Akyanga 43-101

National Instrument 43-101 Technical Report

Prepared in accordance with NI43-101 and Form 43-101F1

INDEPENDENT TECHNICAL REPORT, MISISI GOLD PROJECT AND AKYANGA MINERAL RESOURCE ESTIMATE

DEMOCRATIC REPUBLIC OF CONGO

LAT/LONG: 4°46'00"S, 28°43'30"E

UTM ZONE 35M: 691318.55 M E, 9472888.55 M S

Report Produced for:

AVANTI GOLD CORP.
810 – 789 West Pender Street,
Vancouver, British Columbia, V6C 1H2

REGENCY MINING LIMITED
S203A, Second Floor, Orion Complex,
Mahe, Seychelles

Effective Date: August 01, 2023

Report date: August 01, 2023

Authors: John Arthur
(Ph.D, CGeol FGS)

Ephraim Masibhera
(B.Sc. (Geol.), MSc (Cd), MGSSA, Pr. Sci Nat)

Dian Heinrich Page
(B.Sc, MEng, Pr. Sci Nat)

INDEPENDENT TECHNICAL REPORT, MISISI GOLD PROJECT AND AKYANGA MINERAL RESOURCE ESTIMATE

1 EXECUTIVE SUMMARY

The Misisi Gold Project (or the "Misisi Project") is an exploration property that hosts the Akyanga gold deposit with an Inferred Mineral Resource of 41 million tonnes averaging 2.37 g/t gold based on 19,956m of historic drilling. The project licenses cover 50km of strike length of the prospective Kibara belt within which further exploration targets include the partially drilled target at Akyanga East 500m to the east and three exploration targets within 8 to 13 km of Akyanga, defined by geochemical soil anomalies trenching and scout drilling. Soils lines at 200m spacing cover a majority of the 50km trend and identify 12 additional areas with significant soils anomalies (defined by multiple soils on 2 or more adjacent lines with samples over 100ppb Au) that are yet to be systematically explored. This technical report (the "Technical Report") has been produced for Avanti Gold Corp. (previously named Valorem Resources Inc. "Valorem") and Regency Mining Limited ("Regency").

The Akyanga resource is determined from surface to a vertical depth of 350m over a strike length of 2100 metres. The mineralization remains open to depth and south and drilling has indicated continuity of mineralization in terms of grade and thickness of mineralised package.

The Mineral Resource statement reported in Table 1-1 is authored and reported by Dr. John Arthur who is the principal Qualified Person (or "QP") as such term is defined in National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101"), for the current report detailed herein. Dr. Arthur, therefore, takes responsibility for the accuracy and veracity of the Mineral Resource statement contained within this Technical Report.

Previous historical estimates have been reviewed as part of the current work. given the similarity between historical and current results despite different estimation methodologies, the orebody appears to be robust in terms of the grade variability and continuity and to the reported Mineral Resource statement is considered to be appropriate for the Akyanga Ridge deposit at the current level of investigation and reporting confidence.

Table 1-1. Akyanga Mineral Resource Statement – Effective Date June 30th 2023

Category	Tonnes (millions)	Gold Grade (g/t)	Contained Gold (M.oz)
Measured	-	-	-
Indicated	-	-	-
Inferred	40.8	2.37	3.11

1. Mineral Resources which are not Ore Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues. The Mineral Resources in this Technical Report were estimated using CIM Guidelines.
2. An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity3. Contained metal figures and totals may differ due to rounding of figures.
4. A cut-off grade of 0.5 g/t has been used to report the Mineral Resource

The Misisi Project is owned by LEDA Mining Congo S.A. ("LEDA"), of which Casa Mining Limited ("CASA") owns a 73.08% interest, with a 21.92% participating interest in LEDA being held by MMG

Limited, and the DRC Government owning a 5% free-carried interest. Accordingly, Valorem and Regency entered into a share exchange agreement (the "Share Exchange Agreement") dated December 2022, pursuant to which Valorem has agreed to acquire all of the issued and outstanding shares of Regency, which owns a 99.43% interest in CASA and, indirectly through its ownership in CASA, a 73.08 interest in LEDA. Valorem changed name to Avanti Gold Corp. on 21st April 2023. The government of the DRC retains a 5% free carried interest. According to statute, once mining commences, the government of the Democratic Republic of Congo ("DRC") shall acquire a 10% interest in the Misisi Gold Project.

Approximately 22,000m drilling have been undertaken on this project over a period 2011 to 2018. Several independent reviews of the project were undertaken by SRK (2013) [1], Vermaakt (2016) [2], African Mining Consultants (2017) [3] Denny Jones (2018) [4]. The AMC review [3] involved the relogging of all drill core, the standardization of lithotypes and used the structural interpretation of Vermaakt [2] to update and materially change the geological model from the one used by SRK [1]. As part of the current Technical Report the company has reviewed the historical work through technical validation and a series of confirmatory site visits carried out in 2021 and 2023.

Valorem and Regency commissioned Ephraim Masibhera of Kweneng Group SA, to conduct a site visit in compliance with NI 43-101 and CIM standards, (completed on May 11, 2021) and review all technical data and assist in the preparation of this Technical Report. Mr Masibhera has some 18 years' experience working in both the exploration and mining industry with extensive experience of gold and base metals projects throughout Southern Central and West Africa.

In June 2023 Dian Page carried out an update site inspection, principally to evaluate the current status of the project with special consideration to the quality of the core storage facilities, confirmation of drill collar locations and the current status of the artisanal workings in respect to their possible impact on the Mineral Resource estimate. Mr Page has over 10 years experience in exploration and mining with a specific focus on African gold deposits.

Valorem and Regency commissioned Dr John Arthur, to independently validate the historical Mineral Resource in regard to its compliance and classification with NI 43-101 and CIM standards. Following this validation exercise Dr Arthur produced an independent Mineral Resource estimate reported herein. Dr John Arthur (CGeol FGS, membership ID 1005744) is an independent Mining Consultant with some 27 years' experience as an Exploration and Mineral Resource geologist working extensively throughout Africa, CIS, Central Asia and South America and is a qualified person under the guidelines set out by the JORC and CIM for reporting of Mineral Resources.

The Misisi Project site is located in the Fizi territory of South Kivu province, in the DRC, approximately 250 km south of Bukavu and 140 km north of Kalemie. The three mining licences (Permit de Exploitation) in which the project is located cover a combined area of approximately 133km^2 (157 carres). The central coordinates of the Akyanga deposit are 4°46'00"S 28°43'30"E. The village of Misisi is approximately 1.5 km west of the Akyanga Ridge target and is the current location of the [4]base camp. Access to Akyanga from the camp in Misisi is by means of 4x4 vehicles on dirt roads that bypass the population centre. Airport links from Lubumbashi to Lulimba are available through private charter thus only requiring a 10 km section to be completed by road from Lulimba to the project area.

The ridges at Akyanga, Mdende, Eumba, Lubitchako and Tulonge are exploited by artisanal miners

with little evidence of earlier activity (Figure 5-3). In addition, many of the streams and rivers draining these ridges are being mined and used for washing ore. The artisanal miners utilise small moveable ball mills to crush the ore mined and, in the second quarter of 2012, a group of artisanal miners constructed two small heap leach plants at Misisi village.

With the exception of informal artisanal activity and historical alluvial gold mining at the southern end of PR 822 (Ngalula area) there are currently no formal mine workings, tailings ponds or waste dumps located in the Misisi Gold Project area.

Wardrop [4] reported that historical exploration programmes prior to 2010 are poorly documented. The Misisi Gold Project area was poorly mapped and most geological surveys predate the independence of the DRC. Systematic mineral exploration had not been conducted prior to the programmes undertaken by previous owners CASA and subsequently ARC Minerals in 2010-2017.

CASA and ARC Minerals conducted all modern exploration work on the Misisi Gold Project. LEDA carried out a limited programme of reconnaissance and satellite interpretation work but no drilling or trenching.

CASA commenced exploration activity on the Fizi tenements in June 2010. The exploration activity comprised geological mapping, trenching and diamond drilling. ARC followed this up with the remapping and structural interpretation of Vermaaakt [2] and AMC [3] followed by a 5000m drilling campaign in 2017 which increased the global resource. In August 2011, CASA engaged New Resolution Geophysics to fly and process a 2,800 line km airborne (helicopter), high resolution magnetic and radiometric survey across the Fizi licence area.

Gold mineralisation is hosted in NW-SE trending, approximately 2.5-1.6 Ga Rusizian quartzites, schists and conglomerates of the Kibara Belt, an approximately 2,000 km long, NNE-SSW trending, Proterozoic intracontinental mobile belt situated between the Congo Craton in the west and the Tanzanian Craton in the east. The Kibara belt is a well known metallogenic province in which numerous mineralising events have taken place and which hosts both the Twangiza and Namoya mines developed by Banro. The LEDA licence holdings cover 60 km of the Tanganyika graben within the Rusizian belt with the Misisi Gold Project area within the interpreted lower unit.

The Akyanga geology consists of an overturned meta-sedimentary succession and intruded by dolerite and/or gabbro. The geology of the project area is dominated by meta-sediments comprising interbedded quartz muscovite schists, schistose arkoses, muscovite quartzites, and quartzites; pebble conglomerates and foliated mafic intrusion.

Several sub-parallel mineralised zones were established from historical exploration data and Diamond and RC drilling results from CASA. These mineralised zones with strike lengths of up to 2,000 m are generally less than 10 m thick and appear in the southern end of the deposit to be moderate to shallowly dipping to the southeast. In the central and northern parts to the deposit the deposit steepens at surface, such that at the northern end of the deposit, the mineralisation is near vertical at surface and flattening out down dip at depth.

The depth of weathering is estimated to be approximately 30 m. Diamond drilling at Akyanga has intersected numerous gold bearing quartz vein zones. Mineralisation is structurally and lithologically controlled in association with local deformation zones and occurs along north-south striking structures. The current interpretation is that the base of a mafic unit provides a contact with hardness contrast along which there has been structural movement. Apart from the main

mineralised zone at and adjacent to this contact, there are four sub-parallel zones below the main mineralised zone.

The deposit is located within the central section of an area bounded by a thrust zone to the west and by NW trending sinistral fault zones. Regional lineaments, were interpreted using airborne magnetic surveys (Gradient Enhanced VD1) and K/Th alteration ratio maps. The meta-sedimentary succession has been affected by brittle-ductile deformation. Thrusting has resulted in the overturned sequence at Akyanga.

Mineralisation on the Akyanga ridge within the Misisi Project area appears to be located within competent metaquartzite/conglomerate units with minor specular hematite bands. Minor associated sulphides (pyrite/pyrrhotite) and specularite hosted within broad quartz vein systems have been correlated with visible gold. This has been recorded both during surface mapping, in which the extent of mineralisation has been identified based on spatial distribution of artisan pits, and veins and veinlets logged within drill core which frequently have associated halos of mineralisation occurring in fractured quartzite with distinctive hematite rich oxidation. The host quartz veins vary in thickness from cm-scale to packages in excess of 200 m thick. Veins exploited by artisanal miners typically range in thickness from 0.5 – 2 m. Initial cyanide bottle roll testwork completed on a suite of early Misisi drill core samples confirmed significant free- milling coarse gold (which is currently targeted within high-grade shoots and exploited by local artisanal workings) with only minor sulphides. Potential recoveries in excess of 91% were recorded for all samples which underwent analysis.

Samples were initially submitted to the SGS Laboratory (“SGS”) in Mwanza, Tanzania for preparation, where they were dried and pulverised to 75 microns (µm) before being analysed at the same laboratory. From drillhole MSDD0010 onwards, samples were submitted to the ALS Minerals (“ALS”) facilities in Mwanza for preparation, and subsequently to ALS in Vancouver and Johannesburg for analysis. Samples from drillhole MSDD0084 onwards at Akyanga-Mdende and all holes at Tulonge (TLDD0001 – TLDD0007) were submitted to SGS accredited laboratory at Mwanza, Tanzania. The ALS Vancouver analytical facility is ISO 9001:2008 accredited and has received accreditation to ISO/IEC 17025:2005 from the Standards Council of Canada (SCC). The ALS Johannesburg laboratory is ISO/IEC 17025:2005 accredited for sample preparation and analysis.

Density measurements are carried out using Archimedean principles for consolidated fresh core. The drillhole database presented to the consultant, which forms the basis for the current reported Mineral Resource estimate, contains a total of 4039 density samples taken from surface to a maximum downhole depth of 320m with an average sample core length of 12cm. Average density for the complete database is 2.66t/m3 with a range of outliers between 1.06-4.8.

two site visits have been carried out by QP Ephraim Masibhera and QP Dian Page of the Misisi Gold Project. During the visits there were no exploration activities however appropriate verification was done to confirm the data in the Technical Report.

There have been several historic resource calculations for the Akyanga deposit. The historical resource estimates were not reported using Canadian Institute of Mining, Metallurgy and Petroleum standards on mineral resources and reserves, definitions, and guidelines prepared by the CIM standing committee on reserve definitions and adopted by the CIM council, and hence

are not compliant and considered historic.

- 2014 SRK Consulting (UK) Ltd Scoping Study and Resource Estimate [1]
- 2017 African Mining Consultants, Technical Report and Mineral Resource Estimate [3]
- 2018 Denny Jones Akyanga Resource Estimate [4]

The current Mineral Resource estimate for the Akyanga deposit was based upon 105 diamond drillholes, (19,069.85 m) and 6 RC drillholes (887m) mostly orientated 50-70° to the WNW, designed to be perpendicular to mineralization. Drillholes have been spaced on section lines at approximately 100 m intervals narrowing locally to 50m spacing. The major drilling direction was towards the north-west (290°). Most of the holes have inclinations in the order of -50º to -70º, with the majority of holes inclined at -50º. Selective holes have been drilled at -70º to test depth extent where access is limited due to terrain and surface artisanal workings. The use of these holes has confirmed the relatively steep contacts (sub vertical) of the Akyanga ridge target mineralisation, which based on the general dip of the drilling (-50°), best estimates of true width in the wider portions of the deposit are between 1 and 35 m.

Approximately 1-2km east and north-east of the Akyanga Project is the Akyanga East or Mdende structure. The mineralisation (a zone of veining) can be traced along strike for approximately 5.5 km, primarily through artisanal workings, with a gap in the workings through an east-west valley that cuts through the mineralisation and covers the surface with scree. It has been explored by drilling (10 holes) at around 200 m centres with up to 500 m spacing at the limit with a gap in exploration across the valley. The mineralisation dips at around 53° to the southwest.

The project needs drilling of approximately 23-24,000m to convert Inferred Mineral Resources to Indicated and measured categories. Holes would be located so as to infill the current drill pattern to allow an average spacing of 50m along strike and 50-75m down dip. Thereafter mineral processing, mine design and economic assessment and any other factors pertaining to a Preliminary Economic Analysis and subsequent Feasibility Studies need to be undertaken. It is recommended that the focus should be on bringing the Mineral Resource at Akyanga up to a level of confidence such that detailed mining studies can be considered to a level of detail that could contribute to a Pre-feasibility study.

Table of Contents

List of Tables

List of Figures

2 INTRODUCTION AND TERMS OF REFERENCE

2.1 Issuer

This Technical Report was prepared for and on behalf of Avanti Gold Corp. (AGA-CSE) previously named Valorem Resources Inc. (VALU-CSE) who acquired a 73.08% interest the Misisi Gold Project and associated Akyanga gold deposit indirectly through its acquisition of Regency pursuant to the terms of the Share Exchange Agreement. Avanti Gold Corp. (formerly Valorem) is a Canadian based mineral exploration company headquartered in Vancouver, British Columbia, whose common shares trade on the Canadian Securities Exchange under the symbol "AGA". Previously the Misisi Gold Project was owned by Arc Minerals Ltd, CASA and Anvil Mining Ltd ("Anvil Mining"). MMG Limited, through the acquisition of Anvil Mining have retained a 21.5% indirect shareholding in CASA, the DRC level company. The government of the DRC retains a 5% free carried interest.

2.2 Terms of Reference

Valorem and Regency originally commissioned Dr John Arthur, to independently validate the most recent historical Mineral Resource produced by Denny Jones Pty Ltd [4] in regard to its compliance and classification with NI 43-101 and CIM standards and to subsequently produce an updated independent Mineral Resource estimate. Dr John Arthur (CGeol FGS, membership ID 1005744) is an independent Mining Consultant with some 27 years' experience as an Exploration and Mineral Resource geologist working extensively throughout Africa, CIS, Central Asia and South America and is a qualified person under the guidelines set out by the JORC and CIM for reporting of Mineral Resources. Due to COVID-19 travel restrictions Dr Arthur was unable to visit the project site.

Valorem and Regency commissioned Ephraim Masibhera of Kweneng Group SA, to conduct a site visit in compliance with NI 43-101 and CIM standards. Mr Masibhera has some 18 years' experience working in both the exploration and mining industry with extensive experience of gold and base metals projects throughout Southern Central and West Africa. Mr Masibhera is a qualified person within the meaning of NI 43-101. Mr Masibhera was able to review core and sample storage, project geology, artisanal mining activities, meet with community leaders, local government and report on site accessibility and current security conditions. Mr Masibhera provided detailed information concerning the data collection procedures and quality and application of such data to the Mineral Resource estimation process and is the QP responsible for those sections of the current report.

In June 2023 Dian Page (QP) carried out an update site inspection, principally to evaluate the current status of the project with special consideration to the quality of the core storage facilities, confirmation of drill collar locations and the current status of the artisanal workings in respect to their possible impact on the Mineral Resource estimate. Mr Page has over 10 years experience in exploration and mining with a specific focus on African gold deposits.

This Technical Report is based on project drilling, geochemical and geological data, previously completed reports, testwork results, maps, published government reports and public information. Drilling at the Akyanga deposit was completed between 2010 and 2017 in several stages by former operators. This Technical Report was completed in accordance with disclosure and reporting requirements set forth in NI 43 101, Companion Policy 43-101CP, and Form 43-101F1

The Mineral Resource Estimate for the Akyanga gold deposit has been prepared in accordance with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Reserves (10 May 2014). Only Mineral Resources are estimated – no Mineral Reserves are defined for the Misisi Gold Project. The Technical Report is intended to enable Valorem, Regency and potential partners to reach informed decisions with respect to the Misisi Gold Project. The Effective Date of this Technical Report is June 30, 2023.

2.3 Sources of Information

This Technical Report is based on the exploration work, legal, community and environmental reports generated by Anvil Mining from 1998 through 2008, followed by CASA from 2011 to 2018. This included 21,610 metres of diamond drilling in 133 holes, 2,810 metres of reverse circulation drilling in 23 holes, 2,011-line metres of trenching, in addition to metallurgical studies, geophysical surveying, sampling and prospecting. This work generated a large amount of data and reports, including three historical resource estimates and a Scoping Study [1] reported using the JORC Code.

The estimate for the Akyanga gold deposit June 2023 Mineral Resource was prepared in the following steps:

- Confirmation of licence holding and area coverage (JA)
- Review of Regional and Local Geology (JA)
- Site visit for personal inspection (EM)
- Site visit for personal inspection (DP)
- digital data validation (JA)
- data preparation (JA)
- exploratory data analysis of Au (JA)
- review of geological interpretations, definition of domains and modelling (JA)
- establishment of block models (JA)
- coding by domain and compositing of assay intervals (JA)
- derivation of kriging plan and preparation of kriging parameters (JA)
- variogram analysis for indicators (JA)
- grade interpolation of Au using unfolding and ordinary kriging (JA)
- validation of Au grade estimates (JA)
- classification of estimates (JA)
- resource tabulation and reporting (JA)

2.4 Qualifications of Qualified Persons

Ephraim Masibhera (SACNASP No:200093/12; Geological Society of South Africa No:967492) is a partner and Senior Consultant for the Kweneng Group (Pty) Lty with over 18 years' experience in both exploration and development of mining projects, predominantly gold, copper, PGM and base metals, throughout South, Central and West Africa. Mr Masibhera is listed as a QP for the Technical Report, has assisted in report compilation and has carried out an independent review of the work performed on site as part of the data collection and verification aspects of the project.

Dian Page (SACNASP No:200093) currently head of the Mineral Resource Management (MRM) division for Stark Resources, is an accomplished geology professional in the mining and metals

sector. With over a decade of experience, he is well-versed in techno-economic recovery solutions, ore sorting, and modern exploration procedures. Holding both a Master's in Geotechnical Engineering and a Bachelor of Science (Honours) in Geology & Environmental Geochemistry from Stellenbosch University, Dian's expertise spans from offshore marine diamond mining to opencast and underground mining. In addition to his technical proficiency, Dian is renowned for his skills in project management, due diligence, and scoping studies, backed by his affiliations with the Geological Society of South Africa and the South African Council for Natural Scientific Professions.

John Arthur (CGeol FGS, membership ID 1005744) (together with Mr. Masibhera, the "Authors") is an independent Mining Consultant with some 27 years' experience as an Exploration and Mineral Resource geologist working extensively throughout Africa, CIS, Central Asia and South America and is a qualified person under the guidelines set out by the JORC and CIM for reporting of Mineral Resources. Dr Arthur is listed as a QP for the Technical Report, has assisted in report compilation and has carried out an independent review of the work performed by Ivor Jones as part of this report.

