hole sample grades do not exist and have been transcribed directly off drill sections;
- Actual collar locations of pre-1960 drill holes are not precise as locations have been determined from topographic maps and transformed into the appropriate grid system;

- No downhole survey is available for Pre-1960 drill holes. All pre-1960 drill holes were drilled vertically however recent drilling suggests that holes deviate on average  $10^{\circ}$  towards  $215^{\circ}$ . An assumed downhole survey of  $-80^{\circ}$  towards  $215^{\circ}$  has been assigned to all pre-1960 surface diamond holes;
- The vertical extent of underground voids is partly based on estimates and therefore may not be sufficiently accurate. Anecdotal evidence suggests that around 1M ounces of gold has been produced from the Gorumbwa mine. The resource model estimated by Cube reports approximately 560,000 ounces of gold mined from within the interpreted mining volumes. This would suggest that either the interpreted mining volume underestimates the volume or extent of the actual voids or the sample grades from the pre-1960 drill holes are significantly biased low;
- Underground workings have partially collapsed creating potential significant disturbances to the upper zones.

Given the well established continuity of mineralisation but complications due to a range of potential data integrity issues, Cube believes that the broad category of Inferred as defined by the 1999 JORC Code is appropriate. It is not expected that Gorumbwa can be elevated to an Indicated resource classification until all the issues highlighted above are adequately addressed. It is likely that the pre-1960 drilling will need to be replaced by diamond drilling of sufficient spacing to accurately delineate the previously mined volume and assess the extent to which the upper zone mineralisation has been disrupted by underground mine collapses.

#### **17.8.7 Other Prospects**

All other prospects have been classified as Inferred at this stage. Amongst the Inferred resources many of the prospects have been drilled to an extent that establishes a high level of geological confidence. However, there is not sufficient drilling density to adequately define the extent and grade tenor of the mineralisation to a level that would satisfy an Indicated classification and conversion to reserve status.

In most cases, drilling and other data collection is ongoing and was incomplete at the time of estimation.

- Insufficient data spacing;
- Incomplete density determinations;
- Lack of detailed topographical and historical mining data;
- Incomplete geological logging.

## **18.0 OTHER RELEVANT DATA AND INFORMATION**

### **18.1 Democratic Republic of the Congo**

In 1483, the Portuguese discovered the Congo River and established a long term trading relationship with the Kongo Kingdom and by about 1750 Europeans had become heavily involved in the slave trade, procuring slaves from most parts of Africa, including the Congo. King Leopold II of Belgium claimed possession of the Congo in 1885, which was then named the Congo Free State.

Exploitation of the mineral resources of the Congo Free State commenced, and other industries such as rubber plantations and ivory trading were also established. In response to growing criticism of the treatment of the African population, the Belgian parliament annexed the colony in 1908 and renamed it the Belgian Congo.

In 1960, the Congo held its first elections and became an independent republic with Patrice Lumumba as Prime Minister, Joseph Kasavubu as President and Joseph-Desire Mobutu (later Mobutu Sese Seko) as Chief of Staff. The new republic was plagued by unrest, including army mutinies and a secessionist war with the Katanga Region, in which United Nations troops intervened on behalf of the national government. By the end of 1960, Mobutu had seized power. Lumumba was murdered in early 1961 whilst under arrest. In 1965, Mobutu named himself President.

In 1971, the country's name was changed to Zaire. Foreign-owned businesses and industries were expropriated and nationalised, including the large copper-cobalt mines on the Copperbelt in the Katanga (now Shaba) Region. Economic chaos resulted, and attempted invasions of the Shaba Region from Angola and Zambia were carried out by Zairian insurgents. Troops from France and Belgium were required to defeat the insurgents.

Following the end of the Cold War, Mobutu came under increasing pressure from Western countries to institute democratic and economic reforms and to cease human rights abuses. By this time, the national economy was in ruins, and unpaid troops mutinied in 1990, resulting in widespread violence and looting, again requiring French and Belgian troops to restore order.

In 1996, the genocide in neighbouring Rwanda caused tension and armed conflict between Hutus and Tutsis in eastern Zaire. The alliance of the Zairian army with Hutu militias resulted in open conflict by Tutsi militia in rebellion against Mobutu. Rwanda and Uganda supported the Tutsi uprising and a coalition known as the Alliance des Forces Democratiques pour la Liberation du Congo-Zaire (AFDL) under Laurent-Desire Kabila was formed. The AFDL had early military success, resulting in peace talks between Mobutu and Kabila. Mobutu was forced to leave the country in 1997 and Kabila took over the government, named himself president and renamed the country the Democratic Republic of Congo.

By 1998, however, Kabila had lost the confidence of one of his main allies, the Movement pour la Liberation du Congo (MLC), who attacked from the east, again supported by Uganda and Rwanda. Meanwhile, Zimbabwe, Namibia and Angola sent troops to the DRC to support Kabila. A ceasefire was signed in 1999 between the six countries involved in the conflict, however the rebellion continued until 2001 when Kabila was assassinated. Joseph Kabila succeeded his father as president and immediately set about negotiating a multilateral peace deal. As a result of his efforts and the intervention of South Africa, the Pretoria Peace Accord was signed in 2002. Under the accord,

Joseph Kabila will remain in office until democratic elections are held. These elections are scheduled to be held before June 30, 2006.

The United Nations has mandated MONUC to assist the DRC Government in reforming the DRC's security forces and in organizing the democratic elections. MONUC is staffed with approximately 15,000 troops and 3,500 support staff.

Joseph Kabila is widely supported by the international community, and financial assistance from the World Bank and the IMF has been forthcoming for the first time in over a decade. The DRC is currently more stable than it has been for many years, and it is hoped that stability will bring development and general prosperity to the country. Infrastructure rehabilitation is underway, and large investments have been made in telecommunications development. Renewed interest in mining investments is also evident.

The DRC Parliament passed a new Mining Code in June 2003. The code was developed under the auspices of the World Bank with input from interested parties, and has been based loosely on similar codes in Chile and Zambia.

Mining activities undertaken by Gecamines (the Copperbelt) and OKIMO (gold mining operations) have suffered from a lack of capital investment, particularly after the security situation deteriorated in 1990, and most operations have ceased or are operating at restricted capacity. Current total metal production capacity utilisation is estimated as less than 10% of previous levels. It is estimated that Gecamines produced approximately 500Ktpa of copper during the mid 1980's. Copper production in 1996 was approximately 30Kt, and this level of production has probably been maintained or exceeded slightly in recent years.

Gecamines and OKIMO have been actively attempting to improve rapidly declining copper and cobalt production by promoting several ailing mines and associated ore treatment facilities to foreign investors, generally by offering joint venture terms. International mining companies that have acquired mining interests in the Copperbelt include Phelps Dodge (Tenke Fungurume), First Quantum (Lonshi, Likasi Tailings), Anvil Mining (Dikulushi), the Forrest Group (Kolwezi area), International Panorama Resources (Kambove and Kakanda Tailings) and American Mineral Fields (Kolwezi Tailings).

AngloGold Ashanti and Banro are other foreign companies actively undertaking exploration for gold in the DRC.

## 18.2 Conceptual Study (Preliminary Assessment)

*It should be noted that this conceptual study is categorized as a Preliminary Assessment under Canadian Securities Administrators National Instrument 43-101 and is preliminary in nature because it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. There is no certainty that the results of the conceptual study will be realized in the future.*

Following completion of the resource estimate by Cube in **August 2005** (Indicated resources estimated at 8.23 million tonnes at 2.6 g/t for 0.7 million ounces of gold and Inferred resources estimated at 89.23 million tonnes at 2.6 g/t Au for 7.3 million ounces of gold) MGL's principal focus was to progress from the exploration stage to project feasibility and development. As part of this process, a conceptual study was undertaken in conjunction with the infill drilling programme designed to upgrade the resources from the inferred to the indicated category.

Cube were appointed to review the potential for a mining operation based on a number of the ore bodies at the Moto Gold project. In November 2005 Cube completed a conceptual study indicating that a gold mine supporting annual production of approximately 240,000 ozs of gold per annum could be developed at the Moto Gold project (based on production of 3 million ounces over 12 years). Significant study parameters and assumptions include:

Average Throughput	Mtpa	3
Feed Grade	grams/tonne	2.7
Average Gold Production	koz pa	240
Average strip ratio	waste:ore	3.1
Average Recovery Rate	%	88
Estimated Cashflows*:		
@ 400 \$/oz net	US\$ Million	517
@ 425 \$/oz net	US\$ Million	589
@ 450 \$/oz net	US\$ Million	661
@ 475 \$/oz net	US\$ Million	732
@ 500 \$/oz net	US\$ Million	803
Estimated operational unit cost	US\$/oz(rec'd)	218
Indicative Mine Life	Years	12

\*Undiscounted

***The above evaluations are preliminary in nature and remain subject to completion of a feasibility study. The numbers shown are projections, which may not reflect actual performance.***



The conceptual study does not include capital expenditure and infrastructure costs. Preliminary estimates of these costs are currently being prepared. Due to the number and variety of ore bodies, extensive metallurgical test work is being undertaken to further quantify indicative recovery rates for each orebody and better define the process flow sheet. As noted above, the resources used in the conceptual study were those estimated by Cube in August 2005.

Additional Notes:

- *The objectives of this high level study were a) to provide a first pass indication of the potential of the resource, and b) to provide guidance for exploration drilling with the aim of improving the confidence level of the resource.*
- *The assessment is preliminary in nature, and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. There is no certainty that the preliminary assessment will be realized.*
- *The study comprised open pit optimisation on 12 deposits, preliminary pit designs on 3 deposits (including 2 phased cutback designs) and a top-down whole-bench mining schedule with associated simple (undiscounted) cashflows. Cost parameters used in the study were mostly derived from average data for similar types of operations and no costing analyses were carried out. Metallurgical recoveries were based on initial test results on five of the deposits, the results of which were applied to resources for which no testing was available. No geotechnical evaluations were completed for the study and indicative slope angles were used.*

## 19.0 INTERPRETATION AND CONCLUSIONS

MGL's Moto Gold Project is made up of interests in the Amani Mining Licence (MGL 68.5%) of 897km<sup>2</sup>, the Kibali Mining Licence (MGL 68.5%) of 632km<sup>2</sup>, the Borgakim Mining Licence (MGL 60%) of 472km<sup>2</sup>, the Rambli Mining Licence (MGL 68.5%) of 2,489km<sup>2</sup>, the Gorumbwa Mining Licence (MGL 60%) of 3km<sup>2</sup>, the Agbarabo Mining Licence (MGL 68.5%) of 2km<sup>2</sup>, the Tangold Mining Licence (MGL 68.5%) of 585km<sup>2</sup> and the Area of Technical and Financial Assistance (ATF, MGL 60%) of 295km<sup>2</sup>. The ATF includes the Durba/Chauffeur/Karagba mineralised trend.

