

# THE MINERAL CORPORATION

ADVISORS TO THE MINERAL BUSINESS

# Mineral Resource Estimate of the Adumbi Prospect, Orientale Province, Democratic Republic Of Congo

Prepared under the Guidelines of National Instrument 43-101 and accompanying documents 43-101.CP (October 2005) For Kilo Goldmines Ltd

By The Mineral Corporation, Bryanston, South Africa

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### 3 SUMMARY

This report describes exploration activity and mineral potential of the Adumbi Prospect located in the Orientale Province, Democratic Republic of Congo ("DRC"). The Adumbi Prospect occurs within Exploitation Licence PE9691 (Section 6.2), which forms part of a portfolio of eight Exploitation Licences held by KGL Somituri sprl.

The Adumbi Prospect is one of several gold prospects within Exploitation Licence PE9691, which in turn is one of the eight gold exploitation licences held by KGL Somituri sprl. These licences are collectively called the Somituri Project. As the focus of this report is on the Mineral Resources of the Adumbi Prospect, limited information on the Exploitation Licences other than PE9691 is provided in this report. The remaining seven Exploitation Licences are PE9692, PE9693, PE9694, PE9695, PE137, PE138 and PE140 and are referred to as the "Remaining Seven Licences".

Technical information in this report is based upon data that has been provided by Kilo Goldmines Ltd ("Kilo") to The Mineral Corporation. This includes a site visit to the Adumbi Prospect by Dr Johan Krynauw, an employee of The Mineral Corporation, to collect independent data.

This report has been prepared by professional staff based at The Mineral Corporation's offices in Randburg (South Africa) under the leadership of David Young. David Young, Stewart Nupen and Johan Krynauw are members of staff who are specialists in the fields of exploration, geology and mineral resource estimation and classification. They meet the requirements of SACNASP in order to allow them to act as Qualified Persons (QP) under the requirements of the SAMREC code as recognised by National Instrument 43-101 (NI43-101).

The Exploitation Licences of the Somituri Project are located in the Mambasa and Wamba Territories, District of Ituri and Haut-Uele in Oriental Province (Province Orientale) of the northeastern DRC. The Adumbi Prospect lies between X 594500 and 596000 and Y 191500 and 193100 (WGS 84 Zone 35N UTM coordinates) and totals 210ha.

Mineral tenure for the Adumbi prospect is held through a Permis d'Exploitation ("Exploitation Licence") PE9691. The licence was granted to Société Minère de l'Ituri sprl ("Somituri") for the period February 22, 2009 to February 22, 2039 for gold and diamonds. Exploitation Licence PE9691 forms part of a portfolio of eight Exploitation Licences covering a total of 605.73 square kilometres (the "Somituri Property") held by KGL - Somituri sprl ("KGL Somituri"), a DRC company to which Somituri irrevocably assigned its interest in the Somituri Property pursuant to an assignment agreement dated April 29, 2010. Documentation has been filed with the DRC Cadastre Minière (CAMI) to effect the registration of these assignments however, the assignments have not yet been implemented by the CAMI and the licences remain registered in the name of Somituri pending re-registration. The remaining seven Exploitation Licences comprising the Somituri Property are PE9692, PE9693, PE9694, PE9695, PE137, PE138 and PE140, and are collectively referred to as the "Remaining Seven Licences". Kilo Goldmines Inc., a wholly-owned subsidiary of the Company owns 71.25% of KGL Somituri. The balance of 28.75% is held 5% by the DRC and 23.75% by Somituri. The former Adumbi mine is one of several gold prospects within Exploitation Licence PE9691. No legal research as to the validity of the mineral right tenure has been conducted by The Mineral Corporation. The ownership structure and agreements that



govern the relationships between Somituri sprl, Kilo Goldmines Ltd, Kilo Goldmines Inc. and the DRC State are summarised in Section 6 of this document.

The Adumbi Prospect is well situated for the development of a mining venture, as it is at a low altitude in undulating topography amenable to construction of access roads. On-site infrastructure to support a hard-rock mining operation will have to be constructed. The immediate area will not be capable of supplying sufficient materials other than timber to support the construction of mine-site infrastructure. There is a significant local labour pool available for training and recruitment to any envisioned mining operation.

Significant gold has been recovered between 1920 and 1959 from workings in Exploitation Licence PE9691, other than at the Adumbi Prospect, such as at the Bagbaie and Kitenge and Maipinji gold mines.

Archaean gneisses and granite-greenstone terrains cover much of northeast DRC and extend into the Central African Republic ("CAR"), western Uganda and southern Sudan (Schlüter, 2006). Old basement gneisses, dated at about 3.5Ga, are known as the Bomu (amphibolite-pyroxene gneisses and granites) and West Nile Complexes. Scattered greenstone belts known as the Ganguan and Kibalian Greenstone Belts have been dated at older than 2.9Ga and 2.81Ga, respectively.

The Upper Congo Granite-Greenstone association of north DRC belongs to the granitegreenstone belts of northeastern DRC and CAR. In NE Congo, the greenstone belts are referred to as the Kibalian Supergroup of Archaean age. Greenstones form a number of zones of approximately 10 to 100km<sup>2</sup> composed of metavolcanics and some metasediments. Granitoids form a significant part of the Precambrian rocks in northeastern DRC.

According to Randgold Resources (Hamilton et al, 2006), gold mineralisation within the Kilo-Moto Greenstone Belt in the eastern part of the DRC is associated with epigenetic mesothermal style mineralisation. This style of mineralisation is typical of gold mineralisation in Archaean and Proterozoic greenstone terranes and is generally associated with regionally metamorphosed rocks that have experienced a long history of thermal and deformational events. These deposits are invariably structurally controlled.

Mineralisation in this environment is commonly the fracture and vein type in brittle fracture to ductile dislocation zones. At the Adumbi Prospect the gold mineralisation is generally associated with quartz and quartz-carbonate-pyrite±pyrrhotite±arsenopyrite veins in a banded iron formation (BIF) horizon, with no evidence to date for an association with the metasedimentary, metavolcanic and metavolcaniclastic rocks which dominate the lithologies of the area.

Kilo carried out an initial exploration program on PE9691 from January to December 2010. Geological mapping, collection of 1 043 soil samples, 593m of adit sampling, 734m of trench excavation and sampling and 6 607m of diamond drilling was completed on the Adumbi Prospect. A fully functional exploration camp was constructed about 0.5km to the west of Adumbi Village. Kilo explored a 2 058m strike length of the Adumbi Prospect with 31 drill holes (including 6 re-drilled abandoned holes) on 17 section lines. In addition the Adumbi Prospect was explored by the



sampling of 4 adits and excavation and sampling of 12 trenches. Five boreholes were drilled at Kitenge to a total depth of 1714m, three at Manzako totalling 1 016m and one borehole at Monde Arabe with a depth of 302m.

Kilo incurred an unaudited expenditure of \$13 628 889 (Canadian) up to and including 2010 in the exploration of the licence areas within the Somituri Project, the majority of which was on the Adumbi Prospect.

Information supplied by Kilo to The Mineral Corporation indicates that diamond drilling on the Adumbi Prospect intersected gold-bearing mineralisation over a strike length in excess of 2.0km. This gold mineralised structure strikes northwest–southeast and dips steeply to sub-vertically to the northeast. The drilling in the 1.2km long central section intersected mineralised BIFs over true widths in the order of 100m over a depth below surface of 350m.

Based on the sample preparation techniques observed at the ALS Chemex preparation facility, Mwanza, the security protocols described by Kilo geologists and the analytical procedures adopted by the ALS Chemex Laboratory, Johannesburg, The Mineral Corporation is satisfied that the protocols and procedures have been followed to acceptable levels and the analytical results may be employed for Mineral Resource estimation up to the Indicated classification only. Investigations into the sample preparation at the ALS Chemex Mwanza facility and improvements in the chain-of custody protocols could remove this restriction.

Kilo have identified an Inferred Mineral Resource of 46.3 million tonnes at a gold grade of 1.37g/t above a cut-off grade of 0.5g/t at the Adumbi Prospect. The width of the Mineral Resource varies from 20m to 140m over a strike length of 1.2km.

The metallurgical test work completed to date is not considered sufficient and more representative samples of likely mined ore-grade and type of material (oxide/sulphide) need to be tested for gold recovery before any definitive status on gold recovery can be made.

The Somituri Project contains several Exploitation Licences that, apart from the Adumbi Prospect, are likely to host gold mineralisation.

The style of gold mineralisation may well be structurally controlled and to date there is a poor understanding of the regional and local structural geology. This is reflected in the style of geological and gold continuity modelling completed to date.

The density of the weathered/oxide and unweathered/sulphide materials are poorly understood and is currently assumed. The depth of weathering in the current modelling could be improved from the existing data as well as from new drilling data.

It appears that Kilo's objective was to identify a mineral resource containing between 2 and 4 million ounces of gold. The initial exploration work completed to date would appear to have achieved this objective.

The following is recommended for Kilo to execute in the next phase of project development:



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# **Exploitation Licence PE9691**

- The exiting Inferred Mineral Resource model be employed in a scoping level study to understand the likely Mineral Reserves to be hosted in the Adumbi Prospect.
- The Mineral Resource classification could be improved via in-fill drilling that will also assist in the understanding of the gold grade continuity. Borehole orientation for evaluation should be balanced between the requirements of intersection depth and obtaining an orthogonal intersection. However, boreholes steeper than 60° should be avoided.
- The structural geology of the region, and in particular for the Adumbi Prospect, needs to be understood to assist in gold grade continuity modelling. This will have a positive perspective on the classification of the gold Mineral Resources.
- Kilo has to devise a mechanism to ensure chain of custody controls for samples dispatched from site to Mwanza. Samples specifically taken for density measurements need to be taken over a suite of rock and material types.
- Focus on the historically depleted Mineral Resources and potential for geological losses needs to be made.
- The budget Kilo propose for their Phase 1 work appears to be adequate to fulfil the above works. If this is successful, further evaluation drilling may be required.

# The Remaining Seven Licences

• It is recommended that Kilo devise an exploration programme for the Remaining Seven Licences.

# 4 INTRODUCTION

This report describes exploration activity and mineral potential of the Adumbi Prospect located in the Orientale Province, Democratic Republic of Congo ("DRC"). The Adumbi Prospect occurs within Exploitation Licence PE9691 (Section 6.2), which forms part of a portfolio of eight Exploitation Licences held by KGL Somituri sprl ("KGL Somituri"), a DRC entity to which Somituri sprl assigned its interest in the Somituri Project. Kilo Goldmines Limited ("Kilo") holds 71.25% of KGL Somituri via its wholly-owned subsidiary, Kilo Goldmines Inc. The balance of 28.75% is held 5% by the DRC and 23.75% by Somituri sprl (Figure 1).

The Adumbi Prospect is one of several gold prospects within Exploitation Licence PE9691, which in turn is one of the eight gold exploitation licences held by KGL Somituri. These licences are collectively called the Somituri Project. As the focus of this report is on the Mineral Resources of the Adumbi Prospect, limited information on the Exploitation Licences other than PE9691 is provided in this report. The remaining seven Exploitation Licences are PE9692, PE9693, PE9694, PE9695, PE137, PE138 and PE140 and are collectively referred to as the "Remaining Seven Licences".

This report has been prepared with the objective that Kilo can make this report public with other documentation as per the requirements of National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) as set out in Form 43-101F1 (October 2005).

Technical information in this report is based upon data that has been provided by Kilo to The Mineral Corporation. This includes a site visit to the Adumbi Prospect by Dr Johan Krynauw, an employee of The Mineral Corporation, to collect independent data.



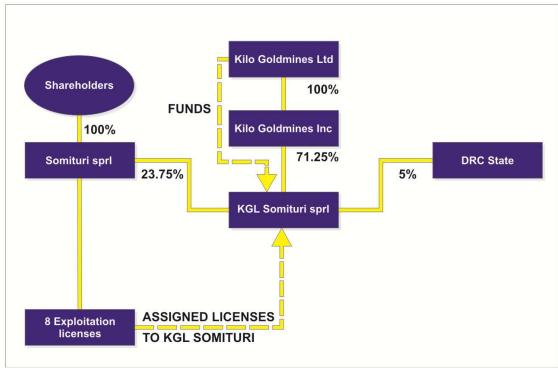


Figure 1: Ownership structure for the Somituri Project.

# 5 RELIANCE ON OTHER EXPERTS

This report has been compiled by The Mineral Corporation, a South African company with international affiliations, which comprises 26 professional technical staff and numerous associates offering expertise in a wide range of geoscientific and mining disciplines. The Mineral Corporation has a demonstrated track record in undertaking independent assessments of exploration and in preparing qualified and competent person's reports and independent feasibility studies on behalf of exploration and mining companies and financial institutions world-wide.

This report has been prepared by professional staff based at The Mineral Corporation's offices in Randburg (South Africa) under the leadership of David Young. A site visit was undertaken by Dr Johan Krynauw in December 2010 to the Adumbi Prospect field camp and the adjacent Kitenge-Manzako areas. These members of staff are specialists in the fields of exploration, geology and Mineral Resource estimation and classification and meet the requirements of the South African Council of Natural Professional Scientists (SACNASP) in order to allow them to act as Qualified Persons (QP) under the requirements of the SAMREC code as recognised by National Instrument 43-101 (NI43-101). A visit to the ALS Chemex sample preparation facility in Mwanza, Tanzania, which is employed by Kilo, was made during the 2010 visit by Dr. Krynauw. David Young visited the ALS Chemex (Pty) Ltd assay laboratory in Johannesburg, South Africa, which is currently employed to conduct all gold analyses, during December 2010.

Neither The Mineral Corporation nor any of their consultants employed in the preparation of this report has any beneficial interest in the assets of Kilo. The Mineral Corporation has been paid fees and will continue to be paid fees for this work in accordance with normal professional consulting practices.



#### 6 PROPERTY DESCRIPTION AND LOCATION

### 6.1 Location and area

The Somituri Project Exploitation Licences are located in the north-eastern DRC as illustrated in Figure 2. The Project is located in the Mambasa and Wamba Territories, District of Ituri and Haut-Uele in Oriental Province (Province Orientale) of the DRC.

The Adumbi Prospect lies between X 594500 and 596000 and Y 191500 and 193100 (WGS 84 Zone 35N UTM coordinates) and totals 210ha. Nia-Nia village is approximately half-way by road between Beni and Kisangani and situated about 30km south of the Adumbi Prospect. Kilo maintains an administrative office in Beni; Kisangani is the capital of Oriental Province. The Exploitation Licences reference the geodetic Datum as WGS 84 and the UTM coordinates are UTM WGS 84, Zone 35N.

The Mineral Corporation have been provided with copies of DRC cadastre certificates for the eight Exploitation Licences. The Mineral Corporation have validated the geographic integrity of the licenses provided to the extent that is possible based on the copies of these certificates.

# 6.2 Mineral tenure and identifying numbers

Kilo supplied information to The Mineral Corporation that Mineral tenure for the Adumbi prospect is held through a Permis d'Exploitation ("Exploitation Licence") PE9691. The licence was granted to Société Minère de l'Ituri sprl ("Somituri") for the period February 22, 2009 to February 22, 2039 for gold and diamonds. Exploitation Licence PE9691 forms part of a portfolio of eight Exploitation Licences covering a total of 605.73 square kilometres (the "Somituri Property") held by KGL - Somituri SPRL ("KGL Somituri"), a DRC company to which Somituri irrevocably assigned its interest in the Somituri Property pursuant to an assignment agreement dated April 29, 2010. Documentation has been filed with the DRC Cadastre Minière (CAMI) to effect the registration of these assignments however, the assignments have not yet been implemented by the CAMI and the licences remain registered in the name of Somituri pending re-registration. The remaining seven Exploitation Licences comprising the Somituri Property are PE9692, PE9693, PE9694, PE9695, PE137, PE138 and PE140, and are collectively referred to as the "Remaining Seven Licences". Kilo Goldmines Inc., a wholly-owned subsidiary of the Company owns 71.25% of KGL Somituri. The balance of 28.75% is held 5% by the DRC and 23.75% by Somituri. The former Adumbi mine is one of several gold prospects within Exploitation Licence PE9691. The ownership structure is summarised in Figure 1.

No legal research as to the validity of the mineral right tenure has been conducted by The Mineral Corporation. The coordinates of the eight Exploitation Licences are listed in Table 1 and summary information is detailed in Table 2.

In accordance with the Mining Regulations of DRC the surface area of an Exploitation Licence is measured in a unit defined as a carré (in English, a



square) which is defined as an area that measures 30 seconds of latitude and longitude on each side. The sides must be oriented north-south and east-west. A square has an area of 84.955 hectares or 0.84955km<sup>2</sup>. The maximum size allowable for an Exploitation Licence is 471 carrés. Given that an Exploration Licence can be converted into an Exploitation Licence it follows that the maximum possible size of an Exploitation Licence is also 471 carrés. The Adumbi Prospect Exploitation Licence (PE9691) covers an area of 12 234ha.

# 6.3 Interest, obligations, expiration dates

# 6.3.1 Interest

According to information supplied by Kilo to The Mineral Corporation, Kilo effectively holds 71.25% of the Somituri Project, as an undivided interest in the Exploitation Licence, subject to the provisions of the Mining Code 2002 and the Mining Regulations as summarised herein under this Section entitled Obligations.

# 6.3.2 Obligations:

All mineral substances, including artificial deposits, underground water and geothermal deposits on surface or in the sub-soil or in water systems of the national Territory vest in the State of the Democratic Republic of Congo. The President of the Republic is responsible for the enactment of the Mining Code by Decree on his own initiative or on the proposal of the Minister in charge of mines and quarries based on the opinion of the Geological Department or the Mining Registry. The mineral tenure system is provided for in the Mining Code 2002 and in the Mining Regulations 2003. An environmental consulting firm of recognised standing is required for guidance and assistance in regards to environmental matters.

Pursuant to the Mining Code 2002 the following types of licences or permits may be granted by the Minister in charge of mines and quarries, for the exploration and exploitation of minerals:

- Prospecting Certificate;
- Exploration Licences; and
- Exploitation Licences to cover:
  - o small scale mining (artisanal);
  - large scale mining;
  - o tailings; and
  - o quarry.



Mineral Resource Estimate of the Adumbi Prospect Orientale Province, Democratic Republic of Congo Report No. C-KIL-ADU-1071-690, April 2011

Exploitation

PE9691

PE9692

PE9693

PE9694

PE9695

PE137

PE138

PE140

Licence

Date

Granted

23/02/2009

23/02/2009

23/02/2009

23/02/2009

23/02/2009

23/02/2009

23/02/2009

23/02/2009

<sup>1</sup>Au: Gold; Di: Diamonds

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	MINERAL CORPORA
>	ADVISORS TO THE MINERAL BU

<b>IINERA</b>	LCO	ORPOR	ATION
DVISORS TO	) THE	MINERAL	BUSINESS

Minerals<sup>1</sup>

Au, Di

Province

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Oriental

Licence	Corner	East Longitude	North Latitude		Licence	Corner	East Longitude	North Latitude
PE9691	1	27º 50' 00"	01º 41' 00"		PE9692	1	27º 29' 30"	01º 50' 00"
	2	27º 50' 00"	01º 47' 00"			2	27º 29' 30"	01º 53' 00"
	3	27º 53' 00"	01º 47' 00"			3	27º 32' 00"	01º 53' 00"
	4	27º 53' 00"	01º 44' 30"			4	27º 32' 00"	01º 55' 30"
	5	27º 56' 00"	01º 44' 30"			5	27º 33' 30"	01º 55' 30"
	6	27º 56' 00"	01º 44' 00"			6	27º 33' 30"	01º 57' 30"
	7	27º 59' 00"	01º 44' 00"			7	27º 36' 30"	01º 57' 30"
	8	27º 59' 00"	01º 41' 00"			8	27º 36' 30"	01º 54' 30"
	9	27º 56' 00"	01º 41' 00"			9	27º 35' 00"	01º 54' 30"
	10	27º 56' 00"	01º 41' 30"			10	27º 35' 00"	01º 52' 30"
	11	27º 53' 00"	01º 41' 30"			11	27º 32' 30"	01º 52' 30"
	12	27º 53' 00"	01º 41' 00"			12	27º 32' 30"	01º 50' 00"
PE9693	1	27º 48' 30"	01º 32' 30"	ĺ	PE9694	1	27º 47' 00"	01º 56' 30"
	2	27º 48' 30"	01º 35' 30"			2	27º 47' 00"	01º 59' 30"
	3	27º 51' 30"	01º 35' 30"			3	27º 53' 00"	01º 59' 30"
	4	27º 51' 30"	01º 37' 30"			4	27º 53' 00"	02º 00' 00"
	5	27º 54' 30"	01º 37' 30"			5	27º 56' 00"	02º 00' 00"
	6 27º 54' 30" 01º 37' 00"			6	27º 56' 00"	01º 54' 00"		
	7	27º 57' 30"	01º 37' 00"			7	27º 53' 00"	01º 54' 00"
	8	27º 57' 30"	01º 34' 00"			8	27º 53' 00"	01º 56' 30"
	9	27º 54' 30"	01º 34' 00"		PE137	1	27º 30' 30"	01º 45' 00"
	10	27º 54' 30"	01º 31' 30"			2	27º 30' 30"	01º 48' 00"
	11	27º 51' 30"	01º 31' 30"			3	27º 33' 30"	01º 48' 00"
	12	27º 51' 30"	01º 32' 30"			4	27º 33' 30"	01º 45' 00"
PE9695	1	27º 38' 00"	01º 37' 00"	-	PE138	1	27º 23' 00"	01º 45' 00"
	2	27º 38' 00"	01º 40' 00"			2	27º 23' 00"	01º 48' 00"
	3	27º 41' 00"	01º 40' 00"			3	27º 26' 00"	01º 48' 00"
	4	27º 41' 00"	01º 38' 00"			4	27º 26' 00"	01º 45' 00"
	5	27º 44' 00"	01º 38' 00"	1	PE140	1	27º 35' 30"	01º 41' 30"
	6	27º 44' 00"	01º 35' 00"	-		2	27º 35' 30"	01º 44' 30"
	7 27º 41' 00" 01º 35' 00"	1		3	27º 38' 30"	01º 44' 30"		
	8	27º 41' 00"	01º 37' 00"			4	27º 38' 30"	01º 41' 30"

Table 2: Summary information on the Sumitori Project Exploitation Licences

Hectare

12 234

8 580

12 234

12 234

3 058

3 058

3 058

6 1 1 7

Territory

Mambasa

Mambasa

Mambasa

Mambasa

Wamba

Wamba

Wamba

Wamba

District

Haut-Uele

Haut-Uele

Haut-Uele

Haut-Uele

Ituri

Ituri

Ituri

Ituri

Expiry Date

22/02/2039

23/02/2039

23/02/2039

23/02/2039

23/02/2039

23/02/2039

23/02/2039

23/02/2039

Table 1: Coordinates of the Somituri Exploitation Licences Licence Corner Fast North Licence

Prior to carrying out exploration, holders of an Exploitation Licence must obtain 'final approval' from the Ministry of Mines. Pursuant to the Mining Code 2002 holders of an Exploitation Licence must complete and submit for approval an Etude D'Impact Environnemental et Plan de Gestion Environnmental du Project, impact assessment study and environmental management plan, ("EIE-PGEP") in order to convert the Exploration Licence into an Exploitation Licence.