2.5 Site Inspection

Ephraim Masibhera is the Qualified Person ("QP") for validation of exploration data, drilling quality and sample quality. He visited site between 10th May and 12th May 2021 since when no further technical work has been performed at the site. Work completed during the site visit of Mr Masibhera included assessing the conditions on the property, reviewing geology and mineralization and verifying exploration data, including drill hole locations, verifying the access to the property, determining what infrastructure is available, confirming sources of water and power, and so forth. Mr Masibhera visited the Akyanga resource area, camp and core storage facility, but did not visit the additional exploration sites within the greater Misisi Project.

Dian Page (QP) completed a second site inspection in May 2023, as part of this inspection Mr Page confirmed drill collar locations and carried out inspection of selected core intervals as well as the core storage facility. In addition Mr Page observed the extent of artisanal workings on the site.

The recent visit provided confirmation of the observations made in 2021 and the current QP considers the previous observations to be valid and pertinent to the current report.

3 RELIANCE ON OTHER EXPERTS

The details for section 4 of this report (property description and location) concerning the legal position and current status of the licence holdings, has been provided by Regency. The Authors carried out limited checks through the DRC Cadastre portal to confirm basic details, location and extent of the licence boundaries discussed in Section 4 below. Regency engaged legal counsel in Kinshasa to provide opinion on the license summarised as follows.

Dorothée Madiya Mwamba, Lawyer and Attorney – Mines and Quarries, of Madiya Law Kinshasa certified in November 2022, that the LEDA mining claims (PE13177 / PE13178 / PE13179) were valid and in compliance with the requirements of the mining authorities.

4 PROPERTY DESCRIPTION AND LOCATION

The Misisi Project site is located in the Fizi territory of South Kivu province, in the DRC, approximately 250 km south of Bukavu and 140 km north of Kalemie. The three mining licences (Permit de Exploitation) in which the project is located cover a combined area of approximately 133km^2 (157 carres, Table 4-1). The central coordinates of the Akyanga deposit are 4°46'00"S 28°43'30"E. The licence location is shown in Figure 4-1 and the licence outlines are shown in Figure 4-2.

The Misisi Project is situated towards the southern end of the Mitumba Mountain range, which forms part of the western escarpment of the Albertine Rift Valley in Eastern DRC. The area is mountainous with elevations in the area ranging from 800 m to 2,600 m AMSL. The Akyanga, Mdende, and Eumba ridges are located to the east of Misisi Village (Figure 4-2).

Table 4-1. Summary of licence holdings covering the Misisi Project

Licence No.	Area (Carres)	Area (km^2)	Licence Type	Expiry	Status
PE13177	13	10.96	Exploitation	3 March 2045	Granted from 4 March 2015
PE13178	60	50.56	Exploitation	3 March 2045	Granted from 4 March 2015
PE13179	84	70.79	Exploitation	3 March 2045	Granted from 4 March 2015

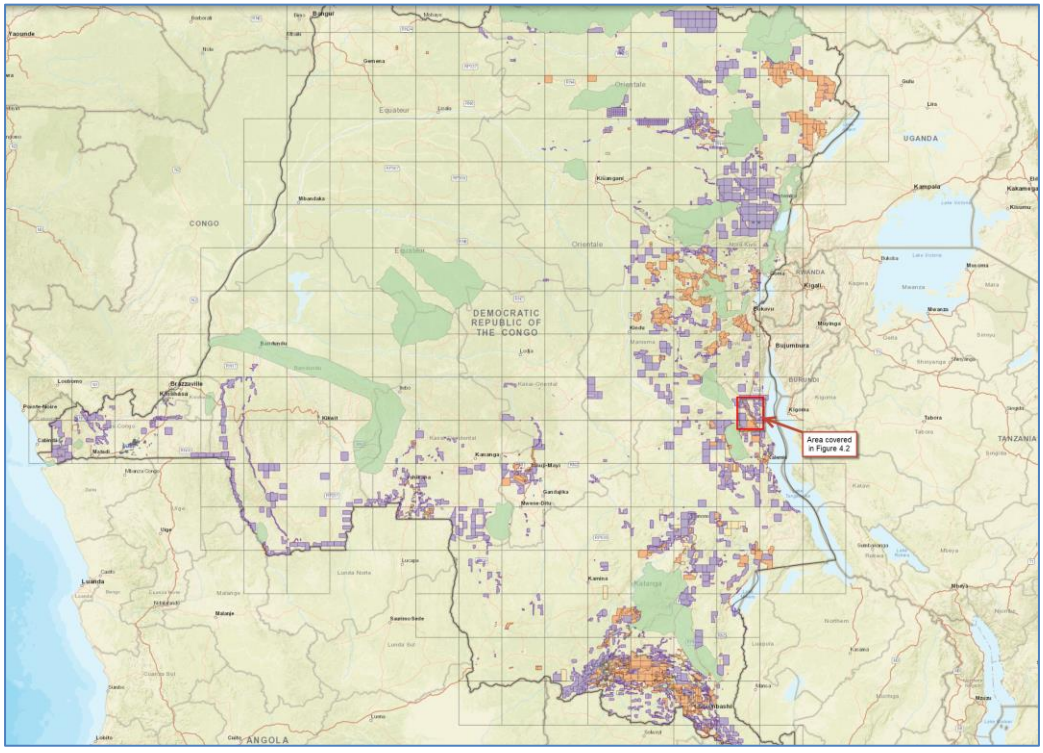


Figure 4-1. Regional location map showing the location and extent of the three licences currently held by ARC in the DRC.

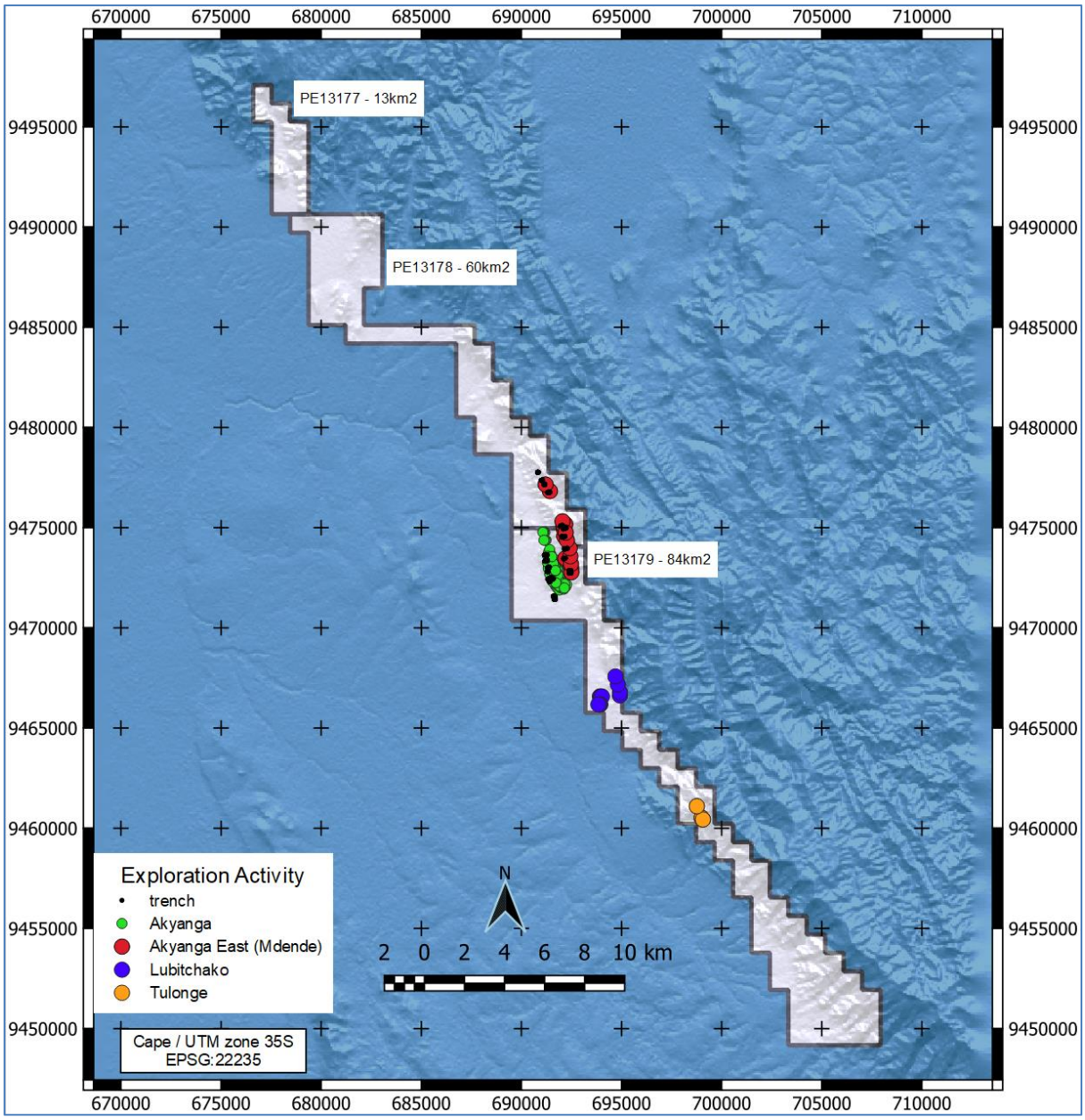


Figure 4-2. Local area map showing the detailed outline of the licence boundaries, the Akyanga and Akyanga East trenching and drilling activity along with the drilling on the Lubitchako and Tulonge prospects.

4.1 Mineral Tenure

The Misisi tenements are held in the name of LEDA Mining Congo SA (LEDA), the shareholding of which is to be jointly held by The Company (73.08%) and MMG (21.92%) through its subsidiary (Anvil Mining) with the remaining 5% held by the Government of the DRC. CASA Resources Ltd ("CASA Resources"), a subsidiary of CASA, entered into an Earn-in Agreement with Anvil Mining in October 2009, for the Misisi tenements, which contain the Akyanga deposit. Anvil Mining was subsequently acquired by Minmetals Resources Ltd in March 2012.

The Earn-in Agreement gave CASA Resources the right to earn a 73.08% interest in the Exploration Licences and the subsequent Misisi Project owned by LEDA Mining Congo S.A. ("LEDA"), by completing, at its own expense, prospecting and research work and a Feasibility Study. LEDA

presently holds a 100% interest in the three mining permits or Permis de Exploitation illustrated in Figure 4-2, which provide the appropriate surface rights and legal right to access for the planned exploration works. The total licence holding was originally 2,400 km^2, and following relinquishment was reduced to approximately 1,000 km^2. A further license reduction has seen the land package reduced to its current 157km^2, i.e. the three PE.

CASA was acquired by Ortac Minerals in 2014. Subsequently, Ortac Minerals underwent a name change to Arc Minerals Ltd. ("Arc Minerals"). In March of 2020, Arc Minerals entered into a share purchase agreement with Golden Square Equity Partners ("Golden Square") pursuant to which Golden Square acquired Arc Minerals' 99.43% shareholding in CASA. Following this, Regency entered into a share purchase agreement with Golden Square dated April 14, 2022, as amended November 4, 2022, pursuant to which Regency acquired Golden Square's 99.43% shareholding in CASA. Valorem and Regency have since entered into a Share Exchange Agreement, pursuant to which Valorem has agreed to acquire all of the issued and outstanding shares of Regency, which owns a 99.43% interest in CASA and, indirectly through its ownership in CASA, a 73.08% interest in LEDA. The government of the DRC retains a 5% free carried interest. According to statute, once mining commences, the government of the DRC shall acquire a 10% interest in the Misisi Gold Project. Royalties are set at 3%. No additional permits are currently required to facilitate the planned work going forward.

4.2 Environmental Liability

LEDA, as the DRC registered entity holding the tenements, will be liable to the DRC government for any damage to the environment resulting from a breach of the requirements of the DRC Mining Code and approved Plan d'Attenuation et de Rehabilitation ("PAR").

On the basis of observations in the field, there are no current liabilities in relation to the exploration activities but there are potential liabilities accruing due to artisanal mining and prospecting activities at some sites.

Figure 4-3. **Artisanal processing area observed on the valley floor between the Akyanga Main and East deposits (May 2021)**

The ridges at Akyanga, Mdende, Eumba, Lubitchako and Tulonge are exploited by artisanal miners (Figure 4-3). The number of artisanal miners varies according to the time of year (rains and school term time seeing a reduction in numbers). Miners themselves work shifts, with a total number varying between 1,000 and 3,000 people, with other people being involved in activities such as transport and crushing. During the site visit about 2000 artisanal miners were observed working on the Akyanga project.

In addition, many of the streams and rivers draining these ridges are being mined and used for washing ore. The artisanal miners utilise small moveable ball mills to crush the ore mined and, in the second quarter of 2012, a group of artisanal miners constructed two small heap leach plants at Misisi village. During the May 2021 visit, several moveable ball mills were observed which have potential to mill 1 tonne per hour.

With the exception of informal artisanal activity and historical alluvial gold mining at the southern end of PR 822 (Ngalula area) there are currently no formal mine workings, tailings ponds or waste dumps located in the Misisi Gold Project area.

4.3 Risks and Opportunities

LEDA recognises the need to engage positively with the local community and maintains regular dialogue with Civil Society, traditional leaders, and local authorities. Historically LEDA has a substantial social program amounting to 4% of exploration spend. This has already resulted in the reconstruction of six schools and the construction of a seventh. A community meeting hall was also constructed and is in constant use. The company accesses this hall for tripartite meetings between government officials, LEDA and the community. Future projects at the construction stage, which may include roads, are likely to further assist in ensuring community benefit is seen.

Presently artisanal mining is conducted on Akyanga hill by a number of illegal miners. LEDA is working with the DRC government and regional authorities, as well as the Village Chief, to identify the optimal means of transitioning the project from illegal informal artisanal mining to a legal responsible and safe mining project with consensus support.

Central and regional government are eager to end illegal mining as there is no compliance with safety, labour or environmental laws and provides no revenue to the state.

LEDA recognises the importance of local community support and assisted by consultants and NGO's will work with community leaders to identify the optimal solutions to manage the transition to properly licenced and socially responsible industrial mining.

4.3.1 Political Risk

The DRC has since 2013 in particular seen increasing stability. The previous widely reported troubles that affected the east have largely been overcome, following co-operation between the UN and DRC forces. Félix Antoine Tshisekedi Tshilombo, the son of the country's longstanding opposition leader, won the December 2018 presidential election. He succeeded Joseph Kabila, who had led the country for 18 years, in the first peaceful transition of power in the DRC's history. In April 2021 the president announced a new government the 'Sacred Union of the Nation' which resolved a month's long power struggle with predecessor Joseph Kabila. The new DRC government provides an opportunity to advance significant mineral projects with lower political risk than former governments.

4.3.2 Access Road

Planning of construction activities around the wet season is well advised. However, the impact of this is considerably less than previously, thanks to the upgrading of the access road from Bukavu to within 10 km of the project LEDA will have to rehabilitate only a 10 km section of road from Lulimba to the project, this section however requires no bridges and should not be complicated.

Alternative transport routes from Kenya can also be considered, including lake transport to Baraka or Uvira.

4.3.3 Health and Safety

Maintaining the health of all personnel is key if morale and on time completion are to be maintained during project execution. Malaria, shigella, and cholera affect the region to varying degrees, as do HIV, and TB and Covid. Mitigation against the former group of diseases has already been put in place by ensuring water supplies are safe and taking anti- mosquito measures; this will need to continue as the project advances. Covid awareness is key in ensuring that the miners are notified of any potential risks and accelerated spreading of the disease if there is an outbreak.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

Road access to Misisi has historically been limited by poor road conditions with travel time to site

from the regional capital, Bukavu, of up to two days. The area is accessible by the N5 road from the airports (links with Lubumbashi) to the north from Bukavu and south from Kalemie. The N5 is currently being improved from Kalemie through to Uvira. Road access from Burundi via Bujumbura and Uvira may also represent viable road alternatives.

For transport of heavy goods, the use of ferries from Kigoma to Kalemie or Uvira, utilising Lake Tanganyika with overland travel from Kalemie to Misisi, or Uvira to Misisi via Baraka to site may also be viable.

Travel by air is the most efficient in terms of time. An airstrip at Lulimba within the Misisi Project area has been renovated and licensed allowing for charter flights from Kalemie and Bukavu. The airstrip is 1.1km in length (3600 feet) which is within the parameters for a Beechcraft King Air or similar.

Airport links from Lubumbashi to Lulimba are available through private charter thus only requiring a 10 km section to be completed by road from Lulimba to the project area.

The village of Misisi is approximately 1.5 km west of the Akyanga Ridge target and is the current location of the [4]base camp. Access to Akyanga from the camp in Misisi is by means of 4x4 vehicles on dirt roads that bypass the population centre.

Larger population centres are located at Bukavu, the capital of South Kivu province, approximately 350 km to the north of Misisi. Bukavu has an airport serviced by commercial flights between Goma, Kalemie and Lubumbashi. There is a port at Bukavu with freight links across Lake Kivu to Goma, North Kivu. Kalemie, the headquarters of Tanganyika District in Katanga Province, is located approximately 180 km to the south of the Misisi Project. Kalemie has an airport serviced by commercial flights between Goma, Bukavu and Lubumbashi. There is a port at Kalemie operated by Société Nationale des Chemins de fer Congolais (SNCC), the national railway company. The port was built to establish a link between the DRC, Tanzania and Zambia from Kalemie by Lake Freighter to the Tanzanian port of Kigoma and Mpulungu in Zambia. There are two commercial ferries on Lake Tanganyika between Kalemie to Kigoma, and Kalemie to Uvira that run regularly.

5.2 Climate

The climate of the Misisi area can be classified as tropical to sub-tropical, with a wet season from October to April and a main dry season from May to September. Work may be completed year round although some access problems might be experienced on unsealed roads during the wet season.

No long term records exist for rainfall in Misisi. During the wet season, heavy rains are common in the mid to late afternoons. Violent thunderstorms are also frequent. In the Kalemie area, average annual rainfall is approximately 1,150 mm (Weatherbase, 2009). No long term records exist for temperature in Misisi, however, in the Kalemie area; temperatures may range between 10 and 30°C during the dry season and between 15 and 33°C during the wet season (Weatherbase, 2009). The Akyanga Ridge is located in a low, mountainous area, prompting local wind patterns which generate gusts from variable directions. LEDA installed a weather station at site in October of 2013.

5.3 Local Resources and Infrastructure

5.3.1 Power

The Misisi area is remote and has no access to the national grid, although there is a hydro-electric facility at Bendera, 45 km to the south of the project area. The design capacity of this installation provides for a maximum of five 8,250 kW horizontal axis turbines to be installed, although only two were ultimately installed which do not function at maximum capacity. Production is 10,750 kVA delivered over a 10,000 V transmission line to Kalemie, 120 km to the south.

Figure 5-1. Generators observed on the project camp, May 2021.

5.3.2 Water

The Misisi Project is located in an area of high topographic relief. Water requirements for exploration activities, for example drilling, can be readily sourced from streams in the valley to the east of the ridge.

A gravity water system provides water to the field camp. This water is treated prior to use. A new gravity water system has been installed to improve access to clean water in the village.

5.3.3 Goods and Services

Mining is well established in the DRC. Vendors and contractors already supply a number of mining operations in the country. Proximity of the project to Zambia and Tanzania, where mining operations are also well established, means that there will be a relatively wide selection of services and personnel.

Figure 5-2. Camp site buildings observed during site visit, May 2021.

5.3.4 Population Livelihood

The local population is involved primarily with subsistence farming and artisanal mining.

5.3.5 Artisanal Mining Activities Within Licence Area

The ridges at Akyanga, Mdende, Eumba, Lubitchako and Tulonge are exploited by artisanal miners with little evidence of earlier activity (Figure 5-3). In addition, many of the streams and rivers draining these ridges are being mined and used for washing ore. The artisanal miners utilise small moveable ball mills to crush the ore mined and, in the second quarter of 2012, a group of artisanal miners constructed two small heap leach plants at Misisi village.

With the exception of informal artisanal activity and historical alluvial gold mining at the southern end of PR 822 (Ngalula area) there are currently no formal mine workings, tailings ponds or waste dumps located in the Misisi Gold Project area.

Figure 5-3. Artisanal mining activities on the Akyanga ridge observed during June 2023 site visit.

5.4 Physiography

The Misisi Project (including Akyanga Ridge) is situated to the west of the escarpments of the Albertine Rift Valley. The Akyanga Ridge summit is 1,030 m above mean sea level and is surrounded by peneplain grassland and shrub as well as patches of agricultural plots with mainly cassava in open fields and banana plantations in the valley floor.

6 HISTORY

6.1 Introduction

Wardrop, 2012 [4], reported that historical exploration programmes prior to 2010 are poorly documented. The Misisi Gold Project area was poorly mapped and most geological surveys predate the independence of the DRC. Systematic mineral exploration had not been conducted

prior to the programmes undertaken by previous owners CASA and subsequently ARC Minerals in 2010-2017.

CASA and ARC Minerals conducted all modern exploration work on the Misisi Gold Project. LEDA carried out a limited programme of reconnaissance and satellite interpretation work but no drilling or trenching.

6.2 Exploration History prior to 2010

Most mineral exploration programmes were conducted prior to the 1950's, during two distinct periods. These comprised:

- Early 20th century: General reconnaissance mapping and surveying;
- Late 1920's to late 1940's: Mineral exploration surveys targeting metallic ores.

