Independent Technical Report for the Mandiana Gold Project, Guinea

Report Prepared for
Volcanic Metals Corp.

Report Prepared by
SRK Consulting (Canada) Inc.
3CR013.002
December 23, 2016
Independent Technical Report for the Mandiana Gold Project, Guinea

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Effective date: November 08, 2016
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Cover: Typical landscape in the project area near village of Moroudo, Guinea.
IMPORTANT NOTICE

This report was prepared as a Canadian Securities Administrators National Instrument 43-101 Standards of Disclosure for Mineral Projects Technical Report for Volcanic Metals Corp. (Volcanic) by SRK Consulting (Canada) Inc. (SRK). The quality of information, conclusions, and estimates contained herein are consistent with the quality of effort involved in SRK’s services. The information, conclusions, and estimates contained herein are based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by Volcanic subject to the terms and conditions of its contract with SRK and relevant securities legislation. The contract permits Volcanic to file this report as a Technical Report with Canadian securities regulatory authorities pursuant to National Instrument 43-101. Except for the purposes legislated under provincial securities law, any other uses of this report by any third party is at that party’s sole risk. The responsibility for this disclosure remains with Volcanic. The user of this document should ensure that this is the most recent Technical Report for the property as it is not valid if a new Technical Report has been issued.

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Executive Summary

Introduction
The Mandiana Gold Project is a gold exploration property located in northeast Guinea that is at the resource development stage. Sovereign Mines of Africa PLC (SMA) indirectly owns 75% of the Mandiana Gold Project, but signed an agreement on November 3, 2016 to sell its 75% interest in the project to Volcanic Metals Corp. (Volcanic), subject to the approval of the TSX Venture Exchange.

In 2013, Sovereign Mines of Guinea Ltd. (SMG), whose ownership comprises 75% SMA and 25% Soguipami (Guinea government), retained SRK Consulting (UK) Limited (SRK UK) to evaluate the Mineral Resources for the Mandiana Gold Project. The services provided by SRK (UK), rendered between April 2013 and January 2014, led to the preparation of the Mineral Resource Statement, in compliance with the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* by the Joint Ore Reserves Committee (JORC Code, 2012 Edition). The Mineral Resource Statement was publicly disclosed by SMA in a news release on January 14, 2014.

In relation to the contemplated transaction, Volcanic commissioned SRK Consulting (Canada) Inc. (SRK) to prepare a technical report pursuant to Canadian Securities Administrators’ National Instrument 43-101 and Form 43-101F1. This technical report summarizes the technical information available on the Mandiana Gold Project and documents the Mineral Resource Statement for the Mandiana Gold Project originally prepared by SRK UK in 2013. This technical report concludes that the Mandiana Gold Project has merit and warrants additional exploration expenditures. An exploration work program is recommended, comprising core drilling, and geological modelling.

There has been no material exploration work on the Mandiana property since the work completed by SRK (UK) for the Mineral Resource Statement disclosed in 2014. As such, SRK considers that the geological interpretation, data analysis, Mineral Resource model and the Mineral Resource Statement remains current. The Mineral Resource Statement is effective November 8, 2016.

In accordance with Canadian Securities Administrators National Instrument 43-101 guidelines, Mr. Martin Pittuck from SRK (UK) visited the Mandiana Gold Project from April 29 to May 3, 2013, accompanied by Mr. John Barry and Mr. John Prochnau, representing SMG. Mr. Pittuck is the qualified person accepting professional responsibility for the Mineral Resource Statement disclosed herein.

Property Description, Location, Access and Physiography
The Mandiana Gold Project site is located in the Mandiana prefecture, approximately 100 kilometres northeast of the city of Kankan (the closest major city and second largest city in Guinea), 725 kilometres northeast of the capital city of Conakry, and 60 kilometres southeast of the AngloGold Ashanti’s Siguiri Gold Mine. The area is accessed by vehicle from Conakry on all-weather paved roads to Kankan for 630 kilometres, and year-round gravel road from Kankan to Mandiana for 95 kilometres. The property consists of two adjacent exploration permits (Mandiana North and Mandiana South) covering an aggregate area of 304 square kilometres.

The easternmost boundary of the Mandiana North permit runs along the border with Mali. An initial prospecting permit was issued to Guiord SA—a wholly owned subsidiary of SMG—on February 3, 2010 for a period of three years. The permit was renewed in April 2013, and in May 2015 for an additional period of two years. The Mandiana North permits is set to expire on May 11, 2017. The permit can be renewed for another one-year period. SRK understands that Volcanic has initiated the renewal process. There is no certainty that the permit will be renewed.

In November 2013, Guiord was granted a second prospecting permit contiguous to the south (Mandiana South). The concession effectively doubled the potential strike extension of the Mandiana Gold Project mineralizing system. Currently the size of the prospecting permits is 304.32 square kilometres. SMG did not commence any work on the southern Concession. The southern Concession permit was renewed in October 2016 and is valid for two years.
This project area lies in the Upper Guinea region and forms part of the upper watershed of the Niger River. This area is characterized by flat topography varying between 400 and 425 metres above mean sea level. Vegetation is predominantly agricultural near populated areas and savannah grasslands with small trees and shrubs farther from populated areas.

There are two main seasons each year. The rainy season from July to October is hot and humid, with monsoon-type rain events. The dry season from November to June is hot and dry, with winds coming from the Sahara Desert. Mean daily temperatures range from 24°C in December to 30°C in April. Mean annual rainfall is approximately 1,470 millimetres, with most rain events occurring in August and September. Exploration work can be completed year round.

Regional Geology, Deposit Types and Mineralization

The geology of Guinea predominantly comprises of Precambrian rocks, which have been strongly deformed by a series of orogenic events that affected the wider region of West Africa. The two principal events are the Liberian Orogeny and the Eburnean Orogeny (Birimian sequences). In Guinea, the geology can be grouped into three main subdivisions: Archaean gneissic rock, Paleoproterozoic greenstone and metasedimentary rock, or Paleoproterozoic granite terrains.

The Mandiana Gold Project area is underlain by geology comparable to that of other Birimian-age volcano-sedimentary sequences in West Africa. Hence, this region is considered prospective for “orogenic” gold deposits, which typically exhibit a strong relationship with regional arrays of major shear zones. Cutting the metasedimentary rocks are E–W trending mafic dikes of probable Mesozoic age. In these deposits, gold mineralization is typically associated with an organized network of quartz veins containing subordinate amounts of carbonate, tourmaline, sulphides, and native free-milling gold. Alternatively, gold mineralization can also be associated with disseminated sulphides in strongly deformed alteration zones without significant veining. In the latter case, gold may be free milling but also refractory. Gold mineralization is associated with regional arrays of alteration and deformation zones, commonly located at major lithological discontinuities. The local controls on the distribution of the gold mineralization are structural and lithological.

Weathering across the licence area is very deep (up to 200 metres) and tends to be deepest over the main gold bearing zones. Weathering is likely a function of the enhanced permeability along the mineralization-controlling structures.

Exploration and Drilling

Volcanic has not performed any exploration work on the Mandiana Gold Project.

SMG used GeoEye satellite imagery data they acquired in July 2010 to delineate major geological structures on the basis of their geomorphic expression. Additionally, SMG recorded basic structural measurements and the locations of 7,876 individual pits. In November and December 2010, and collected 582 pit samples within 291 recent orpaillage (artisanal mining) workings. A soil sampling program was undertaken by SMG in the southern part of the property, outside of the artisanal mining areas. In February 2011, a total of 1,510 soil samples were sent to the ALS Chemex (ALS) laboratory in Bamako, Mali.

SMG carried out three phases of drilling from 2011 to 2013, resulting in six core boreholes and 113 reverse circulation boreholes. Only the boreholes drilled at Yagbelen, Foulouni, Woyondjan, and Damantere are specifically related to the Mineral Resource estimate reported herein. The majority of the drilling was conducted using reverse circulation, with only a small number of core boreholes drilled at Yagbelen and Woyondjan. A certain number of samples from eight reverse circulation boreholes drilled during the third phase of drilling were assayed during 2014 after the Mineral Resource modelling work. These samples were not assayed because they were deemed not to be material to the Mineral Resource modelling work.

Sample Preparation, Analyses, and Quality Control

SMG dispatched 17,702 drilling samples to the ALS laboratory for preparation and assaying, at which time the ALS laboratory was not accredited. At the laboratory, the samples were prepared and assayed for gold using standard preparation and assaying methods. SMG relied in part on the analytical quality control measures
implemented by the ALS laboratory. In addition, with every batch of samples submitted for preparation and assaying, SMG used QC samples—inserted at a frequency of 1 per 24 samples—including blanks, duplicates, and standards consisting of 20 certified ROCKLABS® reference material samples.

In the opinion of SRK, the sample preparation, analytical, and QC procedures used by SMG and ALS on samples collected from the Mandiana Gold Project are consistent with generally accepted industry best practices and therefore are adequate for an exploration property.

**Data Verification**

SRK is uncertain what data verification processes were undertaken by SMG to monitor the reliability of exploration data collected between 2011 and 2013. Reports examined by SRK suggest that SMG implemented routine verifications to ensure the collection of reliable exploration data between 2011 and 2013. All work was conducted by qualified personnel under the supervision of qualified geologists. In the opinion of SRK, the field exploration procedures generally meet industry practices.

All data collected during SMG logging and sampling process were initially recorded on paper and later transcribed into a Microsoft Excel spreadsheet. The exploration data were visually examined and validated on site, by both the geologist responsible for collecting the relevant data and the supervising geologist, before being sent off site for full validation and incorporation into the master Excel spreadsheet.

In accordance with National Instrument 43-101 guidelines, SRK (UK) visited the Mandiana Gold Project from April 29 to May 3, 2013. The purpose of the site visit was to review the exploration work completed by SMG and ascertain the geological setting of the gold mineralization delineated by drilling. At the time of the visit, the third phase of the drilling program was underway. This provided an opportunity to review the geological logging and interpretation and to audit and verify the sample collection and preparation protocols.

SRK aggregated the analytical results for the QC samples produced by SMG for further analysis on correlation, absolute difference, and relative difference plots. In general, the performance of analytical quality control samples used by SMG was acceptable. The check assay data suggest that the performance of the primary laboratory (ALS) is acceptable.

**Mineral Processing and Metallurgical Testing**

SRK is not aware of any metallurgical testwork completed on samples from the Mandiana Gold Project.

**Mineral Resources Estimate**

The Mineral Resource model prepared by SRK (UK) considers three core boreholes and 113 reverse circulation holes drilled by SMG in four domains (Yagbelen, Foulouni, Woyondjan, and Damantaré) during the period of November 2011 to June 2013. The resource estimation work was completed by Dr. John Arthur, CGeol, FGS, CEng MIMMM, under the supervision of Mr. Martin Pittuck, CEng, MIMMM (IMMM # 49186). Mr. Pittuck is an appropriate independent Qualified Person as defined in National Instrument 43-101 guidelines.

SRK believes that the resource evaluation reported herein is a reasonable representation of the gold Mineral Resources found in the Mandiana Gold Project at the current level of sampling. The Mineral Resources were estimated and reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves by the Joint Ore Reserves Committee, the JORC Code (2012 Edition) and are also reported herein in accordance with Canadian Securities Administrators’ National Instrument 43-101. Mineral Resources are not Mineral Reserves and have not demonstrated economic viability. There is no certainty that all or part of the Mineral Resources will be converted into Mineral Reserves.

SRK (UK) used Leapfrog 3D and GEOVIA GEMSTM software to construct the geological solids, and a combination of GEMS and ISATIS® software to prepare assay data for geostatistical analysis, construct the block model, estimate gold grades, and tabulate Mineral Resources. A three-dimensional block model approach was used to estimate gold grades into the blocks using geostatistics, and constrained by geological solids. SRK (UK) considers that the gold mineralization found in the Mandiana project is primarily amenable to open pit extraction, thus used a pit optimizer to aid 1) determination of portions of the gold deposits showing
“reasonable prospect for eventual economic extraction” from an open pit, and 2) selection of reporting assumptions. The optimization assumptions are summarized in Table i.

After review of optimization results, SRK considers that it is reasonable to report as open pit Mineral Resource those classified blocks located within the conceptual pit shells above a cut-off grade of 0.3 g/t Au (Table ii). Mineral Resources are not Mineral Reserves and have not demonstrated economic viability. The effective date of the Mineral Resource Statement is November 8, 2016.

Table i: Conceptual Open Pit Optimization Assumptions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold price</td>
<td>1,550.00</td>
<td>US$ per ounce</td>
</tr>
<tr>
<td>Mining cost</td>
<td>13.95</td>
<td>US$ per tonne mined</td>
</tr>
<tr>
<td>Processing and General and Administrative</td>
<td>16.00</td>
<td>US$ per tonne of feed</td>
</tr>
<tr>
<td>Mining dilution</td>
<td>5</td>
<td>percent</td>
</tr>
<tr>
<td>Mining recovery</td>
<td>95</td>
<td>percent</td>
</tr>
<tr>
<td>Metal recovery (assuming CIL)</td>
<td>90</td>
<td>percent</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Category</th>
<th>Domain</th>
<th>Quantity</th>
<th>Gold Grade</th>
<th>Contained Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yagbelen</td>
<td>13.3</td>
<td>1.20</td>
<td>510</td>
</tr>
<tr>
<td></td>
<td>Foulouni</td>
<td>0.7</td>
<td>1.13</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Woyondjan</td>
<td>1.9</td>
<td>0.99</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Damantere</td>
<td>0.2</td>
<td>2.21</td>
<td>16</td>
</tr>
<tr>
<td>Inferred Total</td>
<td></td>
<td>16.1</td>
<td>1.18</td>
<td>612</td>
</tr>
</tbody>
</table>

* Mineral Resources are reported in relation to a conceptual pit shell. Mineral Resources are not Mineral Reserves and have not demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate. Open pit Mineral Resources are reported at a cut-off grade of 0.3 g/t gold. Cut-off grades are based on a price of US$1,550 per ounce of gold and recovery of 95%.

SRK is satisfied that the Mineral Resources were estimated in conformity with the widely accepted Canadian Institute of Mining, Metallurgy and Petroleum (CIM) *Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines* (May, 2014). The Mineral Resources may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent Mineral Resource estimates. The Mineral Resources may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic, and other factors. Apart from the expiry of the exploration permit on May 11, 2017, there are no known mining, environmental, processing, permitting, taxation, socio-economic, and other factors that may affect the Mineral Resources.

**Conclusion and Recommendations**

The Mandiana North exploration licence expires on May 11, 2017 but can be renewed for another one-year period. Although SRK understands that Volcanic has initiated the renewal process, there is no certainty that the licence will be renewed when it expires.

SRK considers that the character of the gold mineralization delineated by drilling on the Mandiana Gold Project is of sufficient merit to warrant additional exploration expenditures. The work program recommended by SRK includes infill drilling to analyze the nature and controls of the higher grade gold mineralization, with more core boreholes recommended than for reverse circulation drilling. The cost of the recommended work program is estimated at C$900,000.