An EIE-PGEP report dated 11 December 2007 was prepared for former (Table 3) Exploration Licences (PR127, PR128, PR129 and PR130), which included the Adumbi Prospect and an acknowledgment receipt, number CE/5400/09, has been issued by the Cadastre Minière (CAMI).

All holders of a Mineral Right must pay annual rent and taxes to the Government of the DRC prior to March 31st of each year and maintain journals of administrative and technical activities. Rent and taxes on the Somituri sprl Exploitation Licences were US\$311 694 for 2009 and US\$364 606 for 2010 and 2011. Rent and taxes to the amount of US\$364 606 are due by 31 March 2012. Also a report of work in accordance with Ministerial Decree n°3156/CAB MIN/MINES/01/2007 of 06 August 2007 establishing a model for annual reporting on mining or on quarry activities (RDC, 2007) must be filed on or before March 31st of each year. Kilo confirmed that a report for the year ended 31 December 2010 was filed prior to 31 March 2011.

# 6.4 Methodology of locating property boundaries

All Mining Rights are maintained on 1:200,000 scale maps in CAMI in Kinshasa. The holder of an Exploitation Licence must survey the perimeter at his cost. A survey marker post with the holder's name, title number and survey marker identification must be placed at each corner of the perimeter. It is understood that Kilo has contracted a Kinshasa based survey company approved by CAMI to survey the perimeter and establish the corners of the Exploitation Licence.

# 6.5 Location of mineralised zones

Mineralised zones on the Exploitation Licence PE9691 hosting the Adumbi Prospect include the former gold producers, Adumbi, Bagbaie, Manzako, Kitenge and Maipinji as well as a number of other auriferous quartz veins that were exploited during the Belgian administrative era.

# 6.6 Agreements and encumbrances

The information on the agreements discussed below have been supplied by Kilo.

# 6.6.1 Agreement 1

Dated 15 November 2006, entitled "Definitive Agreement" between Kilo Goldmines Inc and Moto Goldmines Ltd 2006.

Kilo entered into an agreement with Moto Goldmines Limited ("Moto") on 15 November 2006, whereby Kilo acquired all of the rights and interests of Moto under three option agreements entered into with DRC companies.



Somituri Propert

15

One of these option agreements pertained to the Somituri Property. Pursuant to the transaction Kilo assumed Moto's responsibilities under the option agreement relating to the property and specified the issuance of common shares upon the completion of a going public transaction (the "Moto Anti-Dilution Right") as consideration to Moto for the acquisition rights and interests of Moto. Kilo also granted Moto the right, at its option, to acquire a 10% equity interest in the property for consideration of US\$5.0 million exercisable when a bankable feasibility study is concluded if, at that time, the Measured Resources for the property exceeds two million ounces of gold. The 15 November 2006 agreement between Kilo and Moto was amended on 20 June 2008. Said amendment pertains to corporate matters without impact on matters pertaining directly to the Somituri Property.

# 6.6.2 Agreement 2

Dated 10 July 2007, entitled "Accord de Societe en vue de la creation de KGL-SOMITURI sprl." This agreement is between Kilo Goldmines Ltd and Deltago International Ltd, R Wynne, J Ntumba, J-M Lokaanga, J-CI Mukengheshay, Societe Somituri SPRL.

The KGL-Somituri sprl partnership was formalised on 12 December 2007, and pursuant to the terms of the partnership Kilo Goldmines Inc owned 75% in KGL Somituri. The asset was the original twenty Research Permits. In accordance with the partnership, Kilo Goldmines Inc. committed to paying 50 000 Euros on the property assignment Registration Date and 75 000 Euros, 150 000 Euros, and 300 000 Euros on the first, second, and third anniversaries of the Registration Date respectively. Kilo Goldmines Inc also committed to investing, at a minimum, 1 million Euros during the first year after the Registration Date, and 500 000 Euros during each of the second and third years after the Registration Date in research activities.

### 6.6.3 Agreement 3

Dated April 2008, entitled "Accord de Societe en vue de la creation de KGL-Somituri sprl." This agreement is between Kilo and Deltago International Ltd, R Wynne, J Ntumba, J-M Lokaanga, J-CI Mukengheshay, Societe Somituri SPRL.

This agreement was a revision of Agreement 2 above to cover Exploitation Licences which were not included in Agreement 2. Pursuant to the terms, Kilo Goldmines Inc. agreed to finance all activities of KGL-Somituri between the execution date of the new Partnership Agreement and the filing of a bankable feasibility study by way of loans which bear interest at the rate of 5%. The loans are repayable by KGL-Somituri from revenues it generates to the extent of 75% of available funds, with the remaining 25% to be distributed to the equity holders. The minority partners may also request that one or more of the permits be transferred into new entities owned by the Company in exchange for a 2% net smelter royalty. As of 30 June 2010, interest income related to these loans had not been recorded as the properties' ability to generate revenue in the future is still being evaluated by Kilo Goldmines Inc.



#### 6.6.4 Agreement 4

Dated 29 April 2010, entitled "Accord de Societe relative a KGL-Somituri sprl." This agreement is between Kilo and Deltago International Ltd, R Wynne, J Ntumba, J-M Lokaanga, J-CI Mukengheshay, Societe Somituri SPRL.

Kilo Goldmines Inc. signed a new Partnership Agreement dated 29 April 2010, entitled (the "2010 Partnership Agreement"), as well as an Assignment Agreement providing for the transfer of the eight Exploitation Permits to KGL-Somituri. As a result of the transfer of the Exploitation Permits, under the mining code rules, the State acquired a 5% equity interest in KGL-Somituri. This interest was proportionately taken from both Kilo Goldmines Inc. and the Partners' interest. Following the assignment of 5% to the State the retained interest held by Kilo Goldmines Inc became 71.25%. Under the 2010 Partnership Agreement signed on 29 April 2010 (the "Effective Date"), Kilo Goldmines Inc committed to paying 75 000 Euros, 200 000 Euros (or an equivalent value in Kilo Goldmines Inc. common shares) and 250 000 Euros (or an equivalent value in Kilo Goldmines Inc common shares), on the Effective Date, three days following the Effective Date, and three days following the property assignment Registration Date, respectively. Kilo Goldmines Inc. has also committed to investing 2 million Euros during the three years following the Effective Date with a minimum of 1 million Euros during the first year. Subsequent to 30 June 2010, Kilo Goldmines Inc. issued 520 915 common shares at a deemed price of C\$0.482 per share to satisfy the Kilo Goldmines Inc. obligation to pay 200 000 Euros three days following the Effective Date as described above.

Under the 2010 Partnership Agreement, Kilo Goldmines Inc. has also agreed to finance all activities of KGL-Somituri, until the filing of a bankable feasibility study, by way of loans which bear interest at the rate of 5%. Within thirty days of the receipt of a bankable feasibility study, the minority partners may collectively elect to exchange their equity participation for either a 2% net smelter royalty, or a 1% net smelter royalty plus an amount equal to 2 Euros per ounce of proven mineral reserves. The 2010 Partnership Agreement ("Agreement 4") cancels and replaces the ones signed in 2007 and 2008.

# 6.7 Environmental liabilities

Kilo has stated that there are no pre-existing environmental liabilities known to it on the Adumbi Prospect.

### 6.8 Work Permits

In accordance with the Mining Code of 2002 and the Mining Regulations of the DRC, certain procedures are set forth that must be carried out before work can begin on a Permis d'Exploitation. The Governor of Orientale Province issued Somituri the required Récépissé (numbered 011) on September 17th, 2009, which allows work to be carried out on the Adumbi Prospect, subject to completion of other formalities.



Copies of the abovementioned Récépissé and of the EIE-PGEP were delivered to, and receipts of their acceptances, were received from various officials. In addition the Chief of Mines in the District was required to provide a 'local Récépissé'. Once the local Récépissé had been received the documents were delivered to the land administrators and village chiefs in the respective Territory and District.

Kilo have informed The Mineral Corporation that they have obtained a document from the Okapi Reserve at Epulu, whereby it acknowledges that the Adumbi Prospect is located outside of the official boundaries of the Reserve as presented in the official gazette. The Mineral Corporation has independently sourced the boundary position of this reserve from UNESCO quoted diagrams (Congo, DPR) and its understood location is shown on Figure 2. The Mineral Corporation cannot vouch for the accuracy of this information.



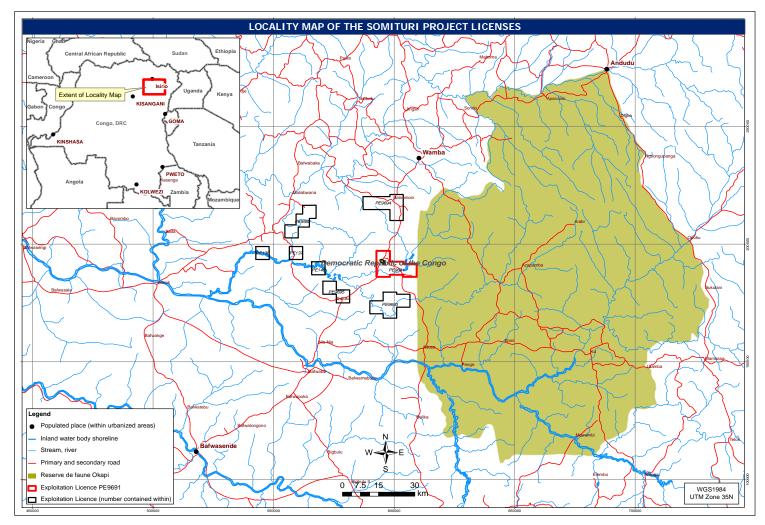


Figure 2: Locality map of the Somituri Project Licences.



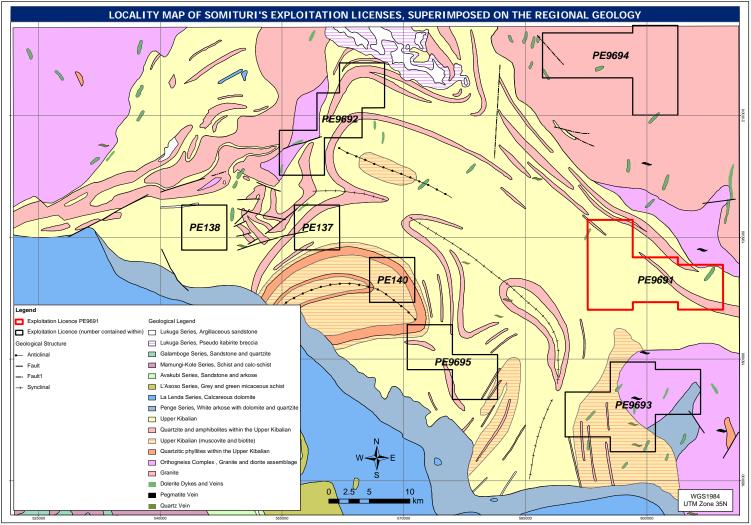


Figure 3: Locality map of the Somituri Exploitation Licenses, superimposed on the regional geology, after Aime et al, 1980.



#### 7 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

# 7.1 Topography, elevation and vegetation

The Somituri Project covers an undulating terrain that varies from about 60m above sea level ("mamsl") to about 800mamsl. The property is drained by numerous creeks and streams. The hills tend to have relatively steep slopes and the valley floors within the areas of the linear hills are relatively narrow. Away from the linear hills the property is gently undulating and the entirety of the Prospect is heavily covered by the Ituri Tropical Rainforest.

# 7.2 Property access

The Adumbi Prospect is accessible by an all-weather road northerly from Nia-Nia to Village 47 (47km north of Nia-Nia). Access within the property is via several gravel roads and trails. Away from areas of habitation and artisanal activity access is on foot through the dense forest growth.

Nia-Nia, illustrated in Figure 2, is accessible from the Ugandan border either through Mahagi in Orientale Province or through Kasindi in North Kivu Province. From Mahagi travel is via the all-weather road westerly to Bunia, Komanda, Mambasa, followed by Nia-Nia a distance of about 440km from the Ugandan border. From Kasindi travel is via the all-weather road westerly for 77km to Beni, then northerly to Komanda and westerly to Mambasa and on to Nia-Nia. The road north from Beni for 66km to the Oriental Province border was upgraded and paved in 2010. Nia-Nia is located about 360km east of Kisangani, the Capital of Oriental Province. Bunia and Beni are accessible several days per week via regularly scheduled commercial flights from Entebbe, Uganda, Kilo maintains an administrative office in Beni, Nia-Nia is also accessible by charter aircraft from Beni, Bunia or Kisangani. Kilo owns and maintains a 1,200m long grass-covered laterite base air-strip in Nia-Nia (Figure 2), which can accommodate propeller driven aircraft including medium sized cargo planes.

Entebbe (Uganda) is directly linked to South Africa, Europe, the United Kingdom and Asia via regularly scheduled commercial carriers. Entebbe is also linked to other African countries as well as Kinshasa, Lubumbashi and Kisangani via Nairobi, Kenya. In addition, Entebbe is linked to the DRC border points of Mahagi and Kasindi by paved highway from the deep sea port of Mambasa, Kenya.

Although DRC-based commercial aircraft operators provide regularly scheduled service between communities in the northeastern DRC with Kinshasa and Lubumbashi it is recommended to avoid travel on these carriers.

# 7.3 Proximity to population centre, nature of transport

The Adumbi Prospect is located within a remote area of Oriental Province. Within the immediate environs there are a number of small villages connected to one another with unmaintained roads and trails. These villages are accessed by motorcycle, bicycle and on foot. In addition, the larger rivers in the area provide access, at least part of the way, by dug-out canoe. The



majority of these villages have less than 300 residents; several larger communities on the Nia-Nia road to Wamba and Isiro (Figure 2) have populations exceeding several thousand residents.

# 7.4 Climate, operating season

The climate is typically tropical and characterised by wet and dry seasons. The dry season covers the one to three month period of late December to February and the wet season covers the period of late February to late December. The average annual temperature is circa 30° C. The annual low is circa 19° C and the high is circa 38° C. The annual rainfall is circa 1,78mm (Wynne, 2007).

It is understood that Kilo carried out exploration on the Adumbi Prospect throughout the entire 12 months of 2010 and progress was not impeded by weather.

# 7.5 Mining operation infrastructure

The Adumbi Prospect is well situated for development of a mining venture, as it is at a low altitude in undulating topography amenable to construction of access roads. On-site infrastructure to support a hard-rock mining operation will have to be constructed. The immediate area will not be capable of supplying sufficient materials other than timber to support the construction of mine-site infrastructure. There is a significant local labour pool available for training and recruitment to any envisioned mining operation. Although some main roads that dissect the district, it will be necessary to build access roads and bridges for any envisioned mine. The location of the nearest sources of power and water as well as tailings and process areas will have to be understood via a scoping study.

### 8 HISTORY

### 8.1 Prior Ownership

From the 1920s to the late 1950s, two exploration groups, Société Internationale Forestière et Minière du Congo ("FORMINIERE") and Société minière de l'Aruwimi - Ituri ("SMAI") held mineral concessions in the area Société Minière de la Tele ("SMT"), a subsidiary of (RMCA, 2007). FORMINIERE, was in charge of development and exploitation for both companies. A portion of PE9695 fell within the SMAI concession. PE9692 was not included in the concessions reported by Royal Museum for Central Africa ("RMCA", 2007). All remaining Somituri Project PEs were on the FORMINIERE The Mineral Corporation has no knowledge if the historical concession. ownership of the property covered by the Somituri Project PEs prior to and since independence in 1960, is complete. Table 3 presents the Exploration Licence number and the corresponding number of the Exploitation Licence to which it was converted. In addition the corresponding licence numbers prior to the most recent Exploration Licence number is presented, which are assumed to have been in effect prior to 1960 (RMCA, 2007).



Current Exploitation Licence	Previous Exploration Licence	Prior Licence number and name
PE9691	127	689 - Magawasa
	128	691 - Maipunji
	129	688 - Mapipi
	130	687 - Alibabi
PE9692	146	754 - Mokepa
	148	752 - Zunguluka
	149	753 - Asa
PE9693	139	746 - Ngayu4
	145	744 - Ngayu2
	147	743 - Ngayu1
	150	745 - Ngayu3
PE9694	142	748 - Omengi
	143	750 - Liganza
	144	749 - Embolini
	613	747 - Jambu
PE9695	131	690 - Manzao
	141	741 - Bamaka
PE137	137	751 - Gambi
PE138	138	742 - Ambaka
PE140	140	740 - Lenda

Table 3: Summary information on Exploration Licences converted into Exploitation Licences

### 8.2 Nature of exploration and development by previous owners

Kilo contracted RMCA in December 2006 to carry out a compilation of the RMCA achieves on gold in the region of Adumbi in the DRC. The compilation focused on gold exploitation on 20 Exploitation Licences, now held as eight Exploitation Licences (Figure 3) collectively referred to as the Somituri Project. The majority of the data available to RMCA was prior to the 1960 independence of the DRC.

#### 8.2.1 Exploitation Licence PE9691

Presented below is a summary for Exploitation Licence PE9691 extracted from the RMCA (2007) compilation. Subsequent activity and data sources are also presented.

1927 – 1951:	The M'Boro and Amuango deposits produced alluvial gold.
1938 – 1955:	Primary and alluvial gold was produced from the Kitenge and Maipinji deposits.
1944:	The Kitenge plant was built.
1948:	Underground and surface exploration at Manzako.
1952 – 1959:	Primary gold was produced from the Bagbaie and Adumbi deposits.
1955:	Kitenge and Maipunji closed.
1959:	Adumbi and Bagbaie closed.
1975:	BRGM summarise the property



1980 – 1981:	BRGM map, sample and drill 3 holes at Adumbi.				
1984:	BRGM complete a literature study of Adumbi.				
	BHP-Utah Mineral International carry out a property review of Adumbi.				

#### 8.2.2 The Remaining Seven Licenses

Information from RMCA (2007) indicates that alluvial gold was exploited from the Mokepa Mine located on the Akurude, Nioke and Mangope Rivers during the period from 1942 to 1954 on PE9692. No information on mining and prospection maps was obtained on PE9693, PE 9694 or PE9695, although the historic Yindi and Angukulu gold deposits are located to the south and northwest, respectively. No further information on historical exploration and production is known to The Mineral Corporation.

#### 8.3 Historical Mineral Resource and Reserve Estimates

### 8.3.1 Exploitation Licence PE9691

A non-NI43-101 compliant historical resource by BRGM (1984) concluded that a 700m section of the Adumbi gold deposit plus a 200m section of the Bagbaie gold deposit to a vertical depth of 20m below the base of Adumbi Mountain could host approximately 20 tonnes of gold which equates to 643,000oz.

The conclusions of a non-NI43-101 compliant historical resource for Adumbi by BUGECO (1988) concluded that remaining resources in the main zone, after mine closure in 1959, are 929 880 ounces of gold. In addition, the BUGECO (1988) non-NI43-101 compliant historical resource further concludes that an additional 5 tonnes of gold (160 750oz) could be hosted outside the main zone within Adumbi Hill. The total BUGECO (1988) non-NI43-101 compliant resource is 1 090 630 ounces of gold as presented in Table 1.

(1700)	1700/							
Oxide Ore Tonnes	Grade g/t Au	Sulphide Ore Tonnes	Grade g/t Au	Ounces GOLD				
	Main Zone							
1 000 000	9.8	-	-	315 050				
-	-	2 250 000	8.5	614 830				
	Outside Main Zone							
-								
	1 090 630							

 Table 4: Adumbi, non NI43-101 compliant historical resource, by BUGECO (1988)

#### 8.3.2 The Remaining Seven Licenses

No historical resources or reserves pursuant to the CIM Guidelines of November 2010 (guidelines for reporting Mineral Resources and Reserves adopted by the CIM and incorporated into the requirements of the NI43-101) have been reported to occur on the Remaining Seven Licences.



# 8.4 Production

# 8.4.1 Exploitation Licence No PE9691

Historical exploitation from the Adumbi, Bagbaie, Kitenge and Maipinji gold mines from 1920 to 1959 is reported as 291 000 ounces of gold (RMCA, 2007). The gold production is summarised in Table 5. Vertical and longitudinal sections of the Adumbi mine, circa  $\pm$ 1958, are illustrated on Figure 4. Evident from the vertical section is that exploitation has only occurred, for the most part, above the level of the creek. In addition, mining only focused on a high grade continuous quartz vein.

Mine	Tonnes of Gold	Total Gold Production			Recovered Grade g/t Au
	Alluvial	Primary	Tonnes	Ounces	
Adumbi & Bagbaie	2.180	4.440	6.620	212,840	9.1
Kitenge & Maipinji	0.401	2.030	2.431	78,158	6.8
TOTALS	3.370	8.135	11.505	291,000	

Table 5: Historical gold production at Adumbi, Bagbaie, Kitenge and Maipinji.

### 8.4.2 The Remaining Seven Licences

A total of 15 200oz of gold was recovered from the Mokepa Mine on PE9692 between 1943 and 1954 in alluvial operations within the local river drainage.

No records of gold production are known from PE9693, PE9694, PE9695, PE 137 and PE140 (RMCA (2007), whereas records indicate that 22 720oz gold had been recovered from the Mambati Mine on PE138 between 1943 and 1950.

# 9 GEOLOGICAL SETTING

# 9.1 Regional Geology

The following section on the regional geology of the north-eastern portion of the DRC is a simplified summary from a draft research paper on the geology of the DRC by Deblond and Tack (2000) and Schlüter (2006) and concentrates on the regional geology of eastern DRC.

Archaean gneisses and granite-greenstone terrains cover much of northeast DRC and extend into the Central African Republic ("CAR"), western Uganda and southern Sudan (Schlüter, 2006). Old basement gneisses, dated at about 3.5Ga, are known as the Bomu (amphibolite-pyroxene gneisses and granites) and West Nile Complexes. Scattered greenstone belts known as the Ganguan and Kibalian Greenstone Belts have been dated at older than 2.9Ga and 2.81Ga, respectively.

The Archaean Ganguan supracrustal series overlies the Bomu Complex, and includes quartzites, slates and metavolcanics (talc schists). It is considered to



be part of the Kibalian-Ganguan greenstones. The Ganguan series is intruded by aplitic and quartz veins and by small doleritic massifs.

The Upper Congo Granite-Greenstone ("UCGG") association of north DRC belongs to the granite-greenstone belts of northeastern DRC and CAR. In north eastern Congo, the greenstone belts are referred to as the Kibalian (Supergroup) of Archaean age. Greenstones form a number of zones of approximately 10km<sup>2</sup> to 100km<sup>2</sup> composed of metavolcanics and some metasediments. Granitoids form a significant part of the Precambrian rocks in northeastern DRC. The simplified geology of the north-eastern DRC is illustrated in Figure 3.