The MGL Project is located within the Moto greenstone belt in the Democratic Republic of the Congo. This Belt comprises Lower Proterozoic Kibalian volcano-sedimentary rocks and banded iron formations (BIF) metamorphosed to greenschist facies. It is cut by north to northeast trending faults and is bounded to the north by Archaean West Nile granite-gneiss complex and to the south by the Upper Zaire granitic complex (Figure 22.2).

The geological model of the Moto Gold Project area has undergone a significant reassessment during the recent drilling by MGL. The MGL geological staff have published initial and broad scale interpretations (MGL, June 2005) from which much of the geological modelling for this resource estimate is drawn. This work is a valuable contribution to more clearly understanding the mineralisation controls within the prospect areas and is ongoing at present. The current geological model developed by MGL geological staff has been used as the basis for targeting a significant amount of recent drilling and has proven to be highly successful.

Gold mineralisation at Moto is associated with epigenetic mesothermal style mineralisation, consistent with the majority of Archaean and Proterozoic greenstone terranes worldwide, including the Birimian rocks of West Africa, the Yilgarn Block in Western Australia, the Lake Victoria region in Tanzania and the Atibiti Belt in Canada.

Mineralisation occurs in a number of rock types, and highest gold grades show a strong spatial association with zones of variably silicified±albitised rock. These alteration-mineralisation zones appear to be broadly conformable with the regional S1 fabric.

MGL is currently completing an extensive drilling program involving 4 drill rigs. Resource estimates have been undertaken for the all major identified deposits. MGL intends to complete infill drilling in order to upgrade the resource classifications to allow conversion to reserve and to continue exploration drilling over the remaining targets in the area. MGL plans to progress through a pre-feasibility to full feasibility study during late 2005 to early 2006.

Outside the twelve prospects currently being defined by MGL drilling the Moto Gold Project Area remains highly prospective for gold, and it can be reasonably expected that new discoveries will be made.

Currently the Moto Gold Project is estimated to contain Indicated global resources above a 1g/t Au cutoff of 34.33mt at a grade of 2.5 g/t Au for 2.809 million ounces of gold and Inferred global resources 92.87mt at a grade of 2.7g/t Au for 8.158 million ounces of gold contained in twelve prospect areas.

The next resource estimation phase at the Moto Gold Project will be to prepare models suitable for pre-feasibility optimisation. This will involve the estimation of recoverable resources incorporating important mining considerations as mining selectivity issues.

## 20.0 RECOMMENDATIONS

Cube recommends the following key points to progress the project towards feasibility:

- Implement a program of selective DC twin drilling of RC holes to verify accuracy of RC drilling in wet conditions;
- Implement a thorough QAQC review including selective re-sampling and umpire laboratory checks;
- Targeted infill drilling in increase estimation precision where pit optimisation show greatest sensitivity;
- Completion of detailed topographic survey;
- Complete comprehensive bulk density determinations for all deposits and material types;
- Undertake comprehensive review of weathering and oxidation surfaces;
- Undertake comprehensive review of geological and mineralisation interpretations;
- Completion of all planned resource drilling and geological logging;
- Continue with detailed metallurgical testwork for all key resource prospects;
- Completion of environmental baseline study;
- Undertake geotechnical and hydrological review;
- Undertake recoverable resource estimations for input into pre-feasibility study.

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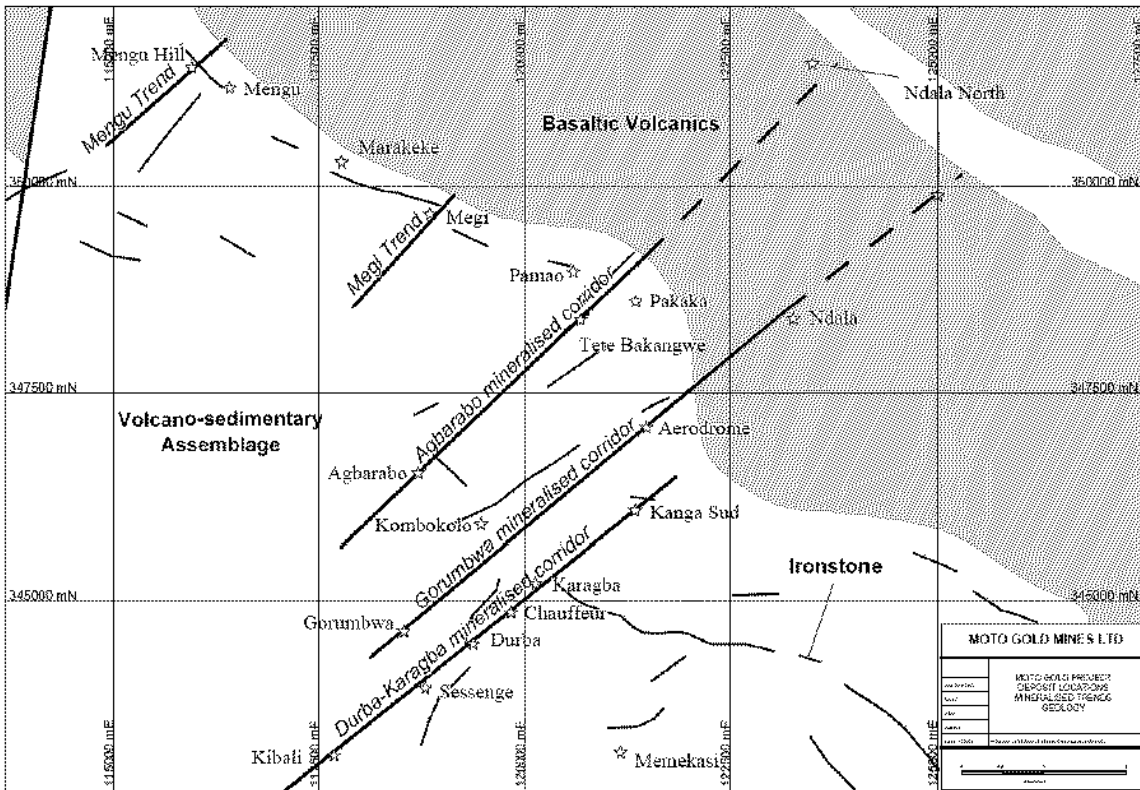


Figure 22.3 Moto Gold Project – Prospect Location Map

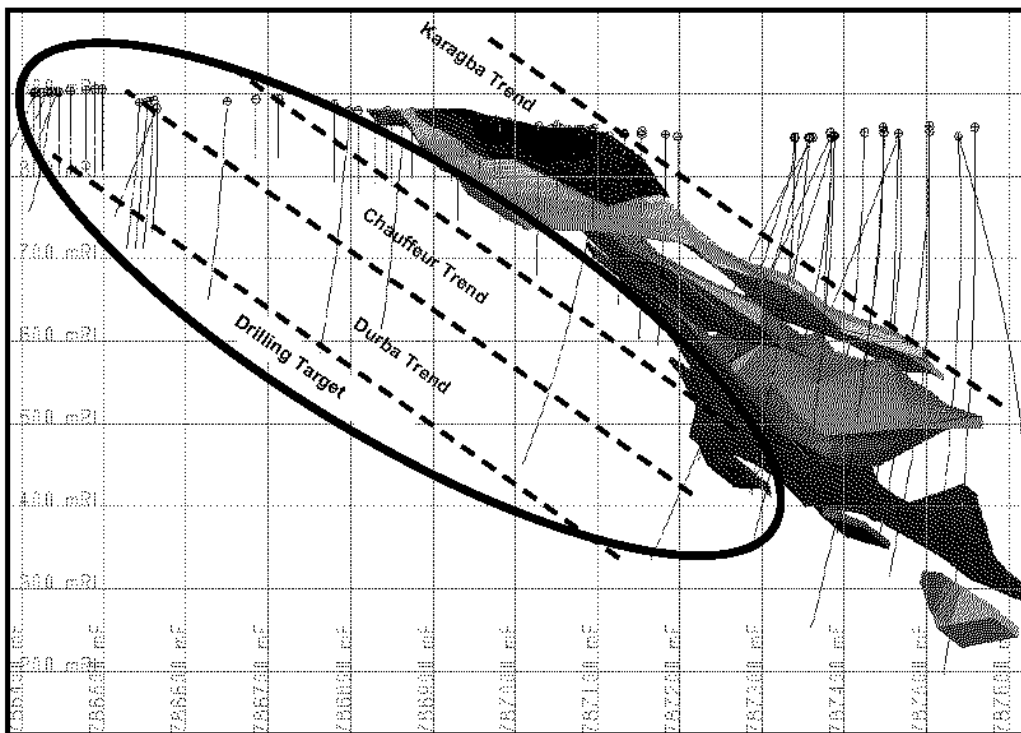
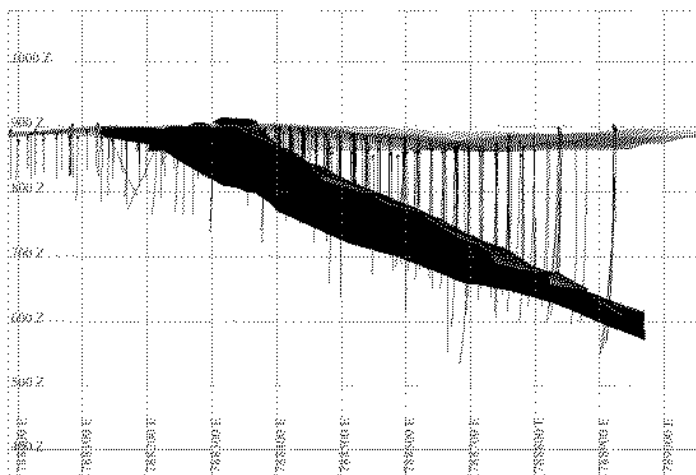


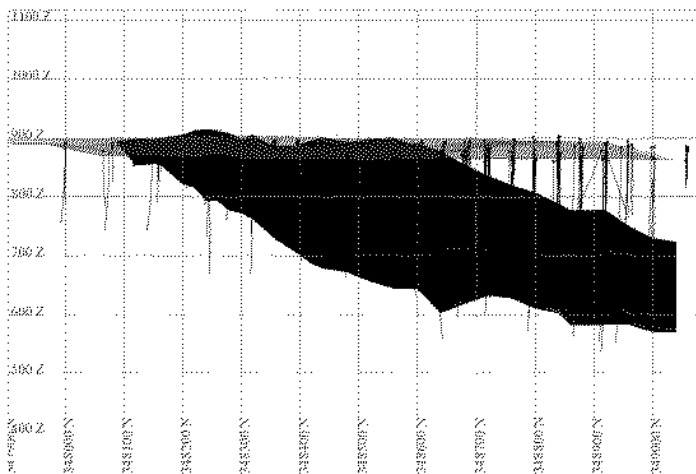
Figure 22.4 Exploration Target – Durba/Chauffeur/Karagba - Section Looking North