SRK believes that Volcanic can deliver the recommended work program prior to the expiry of the Mandiana North exploration licence.
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1 Introduction and Terms of Reference

The Mandiana Gold Project is a resource development stage gold exploration property located in northeast Guinea. The project site is located in the Mandiana prefecture, approximately 100 kilometres northeast of the city of Kankan (the closest major city and second largest city in Guinea), 725 kilometres northeast of the capital city of Conakry, and 60 kilometres southeast of the AngloGold Ashanti Siguiri Gold Mine. The easternmost boundary of the license runs along the border with Mali.

Sovereign Mines of Africa PLC (SMA) indirectly owns 75% of the Mandiana Gold Project. In 2013, Sovereign Mines of Guinea Ltd. (SMG), retained SRK Consulting (UK) Limited (SRK UK) to prepare a Mineral Resource Statement, in compliance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves by the Joint Ore Reserves Committee (JORC Code, 2012 Edition), which was publicly disclosed by SMA in a news release on January 14, 2014.

On November 3, 2016, SMA signed an agreement to sell its 75% interest in the project to Volcanic Metals Corp. (Volcanic), subject to the approval of the TSX Venture Exchange.

In relation with the contemplated transaction, Volcanic has commissioned SRK Consulting (Canada) Inc. (SRK) to prepare a technical report pursuant to Canadian Securities Administrators’ National Instrument 43-101 and Form 43-101F1. This technical report summarizes the available technical information and documents the Mineral Resource Statement for the Mandiana Gold Project originally prepared by SRK UK in 2013.

The Mineral Resource Statement reported herein was prepared in conformity with generally accepted Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines. SRK understands that this technical report will be used by Volcanic to support a listing application to the TSX Venture Exchange.

This technical report concludes that the Mandiana Gold Project, in the opinion of SRK, warrants additional exploration expenditures. An exploration work program is recommended, comprising core drilling, and geological modelling.

1.1 Scope of Work

As defined in a letter of engagement between Volcanic and SRK, the scope of work includes the preparation of an independent technical report in compliance with National Instrument 43-101 and Form 43-101F1 guidelines. This work incorporates an assessment of the following aspects of this project:

- Topography, landscape, access
- Regional and local geology
- Exploration history
- Audit of exploration work carried out on the project
- Geological modelling
- Mineral Resource estimation and validation
This technical report was prepared following the National Instrument 43-101 guidelines and Form 43-101F1. The report was assembled in Toronto during August to November, 2016.

1.2 Work Program

The Mineral Resource Statement reported herein was prepared in conformity with the generally accepted CIM Exploration Best Practice Guidelines and CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines. The exploration database was compiled and maintained by SMG and was audited by SRK (UK). The geological model and outlines for the gold mineralization were constructed by SRK (UK) from a two-dimensional geological interpretation provided by SMG. In the opinion of SRK, the geological model is a reasonable representation of the distribution of the targeted mineralization at the current level of sampling. The geostatistical analysis, variography, and grade models were completed by SRK (UK) during June to November 2013. The Mineral Resource Statement was presented to SMG in a memorandum report on January 2014 and publicly disclosed in a news release dated January 14, 2014.

SRK confirmed with SMG that there has been no material exploration on the Mandiana property since 2013. SRK was informed that a certain number of samples collected in 2013 were assayed in 2014, after the SRK UK work, because they were deemed not to be necessary to support the preparation of an initial geology and Mineral Resource model. The additional analytical results were reviewed by SRK and those results do not materially alter the geological interpretation and the Mineral Resource model. As such, the geological interpretation and the Mineral Resource model originally prepared in 2013 remains valid and is current.

The Mineral Resource Statement reported herein was presented to Volcanic on November 3, 2016 and disclosed publicly in a news release dated November 8, 2016.

1.3 Basis of Technical Report

This report is based on information collected by SRK (UK) during a site visit April 29 to May 3, 2013 and on additional information provided by Volcanic and SMG throughout the course of SRK’s investigations. SRK has no reason to doubt the reliability of the information provided by Volcanic and SMG. Other information was obtained from the public domain. This technical report is based on the following sources of information:

- Discussions with Volcanic and SMG personnel
- Inspection of the Mandiana Gold Project area, including outcrop and core by SRK (UK)
- Review of exploration data collected by SMG
- Additional information from public domain sources

1.4 Qualifications of SRK and SRK Team

The SRK Group comprises more than 1,400 professionals, offering expertise in a wide range of resource engineering disciplines. The independence of the SRK Group is ensured by the fact that it holds no equity in any project it investigates and that its ownership rests solely with its staff. These facts permit SRK to provide its clients with conflict-free and objective recommendations. SRK has a proven track record in undertaking independent assessments of Mineral Resources and mineral reserves, project evaluations and audits, technical reports, and independent feasibility evaluations to bankable standards on behalf of exploration and mining companies and financial institutions worldwide. Through its work with a large number of major international mining companies, the SRK
Group has established a reputation for providing valuable consultancy services to the global mining industry.

This technical report was assembled by a team of professionals sourced from SRK UK and SRK.

Mr. Martin Pittuck, CEng, MIMMM (IMMM # 49186) from SRK (UK), performed the site visit in spring 2013, and supervised the Mineral Resource evaluation work conducted in 2013 and reported in January 2014. Dr. Oy Leuangthong, PEng (PEO # 90563867) from SRK compiled this technical report. By virtue of their education, membership to a recognized professional association and relevant work experience, Mr. Pittuck and Dr. Leuangthong are independent Qualified Persons as defined by National Instrument 43-101.

Mr. Glen Cole, PGeo (APGO #1416), a Principal Consultant (Geology) with SRK, reviewed drafts of this technical report prior to their delivery to Volcanic as per SRK internal quality management procedures. Mr. Cole and Dr. Leuangthong did not visit the project site.

1.5 Site Visit

In accordance with National Instrument 43-101 guidelines, Mr. Martin Pittuck and Mr. Oliver Jones of SRK (UK) visited the Mandiana Gold Project from April 29 to May 3, 2013, accompanied by Mr. John Barry and Mr. John Prochnau of SMG.

The purpose of the site visit was to review the exploration database digitization and validation procedures, review exploration procedures, define geological modelling procedures, examine drill core, interview project personnel, and collect all relevant information to prepare a Mineral Resource model and compile a technical report. The site visit also aimed at investigating the geological and structural controls on the distribution of the gold mineralization, to aid the construction of three-dimensional gold mineralization domains. During the visit, Mr. Pittuck visited the sample storage and preparation facilities and examined several representative core sections in the core storage facility.

Mr. Pittuck was given full access to relevant data and conducted interviews with SMG personnel to obtain information on the past exploration work that would clarify procedures used to collect, record, store, and analyze historical and current exploration data.

1.6 Effective Dates

The effective date for the Mineral Resource Statement is November 8, 2016.

1.7 Acknowledgement

SRK would like to acknowledge the support and cooperation provided by Volcanic personnel for this assignment. Their collaboration was greatly appreciated and instrumental to the success of this project.

1.8 Declaration

SRK’s opinion contained herein and effective November 8, 2016 is based on information collected by SRK throughout the course of SRK’s investigations. The information in turn reflects various technical and economic conditions at the time of writing this report. Given the nature of the mining
business, these conditions can change significantly over relatively short periods of time. Consequently, actual results may be significantly more or less favourable.

This report may include technical information that requires subsequent calculations to derive subtotals, totals, and weighted averages. Such calculations inherently involve a degree of rounding that introduces a margin of error. Where these occur, SRK does not consider them to be material.

SRK is not an insider, associate or an affiliate of Volcanic, SMA, or SMG. Neither SRK nor any affiliate has acted as advisor to Volcanic, SMA, or SMG, or their subsidiaries or affiliates in connection with this project. The results of the technical review by SRK are not dependent on any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings.
2 Reliance on Other Experts

SRK has not performed an independent verification of land title and tenure information as summarized in Section 3 of this report. SRK did not verify the legality of any underlying agreement(s) that may exist concerning the permits or other agreement(s) between third parties, but has relied on Mr. Me Mody Oumar Barry as expressed in a legal opinion provided to Volcanic on November 3, 2016. A copy of the title opinion is provided in Appendix A. The reliance applies solely to the legal status of the rights disclosed in Sections 3.1 and 3.2 below.

SRK was informed by Volcanic that there are no known litigations potentially affecting the Mandiana Gold Project.
3 Property Description and Location

The Mandiana Gold Project is located in the Mandiana prefecture in northeastern Guinea, situated 100 kilometres northeast of Kankan (the closest major town and second largest city in Guinea) and 725 kilometres northeast from Conakry, the capital city of Guinea. The property is centred at approximately 8 degrees, 45 minutes west, and 11 degrees north (Figure 1).

3.1 Mineral Tenure

The Mandiana Gold Project consists of two contiguous prospecting permits as listed in Table 1 and shown in Figure 2. Together the permits cover an area of 304.32 square kilometres and are in good standing with the Centre for Mining Promotion and Development (CPDM). The permits are 100 percent owned by Guiord SA (Guiord) which is a wholly owned subsidiary of SMG. SMG is 75 percent owned indirectly by SMA and 25 percent interest owned by the Guinean government through an investment company. The CPDM is under the authority of the ministry in charge of mines and is serving as an interface between investors and the local administration. The permits give Guiord the right to explore for gold and other associated minerals.

A prospecting permit grants the exclusive right to explore for all of the substances specified in the permit for an initial period of three years. Prospecting permits are not subject to minimum expenditure requirements, but must comply with submitted and approved exploration programs. The permits can be renewed twice, each time for a period of two years. Half of the prospecting permit area must be relinquished on initial renewal. If, at the end of the second renewal, the holder of the permit has not been able to complete a feasibility study for reasons justified and verified by the CPDM, it may be extended for an additional period of one year.

Industrial prospecting permit A2015/018/DIGM/CPDM was issued to Guiord on February 3, 2010 for three years and was renewed for the first time on April 9, 2013 as per Article 24 of the 2011 Mining Code of Guinea for two years. It was renewed a second time on May 11, 2015. Set to expire on May 11, 2017 this permit can be extended by one-year by the CPDM if sufficient information is provided on why a feasibility study has not been completed.

In November 2013, Guiord was granted a second industrial prospecting permit (A2016/071/DIGM/CPDM) immediately and contiguously to the south of the first permit area. This permit was renewed on October 19, 2016 for an additional two years.

<table>
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<th>Permit Name</th>
<th>Permit No.</th>
<th>Permit Owner</th>
<th>Issue Date</th>
<th>Expiry Date</th>
<th>Area (km²)</th>
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<td>Guiord SA</td>
<td>Oct. 19, 2016</td>
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Figure 1: Location Map of the Mandiana Gold Project
Figure 2: Land Tenure Map of the Mandiana Gold Project
3.2 Underlying Agreements

Volcanic signed an agreement with SMA on November 3, 2016 to acquire a 75% interest in the Mandiana Gold Project. Under the agreement, Volcanic will acquire all of the outstanding share capital of SMA’s wholly-owned subsidiary, Sovereign Mines of Africa Ltd. (Sovereign Mines). Sovereign Mines holds a 75% interest in the Mandiana Gold Project, with the remaining 25% interest held by SOGUIPAMI, a Guinean government-owned business entity formed to conduct mineral exploration projects.

Volcanic was assigned the right to acquire Sovereign Mines by Radius Gold Inc. (Radius). In consideration for acquiring the outstanding share capital of Sovereign Mines and for the assignment by Radius, Volcanic has agreed to issue common shares to SMA and Radius such that SMA will hold 9.9% and Radius will hold 5.0% of the outstanding share capital of Volcanic following completion of the transaction.

Volcanic is not subject to any royalties, back-in rights or encumbrances, other than the noted ownership interest of SOGUIPAMI.

3.3 Permits and Authorization

The Mandiana Gold Project is an early stage exploration project. No permit other than the permit granting the mineral rights is required for exploration activities, including trenching and drilling. Access rights must be negotiated with the local population, and it is customary to compensate local farmers for crop disturbances caused by surface exploration work. In order to maintain surface access, annual community payments must be made in the amount of US$20 per square kilometre for the Mandiana North permit and US$15 per square kilometre for the Mandiana South permit.

3.4 Environmental Considerations

SRK is not aware of any environmental liabilities related to the Mandiana Gold Project.

3.5 Mining Rights in Guinea

This section has been extracted and summarized from KPMG (2014)

The Guinean government updated the regulatory environment surrounding mining and exploration in 2011. After significant criticism from industry groups, the government amended the mining code in 2013. However, certain contentious issues remain, including an automatic 15-percent ownership in mining projects held by the Guinean government, as well as an option for the government to acquire an additional 20 percent ownership in mining projects. This ownership provision is designed to encourage companies to process raw materials inside Guinea, rather than exporting unprocessed ore, theoretically decreasing the government’s overall stake in a project as a product’s value increases through processing and possibly manufacturing inside the country’s borders. A second contentious clause in the mining code requires that a shareholders’ agreement will identify decisions that cannot be adopted without prior consultation with the Guinean state; it is not clear whether this provision will entail veto rights for the Guinean government.

The Guinean mining code distinguishes between three levels of permitting that are prospecting permits, exploitation permits, and mining concessions. Prospecting permits distinguish between industrial and semi-industrial prospecting permits, neither of which can be transferred, sold, or used...
as collateral. An individual or entity cannot hold more than three prospecting permits for bauxite and iron mineralization within a maximum limit of 1,050 square kilometres, and not more than five mine prospecting permits for other substances within a maximum limit of 250 square kilometres for industrial prospecting permits, and 80 square kilometres for semi-industrial prospecting permits. While the area of a prospecting permit cannot exceed 500 square kilometres for industrial prospecting permits for bauxite and iron mineralization, it cannot exceed 100 square kilometres for industrial prospecting permits for other substances, including gold, and 16 square kilometres for semi-industrial prospecting permits. Industrial prospecting permits are granted for three years, and can be renewed twice for two-year periods, semi-industrial prospecting permits are granted for two years and can be renewed once for one year. At each renewal, the prospection area is reduced by 50 percent; the relinquished area must be accessible and, if possible, constitute a block, the sides of which are attached to one of the sides of the permit area.

Unlike prospecting permits, exploitation permits can be transferred, sold, or used as collateral. Industrial exploitation, or operating permits, are granted for 15 years. Semi-industrial exploitation permits are granted for 5 years. Both types of permits can be renewed for five-year periods; approval of renewal applications is dependent on compliance with rules and obligations inherent to exploitation permits. Non-commencement of work within a year of the date of the issuance of an exploitation permit results in monthly fines.

Mining concessions can be transferred, sold, or used as collateral, also. They are granted for large projects that involve significant investments in infrastructure, as defined by a feasibility study. Mining concessions are granted for 25-year periods and can be renewed for 10-year periods. In order for a project to qualify for a mining concession a minimum of US$1.0 billion (bauxite, iron, and radioactive substances) or US$0.5 billion (other minerals) of investments are required. Upon non-commencement of work within a year of the issuance of a mining concession, a monthly fine of US$2 million will be charged.