Mineral exploration and development were conducted in the area by a number of companies as well as smaller independent prospectors and producers which included:

- Syndicat Minier Africain (Symaf) with or through its affiliates:
- Société Belge de Recherches Minières en Afrique (Remina);
- Société Minière de la Luama (Syluma);
- Syndicat Minière d'Or (Symor).
- Compagnie Géologique et Minière des Ingénieurs et Industriels Belges (Geomines) and its affiliâtes the Société des Charbons de la Lukuga;
- Société Internationale Forestière et Minière du Congo (Forminiere) through its affiliate the Société Minière du Maniema (SMM).

Among the larger independent prospectors and developers mentioned are Hosli, Holland and Leonard, who were directly involved in gold exploration and mining. Their work is not documented.

In more recent times, a work programme was carried out by Anvil Mining between 1998 and 2008 within the Kalemie tenements. The programme comprised:

- Data compilation and review of the geological and mineral setting – completed in 1998 by GF Consult in conjunction with the Royal Museum for Central Africa (RMCA);
- LANDSAT acquisition and interpretation – completed by Earthscan in 2005;
- Structural frame work from LANDSAT7 data – completed by Rankin of GeoInterp in 2007.

Anvil Mining (now a MMG subsidiary) has held six PR in the Fizi area through its subsidiary LEDA Mining Congo SPRL. Desktop studies commissioned by Anvil were undertaken by GF Consult, 1998; EarthScan, 2005; GeoInterp, 2007.

Anvil carried out a reconnaissance trip to gauge the political and security situations in the area in mid-2004 and reported the situation to be unfavourable for exploration programs to be mounted at the time. Another one in early 2007, reported that the security situation had improved and that work on the permits were possible.

A helicopter supported reconnaissance was carried out by Anvil in June 2007 to assess the geology of the project area, gauge the level of artisanal mining activity, and determine the best exploration methodologies for further assessment of its tenements.

Wardrop, 2012, reported no knowledge of historical mineral resource or reserve estimates for the licence areas.

6.3 Exploration 2010-2017

CASA commenced exploration activity on the Fizi tenements in June 2010. The exploration activity comprised geological mapping, trenching and diamond drilling. ARC followed this up with the remapping and structural interpretation of Vermaaakt [2] and AMC [3] followed by a 5000m drilling campaign in 2017 which increased the global resource.

Exploration targets within the licence areas are illustrated in Figure 4-2. The majority of these were derived by airborne geophysics and ground geochemical programs in 2011-2012. The main focus of the work programmes was the Misisi area (hosting the Akyanga and Akyanga East deposits), where early stage exploration culminated in a series of drilling campaigns. Regional geophysical surveys were completed for the licence area in August 2011. From the geophysics, the Mutshobwe (Lulimba), Kilombwe, Lubitchako and Tulonge/Turongi target areas were identified and the latter two have subsequently been drilled.

CASA and ARC collected approximately 5439 soil geochemical samples. The initial sample grid was 1km spaced lines, with 50m between samples, covering the entire 50km strike length of the property. Subsequent infill lines were conducted in areas of interest on 200m and 100m spaced lines. 16 significant soil anomalies, outside the Akyanga resource area, were defined across the Misisi district. A significant soil anomaly was defined as a coherent cluster of soils on 2 or more adjacent soil lines with gold values +100ppb. Only a few of these soil anomalies have received limited follow-up exploration.

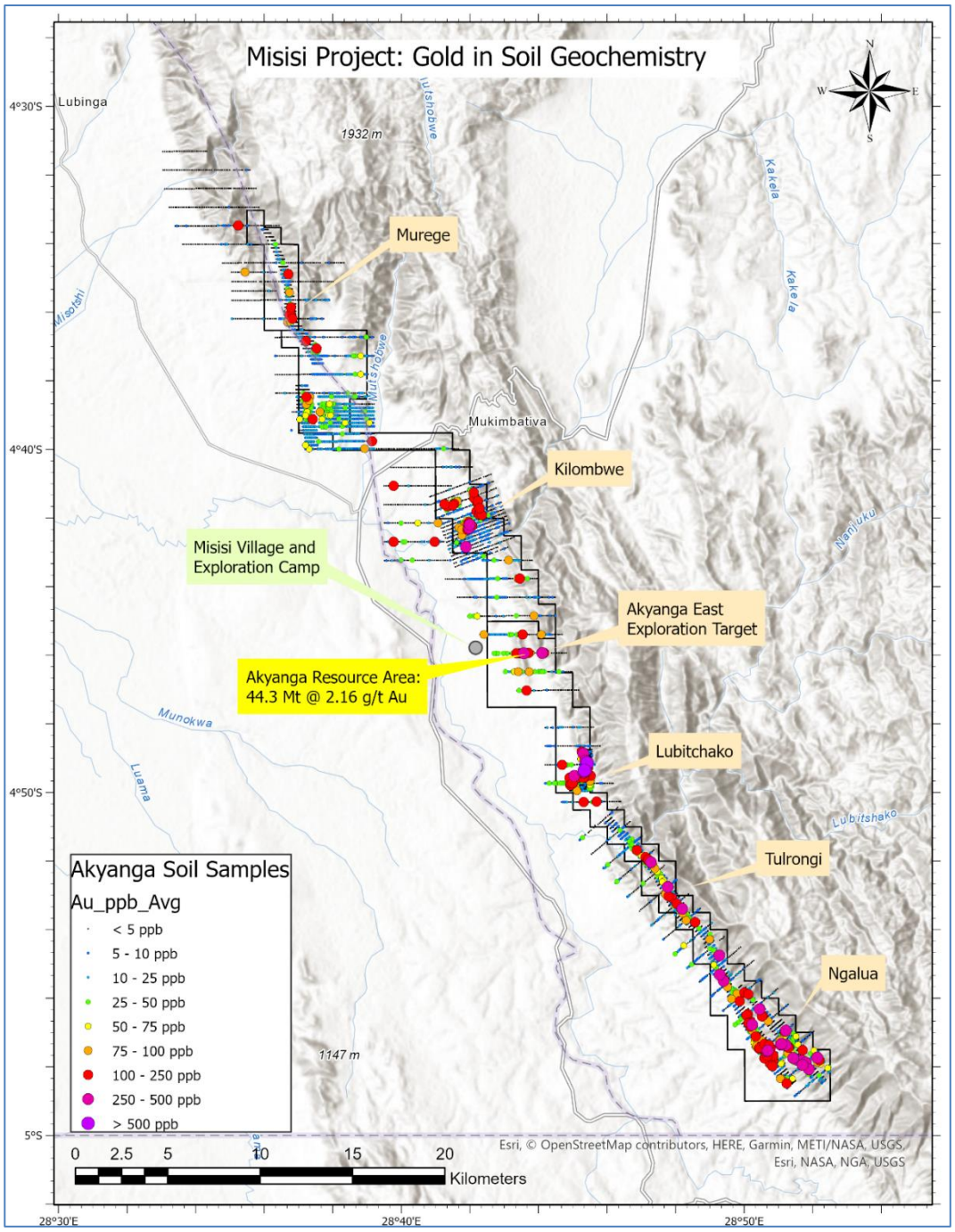


Figure 6-1. **Gold in soil geochemical map of Misisi Project.**

6.4 Rock Sampling and Geological Mapping

6.4.1 Lubitchako

Grab Samples from two separate areas of artisanal workings were collected during September and October 2011. The first area has a strike length of approximately 600 m in a N-S direction and the second area strikes NE-SW for approximately 300 m. The rock sampling returned gold values generally in excess of 3 g/t over samples lengths of between 0.3 m and 1.4 m.

6.4.2 Turongi (also known as Tulonge)

An outcrop sampling programme was carried at the Turongi area in March 2012. Samples were collected from outcrop in artisanal workings. Sampling was concentrated on two NW-SE trending quartz veins, 20-50 m apart and orientated sub-parallel to the Akyanga mineralisation. The quartz veins range from 0.3-0.8 m in width and have a strike length of over 1,300 m. Assay results for the quartz vein samples included gold values in excess of 30 g/t over 0.3-0.5 m intervals. Typical results were 2.5-9.0 g/t gold over 0.3-0.5 m.

6.4.3 Akyanga

The Akyanga Ridge was surveyed in June 2010 using a total station Differential Global Positional System (DGPS) from which a digital map with 5 m contours of the ridge area was produced.

Geological mapping and rock sampling was conducted at the Akyanga target within the Misisi area from June to July 2010, with follow up work in November 2010 through to February 2011.

6.5 Trench Sampling

Trenching has been carried out at Akyanga deposit, the locations of the trenches being shown in Figure 4-2.

During the first quarter, 2011, trenching was carried out both to evaluate mineralisation at surface and to assess the degree of mineralisation in areas not exploited by artisanal mining.

Twelve trenches, comprising 946 line metres, were excavated at the Akyanga deposit between 2010 and 2011.

For the entire Misisi licence area, 79 trenches comprising 5,753 line metres were excavated between 2010 and 2013. No trench samples were included in the sample database for the Mineral Resource Estimate reported herein.

6.6 GEOPHYSICAL PROGRAMMES

In August 2011, CASA engaged New Resolution Geophysics to fly and process a 2,800 line km airborne (helicopter), high resolution magnetic and radiometric survey across the Fizi licence area. The resulting geophysical map, including nine exploration targets identified, is illustrated in Figure 6-2. Two of the nine target areas, Misisi and Lubitchako, are known to host gold mineralisation.

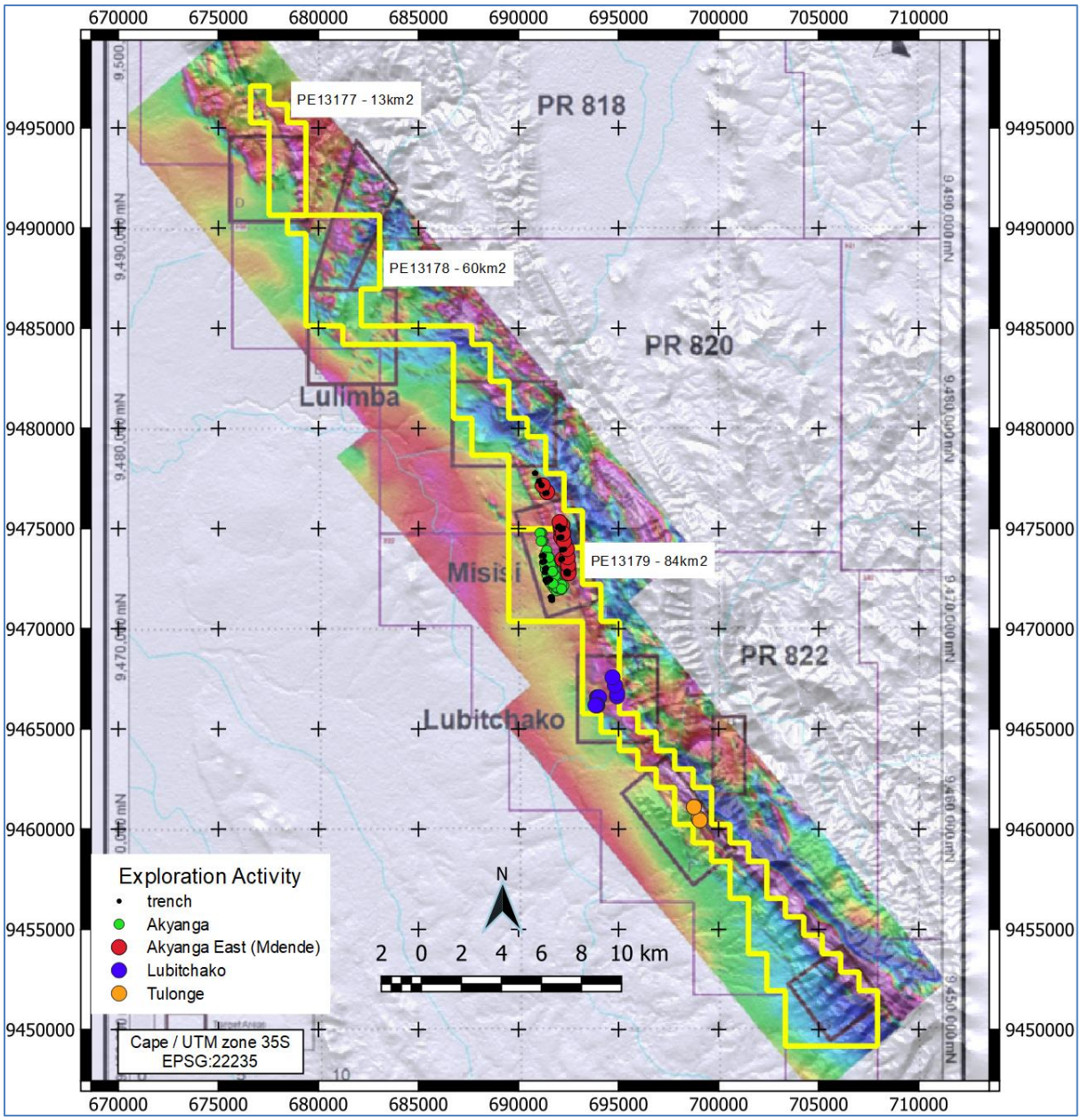


Figure 6-2. **Original exploration target outlines (grey outlines) within the context of the current EP licence boundaries (yellow outlines) showing current drilling and trenching locations as of March 2021 and aeromag results.**

6.7 Drilling

6.7.1 Akyanga

The current Mineral Resource estimate for the Akyanga deposit was based upon 105 diamond drillholes, (19,069.85 m) and 6 RC drillholes (887m) mostly orientated 50-70° to the WNW, designed to be perpendicular to mineralization. Drillholes have been spaced on section lines at approximately 100 m intervals narrowing locally to 50m spacing.

The drilling programme has been completed by a number of different drilling contractors throughout the project.

Initial drill programmes were completed by Energold and DMP Drilling, and more recently and on an ongoing basis Drilltek/Coretek, who have operated up to three diamond core rigs on site. Diamond drillholes have been spaced on section lines at approximately 100 m intervals.

CASA had a fully trained full-time technician at the drill rigs to maintain the security/integrity of the drill core produced. This person maintained responsibility for monitoring and verifying the drill meterage as well as recovery through each drill run. Each day this data was collated and verified by the supervising geologist.

Wireline double tube drilling is undertaken with PQ hole diameter near surface for casing, stepping down to HQ (HQ3=61.1 mm core diameter) through the mineralisation, with step-down to NQ (NQ2=50.7 mm core diameter) only where necessary due to bad ground conditions and associated drilling recovery issues.

All drillhole collars were initially surveyed with standard hand-held GPS equipment and subsequently picked up using a Satellite Differential GPS ("DGPS") system to allow greater control and accuracy of the drill collars to be established. Both hand-held and DGPS coordinates are recorded in the database.

Initial collar surveys of dip and azimuth have been taken using compass measurements for all holes. Downhole surveying was undertaken by CASA on all holes at intervals of between 20–30 m, using a digital REFLEX EZ-SHOT camera provided by the drilling contractors. Parameters measured by the reflex camera included Inclination (in degrees), Azimuth (in degrees), and Time, Magnetic Field, Roll angle and Temperature.

The major drilling direction was towards the north-west (290°). Most of the holes have inclinations in the order of -50º to -70º, with the majority of holes inclined at -50º. Selective holes have been drilled at -70º to test depth extent where access is limited due to terrain and surface artisanal workings. The use of these holes has confirmed the relatively steep contacts (sub vertical) of the Akyanga ridge target mineralisation, which based on the general dip of the drilling (-50°), best estimates of true width in the wider portions of the deposit are between 1 and 35 m.

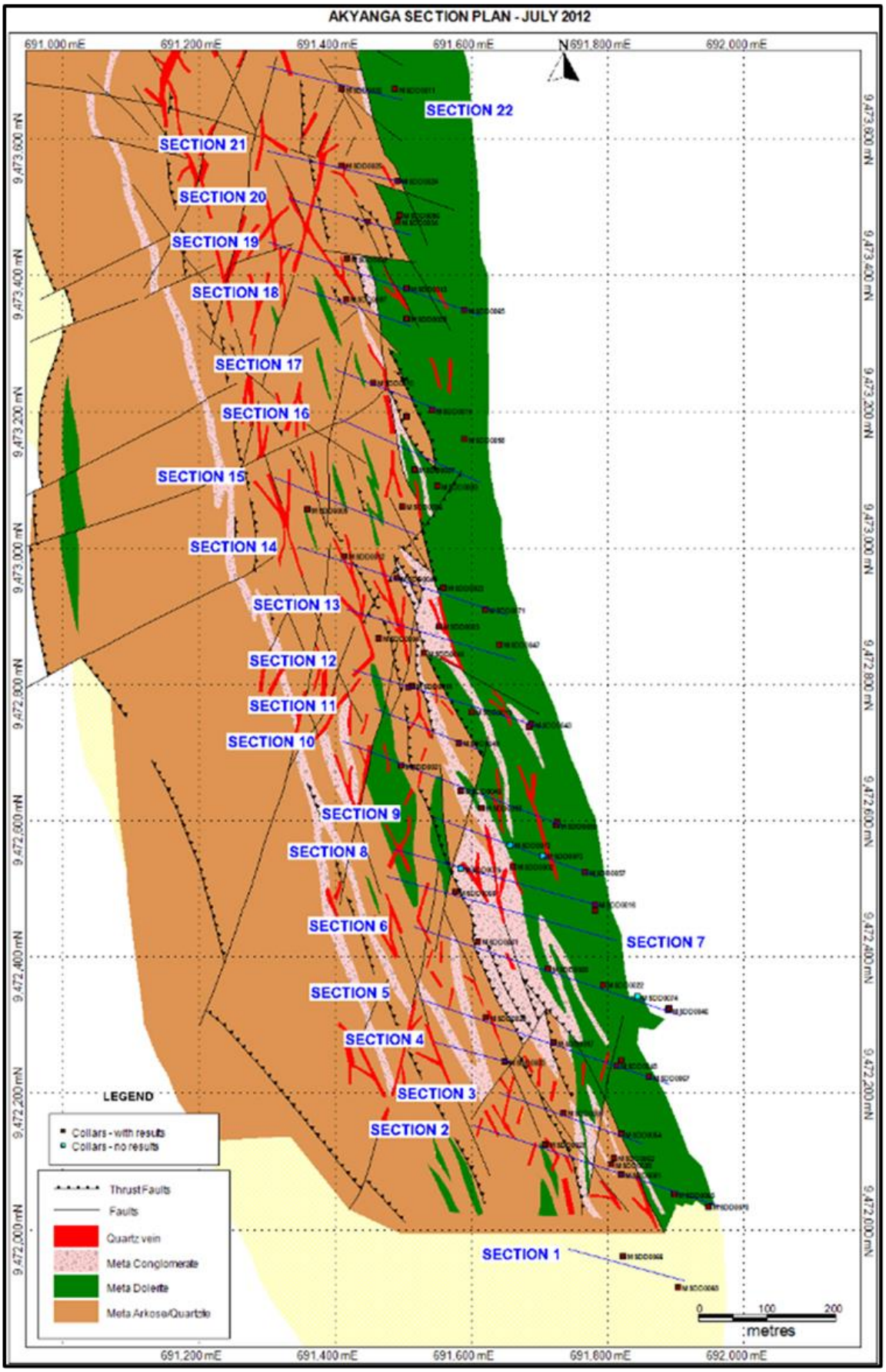


Figure 6-3. Akyanga Ridge drill plan and CASA defined drill section numbering.

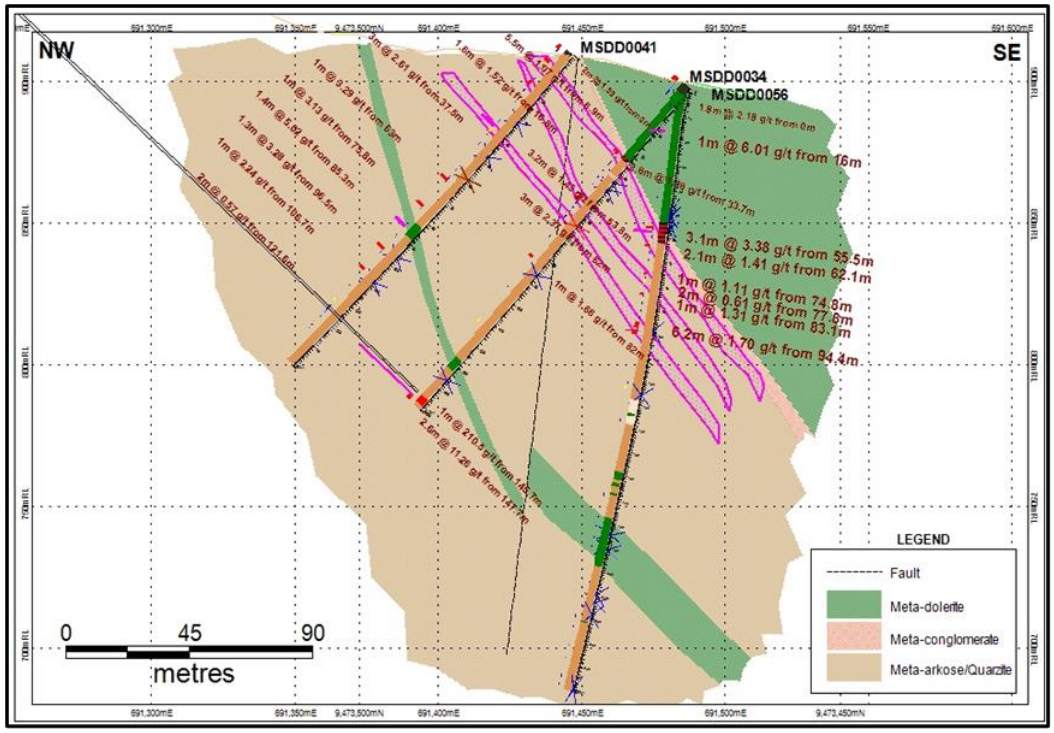


Figure 6-4. **Typical drill section through Akyanaga Ridge (Section line 20)**

Before the drill core is packed and returned to the project site for logging, core recovery was determined on the drill site. Core is measured from the midpoint on any fracture and extrapolated along intact core once reconstructed within the core boxes. In some sections due to the broken nature of the drilling core estimates of the core length are assumed. The length of recovered core is then recorded against the expected 100% drilled length for the intercept measured and marked by core blocks. Based on the data sets the samples generated an average core recovery >85%.