Deblond and Tack (2000) have identified Upper Kibalian sediments with some andesitic volcanics, resting upon a Lower Kibalian volcanic granitoid association in DRC. The metavolcanics of the Lower Kibalian have been subdivided into ultramafic, mafic, intermediate and andesitic. The sediments of the upper Kibalian are pelites and banded iron formation ("BIF", also referred to as itabirites). The Lower Kibalian is intruded by 2.81Ga old tonalites, whereas the Upper Kibalian is intruded by 2.46Ga old granodiorites and granites that represent most of the volume of the UCGG belt.

The UCGG associations of the Archaean greenstone belts of the northern Congo craton have been classified according to their characteristics and to that of their basement as, a) the type A UCGG association (about 95% of the gold output) consists of greenstones with abundant mafic-ultramafic volcanics and scarce sediments. Associated granitoids correspond to a typical TTG suite. The tonalites of this UCGG association intruded 2.8 - 2.9Ga ago, and b) the type B UCGG association comprises mafic-intermediate volcanics and sediments (mainly BIFs). Associated granodiorites and granites (2.4 - 2.5 Ga) represent most of the volume of the entire greenstone belts, and intruded this type B association and its basement.

The areas of the volcanic-granitoid Lower Kibalian display a synclinorial tectonic style, while the greenstones of the Upper Kibalian form belts less than 10km wide, 30 - 60km long, made up of units isoclinally folded along subvertical axial planes and horizontal axis. These units "float" within the granitoids.

### 9.2 Local Geology

The 1980 1:200,000 scale geological maps edited by the Geological Survey of the Republic of Zaire, (currently the DRC) in conjunction with the BRGM of France, covers the area of the Somituri Project as illustrated in Figure 3 (Aime *et al.* (1980).

The Adumbi Prospect is located within the Upper Kibalian Paragneiss Complex (Figure 3), which regionally consists of quartzitic sandstone commonly containing pyrite, with lesser amounts of pelitic and graphitic shales, fine-grained quartzitic sandstone, banded sericite schists, quartz-sericite schists, phyllites, spotted schists, red banded shale and BIF.



Intrusive rocks in the area of the Somituri Project, intruding indiscriminately all the basement formations, consist of possibly Late Proterozic dolerite/diabase and doleritic gabbro and diorite. Quartz veins are predominantly associated with the Upper Kibalian. The Proterozoic Lindian metasedimentary rocks unconformably overlie the Kibalian rocks. Palaeozoic, Cenozoic and Quaternary metasediments and alluvial sediments are locally present within the project area. Post Karoo rocks are essentially represented by lateritic cuirasse. The Karoo formation comprises black shales, elluvial and alluvial deposits.

# 9.3 Somituri Project Geology

The local geology for the Exploitation Licences, presented below, encompasses information derived from the 1:200 000 geological map (Aime *et al*, 1980) and airborne magnetic data used by Kilo. Gold in the Ngayu Greenstone Belt is known to be associated with siliceous chemical metasedimentary rocks including BIFs, and quartz veins.

# 9.3.1 Exploitation Licence PE9691

The published geological map and historical reports indicate that this Exploitation Licence is underlain by Upper Kibalian rocks. On PE9691 the dominant lithologies include a well bedded BIF unit, tuffaceous metasedimentary rocks from time to time referred to as greywacke, black shale, and a mafic intrusion.

The characteristics and spatial distribution of the geology of PE9691 is presented in more detail in Section 10.0 on Exploration and Section 11.0 on Drilling.

### 9.3.2 The Remaining Seven Licences

The Remaining Seven Licences are also underlain by Upper Kibalian rocks, mainly schist and metavolcanics. BIFs are present On PE138, PE140, PE6962 and PE9695.

# 9.4 Structural Geology

No detailed structural geological analysis has been carried out to date on any portion of the Somituri Project.



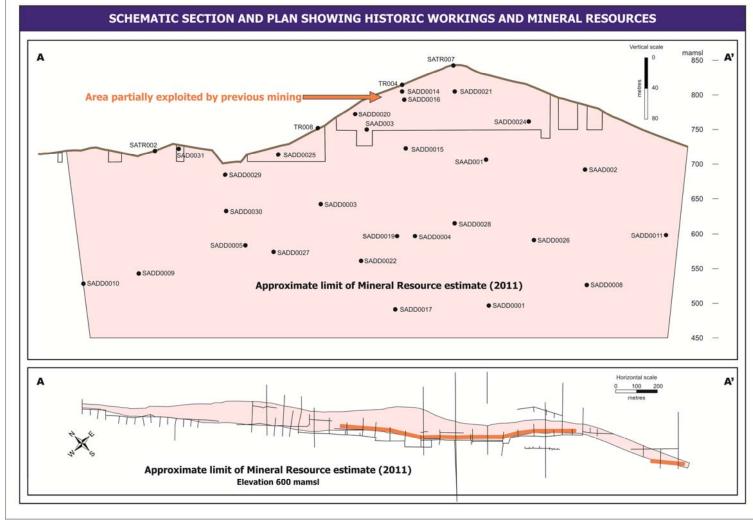


Figure 4: Vertical and Longitudinal Section of Adumbi Mine

Mineral Resource Estimate of the Adumbi Prospect Orientale Province, Democratic Republic of Congo Report No. C-KIL-ADU-1071-690, April 2011



### 10 DEPOSIT TYPES

According to Randgold Resources (Hamilton et al, 2006), gold mineralisation within the Kilo-Moto Greenstone Belt in the eastern part of the DRC is associated with epigenetic mesothermal style mineralisation. This style of mineralisation is typical of gold mineralisation in Archaean and Proterozoic greenstone terranes and is generally associated with regionally metamorphosed rocks that have experienced a long history of thermal and deformational events. These deposits are invariably structurally controlled.

Mineralisation in this environment is commonly the fracture and vein type in brittle fracture to ductile dislocation zones. At the Adumbi Prospect the gold mineralisation is generally associated with quartz and quartz-carbonate-pyrite±pyrrhotite±arsenopyrite veins in a BIF horizon, with no evidence to date for an association with the metasedimentary, metavolcanic and metavolcaniclastic rocks which dominate the lithologies of the area.

### 11 MINERALISATION

# 11.1 Exploitation Licence PE9691

Mineralisation on Exploitation Licence Number PE9691 is known to occur at Bagbaie (referred to as Adumbi North), Adumbi Prospect, Kitenge, Manzako, Monde Arabe, Maipinji, and Vatican (Figure 5).

The mineralisation at the Adumbi Prospect predominantly occurs as gold in association with sulphides, mainly fine grained pyrite. Gold bearing mineralisation is hosted within the BIFs, consisting of chert, magnetite BIF, hematite BIF and lesser amounts of chert banded with fine-grained clastic metasedimentary rocks and chert banded with black shale. Locally thin layers of black shale are interlayered with the BIFs.

Gold mineralisation within the Adumbi Prospect is related to the northwest trending shear zones, which dip steeply towards the northeast, and which in some parts of the area, seem to utilise the competency contrast between two lithologies, namely the BIF-chert and the tuffaceous-greywacke metasedimentary rocks.

This mineralisation occurs over a strike length of 2km in a zone approximately 100m wide to a depth of approximately 350m. The continuity of mineralisation appears to be oriented vertically close to the wall rocks of the BIF.

Known mineralisation at Kitenge, Manzako, Vatican, Adumbi North and Monde Arabe is associated with quartz  $\pm$  carbonate veins.

Preliminary interpretations by Kilo conclude that several mineralising events occurred at Adumbi. The earliest event produced diagenetic pyrite in the black shales and in some of the tuffaceous metasedimentary and greywacke rocks. The second event consisted of pyrrhotite, which may be a syn-chemical precipitate in accordance with the volcanogenic massive sulphide deposit model. This was followed by two additional mineralising events; their sequence is not yet fully understood but a possible scenario is that the next



event was sulphur-poor, resulting in the precipitation of arsenopyrite. The final event is thought to have been pyrite in association with gold, probably syn-late stage or a D3 tectonic event. Tectonically induced permeability in the form of macroscopic to microscopic brittle and ductile network of micro-fractures, breccias and shear zones served to channel and concentrate hydrothermal fluids that were considered to be responsible for the gold mineralisation and the extensive alteration of chemical metasedimentary rocks, BIF and chert.

Mineralisation associated with the early stage pyrrhotite and pyrite event is highly deformed. The subsequent mineralising event is recognised by disseminated fine-grained subhedral arsenopyrite  $\pm$  pyrite within a macroscopic to microscopic brittle and ductile network of micro-fractures. Medium to coarse-grained, euhedral pyrite, may be syn to post-deposition of the gold mineralisation events. Visible gold was not observed in the drill core, but free gold is recovered by local artisanal miners. However, this does not necessarily indicate the nature of the gold mineralisation, but may be a reflection of the fact that the artisanal miners operate in the near-surface, oxidised environment.

High gold values are associated with marked silicification (mainly quartz veining), coupled with iron- and magnesium-rich carbonate flooding and sulphidisation of magnetite in the BIF. BRGM (1982) concluded that gold on PE9691 occurs in association with pyrite, pyrrhotite and arsenopyrite. In addition chalcopyrite and galena have been observed. Gold can occur within the pyrite as electrum. It was noted that the highest gold grades do not have a direct correlation with the grades of arsenic. In polished section, associated with the gold mineralisation, ankerite and calcite were observed in addition to quartz.

According to BRGM (1975) three 'barrels' of pyrite found near Adumbi hill returned gold values of 79 g/t, 212 g/t and 297 g/t, indicative that there is a direct link between gold and pyrite.

### 11.2 The Remaining Seven Licences

On the Remaining Seven Licences the occurrence of mineralisation is unknown to the authors of this report, apart from that described in Section 8.2.2. However, Kilo information suggests that gold is associated with quartz veins in sheared metasedimentary tuffaceous rocks and greywacke at occurrences in proximity to these exploitation Licenses.

### 12 EXPLORATION

Based on a site visit and inspection of data and reports supplied by Kilo, The Mineral Corporation is of the opinion that Kilo's procedures and methodologies, summarised in the following sections, are acceptable for the reporting of mineral resources.

### 12.1 Exploitation Licence PE9691

Kilo carried out an initial exploration program on PE9691 from January to December 2010. Geological mapping, collection of 1 043 soil samples, 593m of adit sampling, 734m of trench excavation and sampling, and 6 607m of diamond drilling was completed on the Adumbi Prospect. The areas targeted



by the 2010 exploration programme by Kilo are illustrated on Figure 5. A fully functional exploration camp was constructed about 0.5km to the west of Adumbi Village.

Kilo explored a 2 058 metre strike length of the Adumbi Prospect with 31 drill holes (including 6 re-drilled abandoned holes) on 17 section lines. In addition the Adumbi Prospect was explored by the sampling of 4 adits and excavation and sampling of 12 trenches.

The previously producing Kitenge gold mine and its northwest strike extension were explored over a 2km strike length with five drill holes, two trenches, a road cutting and three lines of soil sampling. Manzako, a former gold producer from surface and underground, was targeted over a 1 360 metre strike length by three drill holes. An artisanal working, locally known as Monde Arabe, which may be the northwest strike extension of the Kitenge gold-bearing structure, was tested with one drill hole.

# 12.1.1 Exploration Rationale and Objectives

Kilo has primarily used the localities of previous mining and current artisanal mining operations to define drill targets in Licence Number PE9691. The type of exploration being currently undertaken is by diamond drilling, trenching over selected target areas, mapping and sampling of existing adits, limited geological mapping and soil sampling. Details of the type and number of exploration drill holes at Adumbi, Kitenge and Manzako are discussed below.

The primary objectives of the exploration strategy to date are to:

- Improve understanding of the extent and style of mineralisation and to derive Mineral Resource estimates for the Adumbi Prospect;
- Test evidence for mineralisation at Manzako and Kitenge; and
- Optimise exploration models and strategies.

### 12.1.2 Geological mapping

Reconnaissance geological mapping focussed on areas of historical gold exploitation and active artisanal gold exploitation sites. The areas mapped in 2010 are the Adumbi Prospect, Kitenge, Manzako, Adumbi North and the Vatican Prospects. The spatial distribution of each of the Prospects mapped in 2010 on PE9691 is illustrated on Figure 5.

The dominant lithologies within the Adumbi Prospect (Figure 5) were determined from mapping of the historical era adits, complemented by Kilo's diamond drill core and historical and Kilo's trenches.

The lithologies at Adumbi are well-bedded magnetite-chert and hematitechert units, fine clastic metasediments, black shale, and minor thin intervals of black shale. Chert layers interbedded with these lithologies are common. Black shale typically occurs as 1-2 metre wide layers within the BIF and chert units. This sheared and folded chemical metasedimentary sequence is flanked by tuffaceous metasediments and/or greywacke to the northeast and to the southwest. The rocks to the southwest are loosely referred to as the "greywacke footwall" and those to the northeast as the



"tuffaceous metasedimentary hangingwall" units. The structure and the relations between the rocks to the northeast and southwest of the BIFs are currently poorly understood and there is no evidence on which to determine a younging direction. The terms hangingwall and footwall, therefore, do not have any stratigraphic connotation in this context.

A low angle thrust fault has been observed in the footwall rocks exposed in an adit. The age of the thrust relative to the tectonic and mineralisation history has not been determined and the structural setting of the BIF is not understood except for its near vertical orientation. Weathered or oxidised BIF and chert units are exposed at and near the top of Adumbi Hill.

Kilo geologists have stated that small-scale tight folds have been observed within the chemical metasedimentary rocks of the Adumbi Prospect. However, further structural studies will be required to understand fully the overall structure of the Adumbi Prospect.

Kitenge is situated approximately 4km southeast of the Adumbi Prospect (Figure 5). Kitenge is hosted within sheared tuffaceous - greywacke metasediments. This shear zone, mapped along a northwest – southeast strike orientation over a minimum length of 4km, is parallel to and about 500m northeast of the Adumbi Prospect shear zone. Gold mineralisation seems to be associated with quartz veining utilising the northwest–southeast trending shear.

Belgian era mining focused on mineralised quartz veins about 1-2m wide, localised within the shear zone. Mapping to date has revealed multiple quartz veins hosted within the Kitenge shear zone.

Reconnaissance mapping on Manzako (Figure 5) delineated a northwest– southeast trending shear zone over a strike length in excess of 2km. This shear zone hosts multiple parallel to sub-parallel quartz veins ranging in width from 1-2m wide. There is a number of existing adits and narrow open pits within the shear, that trend parallel to the strike direction of the shear zone, indicating that the previous Belgium mining mainly focused on quartz veins.

Adumbi North was exploited by Sociétée Minière de la Tele originally as the M'Boro mine, then as the Bagbaie Mine and subsequently the Bagbaie– Adumbi mine and finally as Adumbi. Gold processing plant included mills that were situated at Bagbaie and Adumbi (RMCA, 2007).



MINERAL CORPORATION

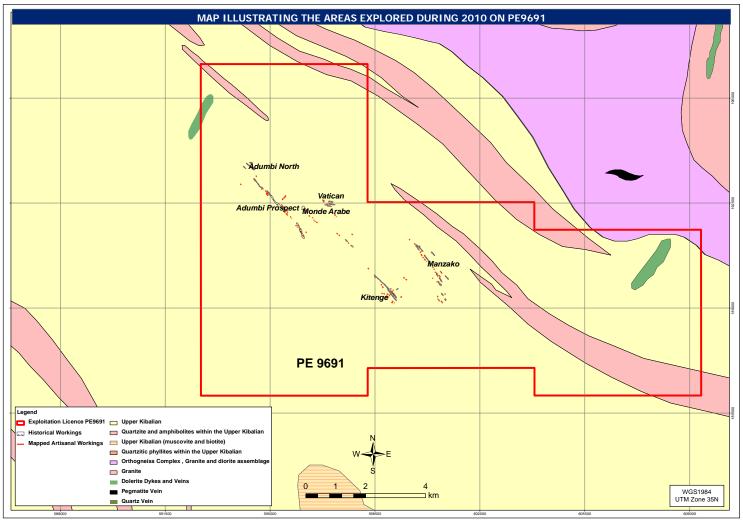


Figure 5: Map illustrating the areas explored in 2010 on PE9691, after Aime *et al*, 1980.



Monde Arabe is situated about 400 m east of the Adumbi Prospect (Figure 5). Geological mapping has delineated a northwest–southeast trending shear over a strike length in excess of 2km. Preliminary indications are that the Monde Arabe shear zone may be the on-strike continuation of the Kitenge shear zone. However, detailed mapping is required before this can be confirmed.

Vatican is situated approximately one kilometre to the east of Adumbi Hill (Figure 5). Reconnaissance geological mapping of exposures in the artisanal pits indicates that the area is dominated mainly by weathered, sheared metasedimentary rocks that trend east–west to northwest-southeast. The rocks in both orientations dip from a shallow angle to sub-vertical. Quartz vein-hosted gold mineralisation appears to be controlled by utilising both of the shear zone orientations. Based on the limited mapping to date, it can be concluded that Vatican has in excess of 600m of strike length hosting possible multiple quartz veins. Active artisanal gold exploitation indicates that Vatican has the potential for gold mineralisation, although the width and depth of mineralisation is not known.

### 12.1.3 Structural mapping

No detailed structural mapping has been completed to date. However, observations by The Mineral Corporation suggest that, in general the Adumbi BIFs appear to be more intensely sheared than the wall rocks, probably due to the fact that the BIFs are more competent than the encompassing rock mass and probably underwent ductile/brittle failure. Quartz and carbonate veins within the BIF zone are normally parallel or sub-parallel to the main shearing orientation, although different ages are likely to be present (Figure 6 and Figure 7).

The Mineral Corporation is also of the opinion that an understanding of the regional tectonic events will have to be gained to develop models for controls of mineralisation. The Mineral Corporation identified linear features from the regional digital terrain model (DTM) of the Adumbi area and classed them based on their orientations. Initial impressions suggested that the gold mineralisation may be associated with the tension related to a north-northwest shearing orientation.

# 12.1.4 Soil sampling

Soil sampling was carried out over PE9691 by Kilo geologists at 20m intervals along widely spaced lines oriented normal (40°) to the regional strike. The objective of the soil sampling programme was to improve definition of the on-strike extensions to the mapped gold-bearing zones, as well as explore for 'blind' zones of gold mineralisation. The soil sampling lines were oriented on a magnetic azimuth of 040° - 220°, normal to the regional strike of the lithologies.

A line of soil sampling over Adumbi Hill was designed to obtain data over an area having known lithologies with the aim of extrapolating the chemical signatures to areas void of exposures to assist in an



interpretation of the underlying lithological units. Analytical data for these samples had not been received at the date of this report.

### 12.1.5 Trench sampling

Kilo excavated 13 trenches totalling 734m on the Adumbi Prospect and commenced 2 trenches on Kitenge during 2010. Trenches were excavated to evaluate the strike continuation of the BIF unit and gold mineralization. Trenches were excavated a few centimetres into fresh bedrock underlying the overburden, saprolite, and/or saprock.

Trenches were excavated at 80 metre intervals oriented normal to the lithological strike direction on Adumbi Hill. The focus of the trenching was to evaluate the near surface gold mineralisation, and to provide lithological information to determine on-strike continuation of mineralisation as well as that of the gold bearing host rocks. The two trenches excavated within Kitenge Prospect were aimed at exploring for gold mineralisation across the multiple quartz veins hosted within the Kitenge shear zone. Analytical results of this sampling have yet to be reported by Kilo.



Figure 6: Photographs of meta-volcanosedimentary hangingwall (left, facing approximately southeast) and BIF (right, facing upwards, with the top of the photograph in the southeast) in an old Belgian era adit. The BIF is highly sheared parallel to the lithology contacts.



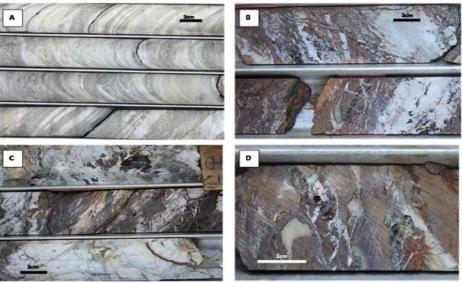


Figure 7: Photographs of typical quartz vein textures in meta-volcanosedimentary hangingwall (A) and BIF (B, C and D).

#### 12.1.6 Adit sampling

Kilo have completed 593m of adit sampling on the Adumbi Prospect. Horizontal chip channel samples were collected over the length of 4 adits.

The analytical results from the adit samples suggest that the operators at the former producing Adumbi Mine, only focused on mining the 'high-grade' quartz vein zones. However, Kilo have discovered significant gold mineralisation within the BIF horizon rocks thus providing a new target for gold exploitation.

### 12.1.7 Diamond drilling

Kilo carried out 9 639m of diamond drilling on the Adumbi, Kitenge, Manzako and Monde Arabe areas from February to December 2010 under a contract with SENEX sprl, a DRC subsidiary of the drilling company Geosearch. Two helicopter-portable Longyear 38 diamond drill rigs were utilised. The Mineral Corporation observed the drilling methodologies and procedures during the site visit of December 2010 (Section 16.1.1). Drill holes commenced with PQ size drill rods (core diameter of 85mm). Once the upper weathered zone and fractured formations had been drilled, the drill hole was reduced to HQ sized core (63mm) through the transition zone from highly weathered and/or oxidised units to fresh unweathered competent rocks. The fresh rock was drilled with NQ size drill rods, producing 48mm diameter core. No downhole surveys were completed during the site visit. Perusal of downhole survey data and Kilo reports indicate that downhole survey data was collected at 15 m intervals using a FlexIT survey tool with a digital readout. The data was digitally stored, and manually transferred to the daily drill log sheets by SENEX sprl personnel.

The location of the drill site collars was determined in the field with a hand held Garmin 60CSx GPS (WGS 84 Zone 35N UTM coordinates) by



Kilo geologists. Kilo geologists reported to The Mineral Corporation that the drill site preparation was generally completed manually, although a bulldozer was used on accessible sites. After clearing the drill pad, the collar site was pegged with respect to UTM coordinates determined by GPS. A compass was used to establish a line oriented with respect to magnetic north to indicate the drill hole azimuth. Once the drilling rig was moved onto the pad by a Eurocopter B3 helicopter, a Kilo geologist verified the set-up orientation of the drill hole by a clinometer and a compass.

Rehabilitation of sites is the responsibility of Kilo. A verbal report by the Kilo site geologist, Mr S Robinson, to The Mineral Corporation has indicated that this process started during January 2011. It was also reported to The Mineral Corporation that concrete markers are in the process of being erected on the drill hole collar.