Mining convention: The granting of a mining concession and an exploitation permit must be accompanied by the mining convention. The maximum duration of a mining convention is 25 years, renewable for one or several periods of 10 years. Mining conventions are subject to an executive order and will be signed by the Minister of Mines, following the advice of the National Mining Committee and the authorization of the Council of Ministers. Mining conventions will then be submitted for the legal opinion of the Supreme Court and ratified by Parliament.

3.6 SRK Comments

Apart from the expiry of the Mandiana North exploration permit on May 11, 2017, there are no known significant factors and risks that may affect access, title, or the right or ability to perform the exploration work recommended for the Mandiana Gold Project.

The Mandiana North permits is set to expire on May 11, 2017. The permit can be renewed for another one-year period. SRK understands that Volcanic has initiated the renewal process. There is no certainty that the permit will be renewed.
4 **Accessibility, Climate, Local Resources, Infrastructure, and Physiography**

4.1 **Accessibility**

The Mandiana Gold Project is located in the northeast of Guinea, approximately 100 kilometres northeast of the city of Kankan and 725 kilometres northeast from Conakry, the capital city of Guinea. The area is accessible year round by vehicle from Conakry and Kankan via Mandiana, the closest town to the project area.

4.2 **Local Resources and Infrastructure**

The area has a relatively low population of approximately 25,000 people within the Mandiana prefecture. The population in this region is mainly Malinke, a West African ethnic group that lives in traditional rural villages.

The project area is rural and underdeveloped, with no infrastructure. No local services are available, including mobile telephone coverage. The project is self-sufficient in regard to water supply, electricity generation, and satellite communications.

A skilled workforce is available in Guinea. Human resources may also be available from nearby countries, such as Mali and Burkina Faso, travelling from major centres such as Bamako, Mali and Ouagadougou, Burkina Faso.

4.3 **Climate**

The Mandiana Gold Project area experiences two main seasons each year. The rainy season from July to October is hot and humid, with monsoon-type rain events. The dry season from November to June is hot and dry, with winds coming from the Sahara Desert. Mean daily temperatures range from 24°C in December to 30°C in April. The maximum temperature can reach 39°C during March–April, whereas the minimum temperature can be as low as 11°C during December–January. Mean annual rainfall is approximately 1,470 millimetres, with high most rain events occurring in August and September.

Exploration work can be completed year round.

4.4 **Physiography**

There are four main physiographical regions in Guinea: Upper Guinea, Central Guinea, Lower Guinea (or Maritime Guinea), and Forest Guinea. The Mandiana Gold Project lies in the Upper Guinea region, to the east of Futa Jalon, north of Forest Guinea, and bordering Mali to the north and east. The Upper Guinea region forms part of the upper watershed of the Niger River and is a generally flat, coastal plain.

The mean elevation in the project area ranges from approximately 400 to 425 metres above sea level. Vegetation is predominantly agricultural near populated areas and savannah grasslands with small trees and shrubs farther from populated areas.
Figure 3: Typical Landscape in the Project Area Near Village of Moroudo, Guinea
5 History

The Mandiana Gold Project is situated in a region that has been well known for artisanal mining for more than 1,000 years. There is visible evidence of artisanal mine workings throughout the Mandiana prefecture: more than 7,000 workings have been found in the project area alone.

There are few records of exploration work completed prior to SMG ownership. SMG began drilling the property in June 2011, and completed three phases of drilling by June 2013. The first published Mineral Resource Statement for the Mandiana Gold Project was released in January 2014. There has been no significant exploration or development work since.

Apart from the artisanal mining, there has been no commercial gold production from a company on this property.
6 Geological Setting and Mineralization

6.1 Regional Geology

The geology of Guinea is predominantly comprised of Precambrian rocks that have been strongly deformed by a series of orogenic events that affected the wider region of West Africa (Figure 4).

The two principal events are the Liberian Orogeny and the Eburnean Orogeny (Birimian sequence). In Guinea, the geology can be grouped into three main rock sequences: Archaean gneissic rock, Paleoproterozoic greenstone and metasedimentary rock, and Paleoproterozoic granite terrains.

6.1.1 Archaean Gneissic Rock

The Archaean rocks comprise granite, gneiss, and migmatite intercalated with high-grade schistose metasedimentary rock. These are remnants of the West African Craton, ancient shield rocks that formed circa 2.6–2.9 billion years ago (Ga). Recent mapping has enabled subdivision on the basis of age and lithology. The oldest rocks are high-grade metamorphic rocks (amphibolite to granulite facies), which pre-date the Liberian Orogeny, dated at between 2.8 and 3.05 Ga. The second of these subdivisions constitutes granitic batholiths of Liberian age (circa 2.6–2.8 Ga). The final subdivision contains two banded iron formation (BIF) ranges at Simandou and Nimba.

6.1.2 Paleoproterozoic Greenstone and Metasedimentary Rocks

The northeast of Guinea is dominated by a vast area of Paleoproterozoic metasedimentary and metavolcanic rocks—referred to as the Siguiri Basin—which forms the host stratigraphy for the Mandiana Gold Project. The Siguiri Basin is bounded to the south by Paleoproterozoic plutonic rocks and to the north is buried by overlying Late Paleoproterozoic and Mesozoic sedimentary rocks. Marine detrital sedimentary siltstone and fine sandstone constitute the dominant lithologies within the basinal succession, but are intercalated with minor lava (pyroclastic rock) and are intruded by subvolcanic dikes and sills. All of the rocks are generally weakly metamorphosed, and the development of sericite as a secondary mineral is pervasive. Deformation within the basinal succession is heterogeneous: most of the metasedimentary and metavolcanic rocks possess an irregular foliation, with localized development of a stronger schistosity in shear zones and in the vicinity of plutonic contacts.

Volcanic rocks within the basin have been dated at circa 2.1 Ga, leading to the interpretation that the Siguiri Basin succession is the same age as volcanic rocks in Birimian greenstone belts elsewhere in the wider West African region. The volcanic components within the basin share the same geochemical characteristics as modern-day subduction zones, suggesting that the basin originally had a convergent margin setting.

Birimian greenstone rocks host world-class accumulations of gold in West Africa. In Guinea, the Siguiri Basin hosts the Siguiri, Lefa, and Kiniero mines, the principal gold producers of the country. Numerous other gold prospects occur throughout the basin, which extends east across the Malian frontier.
Figure 4: Regional Geological Map of West Africa
6.1.3 **Paleoproterozoic Granite Terrains**

A large belt of granitic rocks separates the Archaean cratonic rocks to the south from the Siguiri Basin metasedimentary rock to the north. The belt has an average width of 50–100 kilometres and outcrops in an arc, with a general WNW–ESE strike. Several isolated plutons of Paleoproterozoic age fall outside of this arc within the Siguiri Basin and the Archaean domain.

The granite terrain is dominated by a vast granodioritic batholith that is intruded by smaller granitic bodies such as monzogranite, biotite granite, and two-mica granite. The granite batholith is dated at circa 2.08 Ga, indicating that it was emplaced late in the Eburnean Orogeny. Its emplacement during this orogeny is thought to coincide with the development of large-scale sinistral shear zones along the southern margin of the plutonic belt, where it borders the Archaean domain.

6.2 **Structural Geology**

Two main fracture and fault zones have played an important role in the tectonic development of Guinea and on the control of hydrothermal gold mineralization found throughout the Birimian. Probably the most important are NNE–SSW and N–S trending structures associated with intense ductile deformation, normally with a significant sinistral transcurrent component. These structures are commonly host zones of intense quartz, carbonate, and kaolinitic hydrothermal alteration associated with gold mineralization. Within the northeast of Guinea, prominent E–NE lineaments cross the entire Siguiri Basin. Some of these structures are recognised as fault zones associated with intense mylonitic deformation and are the locus of granodiorite lenses injected into these structures.

Geophysical maps of Guinea indicate the presence of many mafic to ultramafic dikes and sills that intruded the Archaean and Proterozoic rocks during the Mesozoic. These intrusions generally strike in an E–W orientation.

6.3 **Property Geology**

The Mandiana Gold Project is underlain by Birimian rocks of the Siguiri Basin succession.

Geology of the Mandiana Gold Project area is very poorly characterized. Deryugin and Magee (2013) report that metasedimentary rock outcrops are sparse and show sub-vertical, approximately north-south-trending beds of rusty sandstone, siltstone, and mica-staurolite phyllite. The metasedimentary rocks are folded and contain a weak to moderately developed slaty cleavage that dips subvertically and trends N–S to NNE–SSW. The presence of fine mineral stretching lineation has been recorded. Two sectors of alluvial sediments were mapped within the Fie and Sankarani river valleys, and a northwest-southeast trending dyke of Mesozoic dolerite is encountered as fragments on surface, and mapped across the property intruding metasedimentary rocks of the Paleoproterozoic Siguiri Basin succession. Known veins have a dominantly north-south orientation parallel to the slaty cleavage orientation.

Geological interpretation of satellite imagery—together with mapping of the pits and scarce outcrops—indicates that several systems of structures are present (Figure 5), although their nature and role in relationship with gold mineralization are unclear.
6.4 Mineralization

Mineralization in the Mandiana property consists dominantly of quartz vein in float and numerous boudinaged and broken quartz veins with clay altered wallrock near the orpaillage pits. Pyrite and arsenopyrite are the main sulphides in gold bearing veins. Free gold is reported. Secondary (placer) gold deposits are also reported in the property.

Exploration work has identified several zones of gold mineralization that are located on (Figure 6).

Reverse circulation drilling in the Yagbelen area during 2013 encountered the following main zones of quartz veins: the north-northwest trending Foloukatou, Daoudabe, Daoulemba-Folountou, and the north-south trending Foulanibe-Kadossa zone.

The Foloukatou zone hosts the Foloukatou orpaillage and includes numerous old pits and recent mines exploited with metal detectors. Its length is more than 200 metres and width on surface ranges from 50 to 70 metres.

The Daoudabe zone was mined by local orpaillers and drilled with no significant mineralization returned. The zone’s width is approximately 100 metres and length approximately 200 metres.

The Daoulemba-Folountou zone hosts large recent orpaillages. Its length is approximately 600 metres and width up to 100 metres.

The Foulanibe-Kadossa zone hosts recent orpaillages. Its length is more than 1000 m and width ranges from 100 to 130 metres.

The Woyondjan sector has southeast to east-southeast trending white to light grey auriferous quartz veins with pyrite, rare arsenopyrite, and minor limonite and goethite partially filling open spaces form stockwork style mineralization. The mineralized zone has a length of 800 metres and width of 130 metres.

Orpaillages in the Folouni sector are interpreted to exploit placer style gold mineralization.

The Sidylamin sector has been exploited recently with metal detectors mineralization consists of quartz-pyrite vein zones 550 metres in length and maximal width of 300 metres. Its shape is complicated and the trend of the gold veins is not known.

The Masafren sector has a zone of north-south trending quartz veins with approximate 800 metres length and 350 metres maximal width.

The Namatous sector has recent orpailleage in numerous shallow pits north-south-trending quartz vein zones 1000 m in length and 350 metres in width.

Weathering across the licence area is very deep (up to 200 metres) and tends to be deepest over the main gold-bearing zones. Weathering is likely a function of the enhanced permeability along the mineralization structures. Within the area of the main orpaillage workings, the metasedimentary rocks are pervasively altered by kaolinite and cut by quartz veins and breccia, which contain red-brown oxides, interpreted to be the weathering product of sulphides. Orpailleurs extract gold from both quartz vein material and altered host rocks.
Figure 5: Overview of the Local Geology Setting of the Mandiana Gold Project
Figure 6: Location of Gold Mineralization Identified on the Property and Initial Interpretation of Structures from Satellite Imagery in the Yagbelen and Woyondjan Zones

Source: SRK (UK), 2014
7 Deposit Types

The Mandiana Gold Project is underlain by geology comparable to that of other Birimian-age volcano-sedimentary sequences in West Africa. This region is therefore considered prospective for “orogenic” gold deposits, which typically exhibit a strong relationship with regional arrays of major shear zones. In these deposits, the gold mineralization is typically associated with an organized network of quartz veins containing subordinate amounts of carbonate, tourmaline, sulphides, and native free-milling gold. Alternatively, the gold mineralization can also be associated with disseminated sulphides in strongly deformed alteration zones without significant veining. In the latter case, gold may be free milling, but also may be refractory.

The gold mineralization is related to regional arrays of alteration and deformation zones, commonly located at major lithological discontinuities. The local controls on the distribution of the gold mineralization are generally both structural and lithological.
8 Exploration

Volcanic has not performed any exploration work on the Mandiana Gold Project. All available exploration work discussed in this section was completed by SMG.

No material exploration work has been done on the property since 2013. The exploration work completed by SMG was audited by SRK UK and SRK.

8.1 Exploration Work by SMG

8.1.1 Structural Geology Interpretation and Pit Mapping

GeoEye satellite imagery was acquired by SMG in July 2010 and used to delineate major geological structures on the basis of their geomorphic expression (Figure 6). Concession-scale structures were interpreted from 1:25,000 scale imagery, whereas structures within the vicinity of the orpaillages were mapped at 1:5,000 scale. Additionally, basic structural measurements were recorded where exposures permitted.

Interpretation of the satellite imagery by SMG revealed four main sets of photolineaments on the basis of their orientation, which may represent geological features (Figure 6). These sets are oriented as follows: NW–SE, N–S, NE–SW, and E–W. Orpaillage workings are generally co-linear with NW–SE and N–S oriented photolineaments; therefore, SMG currently believes that these structures exert the principal structural control on mineralization and extend into the southern part of the project area. In several of the pits, the foliation of the metasedimentary rocks had a N–S or NNW–SSE strike and dip sub vertically towards the west. E–W and NE–SW oriented structures are tentatively interpreted as post-mineralization, with some hosting Mesozoic dolerite dikes. Several enigmatic concentric circular lineaments have also been interpreted from satellite imagery. These structures may image granitic intrusions.

SMG has recorded the locations of 7,876 individual pits along what appear to be two parallel structures constituting a mineralized corridor in the area of the prospecting permits (Figure 6). The orpaillage workings were distinguished into three groups by the type of material they exploit: those that extract highly weathered in-situ saprolitic material, those that exploit colluvial material, and others that mine alluvial placers. SMG has also distinguished relatively new workings from established workings, and those that are said to pre-date colonial times. The known orpaillage sectors broadly define two linear NW trending belts known as Yagbelen and Woyondjan gold fields, which are approximately 1,000 and 600 metres in length, respectively, and range up to 200 metres in width.