CASA established a logical logging and sampling sequence in order to ensure data capture procedures were followed and implemented to provide both consistent and quality methodology for the process of submitting the samples for external laboratory analysis. This was further refined by ARC minerals who commissioned consultants AMC to relog all the core for all drill campaigns and standardise rock names and produce a photographic guide.

Core and core blocks were placed in core boxes by the driller under supervision of the CASA and ARC rig technicians who took custody of the drill core at this stage. Upon receipt in the core shed on site by the supervising CASA and thereafter ARC geologist, the drillcore was cleaned or washed, if required, and core blocks were verified against the drillers' logs.

Core is arranged/rotated to orient them to known features such as regular banding or joint sets. The core was photographed wet in a frame ensuring a constant angle, distance and light conditions.

Core was logged to define the key lithological domains encountered during drilling. These domains are logged descriptively based on their colour, texture, mineralogy, weathering intensity and oxidation which is recorded within the lithological log code sheets. These lithological domains are used to define all sampling intervals and further section interpretations.

Geotechnical logging was completed on the drill core at the drill site. Recovery and RQD were recorded for each core run. Primary lithology was also recorded so these materials can be domained and interpreted during evaluation. Additional information was also recorded with respect to weathering and alteration.

Structural logging was undertaken identifying and recording the dip/dip direction and structural features within the geotechnical logged intervals. In addition, information has been collected regarding mineral infill and structural thickness.

Following sampling, multiple magnetic susceptibility readings (using a Terraplus KT-10 magnetic susceptibility meter) were taken every sample interval. A minimum of two readings are taken on the flat surfaces of the broken or cut core. Results were averaged over the intercept and recorded in SI units (kappa).

CASA and ARC associated a potential link between mineralisation and the occurrence of a broken horizon of magnetite banded iron formation ("BIF"). Although not exclusive to mineralisation this potential marker horizon can be identified using the magnetic susceptibility in conjunction with geology and so can be used to indicate grade prior to the returning sample assays. The unit is also noted to be continuous between drill holes and sections assisting with the interpreted continuity and linking together of mineralised intervals in 3D.

Bulk density readings were taken based on sample intervals which were prepared at 1 m intervals within each lithology and are truncated on every lithological break.

Trained staff were involved at all stages of the sampling, sample packaging and sample transportation process. During the drilling programme staff members were based full time at the drill rig site to supervise the drilling and data recording and to complete preliminary geological logs of the drill core. This included an onsite technician or geologist and project geologist supervisor.

Sampling of the drill core was undertaken at the Misisi base camp by the project geologist. Sampling is based primarily on the lithological logs produced by CASA geologists. Drillholes are, within each core tray were marked up and then split using a core saw along the orientation marks, being completed at the Misisi sample preparation and storage facility.

Each drill hole was sampled in its entirety along the core length with both HQ and NQ core halved for assay. Intervals are marked on a maximum sample interval of 4 m in areas considered waste (this is notably restricted to homogenous mafic material) and 1 m intervals in zones with potential for mineralisation, with samples lengths adjusted according to lithological contacts.

A minimum sample interval of 0.5 m was applied to ensure sufficient sample volume is generated to provide a homogenous and representative sample. The drill core was cut in half along the long axis on site by trained CASA / ARC personnel, with the right hand half of the drill core consistently removed for sampling and the remaining half returned to the core box for archival purposes.

All samples, under the supervision of a geologist, are assigned a sequential 5 digit number as reference which is recorded both on core box, by single ticket within the sample bag and also written on the heavy duty polythene sample bag. Sample numbers are entered into the database with associated location data, including hole numbers and intervals. Sample weights are also recorded.

Both overall core recovery as well as core recovery for samples within the mineralisation domains only, are good. The average core recovery ranges from approximately 85-87%. Between 50% and 60% of samples are associated with core recovery of 95% or greater.

Core recovery of less than 60% is evenly distributed throughout the Akyanga mineralisation domains. There does not appear to be a single localised area or mineralisation domain affected to a material degree by poor core recovery.

A table of drill collar locations is provided in Appendix B and a table of mineralised intersection intervals is provided in Appendix C.

6.7.2 Akyanga East (Mdende)

Approximately 1-2km east and north-east of the Akyanga Project is the Akyanga East or Mdende structure (Figure 6-5). The mineralisation (a zone of veining) can be traced along strike for approximately 5500 m, primarily through artisanal workings, with a gap in the workings through an east-west valley that cuts through the mineralisation and covers the surface with scree. It has been explored by drilling (10 holes) at around 200 m centres with up to 500 m spacing at the limit with a gap in exploration across the valley. The mineralisation dips at around 53^{o} to the southwest. A summary of the drill results is presented in Table 6-1.

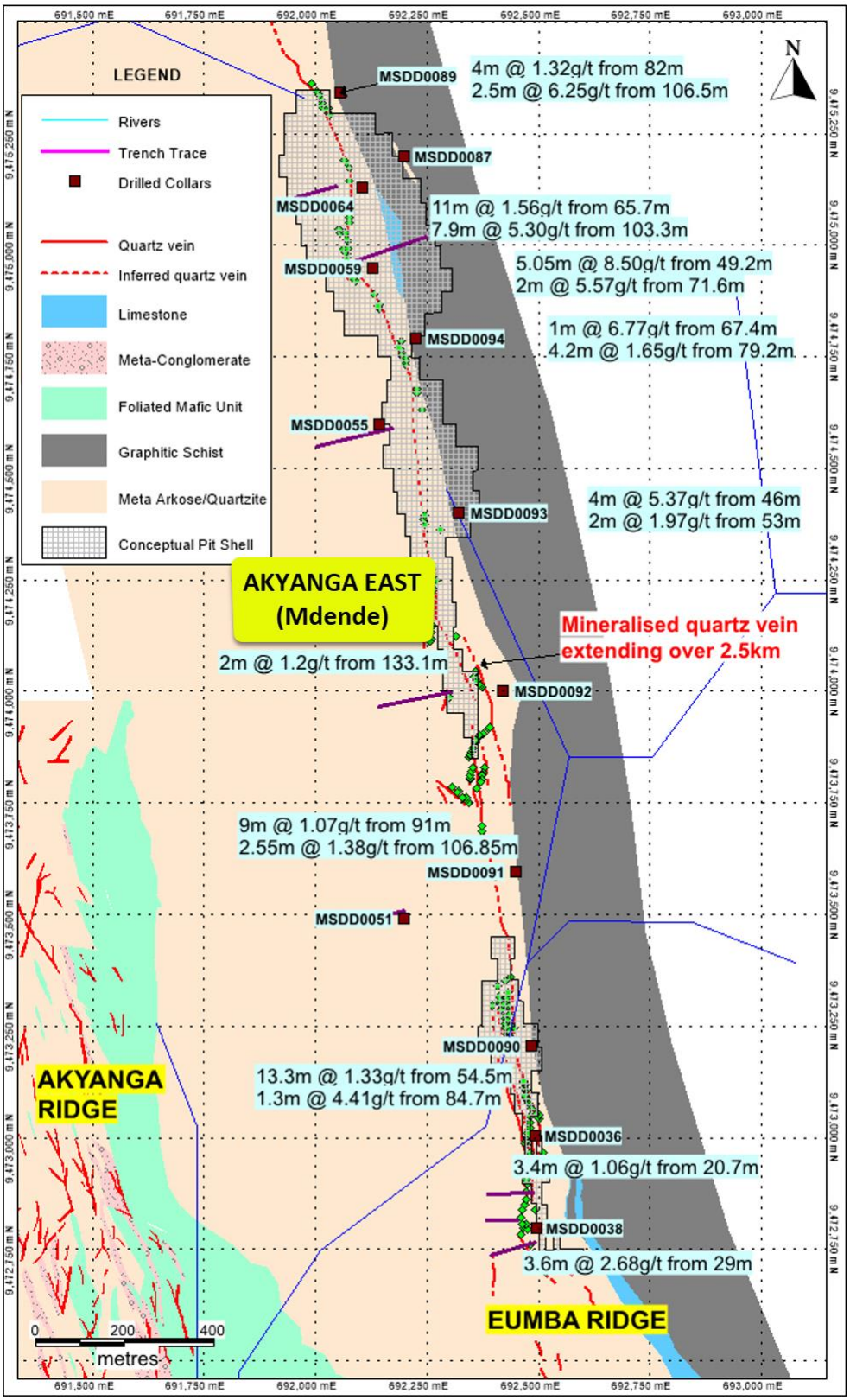


Figure 6-5. Akyanga East exploration target.

Table 6-1 Summary of drill results from Akyanga East

Hole_ID	UTM East	UTM North	From	To	Width (m)	Au g/t
MSDD0036	692491	9473005	20.70	24.10	3.40	1.06
MSDD0038	692495	9472798	29	32.6	3.6	2.68
MSDD0059	692124	9474942	49.2	54.25	5.05	8.50
MSDD0064	692108	9475139	65.7	76.8	11.1	1.56
and			103.3	111.2	7.9	5.30
MSDD0089	692059	9475339	82.00	86.00	4.00	1.32
and			106.50	109.00	2.50	6.25
MSDD0090	692481	9473201	54.50	67.80	13.30	1.33
and			84.70	86.00	1.30	4.41
MSDD0091	692446	9473592	91.00	100.00	9.00	1.07
and			106.85	109.40	2.55	1.38
MSDD0092	692418	9473998	133.10	135.10	2.00	1.20
and			138.00	139.00	1.00	1.17
MSDD0093	692277	9474396	46.00	50.00	4.00	5.37
and			53.00	55.00	2.00	1.97
and			123.00	124.10	1.10	2.20
MSDD0094	692220	9474777	67.40	68.40	1.00	6.77
and			79.20	83.40	4.20	1.65

6.7.3 Lubitchako

The Lubitchako Target is approximately 7 km south of Misisi. An initial soil sampling program revealed a 1.2 km gold in soil anomaly. This was further supported by positive trench results in a follow-up program shortly afterward (Figure 6-6).

Four diamond drill holes were completed in 2013 encountering a series of stacked quartz veins which warrant further exploration (results summary Table 6-2).

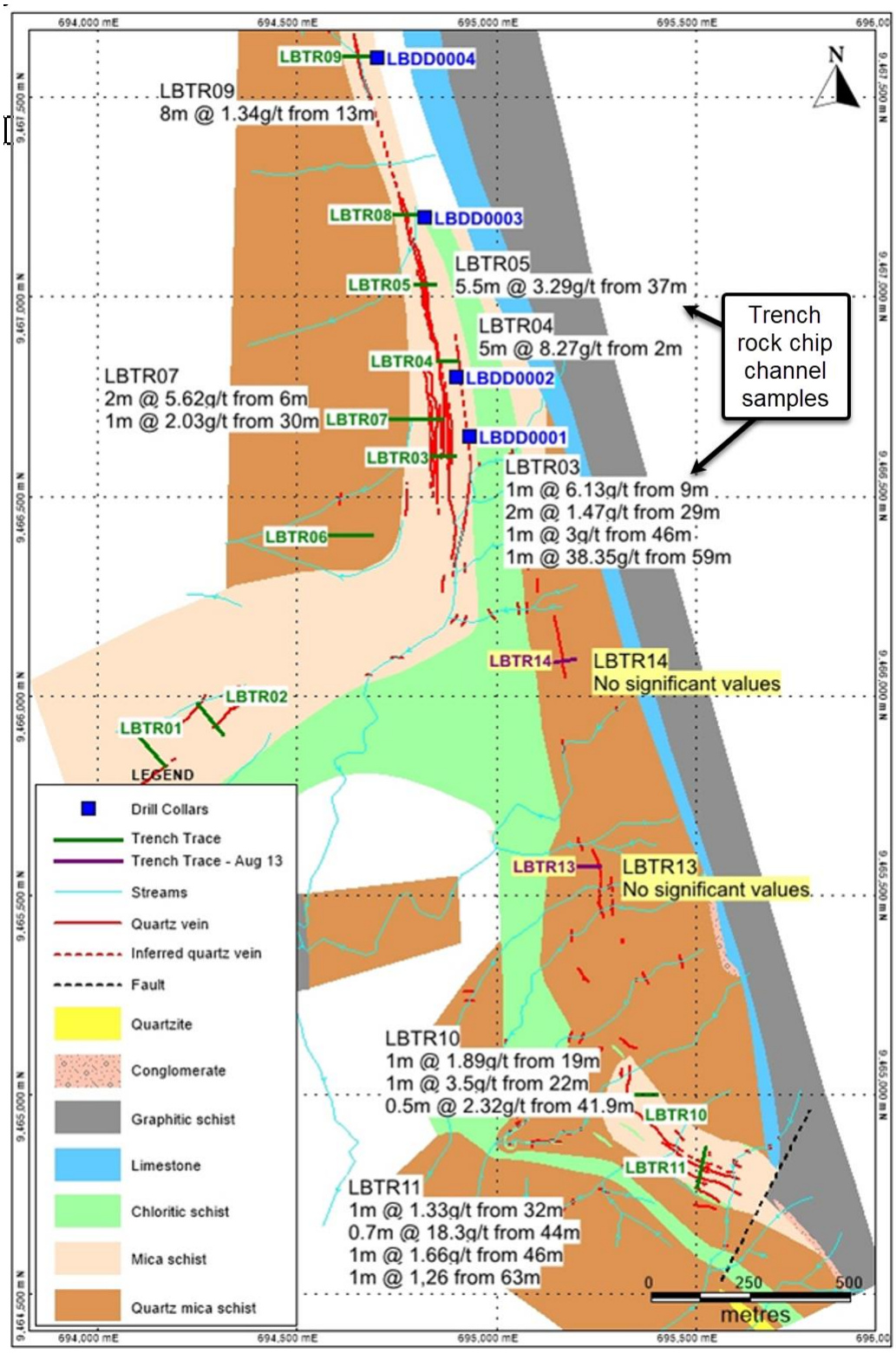


Figure 6-6. Lubitchako exploration target.

Table 6-2. Summary of drill results from Lubitchako

Hole ID	UTM East	UTM North	From	To	Interval (m)	Au ppm
LBDD0001	694925	9466652	26.30	30.50	4.20	1.24
and			62.40	67.00	4.60	6.08
and			93.60	95.70	2.10	9.06
and			110.20	114.50	4.30	1.09
LBDD0002	694926	9466797	28.20	31.20	3.00	0.80
and			134.10	137.10	3.00	1.37
LBDD0003	694826	9467207	11.70	12.70	1.00	2.09
and			83.90	85.50	1.60	1.13
and			90.60	91.40	0.80	2.45
and			99.30	100.10	0.80	73.55
LBDD0004	694700	9467600	36.20	37.50	1.30	0.76
and			40.50	50.90	10.40	1.37
and			52.50	55.80	3.30	2.82

6.7.4 Tulonge

At Tulonge, 14km south-east of Akyanga, 7 diamond holes have been drilled within a target zone with 5km of veining, anomalous gold in soils and artisanal gold production (Figure 6-7). The drill holes tested two areas, approximately 700m apart and cut a series of stacked veins which warrant further exploration (results summary Table 6-3).

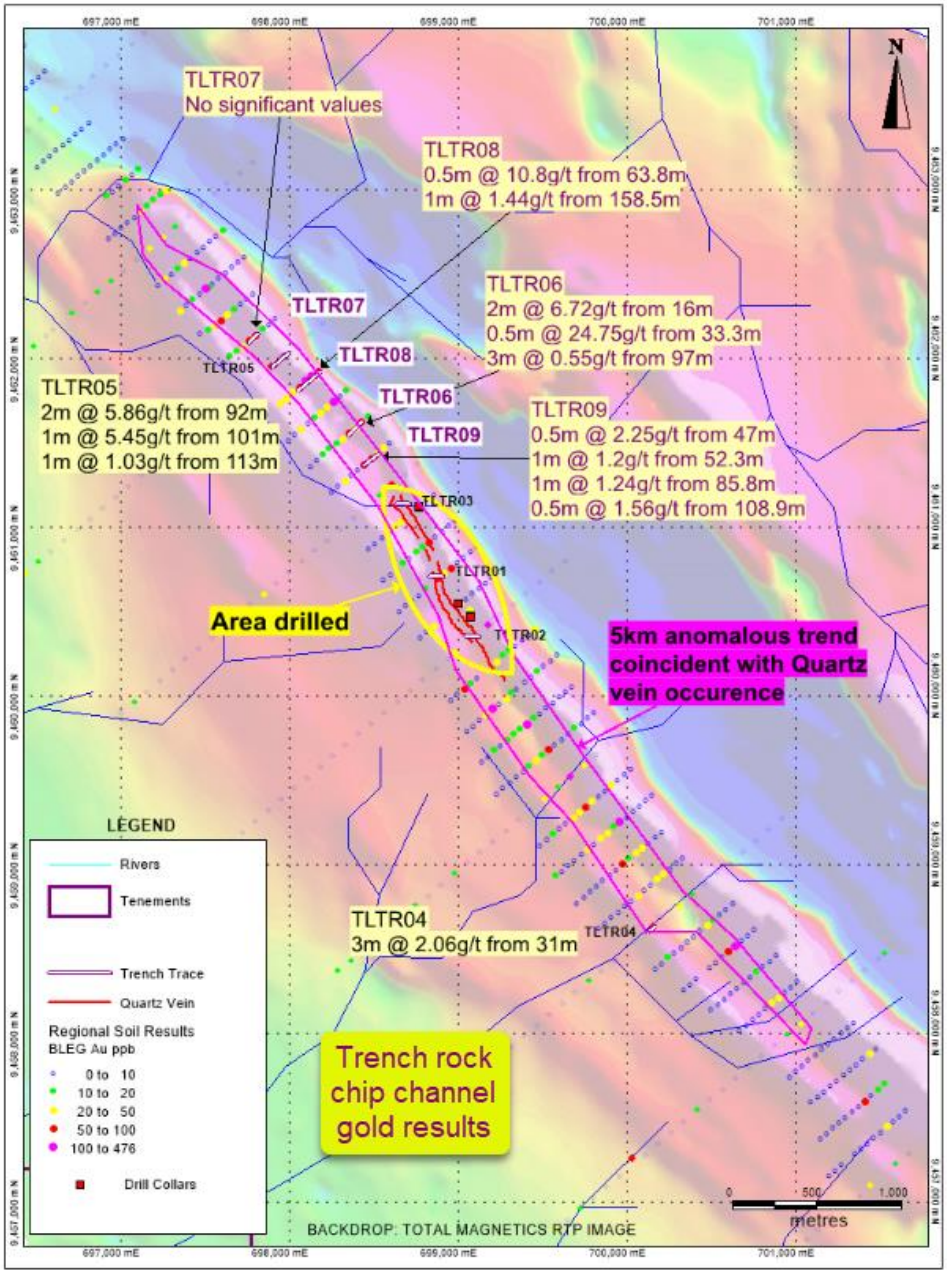


Figure 6-7. Tulonge exploration target.

Table 6-3. Summary of drill results from Tulonge

Hole ID	UTM East	UTM North	From	To	Interval (m)	Au ppm
TLDD0001	699063	9460463	10.6	12.4	1.8	6.64
and			16.9	18.7	1.8	5.94
and			40.6	44.2	3.6	4.12
and			54.5	55.5	1	3.59
and			73.1	74.3	1.2	1
TLDD0002	699054	9460542	52.2	58.4	6.2	5.05
and			126	127.3	1.3	2.78
TLDD0003	699068	9460464	14	19	5	3.98
and			28.5	30.2	1.7	0.91
and			80	84	4	5.04
and			89	92	3	3.04
and			147	148	1	1.27
TLDD0004	699004	9460542	19	20	1	0.95
and			97	98	1	2.38
and			137	138	1	0.98
TLDD0005	699069	9460457	8.5	9.8	1.3	13.05
and			15.3	16.3	1	2.02
and			31	34.4	3.4	7.11
TLDD0006	698768	9461115	57	60.2	3.2	0.8
and			61.55	63	1.45	1.01
and			103	108.9	5.9	7.15
TLDD0007	698771	9461119	46.1	47.4	1.3	0.73
and			169	169.9	0.9	1.19
and			184.7	185.2	0.5	3.57

6.8 Historic Resource Calculations.

There have been several historic resource calculations for the Akyanga deposit. The pre 2023 resource estimates were not reported using Canadian Institute of Mining, Metallurgy and Petroleum standards on mineral resources and reserves, definitions, and guidelines prepared by the CIM standing committee on reserve definitions and adopted by the CIM council,. 2014 MDM and SRK Consulting (UK) Ltd Scoping Study and Resource Estimate [1]

- 2017 African Mining Consultants, Technical Report and Mineral Resource Estimate [3]
- 2018 Denny Jones Akyanga Resource Estimate [4]

6.8.1 2014 MDM/SRK and 2017 AMC Resource Reports [1] [3].