Standard procedure reported to The Mineral Corporation and observed during the site visit (Section 16.1.1) indicated that drill rig personnel placed the recovered drill core into metal core trays labelled at the drill site with the drill hole number. End-of-run markers are placed in the core tray between the end and start of each recovered drill run. Information on core recovery, depth of the run, stickup length and ground conditions are recorded for each run and inspected by Kilo geologists. The core is transported from the drill site by helicopter to the core yard facility at Kilo's exploration camp.

### 12.2 The Remaining Seven Licences

To date no field exploration work has been carried out on any of the Remaining seven Licences of the Somituri Project, although planning of field work, logistics and acquisition of supplies has understood to have commenced.

### 12.3 Expenditure on Exploitation Licence EP9691

Kilo has reported the following information on expenditure on Exploitation Licence EP9691 to The Mineral Corporation:

Un-audited expenditure totalling \$11 105 455 (Canadian) was incurred by Kilo to December 2010 (Table 6). This amount includes C\$2 340 648, comprising exploration expenditure for which invoices were received and/or paid in calendar Q1 2011.



ACTIVITY	2011 Q1	2010	2009	2008	2007
	C\$	C\$	C\$	C\$	C\$
Acquisition costs		126 277	172 384	10 866	84 776
Drilling	2 042 631	6 800 089			
Sampling	10 900	151 563			
Professional Fees	165 415	318 294	27 451	49 620	10 665
Management/	56 164	672 539	34 055	36 808	17 424
Admin					
Geological	5 147	165 687			105
Travel	17 949	1 398		8 013	13 825
Trenching	17 036	47 664			
Other	25 406	9 481			5 823
TOTALS	2 340 648	8 292 992	233 890	105 307	132 618

Table 6: Expenses incurred to Q1 2011 on PE9691

#### 12.4 Expenditure on the Remaining Seven Licences

Kilo has reported the following information on expenditure on the Remaining Seven Licences to The Mineral Corporation:

Un-audited expenditure totalling \$2 523 434 (Canadian) was incurred by Kilo to December 2010 (Table 6). This amount includes C\$30 009, comprising exploration expenditure for which invoices were received and/or paid in calendar Q1 2011.

ACTIVITY	2011 Q1	2010	2009	2008	2007
	C\$	C\$	C\$	C\$	C\$
Acquisition costs		498 948	681 123	42 934	334 965
Drilling					
Sampling					
Professional Fees	18 380	35 366	108 464	196 061	42 140
Management/	6 240	74 727	134 557	145 435	68 847
Admin					
Geological	572	18 410			942
Travel	1 994	156	0	31 663	54 627
Trenching					
Other	2 823	1 054			23 006
TOTALS	30 009	628 661	924 144	416 093	524 527

Table 7: Expenses incurred to Q1 2011 on the Remaining Seven Licences



### 13 DRILLING

## 13.1 Exploration Licence PE9691

## 13.1.1 Drilling Programme

Kilo prospected the Adumbi Prospect with 31 diamond drill holes to a total of 6 607m of core (Figure 8). Five boreholes were drilled at Kitenge, to a total of 1 714m, one borehole was drilled at Monde Arabe to a drilling depth of 302m and three for a total of 1 016m at Manzako.

## 13.1.2 Drill localities

General details of each bore hole are summarised in Table 8, as supplied by the Kilo site geologist.

## 13.1.3 Results of the diamond drilling programme

Information supplied by Kilo to The Mineral Corporation indicated that diamond drilling on the Adumbi Prospect intersected gold-bearing mineralisation over a strike length in excess of 2.0km. This gold mineralised structure strikes northwest—southeast and dips steeply subvertically to the northeast. The drilling in the 1.2km long central section intersected mineralised BIFs over true widths in the order of 100m over a depth below surface of 350m.

(The true width is the width normal to the interpreted ore body sidewalls and can be generally considered as the horizontal width of the ore body.) Modelling of the data supplied supports this interpretation (Section 19).

## 13.2 The Remaining Seven Licences

No drilling was conducted on these Exploitation Licences.

## 14 SAMPLING METHOD AND APPROACH

## 14.1 Exploitation Licence PE9691

## 14.1.1 Sampling method, type, area and sampling intervals

The Mineral Corporation inspected sampling sites and core sampling methods and is of the opinion that all relevant sampling locality data was recorded and sample collection took place according to generally accepted industry procedures. All collected samples were retained in a locked secure shed until they were dispatched by vehicle to the administrative office of the Company offices of Kilo in Beni. A commercial freight forwarding agent transported the samples from Beni to ALS Chemex laboratory in Mwanza, Tanzania for sample preparation.

## 14.1.2 Soil samples

The Mineral Corporation has not made use of any soil sampling data for this Mineral Resource estimate.



### 14.1.3 Trench samples

The Mineral Corporation inspected the trenching and sampling processes during the Site Visit (Section 16.1.1). Trench samples were dug by labourers, using picks and shovels to bedrock where practicable. Sampling commenced following completion of geological logging of trenches. In mineralised sections, and sections of geology considered to be favourable for mineralisation, a maximum sample length of 1.0m was applied. Approximately 1.5m sample lengths within deemed to be unmineralised lithologies were generally applied. Sampling intervals did not cross lithological boundaries, with the exception where the presence of narrow veining hosted within a unit were sampled. After all the sample intervals were marked, continuous channel samples were collected from each marked interval, under the supervision of the geologist. Sampling took place along one wall of the trench to minimise the possibility of contamination.

## 14.1.4 Adit samples

The Mineral Corporation inspected one adit which had been sampled by Kilo during the site visit (Section 16.1.1). Sampling intervals in adits were marked by inserting concrete nails into the rock at the ends of each sample. Horizontal chip channel samples were collected by hammer and chisel over predetermined sample intervals. The sampling was based on the lithological and alteration characteristics. Sample lengths varied from 0.5m - 2m in horizontal length.

## 14.1.5 Drill core samples

The Mineral Corporation inspected sampling procedures during the Site Visit. The drill core (laid in appropriately sized SANDVIK metal core trays) was transported from the drill site in an aluminium bin by helicopter, using a sling. This procedure was reported to The Mineral Corporation, but not observed at the time of the site visit. However, the method was observed for transport of building material. Prior to logging and sampling the drill core was digitally photographed in order to maintain a permanent record. All of the drill core photographs were downloaded into the Somituri Project data base retained in company computers on site and in the corporate office in Toronto, Canada.

One metre sample lengths were marked on the core in the BIF horizon during logging. The sample depths for each sample were entered into a sample ticket book, which contained removable duplicate sample ticket tags. The core sample numbers and sample intervals were written onto pre-printed diamond drill log forms. Each marked sample was split along its length by trained staff using a dedicated drill core diamond saw. The core was broken at the sample position marks using a geological pick. The sampling lengths were reduced when necessary, e.g. where lithological contacts or core size changes were encountered, with the bottom/top end of the sample being about 2cm from the contact. One half of the core was replaced in the core tray and the remaining half was placed in a plastic sample bag, in which the sample number is folded in along the open end of the bag, which was then



closed using a stapler. Sample tags were placed in the core tray at the position of the bottom end where samples had been obtained. A brick was sawn ("brick cleaning") after each sample had been split to ensure that no cross-contamination takes place between samples.

The total length of core through the BIF horizon was sampled and a further 30m above and below the contacts with the hanging- and footwalls. Sample lengths in the hangingwall and footwall were increased to 2m. Hanging- and footwall zones where there are any features, such as sulphide concentrations, which may be gold-bearing, were also sampled. Sampling intervals ranged between 0.5m - 2.0m, depending on lithological and alteration characteristics. Samples in the mineralised section were generally 1.0m in length or less. Samples did not cross lithological, alteration, or sulphide mineralisation boundaries or where core size was changed.

The individual samples were placed into large rice bags, labelled and weighed and retained in locked storage on-site. Samples were transported in Kilo owned vehicles to Kilo's administrative office in Beni, and then to ALS Chemex in Tanzania by a commercial freight forwarding agent.

## 14.1.5.1 Sample recovery

The drill core inspected by The Mineral Corporation during the site visit (Section 16.1.1) indicated 100% recovery in the BIF and 95 to 100% in the hangingwall and footwall rocks.

## 14.1.6 Factors affecting reliability of results

The following items have the potential to affect reliability of analytical results, based on, The Mineral Corporation's observations:

- Chain of custody during sample transport;
- Possible sample contamination within the laboratory due to poor dust collection;
- Possible inadequate pulp particle size for the assay charge; and
- Inhomogeneous medium being sampled, i.e. a nugget effect.

## 14.1.7 Sampling quality and biases

Based on the site visit and data verification (Section 16) on results received to date, in the opinion of The Mineral Corporation the sampling quality is within acceptable standards and no material biases have been identified.



Duill	UTM V	VGS 84	Elevation	Azimuth	Dia	Length	Start	End
Drill Hole	UTM E	UTM N	Metres	Magnetic	Dip	Metres	dd/mm/yyyy	dd/mm/yyyy
SADD0001	595320	192282	683.0	40.0	-50.0	316.60	22/02/2010	12/03/2010
SADD0002	595216	192394	701.0	40.0	-50.0	142.80	15/03/2010	31/03/2010
SADD0003	595097	192513	712.0	40.0	-50.0	384.12	23/03/2010	27/04/2010
SADD0004	595217	192393	701.0	40.0	-50.0	352.80	02/04/2010	25/04/2010
SADD0005	595014	192606	687.0	40.0	-50.0	346.70	24/05/2010	08/06/2010
SADD0006	595969	191575	669.0	40.0	-50.0	303.55	10/06/2010	23/06/2010
SADD0007	595462	192182	673.0	40.0	-50.0	108.30	24/06/2010	03/07/2010
SADD0008	595462	192181	673.0	40.0	-50.0	320.70	03/07/2010	14/07/2010
SADD0009	594895	192755	658.0	40.0	-50.0	333.00	14/07/2010	26/07/2010
SADD0010	594813	192862	652.0	40.0	-50.0	298.70	27/07/2010	08/08/2010
SADD0011	595573	192087	647.0	40.0	-50.0	301.70	05/08/2010	16/08/2010
SADD0012	594565	193079	635.0	40.0	-50.0	296.70	10/08/2010	22/08/2010
SADD0013	595309	192517	783.0	220.0	-50.0	36.30	16/08/2010	21/08/2010
SADD0014	595309	192517	783.0	220.0	-57.0	34.80	22/08/2010	26/08/2010
SADD0015	595346	192553	778.0	220.0	-50.0	169.70	23/08/2010	06/09/2010
SADD0016	595306	192521	786.0	220.0	-60.0	157.70	26/08/2010	05/09/2010
SADD0017	595420	192642	723.0	220.0	-50.0	379.70	10/09/2010	25/09/2010
SADD0018	595382	192596	745.0	220.0	-50.0	25.80	11/09/2010	14/09/2010
SADD0019	595382	192596	745.0	220.0	-50.0	294.40	15/09/2010	13/10/2010
SADD0020	595258	192580	783.0	220.0	-50.0	109.80	27/09/2010	18/10/2010
SADD0021	595384	192453	761.0	220.0	-50.0	81.30	14/10/2010	19/10/2010
SADD0022	595335	192650	740.0	220.0	-50.0	295.70	18/10/2010	01/11/2010
SADD0023	595446	192536	731.0	220.0	-50.0	92.00	20/10/2010	27/10/2010
SADD0023a	595446	192536	731.0	220.0	-50.0	39.00	27/10/2010	30/10/2010
SADD0024	595477	192348	710.0	220.0	-50.0	50.30	24/10/2010	05/11/2010
SADD0025	595132	192672	753.0	220.0	-50.0	126.30	02/11/2010	10/11/2010
SADD0026	595533	192404	697.0	220.0	-50.0	253.80	06/11/2010	18/11/2010
SADD0027	595203	192758	699.0	220.0	-50.0	270.70	11/11/2010	23/11/2010
SADD0028	595445	192538	722.0	220.0	-50.0	287.48	19/11/2010	01/12/2010
SADD0029	595077	192727	707.0	220.0	-50.0	57.30	24/11/2010	27/11/2010
SADD0030	595132	192789	698.0	220.0	-50.0	236.00	28/11/2010	07/12/2010
SADD0031	595026	192801	692.0	220.0	-50.0	103.70	02/12/2010	07/12/2010

Table 8: Location and orientation data of the Adumbi Prospect diamond drilled holes data

Note:

SADD0023a is a deflection of SADD0023.





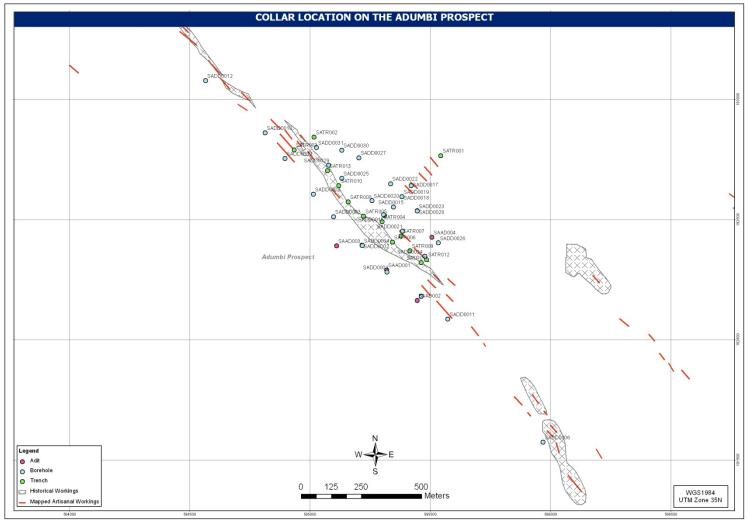


Figure 8: Collar locations on the Adumbi Prospect



#### 14.1.8 Rock types and mineralisation

The main rock types observed on PE9691, as provisionally classified by Kilo field geologists and observed by The Mineral Corporation, include magnetite BIF, hematite BIF, chert, black shale, tuffaceous metasedimentary rocks, greywacke, shale, chlorite schist, quartz and carbonate veins, mafic intrusives, and mafic ash tuff. These rocks are relatively fine-grained and no petrographic studies have been conducted to date, with the result that the terminology employed may change in future.

The magnetite BIF unit is defined by alternating layers of amorphous white to pale grey chert and massive black magnetite. This is the dominant lithological unit that occurs on the Adumbi Prospect. This unit is host to numerous pale grey to smoky quartz veins and veinlets, generally parallel to the bedding. Fine grained sulphides (pyrite, arsenopyrite and pyrrhotite) are associated with the quartz veining. Kilo has reported that high gold values are associated with high concentrations of pyrite, whereas lower gold values are associated with pyrrhotite and a lack of pyrite.

The hematite BIF unit consists of amorphous grey to dark grey chert interbanded with reddish brown hematite. The recognition of sulphides in this lithological unit is difficult to due to the oxidation of the sulphides. This unit is host to numerous smoky quartz veins and veinlets oriented parallel to the bedding. This unit often returns significant gold values.

Chert is normally an amorphous, massive grey rock. It is commonly host to quartz veinlets and veins and to sulphides (pyrrhotite pyrite and arsenopyrite) mineralisation. Preliminary simplistic observations by Kilo indicate that there have been at least three, and possible more, The preliminary interpretation places the mineralising episodes. majority of the gold with the last episode of pyrite mineralisation. The pyrrhotite commonly displays volcanogenic massive sulphide characteristics in that the pyrrhotite occurs, in part at least, as semimassive veins resembling typical 'stringer ore'. Those intervals containing in particular abundant fine grained pyrite return significant gold values.

The black shale is a very fine-grained rock containing detrital particles. It is dark grey to black, normally foliated and sheared displaying bedding and rarely primary sedimentary features such as flame structures. Large cubic pyrite crystals in the order of 1cm occur throughout this unit. This rock type is commonly host to numerous thin quartz veins and veinlets, but typically does not carry significant gold values. This rock type occurs at several intervals within the chemical metasedimentary unit.

The tuffaceous metasedimentary rocks are generally grey to purplish in colour and are comprised of fine to medium-grained clastic detrital particles. It is dominantly associated with the hangingwall side of the



Adumbi Prospect mineralised structure. Sulphides and gold values are not normally reported. Rarely, it may host a mineralised quartz vein.

The greywacke is a grey, metasedimentary rock comprising mediumgrained clastic detrital particles. This unit occurs on the footwall side of the Adumbi Prospect mineralised structure and it may have formed from the re-working of an ash tuff. Locally, it is host to quartz and carbonate veins and veinlets. In addition calcite veinlets with some rusty iron stains along the margins occur in places. Minor late stage cubic pyrite occasionally occurs.

The visual differentiation between the tuffaceous metasedimentary and the greywacke units is very difficult. Given that the structure of the Adumbi Prospect is not well understood with respect to folding and stratigraphic top directions, and due to the presence of low-angle thrust faults in the footwall rocks, Kilo arbitrarily distinguish the footwall and hangingwall as two separate units.

Shale, consisting of grey, fine grained particles, is rarely observed. It exhibits sericitic alteration and rare cubic pyrite crystals.

Chlorite schist, not seen by The Mineral Corporation, is uncommon and is typically a medium dark green, massive rock.

Quartz veins, ranging in thickness from 1mm to 5m in thickness, occur throughout the chemical metasedimentary sequence on the Adumbi Prospect. Multiple generations, represented by variations in colour and relationships to one another, are present and a detailed study will be required to understand the relationship of the gold and different generations of sulphide mineralisation. Kilo geologists have reported that there is a definitive relationship between gold mineralisation and episodic quartz veining.

# 14.1.9 Summary of relevant samples, values and estimated true widths

A summary of holistic evaluation BIF cut gold values is supplied in Appendix 1.

## 14.1.10 Borehole Logging Procedures

Logging took place on site at the Adumbi exploration camp. The Mineral Corporation observed the logging procedures on site and noted the following:

- An initial visual assessment of the core was made and zones of good and poor mineralisation were noted; and
- Detailed geological logging was then completed. Notes were made of the lithology, alteration, mineralisation and general rock description. The rock description recorded colour and approximate mineral assemblage.

The Mineral Corporation inspected one drill hole, SADD004, in detail for quality and detail of logging and sampling, and one, SADD019, was



checked in detail across the BIF horizon for the same features. Observations are summarised in Table 9.

### 14.2 The Remaining seven Licences

No sampling has been done on the Remaining Seven Licences.

### 15 SAMPLE PREPARATION, ANALYSES AND SECURITY

### 15.1 Exploitation Licence PE9691

15.1.1 Involvement of an employee, officer, director or associate of the issuer in sample preparation

Kilo have informed The Mineral Corporation that no Kilo employee, officer, director or associate of the issuer carried out any sample preparation of samples from the exploration programme described herein on the KGL Somituri Project.

## 15.1.2 Sample Delivery Procedures

All collected samples were retained in a locked secure shed until they were dispatched by Company vehicle to the Company administrative office in Beni. A commercial freight forwarding agent transported the samples from Beni to ALS Chemex laboratory in Mwanza, Tanzania for sample preparation.

## 15.1.3 Sample Preparation

All sample preparation takes place at the ALS Chemex sample preparation facility in Mwanza, Tanzania. Standard procedures and quality controls are in place to ensure that samples are prepared in compliance with client requirements. The laboratory does not have a LIMS (digital Laboratory Management System) in place at present, but perusal of the laboratory records indicated that continual control of individual samples is maintained during the various preparation phases.

Kilo submitted soil, adit, trench and diamond drill core samples to the sample preparation facility of ALS Chemex in Mwanza, Tanzania. The sample preparation procedures carried out by ALS Chemex consisted of the following:

- The samples were sorted and compared with the packing slips;
- The samples were placed in metal trays and air dried; final drying was in an oven;
- The samples were weighed;
- The entire sample was crushed to a minimum of 70% passing a 2mm screen;
- The entire sample was pulverised to 90% less than 75 microns; and
- The sample pulps were shipped by commercial courier to either ALS Chemex in Johannesburg, South Africa or to ALS Chemex in Vancouver, Canada for analysis.



able 9: Observations and Comments on Drill Hole Logging

Drill Hole	ervations and Comments of Check Item	Comments
SADD004	Depth control	Acceptable.
SADD019	(markers) and	
	measurements	
	RQD (Rock quality	Not currently planned.
	designation)	
	Protocols	Protocols for logging and sampling are verbally
		communicated.
	Lithological	Acceptable. Interim nomenclature being used
	identification and	e.g. greywacke, tuffaceous metasediment.
	description	Nomenclature to be updated following results
		of petrographic studies.
	Classification of	Currently only detailed descriptions are
	mappable lithological	recorded. Unit identification will be done in
	units Identification	the next logging phase.
	Identification, description and	Currently acceptable general descriptions are being recorded. No core-bedding or core-
	structural analysis of	structure angles are being recorded. This will
	veins and structural	be done in the next logging phase
	features	be done in the next logging phase
	Identification and	Alteration, specifically sericitisation,
	description of	silicification and chloritisation, is being
	alteration.	recorded. More attention to the recognition of
		type, styles and intensity of alteration is
		required in the next logging phase.
	Identification and	Acceptable
	description of sulphides	
	General comments	1. Structural information may be lost in
		sampled zones. It is important to ensure
		that the half-core that is sampled, is always
		taken on one side of the core, otherwise
		structural orientations will be incorrectly
		measured; 2. In order to complete a structural study and
		understand the mineralisation, oriented
		core drilling must be employed;
		3. Due to time pressures, KiloGold employed a
		"quick log" method during the initial drilling
		phase, resulting in the need to relog
		detailed aspects in a later logging phase. It
		is recommended that future logging be
		completed in a single logging phase.

#### 15.1.4 Sample Analysis

ALS Chemex in Mwanza, Tanzania, submitted pulps of soil, adit, trench and diamond drill core samples to the ALS Chemex full service facilities in Johannesburg, South Africa and in Vancouver, Canada. The sample analysis was carried out as follows:

- The gold values in the soil sample pulps were determined on a 30g charge by the fire assay method with an ICP finish. Gold was reported in ppb;
- Multi-element suite of 34 elements were analyzed by the low level ICP method;



- The gold content in adit, trench and diamond drill core pulps were determined on a 50g charge by the fire assay method with an Atomic Absorption ("AA") finish (ALS Assay method Au-AA24).
- In the fire assay with AA finish method, a prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents, as required, inquartered with 6mg of gold-free silver and cupelled to yield a precious metal bead (inquartering is the addition of gold-free silver). The bead is then digested in 0.5ml dilute nitric acid in a microwave oven. 0.5ml concentrated hydrochloric acid is added and the bead is further digested in the microwave oven at a lower power setting. The digested solution is cooled, diluted to a total volume of 4ml with demineralised water and analysed by atomic absorption spectrometry against matrix-matched standards.
- Gold was reported in ppm; and
- Adit, trench and diamond drill core pulps samples that returned gold values greater than 10 ppm were re-assayed by the gravimetric method (ALS Assay method Au-AA23). In this method, a prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents in order to produce a lead button. The lead button containing the precious metal is cupelled (oxidation and melting of lead under high temperatures, which is absorbed into a porous cupel) to remove the lead. The remaining gold and silver bead is parted in dilute nitric acid, annealed and weighed as gold.