The orpaillage sectors typically comprise clusters of closely spaced vertical pits, often only 5-10 metres apart at the surface and sometimes interconnected at depth where mineralized rock is encountered. The shafts generally target the soft, easily mineable saprolite horizon, with depths from a few metres up to thirty metres in exceptional cases. Individual orpaillage sectors are most frequently oriented along NW–SE to NYS trends and extend for lengths of several hundred metres. Based upon geological observation and pit sample results, SMG interprets there to be a reasonable continuity of gold mineralization within structures following these trends.
8.1.2 Soil Sampling

A soil sampling program was undertaken in January 2011 by two groups supervised by SMG geological staff in the southern part of the property, outside of the areas of orpaillage workings. Sampling was conducted on an irregular grid consisting of 21 lines spaced 200–600 metres apart, with samples collected every 50 metres (see Figure 7). Samples were taken from a minimum depth of 40 centimetres below the base of the organic horizon or the surface and no samples were taken from areas of recent orpaillage workings. In total, 1,510 soil samples were sent to the ALS Chemex (ALS) laboratory in Bamako in February 2011.

Soil samples ranged in grade from below detection to 5,000 parts per billion (ppb) gold (median 3 ppb, mean 19 ppb). Gold values of 8–40 ppb generally define relatively continuous zones that trend NW–SE and are co-linear with the main Yagbelen and Woyondjan gold fields, as defined by the pit mapping and sampling (Figure 7). Higher soil values tend to be relatively spotty in distribution. Sample lines to the north of Yagbelen suggest that the gold mineralization may extend up to 1.5 kilometres north of the current limit of artisanal mining. However, due to the relatively wide line spacing and the presence of more than one group of anomalous values, the correlation of the main zone between a few of the lines is not entirely straightforward.

Figure 7: Location of Soil and Pit Sample Data
In SRK’s opinion, some infill soil sample lines are warranted to guide drilling between widely spaced (i.e. 500 metres) sample lines north of Yagbelen. The area directly to the north of Woyondjan has not been sampled within a kilometre of the orpaillage workings; therefore, this zone has the potential to be extended significantly in this direction. No soil samples have been taken in the southern license. SRK recommends extending coverage of soil samples southwards into the southern license.

8.1.3 Pit Sampling

During November and December 2010, SMG carried out a program of pit sampling within all recent orpaillage workings. In total, 582 samples of altered or mineralized rock were collected from 291 pits; these are considered representative of material mined by the orpailleurs and mine spoil. The intention of this sampling program was to establish a qualitative indication of the configuration, distribution, and extent of gold mineralization. The pit sampling results were used to guide drilling. None of the pit samples inform the Mineral Resource model.
9 Drilling

Volcanic has not completed any drilling on the Mandiana Gold Project. This section presents the drilling activities completed by SMG to support the initial Mineral Resource Statement prepared for the property. No new drilling has been conducted since.

9.1 Core Drilling Program (Phase 1–3)

Table 2 and Figure 8 summarize the drilling carried out at the Mandiana Gold Project. Only the boreholes drilled at Yagbelen, Foulouni, Woyondjan, and Damantere are related to the current Mineral Resource estimate reported herein. The majority of the drilling was carried out using reverse circulation, with only a small number of core boreholes drilled at Yagbelen and Woyondjan. Duplicate reverse circulation samples were collected for quality control purposes.

Boreholes intersected high-grade gold mineralization generally less than three metres in width within much broader lower-grade intervals (cut-off of 0.25 gram of gold per tonne [g/t]). The intensity of artisanal activity in the areas is probably explained by the bonanza-grade quartz veins intercepted at Yagbelen in boreholes RCY-117 (cut one metre of 149 g/t gold from eight metres), RCY 114 (cut one metre of 97.4 g/t gold from 184 metres) and RCY-94 (cut one metre averaging 68.8 g/t gold from 168 metres). Of much greater significance for potential commercial bulk mining of these gold deposits is the presence of continuous broader zones of lower-grade gold mineralization, which form a halo around the higher-grade vein system and may reflect mobilization within the exceptionally deep weathering profile (200 metres at Yagbelen). This broader lower-grade gold mineralization is characterized by hydrothermal alteration, including sulphidation and quartz veining within the intensely weathered profile.

Table 2: Summary of Drilling Completed at the Mandiana Gold Project by SMG

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<td>180</td>
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<tr>
<td>Yagbelen*</td>
<td>RC</td>
<td>13</td>
<td>1809</td>
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<td>3034</td>
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<tr>
<td>Woyondjan*</td>
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<td>750</td>
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<td>Foulouni*</td>
<td>RC</td>
<td>3</td>
<td>366</td>
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<td>Makolo</td>
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<td>Sidylamin</td>
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<tr>
<td>Masafren</td>
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<tr>
<td>Namatou</td>
<td>RC</td>
<td>3</td>
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<td>Yagbelen*</td>
<td>BH</td>
<td>3</td>
<td>276</td>
<td>2 (tails)</td>
<td>219</td>
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<tr>
<td>Woyondjan*</td>
<td>BH</td>
<td>1 (tail)</td>
<td>109</td>
<td></td>
<td>109</td>
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<tr>
<td><strong>Total</strong></td>
<td>RC</td>
<td><strong>21</strong></td>
<td><strong>3009</strong></td>
<td><strong>32</strong></td>
<td><strong>4590</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>BH</td>
<td><strong>3</strong></td>
<td><strong>276</strong></td>
<td><strong>3</strong></td>
<td><strong>328</strong></td>
</tr>
</tbody>
</table>

RC = reverse circulation, BH = core borehole

* Considered for Mineral Resource evaluation of Mandiana Gold Project
Figure 8: Location of Core and Reverse Circulation Boreholes Drilled by SMG

Figure 9 is a vertical projection of the Yagbelen area showing the shallow plunge of the gold mineralization. This image does not include the bonanza-grade intersection mentioned above, which occurs to the north and may be representative of a second high-grade shoot. The implication is that deeper targeted drilling could increase the resource potential at Yagbelen.
A certain number of samples from eight reverse circulation boreholes (RCD_111, RCD_112, RCD_113, RCD_118, RCD_90, RCD_93, RCD_95, and RCW_106) drilled during phase three of the 2013 drilling program were assayed during 2014 after the Mineral Resource evaluation work was completed by SRK UK. Those samples had not been initially assayed because they were deemed not necessary to support the preparation of an initial geology and Mineral Resource model. During 2014, these samples were sent to the ALS laboratory in Bamako for preparation and assaying.

Significant analytical results were disclosed by SGM on September 30, 2014. The results for four boreholes (RCY_90, RCY_93, RCY_95 and RCY_118) drilled within the Yagbelen target replicate analytical results of nearby holes. One high grade interval (18.14 g/t gold over hole length interval of 4.0 metres) intersected in boreholes RCY_93 is associated with a quartz vein. At the Woyondjan target borehole RCW-106 intersected one hole length interval of 4.0 metres grading an average of 2.16 g/t gold. Other samples did not intersect significant gold mineralization.

SRK reviewed these additional analytical results. They essentially replicate the analytical results obtained from adjacent boreholes and therefore have a negligible impact on the geological interpretation of the boundaries of the gold mineralization at Yagbelen and Woyondjan. While these samples may impact slightly local grade estimates, SRK considers that their impact on the Mineral Resource model is immaterial and therefore do not materially impact the Mineral Resource Statement.
9.2 Drilling Pattern and Density

Drilling at Foulouni-Yagbelen and Woyondjan has taken place on several lines between 100 and 200 metres apart, with at least 2 and up to 12 boreholes on each line. Drilling at Damantere gave much less comprehensive coverage, with only one or two boreholes on closer spaced lines.

9.3 SRK Comments

SRK notes that the majority of drilling comes from reverse circulation holes. These can be prone to quality issues if the ground is saturated. Boreholes generally intersected the mineralization at suitable intersection angles, though not always perpendicular to the mineralization. As a result, intersected lengths are generally longer than the true thickness of the mineralization.

Drilling coverage has been sufficient to outline the three-dimensional geometry of the mineralization at the main deposits with reasonable confidence. At Yagbelen, there is a fairly clear plunging trend of alternating high and low grades, which requires some more work to confirm and explore downward extensions and the possibility of a repeat high grade feature further to the northwest. Figure 9 shows that the spacing between boreholes needs to be reduced to more comprehensively demonstrate the continuity of these plunging grade trends.

Generally, the erratic nature of intersected grades suggests that a greater density of coverage is required to increase the confidence of grade estimation.
10  Sample Preparation, Analyses, and Security

10.1  Sample Preparation and Analyses

10.1.1  Volcanic Sampling

Volcanic has not conducted any sampling at the Mandiana Gold Project.

10.1.2  SMG Sampling

Between 2010 and 2014, SMG dispatched 17,702 samples to the ALS laboratory in Bamako, Mali for preparation and assaying, including 3,829 analytical quality control samples (Section 10.3). At the time, the ALS laboratory was not accredited. The ALS laboratory is a commercial laboratory and is independent of SMG.

Prior to dispatching samples to the laboratory, cone splitters were used to provide a 3% split (approximately 1 kilogram) sample, that was bagged and labelled in the field. From each sample, some chips are sieved and washed, then photographed.

Samples were prepared and assayed for gold using standard methods, as follows:

- Weighing (WEI-21)
- Sample logging (LOG 22)
- Crushing (CRU-21), >70% –6 mm
- Pulverizing (PUL-21) >85% –75 μm
- Fire assay with atomic absorption finish for gold (Au-AA26) on a 50-g subsample with low detection level 0.01 g/t

Analytical results were delivered to SMG by email.

A certain number of samples collected during the third phase of the drilling program in 2013 were submitted for assaying in 2014, after the Mineral Resource model was completed. At the time of the Mineral Resource evaluation work done by SRK (UK) in 2013, these samples were not considered material to support geology and Mineral Resource modelling.

10.2  Specific Gravity Data

SMG weighed each reverse circulation sample before and after drying. The represented volume of each sample was calculated based on the reverse circulation drill bit outer diameter and the drilled length. The dry density of the sample was calculated by dividing the dry weight by the represented volume.

10.3  Quality Assurance and Quality Control Programs

SMG relied in part on the analytical quality control measures implemented by the ALS laboratory. In addition, SMG used analytical quality control samples in every batch of samples submitted for preparation and assaying, inserted at an overall frequency of two in every 9 samples. Analytical quality control samples included blanks, duplicates, and standards and represented 21.7% of the
samples submitted for preparation and assaying (Table 3). Blanks (one in every 15 samples) of Ordovician quartz sandstone were used to detect sampling and assaying contamination with gold. Duplicate samples were collected and submitted for preparation and assaying along with the other samples. Standards selected from 20 different certified ROCKLABS® reference materials (Table 4) were inserted at a rate of one in every 15.

No umpire (referee) laboratory testing was undertaken.

<table>
<thead>
<tr>
<th>Sample Type</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse circulation</td>
<td>13,873</td>
<td>78.4</td>
</tr>
<tr>
<td>Blank</td>
<td>1,146</td>
<td>6.5</td>
</tr>
<tr>
<td>Duplicate</td>
<td>1,469</td>
<td>8.3</td>
</tr>
<tr>
<td>Standard</td>
<td>1,214</td>
<td>6.9</td>
</tr>
<tr>
<td>Total</td>
<td>17,702</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table 4: Specifications of ROCKLABS Certified Reference Material Samples**

<table>
<thead>
<tr>
<th>CRM ID</th>
<th>Lower Limit (g/t Au)</th>
<th>Upper Limit (g/t Au)</th>
<th>CRM ID</th>
<th>Lower Limit (g/t Au)</th>
<th>Upper Limit (g/t Au)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G999-4</td>
<td>2.83</td>
<td>3.21</td>
<td>SH55</td>
<td>1.28</td>
<td>1.47</td>
</tr>
<tr>
<td>OxI96</td>
<td>1.68</td>
<td>1.92</td>
<td>OxP50</td>
<td>13.95</td>
<td>15.85</td>
</tr>
<tr>
<td>OxL51</td>
<td>5.49</td>
<td>6.21</td>
<td>SK52</td>
<td>3.85</td>
<td>4.36</td>
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<td>SG56</td>
<td>0.96</td>
<td>1.10</td>
<td>OxF100</td>
<td>0.75</td>
<td>0.86</td>
</tr>
<tr>
<td>OxK94</td>
<td>3.34</td>
<td>3.79</td>
<td>OxF85</td>
<td>0.75</td>
<td>0.86</td>
</tr>
<tr>
<td>G997-3</td>
<td>1.32</td>
<td>1.5</td>
<td>OxG84</td>
<td>0.86</td>
<td>0.99</td>
</tr>
<tr>
<td>MG-12</td>
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<td>0.95</td>
<td>OxI81</td>
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<td>1.93</td>
</tr>
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<td>OxJ95</td>
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<td>2.49</td>
<td>OxK79</td>
<td>3.31</td>
<td>3.75</td>
</tr>
<tr>
<td>OxP50</td>
<td>13.95</td>
<td>15.85</td>
<td>OxK94</td>
<td>3.34</td>
<td>3.79</td>
</tr>
<tr>
<td>G310-8</td>
<td>7.48</td>
<td>8.46</td>
<td>OxK95</td>
<td>3.31</td>
<td>3.76</td>
</tr>
</tbody>
</table>

**10.4 SRK Comments**

SRK is satisfied that the analytical assay quality control samples chosen are of sufficient range in grade, source (mineralogy and style) and colour to reflect the potential grades and styles of mineralization encountered on the project.

In the opinion of SRK, the sample preparation, security and analysis and analytical assay quality control procedures used by SMG on samples collected from the Mandiana Gold Project are consistent with generally accepted industry best practices and therefore are adequate for an exploration property.

There has been no significant exploration on the Mandiana Gold Project since 2013. The control procedures used meet generally accepted industry best practices and are considered adequate. SRK considers the data to be sufficiently reliable to inform a geology and Mineral Resource model.

In future it is recommended that blanks are inserted to the sample batches ahead of the sample preparation laboratory rather than ahead of the assay laboratory and that the use of an umpire laboratory is considered.
11 Data Verification

Volcanic has not completed any data verification on the Mandiana Gold Project. This section presents the data verification completed by SMG and SRK to support the Mineral Resource Statement prepared for the property in 2013.

There has been no material exploration data collected since 2013.

11.1 Verifications by SMG

It is unclear to SRK what verifications were completed by SMG to monitor the reliability of exploration data collected between 2011 and 2013. Reports examined by SRK suggest that SMG implemented routine verifications to ensure the collection of reliable exploration data between 2011 and 2013. All work was conducted by appropriately qualified personnel under the supervision of qualified geologists. In the opinion of SRK, the field exploration procedures generally meet industry practices.

SMG relied in part in the analytical QC measures implemented by the ALS laboratory. All data collected through the SMG logging and sampling process were initially recorded on paper and later transcribed into a Microsoft Excel spreadsheet. The exploration data were visually examined and validated on site, by both the geologist responsible for the data collection and the supervising geologist, before being sent off site for full validation and incorporation into the master Excel spreadsheet.

11.2 Verifications by SRK and SRK UK

11.2.1 Site Visit

Mr. Martin Pittuck and Mr. Oliver Jones of SRK (UK) visited the project site between April 29 and May 3, 2013. The purpose of the site visit was to review the exploration work completed by SMG and ascertain the geological setting of the gold mineralization delineated by drilling.