In October 2013, CASA requested SRK to complete the Misisi Project's Maiden Mineral Resource Estimate as part of a Scoping study by MDM [1]. The Mineral Resource estimate was based on drilling within the Misisi (Fizi) licence area which, at the time, comprised of a total of 81 drillholes for a total of 14,232 m, all of which were diamond core drillholes drilled between 2010 and 2013. SRK reported an Inferred oxide gold Mineral Resource of 4.3 million tonnes (Mt) at a grade of 1.2 g/t Au for 160 koz of contained metal. SRK also reported an Inferred transition gold Mineral

Resource of 15.4 Mt at a grade of 1.7 g/t Au for 850 koz of contained metal.

In 2017 AMC completed a review of the geological interpretation for the Akyanga Deposit [3], specifically the contrasting interpretations between SRK [1] and Vermaakt [2], to evaluate its effect on the potential resource. This work included:

- A geological and resource workshop including a review of resource modelling.
- An audit of the geological modelling (mineralised vein systems produced by Vermaakt [2]);
- The creation of a revised block model based upon six (6) continuous mineralised vein systems (or domains); and
- A conceptual pit design for the 2017 block model to constrain the MRE using assumptions based on a conventional gravity and CIL operation.

The 2017 AMC mineral resource estimate was reported in accordance with the guidelines of the JORC Code.

Table 6-4 illustrates the 2017 AMC mineral resource estimation for the Akyanga Deposit using the revised geological model. AMC has reported the portion of the global resource which had been shown to possess reasonable prospects for eventual economic extraction.

Table 6-4. 2017 AMC Historic Resource tabulation by cut off grade

Cut-off (g/t)	Quantity (Kt)	Au (g/t)	Au (Koz)
0.10	29,719	1.65	1,576
0.30	29,719	1.65	1,576
0.50	29,671	1.65	1,573
1.00	24,062	1.84	1,423
1.50	**14,334**	**2.27**	**1,046**
2.00	9,034	2.57	746

AMC reported the 2017 mineral resource, subject to:

- There were reasonable prospects for eventual economic extraction under assumptions of a gold price of US$1250/oz; employment of conventional open-pit mining methods, and processing in a conventional Gravity + CIL purpose-built facility. Mining costs are assumed at US$3/t ore/waste. Processing costs at US$18/t ore and general and administration US$1.5/t ore.
- Reported Mineral Resources contain a 5% allowance for hangingwall and footwall contact boundary loss and dilution. A mining recovery of 5% is applied.
- All resources were reported as Inferred.
- Approximate drill hole spacing's for the Inferred Mineral Resources were 100m. Depth of mineralisation below surface ranges from 0m to 300m.

6.8.2 2018 Denny Jones Akyanga Resource Estimate [4]

In 2018 Ivor Jones, Principal Consultant of Denny Jones Pty Ltd, produced a new Mineral Resource Estimate reported in accordance with the guidelines of the JORC Code (2012) and considered historic. The estimate was based on information from 105 diamond drill holes and 6 RC drill holes.

The resulting historic mineral resource estimate for Akyanga (2018) is summarised in Table 6-5 and accompanying notes.

Table 6-5. 2018 Denny Jones Historic Resource Estimate

Category	Tonnes (millions)	Gold Grade (g/t)	Contained Gold (million oz)
Inferred Resource	44.3	2.16	3.0

The Denny Jones 2018 report also outlined an exploration target for the Akyanga East area. The exploration target was reported in accordance with the guidelines of the JORC Code (2012).

The Exploration target was calculated from 10 diamond drill holes (Section 6.7.2). Drill intersections cut the mineralisation with holes angled at approximately 70°. The true width of the mineralisation has been estimated using the dip of the mineralisation and the intersection angle of the drillhole. Down-dip length of the mineralisation has been measured from the intersections at 110 m for 100 m below the surface, and 165 m for 150 m below the surface.

Volume for the smaller case (1,188,000 m3) has been calculated as the average width (3.6 m) multiplied by the strike length excluding the valley less 500 m (3,000 m) multiplied by the down-dip length for 100 m below surface (110 m). Volume for the larger case (2,673,000 m3) has been calculated as the average width multiplied by the strike length including the valley (4,500 m) multiplied by the down-dip length for 150 m below surface (165 m).

For the tonnages, the average density for Akyanga (2.65 t/m3) has been applied. For the Upper Range case, the average grade has been taken as the grade from the central samples (2.43 g/t), and for the lower case, the average grade of all of the intersections has been applied less 20% (1.94 g/t).

7 GEOLOGICAL SETTING AND MINERALISATION

7.1 Regional Geology

Gold mineralisation is hosted in NW-SE trending, approximately 2.5-1.6 Ga Rusizian quartzites, schists and conglomerates of the Kibara Belt, an approximately 2,000 km long, NNE-SSW trending, Proterozoic intracontinental mobile belt situated between the Congo Craton in the west and the Tanzanian Craton in the east (Figure 7-1). The Kibara belt is a well known metallogenic province in which numerous mineralising events have taken place and which hosts both the Twangiza and Namoya mines developed by Banro. The LEDA licence holdings (Figure 4-2) cover 60 km of the Tanganyika graben within the Rusizian belt with the Misisi Gold Project area within the interpreted lower unit.

Wardrop, 2012, report that gold mineralisation in the Kibara belt has traditionally been considered to be related to the 970 Ma, G4 granites, but it is probable that at least some of the gold mineralisation is Pan African in age.

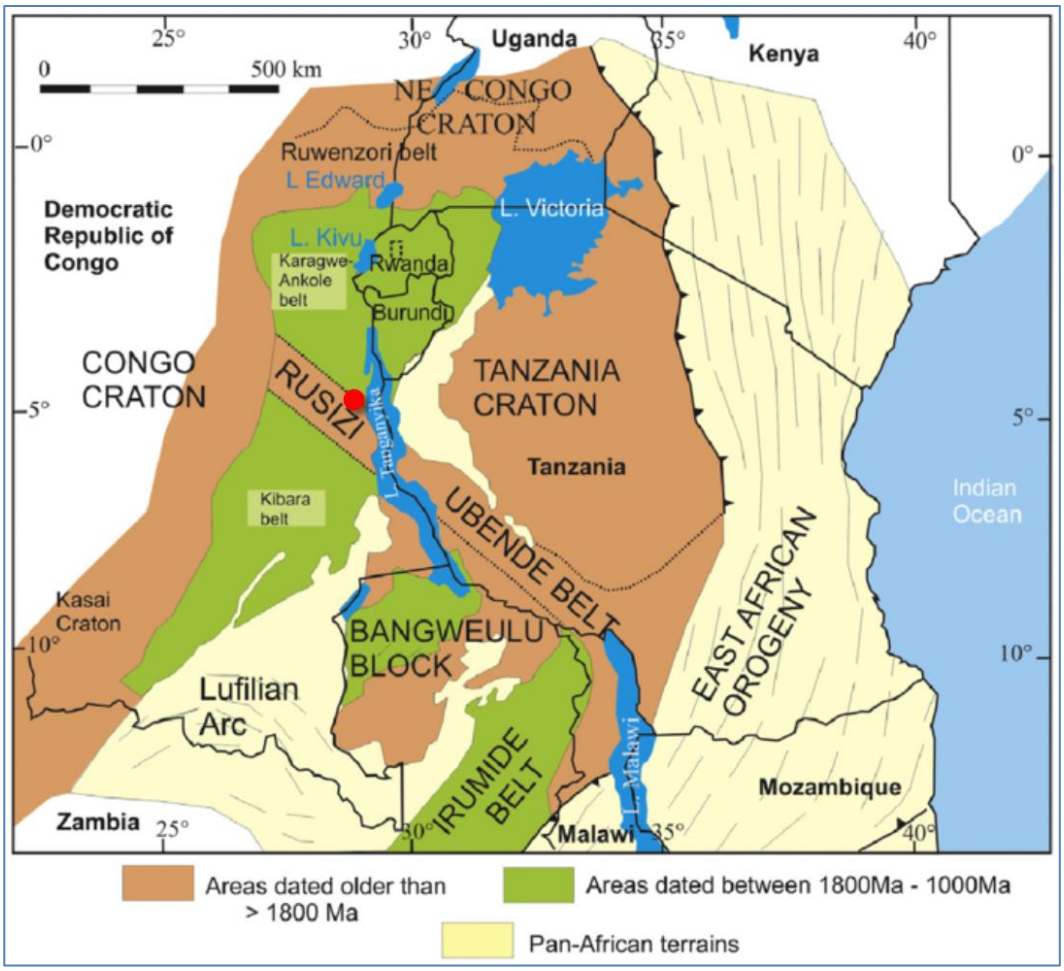


Figure 7-1. **Regional setting of the Akyanga Deposit (red circle) within the context of the Proterozoic Rusizi and Kibara tectonic belts (After Dewaele et al 2011)**

7.2 Local Geology

The Akyanga geology consists of an overturned meta-sedimentary succession and intruded by dolerite and/or gabbro. The geology of the project area is dominated by meta-sediments comprising interbedded quartz muscovite schists, schistose arkoses, muscovite quartzites, and quartzites; pebble conglomerates and foliated mafic intrusion.

Several sub-parallel mineralised zones were established from historical exploration data and Diamond and RC drilling results from CASA. These mineralised zones (Figure 7-2) with strike lengths of up to 2,000 m are generally less than 10 m thick and appear in the southern end of the deposit to be moderate to shallowly dipping to the southeast. In the central and northern parts to the deposit the deposit steepens at surface, such that at the northern end of the deposit, the mineralisation is near vertical at surface and flattening out down dip at depth.

The depth of weathering is estimated to be approximately 30 m. Diamond drilling at Akyanga has intersected numerous gold bearing quartz vein zones. Mineralisation is structurally and lithologically controlled in association with local deformation zones and occurs along north-south striking structures. The current interpretation is that the base of a mafic unit provides a contact with hardness contrast along which there has been structural movement. Apart from the main mineralised zone at and adjacent to this contact, there are four sub-parallel zones below the main

mineralised zone.

The deposit is located within the central section of an area bounded by a thrust zone to the west and by NW trending sinistral fault zones. Regional lineaments interpreted using airborne magnetic surveys (Gradient Enhanced VD1) and K/Th alteration ratio maps. The meta-sedimentary succession has been affected by brittle-ductile deformation. Thrusting has resulted in the overturned sequence at Akyanga.

The strong structural overprint in the region suggests a variable NNE to the NE plunge and a pitch between 30 degrees to 80°. The structural fabric and lineation dominate virtually all the host rocks, with the exception of the intrusive units and is interpreted as being the major control of the location and form of the deformed preferentially gold mineralised quartz "core" veins. The quartz "core" veins are often localised in groups.

The Mineral Resource estimation work detailed in this report uses the CASA interpretation of the mineralisation at Akyanga as the basis of the resource estimate. The deposit has been divided into several mineralised domains which comprise varying amounts of gold mineralisation.

7.3 Geological model

In June 2016, Dr Deon Vermaakt (Vermaakt) was commissioned, by CASA, to review the geological model for the Akyanga Deposit. This review included:

- A review of additional drilling (post-March 2014) not included in the 2014 SRK MRE (six RC holes);
- Lithological mapping (on section) to aid the study by highlighting the dips of the mineralised vein systems;
- The use of structural measurements collected during an earlier field visit including examinations of core and deposit outcrops (Vermaakt, 2013); and
- The use of Leapfrog software to constrain the principal mineralised vein systems (domains) dip directions and plunges.

The results of this combined study demonstrate that the Akyanga Deposit is within a westward converging thrust system with the mineralised vein systems hosted in meta-sediment strata. This led to a revised interpretation of the vein systems as continuous, shallow dipping, lithologically concordant, planar vein forms (Figure 7-2).

These findings are corroborated by CSA (2015) who concluded, on a separate site visit, that the deformation and mineralisation is inferred to be broadly concordant with host strata. Their interpretation implies that mineralisation is likely to be largely planar in form, and laterally continuous, although it may show thickness variations due to pinching and swelling of the multiple shear zones.

AMC reviewed the 2016 geological model and concluded:

- The wireframes created by Vermaakt were compiled at a 0.5g/t cut-off using 3m composites (Vermaakt, 2016). A 0.3g/t cut-off was used on 2m composites (Section 4.0);
- A shallow dipping, near-surface, top vein (interpreted by Vermaakt, 2016) was removed from the model. These near surface results, used to classify the vein, are thought to represent contamination in the overburden material intersected in drill holes positioned at

the base of the Akyanga ridge; and

- The mineralised vein system model, completed by Dr Deon Vermaakt (2016), is more concordant with host strata. No cross-cutting faults were modelled or included in the current MRE. This is based on observations by Vermaakt (2016) whereby faulting does not result in the material displacement or truncation of the Akyanga Deposit mineralisation.

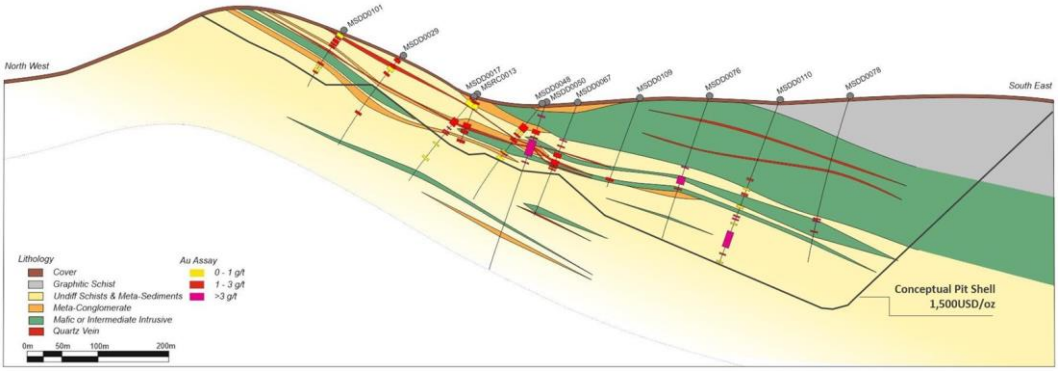


Figure 7-2. **Example cross section through Akyanga Ridge highlighting the relatively shallow dipping and stratiform nature of the mineralisation and the close association with thin stratabound mafic intrusives (*After ARC Minerals 2018*)**

7.4 Mineralisation

Mineralisation on the Akyanga ridge within the Misisi Gold Project area appears to be located within competent metaquartzite/conglomerate units with minor specular hematite bands. Minor associated sulphides (pyrite/pyrrhotite) and specularite hosted within broad quartz vein systems have been correlated with visible gold. This has been recorded both during surface mapping, in which the extent of mineralisation has been identified based on spatial distribution of artisan pits, and veins and veinlets logged within drill core which frequently have associated halos of mineralisation occurring in fractured quartzite with distinctive hematite rich oxidation. The host quartz veins vary in thickness from cm-scale to packages in excess of 200 m thick. Veins exploited by artisanal miners typically range in thickness from 0.5 – 2 m.

Initial cyanide bottle roll testwork completed on a suite of early Misisi drill core samples confirmed significant free- milling coarse gold (which is currently targeted within high-grade shoots and exploited by local artisanal workings) with only minor sulphides. Potential recoveries in excess of 91% were recorded for all samples which underwent analysis.

8 DEPOSIT TYPES

A number of previous workers, both regionally and locally, have carried outinvestigations into the style and structure of theminerlaisation present at Akyanga. The current modelling used by the QP for the Mineral Resource estimate draws on the previous work in conjunction with the results and observations from the site inspections carried out as part of the current study. Wardrop [4], reports that the Akyanga deposit is hosted by quartz veins and, to a lesser extent, alteration haloes, within a mesothermal shear zone setting. The quartz veins appear to be syntectonic with the N-S trending shear zone which was the primary control on mineralisation. Mineralisation is

concentrated in zones of dilation, or structural "jogs", within the approximately 200 m wide shear zone.

Based on field observations combined with drill data and software modelling Vermaakt (2016) interpreted the Akyanga deposit as being located within a westward verging thrust system with the mineralised vein systems hosted in meta-sediment strata. This led to a revised interpretation of the vein systems as continuous, shallow dipping, lithologically concordant, planar vein forms.

These findings are supported by the later field work (CSA, 2015) who concluded, on a separate site visit, that the deformation and mineralisation is inferred to be broadly concordant with host strata. Their interpretation implies that mineralisation is likely to be largely planar in form, and laterally continuous, although it may show thickness variations due to pinching and swelling of the multiple shear zones.

The further work of AMC (2017) noted that the mineralised vein system model, completed by Dr Deon Vermaakt (2016), is more concordant with host strata and no cross-cutting faults were modelled or included in the Resource modelling described herein. This is based on observations by Vermaakt (2016) whereby faulting does not result in the material displacement or truncation of the Akyanga Deposit mineralisation and marks a significant change in interpretation from that of the earlier interpretations (2014).

The site inspection carried out for the current report allowed the QP who carried out the inspection, (Mr Dian Page) to verify the current surface mapping with quartz veins containing abundant pyrite with minor chalcopyrite observed along the Akyanga Hill ridge line.

9 EXPLORATION

No exploration work has been carried out by the current issuer on the Misisi Project.

10 DRILLING

No drilling work has been carried out by the current issuer on the Misisi Project. The current Mineral Resource estimate for the Akyanga deposit was based on 105 diamond drillholes (19,069.85 m) and 6 RC drillholes (887 m), drilled primarily in 2011-2014 with minor infill in 2016.

All aspects of these programmes are described in detail in section 6.7 Drilling, including drilling, logging, core handling, sampling and security protocols, which conform to recommended industry practices.

Down-hole surveying was carried out on all holes and the collars were surveyed and marked with monuments.

All drill core was cut in half with a diamond saw, half being returned to the core tray and the other half being prepared for assay. All samples were shipped to internationally certified laboratories (SGS or ALS) in Mwanza, Tanzania, for preparation and analysis.

CRM's were added to the sample stream at approximately 6% and blanks were added at

2%. No systematic duplicate sampling was carried out.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 Introduction

Samples were initially submitted to the SGS Laboratory ("SGS") in Mwanza, Tanzania for preparation, where they were dried and pulverised to 75 microns (µm) before being analysed at the same laboratory. From drillhole MSDD0010 onwards, samples were submitted to the ALS Minerals ("ALS") facilities in Mwanza for preparation, and subsequently to ALS in Vancouver and Johannesburg for analysis. Samples from drillhole MSDD0084 onwards at Akyanga-Mdende and all holes at Tulonge (TLDD0001 – TLDD0007) were submitted to SGS accredited laboratory at Mwanza, Tanzania. The ALS Vancouver analytical facility is ISO 9001:2008 accredited and has received accreditation to ISO/IEC 17025:2005 from the Standards Council of Canada (SCC). The ALS Johannesburg laboratory is ISO/IEC 17025:2005 accredited for sample preparation and analysis. The Laboratories utilised for the analytical work were employed on an independent consultant basis and have no relationship with the Company.

11.2 Sample Preparation and Analysis

11.2.1 Sample Preparation

Samples sent to the laboratory are packed in sealed A0 plastic bags and packed into polyweave sacks sealed by cable ties. The samples were sent by road to Bukavu, where they were received by CASA's logistics staff, samples were then forwarded to the ALS laboratory in Mwanza via road for sample preparation. Sample preparation methods used by ALS Laboratory at Mwanza, comprised the following procedures:

- Samples layout and primary weighing;
- Drying of the whole sample at 100-110°C (roughly 4 kg/m drilled at HQ3);
- Crushing of the whole sample with Quality Control ("QC") requiring 70% of sample passing through a 2 mm sieve (or better) and using a jaw crusher. Sampling for QC at the first sample, on each individual machine, each lot/matrix, or when new adjustments are made. Cleaning with compressed air between each sample. Cleaning with sterile quartz each different lot or more if necessary;
- Sample splitting with riffle splitter or directly from the crusher. Subsample of 250-500g;
- Pulverisation of the 250-500 g subsample using a "flying disc" or "ring and puck" style grinding mills. QC every 20 samples requiring 85% of sample passing through a 75um (200 mesh) sieve or better. Cleaning with compressed air between each sample.

11.2.2 Sample Analysis

ALS transported the prepared pulps over to its laboratories in Vancouver and Johannesburg by airfreight for final analysis.

Drill core, rock and trench samples are analysed as 50 g aliquots by fire assay with an Atomic

Absorption Spectroscopy ("AAS") finish. The lower detection limit is 0.01 g/t Au. Samples have to date been assayed only for gold.

All QC data are registered in the Laboratory Information Management System ("LIMS") system and assay results were returned to CASA in electronic format and loaded into the sample database with the batch number and date of assay recorded after review by CASA personnel for QAQC.

11.2.3 Verification and Security

Trained LEDA staff were involved at all stages of the sampling, sample packaging and sample transportation process. During the drilling programme staff members were based full time at the drill rig site to supervise the drilling and data recording and to complete preliminary geological logs of the drill core. This included an onsite technician or geologist and project geologist supervisor.

Samples sent to the laboratory are packed in sealed A0 plastic bags and packed into polyweave sacks sealed by cable ties. The samples are then sent by road to Bukavu, where they are received by CASA / ARC logistics staff, samples are then forwarded to the ALS laboratory in Mwanza via road for sample preparation.

ALS transports the prepared pulps over to its laboratories in Vancouver and Johannesburg by airfreight for final analysis.

11.3 Density Determination

Density measurements are carried out using Archimedean principles for consolidated fresh core.