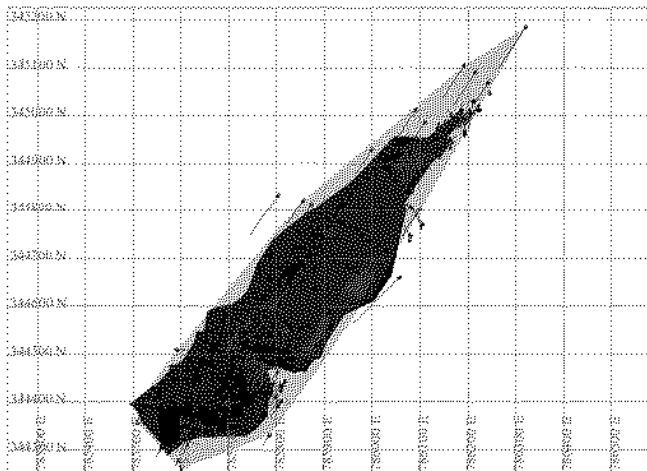
**Figure 22.5 Pakaka Mineralised Zone – Plan**



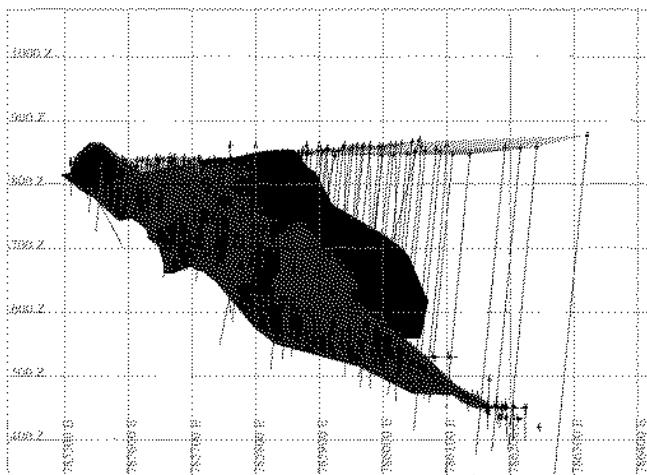
**Figure 22.6 Pakaka Mineralised Zone – Section Looking North**



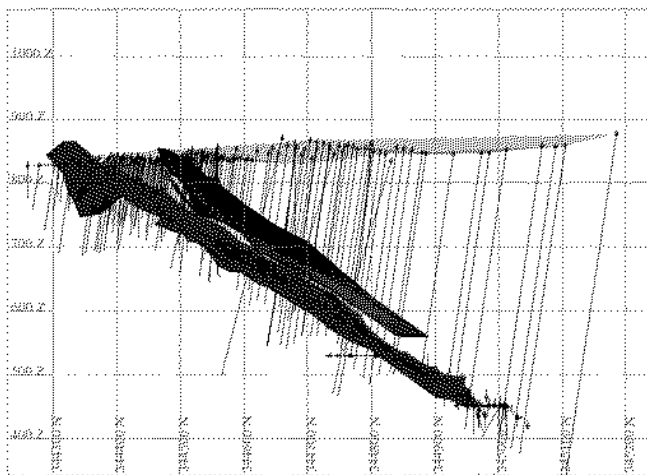
**Figure 22.7 Pakaka Mineralised Zone – Section Looking West**



**Figure 22.8 Gorumbwa Mineralised Zone – Plan**

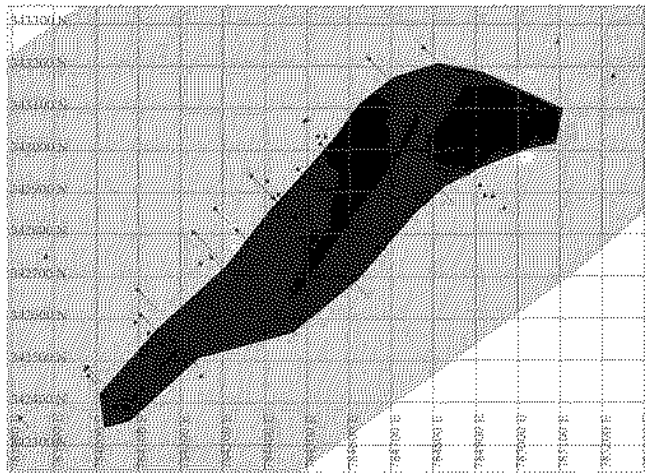


**Figure 22.9 Gorumbwa Mineralised Zone – Section Looking North**

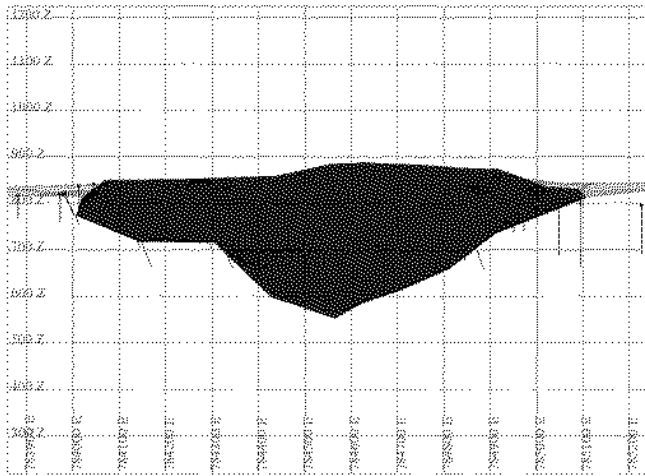


**Figure 22.10 Gorumbwa Mineralised Zone – Section Looking West**

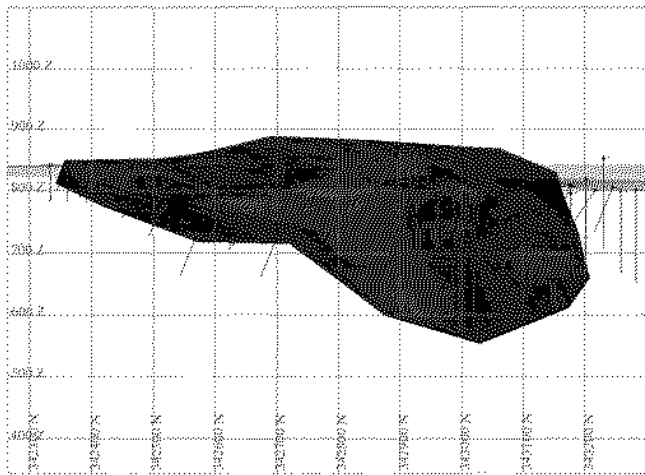




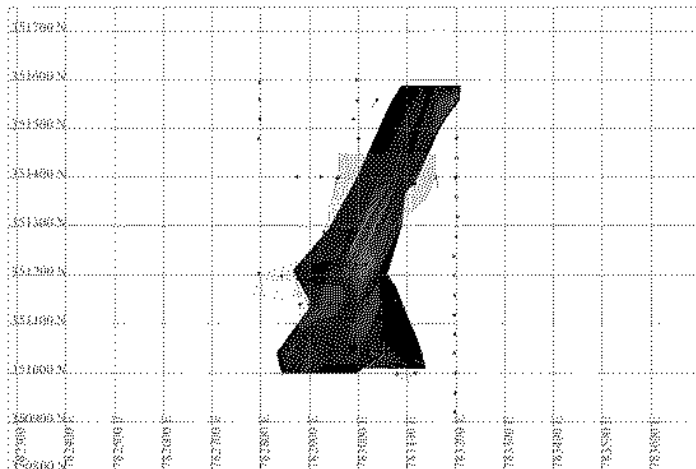
**Figure 22.11 Kibali Mineralised Zone – Plan**



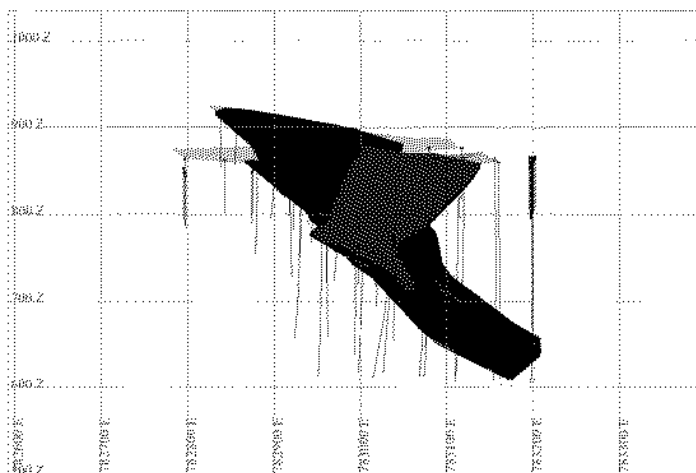
**Figure 22.12 Kibali Mineralised Zone – Section Looking North**



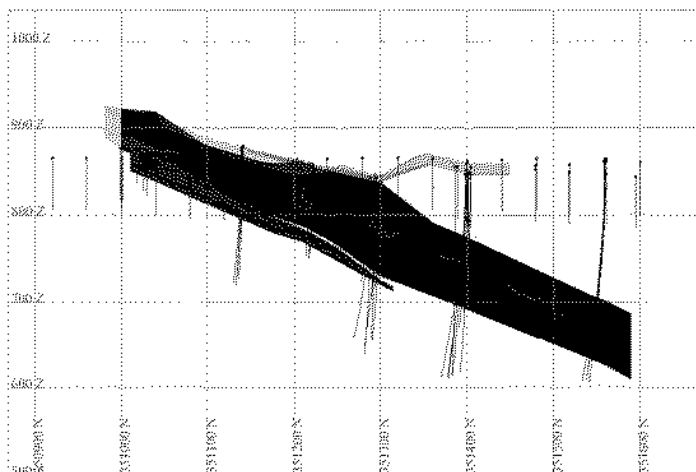
**Figure 22.13 Kibali Mineralised Zone – Section Looking West**