At the time of the visit, the third phase of the drilling program was underway. This provided an opportunity to review the geological logging and interpretation and also to audit and verify the sample collection and preparation protocols. During the site visit, the modelling of the deposit was discussed with on-site geological staff, providing a degree of feedback to the process.

11.2.2 Database Integrity

SRK undertook a brief random cross-check of the electronic data against the original assay laboratory certificates and found no material discrepancies.
11.2.3 Analytical Quality Control Data

SRK aggregated the analytical results for the quality control samples produced by SMG for further analysis. Blanks returned gold concentrations ranging from below detection limit to 0.2 g/t. Duplicates showed a strong correlation to the original sample, with a correlation coefficient of 0.99 throughout the three programs and as supplied to SRK (Figure 10). However, duplicate samples were not blind to the laboratory, and therefore do not fully indicate the repeatability of the analyses.

![Figure 10: Bias Plot Comparing Gold in Duplicate and Original Samples (Phases 1, 2, and 3)](image)

Some 20% of duplicate samples had an absolute difference >10% (Figure 11). However, the plot for relative difference (Figure 11) highlights that these duplicates generally had very low gold concentrations (<1.0 g/t). Relative differences at higher gold concentrations showed good repeatability.

In general, the analytical quality control data reviewed by SRK attest that the assay results delivered by the primary laboratory used by SMG are sufficiently reliable for the purpose of resource estimation. The data sets examined by SRK do not present evidence of obvious analytical bias.
Figure 11: Mean Absolute (top) and Relative (bottom) Difference Plots Comparing Gold in Duplicate and Original Samples (Phases 1 and 2 only)
12 Mineral Processing and Metallurgical Testing

SRK is unaware of any metallurgical testwork completed on samples from the Mandiana Gold Project.
13 Mineral Resource Estimates

13.1 Introduction


The Mineral Resource model prepared by SRK (UK) considers three core boreholes and 113 reverse circulation holes drilled by SMG during the period of November 2011 to June 2013. The resource estimation work was completed by Dr. John Arthur, CGeol, FGS, CEng MIMMM, under the supervision of Mr. Martin Pittuck, CEng, MIMMM (IMMM # 49186). Mr. Pittuck is an appropriate independent Qualified Person as this term is defined in National Instrument 43-101.

A certain number of samples from eight reverse circulation boreholes drilled during the third phase of the 2013 drilling program were assayed during 2014 after the Mineral Resource evaluation work completed by SRK UK. Those samples had not been initially assayed because they were deemed not necessary to support the preparation of an initial geology and Mineral Resource model. These additional analytical results are in keeping with the analytical results obtained from adjacent boreholes and therefore have a negligible impact on the geological interpretation of the boundaries of the gold mineralization at Yagbelen and Woyondjan. While these samples may impact slightly local grade estimates, SRK considers that their impact on the Mineral Resource model is immaterial.

This section describes the resource estimation methods and summarizes the key assumptions considered by SRK. In the opinion of SRK, the resource evaluation reported herein is a reasonable representation of the gold Mineral Resources found in the Mandiana Gold Project at the current level of sampling. While the Mineral Resources were evaluated in accordance with the JORC Code, SRK confirms that the estimation methods are consistent with CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines. Therefore, the Mineral Resources also can be reported in accordance with Canadian Securities Administrators National Instrument 43-101 guidelines. Mineral Resources are not mineral reserves and have not demonstrated economic viability. There is no certainty that all or part of the Mineral Resources will be converted into mineral reserves.

The database used to estimate the Mandiana Gold Project Mineral Resources was audited by SRK. SRK is of the opinion that the current drilling information is sufficiently reliable to interpret with confidence the boundaries for gold mineralization and that the assay data are sufficiently reliable to support Mineral Resource estimation. SRK (UK) used Leapfrog 3D to construct the geological solids, and a combination of GEOVIA GEMS™ and ISATIS® software to prepare assay data for geostatistical analysis and variography, construct the block model, estimate metal grades, and tabulate Mineral Resources.

13.2 Resource Estimation Procedures

The resource evaluation process involved the following procedures:

- Compile and verify database
- Construct wireframe models for the boundaries of the gold mineralization
- Define resource domains
- Condition data (compositing and capping) for geostatistical analysis and variography
- Conduct block modelling and interpolate grades
- Classify and validate resources
- Assess “reasonable prospects for eventual economic extraction” based on CIM Definition Standards for Mineral Resources and Mineral Reserves and select appropriate cut-off grades
- Prepare Mineral Resource Statement

13.3 Resource Database

Borehole data were provided as a series of Microsoft Excel spreadsheets for each of collar, downhole surveys, assays, geology and various alteration and oxidation tables. Individual tables were created in a relational database in GEMS mining software to check for overlapping sample or logging intervals and duplicate hole-ID and sample-ID information. A small number of errors were corrected, but no significant or repeating errors were recorded. SRK considers the database to be valid for Mineral Resource modelling.

The database covers a number of exploration properties on the Mandiana prospecting permits, which do not form part of the current Mineral Resource model. SRK created a key index filter to ensure that only those holes associated with the four domains (Yagbelen, Foulouni, Woyondjan, and Damantere) were included in the Mineral Resource estimation work.

Surface topography was originally provided as a drawing exchange format (dxf) file based on original large-scale mapping of the area. However, when this topography was validated against the borehole collar surveys, the surface was found to be inaccurate: in places, up to 20 metres differences were recorded. A new topography surface was created from the borehole collar data combined with a more detailed topographic survey carried out over part of the licence area. Using the collars at least gives a degree of confidence that the relative location and depth of the gold mineralization is precise, given the high level of confidence in the collar surveys. However, a new surface topography survey should be carried out to support future exploration work.

13.4 Solid Body Modelling

The geological modelling was based on the site-based geological and structural modelling produced by the SMG geological team. The interpretation was based on level plans and cross-sections produced manually along drilling sections, with subsequent digitizing of major structures and deposit boundaries and contacts. The digitized sections were imported into Leapfrog 3D software to produce four wireframe domains that were used as resource domains to constrain grade interpolation (Figure 12).

The Damantere domain is currently sparsely drilled and the resulting structure is relatively simple, with only a single modelled domain striking north (strike length 440 metres) and dipping to the east at 35 degrees. Woyondjan, while also relatively sparsely drilled, is modelled with several separate structures based on an updated sectional interpretation provided by SMG in October 2013. The general trend is along a strike to the north-west at 310 degrees (strike length 740 metres), with a dip to the north-east of 65–85 degrees.

The Yagbelen and Foulouni domains are interpreted to coalesce at the northern end of the models. The Foulouni domain is considered to occupy a major structure with the Yagbelen deposit being a splay in its hangingwall. Foulouni strikes towards 350 degrees (strike length 1,050 metres) and dips steeply to the east at 80 degrees. Yagbelen is modelled as a series of subparallel and anastomosing
structures, which pinch and swell both along strike and dip. The general trend is along a strike to the north-west at 310–320 degrees (strike length 1,300 metres) and a dip to the east of approximately 65 degrees.

Figure 12: Distribution of the Four Modelled Domains Used to Constrain Mineral Resource Modelling
(XY coordinate spacing =100 metres)

Figure 13: Plan and Sample Vertical Section at Yagbelen Showing Mineralized Domains and Borehole Layout
Damantere is modelled to a maximum vertical depth of 110 metres. Foulouni and Yagbelen are the most extensively drilled and have been modelled to a vertical depth of 260 metres. Woyondjan has been modelled with a varying depth of the individual units of 120–230 metres vertically. The extensive weathering at all domains is particularly emphasised in these wide, multi-unit zones of mineralization, with traces of oxidation visible in material from up to 200 metres depth.

The lithological descriptions show a transition from saprolite to saprock at depths of 150–200 metres in many of the domains and a commensurate increase in density from approximately 1.8 to 2.2 tonnes per cubic metre (t/m³).

### 13.5 Bulk Density

A total of 1,166 density measurements were available for analysis (Table 5). In all cases, there was a clear correlation between depth and oxidation state (Figure 14). It was decided to create a density model based on the correlation with alteration state. Alteration codes range from 0 for intensely altered material to 4 for partially altered material.

<table>
<thead>
<tr>
<th>Oxidation Code</th>
<th>Sample Count</th>
<th>Average Dry Density (t/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>351</td>
<td>2.51</td>
</tr>
<tr>
<td>1</td>
<td>341</td>
<td>2.31</td>
</tr>
<tr>
<td>2</td>
<td>440</td>
<td>2.05</td>
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<tr>
<td>3</td>
<td>14</td>
<td>1.77</td>
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<tr>
<td>4</td>
<td>6</td>
<td>1.72</td>
</tr>
<tr>
<td>Undefined</td>
<td>17</td>
<td>2.38</td>
</tr>
</tbody>
</table>

**Figure 14: Relationship Between Rock Density and Alteration**
13.6 Compositing

The average sample length was close to 1 metre; therefore, a 1-metre composite length was chosen. The statistics for the individual domains are summarized in Table 6. Declustering of the data for Damantere and Foulouni was inconclusive, given the relatively sparse data in these domains. At Yagbelen and Woyondjan, declustering indicated a small drop in grade and variance, but was not considered material. It was decided to use unweighted data for semi-variogram analysis.

Figure 15 shows the histograms of the gold composites in the four domains. While not a true log normal distribution, it is clear that the wireframe models enclose appropriate data distributions for the style of gold mineralization. There is some evidence for the presence of sub-populations at both the low-grade and high-grade extremes. However, the low number of composites is insufficient to allow separating sub-populations into separate domains.

Overall the distributions between the four deposits are similar. The higher average grade in the Yagbelen deposit is due to a small number of very high-grade composites at the north end of this deposit. There is evidence for a plunging trend of higher grade material in this area and further drilling is required to confirm the continuity of this zone.

Table 6: Basic Statistics for Gold Composite Samples

<table>
<thead>
<tr>
<th>Domain</th>
<th>Count</th>
<th>Maximum (g/t Au)</th>
<th>Mean (g/t Au)</th>
<th>Variance (g/t Au)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damantere</td>
<td>138</td>
<td>38.97</td>
<td>0.83</td>
<td>15.7</td>
</tr>
<tr>
<td>Foulouni</td>
<td>216</td>
<td>25.24</td>
<td>0.75</td>
<td>5.6</td>
</tr>
<tr>
<td>Yagbelen</td>
<td>1,846</td>
<td>147.00</td>
<td>1.15</td>
<td>36.1</td>
</tr>
<tr>
<td>Woyondjan</td>
<td>735</td>
<td>48.92</td>
<td>0.77</td>
<td>7.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,935</strong></td>
<td><strong>147.00</strong></td>
<td><strong>1.01</strong></td>
<td><strong>25.7</strong></td>
</tr>
</tbody>
</table>

13.7 Evaluation of Outliers

Grade capping was not explicitly applied to composites. Instead, the treatment of high-grade composites has been accounted for in the estimation approach (Section 13.9).
Figure 15: Log Histograms and Quantile Plots for Yagbelen, Foulouni, Woyondjan, and Damantere (top to bottom)

Source: SRK (UK), 2014
13.8 Variography

Semi-variograms were modelled initially using a pairwise relative transformation. This provides a normal score transform to force the data to fit a normal distribution and thus provide a more robust basis for the variogram shape to aid modelling. Following analysis, the resulting model was then back transformed to the original data distribution for kriging. The modelled variograms are shown in Figure 16 and summarized in Table 7.

The “plane” of the individual deposits was calculated from the composites and wireframes, and directional variograms were constructed on this plane in an attempt to establish the presence of any directional anisotropy within the individual deposits. A key feature of many shear zone hosted deposits is the presence of narrow, plunging shoots, which are not always apparent from initial near-surface sampling and mapping. However, the relatively widely spaced drilling on these deposits largely precludes the construction of reliable variograms in any directions other than the principal along strike and down dip directions.

As a first step, the downhole variogram (minor orientation) was modelled to obtain a reliable nugget variance, which could then be applied to the directional variograms. The nugget variance varied from 22 to 40% of the total variance of the variograms, which is considered fair for deposits of this type at this level of drilling. For the directional variograms, a lag distance of 50 metres was chosen, which closely corresponds to the drill spacing on the majority of the site. However, the quality of the variograms is poor as a result, with noisy or pure nugget effect observed at low lag distances. In particular, Woyondjan and Damantere have poorly defined variograms.

However, the results for Yagbelen and Foulouni are encouraging, with ranges between 70 and 120 metres recorded and clear indications of directional anisotropy and plunging zones of greater continuity. It is envisaged that with closer spaced infill drilling, the quality of the variography for these deposits could be significantly improved.

### Table 7: Semi-Variogram Parameters*

<table>
<thead>
<tr>
<th>Domain</th>
<th>Structure</th>
<th>Variance (Nugget %)</th>
<th>Range (m)</th>
<th>Orientation (degrees)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Major</td>
<td>Semi-Major</td>
</tr>
<tr>
<td>Yagbelen</td>
<td>Nugget (Co)</td>
<td>13.96 (40)</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Spherical (C1)</td>
<td>10.82</td>
<td>73</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Spherical (C2)</td>
<td>15.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foulouni</td>
<td>Nugget (Co)</td>
<td>1.79 (32)</td>
<td>16</td>
<td>16</td>
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<tr>
<td></td>
<td>Spherical (C1)</td>
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<td>120</td>
</tr>
<tr>
<td></td>
<td>Spherical (C2)</td>
<td>2.23</td>
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<td></td>
</tr>
<tr>
<td>Woyondjan</td>
<td>Nugget (Co)</td>
<td>2.13 (30)</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Spherical (C1)</td>
<td>2.35</td>
<td>161</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>Spherical (C2)</td>
<td>4.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Damantere</td>
<td>Nugget (Co)</td>
<td>3.51 (22)</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>Spherical (C1)</td>
<td>4.92</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>Spherical (C2)</td>
<td>7.23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* After back transformation from Pairwise-Relative model
Figure 16: Directional Semi-Variograms (Pairwise Relative Transformation)
Source: SRK (UK), 2014
13.9 Block Model and Grade Estimation

Gold grade was estimated into a series of large blocks (panels) using ordinary kriging (OK). The panel size was 25 by 25 by 25 metres (XYZ). High-grade composites were not capped; however, the spatial influence of composites greater than 30 g/t was restricted to 20 metres.

The search parameters used for the interpolation of the four domains are summarized in Table 8. The principal search was based on roughly the modelled semi-variogram ranges in each of the three principal directions, with orientations based on the direction of maximum reliability on the plane of the mineralization. With the exception of Damantere, all other domains were estimated with a two-pass kriging approach. The large search radii used for Damantere required only a single pass for grade estimation. In all passes, the number of composites per borehole was limited.