ALS Chemex in Johannesburg is accredited by SANAS, the South African National Accreditation System, according to the recognised international Standard ISO/IEC 17025:2005. The SANAS Facility Accreditation Number is T0387.

The ALS sample preparation facility is not currently accredited.



## 15.1.5 Analytical Quality Assurance and Control Results

In addition to the analytical quality assurance and control samples employed by ALS Chemex, Kilo, as the owner of the Prospect, inserted blanks and standards into the sampling streams, duplicate trench samples (Section 15.5.1.2) were inserted as well. To date Kilo have not submitted repeat samples (pulps that had been analysed and are resubmitted to the original assay laboratory under new sample numbers) for analysis.

Sample Type	No of Samples	No of Standards	No of Blanks
Adit	512	8	18
Drill hole	3644	84	129
Trench	614	14	21
Total	4770	106	168
% of Field Samples		2.22	3.52

	Table 10:	Summary	y of standards	and	blanks	inserted	by k	Cilo	for the	adit,
,	drillhole an	d trench	samples							

Table 10 is a summary of standards and blanks inserted by Kilo for the adit, drill hole and trench samples. A total of 4770 samples were assayed, for which 106 standards and 168 blanks were inserted. This represents a total of 5.74% of control samples for the total number of field samples.

It is the preferred method of The Mineral Corporation to analyse comparative results by error deviation percentage or mean deviation percentage charts for standard and duplicate analytical results respectively, as a sense of proportion is gained from the differences. The definitions are as follows:

Error Deviation= (<u>Xanalysis-Xstandard</u>) Xstandard

By using this convention, negative deviations are noted as underreporting and positive deviations are noted as over-reporting of results.

Due to the fact that a preferred or certified value is not known for duplicate samples, the Mean Deviation definition is:

Mean Deviation = 
$$(X_A - X_B)$$
  
(Mean  $(X_A, X_B)$ )

#### 15.1.5.1 Duplicate Data

Laboratory duplicates are sample pulps which have been reanalysed and are, therefore, a measure of the analytical error. Approximately 15% of laboratory duplicates were checked. The Mean Deviation was generally in the range -10% to +10%. One sample duplicate returned a Mean Deviation of +23.8%.



Apart from poor precision near the detection limits the laboratories display acceptable analytical precision.

Kilo geologists only duplicated samples from the trenches and one adit. These duplicates represent the sampling error and show a large range of errors between approximately -100% and +100%. This large error is considered acceptable due to the high nugget effect of this style of gold mineralization (Figure 9).

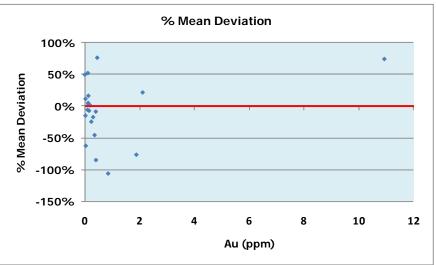


Figure 9: Percentage mean deviation for field duplicate data

### 15.1.5.2 Certified reference material Data

Certified reference materials (standards) were introduced by Kilo geologists into the sample streams and also internally by ALS Chemex. The standards employed are provided in Table 11. All of these standards are supplied by Rocklabs of New Zealand.

Standard	Certified Gold Abundance (ppm)	Inserted By				
OxJ64	2.366	Kilo	ALS			
OxL63	5.865	Kilo	-			
OxN49	7.635	Kilo	-			
OxE74	0.615	Kilo	-			
OxG70	1.007	-	ALS			
SL46	5.867	-	ALS			
SH35	1.323	-	ALS			

Table 11: Standards information

The % error deviation results from the expected mean value is expressed as a percentage using the formula as described in section 15.5 and the results for ALS Chemex standards are displayed graphically in Figure 10. It can be seen from Figure 10 that generally the lower grade standards (<2ppm) have higher deviations from the expected mean. Positive results indicate an over-estimation, whereas negative results indicate an underestimation of grade. Most samples returned % error deviations between 10% and +10%. Determination of the mean of all %



error deviations gives a measure of the overall bias, which is - 0.01% for the standards used by ALS Chemex.

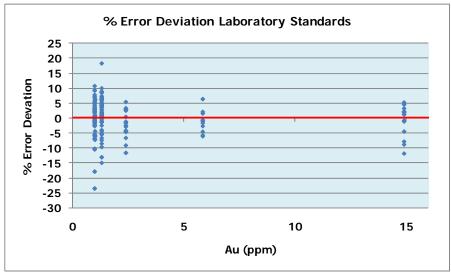


Figure 10: Percentage error deviation for standards used by ALS Chemex

Kilo geologists introduced Rocklabs standards OxE74, OxJ64, OxL63 and OxN49 (Table 11) in their sample streams as unknowns. The results are graphically shown in Figure 11, which shows that the majority of % Error deviations plot between -10% and +10%. Five % error deviations returned values less than -20% or more than +20%. Although these results may indicate laboratory error, they are more likely to relate to incorrect sample numbering. The bias for all standards is -0.1%.

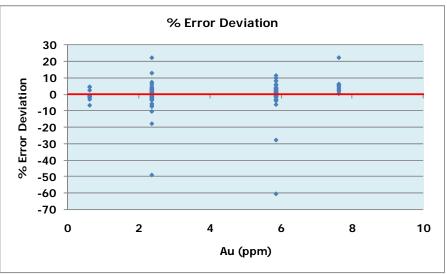


Figure 11: Percentage error deviation for standards used by Kilo

Blanks of a granite from the Mwanza area, understood to contain a gold abundance of less than 3ppb were employed to obtain a measure of contamination in the sample preparation and in the laboratory. All blanks inserted by ALS returned gold abundances



below the lower detection limit (LDL) of 0.005ppm or 0.05ppm for gravimetric determinations. Table 12 is a summary of blank data for Kilo inserts.

Samples	Number	%	Comment
Total No of samples	4770		
No of blanks	168	3.52	% of all samples
No >LDL	37	22.02	% of all blanks
No >0.01ppm	20	11.90	% of all blanks

Table 12: Summary of Au Values determined for Blanks

Table 12 shows that a relative high proportion of blanks returned gold abundances above the LDL and 11.9% returned a gold abundance above 0.01ppm. Although the absolute degree of possible contamination is low, there is some cause for concern that contamination may be taking place during the sample preparation stage.

#### 15.1.6 Sample Database

Kilo maintains comprehensive separate MS Excel (2003) databases for the Adumbi, Kitenge, Manzako and Monde Arabe prospects. Data include, among others, drill hole/adit/trench numbers, collars surveys and azimuths, name of the logger, sample type and number, recoveries, lithological, mineralogical, mineralisation and alteration data, gold abundance and standard and blank information. The Mineral Corporation has inspected the level of detail and it is considered adequate for an operation during the current exploration phase. Cross checks to determine whether transcription of data has occurred was undertaken. No material errors were evident.

#### 15.1.7 Overall Adequacy Statement

Based on the sample preparation techniques observed at the ALS Chemex preparation facility, the security protocols described by Kilo geologists and the analytical procedures adopted by the ALS Chemex Laboratory, Johannesburg, The Mineral Corporation is satisfied that the protocols and procedures have been followed to acceptable levels for the use in Mineral Resource estimation.

## 15.2 The Remaining Seven Licences

No samples were obtained from the Remaining Seven Licences and, thus, no analyses have been completed.



### 16 DATA VERIFICATION

## 16.1 Exploitation Licence PE9691

## 16.1.1 Quality Control and Data Verification Procedures

The Mineral Corporation has undertaken the following steps to verify the validity of the data used in this Mineral Resource evaluation.

## 16.1.1.1 Site Visit (December 2010)

One Qualified Person, an employee of The Mineral Corporation, visited the area from 6 to 8 December 2010, obtained information on logistics and the geology of the Adumbi-Kitenge-Manzako area, and assessed the exploration methods and types and quality of information being obtained with regard to the geology, artisanal activity and bore hole logging.

Three drill sites were visited where drilling operations were in progress. Drill core was stacked in core trays on site and the core was inspected for recovery, level of cleanliness and correctness of the depth markers. The coordinates for four collar positions were checked and compared with the information supplied by Kilo. Within the errors expected for hand-held GPS equipment, position data is acceptable.

Three boreholes were examined and checked for logging detail and accuracy. Current logging is considered by The Mineral Corporation to be a rapid method, which will be followed by more detail. To date detailed structural relationships have yet to be determined. Alteration logging has been completed to a limited level. The general lithological logs and recording of mineralisation are acceptable.

Following the Adumbi visit, the ALS Chemex sample preparation facility in Mwanza was inspected and is reported in Section 15.3.

## 16.1.1.2 Field Logs/Electronic Log

Field sheets from 21 boreholes were inspected by The Mineral Corporation. The borehole logging and sampling data was checked against the Excel database that was provided to The Mineral Corporation. There was good correspondence between the intervals noted in the field logs and those entered in the electronic database.

## 16.1.1.3 Sample Database/Laboratory Certificate

A random sample of analytical results from 10 boreholes within the electronic borehole logs were cross checked with gold grade as reported in the laboratory certificates. No errors were encountered in this process.



### 16.1.1.4 Independent Sample Analysis

The Mineral Corporation resubmitted four sample pulps of samples prepared by ALS Chemex in Mwanza, and previously assayed, to the ALS Chemex laboratory in Johannesburg as unknown samples. The comparative results are summarised in Table 13.

TMC Sample No	KG Sample No	TMC Au (g/t)	Kilo Au (g/t)	% Mean Deviation	% Error Deviation
L2296	6579	1.08	1.625	40.30	-
L2297	6597	3.47	3.97	13.44	-
L2298	6585	2.94	3.62	20.73	-
L2299	6590	7.53	7.67	1.84	-
L2300	AMIS0044	2.96	2.90	-	-2.07

 Table 13: Independent Sampling - Mean Deviation for Repeat samples

 and percentage Error Deviation for inserted Standard

Note: L2300/AMIS0044 is a reference material Standard inserted by The Mineral Corporation

Results from Table 13 indicate that the Mean Error Deviations are relatively high, whereas the Error Deviation for the standard (L2300) is well within acceptable limits. It is normal for Repeats data to vary considerably due to the nugget effect of gold, and The Mineral Corporation is satisfied that the ALS Chemex preparation laboratory in Mwanza complies with all relevant procedures for the sample preparation methods. Kilo may have to consider prescribing a finer mill product by the Mwanza laboratory, which may reduce the nugget effect. The current specification for the laboratory is for 85% of sample material to be finer than 75µm.

#### 16.1.1.5 Qualified Person's Statement

The Mineral Corporation and the QP has independently processed the data presented by Kilo and their agents in verifying the data employed in the Mineral Resource estimates.

## 16.1.1.6 Limitations of Verification

Due to the relatively poor duplicate pulp analytical results obtained from The Mineral Corporation visit (Table 13), the minor possible sample preparation contamination and chain of custody issues, the data is considered only adequate for the reporting of Inferred and/or Indicated Mineral Resources.

## 16.1.1.7 Failure to Verify

Not applicable.

## 16.2 The Remaining Seven Licences

No data was obtained from the Remaining Seven Licences and, thus, no validation is necessary.



## **17 ADJACENT PROPERTIES**

Several other active gold exploration projects are in various stages of development in the north-eastern DRC. These projects include the Randgold Resources -AngloGold Ashanti joint venture, Kibali and AngloGold Ashanti's Mongbwalu project. Mwana Africa and Loncor Resources also have gold exploration projects in the area. Figure 12 illustrates the location of these projects with respect to Kilo's license areas.

It should be noted that the Qualified Person is unable to verify the information on the adjacent properties. However, this information is not necessarily indicative of the mineralisation within the Somituri Project.

## 17.1 Randgold Resources / AngloGold Ashanti (Kibali)

According to Randgold Resources (2011), the Kibali project has a Probable Mineral Reserve of 9.2M oz of gold, Indicated Mineral Resource of 13.9M oz and an Inferred Mineral Resource of 5.8M oz of gold.

## 17.2 AngloGold Ashanti (Mongbwalu)

As published by SRK Consulting (2010), the Mongbwalu Project had an Inferred Mineral Resource of 2.9m oz of gold in September 2010.

## 17.3 Mwana Africa

In July 2010 Mwana released a JORC-compliant Mineral Resource of 0.2m oz Indicated and 1.m oz Inferred (Mwana, 2010)



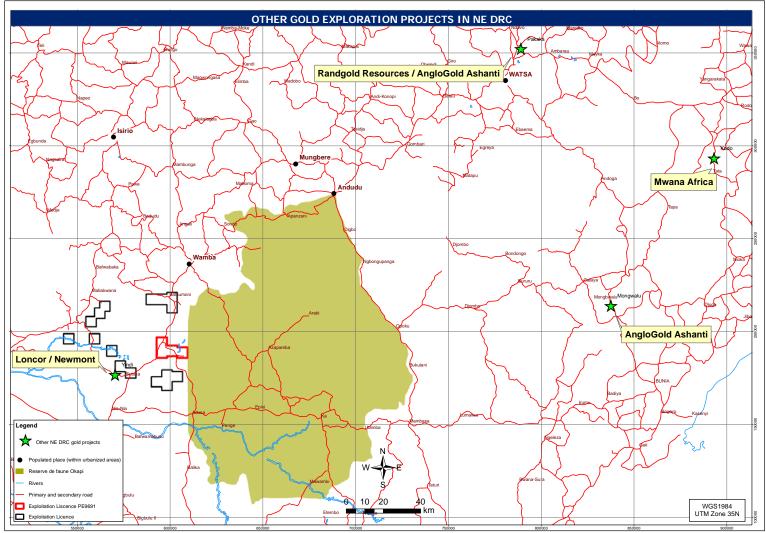


Figure 12: Other gold exploration projects in NE DRC



#### 18 MINERAL PROCESSING AND METALLURGICAL TESTING

## 18.1 Exploitation Licence PE9691

To date minor amounts of auriferous ore sourced from the artisanal workings on the Adumbi Prospect, Kitenge and Manzako have been tested for gold extraction via cyanide leaching (Robinson, 2010). The gold grades of the material tested vary from 3.52g/t to 140.00 g/t (average 41.79g/t) and the gold recoveries vary from 55.13% to 99.98% (average 87.28%).

It should be noted that the gold abundances in the hand-picked artisanal ore samples are significantly higher than the modelled gold grades likely to occur at the Adumbi Prospect. It should further be noted that the artisanal workings and hence material employed in this test work, is likely to be from above the water-table and contain oxide material that could have improved gold recoveries with respect to the underlying sulphide material.

## 18.2 The Remaining Seven Licences

No work was done on the Remaining Seven Licences.

## 19 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

## 19.1 Exploitation Licence PE9691

## 19.1.1 Borehole Database

The borehole database was provided to The Mineral Corporation an Excel spreadsheet format. The borehole database comprised collar, survey, lithology and assay information.

Two validation exercises have been carried out on comparing the excel database with the raw field data. A review of the accuracy of the lithological data was carried out on site by Johan Krynauw, and the results are presented in Section 16.1.1.2.

A further review of the assay table with the raw analytical certificates was carried out by The Mineral Corporation and the results are presented in Section 16.1.1.3.

Finally, a cursory examination of the downhole survey data revealed that the azimuth data varied widely in places from the intended direction of drilling. As these variations typically occurred close to the BIF intersections, and as the azimuth trends returned to normal towards the base of the borehole, it was interpreted that the survey data was compromised in places by the magnetic properties of the BIF.

The Mineral Corporation evaluated the data for each borehole individually discarding survey records where the variation between the azimuth and the intended drilling direction was greater than 30° and where a visual inspection of the data provided evidence that the azimuth readings had been compromised due to the presence of magnetic rock formations (BIF).



The correction of  $2^{\circ}E$  was applied to convert the Magnetic North azimuths to UTM North azimuths.

The Excel database was imported into Datamine Studio Version 3.19 (Datamine) for further processing. Datamine's borehole validation tools were employed to check for sample overlaps and duplicates. Two sample overlap errors were corrected.

## 19.1.2 Exploration Data Analysis

## 19.1.2.1 Identification of mineralised zone (BIF)

Mineralisation is broadly identified as being hosted within the BIF unit. Sub-units within the BIF have been identified during lithological logging. Kilo are working towards developing an understanding of the relationship between the gold mineralisation and internal lithologies of the BIF unit, but at this stage, The Mineral Corporation has preferred to only model a single mineralised zone and to estimate grades within the zone geostatistically.

## 19.1.2.2 Composites within BIF

In general, analytical samples were taken at 1m intervals down the borehole.

Inspection of cross-sections of the borehole data, along with The Mineral Corporation's understanding of the local geology informed the compositing strategy. The Mineral Corporation interprets that the mineralisation trends are most likely to be parallel to the BIF contacts i.e. vertical and in a plane which lies parallel to the strike of the BIF unit.

When viewed in cross-section which is aligned normal to the strike of the BIF, the drilling undertaken to date intersects the BIF at variable angles to the dip of the unit. As such, the 1m samples represent different apparent thicknesses relative to the dip of the BIF. The Mineral Corporation corrected for this apparent thickness by measuring the intersection angle with the BIF and taking a variable composite length in each borehole so that the resulting composites have the same support relative to the dip of the ore body. This is illustrated schematically in Figure 13.

The resulting composite dataset is thus considered to represent samples with equal true thickness of 2.5m. This dataset was used for statistical and geostatistical analysis.



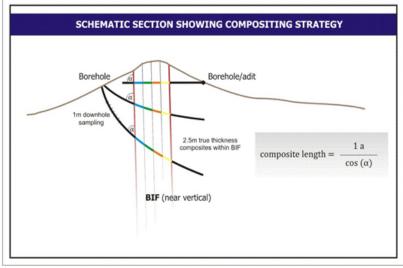


Figure 13: Schematic section showing compositing strategy

#### 19.1.2.3 Distribution

The distribution of the true thickness composites is highly skewed. Figure 14 is a histogram which shows the distribution of the composites, and illustrates the skewness of the gold data. The mean of the composites is 1.2 g/t.

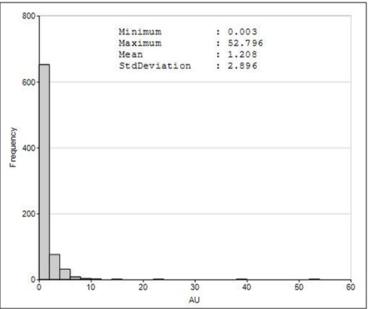


Figure 14: Histogram in normal space for composites

The distribution of the natural log transform of the gold data is shown in Figure 15. This demonstrates that the data can be considered to be near log-normal. In light of the skewed distribution of the data, and the difficulty in discriminating between mineralised and unmineralised zones within the BIF, The Mineral Corporation elected to employ Indicator Kriging (IK), as the primary estimation tool.



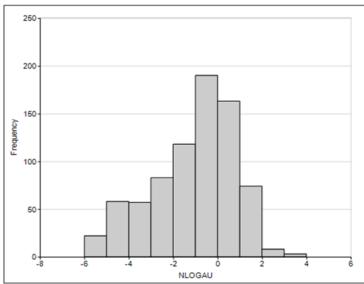


Figure 15: Histogram of the natural log transform for composite data

#### 19.1.2.4 Cut-off selection

An analysis of the cumulative probability distribution of the composites indicated that at least 3 populations of data are evident within the composite data. The data was subdivided for indicator variography and IK utilising the 3 populations, as described by Clark (1993).

Figure 16 illustrates the cumulative probability plot for the composite data in log space. The cut-off values selected in log space translate to cut-offs of 0.01, 0.99 and 3.68 g/t respectively, in normal space.

## 19.1.3 Variogram Analysis

## 19.1.3.1 Rotation

As described in Section 19.2.3, The Mineral Corporation chose to utilise IK, and hence only indicator variograms were analysed. In line with the compositing strategy, which assumed that the mineralisation trends would be sub-parallel to the strike of the BIF and orientated vertically, all 3D variography was carried out in a rotated co-ordinate system. The rotated co-ordinate system's Y axis was oriented along strike (50° west of north) then rotated 90° about the Y axis onto a vertical plane.



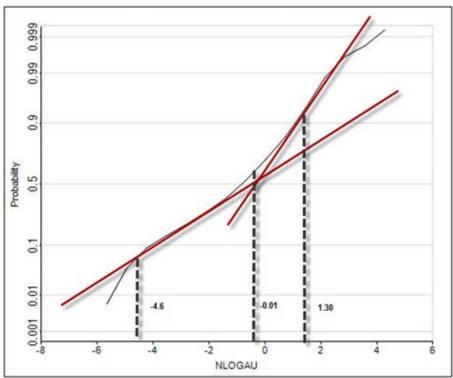


Figure 16: Graphical selection of indicator cut-offs

#### 19.1.3.2 Anisotropy

Within the rotated co-ordinate system (see Section 19.3.1), various angles of anisotropy were investigated. It is to be expected that grade continuity should be longest within the plane of the BIF, and shortest orthogonal to the plane of the BIF. Furthermore, within the plane of the BIF, it is to be expected that grade continuity is longest in a vertical sense and shortest in a horizontal sense based on a vertically moving hydrothermal gold mineralisation fluid genesis.

Although structured indicator variograms were obtained for all three grade ranges, the expected anisotropy in grade continuity was not evident. The Mineral Corporation considers it likely that the distribution of composite pairs in a vertical sense is insufficient at this stage to support this level of analysis. As a result, omni-direction indicator variograms have been modelled. In order to honour the conceptual geological model, and prevent the extrapolation of high grade trends orthogonal to the plane of the BIF, the search strategy orthogonal to the BIF was extremely restrictive (Section 19.4.2).

#### 19.1.3.3 Indicator variograms

Indicator variograms for the various cut-off's are provided in Figure 17 Figure 18 and Figure 19. A summary of the variogram parameters applied is provided in Table 14.



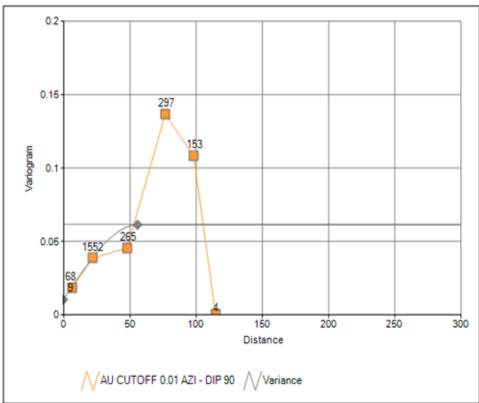


Figure 17: Indicator variogram for cut-off of 0.01 g/t

## 19.1.4 Estimation Methodology and Parameters

IK was applied to blocks of  $10m \times 10m \times 5m$  in the rotated co-ordinate system, utilising the cut-offs described above. This block model was rotated in the same way as described in Section 19.3.1 and therefore the blocks were of equal length (10m) in the plane of the BIF, and shortened (5m) orthogonal to the plane of the BIF.