Bulk density for consolidated material is calculated using the formula W1/(W1-(W3-(W2-W1)-(W4-W1))), where W1 is dry weight, W2 is weight with plastic, W3 is weight in water and W4 is the wet weight. Weights are recorded manually from a mechanical 'dial' scale set and entered into the electronic database.

The drillhole database presented to the consultant, which forms the basis for the current reported Mineral Resource estimate, contains a total of 4039 density samples taken from surface to a maximum downhole depth of 320m with an average sample core length of 12cm. Average density for the complete database is 2.66t/m3 with a range of outliers between 1.06-4.8.

11.4 QAQC Program

11.4.1 CRM (Standards)

CASA introduced fourteen CRM's at a percentage of 6% of the total submitted sample population, each in 50 g sealed sachets, covering a range of Au grade concentrations. CRM's were sourced from African Mineral Standards and were monitored via a robust assessment of laboratory returns using ±2 standard deviations to establish that they were sufficiently accurate and suited to the mineralisation related to the project (Table 11-1). Re-assays were ordered for problematic CRM's.

Table 11-1. CRM standard results

CRM reference ID	CRM reference Value (Au ppm)	Std Deviation	-3 STD	-2 STD	+2 STD	+3 STD	Returning Mean Value (Au ppm)	Number of samples
AMIS0023	3.57	0.26	2.79	3.05	4.09	4.35	3.47	43
AMIS0030	21.42	1.24	17.7	18.94	23.9	25.14	20.47	21
AMIS0042	0.802	0.084	0.55	0.634	0.97	1.054	0.82	10
AMIS0043	1.65	0.17	1.14	1.31	1.99	2.16	1.63	93
AMIS0044	2.9	0.19	2.33	2.52	3.28	3.47	2.85	148
AMIS0080	1.14	0.1	0.84	0.94	1.34	1.44	1.14	34
AMIS0103	4.73	0.38	3.59	3.97	5.49	5.87	4.43	92
AMIS0174	2.13	0.1	1.83	1.93	2.33	2.43	2.1	94
AMIS0175	0.5	0.05	0.35	0.4	0.6	0.65	0.5	88
AMIS0181	1.39	0.08	1.15	1.23	1.55	1.63	1.37	11
AMIS0183	2.78	0.16	2.3	2.46	3.1	3.26	2.75	8
AMIS0232	3.29	0.2	2.69	2.89	3.69	3.89	3.37	9
OXD43	0.401	0.021	0.338	0.359	0.443	0.464	0.4	20
OXH52	1.291	0.025	1.216	1.241	1.341	1.366	1.28	23

11.4.2 Blanks

Blank pulps were inserted at a rate of 1:50 (2%). Results are shown in Figure 11-1. Blanks were submitted "blind" to the laboratory. There is some minor occurrences of elevated grade indicating possible laboratory contamination but the rate of occurrence and the lack of trend does not signify a material issue and the consultant consider the laboratory facilities to be appropriate for analysis of fine gold samples.

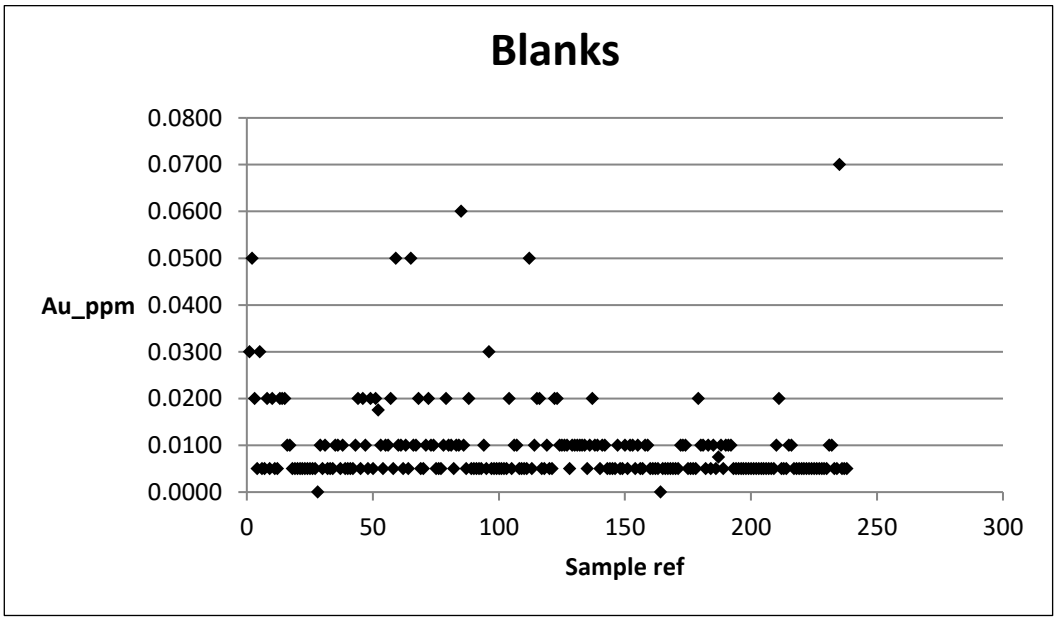


Figure 11-1. Results from analysis of 239 blind submitted blank samples.

11.4.3 Duplicates

The company did not routinely insert duplicate and repeat samples into the analysis sample

stream, but rather relied on the results from the internal laboratory duplicate protocol which consists of three repeat assays from the same prepared sample. Therefore, these are not true duplicates in that they are being generated from the same (single) sample and not from three separate samples produced from the same drill interval. Additionally, as these are in-house repeats within the laboratory, they cannot be considered "blind" and independent. Notwithstanding, the laboratories used throughout the drilling and sampling programmes at Akyanga are all internationally certified and subject to rigorous checks and certification requirements.

11.5 Conclusions

Overall the QAQC which has been carried out at Akyanga is considered appropriate for the style of mineralisation and expected grades. The number of samples taken and their frequency is within what would be considered "best practice". Notwithstanding the above, there are a couple of points which should be considered:

- The number of CRM's used is high and several have similar average values and ranges which intersect. It may be worth reducing the number of CRM's which would allow larger populations of the remaining to be built up. This should be done while maintaining the current range from very low to high grades.
- Production of duplicate field samples should be considered to allow better determination of, not only small scale variation within individual samples, but also a better idea of potential lab variability and quality.
- The company should also consider sending repeat samples to the laboratory from those already assayed, after changing the sample number to ensure they are "blind" to the laboratory.
- There is no discussion on potential coarse gold and screen fire assay work has not been carried out.
- Ephraim Masibhera (QP) has reviewed the sample preparation, analysis and security and believes that it was conducted using the best practices as outlined by Canadian Institute of Mining, Metallurgy and Petroleum (CIM). The sampling preparation, security and analytical procedures used are consistent with generally accepted industry best practices and are therefore adequate for resource database compilation.
- Dr John Arthur reviewed the QA/QC work undertaken by CASA and has concluded that it was of acceptable standard for the type of sampling conducted. Dr Arthur believes that for the drilling programs sufficient standards and blanks were added to the sample stream for the purposes of checking on the quality of the assay laboratories used.
- Overall, the validation and the analytical quality control data examined by Dr Arthur suggest that gold grades are reasonably reproduced, and that the assays are generally reliable for the purpose of resource estimation.

12 DATA VERIFICATION

A site visit was done by QP Ephraim Masibhera on 11 May 2021 to Misisi Gold Project. During the visit there were no exploration activities but the following verification was done to confirm the

data in the technical reports:

12.1 Sampling and logging verification

The Misisi Gold Project exploration camp is properly managed and is in good order.

The core was found to be packed properly and a few drill holes were laid down to confirm the geology and mineralization and compare with the data captured in the database being used for resource estimation (Figure 12-1). The core consists of half core that remained after sampling and some zones have quarter core remaining from the metallurgical sampling that took place. The remaining core is in good order and can always be used for further analysis.

Figure 12-1. Core inspection during QP site visit.

The core trays are stored under a roofed shed and clearly marked and labelled for further use. It was very easy to locate the selected drill holes during the visit (Figure 12-2).

Figure 12-2. Core trays with historical core from drilling programmes.

12.2 Drill hole collar verification

During the site visits conducted in 2021 and 2023, drill collars were observed and locations confirmed in the field by the QP's. Figure 12-3 shows the collar for MSD000128 as observed during site visit. The orientation of the drill hole was confirmed to be about 70°.

Figure 12-3. MSD00128 collar position

12.3 Verification of Local resources and Infrastructure

The project area can easily be accessed. Travel by air is the most efficient in terms of time. An airstrip in nearby Lulimba has been renovated and licensed allowing for charter flights from Kalemie and Bukavu. Airport links from Lubumbashi to Lulimba is available through private charter and only a 10 km section can be completed by road from Lulimba to the project area by a gravel road that require grading. The dirt roads, tracks and footpaths can be accessed by 4x4 vehicles only. Bridges were found on route to the project site although some may require repairing to allow heavy vehicles transporting mining equipment.

The project has good mobile phone and internet coverage.

Figure 12-4. Well maintained airstrip at Lulimba.

12.4 The data verification procedures applied by the qualified person;

During the current exercise no additional samples were collected by Kweneng QP for verification purposes. Mineralized intersections recorded in the database for drill holes MSDD002; MSDD0019; MSDD0032; MSDD0043; MSDD0060; MSDD0082; MSDD0088 and MSDD0110 were confirmed on the core from the stored core trays in the yard. The drill core was found to be in good order and can be sampled for future verifications. Below is drill hole MSD0002 which shows the intersected mineralized quartz vein from 65-70m grading at an average grade of 7,75g/t. Several quartz veins were noted on each drill hole as reported from the previous reports. Structural analysis of the quartz veins to define the vein styles and type of veins is required. This can be done by the re-logging of the available core before further exploration is done for efficient strike and down-dip targeting of mineralisation. The quartz veins show evidence of brittle nature whilst the host rocks exhibit ductile deformation with mylonitic fabric strongly present.

Figure 12-5. **MSD0002 mineralized quartz vein (60-70m).**

Figure 12-6. **Quartz vein overlaying conglomerate from Akyanga ridge which is currently being mined by the artisanal miners.**

Figure 12-7. Quartz stockpile from artisanal mining activities ready for processing.

Due to time and access constraints only Akyanga deposit was visited, the other exploration targets namely Kilombwe, Lubitchako, Mdenge, Ngalula and Tulonge could not be visited by the QP.

In the opinion of the QP, the sampling preparation, security and analytical procedures used by ARC are consistent with generally accepted industry best practices and are therefore adequate.

Although no verification sampling was done by the QP on site visit, the presence of established artisanal miners on the Akyanga ridge shows that the oxide quartz vein is mineralised and of high grade with coarse and fine gold being recovered by the artisanal miners.

Figure 12-8. Akyanga ridge artisanal mining activities.

Geological observations made by the QP on site visit verify the mapping of Akyanga project and historical data being used for resource estimation. Quartz vein with pyrite and some chalcopyrite was observed with some intersections showing native gold on the remaining half core which is evidence that there is mineralization on the property as illustrated by previous studies.

Based on the data verification performed, the collar coordinates, downhole surveys and assay results are considered suitable to support Mineral Resource estimation at the Misisi Gold Project.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Introduction

As part of the original 2013 study, a small number of samples were selected for preliminary metallurgical testwork. All testwork was carried out by SGS in Mwanza, Tanzania. The following reports discuss the work carried out and the results obtained. A summary is included below:

- SGS Test Report, Metmin Report No: 13/018, Gold Deportment Study on Two Gold-Bearing Samples from the Misisi Gold Project, Mngoma and Lombard, 26 April 2013;
- SGS Test Report, Metmin Report No: 13/133, Comminution and Metallurgical Testwork, Fick and Stanek, 11 September 2013;
- SGS Test Report, Metmin Report No: 13/145, Simulated Heap Leach and Percolation Rate Tests on an Oxide Sample, Fick and Stanek, 18 December 2013.

13.2 Gold Deportment Testwork

13.2.1 Sample Preparation

Two samples of about 25 kg of each (1 oxide and 2 transitional) were required for the gold deportment testwork. Each sample was crushed to approximately 100% passing 1.7 mm and blended, then milled down to approximately 80% passing 75 µm.

Each sample was split into the following aliquots:

- 2 x 10 kg split aliquots for gravity concentration followed by dissolution appraisal;
- Approximately 500 g split aliquot for grading analysis;
- Approximately 500 g split aliquot for Heavy Liquid Separation ("HLS");
- Approximately 250 g split aliquot for head assay;
- Approximately 10 g of each sample for XRD analysis;
- Approximately 250 g of the head material was split for the preparation of polished blocks for mineralogical investigation;
- Approximately 10 kg for diagnostic leach testwork.

13.2.2 Test Work Results and Conclusions

The Akyanga samples, labelled AKMET 01 for the transitional sample and AKMET 02 for the oxide sample, were submitted for chemical, mineralogical and metallurgical assessment with the resulting data discussed below. Due to uncertainties in the metallurgical results obtained from gravity and intensive leach on sample AKMET 01, the test work had to be repeated on sample AKMET 03, which was equivalent to sample AKMET 01. Since this work was undertaken (2013), the depth of the ore resource has been increased significantly through deeper drilling and this may reflect in different recoveries.

Approximately 91% of the AKMET 01 sample and approximately 87% of AKMET 02 was SiO_2. The head grades of the samples were 2.84 g/t Au and 2.13 g/t Au for the AKMET 01 and AKMET 02 samples, respectively. The loss on ignition was low as was the total S and organic carbon. Arsenic was below detection for the AKMET 01 sample (<0.01%) and 0.01% for the AKMET 02 sample, implying that the Au in these samples is not refractory or associated with arsenopyrite.

The grading analysis on the AKMET 01 sample indicated that the Au is progressively upgraded into the finer size fractions, with the occurrence of coarse gold. The skewed distribution of Au in the AKMET 02 sample is a result of the nugget effect, similarly to the AKMET 01 sample, the AKMET 02 sample is upgraded into the finer size fractions.

The HLS analysis results for the Akyanga samples indicated that approximately 55% of the Au in the AKMET 01 sample and approximately 45% of the Au in the AKMET 02 sample was gravity recoverable as determine by HLS. These results we confirmed when the gravity tests were conducted, where a close agreement was noted between the HLS and gravity tests; implying that these samples are amenable to gravity recovery.

Bulk Mineralogical Analyses (QEMSCAN) were conducted on the head and gravity concentrate. These results were validated and compared to the XRD analysis and all the results were in close

agreement. The head samples were dominated by silicates, approximately 97% and approximately 94% silicates for the AKMET 01 and AKMET 02 respectively. The gravity concentrates where also dominated by the silicates (approximately 61% for the AKMET 01 sample and approximately 57% for the AKMET 02 sample), with abundant amounts of Fe-oxide/hydroxide (approximately 31% and approximately 39% for the AKMET 01 and AKMET 02, respectively).

The QEMSCAN Trace Mineral Search analyses of the gravity concentrates showed that almost all of the Au occurred as native Au in both the samples. These grains occurred in particles which ranged in size from 1 μm^2 to 7702 μm^2 in the AKMET 01 sample and between 1 μm^2 to 10380 μm^2 in the AKMET 02 sample. The GSD results indicated that at 80% passing 75 µm, most of the Au will be exposed. Sample AKMET 02 was slightly coarser than sample AKMET 01.

The liberation of Au in both the gravity concentrate samples was very high, with liberation of approximately 82% Au and approximately 81% Au in the AKMET 01 and AKMET 02, respectively. Some of the Au was associated with silicates and oxides, with lesser Au grains associated with poly phase minerals. Approximately 2% of the Au grains in the AKMET 01 and approximately 1% in the AKMET 02 samples were associated with sulphides.

13.3 COMMUNITION AND SIMULATED HEAP LEACH TEST WORK

13.3.1 Sample Receipt and Preparation

Two samples representative of oxide material (AKMET04), weighing approximately 136 kg and transition material (AKMET05) weighing approximately 178 kg were collected in October 2013 from the Akyanga deposit. Existing core was used and the samples sent for comminution and metallurgical test work at SGS South Africa.

Collection of these samples followed the guidelines listed below:

- Required total weight for oxide sample was 100 kg and transition sample was 175 kg;
- Average grade of sample approximately 2.5 g/t which is higher than the reported average grade for the resource (2.16g/t Au);
- Sample was obtained by halving existing halved diamond drill core;
- Sample from mineable intersects with representative grade ranges (has some high and low values and includes internal dilution similar to a possible mined width);
- Sample from holes representing good spread strike wise along the ore body;
- Maximum vertical depth of samples at around 100 m below surface, to represent ‘early’ open pit production.

In classifying oxidised versus transitional material, presence of sulphides and ferruginisation were used as key indicators, as well as alteration/weathering, as follows:

- Oxidised – mineralized intervals with no fresh sulphides (box works or pseudo morphs of pyrite sometimes present), highly weathered intervals near surface and highly ferruginised (altered)/sheared intervals at depth;
- Transition – mineralized intervals with fresh sulphides (rarely observed), mainly competent rock material and moderately to weakly ferruginised, with oxidation on fractures.

Some oxidised material exists at depth. This is believed to be mainly related to contacts of chloritic

schists and the other highly siliceous metasediments.

Following the guidelines above, these samples were collected from 41 holes for transition material and 27 holes for oxide material.

13.3.2 Comminution Test Work

Tests were performed on the transitional mineralisation sample to determine the Bond Ball, Rod, Crushability and Abrasion work indices. The abrasion test, carried out on a composite, gave a result of 0.2642.

13.3.3 Flowsheet Testing

Three proposed flowsheets were tested:

- Flowsheet 1: Two-stage milling and CIL, with gravity concentration in the primary milling circuit.
- Flowsheet 2: Gravity concentration at a coarse grind with the tailings being heap leached;
- Flowsheet 3: Crushing to <10 mm followed by screening at 1.18 mm. The +1.18 mm material being heap leached and the -1.18 mm portion subjected to gravity recovery and screened at 0.15 mm. The +0.15 mm material is added to the +1.18 mm on the heap, the -0.15 mm is subjected to CIL.

13.4 Simulated Heap Leach

13.4.1 Sample Preparation

52 samples (approximately 1 kg each) were composited to form AKMET 06 Oxide composite of 52 kg. The composite sample was crushed to 100% <8 mm and then riffle split to two aliquots of 26.5 kg. Each aliquot was rotary split to 10 aliquots and 8 opposite cup aliquots were combined to form two aliquots, approximately 20 kg each, for the percolation rate test. The 2 remaining aliquots were recombined, and rifle split to two aliquots of approximately 5.3 kg. One aliquot was subjected to simulated heap leach test and the remainder of the aliquots were stored.

13.4.2 Simulated Heap Leach Test Work

The composite was crushed, and bottle-roll leached for seven days. Gold dissolution of 65.2% was achieved. Percolation tests were carried out on agglomerated and un-agglomerated samples. No ponding was observed at rates up to 100 l/h/m^2.

13.5 Test Work Discussion

The test work on drill core from drill programs prior to 2014 showed that the ore was not refractory and that good recoveries could be expected from gravity and leaching techniques. The extent of mineralization was since increased by deeper drilling. No testwork has been undertaken on core from this level of the mineralization.

The mineralization hardness is considered to be medium. The crushing index indicated soft to medium, indicating that little difficulty would be experienced in the crushing and comminution stages.

Generally, all recoveries were high, the heap leach results being especially promising. As the cost

of diesel-generated power was known to be high, it was decided that the flowsheet should be simplified by the elimination of the gravity recovery step and associated high-intensity leaching. Gravity concentrate was shown to have very good leaching characteristics and it was concluded that this material would leach without being concentrated.

The lack of ponding at high flow rates indicates good heap permeability was to be expected and so no agglomeration step was included in the proposed flowsheet. The recovery for the simulated seven-day heap leach was lower than that previously reported for oxides at 65.2% but the slope of the curve indicates that longer leaching times will result in improved recoveries.

Testwork has been carried out by a reputable laboratory and indicates that the mineralisation is amenable to gravity recovery and leaching. Additional testwork is recommended to test gold recoveries on material added to the mineral resource since 2014 much of which is from a depth below that of the previous resource and sample collection points.

14 MINERAL RESOURCE ESTIMATE

14.1 Introduction

The Mineral Resource Statement presented herein has been reported in accordance with NI-43-101. The Qualified Person who assumes responsibility for reporting of the Mineral Resource is Dr John Arthur who is independent of Valorem and Regency. Dr Arthur carried out detailed validation and verification of the Mineral Resource estimate produced by Ivor Jones (as described in Section 6.8.2) and subsequently carried out an independent Mineral Resource estimation exercise the results of which are reported below as the current Mineral Resource statement. Dr Arthur is satisfied that the data quality, methodology and results are appropriate and are a reasonable and accurate reflection of the tonnes and grade as reported at the level of confidence quoted. The effective date of the resource statement is 30th June 2023.

The QP is not aware of any permitting, legal, title, taxation, socio-economic, and marketing that could materially affect the Mineral Resource.

14.2 Database Validation

14.2.1 Data Provided

The drillhole database was provided by ARC Minerals. The data was provided as datamine format digital files from the ARC Minerals database and contained collar, survey, assay, geological codes and specific gravity data.

Digital terrain models (DTMs) for the topographic elevation were provided by ARC Minerals, together with five solids for the mineralised zones.

The Mineral Resource Estimate for the Akyanga deposit is based upon information from 105 diamond drill holes and 6 RC drillholes (Appendix A).

The sample database and the topographic surface were reviewed and validated by the QP. The validation exercise carried out by the QP has confirmed the integrity of the database.