Table 8: Search Parameters Used for Interpolation

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Initial Search (m)</th>
<th>Infill Search (m)</th>
<th>Azimuth</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yagbelen</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major axis</td>
<td>100</td>
<td>1,000</td>
<td>126°</td>
<td>18°</td>
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<tr>
<td>Semi-major axis</td>
<td>80</td>
<td>1,000</td>
<td>004°</td>
<td>58°</td>
</tr>
<tr>
<td>Minor axis</td>
<td>10</td>
<td>40</td>
<td>194°</td>
<td>32°</td>
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<tr>
<td>Minimum composites</td>
<td>8</td>
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<tr>
<td>Maximum composites</td>
<td>24</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discretization</td>
<td>5x5x5</td>
<td>5x5x5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Octants</td>
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<td>1</td>
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<td></td>
</tr>
<tr>
<td>Spatial restriction</td>
<td>30 g/t @ 20 m</td>
<td>30 g/t @ 20 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Foulouni</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major axis</td>
<td>100</td>
<td>1,000</td>
<td>003°</td>
<td>53°</td>
</tr>
<tr>
<td>Semi-major axis</td>
<td>80</td>
<td>1,000</td>
<td>163°</td>
<td>36°</td>
</tr>
<tr>
<td>Minor axis</td>
<td>10</td>
<td>50</td>
<td>343°</td>
<td>54°</td>
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<tr>
<td>Minimum composites</td>
<td>8</td>
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<td></td>
</tr>
<tr>
<td>Maximum composites</td>
<td>24</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discretization</td>
<td>5x5x5</td>
<td>5x5x5</td>
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</tr>
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<td>Octants</td>
<td>1</td>
<td>1</td>
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<td></td>
</tr>
<tr>
<td>Spatial restriction</td>
<td>30 g/t @ 20 m</td>
<td>30 g/t @ 20 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Woyondjan</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major axis</td>
<td>80</td>
<td>1,000</td>
<td>340°</td>
<td>00°</td>
</tr>
<tr>
<td>Semi-major axis</td>
<td>80</td>
<td>1,000</td>
<td>070°</td>
<td>80°</td>
</tr>
<tr>
<td>Minor axis</td>
<td>10</td>
<td>40</td>
<td>250°</td>
<td>10°</td>
</tr>
<tr>
<td>Minimum composites</td>
<td>8</td>
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<td></td>
</tr>
<tr>
<td>Maximum composites</td>
<td>24</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discretization</td>
<td>5x5x5</td>
<td>5x5x5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Octants</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spatial restriction</td>
<td>30 g/t @ 20 m</td>
<td>30 g/t @ 20 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Damantere</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major axis</td>
<td>500</td>
<td></td>
<td>000°</td>
<td>00°</td>
</tr>
<tr>
<td>Semi-major axis</td>
<td>500</td>
<td></td>
<td>090°</td>
<td>35°</td>
</tr>
<tr>
<td>Minor axis</td>
<td>50</td>
<td></td>
<td>270°</td>
<td>55°</td>
</tr>
<tr>
<td>Minimum composites</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum composites</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discretization</td>
<td>5x5x5</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Octants</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spatial restriction</td>
<td>30 g/t @ 20 m</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
13.10 Mineral Resource Classification

Block model quantities and grade estimates for the Mandiana Gold Project were classified by Dr. John Arthur, CGeol, FGS, CEng MIMMM under the supervision of Mr. Martin Pittuck, CEng, MIMMM (IMMM # 49186). Mr. Pituck is an appropriate independent Qualified Person for the purpose of National Instrument 43-101.

Mineral Resource classification is typically a subjective concept. Industry best practices suggest that resource classification should consider the confidence in the geological continuity of the mineralized structures, the quality and quantity of exploration data supporting the estimates, and the geostatistical confidence in the tonnage and grade estimates. Appropriate classification criteria should aim at integrating these concepts to delineate regular areas at similar resource classification.

SRK is satisfied that the geological modelling honours the current geological information and knowledge. The location of the samples and the assay data are sufficiently reliable to support resource evaluation. The sampling information was acquired primarily by reverse circulation drilling on sections spaced at 100 metres.

SRK considers that the confidence in the estimates is insufficient to allow the meaningful application of technical and economic parameters, or to enable an evaluation of economic viability worthy of public disclosure and justify an “Indicated” classification within the JORC Code or the CIM Definition Standards for Mineral Resources and Mineral Reserves. Specifically, the following issues need to be verified/corrected to improve the overall confidence in the Mineral Resource estimates:

- Verify and update the topography survey data and reconcile collar elevations with topographic survey
- Confirm model density data against data collected from measurements
- Improve sample coverage over the Damantere, Woyondjan, and Foulouni deposits and the northern portion of the Yagbelen deposit, with the aim of improving the semi-variogram quality

For these reasons SRK believes that all modelled blocks informed by the two estimation passes are appropriately classified in the “Inferred” category within the JORC Code or the CIM Definition Standards for Mineral Resources and Mineral Reserves. Additional infill drilling and sampling is required to support a higher classification. It cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration.
13.11 Mineral Resource Statement

CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014) defines a Mineral Resource as follows:

“A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.

The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.”

The “reasonable prospects for eventual economic extraction” requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that takes into account extraction scenarios and processing recoveries. In order to meet this requirement, SRK considers that major portions of the Mandiana Gold Project are amenable for open pit extraction.

To determine the quantities of material offering “reasonable prospects for economic extraction” by an open pit, SRK used a pit optimizer and reasonable mining assumptions to evaluate the proportions of the block model that could be “reasonably expected” to be mined from an open pit.

The optimization parameters were selected based on experience and benchmarking against similar projects (Table 9). The reader is cautioned that the results from the pit optimization are used solely for the purpose of testing the “reasonable prospects for economic extraction” by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Mandiana Gold Project. The results are used as a guide to assist in the preparation of a Mineral Resource Statement and to select appropriate reporting assumptions.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold price</td>
<td>1,550</td>
<td>US$ per ounce</td>
</tr>
<tr>
<td>Mining cost</td>
<td>13.95</td>
<td>US$ per tonne mined</td>
</tr>
<tr>
<td>Processing and General and Administrative</td>
<td>16.00</td>
<td>US$ per tonne of feed</td>
</tr>
<tr>
<td>Mining dilution</td>
<td>5</td>
<td>Percent</td>
</tr>
<tr>
<td>Mining recovery</td>
<td>95</td>
<td>Percent</td>
</tr>
<tr>
<td>Metal recovery (carbon-in-leach)</td>
<td>90</td>
<td>Percent</td>
</tr>
</tbody>
</table>

SRK considers that it is appropriate to report as a Mineral Resource those classified model blocks that are located within the Mandiana Gold Project and within the conceptual pit envelope, and are above a cut-off grade of 0.3 g/t gold (Figure 17).
SRK is satisfied that the Mineral Resources were estimated in conformity with the widely accepted CIM *Estimation of Mineral Resource and Mineral Reserve Best Practices Guidelines*. The Mineral Resources may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent Mineral Resource estimates. The Mineral Resources may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic, and other factors. Apart from the expiry of the exploration permit on May 11, 2017, there are no known mining, environmental, processing, permitting, taxation, socio-economic, and other factors that may affect the Mineral Resources. The Mineral Resource Statement presented in Table 10 was prepared by Mr. Martin Pittuck, CEng, MIMMM (IMMM # 49186). Mr. Pittuck is an independent qualified person as this term is defined in National Instrument 43-101. Mineral Resources are not mineral reserves and have not demonstrated economic viability. The effective date of the Mineral Resource Statement is November 8, 2016.

### Table 10: Mineral Resource Statement*, Mandiana Gold Project, Guinea, SRK Consulting (UK) Limited, November 8, 2016

<table>
<thead>
<tr>
<th>Category</th>
<th>Domain</th>
<th>Quantity Mt</th>
<th>Gold Grade g/t</th>
<th>Contained Gold 000'oz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inferred</td>
<td>Yagbelen</td>
<td>13.3</td>
<td>1.20</td>
<td>510</td>
</tr>
<tr>
<td></td>
<td>Foulouni</td>
<td>0.7</td>
<td>1.13</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Woyondjan</td>
<td>1.9</td>
<td>0.99</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Damantere</td>
<td>0.2</td>
<td>2.21</td>
<td>16</td>
</tr>
<tr>
<td><strong>Inferred Total</strong></td>
<td></td>
<td><strong>16.1</strong></td>
<td><strong>1.18</strong></td>
<td><strong>612</strong></td>
</tr>
</tbody>
</table>

* Mineral Resources are reported in relation to a conceptual pit shell. Mineral Resources are not mineral reserves and have not demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate. Open pit Mineral Resources are reported at a cut-off grade of 0.3 g/t gold. Cut-off grades are based on a price of US$1,550 per ounce of gold and recovery of 95%.
13.12 Sensitivity Analysis

The Mineral Resources of the Mandiana Gold Project are sensitive to the selection of the reporting cut-off grade. To illustrate this sensitivity, the model quantities and grade estimates are presented in Table 11 at different cut-off grades. The reader is cautioned that the figures presented in this table should not be misconstrued with a Mineral Resource Statement. The figures are only presented to show the sensitivity of the block model estimates to the selection of cut-off grade. Figure 18 presents this sensitivity as grade tonnage curves.

Table 11: Quantities and Grade Estimates* at Various Cut-off Grades (Pit Constrained)

<table>
<thead>
<tr>
<th>Cut-off Grade (g/t gold)</th>
<th>Tonnage ('000t)</th>
<th>Gold Grade (g/t)</th>
<th>Contained Gold ('000oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>19,254</td>
<td>1.02</td>
<td>633</td>
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<tr>
<td>0.2</td>
<td>17,940</td>
<td>1.09</td>
<td>627</td>
</tr>
<tr>
<td><strong>0.3</strong></td>
<td><strong>16,096</strong></td>
<td><strong>1.18</strong></td>
<td><strong>612</strong></td>
</tr>
<tr>
<td>0.4</td>
<td>14,195</td>
<td>1.29</td>
<td>590</td>
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<tr>
<td>0.5</td>
<td>11,838</td>
<td>1.46</td>
<td>557</td>
</tr>
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<td>1.0</td>
<td>5,718</td>
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<tr>
<td>1.5</td>
<td>3,394</td>
<td>2.97</td>
<td>324</td>
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<td>2.0</td>
<td>2,108</td>
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<td>253</td>
</tr>
<tr>
<td>2.5</td>
<td>1,371</td>
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<td>200</td>
</tr>
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<td>3.0</td>
<td>945</td>
<td>5.35</td>
<td>163</td>
</tr>
<tr>
<td>3.5</td>
<td>687</td>
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</tr>
<tr>
<td>4.0</td>
<td>497</td>
<td>7.10</td>
<td>113</td>
</tr>
<tr>
<td>4.5</td>
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<td>97</td>
</tr>
<tr>
<td>5.0</td>
<td>293</td>
<td>8.92</td>
<td>84</td>
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</tbody>
</table>

* The reader is cautioned that the figures presented in this table should not be misconstrued with a Mineral Resource Statement. The figures are only presented to show the sensitivity of the block model estimates to the selection of cut-off grade.

Figure 18: Mandiana Gold Project Within-Pit Grade Tonnage Curves
14 **Adjacent Properties**

There are no adjacent properties that are relevant to the Mandiana Gold Project.

15 **Other Relevant Data and Information**

There are no other relevant data available about the Mandiana Gold Project.
16 Interpretation and Conclusions

Exploration work by SMG was professionally managed and procedures consistent with generally accepted industry best practices were used. After review, SRK is of the opinion that the exploration data are sufficiently reliable to confidently interpret the boundaries of the gold mineralization for the Mandiana Gold Project.

SRK believes that the resource evaluation reported herein is a reasonable representation of the gold Mineral Resources found in the Mandiana Gold Project at the current level of sampling. The Mineral Resources were estimated and reported in accordance with the JORC Code (2012 Edition) and are also reported herein in accordance with National Instrument 43-101. Mineral Resources are not mineral reserves and have not demonstrated economic viability. There is no certainty that all or part of the Mineral Resources will be converted into mineral reserves.

The Mineral Resources may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent Mineral Resource estimates. The Mineral Resources may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic, and other factors.

The Mandiana North exploration licence can be renewed for another one-year period. Although SRK understands that Volcanic has initiated the renewal process, there is no certainty that the licence will be renewed when it expires. Apart from the expiry of the Mandiana North exploration permit on May 11, 2017, there are no known mining, environmental, processing, permitting, taxation, socio-economic, or other factors that may affect the Mineral Resources.

SRK defined four geological domains that include the Yagbelen, Foulouni, Woyondjan, and Damantere domains. SRK estimated gold grades for each of these domains into a block model informed by composited gold assays, and an ordinary kriging estimator wherein the influence of composites greater than 30 g/t was restricted to a 20 metre radius was applied. Average specific gravity values were assigned to the block model based on alteration codes; these were used to convert rock volumes into tonnage.

The Mineral Resource Statement prepared by SRK (UK) is based on an open pit Mineral Resource and is reported at a cut-off grade of 0.3 g/t gold within a conceptual pit shell.

SRK draws the following conclusions:

- Mineral Resources can be expanded and/or upgraded by exploration drilling. Future drilling should favour more core drilling than reverse circulation drilling, to better ascertain geological features.
- An improved understanding of gold mineralization controls through structural geology studies can be instrumental in providing a better geological model to predict the form and shape of the gold mineralization and improve the confidence in the Mineral Resources.
17 Recommendations

The Mandiana Gold Project is at an early stage; however, significant detailed work has led to the identification and delineation of at least four gold deposits with potential for future economic extraction by open pit mining methods. The combined Yagbelen and Foulouni deposits, which host most of the drilling, show exploration potential. Widely spaced drilling however only supports the delineation of inferred Mineral Resources under international reporting guidelines.

SRK considers that the character of the gold mineralization delineated by drilling on the Mandiana Gold Project is of sufficient merit to warrant additional exploration expenditures. SRK recommends a work program that—if implemented—will advance the project. The proposed work program includes:

- Topographic surveying
- All data should be imported from Excel into an industry standard database, with enhanced safety, speed and relational data functionalities
- Umpire (referee) testing to confirm the reliability of the analytical results delivered by ALS, the primary laboratory
- Preliminary metallurgical testing work will characterize the nature of the gold mineralization and its deportment. Testing should be conducted on representative samples, initially focusing on the Yagbelen deposit
- Infill drilling to improve the confidence in the continuity of the gold mineralization and to further characterize its geological setting. Future drilling should favour core over reverse circulation drilling, because core drilling facilitates ascertaining the geological features of the gold mineralization. This is particularly important for studying the nature and controls of the higher grade gold mineralization intersected in many reverse circulation boreholes. Infill core drilling should focus initially on the Yagbelen and Foulouni deposits, and then the Woyondjan and Damantere deposits. The drilling pattern should aim to reach a spacing of 50 by 50 metres and take into account that the gold mineralization appears to plunge moderately at Yagbelen.
- Investigations into the nature of the higher grade gold mineralization—particularly the narrow higher grade subdomain along the footwall of the Yagbelen deposit—which can only be efficiently conducted with core drilling
- Property-wide reconnaissance in the South Concession should comprise soil sampling, geological mapping, and prospecting. The reconnaissance program should also include a provision to allow testing gold-in-soils anomalies of surface occurrences with fences of inclined rotary air blast boreholes to trace surface anomalies to bedrock.