IK estimates the probability (or proportion) of each block being above the respective cut-offs.

The grade for each grade group was estimated from the 2.5m composite data as described in Section 19.4.3, and a weighted average grade for the block calculated on the basis of the individual probabilities.



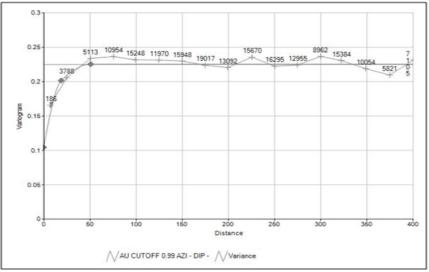


Figure 18: Indicator variogram for cut-off 0.99 g/t

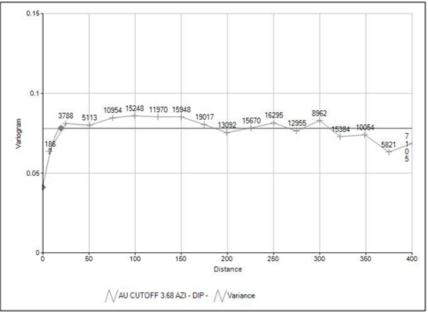


Figure 19: Indicator variogram for cut-off 3.68 g/t

Cut-off	Nugget	Range 1 (X)	Range 1 (Y)	Range 1 (Z)	Spatial Variance	Range 2 (X)	Range 2 (Y)	Range 2 (Z)	Spatial Variance
0.01	0.015	56	56	56	0.051	-	-	-	-
0.99	0.104	19	19	19	0.07	51	51	51	0.051
3.68	0.041	42	20	20	0.037	-	-	-	-

Table 14: Modelled variograms (in rotated co-ordinates)

#### 19.1.4.1 Estimation Parameters

The weighted average grade of the block was calculated using the estimated means in Table 15. These estimates are the log estimates of the mean as defined by Rendu (1981).



Table	15:	Estimated	means	for	I
					_

Grade (Gold g/t)	No. of samples	Mean Gold g/t
0 to 0.01	45	0.007
0.01 to 0.99	399	0.32
0.99 to 3.68	171	1.88
3.68 to ∞	57	7.30
Total	672	1.29

к

#### 19.1.4.2 Search Parameters

A two stage search strategy was implemented. The search criteria were constricted in the direction orthogonal to the plane of the BIF, as the conceptual geological model suggests that mineralisation is preferentially oriented parallel to this plane. Table 16 contains the search parameters used for IK.

Cut-off	Search (X)	Search (Y)	Search (Z)	Min n	Max n	Search (X)	Search (Y)	Search (Z)	Min n	Max n
0.01	100	100	10	5	25	200	200	80	5	25
0.99	100	100	10	5	25	200	200	80	5	25
3.68	40	40	10	5	25	200	200	80	5	25

#### 19.1.4.3 Tonnage and Grade Calculation

The final estimated grade of each block was calculated by applying the estimated means for each grade group to the estimated proportion of each grade group within each block.

Tonnages were estimated utilising the block volume and the density described in Section 19.1.7. A set of cross-section and plans through the block model are included as Appendix 2 and Appendix 3.

#### 19.1.5 Model Constraints

#### 19.1.5.1 Surface Topography

The block model was constrained by the topography as supplied by Kilo. This topographic surface was sourced from 2m contours which were derived from the high resolution WorldView 2 satellite imagery that was supplied (copyright held by Digital Globe).

The Mineral Corporation considers the accuracy of the topography to be acceptable for the level of confidence in the Mineral Resource estimates.

#### 19.1.5.2 Depth of Drilling

The block model was constrained at depth to 450mamsl. This represents a level which is between 30m and 50m below the last borehole intersection point with the BIF. The Mineral Corporation considers the extrapolation down-dip extent to be of limited risk in the estimates given the likely continuity of the BIF in a vertical sense, and



given the extent of the range of the IK variograms parallel to the plane of the BIF.

## 19.1.5.3 Mineralised envelope (BIF)

The block model was constrained by a wireframe which represented an interpretation of the limits of mineralisation. This wireframe is approximately equivalent to the limits of the BIF unit, but does not represent a lithological model of the BIF itself. The model was constructed by making a selection of the mineralised intervals in each borehole (as identified by grade) and interpolating the edge of this mineralisation in a series of cross-sections.

## 19.1.6 Geological Losses

No geological losses have been applied.

## **19.1.7** Density Determinations

Insufficient laboratory density determinations have been made for an analytically determined density to be applied.

An assumed density of  $3.0 \text{ t/m}^3$  was applied to material interpreted to be fresh and  $2.7 \text{ t/m}^3$  to material interpreted to be weathered. A nominal depth below surface of 40m was used to distinguish between weathered and fresh material.

The Mineral Corporation considers the lack of reliable density information to be a limitation in the Mineral Resource estimates and this is reflected in the restriction of the Mineral Resources to the Inferred category.

## 19.1.8 Mineral Resource Classification

The Mineral Resources at this stage can only be classified as Inferred Mineral Resources. The factors which influence the categorization are listed below:

- **Quantity**: The drilling density is sufficient for a recognisable, mineralised geological unit to be identified and its continuity reasonably assumed between boreholes. The quantity estimate may be considered to be sufficient for an Indicated Mineral Resource.
- **Tonnage**: The tonnage can only be estimated on the basis of an assumed density. The tonnage estimate is therefore based on limited information and can only inform an Inferred Mineral Resource
- **Quality**: The grade estimate within the mineralised zone is limited in confidence as there is not yet a meaningful agreement between the geostatistical properties of the mineralised unit and the conceptual geological model. The Mineral Corporation considers the global grade estimates to be robust, but the confidence in the local estimates is insufficient to allow the application of technical and economic parameters to support mine planning, and hence can only be classified as an Inferred Mineral Resource. The confidence in the local grade estimates is likely to increase as an understanding of the lithological and grade characteristics within the mineralised zone is incorporated into the model.



• **Depletion**: The quantity of the Mineral Resource estimates may also be affected by the amount of mineralisation which has been removed by historic workings. These have not been incorporated into the model and contribute to the classification of the Inferred category.

## 19.1.9 Mineral Resource Statement

The Inferred Mineral Resources at a 0.5 g/t cut-off are presented in Table 17.

Cut off (g/t Au)	Tonne above cut	Grade above cut	Million ounces gold		
	off	off (g/t Au)	above cut-off		
0.50	46 307 259	1.37	2.03		

#### **19.1.9.1** Assumptions regarding economic extraction

At a marginal cost of approximately US\$19/tonne, a gold price of US\$1400/oz, a gold recovery of 85%, dilution of 2.5% at nil gold content a marginal cut-off of approximately 0.5g/t results. It is not known if any environmental, permitting, legal, taxation, title, socio-economic, marketing, political or other issues may impact materially on the Mineral Resources.

## 19.1.9.2 Grade / tonnage characteristics

A grade / tonnage curve for the block model of the deposit is presented in Figure 20 and is summarized in





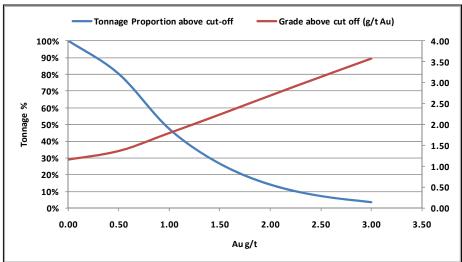


Figure 20: Grade / tonnage characteristics of the block model



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Cut off (g/t Au)	Tonne above cut off	Grade above cut off (g/t Au)	Tonnage Proportion above cut- off	Million ounces Au above cut-off
0.00	57 772 686	1.16	100%	2.15
0.50	46 307 259	1.37	80%	2.03
1.00	27 337 071	1.80	47%	1.58
1.50	15 348 678	2.24	27%	1.11
2.00	8 100 419	2.70	14%	0.70
2.50	4 194 257	3.14	7%	0.42
3.00	2 048 862	3.58	4%	0.24

Table 18: Summary of grade / tonnage characteristics



Table 18 does not imply the classification of Mineral Resources at a zero cut-off, and is provided for information purposes only.

#### 19.2 The Remaining Seven Licences

No Mineral Resources have been estimated for the Remaining Seven Licences.

20 OTHER RELEVANT DATA AND INFORMATION

Not applicable.

#### 21 INTERPRETATION AND CONCLUSION

#### 21.1 Exploitation Licence PE9691

Kilo have identified by diamond drilling over a strike length of 1.2k an Inferred Mineral Resource above a cut-off grade of 0.5g/t 46.3 million tonne at a gold grade of 1.37g/t on the Adumbi Prospect. The width of the Mineral Resource varies from 20m to 140m.

The method of sampling and analysis conducted by Kilo at the Adumbi Prospect is appropriate although the sample preparation at the ALS Chemex Laboratory in Mwanza needs to be investigated.

The chain of custody controls of samples dispatched from Adumbi to the ALS Chemex Laboratory in Mwanza needs to be improved.

The metallurgical test work completed to date is not considered sufficient and more representative samples of likely mined ore-grade and type of material (oxide/sulphide) need to be tested for gold recovery before any definitive status on gold recovery can be made.

The style of gold mineralisation may well be structurally controlled and to date there is a poor understanding of the regional and local structural geology. This is reflected in the style of geological and gold continuity modelling completed to date.

The density of the weather/oxide and unweathered/sulphide materials are poorly understood and is currently assumed. The depth of weathering in the current modelling could be improved from the existing data as well as from new drilling data.

It appears that Kilo's objective was to identify a mineral resource containing between 2 and 4 million ounces of gold. The initial exploration work completed to date would appear to have achieved this objective.

#### 21.2 The Remaining Seven Licences

The Somituri Project contains several Exploitation Licences that, apart from the Adumbi Prospect, are likely to host gold mineralisation.

#### 22 RECOMMENDATIONS



### 22.1 Kilo Budget proposal

Kilo has submitted the following proposed budget to The Mineral Corporation:

A total budget of \$15 000 000 (Canadian) is proposed, which will be split between a Phase 1 (\$9 686 500) and a Phase 2 (\$5 313 500) exploration programme as summarised in Table 19 and Table 20.

Table	19:	Pro	posed	Phase	I	Budget
					_	

Activity	C\$
Drilling- Resource upgrade and definition	4 500 000
Geological, metallurgical, trenching and sampling	1 200 000
Property fees and costs	460 000
Preliminary Economic Assessment, Pre-feasibility and environmental studies	300 000
Capital expenditure, repairs and maintenance	200 000
Environmental bond	64 000
Regional exploration	700 000
General Administration and Working Capital	2 262 500
TOTAL – Phase I	9 686 500

#### Table 20: Proposed Phase II Budget

Activity	C\$
Drilling- Resource upgrade and definition	2 361 000
Geological, metallurgical, trenching and sampling	637 500
Property fees and costs	822 500
Preliminary Economic Assessment, Pre-feasibility and environmental studies	180 000
Capital expenditure, repairs and maintenance	125 000
Regional exploration	337 500
General Administration and Working Capital	850 000
TOTAL - Phase II	5 313 500

## 22.2 Exploitation Licence PE9691

The following is recommended for Kilo to execute in the next phase of project development:

- The existing Inferred Mineral Resource model be employed in a scoping level study to understand the likely Mineral Reserves to be hosted in the Adumbi Prospect.
- The Mineral Resource classification could be improved via in-fill drilling that will also assist in the understanding of the gold grade continuity. Borehole orientation for evaluation should be balanced between the requirements of intersection depth and obtaining an orthogonal intersection. However, boreholes steeper than 60° should be avoided.
- The structural geology of the region, and in particular for the Adumbi Prospect, needs to be understood to assist in gold grade continuity modelling. This will have a positive perspective on the classification of the gold Mineral Resources.
- Kilo has to devise a mechanism to ensure chain of custody controls for samples dispatched from site to Mwanza. Samples specifically taken for density measurements need to be taken over a suite of rock and material types.
- Focus on the historically depleted Mineral Resources and potential for geological losses needs to be made.



The budget that Kilo proposes for their Phase 1 work appears to be adequate to fulfil the above works. If this is successful, further evaluation drilling may be required.

## 22.3 The Remaining Seven Licences

It is recommended that Kilo devise an exploration programme for the Remaining Seven Licences.

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#### 24 DATE AND SIGNATURE PAGE

Date 12 April 2011

Signed

D. N. Yz

D. R. Young Director

\_\_\_\_

J. R. Krynauw Senior Geological Advisor

25 ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORTS ON DEVELOPMENT AND PRODUCTION PROPERTIES Not applicable



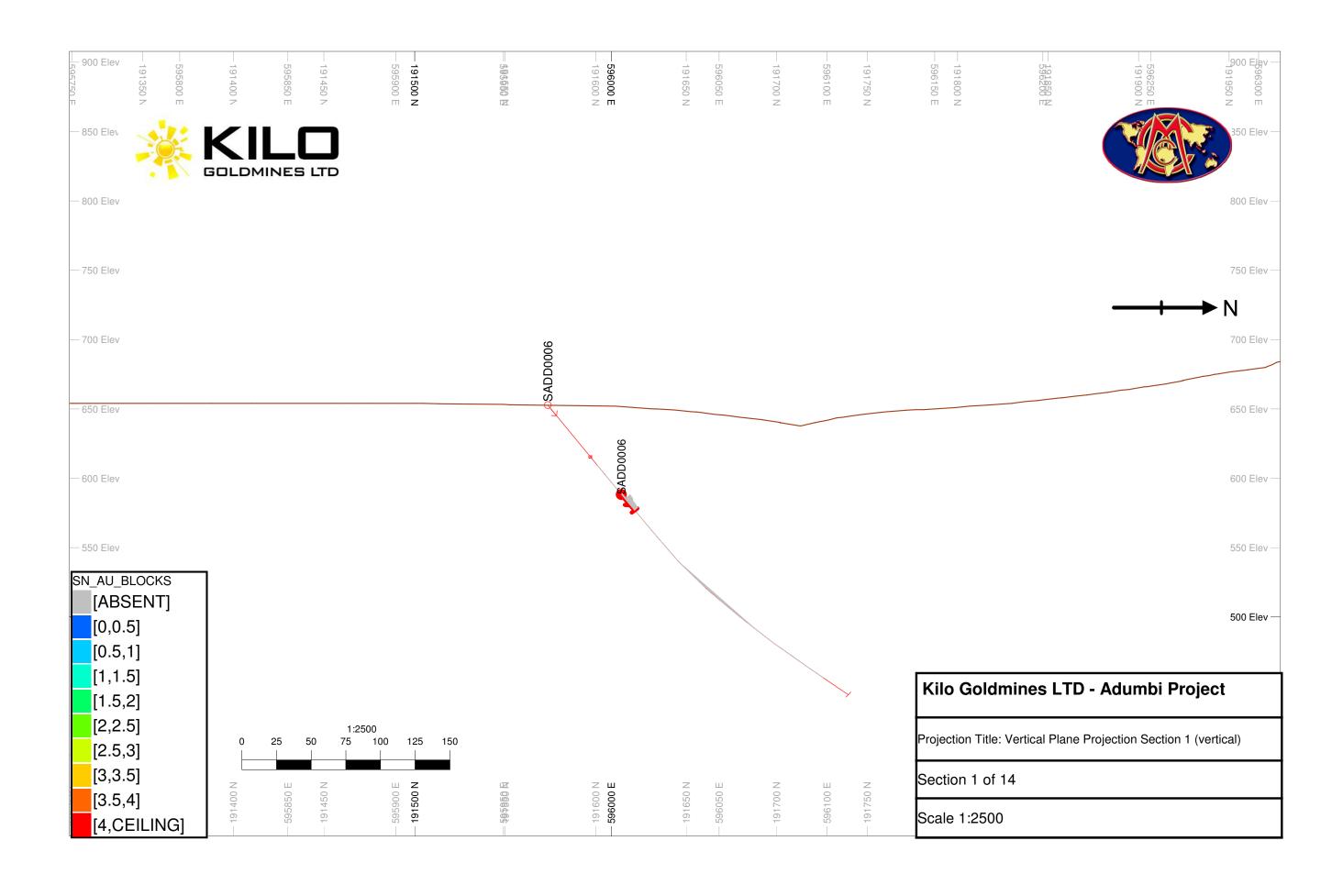
Borehole	From (m)	To (m)	Au (g/t)	Intersection	Intersection	True
				Thickness	angle	Thickness
				(m)		
SADD0006	83.7	98.6	2.56	14.9	50	9.6
SADD0011	8.0	105.9	0.45	97.9	50	62.9
SADD0008	95.1	186.4	0.35	91.3	50	58.7
SADD0024	8.0	50.3	0.55	42.3	50	27.2
SADD0026	121.5	209.2	2.52	87.7	45	62.0
SAAD001	100.6	154.6	1.51	54.0	0	54.0
SADD0001	148.6	228.6	1.21	80.0	42	59.5
SADD0028	145.6	266.5	1.05	120.8	50	77.7
SAAD002	84.5	107.8	1.26	23.4	0	23.4
SADD0021	7.2	76.7	1.24	69.5	53	41.8
SATR006	0.0	43.5	1.41	43.5	0	43.5
SATR007	0.0	8.9	3.31	8.9	0	8.9
SADD0004	142.8	293.8	1.61	151.0	40	115.7
SADD0017	158.7	337.8	1.28	179.1	44	128.8
SADD0019	86.6	257.8	0.68	171.2	47	116.7
SADD0015	5.5	169.2	0.88	163.6	49	107.4
SADD0016	0.4	136.6	2.59	136.2	76	33.0
SADD0014	0.1	34.8	1.51	34.7	65	14.7
SATR004	0.0	52.2	0.67	52.2	0	52.2
SAAD003	129.2	175.1	0.43	45.9	0	45.9
SADD0020	3.6	102.8	1.93	99.2	75	25.7
SATR005	53.0	111.4	0.36	58.4	0	58.4
SADD0022	178.8	274.1	1.62	95.3	38	75.1
SADD0003	125.8	260.6	1.33	134.8	46	93.6
SATR008	0.2	73.4	0.38	73.2	0	73.2
SADD0027	106.8	244.6	1.11	137.8	46	95.7
SADD0025	0.3	66.6	1.06	66.3	64	29.1
SADD0030	85.4	212.7	1.30	127.3	48	85.2
SADD0005	114.2	253.0	1.41	138.8	40	106.3
SADD0029	0.4	51.5	0.75	51.1	47	34.9
SATR002	23.0	37.8	0.93	14.8	0	14.8
SADD0031	6.5	60.5	2.40	54.0	46	37.5
SADD0009	160.7	204.0	0.08	43.3	52	26.7
SADD0010	194.7	226.0	0.41	31.3	50	20.1
SATR004	0.0	52.2	0.67	52.2	0	52.2