**Figure 22.14 Mengu Hill Mineralised Zone – Plan**



**Figure 22.15 Mengu Hill Mineralised Zone – Section Looking North**



**Figure 22.16 Mengu Hill Mineralised Zone – Section Looking West**

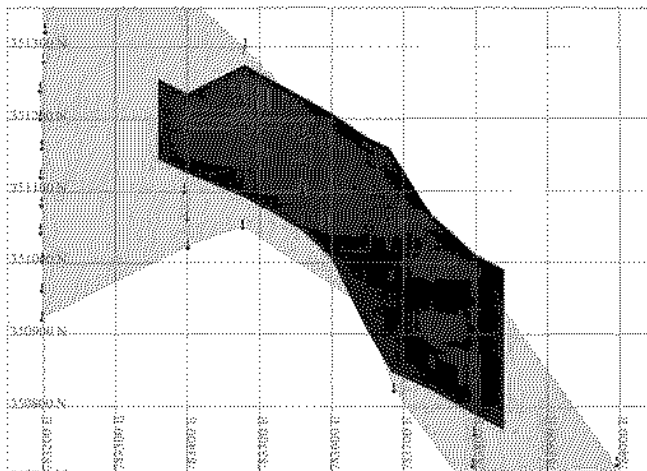


Figure 22.17 Mengu Village Mineralised Zone – Plan

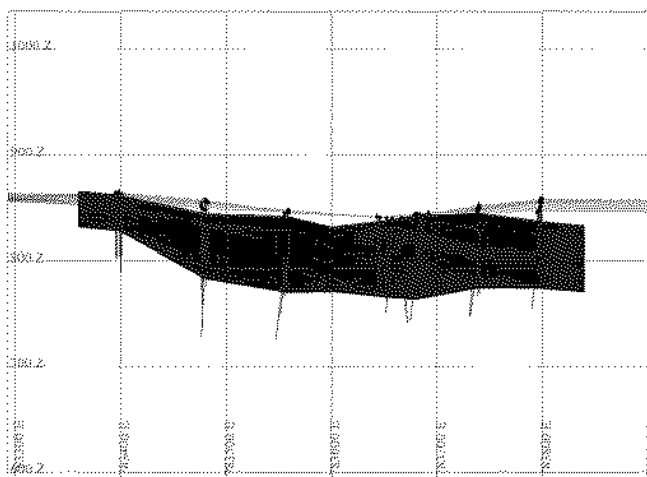


Figure 22.18 Mengu Village Mineralised Zone – Section Looking North

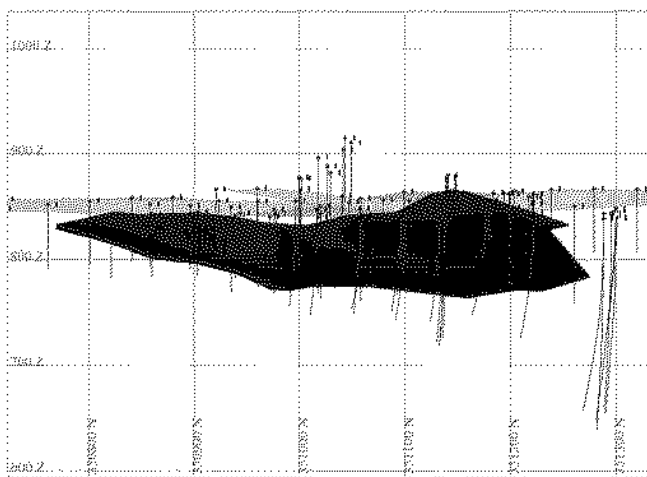


Figure 22.19 Mengu Village Mineralised Zone – Section Looking West

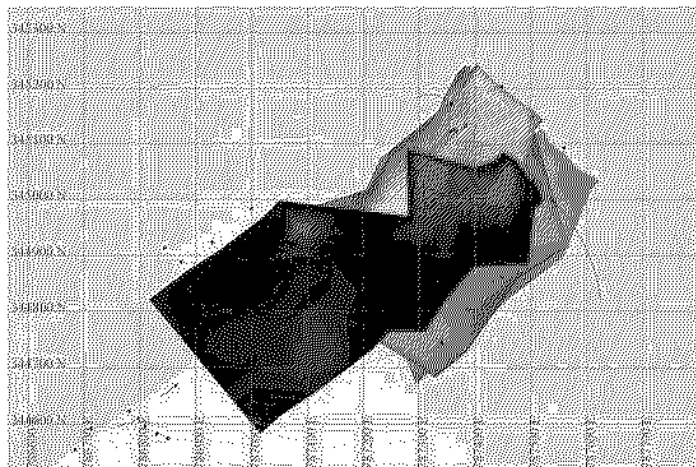


Figure 22.20 Karagba Mineralised Zone – Plan

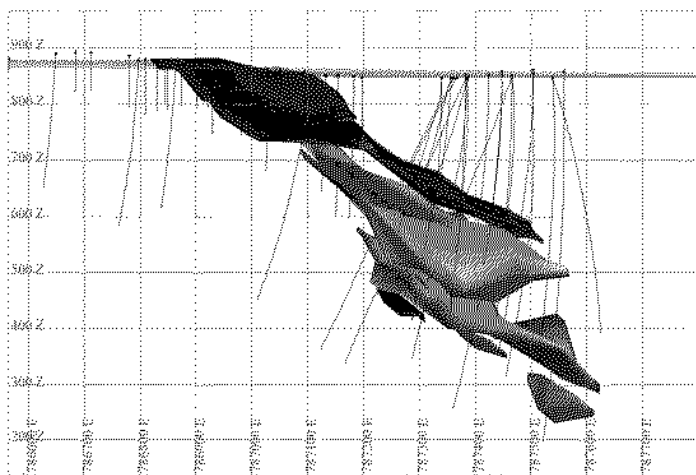


Figure 22.21 Karagba Mineralised Zone – Section Looking North

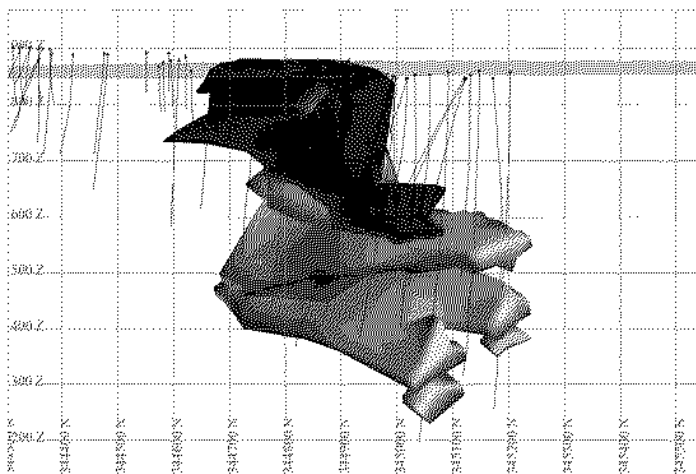
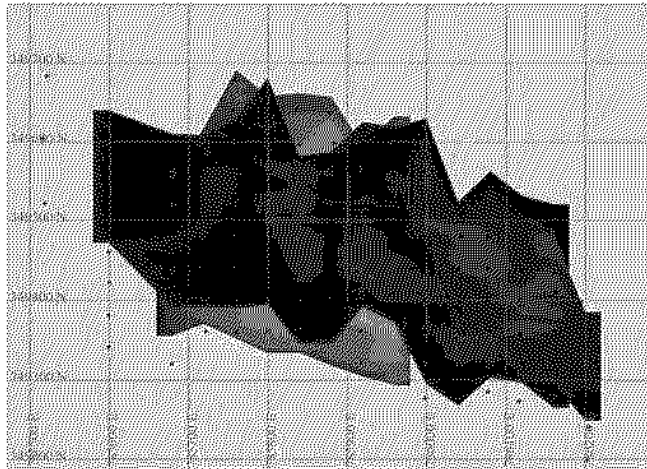
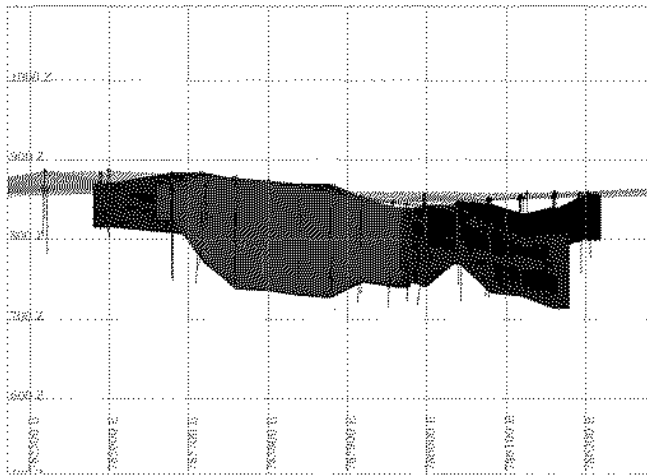


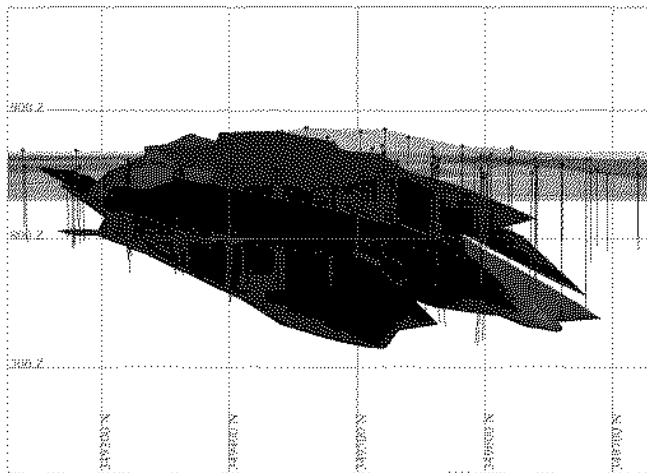
Figure 22.22 Karagba Mineralised Zone – Section Looking West



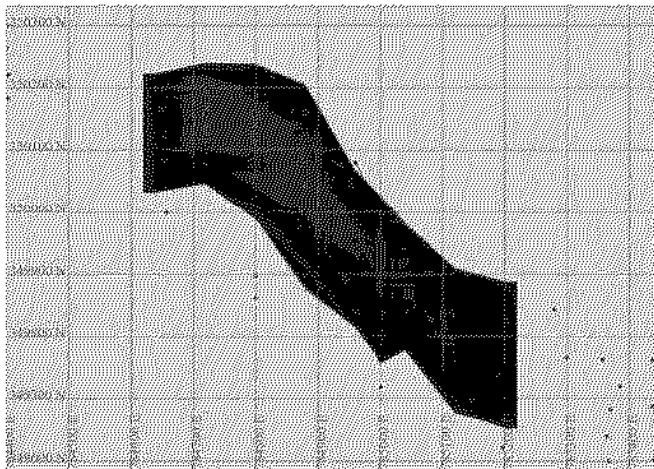
**Figure 22.23 Megi Mineralised Zone – Plan**



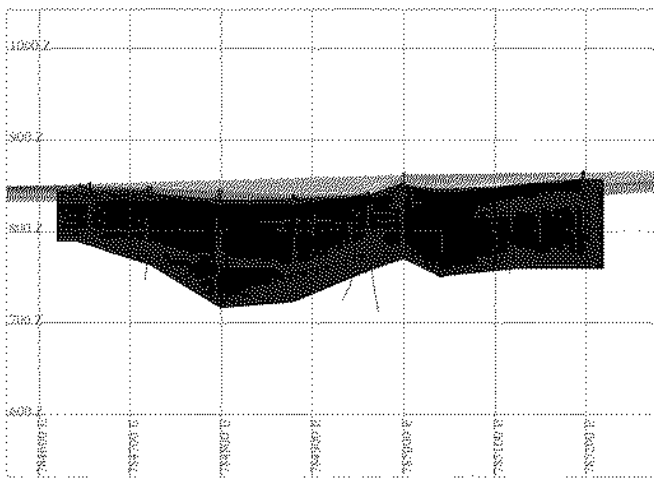
**Figure 22.24 Megi Mineralised Zone – Section Looking North**