The total costs for the recommended program are estimated at about C$900,000 as summarized in Table 12.

SRK believes that Volcanic can deliver the recommended work program prior to the expiry of the Mandiana North exploration licence.
### Table 12: Estimated Budget for Proposed Work Program for the Mandiana Gold Project

<table>
<thead>
<tr>
<th>Work Program</th>
<th>Amount</th>
<th>Units</th>
<th>Unit Cost (C$)</th>
<th>Subtotal (C$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground geophysical survey*</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Reverse circulation drilling</td>
<td>600</td>
<td>Metres</td>
<td>165</td>
<td>99,000</td>
</tr>
<tr>
<td>Core drilling</td>
<td>900</td>
<td>Metres</td>
<td>250</td>
<td>225,000</td>
</tr>
<tr>
<td>Assaying</td>
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<td>Samples</td>
<td>25</td>
<td>50,000</td>
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<td>Metallurgical testwork</td>
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<td>Bulk samples</td>
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</tr>
<tr>
<td>Camp support and site preparation</td>
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<td></td>
<td></td>
<td>77,000</td>
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<td>54,000</td>
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<td>Community relations</td>
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<td>Travel and transportation</td>
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<td>32,000</td>
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<td>Corporate and Guinean administration</td>
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<td></td>
<td></td>
<td>145,000</td>
</tr>
<tr>
<td>Contingency</td>
<td>10</td>
<td>Percent</td>
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<td>82,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>902,000</strong></td>
</tr>
</tbody>
</table>

* Magnetic and electromagnetic.
18 References


APPENDIX A

Mineral Tenure Information
CABINET D'AVOCATS BAO ET FILS
Avocats à la Cour

Conakry, November 3rd, 2016.

To the kind attention of Mr. Michael Iverson
Chief Executive Officer

VOLCANIC METALS CORP.
Suite 1600, 609 Granville Street
Vancouver, BC V7Y 1C3
Tel: 604-856-9887

SUBJECT: LEGAL OPINION ISSUED ON DUE INCORPORATION AND VALID EXISTENCE OF GUIORD SA AND THE GOOD STANDING OF THE EXPLORATION PERMITS HELD BY GUIORD IN REPUBLIC OF GUINEA.

Dear Michael

In the frame of your entering into a partnership to be concluded between GUIORD SA the (Company) holder of nine (09) Industrial Exploration Permits covering various areas in the prefectures of Mandiana, Faranah and Mamou (the Permits) and Volcanic Metals Corp. the (for the exploration for Gold the (Project), collectively called in this opinion the (Recipients), you instructed us as local council in view to perform a due diligence (the Diligences) on the Due incorporation and the valid existence of the Company, as well as the validity and the good standing of the mining titles held by the Company.

I - SCOPE OF THE OPINION.

The Recipients requested our opinion on the due incorporation and the valid existence of the Company. Our understanding of that request is for us to check and determine whether the Company has been duly incorporated and has the legal capacity to exercise its activities as a Guinean entity and whether such right are binding upon the administration and third party at the date of this opinion.

The Recipients also requested an opinion on the good standing of the exploration licenses held by the Company to ensure that these were legally issued and are valid and grant the right to carry out the exploration activities for the Company; that such rights are binding upon the administration and third party at the date of this opinion.

Therefore, we undersigned confirm that we are a Law firm duly authorized to practice legal advice and legal representation in the Republic of Guinea (Guinea), on the basis of Law L / 2004/014 of 29th May 2004 carrying out reorganization of legal profession in Guinea.

As such we confirm having all rights in the exercise of our profession and in particular, we are not under any sanction or restriction of any kind, which may minimize or cancel the effects of this legal opinion.

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However, our legal opinion is given exclusively on the basis of the relevant applicable law in Guinea, as it exists and is interpreted at the date of this legal opinion. In order to issue our opinion, we have reviewed and considered the following documents the (Documents):

a. The Corporate Documents
   - The Articles of association of GUIORD SA dated on 19th January 2010;
   - The resolutions of the sole shareholder revoking Mr. John Peter BARRY as General Manager and appointing Mr. Mohamed Haidara CHERIF for the same position;
   - The deed ascertaining the filing of the minute of the sole shareholder to the Notary;
   - The initial certificate of incorporation of the Company dated on 20th January 2010;
   - The certificate of incorporation modifying the initial certificate on 14th November 2014;

b. The Mining Documents
   - The Ministerial order N°A 2010/606/PR/MMEH/SGG transferring the exploration licence held by Office Guinée des Mines to GUIORD SA dated 03rd February 2010;
   - The Ministerial order N°A 2010/570/PR/MMEH/SGG licence held by Office Guinée des Mines to GUIORD SA dated on 03rd February 2010;
   - The Ministerial order N°A 2010/585/PR/MMEH/SGG transferring the licence held by Office Guinée des Mines to GUIORD SA dated on 03rd February 2010;
   - The Ministerial order N°A 2013/789/MMG/SGG renewing the exploration licence N°A 2010/570/PR/MMEH/SGG granted to GUIORD SA/SMG dated on 09th April 2013;
   - The Ministerial order N°A 2013/5104/MMG/SGG granting exploration licence to GUIORD SA dated on 1st November 2013;

The Renewed Licences:

- The Ministerial order N°A/2015/1545/MMG/SGG renewing the mining permit N°A 2013/798/MMG/SGG granted to GUIORD SA dated on 11th May 2015;
- The Ministerial order N°A 2016/8282/MMG/SGG renewing the mining permit N°A 2013/790/MMG/SGG granted to GUIORD SA dated on 19th October 2016;
- The Ministerial order N°A 2016/8283/MMG/SGG renewing the mining permit N°A 2013/790/MMG/SGG granted to GUIORD SA dated on 19th October 2016;
- The Ministerial order N°A 2016/8284/MMG/SGG renewing the mining permit N°A 2013/790/MMG/SGG granted to GUIORD SA dated on 19th October 2016;
- The Ministerial order N°A 2016/8285/MMG/SGG renewing the mining permit N°A 2013/790/MMG/SGG granted to GUIORD SA dated on 19th October 2016;
- The Ministerial order N°A 2016/8286/MMG/SGG renewing the mining permit N°A 2013/791/MMG/SGG granted to GUIORD SA dated on 19th October 2016;
- The Ministerial order N°A 2016/8287/MMG/SGG renewing the mining permit N°A 2013/791/MMG/SGG granted to GUIORD SA dated on 19th October 2016;

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- The Ministerial order N°A 2016/6288/MMG/SGG renewing the mining permit N°A
  2013/791/MMG/SGG granted to GUIORD SA dated on 19th October 2016;
- The Ministerial order N°A 2016/6290/MMG/SGG renewing the mining permit N°A
  2013/6104/MMG/SGG granted to GUIORD SA dated on 19th October 2016;
- The receipts of payment of the processing fee related to renewal of the permits.

For the purposes of this opinion, we examined the relevant applicable laws, decrees, orders
relating to company law and mining law in the Republic of Guinea (the Law).

- Law L/2011/008/CNT dated 6th September 2011, carrying out the Mining Code of
  Republic of Guinea as amended by the law L/2013/053/CNT dated 08th April 2013;
- The Decree D/2013/075/PRG/SGG promulgating the law L/2013/053/ CNT dated 8th
  April 2013;
- The revised Uniform Act relating to Commercial Companies and Economic interest
  Group:

II- ASSUMPTIONS

In giving this opinion, we assumed that all the Documents provided to our firm in the frame of
this opinion are complete, authentic and up to date, and all copies of documents provided to
our firm are also authentic and up to date and consistent with the originals.

We assumed that all signatures on the above are authentic and valid.

We assumed that the Corporate Documents, the Mining Document and the Law should be
reviewed and interpreted only according to the Guinean law;

We assumed that no engagement of the Recipients in Guinea or outside of Guinea will make
their engagement under the Corporate Document and the Mining Document non valid.

We assumed that the Recipients have obtained all necessary authorizations applicable to them
in relation with this opinion.

We have assumed that there is no other document, agreement or arrangement of any kind
between Recipients or/and between third party and Recipients which may modify or substitute
any of the documents mentioned above.

III- RECIPIENTS OF THIS OPINION

This legal opinion is issued only for the benefit of the Recipients, no other person or entity is
entitled to its benefit without our writing consent.

IV- THE RESEARCHES PERFORMED

- The Trade Register (RCCM)\(^1\)

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\(^1\) The Trade registry (Art.36 Uniform Act General Commercial Law) in our case the Court of First Instance of Kaloum is
competent to all formalities relating to the Company.

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On the 05th, 10th, 17th, 18th and 21st October 2016, we made trips to the Trade Register (RCCM) in order to obtain the certificates confirming the due incorporation and the valid existence of the Company.

We also obtained the certificate evidencing that no security interest is actually registered over the Company’s assets to the benefit; we also received the certificate of Non-bankruptcy at the date of this opinion.

- The Mining Register (CPDM)

On the 21st, 24th and 31st October 2016, we made trips to the mining register (CPDM) in order to confirm the validity and the good standing of the exploration licenses held by the Company.

V. OUR OPINION ON THE DUE INCORPORATION AND THE VALID EXISTENCE OF THE COMPANY

After reviewed of the Corporate Documents, the Law in addition with researches performed with the Trade registry, our opinion is the following:

- Due incorporation and valid existence of the Company

The Company, is a Public Limited Company incorporated under the laws of Guinea. Registered with the Trade Registry of Kaloum under the registration number RCCM/GC-KAL/027.259A / 2010 dated 19th March 2010.

Its registered office is located Cité Chemin de Fer, Commune de Kaloum, Conakry in Republic of Guinea, the shares capital is 100 million GNF constituted of one thousand (1000) shares fully subscribed and paid up, with a nominal value of one hundred thousand (100,000 GNF) Guinean francs each.

<table>
<thead>
<tr>
<th>Shareholders</th>
<th>Contribution in GNF</th>
<th>Number of shares</th>
<th>% Stake</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOVEREIGN MINES OF GUINEA LIMITED</td>
<td>100,000,000</td>
<td>1000 shares</td>
<td>100%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100,000,000</td>
<td>1000 shares</td>
<td>100%</td>
</tr>
</tbody>
</table>

At the incorporation, the company was managed by Mr. John Peter BARRY as General Manager and Mr. David Brain PEARL as Deputy Manager.

Following the resolution of the sole shareholders dated on 11th November 2014, Mr. John Peter BARRY has been revoked and Mr. Mohamed Haidara CHERIF appointed as the new General Manager of the company. The formalities required by the law for ascertaining the change of manager have been conducted by Me. Foutoumata Yassane Y. SOUMAH. Public Notary and completed by the filing of the resolution to the RCCM. A certificate of incorporation (M2) modifying the initial one has been issued by the RCCM under the formality number N°RCCM/GC-KAL-M/061.253/2014 on the 14th November 2014. Based on the certificate of Non-bankruptcy dated the 19th October 2016, we confirm that, no notice of liquidation, no notice of appointment of a liquidator, or a provisional administrator was

2 Centre for Promotion and Development of Mine sector (CPDM) is the one-stop under authority of the Ministry in charge of Mines and serving as an interface between investors and Administration. (Art. 1 missing code)

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observed or disclosed, we are of the opinion that there is no bankruptcy pending upon the Company;

Based on the certificate of non-registration of security dated on 19th October 2016 as issue by the RCCM, we confirm that no security is registered over the assets of the Company;

No offense, violation and/or default relating to the incorporation and/or the valid existence of the Company have been disclosed.

Therefore, our opinion is that the Company has a valid existence in Guinea and has at the date of this opinion full legal capacity to the exercising of its activities.

VI- STATUTE OF THE PERMITS

The permits held by the Company are an exploration permits granted for the exploring Gold in various prefectures of Guinea (Mandiana, Manou, Faranah and Kankan).

VII- REVIEW OF THE INITIAL PERMITS

The review of the initials permits disclosed that the Company was holding thirteen (13) explorations licenses for the exploring of gold and other associated minerals in the prefectures of Faranah, Mamou, Mandiana and Kankan. The different permits have been granted through Ministerial orders as below:

a. Ministerial order N°A/2010/570/FPR/MMEH/SGG transferring the exploration permits held by Office Guinéen des Mines to the Company dated on 03rd February 2010.

It should be noted that the above Ministerial order granted one (01) exploration permit to exploring Gold and other associated minerals on a surface covering 127.32 Km² in the prefecture of Mandiana. The permit has been granted for an initial period of three years (03) renewable and was registered in the mining registry under the registration number N°A 2010/005/DIGM/CPDM. The permit has been renewed in 2013.

Regarding the above be advised that our review of the receipts attached to the permit disclosed the payment of the annual surface fee from 2010 to 2012.

b. Ministerial order N°A/2010/566/FYD/MMEH/SGG transferring the exploration permits held by Office Guinéen des Mines to the Company dated on 03rd February 2010.

It should be noted that the above Ministerial order granted seven (07) exploration permits for exploring Gold and other associated minerals on a surface covering 736 Km² in the prefectures of Faranah and Mamou. The permit has been granted for an initial period of three (03) years renewable and was registered in the mining registry under the registration number N°A/2010/003/DIGM/CPDM. The permit has been renewed in 2013.

Regarding the above be advised that our review of the receipts provided to us disclosed the payment of the annual surface fee from 2010 to 2012.

c. Ministerial order N°A/2010/606/PRA/MMEH/SGG transferring the exploration permits held by Office Guinéen des Mines to the Company dated on 03rd February 2010.

It should be noted that the above Ministerial order granted five (05) exploration permits for exploring Gold and other associated minerals on a surface covering 500 Km² in the prefecture of Kankan. The permit has been granted for an initial period of three (03) years renewable and
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was registered in the mining registry under the registration number N°A 2010/039/DIGM/CPDM. The permit has been renewed in 2013.

Regarding the above, be advised that our review of the receipts provided to us disclosed the payment of the annual surface fee from 2010 to 2012.

VIII- RENEWAL OF THE PERMITS

Article 24 of the 2011 Mining code provides that: "The term of an Industrial Exploration Permit may be renewed two (2) times for a maximum period of two (2) years each time, at the request of the holder and on the same conditions as those on which the Permit was granted.

The term of a Semi-industrial Exploration Permit may be renewed only once for a maximum period of one (1) year, at the request of the holder and on the same conditions as those on which the Permit was granted.

Each of these renewals occurs automatically if the holder has met all of the obligations contained in the granting order and in this Code and, if it so requests, in its application for renewal, a minimum work program adapted to the results of the preceding period and representing a financial outlay at least equal to that set out in the granting order.