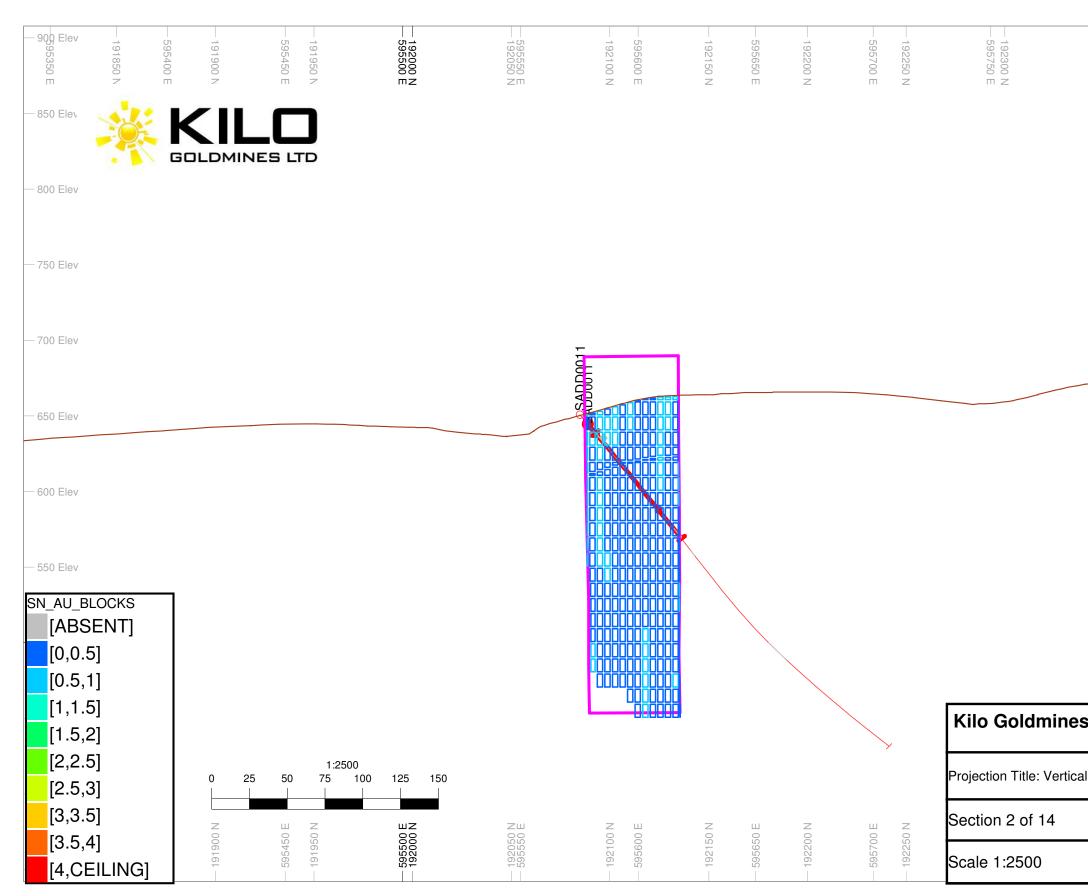
## APPENDIX 1: BOREHOLE GOLD ANALYSES FOR THE INTERPRETED ORE BODY

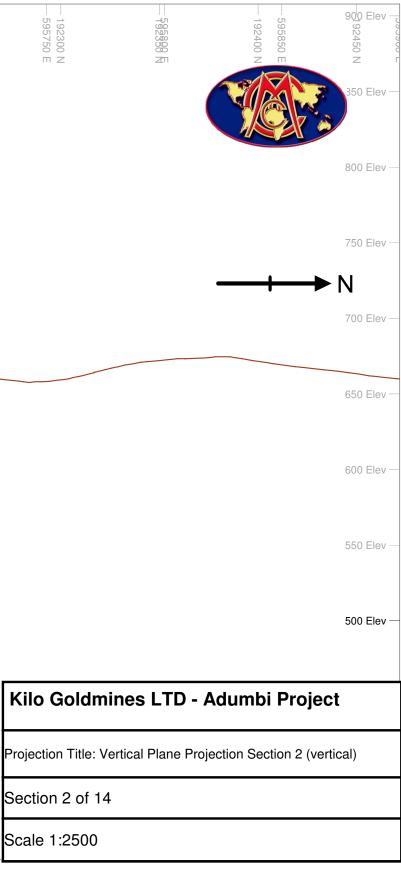


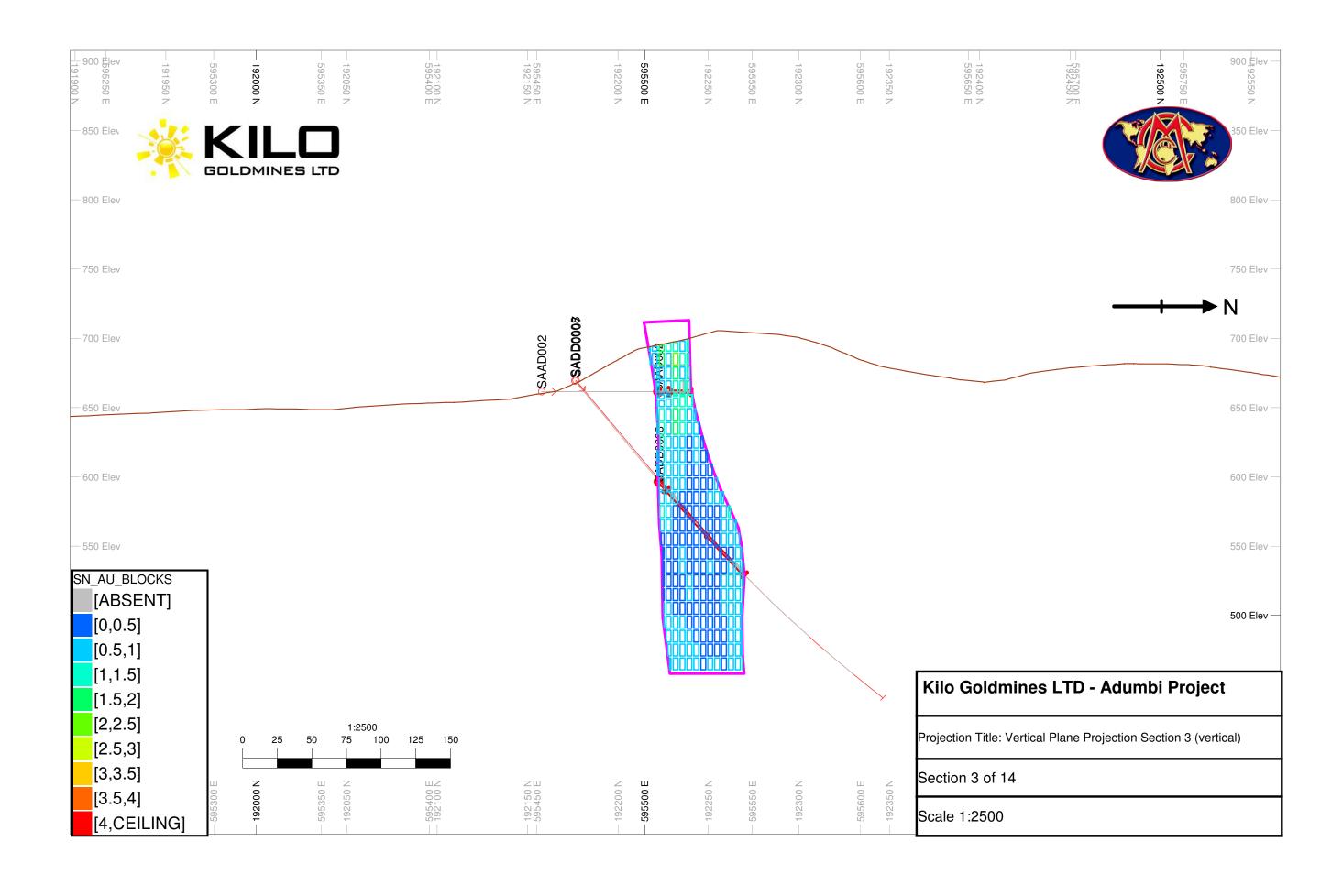
APPENDIX 2: CROSS SECTIONS THROUGH BLOCK MODEL

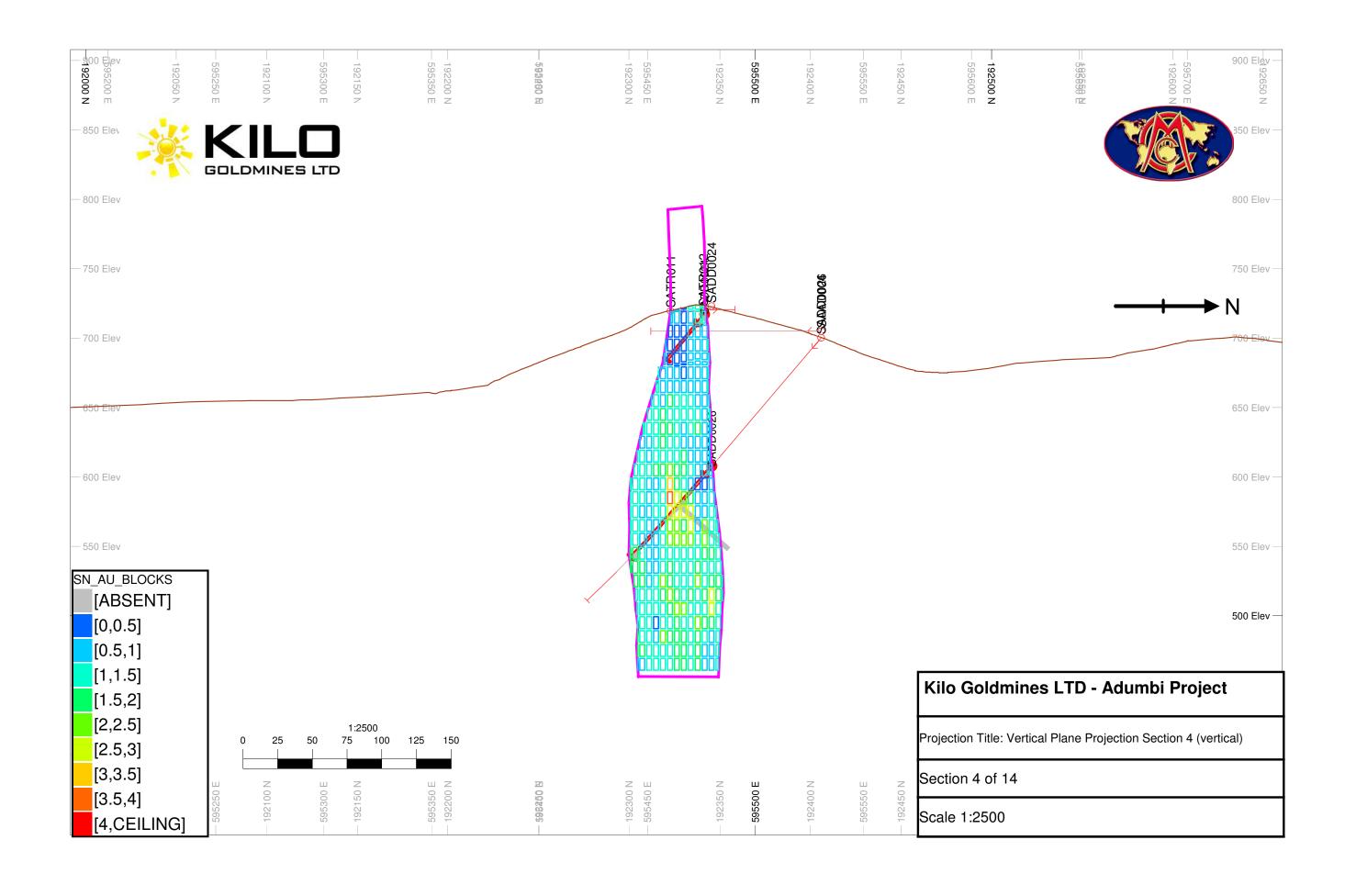


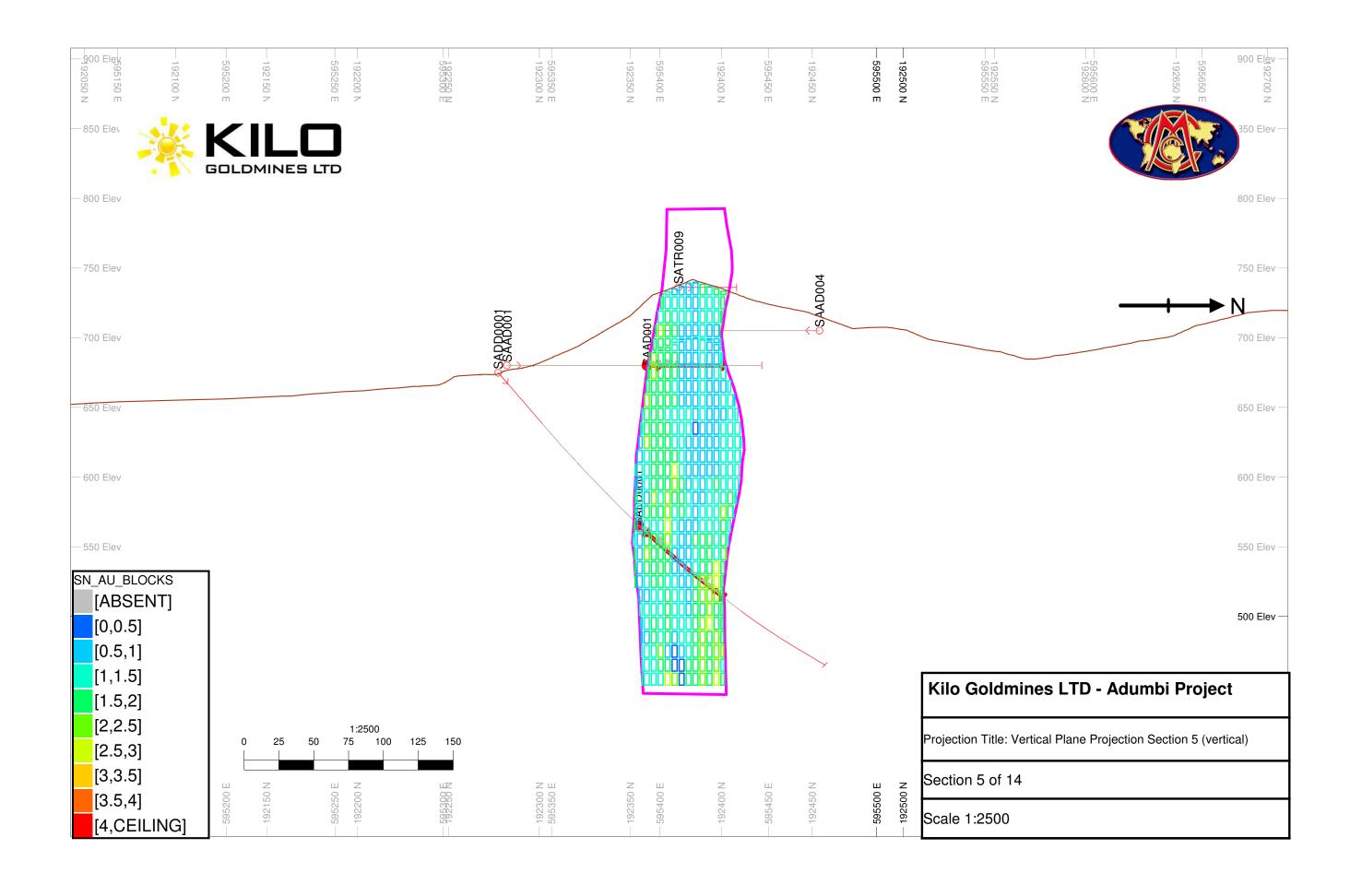


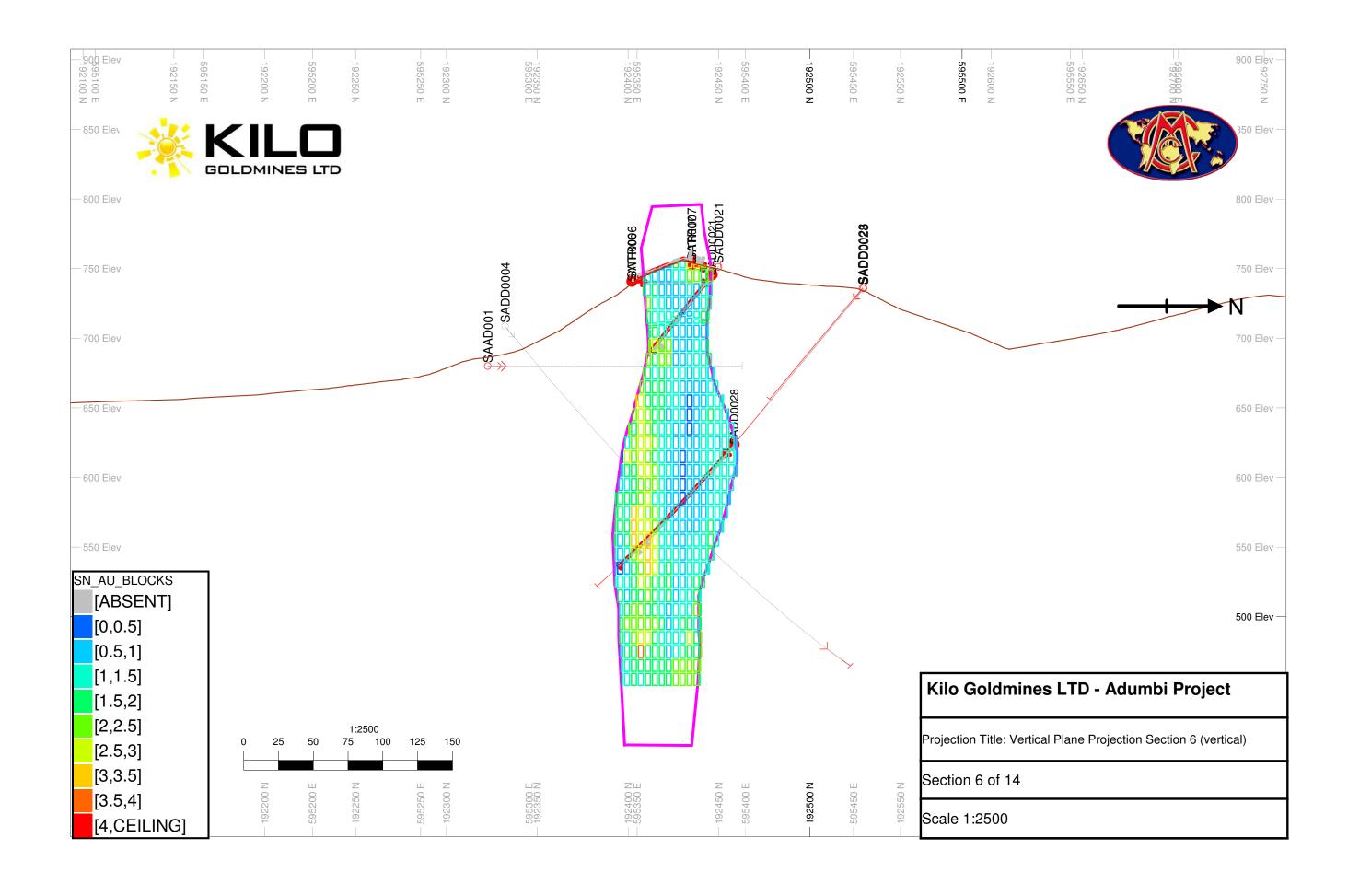