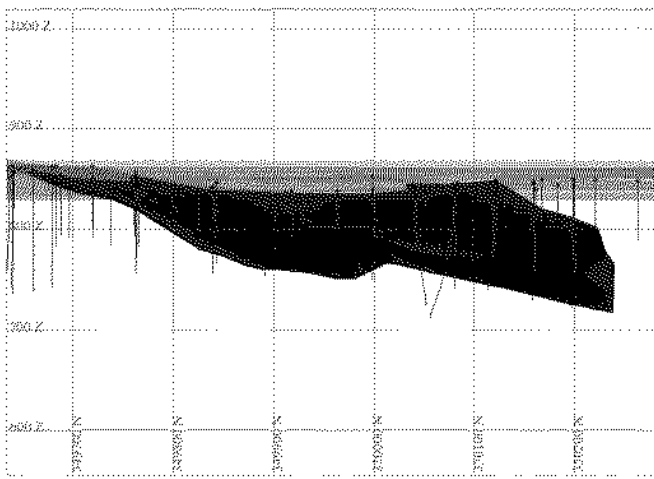
**Figure 22.25 Megi Mineralised Zone – Section Looking West**



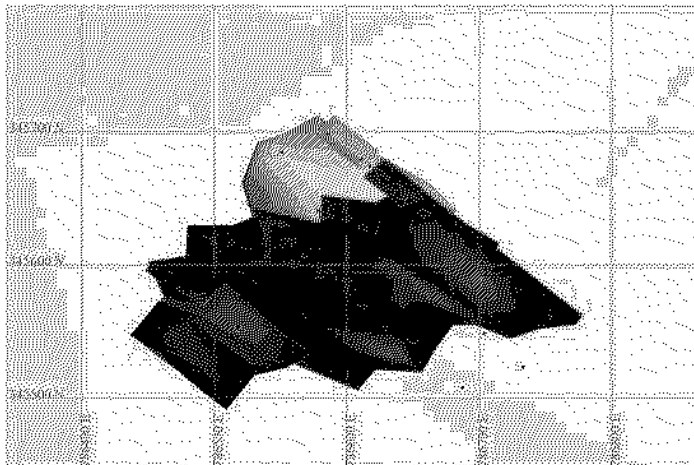
**Figure 22.26 Marakeke Mineralised Zone – Plan**



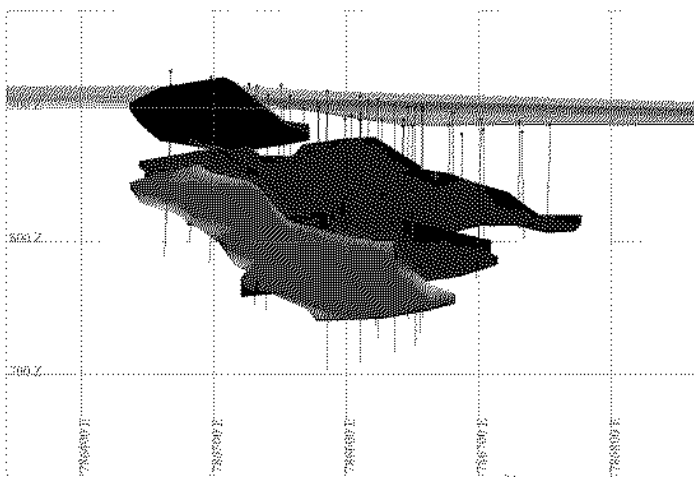
**Figure 22.27 Marakeke Mineralised Zone – Section Looking North**



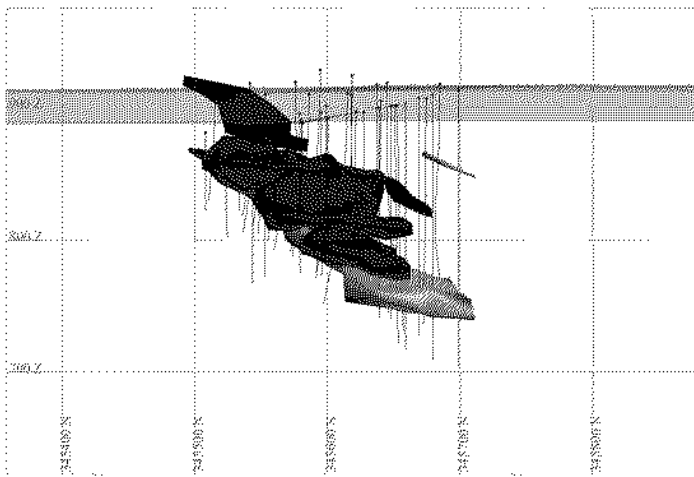
**Figure 22.28 Marakeke Mineralised Zone – Section Looking West**



**Figure 22.29 Kombokolo Mineralised Zone – Plan**



**Figure 22.30 Kombokolo Mineralised Zone – Section Looking North**



**Figure 22.31 Kombokolo Mineralised Zone – Section Looking West**

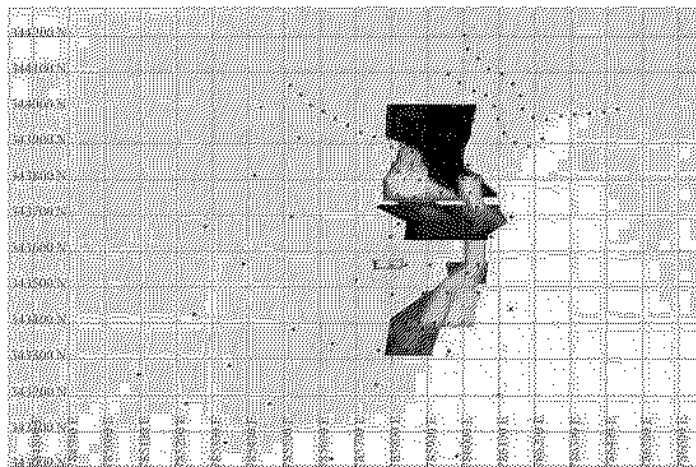


Figure 22.32 Sessenge Mineralised Zone – Plan

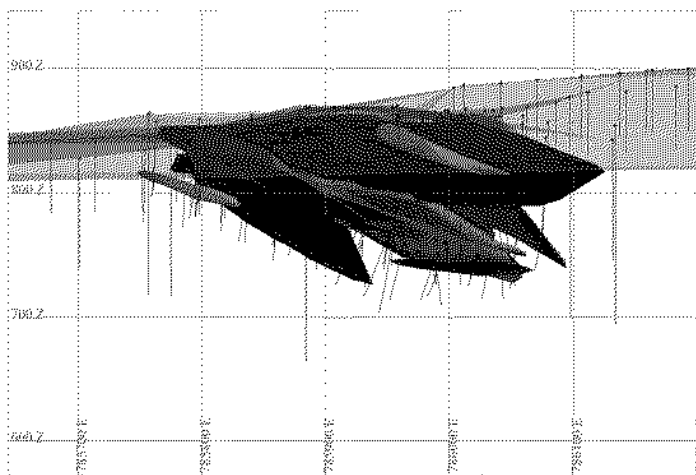


Figure 22.33 Sessenge Mineralised Zone – Section Looking North

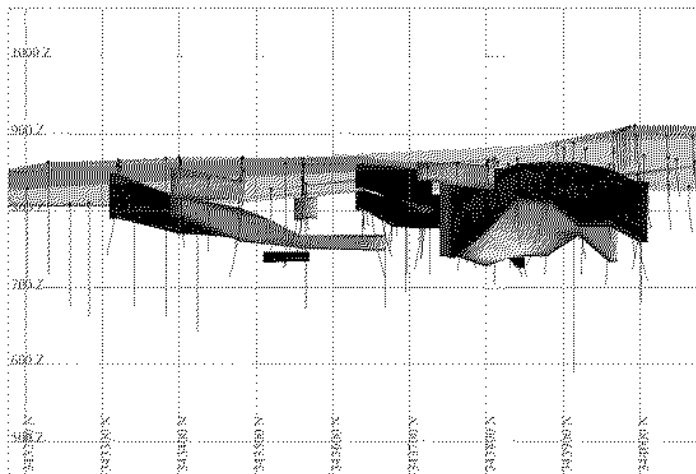
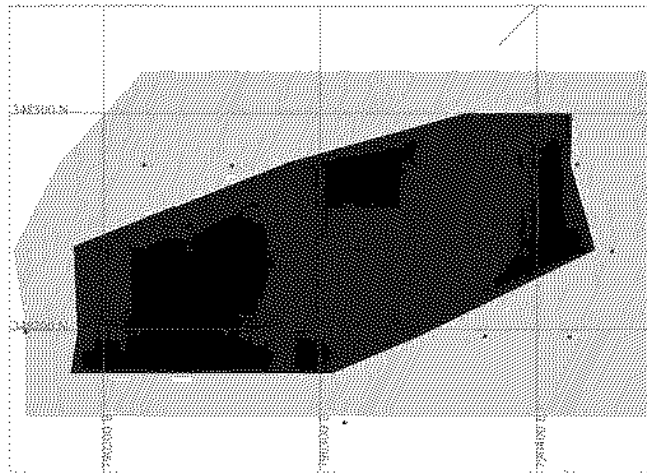
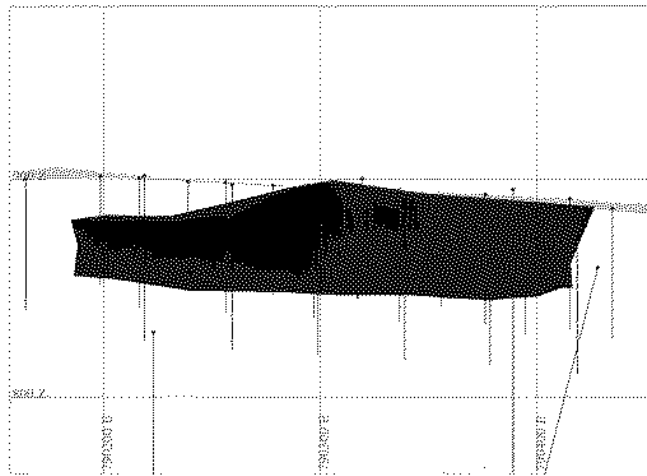