14.2.2 Approach

The basis of the mineral resource estimates for the Akyanga gold deposit was prepared in the following steps:

- digital data validation
- data preparation
- exploratory data analysis of Au values
- Geological interpretation and modelling (wireframing)
- establishment of block models
- coding and compositing of assay intervals
- consideration of grade outliers
- derivation of kriging plan and boundary conditions
- variogram analysis and selection of appropriate kriging parameters
- grade interpolation of Au using OK and check estimates using RBF interpolation
- classification of estimates
- resource tabulation and resource reporting

This estimation method was chosen because of the broad drill spacing, the confidence in the interpretation, and the advantages of kriging in considering the clustering of data.

14.3 Domain Modelling

The deposit is split into 5 separate, hard boundary, grade domains for the purpose of Resource estimation (Figure 14-4 to Figure 14-5). The numbering order is from uppermost (1) to lowermost (5). Domains 1-4 are roughly equal in areal extent although thickness varies considerably both between and within individual domains from 1m to +20m in places. Domain 5 is significantly smaller than the others. The overall mean thickness for the combined domains is 6.3m but varies up to a maximum of 47m in domain 1. In general, the thickness intervals are positively skewed with the majority of the intervals clustered around the mean and the thicker intervals occurring as outliers.

	Value
Count	91.00
Mean	8.94
SD	8.40
CV	0.94
Variance	70.48
Minimum	1.00
Q1	3.68
Q2	6.04
Q3	11.31
Maximum	46.77

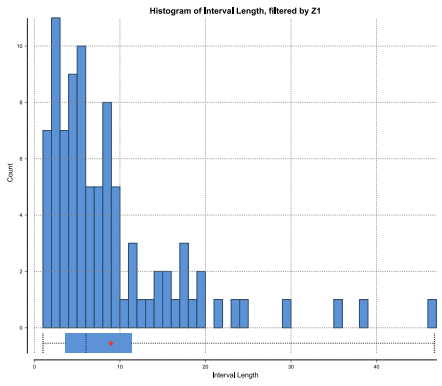


Figure 14-1. Mineralised domain interval thickness plots – domains 1

	Value
Count	94.00
Mean	6.58
SD	6.09
CV	0.93
Variance	37.03
Minimum	0.01
Q1	1.78
Q2	4.85
Q3	10.13
Maximum	27.22

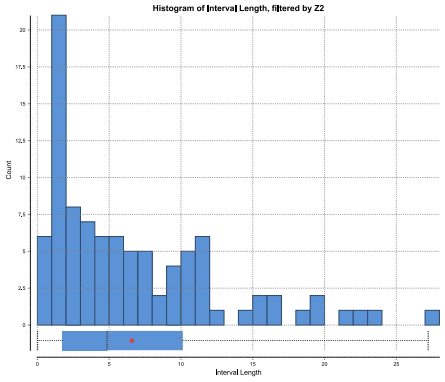


Figure 14-2. Mineralised domain interval thickness plots – domains 2

	Value
Count	78.00
Mean	4.76
SD	4.94
CV	1.04
Variance	24.40
Minimum	0.49
Q1	1.53
Q2	2.64
Q3	5.42
Maximum	21.42

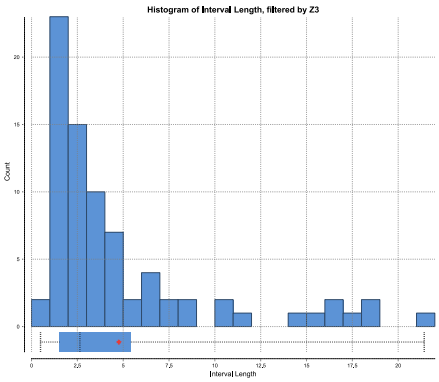


Figure 14-3. Mineralised domain interval thickness plots – domains 3

	Value
Count	50.00
Mean	3.45
SD	2.90
CV	0.84
Variance	8.43
Minimum	0.52
Q1	1.49
Q2	2.59
Q3	4.01
Maximum	12.06

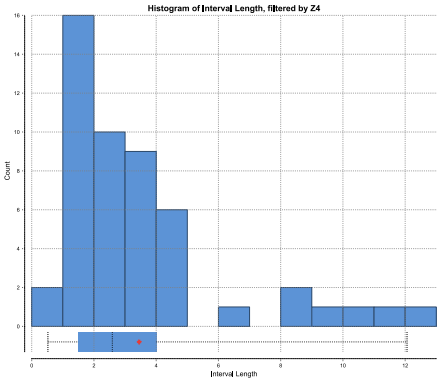


Figure 14-4. Mineralised domain interval thickness plots – domains 4

	Value
Count	5.00
Mean	5.99
SD	10.52
CV	1.76
Variance	110.63
Minimum	0.53
Q1	0.80
Q2	0.87
Q3	3.03
Maximum	24.72

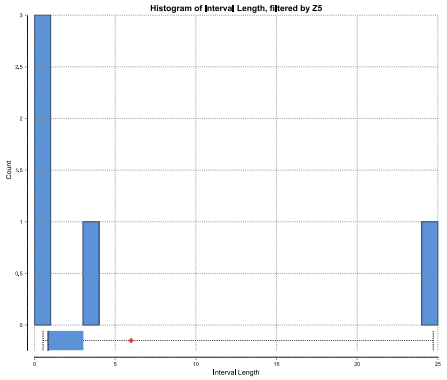


Figure 14-5. Mineralised domain interval thickness plots – domains 5

Figure 14-6 shows a plot of interval composite grade plotted against the corresponding domain thickness. The plot is log transformed on both axes to emphasise any trend. However, it is clear that there is little to no correlation between the thickness of individual domains and the grade of the interval.

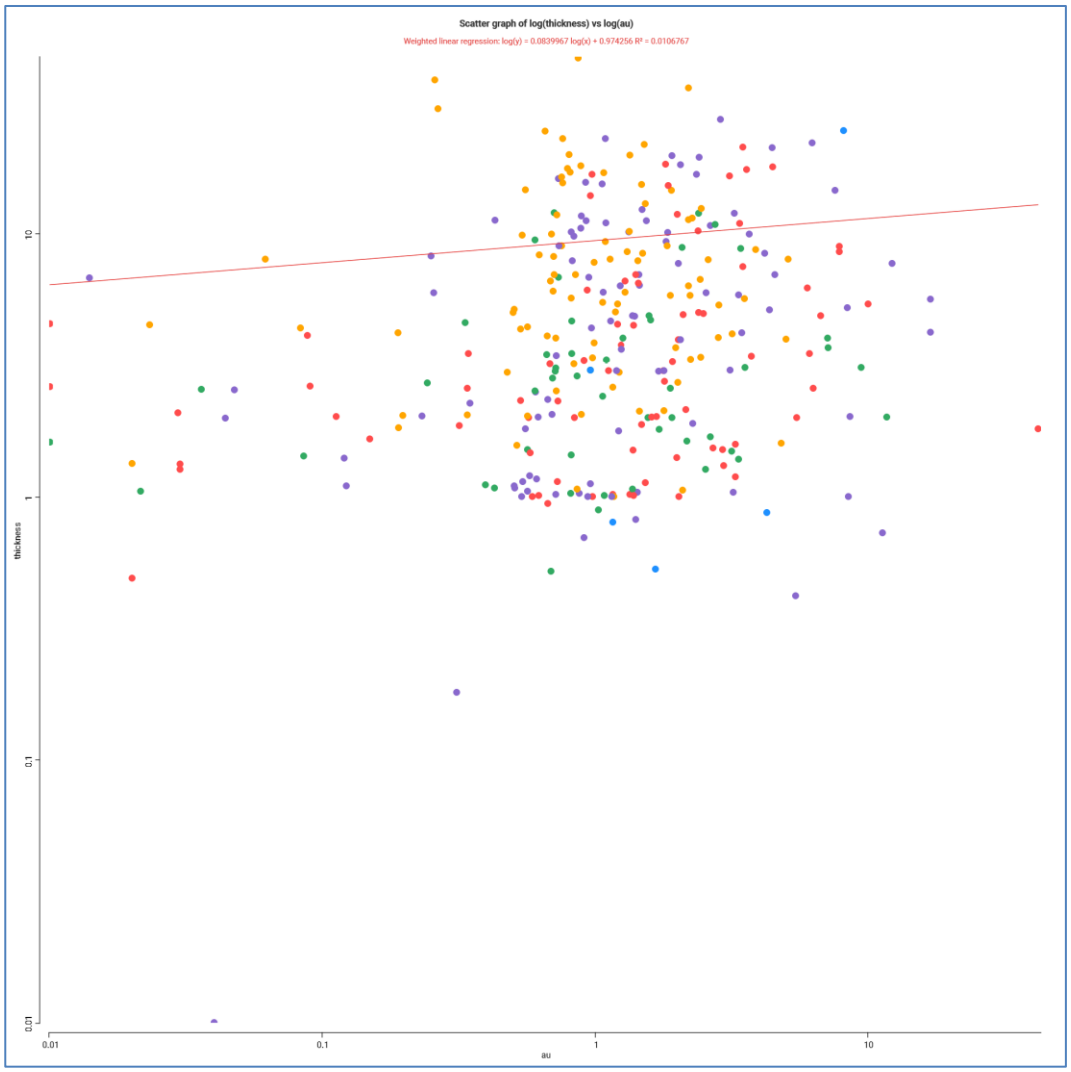


Figure 14-6. grade vs thickness plot for the combined mineralised domains (coloured by domain zone)

There is a moderate degree of confidence in the geological framework in the interpretation presented. Orientation of the structural zones included use of artisanal workings to assist the interpretation. There were five mineralised volumes interpreted and used for the grade modelling described below. Drillhole spacing is not on a regular grid pattern, partially due to different campaigns and also because of lack of suitable pad locations owing to artisanal workings in some areas. Figure 14-7 below, give some idea of the irregular drill collar spacing in relation to the current mineralisation domains. Modelling of these domains is based initially on grade whereby the relatively hard grade boundary can be easily discerned from the assay results. This is followed up by an interpretation of the host lithology units to allow continuity within the five domains to be confirmed both along strike and in the dip direction. The overall form of the deposit changes from the north, where it is predominantly steeply dipping to the east, to the central and south where the units tend to flatten towards the east (Figure 14-8 and Figure 14-9). Average dips in the steeply dipping area are in the order of between 60-80^{o} whereas in the south and east the dip flattens to between 20-30^{o}.

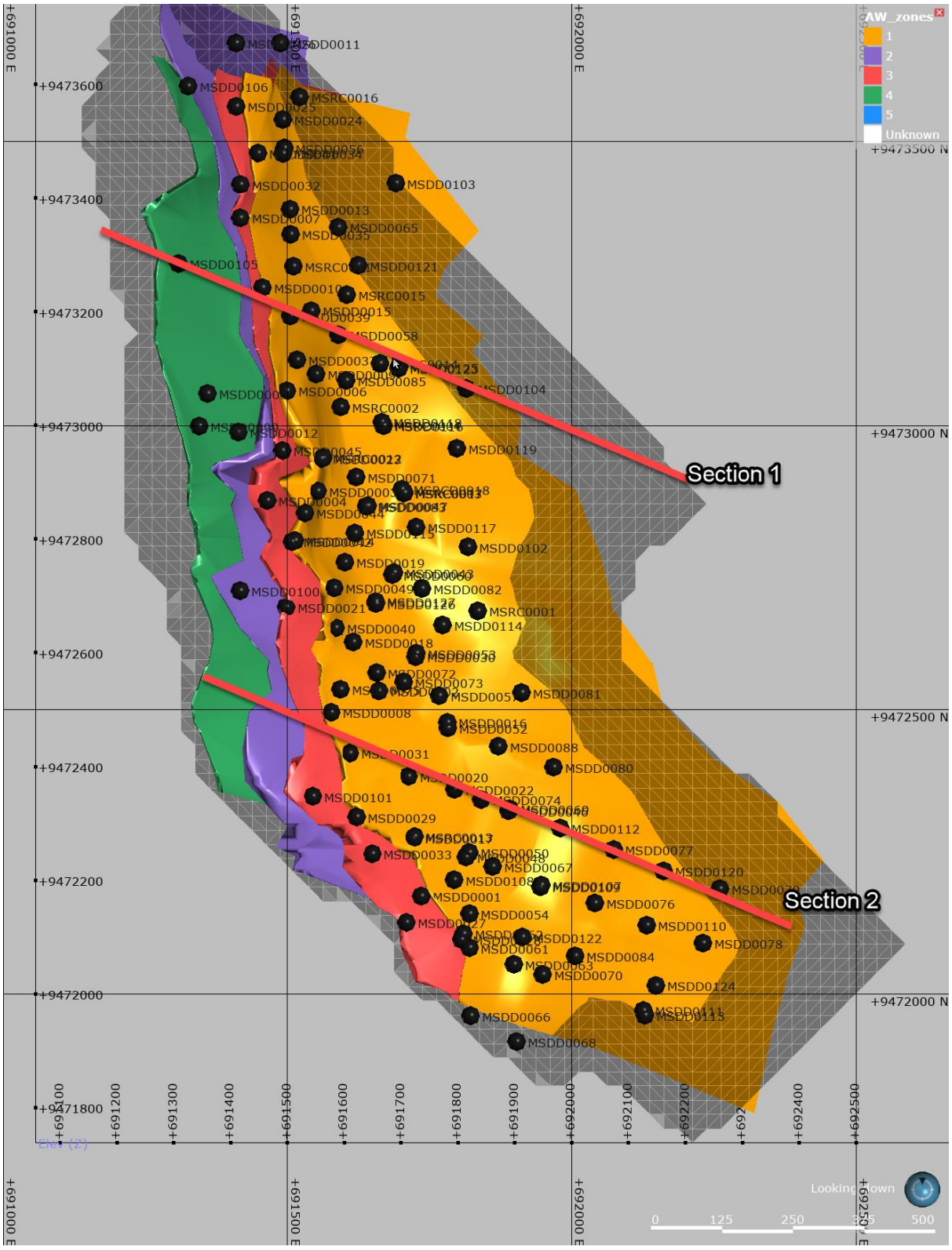


Figure 14-7. Plan view of drill collar locations at Akyanga Ridge deposit and conceptual Resource pit shell (RF1)

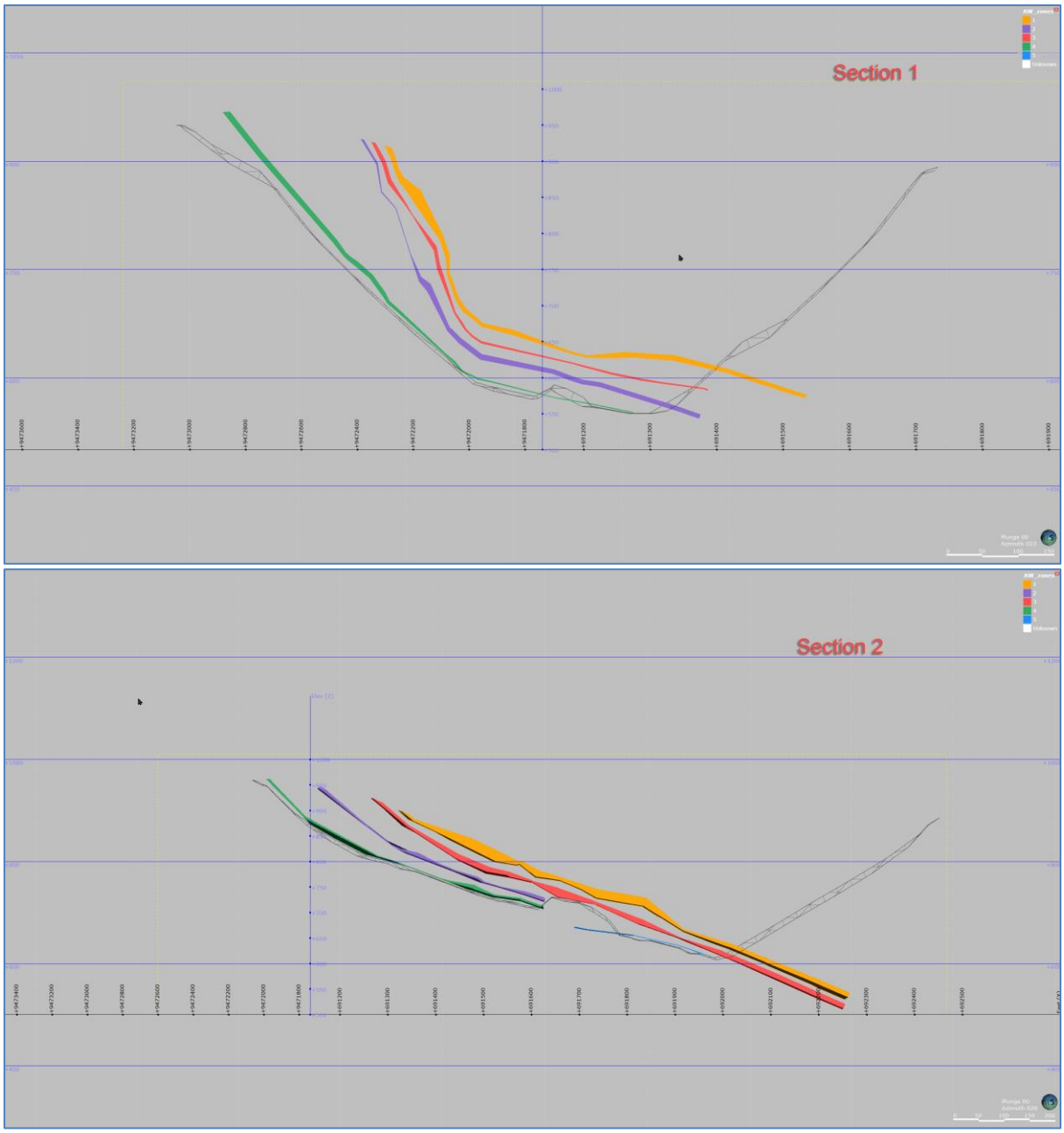


Figure 14-8. Cross sections through the Akyanga Ridge deposit in the north and south of the Mineral Resource domain highlighting how the dip changes with latitude (refer to Figure 14-7 for section locations).

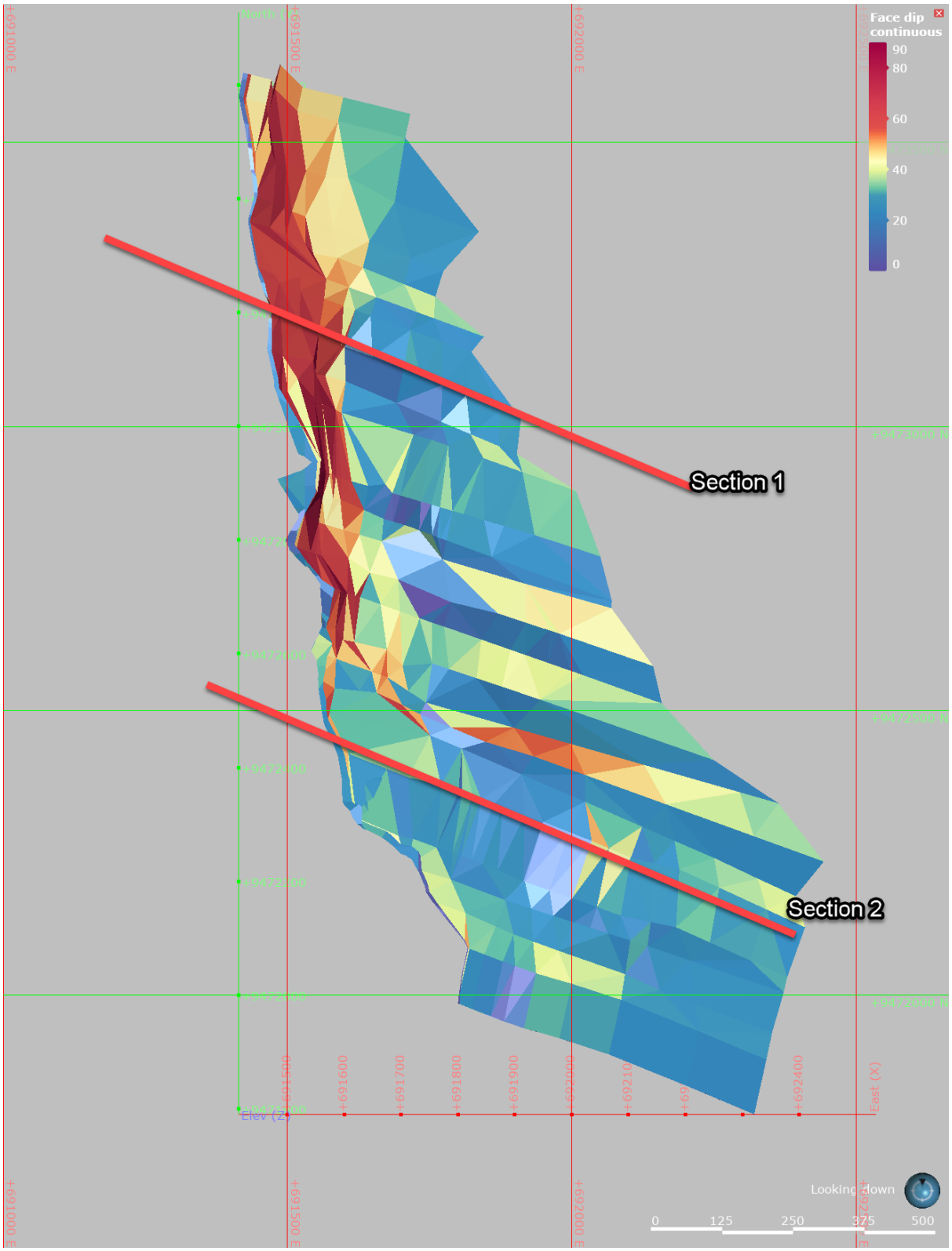


Figure 14-9. Plan view of domain 1 with colour shading representing the average dip of the domain showing steeper dips in the north-west (red colouring) and shallower dips in the south and east (green/blue colours)

14.4 Compositing

All data was composited to the dominant sample length of 1 m prior to analysis and estimation. The composited data was then coded according to the relevant vein package in preparation for

modelling.