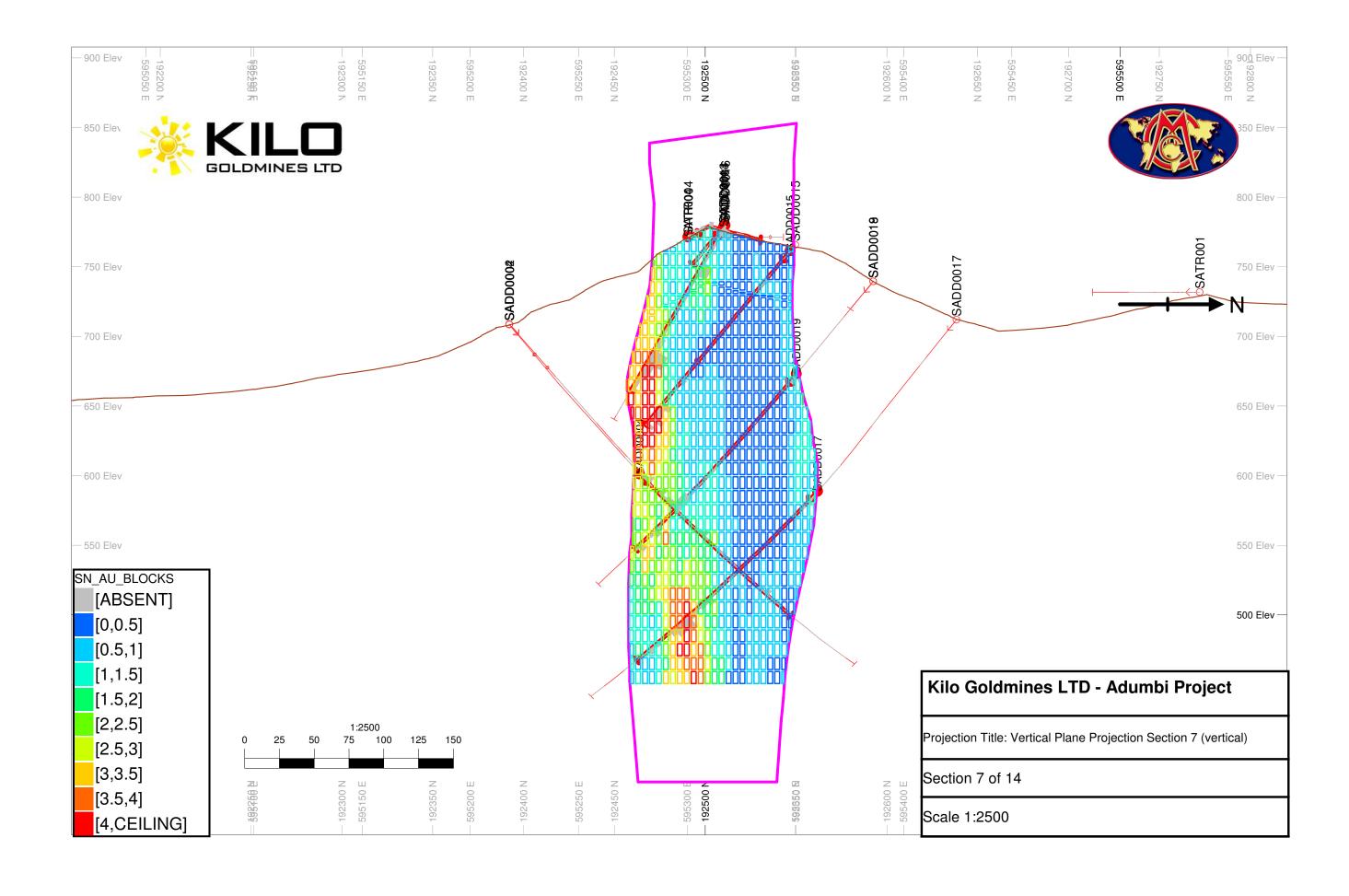


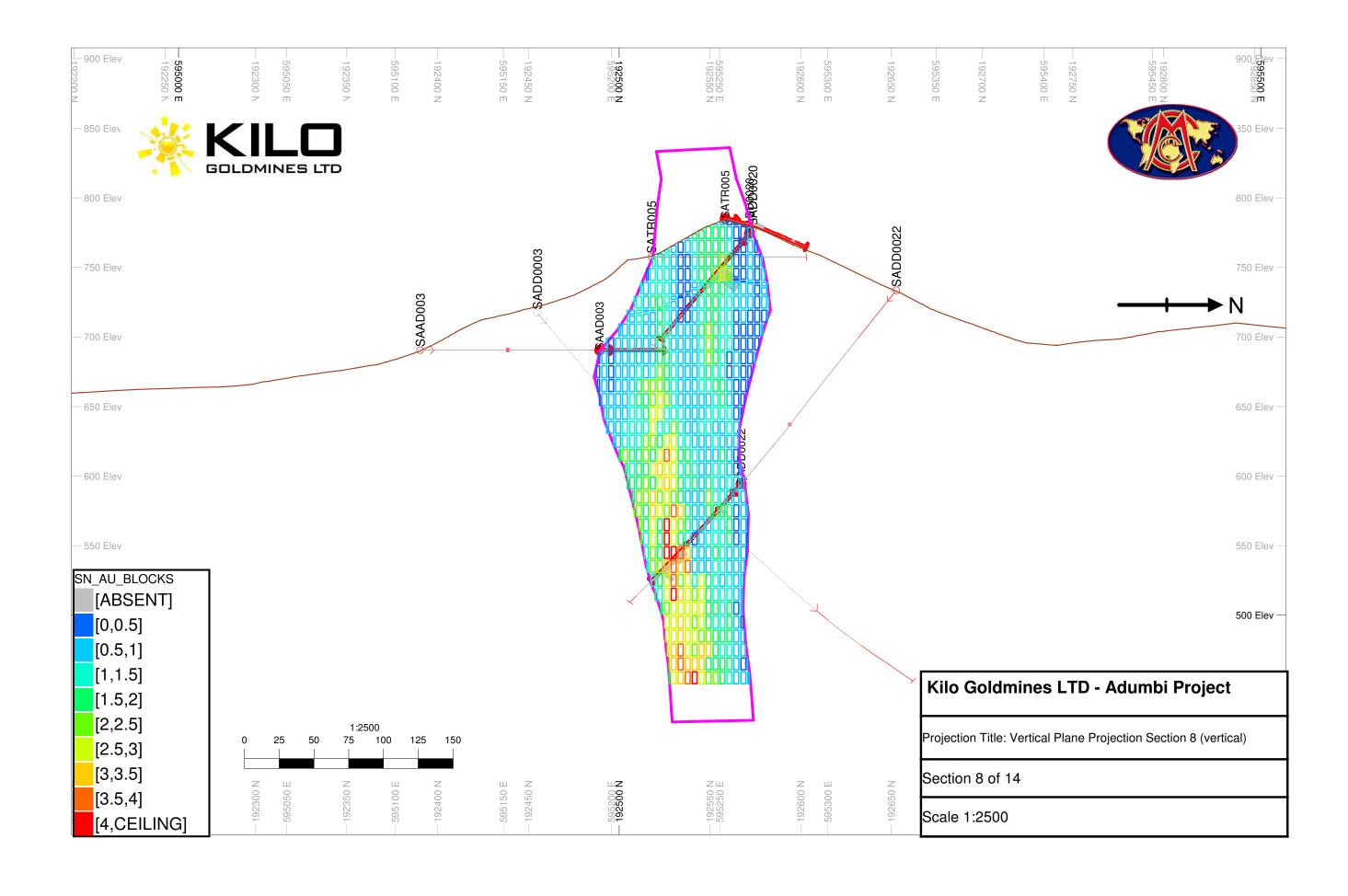


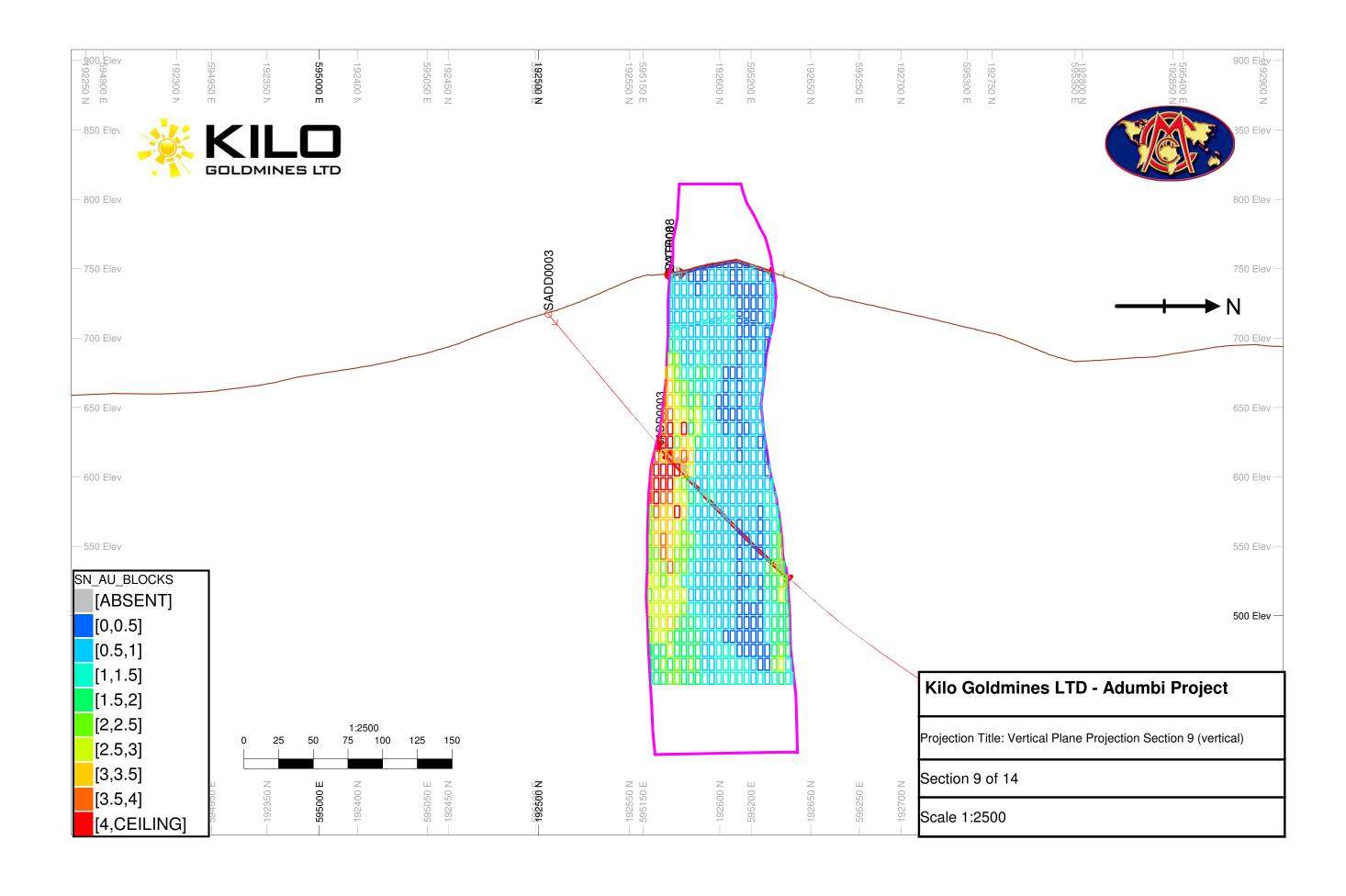


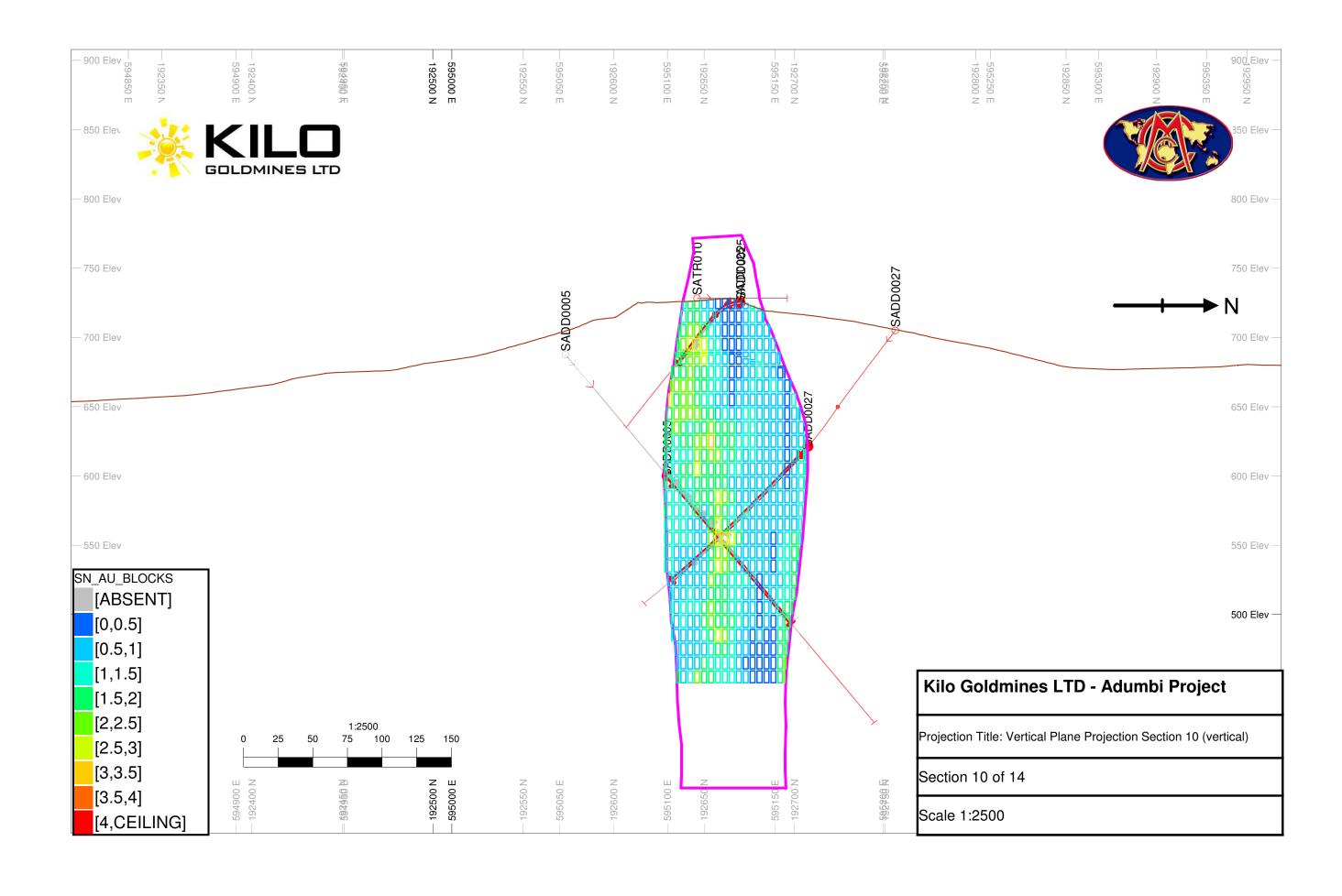


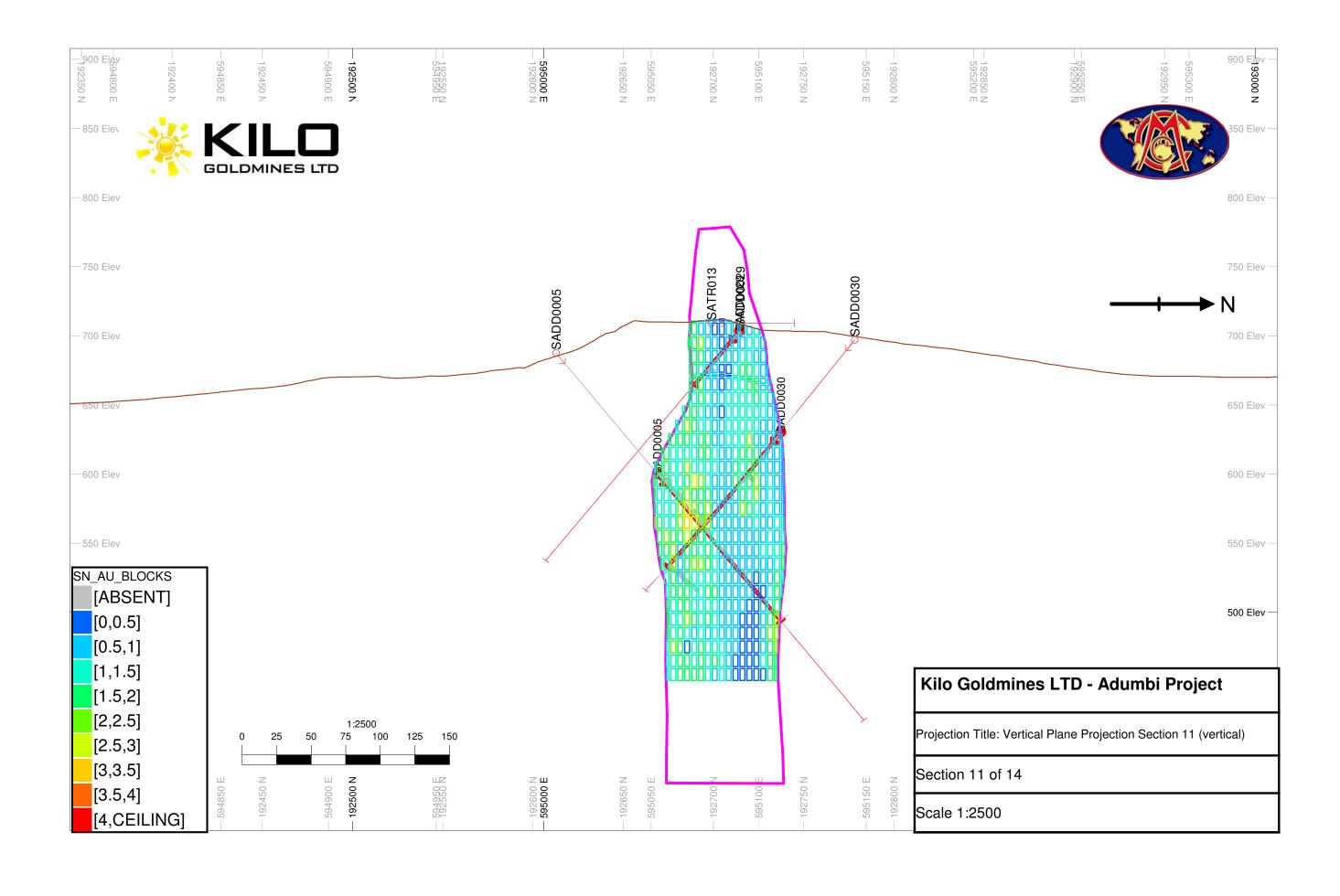


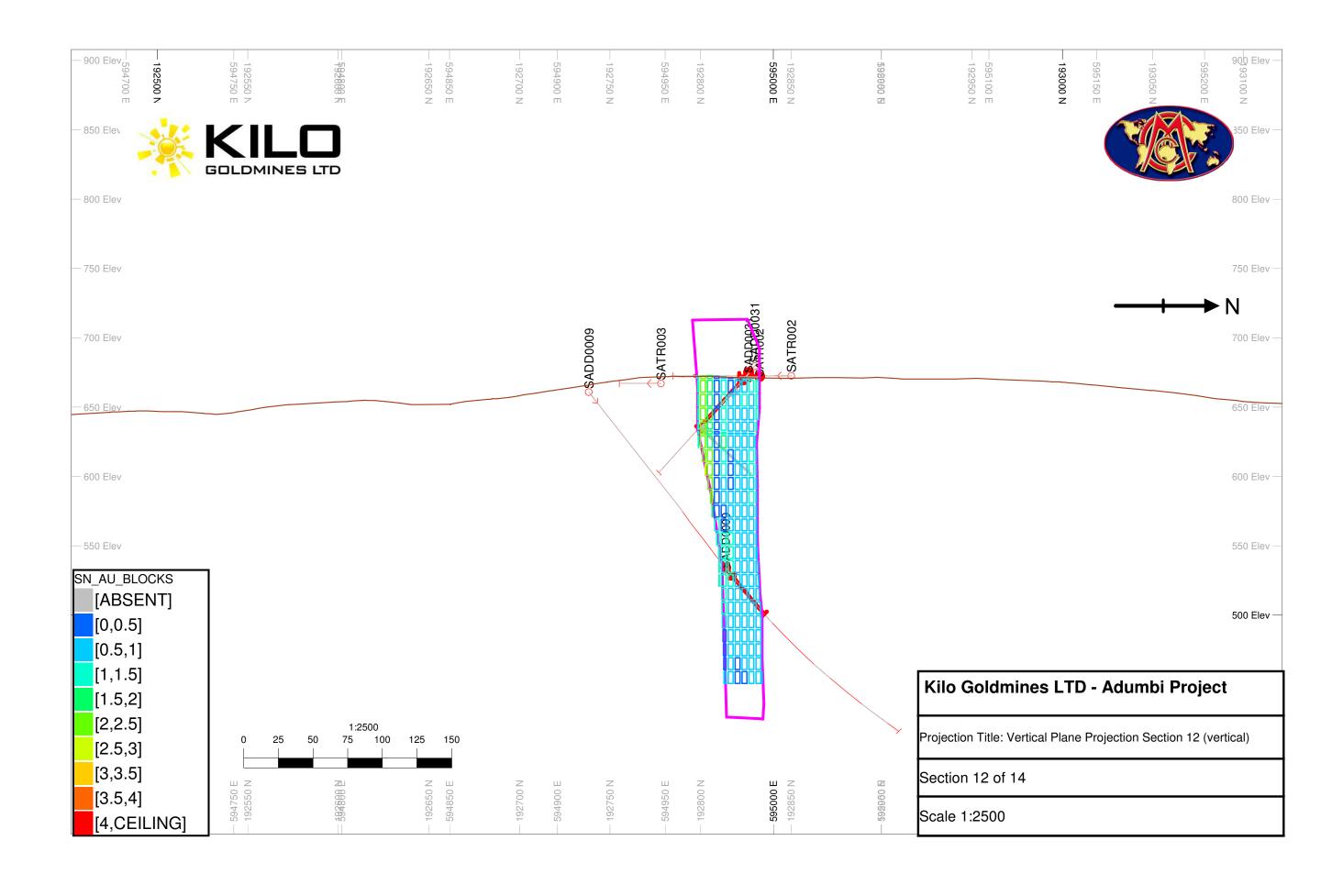


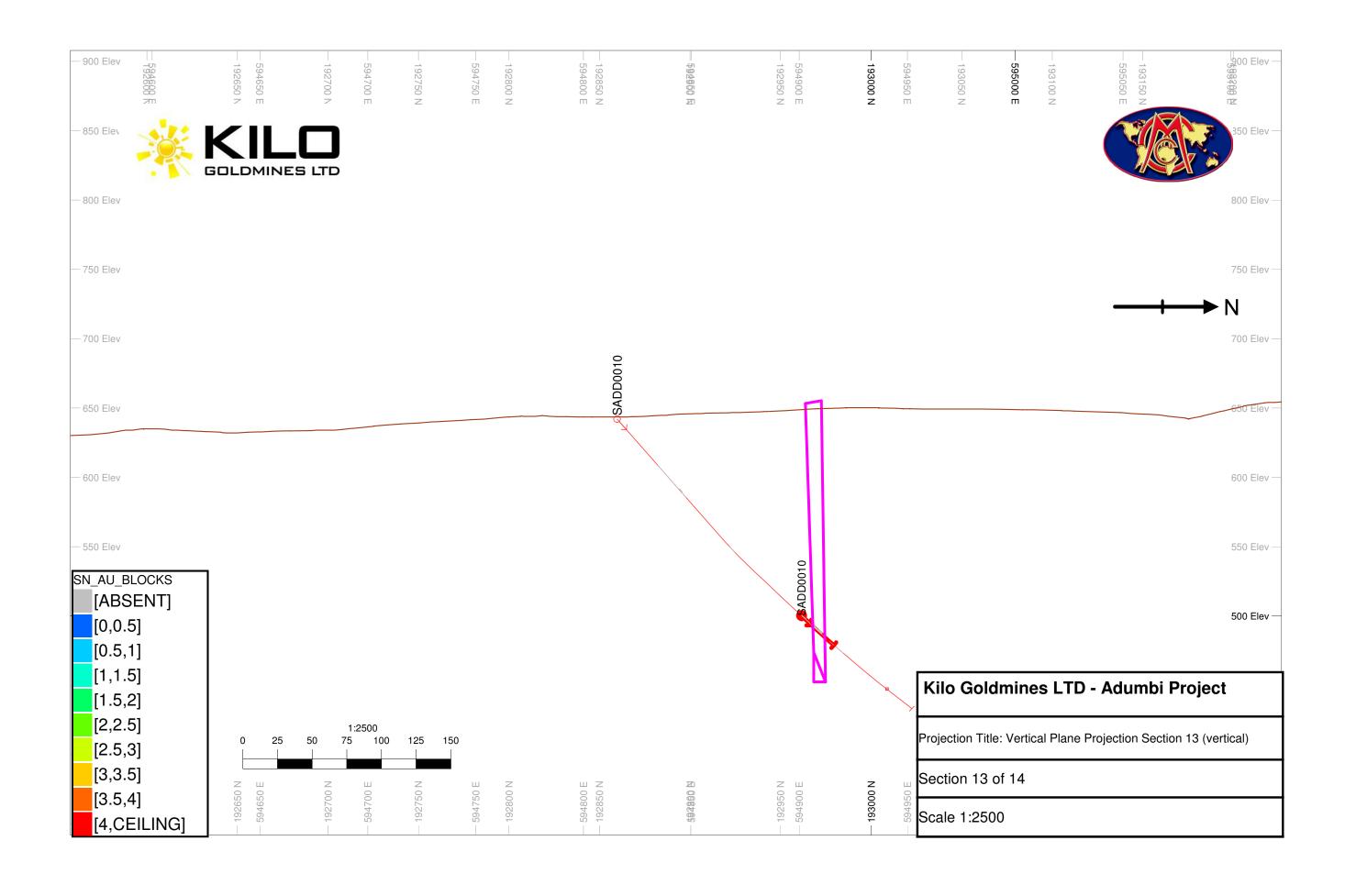


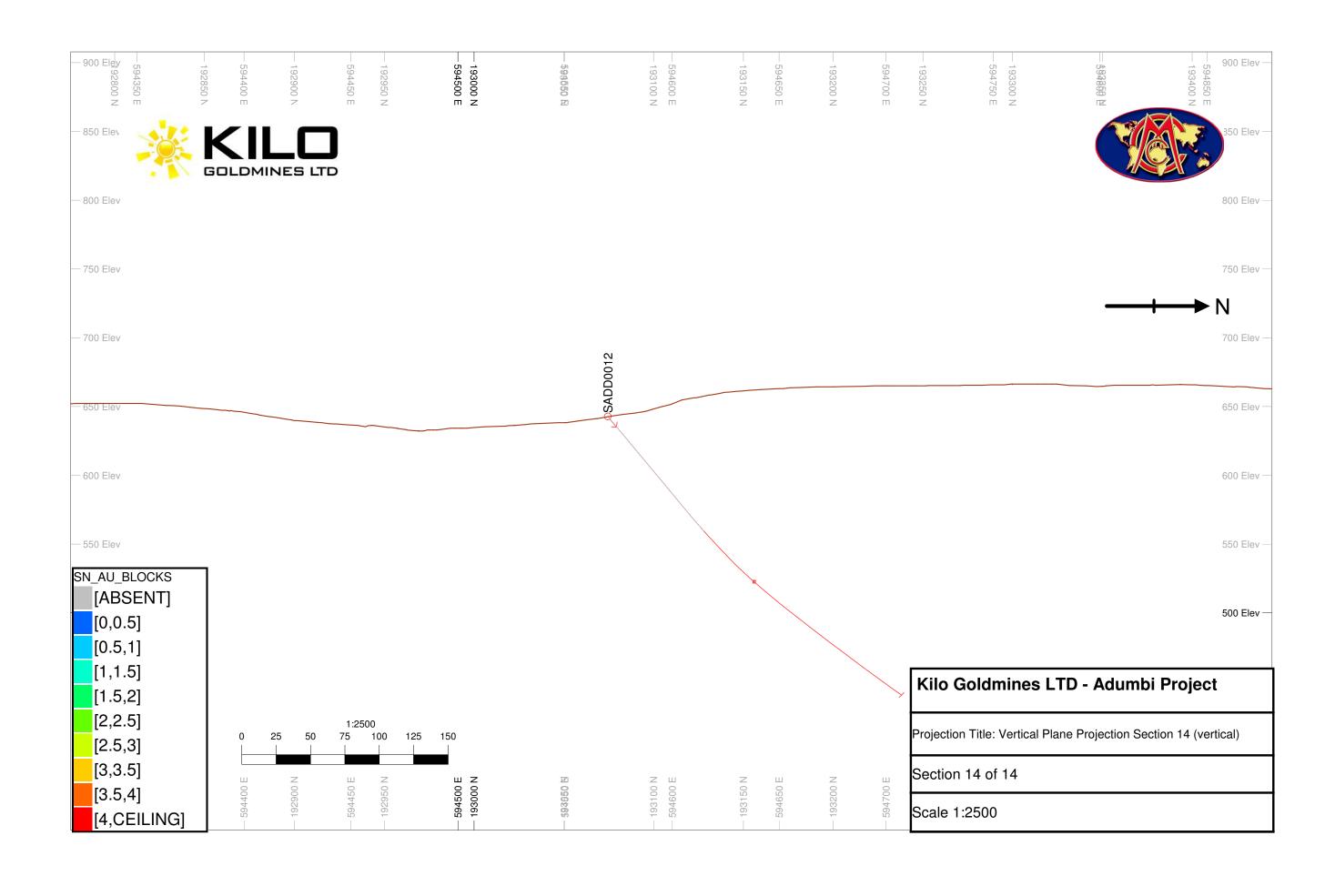












## APPENDIX 3: PLAN VIEWS OF BLOCK MODEL