Figure 22.34 Sessenge Mineralised Zone – Section Looking West

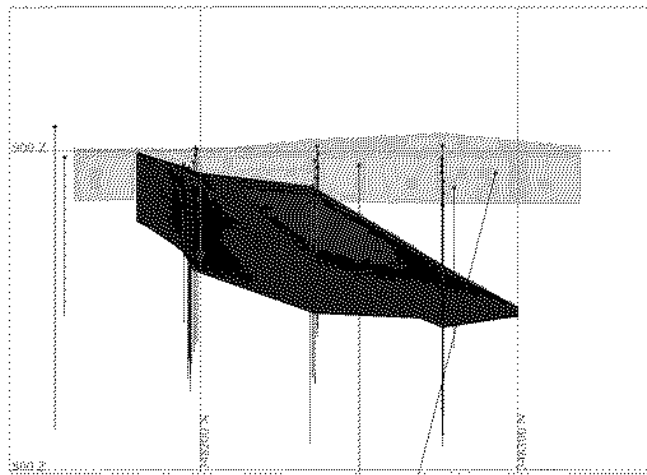




**Figure 22.35 Ndala Mineralised Zone – Plan**



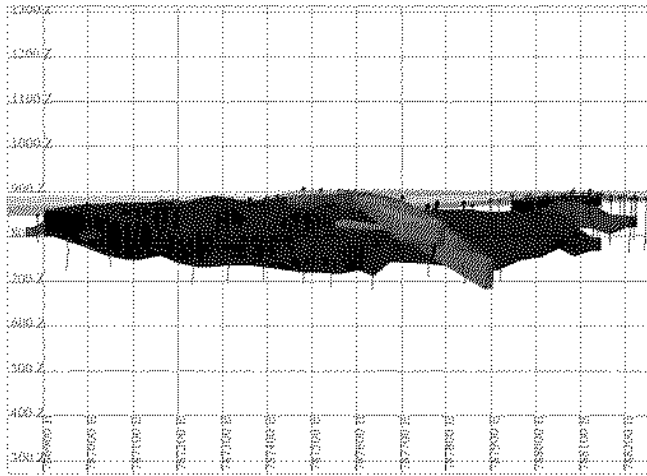
**Figure 22.36 Ndala Mineralised Zone – Section Looking North**



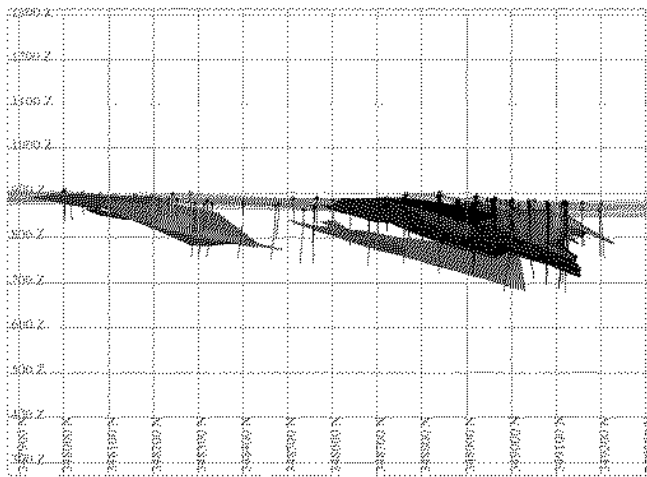
**Figure 22.37 Ndala Mineralised Zone – Section Looking West**



**Figure 22.38 Pamao Mineralised Zone – Plan**



**Figure 22.39 Pamao Mineralised Zone – Section Looking North**



**Figure 22.40 Pamao Mineralised Zone – Section Looking West\***

## **23.0 CERTIFICATES**

**Cube Consulting Pty Ltd****Certificate of Qualified Persons – Ted Coupland**

As an author of the report “Moto Gold Project Independent - Technical Report” dated November 2005 on the Moto properties of Moto Goldmines Ltd, I state:

My name is Ted Coupland and I am a Director of Cube Consulting Pty Ltd of 1111 Hay Street, West Perth 6005. My residential address is 59 Victoria Street Mosman Park 6005 Western Australia.

I hold a Bachelor of Science degree from University of New England (1987), Post Graduate Diploma in Geoscience (Mineral Economics) from Macquarie University (1992) and Graduate Diploma in Applied Finance and Investment (1997) from the Securities Institute of Australia.

I am a Chartered Professional (Geology) registered with the Australian Institute of Mining and Metallurgy (AusIMM) and a member of the Mineral Industry Consultants Association (MICA). I am a current financial Corporate Member of the AusIMM. I am a “qualified person” for the purposes of this Instrument.

I have practised as a geologist continuously since 1988.

I have not visited the Moto Property.

I am responsible for the preparation of all sections of this report.

I am not aware of any material fact or material change with respect to the subject matter of the technical report which is not reflected in the technical report, the omission to disclose which makes the technical report misleading.

I am independent of Moto Goldmines Limited pursuant to section 1.5 of this Instrument.

I have previously undertaken resource estimates of Pakaka, Gorumbwa and Kibali for inclusion in Instrument “Moto Project – Independent Technical Report” 10<sup>th</sup> June 2005 prepared by RSG Global on behalf of Moto Goldmines Limited.

I have read the Nation Instrument 43-101 Standards of Disclosure for Mineral Projects and Companion Policy 43-101CP to National Instrument 43-101, of the Canadian Institute of Mining, Metallurgy and Petroleum adopted August 20<sup>th</sup> 2000.

I consent to the filing of the technical report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their web sites accessible by the public, of the technical report.

Dated this 12<sup>th</sup> Day December, 2005



Signature of Ted Coupland

BSc DipGeoSc ASIA MAusIMM

**Cube Consulting Pty Ltd****Certificate of Qualified Persons – Rick Adams**

As an author of the report “Moto Gold Project Independent - Technical Report” dated November 2005 on the Moto properties of Moto Goldmines Ltd, I state:

My name is Patrick (Rick) Adams and I am a Director of Cube Consulting Pty ltd of 1111 Hay Street, West Perth 6005. My residential address is 6 Geordie Rise Sorrento 6020 Western Australia.

I hold a Bachelor of Science degree from University of New South Wales in Geology and Computer Science (1982).

I am a practicing Geologist registered (112739) with the Australian Institute of Mining and Metallurgy (AusIMM). I am a current financial Corporate Member of the AusIMM. I am a “qualified person” for the purposes of this Instrument.

I have practised as a geologist continuously since 1982.

I have visited the Moto Property for a period of 3 days from June 29<sup>th</sup> to July 1<sup>st</sup> 2005.

I am responsible for the preparation of all sections of this report.

I am not aware of any material fact or material change with respect to the subject matter of the technical report which is not reflected in the technical report, the omission to disclose which makes the technical report misleading.

I am independent of Moto Goldmines Limited pursuant to section 1.5 of this Instrument.

I have previously undertaken no work on behalf of Moto Goldmines Limited on the Moto Gold Project.

I have read the Nation Instrument 43-101 Standards of Disclosure for Mineral Projects and Companion Policy 43-101CP to National Instrument 43-101, of the Canadian Institute of Mining, Metallurgy and Petroleum adopted August 20<sup>th</sup> 2000.

I consent to the filing of the technical report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their web sites accessible by the public, of the technical report.

Dated this 12<sup>th</sup> Day December, 2005



Signature of Patrick Adams

Bsc MAusIMM MAIG

## **Appendix 1. AUDIT REPORT – PREPARATION LABORATORY**

# **AUDIT REPORT**

**PREPARATION LABORATORY  
OF BORGAKIM MINING (sprl),  
MOTO PROJECT, DOKO-WATSA  
NE DEMOCRATIC REPUBLIC OF CONGO**

**Produced for:**

**MOTO GOLDMINES LTD.  
PERTH, AUSTRALIA**

**Prepared by:**

**Michel M. Mercier  
Senior Consulting Geologist/Geochemist**

**September 16, 2005**

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## **1.0 SUMMARY**

A site visit was completed in September 2005 to audit the preparation laboratory of BORGAKIM MINING (sprl) at Doko, Democratic Republic of Congo. In the present report the main elements investigated and discussed are: organization and management of the preparation laboratory, description of working areas, main equipment utilized in the preparation of samples, actions taken to insure the Quality Control (QC) and Quality Analysis (QA), details of sample shipment to external analytical laboratories, Reverse Circulation (RC) drill sample preparation, Diamond drill sample preparation and Soil sample preparation.

It is concluded that the Doko preparation laboratory is well organized and well managed, and that the different types of sample preparation observed are being performed to a high standard.

Minor adjustments to the sample 'security assurance' and QA/QC procedures for the RC and soil preparation are recommended. These include: 1) the use of seals to ensure the physical integrity of samples during transport to the analytical labs in Mwanza, Tanzania and Perth, Australia; 2) the insertion of 'blanks' into the RC batch samples; and 3) the introduction of a QC/QA procedure for Soil samples.

## **2.0 INTRODUCTION**

At the request of Moto Goldmines Ltd., a site visit to the preparation laboratory run by BORGAKIM MINING (sprl) at Doko, in the Democratic Republic of Congo was initiated in the period 9 September to 16 September 2005. The objective of the visit was to undertake a comprehensive review of the procedures and quality of sample preparation in the Doko preparation laboratory, which was to be formalized as an audit report.

## **3.0 GENERALITIES**

The BORGAKIM MINING (sprl) sample preparation laboratory is located on the KILOMOTO (OKIMO) mining concession (Moto Concession) in an area known locally as "Poste Doko". The sample preparation area is guarded 24 hours per day by BORGAKIM security guards who control the entrance to the area. Only BORGAKIM MINING and Moto Goldmines Ltd. employees are authorized to enter the site.

### **3.1 Employees**

The sample preparation laboratory at Doko is under the direct supervision of a Congolese Geologist, Mr. Guillaume Kiza, and a well trained Congolese technician, Mr. Jean-Bosco Athocon. Mr. Kiza has 20 years of experience in exploration geology and Mr. Athocon 20 years of experience in chemical and preparation laboratories. Both employees have worked previously for Barrick Gold Corp. (1996-7) and for a joint venture between Barrick Gold Corp. and AngloGold (1997-8). They are assisted by 22 well trained lab assistants: 12 assistants work on the preparation of Diamond Drill samples and 10 assistants on the preparation of RC samples. The preparation of

soil samples is done by lab assistants taken from both diamond drill and RC sample preparation crews and also, when present in Doko, from assistants working on the collection of soil samples in the field.

The 2 Congolese supervisors are in turn managed by senior expatriate exploration geologists of the Moto Goldmines Ltd. exploration team.

### 3.2 Sample Preparation Areas

The sample preparation areas are housed in a large building of 441m<sup>2</sup> divided into various sections for the processing and preparation of different types of samples. The building also has a small core storage area and an office for the senior lab technician. The areas are clean and well laid out with activities separated from each other. The various preparation sections of the laboratory are: crusher section, pulverizer section, core saw section, chipboard section, core drying section and soil preparation section.

### 3.3 Sample Preparation Equipment

The main equipment in use at the Doko preparation laboratory consists of:

- Jaw crushers;
- Pulverizers (both saucer style puck and ring type);
- Drying oven;
- Diamond saws;
- Riffle splitters;
- Various stainless steel screens;
- Ultrasonic sieve cleaners;
- Compressed air connections;
- Work stations equipped with dust exhausts;
- Dust extractor system

*Jaw Crushers:* two *TM Engineering* jaw crushers are used in the Doko preparation laboratory. Each machine can crush  $\pm$  6kg of material (approximately 2m of core) in about 4 minutes, so that 90% of the sample is less than 2mm. The jaws can be cleaned very easily with compressed air or, when necessary, with 'barren' granitoid rock material (see section on *Pulverisers* below for details about the gold-barren material). The jaw crushers are also used to prepare the blank material to clean the *LM2* and the *TM Engineering* pulverizer bowls.