At each renewal, the Permit area covered by the exploration is reduced by half of its previous size. The area reverting to the applicant must include in the regular area the known deposits for the substances set out in the Exploration Permit."

• Review of the 1st renewal

Based on the above article 24, the review of the 1st renewal disclosed that all the permits held by the Company have been renewed for the first time in 2013 as evidenced by the following Ministerial orders:


It should be noted that the above Ministerial order renewed one (01) exploration permit held by the Company for exploring Gold and other associated minerals on a surface covering 127 Km² in the prefecture of Mandiana. The permit has been renewed for a period of two (02) years renewable and was registered in the mining registry under the registration number N° A 2013/041/DIGM/CPDM. The permit has been renewed in 2015.

Regarding the above, be advised that our review of the receipts as provided tonus disclosed the payment of the annual surface fee from 2013 to 2014.


It should be noted that the above Ministerial order renewed seven (07) exploration permits held by the Company for exploring Gold and other associated minerals on a surface covering 736 Km² in the prefecture of Mamou and Faranah. The permits have been renewed for a period of two (02) years renewable and was registered in the mining registry under the registration number N° A 2013/030/DIGM/CPDM. The permit has been renewed in 2016. Regarding the
above, be advised that our review of the receipts as provided to us disclosed the payment of the annual surface fee from 2013 to 2014.

c. **Ministerial order N° A2013/78/1/MMG/SGG carrying renewal of the exploration permit N°A2015/002/MMG/MEH/MEH/SGG granted to GUIORD SA/ SMG. (Sovereign Mines of Guinea) dated on 09th April 2013:**

It should be noted that the above Ministerial order renewed six (06) exploration permits held by the Company for exploring Gold and other associated minerals on a surface covering 500 Km² in the prefecture of Kankan. The permits has been renewed for a period of two (02) years renewable and was registered in the mining registry under the registration number N° A2013/040/DIGM/CPDM. The permit has been renewed in 2016. Regarding the above, be advised that our review of the receipts as provided to us disclosed the payment of the annual surface fee from 2013 to 2014.

We observed that the first renewal of the permits have been done without relinquishment retrocession of the half of the initial surface as provided by the article 24 of the mining code. However, article 1° of these Ministerial orders granting renewal of the permits mentioned an exceptional circumstances which conducted to these renewals without retrocession. Therefore, we do not anticipate any red flag on the validity of this first renewal in relation with the non-relinquishment of the 50% surface.

Regarding the above, be advised that our review of the receipts disclosed the payment of the annual surface fee from 2013 to 2016.

- **Review of the 2nd renewal process**

The review of the 2nd renewal disclosed that a number of permits held by the Company have been renewed for the second time on 2015 and 2016 as evidenced by the followings Ministerial orders:

a. **Ministerial order N° A2015/1545/MMG/SGG carrying renewal of the exploration permit N°A2013/78/1/MMG/SGG granted to GUIORD SA dated on 11th May 2015:**

The above Ministerial order renewed two (02) exploration permits held by the Company for exploring Gold and other associated minerals on a surface covering 127.32 Km² in the prefecture of Mandiana. The permits has been renewed for a period of two (02) years and was registered in the mining registry under the registration number N° A2015/018/DIGM/CPDM.

b. **Ministerial order N° A2016/5288/MMG/SGG carrying renewal of the exploration permit N°A2013/78/1/MMG/SGG granted to GUIORD SA/ SMG, dated on 16th October 2016:**

The above Ministerial order renewed the exploration permit held by the Company for exploring Gold and others associated minerals in the prefecture of Kankan. The permit has been renewed for a period of two (02) years and registered in the mining registry under the registration number N°A2016/070/DIGM/CPDM. This permit covered a surface of 84 Km².

c. **Ministerial order N° A2016/5287/MMG/SGG carrying renewal of the exploration permit N°A2013/78/1/MMG/SGG granted to GUIORD SA/ SMG, dated on 19th October 2016:**

The above Ministerial order renewed the exploration permit held by the Company for exploring Gold and others associated minerals in the prefecture of Kankan. The permit has been
renewed for a period of two (02) years and registered in the mining registry under the registration number N°A2016/069/DIGM/CPDM. This permit covered a surface of 82 Km².


The above Ministerial order renewed the exploration permit held by the Company for exploring Gold and other associated minerals in the prefecture of Kankan. The permit has been renewed for a period of two (02) years and registered in the mining registry under the registration number N°A2015/088/DIGM/CPDM. This permit covered a surface of 96 Km².


The above Ministerial order renewed the exploration permit held by the Company for exploring Gold and other associated minerals in the prefecture of Mamou. The permit has been renewed for a period of two (02) years and registered in the mining registry under the registration number N°A2016/067/DIGM/CPDM. This permit covered a surface of 74 Km².


The above Ministerial order renewed the exploration permit held by the Company for exploring Gold and other associated minerals in the prefecture of Faranah. The permit has been renewed for a period of two (02) years and registered in the mining registry under the registration number N°A2016/066/DIGM/CPDM. This permit covered a surface of 100 Km².


It should be noted that the above Ministerial order renewed the exploration permit held by the Company for exploring Gold and other associated minerals in the prefecture of Faranah. The permit has been renewed for a period of two (02) years and registered in the mining registry under the registration number N°A2016/065/DIGM/CPDM. This permit covered a surface of 98 Km².


It should be noted that the above Ministerial order renewed the exploration permit held by the Company for exploring Gold and other associated minerals in the prefecture of Faranah. The permit has been renewed for a period of two (02) years and registered in the mining registry under the registration number N°A2016/064/DIGM/CPDM. This permit covered a surface of 78 Km².


It should be noted that the above Ministerial order renewed two (02) exploration permits held by the Company for exploring Gold and other associated minerals in the prefecture of Mandiana. The permits have been renewed for a period of two (02) years and registered in the
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mining registry under the registration number N°A2016/071/DIGM/CPDM. This permit covered
a surface of 177 Km².

From our review of the receipts attached the renewed permits, it appears that the processing
fees related to the renewal of the permits have been paid. Therefore, we have no comment on
this point.

IX- RIGHTS AND OBLIGATIONS ATTACHED TO THE PERMITS.

It should be noted that Article 88 of the law L/2013/053/CNT dated 06th April 2013, carrying out
amendments of some provisions of law L/2011/006/CNT/ carrying out Mining Code of the
Republic of Guinea provides that: *Mining Title and Authorisations instituted by virtue of this
Code may be revoked by the issuing authority for one of the following grounds:

- The exploration or mining activity is suspended or activity restricted for more than six
  (6) months in the case of exploration, and more than twelve (12) months for mining
  operations, without legitimate grounds and in a manner detrimental to the public
  interest.

- The feasibility study produced demonstrates the existence of a Deposit which is
  economically and commercially exploitable within the perimeter of the exploration
  permit, but no mining operations follow within the timeframes set out in and in
  accordance with the modalities stipulated in Articles 34 and 41 of this Code.

- The violation of any of the provisions of this Code described below:

  1. Mining work costs or expenses of the holder are less than 25% over two
     consecutive years of the whole of the minimum work program, or the minimum
     amount of expenditure specified for this period by the Mining Title or the terms
     of reference of the Mining Concession, except in duly justified cases of force
     majeure, which do not exceed twelve (12) months;

  2. Failure to start work within six (6) months from the date of the grant of the
     exploration permit, a delay of eighteen (18) months for Operating Permits and
     two (2) years for a Mining Concession, all in accordance with the procedures
     set out in Articles 34 and 41 of this Code;

  3. Failure to maintain the holder’s extraction records, sale, and shipping
     information on a regular basis and in accordance with standards established by
     the regulations in force, or refusal to produce these records to qualified Agents
     of the National Mines Department and National Tax Department;

  4. Non-payment of taxes and/or royalties;

  5. Exploration or mining operating activities conducted outside the perimeter of the
     Mining Title or the exploration or mining of substances not designated therein;

  6. Mining operation activities undertaken with an Exploration Permit;

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7. Loss of the financial or technical capability which guaranteed, at the time the Title was granted, that the operations would be duly performed by the holder;

8. Total assignment, transfer or Lease of all mining rights without the prior authorization provided for in Article 90 below;

9. Assignment […] without deductions at source of the capital gains, indicated in Article 91-B below;

10. Assignment […] without deductions at source of the capital gains payable under Article 91-C below;

11. Assignment, transfer, or Lease of all or part of the mining rights resulting from the Exploration Permit;

12. Recurrent tax fraud relating to incorrect financial statements and balance sheets;

13. Non-compliance with the provisions of this Code relating to conflicts of interest described in Article 8 above, and the Code of Conduct described in Article 155 below;

Revocation can only occur after a warning notice from the Minister is sent to the holder of the Mining Title or the Authorization requesting the holder to provide, within the timeframe below, proof of compliance with its obligations before the date of the warning notice:

- One month for Exploration Permits and Authorizations; and

- Forty-five (45) days for the Operating Permit and Mining Concession.

Upon receipt of the warning notice and for the period of the latter, no technical activity is permitted under the relevant Mining Title or Authorization.

X- OUR OPINION ON THE GOOD STANDING OF PERMIT

Based on the certificates of validity and good standing N°775/MMG/CAB/CPDM/2016 dated 31st October 2016, issued by the Managing Director of the Centre for Promotion and Development of Mine (CPDM) it is our opinion that the permits registered with the CPDM under the registration numbers as provided below are valid and in good standing at the date of this opinion:

- A 2015/018/DIGM/CPDM dated on 11th May 2015;
- A 2016/004/DIGM/CPDM dated on 19th October 2016;
- A 2016/005/DIGM/CPDM dated on 19th October 2016;
- A 2016/006/DIGM/CPDM dated on 19th October 2016;
- A 2016/007/DIGM/CPDM dated on 19th October 2016;
- A 2016/008/DIGM/CPDM dated on 19th October 2016;

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- A 2016/069/DIGM/CPDM dated on 19th October 2016;
- A 2016/070/DIGM/CPDM dated on 19th October 2016;

XI- OUR RESERVES

Our legal opinion is issued in this case under the following reserves:

For all purposes, we precise the following:

- Our research in connection with this legal opinion did not include a check of any nature whatsoever of the obligation of the Company to comply with Guinean tax regulation such research being outside of the scope of our mission.
- Our research in connection with this legal opinion did not include a check of any nature whatsoever on the level of mining work or costs or expenses;
- Our research in connection with this legal opinion did not include a check of any nature whatsoever of the financial or technical capability of the Company;
- As part of this legal opinion, "valid" means in relation with the rights of the Company referred to above that such rights met all legal requirements to produce their full effect.
- As part of this legal opinion, "binding" means in relation with the rights of the Company referred to above that such rights may have radiation toward those who were neither parties nor represented to the relevant deed.

XII- DISCLOSURES

This opinion may not be disclosed to any other person than the Recipients and the persons mentioned below, in the terms and conditions set out below:

Individuals (such as affiliates, auditors, legal advisors of the Recipients, administrative authorities) who, in the course of their activities should have access to similar information concerning the Recipients in accordance with the regulation in force at the time of disclosure.

Persons expressly authorized by regulation, order, judgment, order, a decision rendered by a competent court.

Persons who may have access in the framework of lawsuit.

XIII- APPLICABLE LAW

This opinion is governed and will be always governed by and interpreted in accordance with the applicable law in Guinea at the date of its signature.

Me Mody Oumar BARRY
Attorneys at law

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(West Africa) e-mail : baofils@gmail.com
CERTIFICATE OF QUALIFIED PERSON


I, Martin Pittuck, residing in Cardiff, Wales, United Kingdom, do hereby certify that:

1) I am a Corporate Consultant (Geology) with the firm of SRK Consulting (UK) Limited with an office at 5th Floor, Churchill House, 17 Churchill Way, Cardiff, Wales, United Kingdom CF10 2HH;

2) I am a graduate with a Master of Science in Mineral Resources gained from Cardiff College, University of Wales in 1996 and I have practised my profession continuously since that time. Since graduating I have worked as a consultant at SRK on a wide range of mineral projects, specializing in precious and rare metals. I have undertaken many geological investigations, resource estimations, mine evaluation technical studies and due diligence reports;

3) I am a member of the Institution of Materials Mining and Metallurgy (Membership Number 49186), a Fellow of the Geological Society of London and I am a Chartered Engineer;

4) I have personally inspected the subject project during April and May of 2013.

5) I have read the definition of Qualified Person set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association, and past relevant work experience, I fulfill the requirements to be a Qualified Person for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;

6) I, as a Qualified Person, am independent of the issuer as defined in Section 1.5 of National Instrument 43-101;

7) I am the co-author of this report and responsible for Sections 5 through 13 and accept professional responsibility for those sections of this technical report;

8) Prior to 2013 I had no prior involvement with the subject property;

9) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith;

10) I have not received, nor do I expect to receive, any interest, directly or indirectly, in the Mandiana Gold Project or securities of Volcanic Metals Corp.; and

11) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Cardiff, Wales, United Kingdom
December 23, 2016

[“signed and sealed”]

Martin Pittuck, MSc, CEng
FGS, MIMMM(#49186)
Corporate Consultant (Geology)
SRK Consulting (UK) Limited
CERTIFICATE OF QUALIFIED PERSON


I, Oy Leuangthong, residing in Aurora, Ontario, Canada, do hereby certify that:

1) I am a Principal Consultant (Geostatistics) with the firm of SRK Consulting (Canada) Inc. with an office at 1300, 151 Yonge Street, Toronto, Ontario, Canada M5C 2W7;
2) I am a graduate of the University of Toronto in 1998 with a BA Sc. in Civil Engineering. I am a graduate of the University of Alberta in 2003 with a PhD in Mining Engineering (Geostatistics). I have practiced my profession continuously since 2003. My relevant experience includes: resource estimation, geostatistical support and modelling for exploration and mining projects in the Americas, Australia and West Africa, and contributions to several independent technical reports on base and precious metals exploration projects in North and South America and Africa.
3) I am a professional Engineer registered with Professional Engineers of Ontario license number 90563867. I am also a professional Engineer registered with the Association of Professional Engineers and Geoscientists of Alberta license number 82746;
4) I have not personally visited the project area but relied on a site visit conducted by Martin Pittuck, a co-author of this technical report;
5) I have read the definition of Qualified Person set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association, and past relevant work experience, I fulfill the requirements to be a Qualified Person for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
6) I, as a Qualified Person, am independent of the issuer as defined in Section 1.5 of National Instrument 43-101;
7) I am the co-author of this report and responsible for Sections 1, 2, 3, 4, 14, 15, 16, 17 and 18, and accept professional responsibility for those sections of this technical report;
8) I have had no prior involvement with the subject property;
9) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith;
10) I have not received, nor do I expect to receive, any interest, directly or indirectly, in the Mandiana Gold Project or securities of Volcanic Metals Corp.; and
11) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Toronto, Ontario, Canada
December 23, 2016

["signed and sealed"]

Oy Leuangthong, PhD, PEng
PEO#90563867
Principal Consultant (Geostatistics)
SRK Consulting (Canada) Inc.