*Pulverizers:* two types of pulverizers are used; the flying saucer style puck (*LM2*) and the ring type (*TM Engineering*). The two *TM Engineering* pulverisers with a bowl capacity of approximately 250g (which were used at the beginning of the project) have been replaced by three *LM2* machines with a bowl capacity of approximately 1.5kg. Both models pulverize samples to the point that 85% of the material passes through a 75 micrometer mesh. A crushed gold-barren material, obtained from fresh granitoid rock, is used to clean the bowls. Analyses carried out on the 'barren' granitoid material have consistently returned values of  $\leq$  0.03ppb Au with the majority of samples giving  $<$  0.01ppb Au. This gold-barren granitoid material is collected from an area 14km north of Doko, at the following UTM locations:

- N395654/E785046;
- N395620/E785240;
- N359597/E785091;
- N359641/E785181;
- N359655/E785062;
- N395644/E785190;
- N359595/E785090.

*Drying oven:* a *Marc* ventilated electric drying oven (0° to 300°C) is used in the Doko preparation laboratory. This oven permits the control of the temperature to accommodate different types of sample material (drying of 48 core samples in about 1 hour at 120°C; drying of 24 RC samples in about 6 hours at 120°C; drying of 40 to 48 soil samples in about 6 or 7 hours at 120°C).

*Diamond saws:* two types of diamond saw are used to split the diamond core, a *Vancon* core saw that can split one meter of core in about 5 minutes and a *Corstor* core splitter that can split one meter of core in about 10 minutes.

*Riffle splitters:* different types of stainless steel riffle splitters (*Geneq* and *Controlab*) are available on site. They are used to prepare sub-samples.

*Various stainless steel screens:* different types of stainless steel screens (*Controlab* and *Madison*) are available on site. They are used to test the quality of crushing and pulverization, and also to obtain the fine fraction from soil for analysis.

*Ultrasonic sieve cleaners:* two *Controlab* ultrasonic sieve cleaners are used to clean the screens. They are very efficient and after the cleaning no particles are left in the mesh.

*Compressed air connections:* numerous compressed air connections are available in the preparation laboratory to do the cleaning of the different apparatus and material used.

*Work stations equipped with dust exhausts:* four work stations are present in the laboratory and these are equipped with dust exhausts that connect to a dust extraction system (*Donaldson Torit Downflo Oval*). The work stations are used for sample splitting and for recuperation of the pulverized samples from pulverizer bowls.

#### **4.0 QUALITY CONTROL AND QUALITY ANALYSIS**

For the Moto Goldmines Ltd. project in Doko, a program of external quality control (QC) and quality analysis (QA) is applied to check for contamination, accuracy and precision. This consists of three types of check samples that are introduced into the sample stream, which include gold “blanks”, standards and laboratory duplicates. In addition, for RC samples, field duplicates are also introduced in the sample stream. For the Diamond drill program, the check samples introduced into the batch stream total 12% which is very high when compared to the 5-6% that is considered as adequate for most exploration projects. For the RC program, the check

samples introduced into the batch stream total 15%. As a test, for the Gorumbwa deposit, where coarse gold was observed, Screen Fire Assay is also performed for all RC samples that return Au values over 1g/t. The preliminary results show that Screen Fire Assay results are higher than the usual Au Fire Assay analyses. The results of QC/QA will be discussed in a different report that will be produced later this year.

#### **4.1 Gold “blanks”**

Gold “blanks” are used to check the possibility of gold contamination during the analytical procedure. This blank material is prepared on site with reverse circulation cuttings of hole PMRC 089 (from 58m to 80m) that returned values  $\leq 5$ ppb Au. For Diamond drill samples, one ‘blank’ is introduced randomly into the sample stream for each group of 25 samples (4%).

#### **4.2 Standards**

Various standards are used to verify the ability of the laboratory to accurately detect gold values. For Diamond drill samples, one ‘standard’ is introduced randomly into the sample stream for each group of 25 samples (4%). For RC samples, one standard is introduced randomly into the sample stream for each group of 20 samples (5%). The eight different ‘assay-certified’ reference materials used were obtained from the following companies.

*Western Mineral Standards, 28 Irwin St, Bellevue, WA 6056:*

- AUOH-1 (recommended value 1.197ppm Au, lower limit 1.169ppm Au, upper limit 1.225ppm Au)
- AUOI-1 (recommended value 1.763ppm Au, lower limit 1.729ppm Au, upper limit 1.796ppm Au)
- AUOJ-1 (recommended value 2.413ppm Au, lower limit 2.378ppm Au, upper limit 2.448ppm Au)
- AUSK-1 (recommended value 3.680ppm Au, lower limit 3.613ppm Au, upper limit 3.747ppm Au)

*Gannet Holdings PTY Ltd., 43 Frederic St., Naval Base, WA 6165:*

- ST16/1291 (recommended value 0.500ppm Au, Standard deviation 0.440)
- ST10/0301 (recommended value 3.400ppm Au, Standard deviation 0.15)
- ST04/2264 (recommended value 4.780ppm Au, Standard deviation 0.210)
- ST44/0294 (recommended value 13.900ppm Au, Standard deviation 0.530)

#### **4.3 Duplicates**

Duplicates are used to verify the degree of precision of the analyses. They can also be used to verify the quality of the preparation of samples in the preparation laboratory or to verify if mixing of samples occurred during batch processing. For Diamond drill samples, one duplicate is introduced randomly into the sample stream for each 25 samples (4%). For RC samples one field duplicate and one laboratory duplicate are introduced into the sample stream for each 20 samples (10%).

## 5.0 SAMPLE SHIPMENTS TO THE ANALYTICAL LABORATORIES

Two analytical laboratories are used by Moto Goldmines Ltd.: *Genalysis* analytical laboratory in Perth (Australia) for Diamond drill samples, and *SGS* analytical laboratory in Mwanza (Tanzania) for RC and Soil samples.

The RC and Soil samples are sent to *SGS* laboratory in Mwanza. They are packed in new polyweave bags (between 50 and 90 RC samples) or in cardboard boxes inserted into new polyweave bags (approximately 50 to 60 Soil samples), and sent from the Doko airport in the DRC to Mwanza, Tanzania on an airplane belonging to Kilwa Air (a company associated with Geosearch Ltd. that is engaged in the contract drilling for the Moto project). The parcels are then picked up by *SGS* staff at the airport in Mwanza.

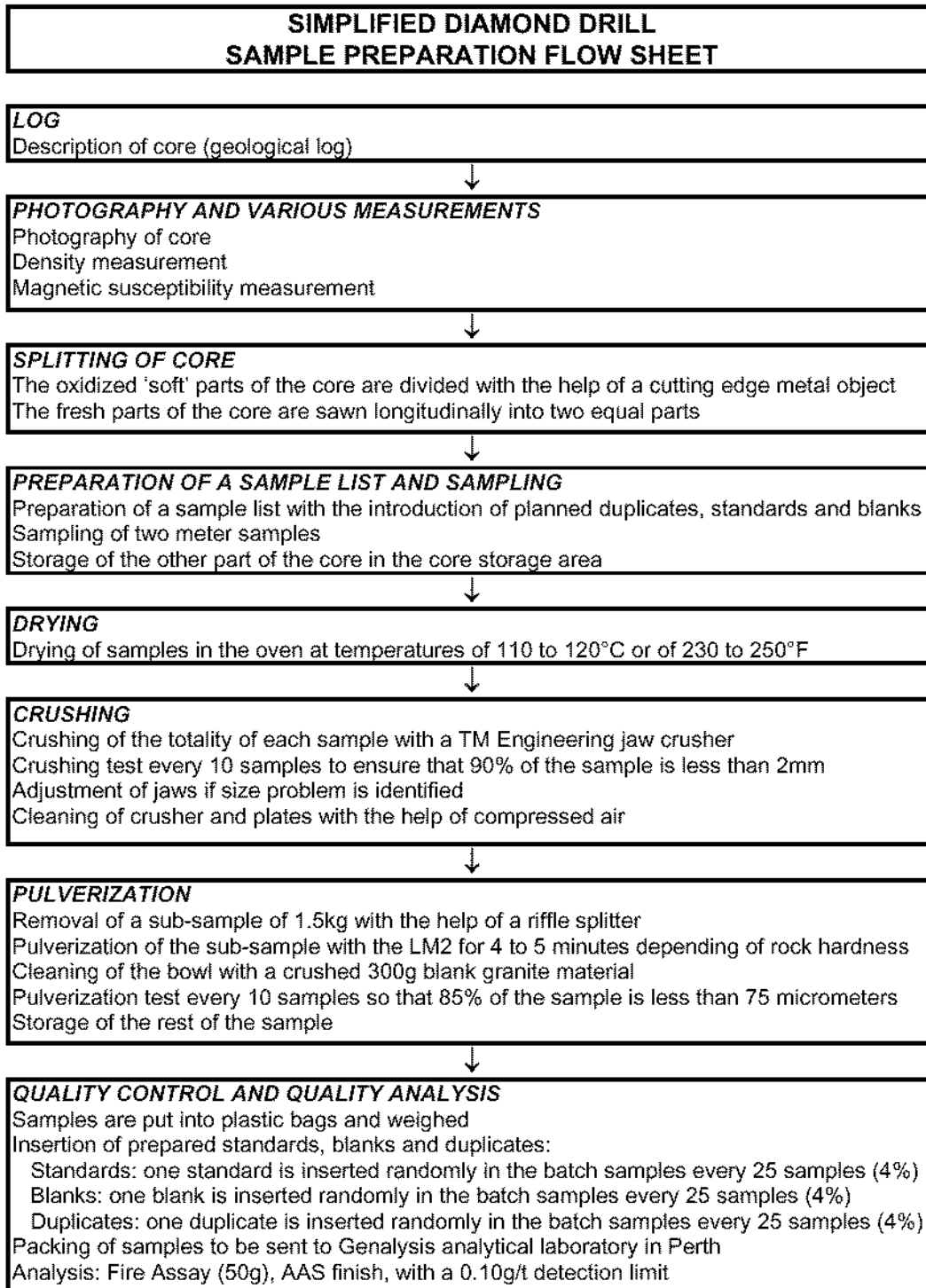
The Diamond drill samples, sent to *Genalysis* laboratory in Perth, are packed in cardboard boxes (100 to 110 samples per cardboard box) that are closed with packing tape. The boxes are sent from Doko airport with the Kilwa Air plane to Entebbe airport in Uganda and then picked up by DHL staff at the airport and redirected by DHL (air service) to the *Genalysis* laboratory in Perth.

To this point in time, it appears that ‘best-practice’ security assurance of the samples during transport between Doko and the various external laboratories has not been addressed. As a consequence, it is recommended that the samples be packed in new polyweave bags protected by bag ‘seals’ in order to ensure their security. The polyweave bags can then be inserted into cardboard boxes where necessary. A receiving form (see example below) would then be sent with the parcels and be returned signed to Moto Goldmines Ltd.

<b>LABORATORY:</b>
<b>LOCATION:</b>
<b>DATE RECEIVED:</b>
<b>PREPARATION LAB JOB NUMBER:</b>
<p style="text-align: center;"><i>I hereby certify that the seal on this bag shows no evidence of tampering</i></p> <p style="text-align: center;">_____</p> <p style="text-align: center;"><b>Signature</b></p>

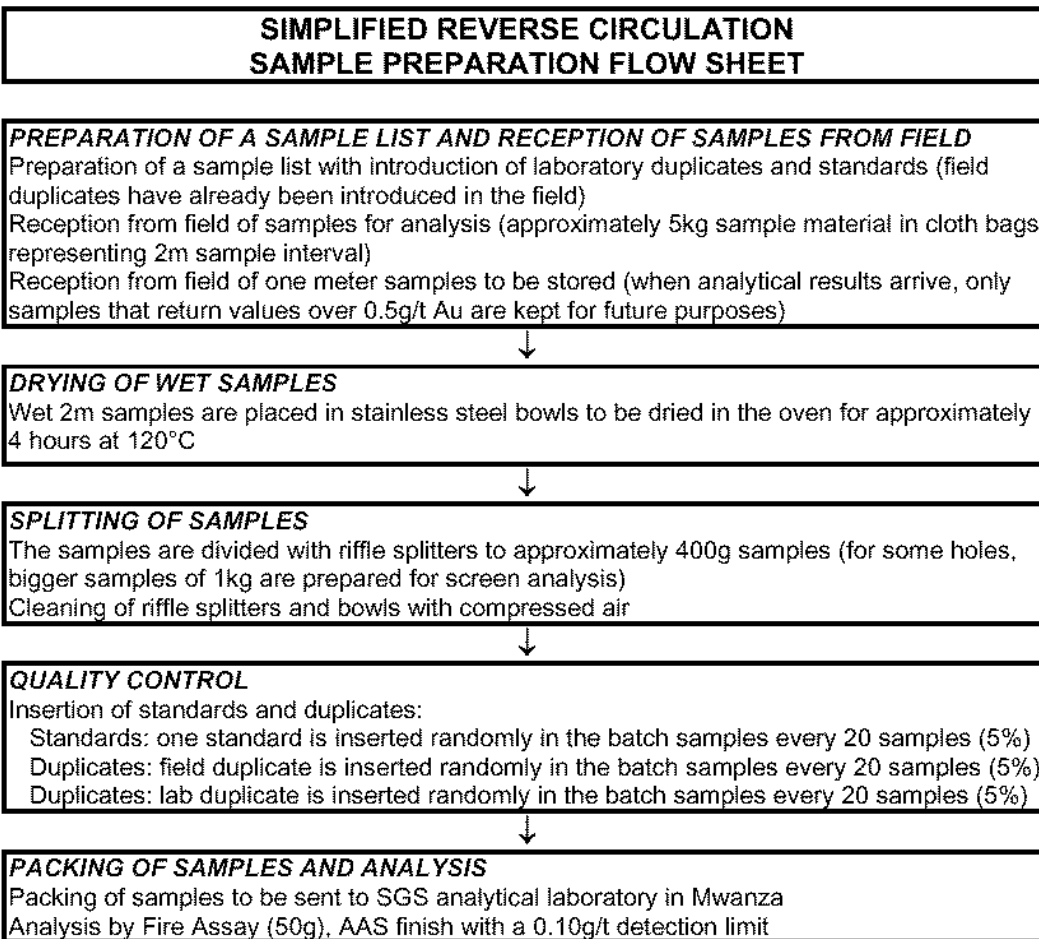
## 6.0 DIAMOND DRILL SAMPLE PREPARATION

The diamond drill samples are logged, photographed, split and pulverized on site and then packed and sent to Genalysis laboratory in Australia for a Fire Assay gold analysis. The following flow sheet summarizes the different stages of diamond drill sample processing.



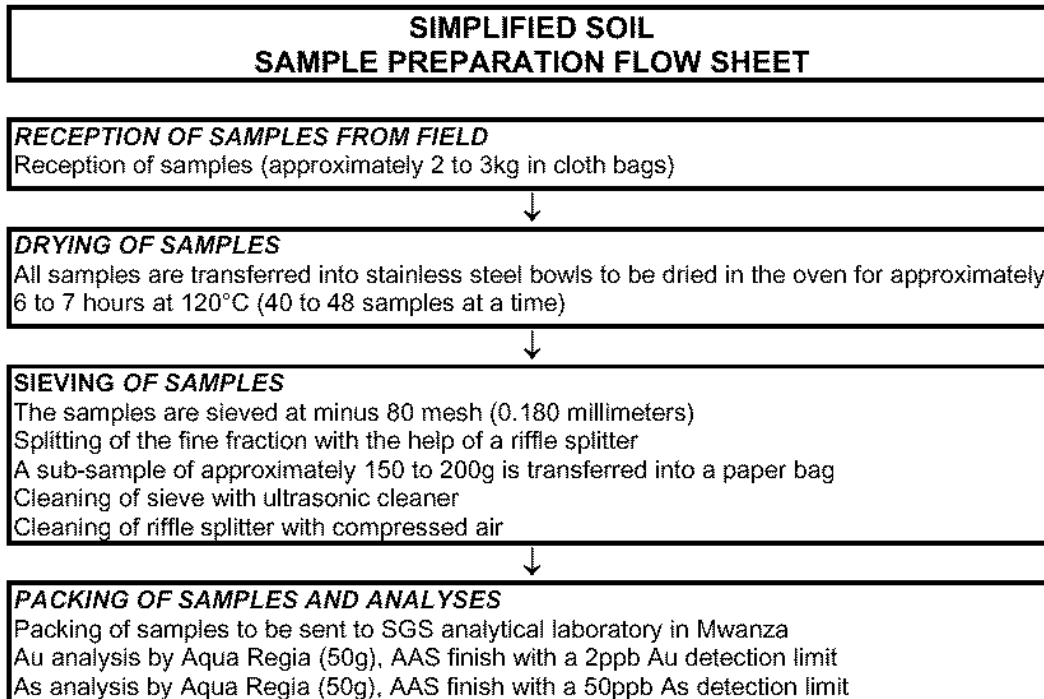
## 7.0 REVERSE CIRCULATION SAMPLE PREPARATION

In the field, Reverse Circulation (RC) samples are collected on a metre basis while the sample collected at the drill for analysis represents a 2m sample. In the Doko preparation laboratory, only the splitting of each two meter sample received from the field and the introduction of standards and duplicates are performed. The rest of the preparation (drying, crushing and pulverization) is handled at the SGS laboratory in Mwanza. The RC samples are analyzed by SGS in Mwanza for Au, Fire Assay, AAS finish. Chipboards are prepared on site. The following flow sheet summarizes the different stages of RC sample processing.



## 8.0 SOIL SAMPLE PREPARATION

Soil samples are received from the field in cloth bags of approximately 2 to 3kg. Once in the preparation laboratory, they are dried and then sieved to -80 mesh with stainless steel screens and sent to the SGS analytical laboratory in Mwanza to be analyzed for Au and As (Aqua Regia). The following flow sheet summarizes the different stages of the Soil sample processing.





## **9.0 RECOMMENDATIONS**

1. Samples should be sent to the various analytical laboratories in new sealed polyweave bags and a signed certificate from the laboratories stating that the seals show no evidence of tempering should be obtained.
2. One gold 'blank' should be inserted into the RC batch samples at the same rate as standards and duplicates.
3. A Quality Control (QC) and Quality Analysis (QA) for the Soil sampling program should be applied by the insertion of gold 'blanks' (2%), standards (2%) and field and lab duplicates (4%).
4. The number of check samples for the Diamond drill and RC sample streams could eventually be reduced significantly if a study of the results proves that the quality of the analytical laboratories is acceptable.
5. The dust extraction system in the area of the jaw crushers and the Soil sample preparation could be improved with additional exhaust points and booster fans.
6. Eventually, the entire preparation of RC samples could be done at the preparation laboratory in Doko. In this way, it would be possible, with the three LM2s available on site, to process bigger sub-samples (1.5kg instead of the 400g presently sent to SGS in Mwanza), thus giving sub-samples with 3 to 4 times more representivity.

## **10.0 CONCLUSIONS**

The Doko preparation laboratory is well managed and organized. Workers are literate, have a good routine, communicate well and are proficient in their assigned tasks.

The sample preparation areas are clean and well laid out with the different activities separated from each other.

Given the good work practices within the preparation laboratory, it is clearly evident that contamination or sample numbering mix-ups are likely to be very rare occurrences.

The number of checks introduced into the batch sample streams total 12% for Diamond drill samples and 15% for RC samples. These percentages can be considered as very high when compared to the 5 or 6% that are considered adequate for most exploration projects.

The different sample-type preparations observed are being performed to a high standard.

Minor issues concerning sample security assurance and QC/QA within the RC and Soil sample streams can be easily remedied with the recommendations of this report.

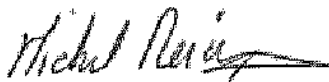
## 11.0 CERTIFICATE OF QUALIFIED PERSON

*I, Michel M. Mercier, B.Sc. Geology do hereby certify that:*

1. I am a senior independent exploration consultant who has been contracted to provide an independent audit and report on the BORGAKIM MINING (sprl) preparation laboratory in Doko, Haute Uele, Province Orientale, Democratic Republic of Congo by:

Moto Goldmines Ltd.  
30 Ledger Road  
Balcatta 6021  
Perth, Western Australia  
Telephone: +61 (08) 9240 1377  
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2. I graduated with a B.Sc. (Geology) from the University of Montreal in 1971.
3. I am registered as a Professional Geologist in Canada with the "Ordre des géologues du Québec", permit number 987.
4. I have worked as a geologist and geochemist for more than 30 years since my graduation from university and more than 20 years in Africa.
5. I have read National Instrument 43-101 and Form 43-101F1.
6. I have read the definition of "qualified person" as set out in National Instrument 43-101 (NI 43101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements of a qualified person for the purposes of NI 43-101.
7. I am responsible for the preparation of the Audit Report entitled: **Preparation Laboratory of BORGAKIM MINING (sprl), Moto Project, Doko-Watsa, NE Democratic Republic of Congo.**
8. I have consulted for Moto Goldmines Ltd. in the past with respect to their ongoing soil geochemistry programs at the Moto Project in the DRC. In addition, I have worked in the past for Barrick Gold Corp. (1996-7) and Geo Services International Ltd. (1997-8) on the same exploration property in the DRC.
9. I consent to the filing of this Audit Report with any stock exchange or any other regulatory authority and any publication by them, including electronic publication via public company files on their website and accessible by the public.



Dated at Doko, Democratic Republic of Congo, this 16<sup>th</sup> day of September, 2005.