The histogram of the grades of samples in the mineralised domains is positively skewed with a small proportion of the higher grades in amongst a large number of low-grade mineralisation mixed with barren rock (Figure 14-10 to Figure 14-15). The following plots are all showing the results from the uncapped data.

	Weighted Value
Count	2,039
Length	1,978
Mean	2.09
SD	4.74
CV	2.27
Variance	22.50
Minimum	0.01
Q1	0.39
Q2	0.83
Q3	1.85
Maximum	72.96

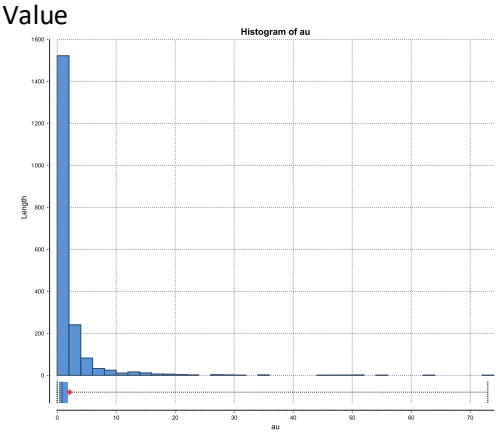


Figure 14-10. Mineralised domain interval 1m composite grade plots – combined domains

	Weighted Value
Count	822
Length	804
Mean	1.23
SD	2.33
CV	1.90
Variance	5.45
Minimum	0.01
Q1	0.29
Q2	0.66
Q3	1.33
Maximum	45.40

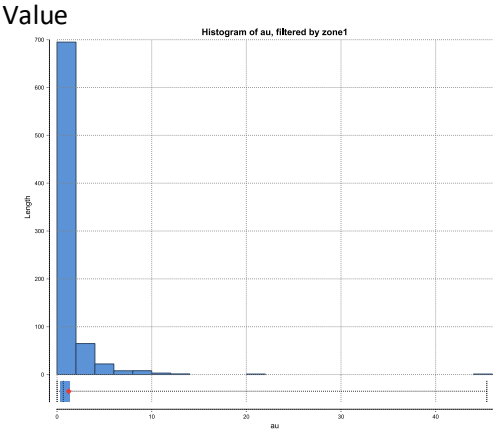


Figure 14-11. Mineralised domain interval 1m composite grade plots –domain1

	Weighted Value
Count	622
Length	609
Mean	2.54
SD	5.43
CV	2.14
Variance	29.49
Minimum	0.01
Q1	0.47
Q2	0.91
Q3	2.29
Maximum	72.96

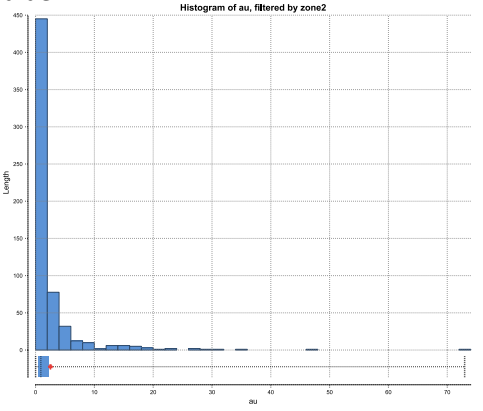


Figure 14-12. Mineralised domain interval 1m composite grade plots –domain2

	Weighted Value
Count	388
Length	369
Mean	2.85
SD	5.84
CV	2.05
Variance	34.06
Minimum	0.01
Q1	0.52
Q2	1.15
Q3	2.63
Maximum	51.20

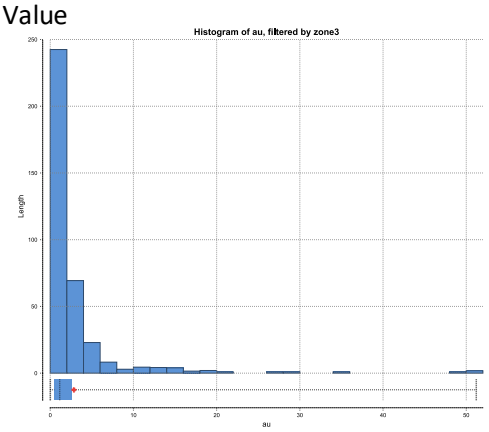


Figure 14-13. Mineralised domain interval 1m composite grade plots –domain3

	Weighted Value
Count	176
Length	166
Mean	2.02
SD	3.26
CV	1.61
Variance	10.66
Minimum	0.01
Q1	0.36
Q2	0.92
Q3	2.09
Maximum	20.27

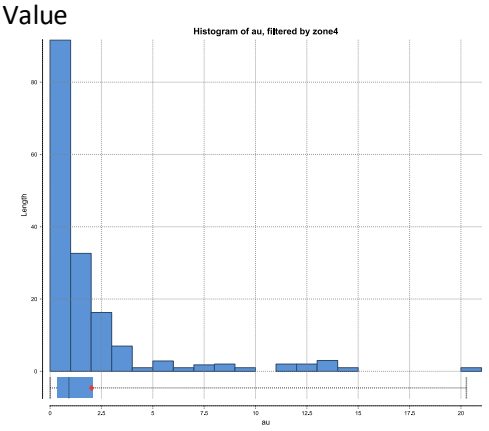


Figure 14-14. Mineralised domain interval 1m composite grade plots –domain4

	Weighted Value
Count	31
Length	30
Mean	7.00
SD	14.68
CV	2.10
Variance	215.50
Minimum	0.07
Q1	0.66
Q2	1.66
Q3	4.48
Maximum	62.53

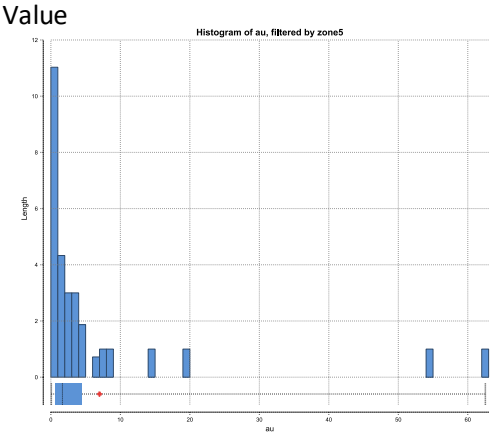


Figure 14-15. Mineralised domain interval 1m composite grade plots –domain5

14.5 Evaluation of Outliers

An outlier analysis was conducted on the samples within wireframes for each of the Akyanga domains. Grade-capping was conducted on the 1m composites. The grades were top cut based on the break of slope on the cumulative frequency plot. AMC had historically selected a grade cap of 20g/t [3]. This is supported by the results documented in the 2014 MRE by SRK [1]. However, based

on the updated drilling results from 2017-2018, Denny Jones decided that a cap of 30g/t would be better suited to the deposit. Review of the historical capping confirms the appropriateness of using the higher 30g/t value in reducing the impact of high-grade outliers. Notwithstanding, the QP considers the impact of capping is not fully understood at this time and the location of high grades appears to be clustered in certain domains which may indicate that capping of these could negatively impact the accuracy of the final grade estimates in these areas.

It was decided for the current resource estimate to leave the data uncapped with a recommendation that future work should examine the impact of a separate cap for each domain if appropriate.

14.6 Statistical Analysis and Variography

Initial semi-variograms produced by AMC in 2017 [3] were carried out on 2m composites. Only the basal domain was modelled (subsequently renamed to domain 1 for this report) and the variogram modelling parameters were then applied to the other smaller domains. Hence AMC had assumed a degree of stationarity exists between the different domains.

Denny Jones [4], used a composite value of 1m and applied an unfolding algorithm to the vein domains in order to try and improve the robustness of the semi-variograms. However, modelling was only performed on the largest vein (domain 1) and the results applied to the remaining smaller domains.

In both cases, there is an assumption of stationarity between veins implying the overall statistical properties and variance are similar. The results from the basic statistics for each domain show significantly differing variances and ranges with mean values ranging from 1.2 to 7g/t. However, the CV values are all within a narrow range of between 1.4-1.7 (after capping) which would tend to suggest a similar data distribution within each vein and hence the assumption of stationarity is likely to be valid.

As part of the current reporting Dr John Arthur produced an updated variographic analysis to provide the necessary inputs used for the final block modelling and grade estimation. The following variograms show a broadly similar pattern and quality to those produced previously by both AMC and Denny Jones. These results, along with the associated Kriging Quality test results indicate that the models and assumptions used by Denny Jones in the historical block model grade estimation and Mineral resource reporting were appropriate.

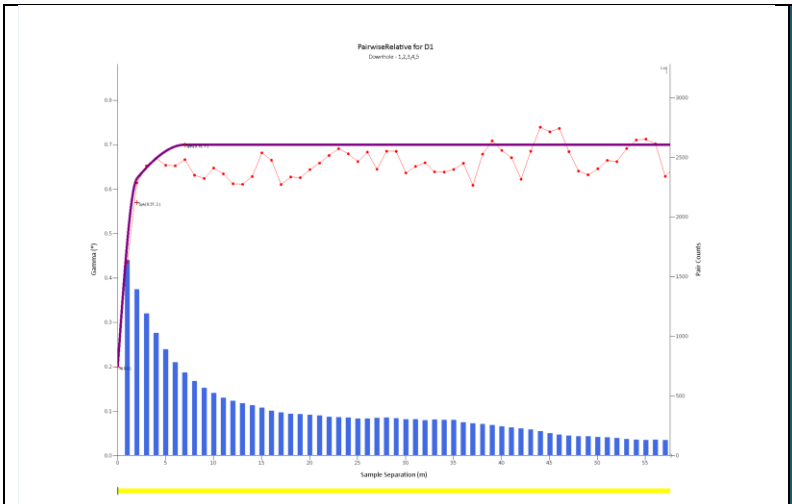
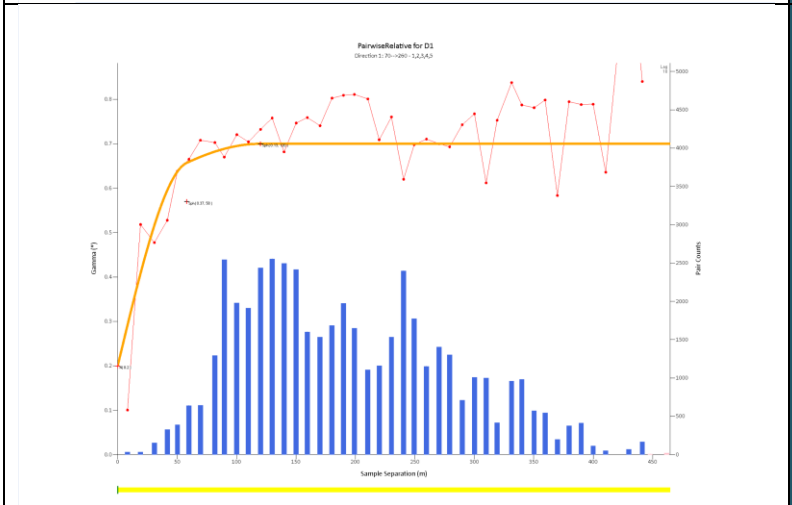
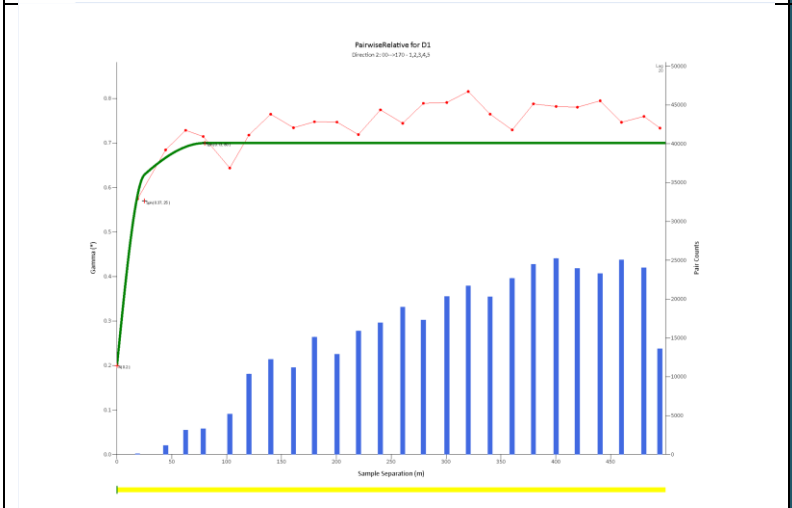
	**Downhole variogram** Lag = 1m Pairwise relative Co= 0.2 C1 = 0.37 a1 = 2m C2 = 0.13 a2 = 7m
	**Dip variogram** Lag = 10m Pairwise relative Co= 0.2 C1 = 0.37 a1 = 58m C2 = 0.13 a2 = 120m
	**Strike variogram** Lag = 20m Pairwise relative Co= 0.2 C1 = 0.37 a1 = 25m C2 = 0.13 a2 = 80m

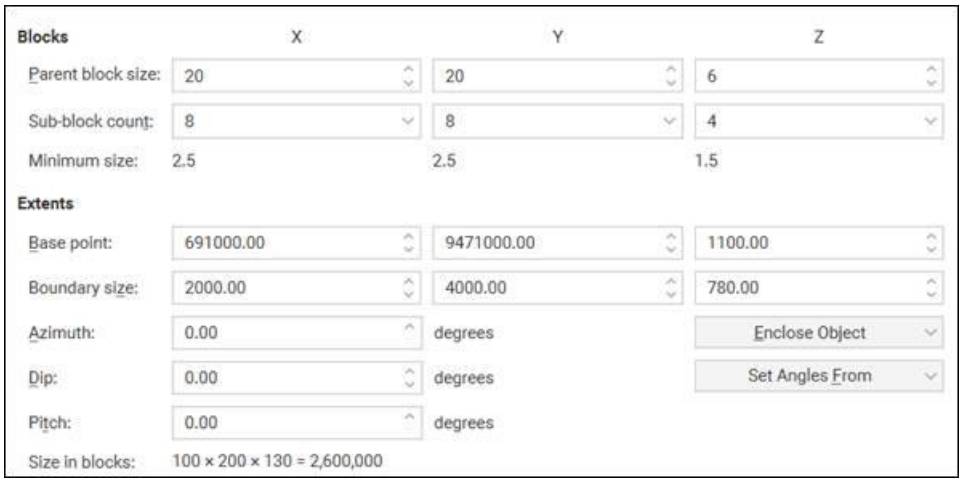
Figure 14-16. Global variograms for the combined 1m composite data from all 5 domains

14.7 Block Model Grade Interpolation

A 3D block model was constructed with parent cell dimensions of 20 mE by 20 mN by 6 mRL and was coded in Leapfrog by using the geological model as an Evaluation trigger to reflect the surface

topography and mineralised zones.

This block model was further subdivided using the Octree® option within Leapfrog, to allow a closer fit to the low angle vein packages, into variable sized sub-blocks with minimum dimensions of 2.5 m by 2.5 m by 1.5 m block size (XYZ) for grade estimation purposes.



14.7.1 Domain modelling

The individual domain models have not been changed from those used by Denny Jones [4] which were, in turn produced by AMC in 2017 [3]. Review of the geological logs, assay database and the methodology used by AMC to construct the mineralised domains has shown the methodology employed was appropriate given the drill spacing and quality. The domain wireframes were therefore accepted and imported into Leapfrog® for domaining purposes. Section 14.3 details the approach used and the statistical analysis of the individual domains.

14.7.2 Grade Capping

The grade capping analysis carried out by AMC and subsequently Denny Jones, as detailed in Section 14.5 was reviewed and the approach taken is considered conservative for the purposes of the Mineral Resource estimation of the project at the exploration stage. For ongoing future iterations of the project it would be recommended to look at capping of data within individual domains. However, for the purpose and level of the current estimate no capping was carried out.

14.7.3 Density modelling

The mean density is 2.66t/m^3 and the distribution shows a high kurtosis with no evidence for mixing of density domains (Figure 14-17).

The density data is discussed in Section 14.7.1. Previous handling and interpretation of the density data in the Denny Jones repot is not discussed in detail other than an implication that the average of 2.63t/m^3 was applied. As part of the current approach the density data was interpolated on a per-block basis using a radial basis function (RBF) interpolation in Leapfrog® in order to check the reported estimates.

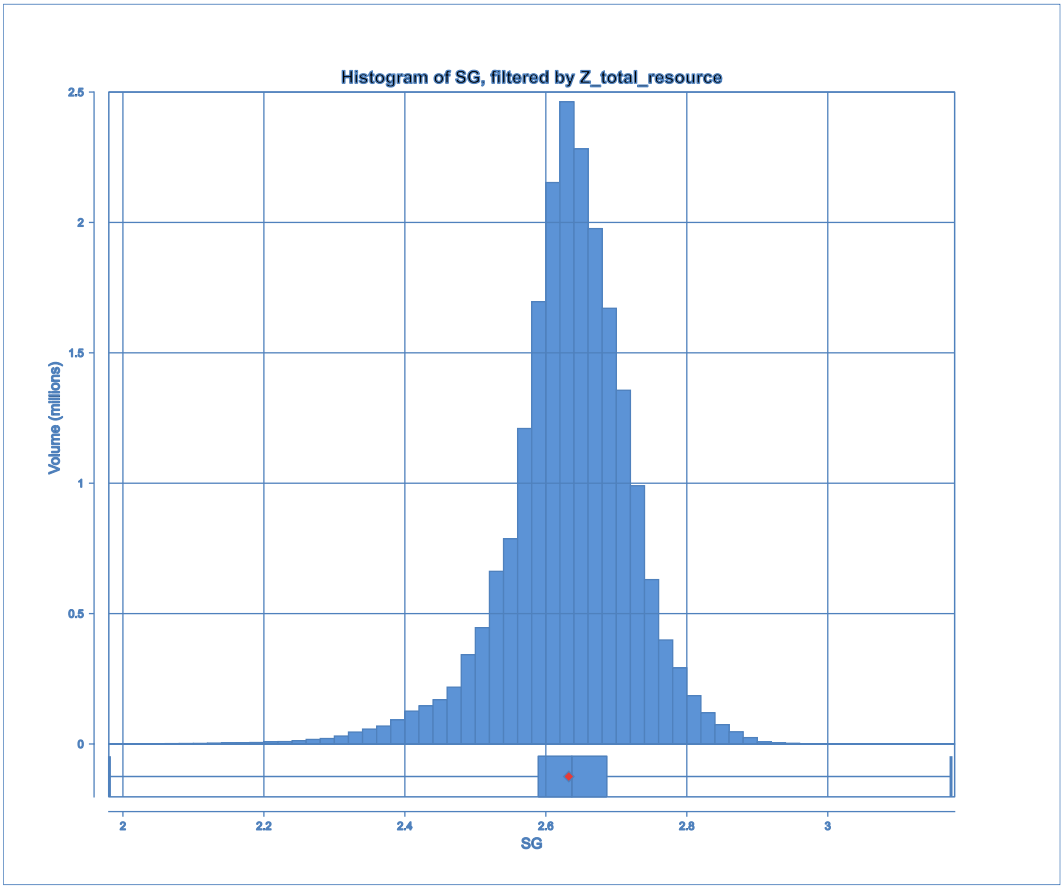


Figure 14-17. Density results histogram for the combined mineralised domains (1-5)

14.7.4 Block model grade interpolation

One key difference between the grade modelling performed by Denny Jones in 2018 and the validation carried out by the QP as part of the current reporting, is the use of the unfolding routine in Datamine®. The approach used by the QP for the current resource estimate involved the construction of structural domains and form interpolants in Leapfrog for each individual domain. The result is, in effect, a series of "best fit" trend surfaces which are then used by the grade interpolation routine to provide each parent block estimate with the appropriate search ellipse orientation for its position within the domain model. This avoids the problem of having to either, sub-divide the domains into separate sub-domains based on their average dip and strike or carrying out a complex unfolding and re-folding exercise.

14.7.5 Validation results

The following **Table 14-1** lists the results of the various validation runs carried out by the Lead Author and compares them directly with the results obtained and reported by Denny Jones [4]. All numbers reported in **Table 14-1** are reported within the whittle optimised pit shell for RF1.

Table 14-1. Validation results comparison with reported Mineral resource estimate and model

COG (g/t)	Cut (g/t)	Density (t/m^3)	Tonnes (Mt)	Grade (g/t)	Gold (M.oz)	Comment
0.5	**30**	**2.63**	**44.1**	**2.16**	**3.07**	**Denny Jones (2018) – Ordinary Krige (Datamine)**
0.5	30	variable	39.7	2.27	2.90	J. Arthur (2023) – Ordinary Krige (leapfrog)
% Diff to 2018 MRE			**-10%**	**+5%**	**-5%**	
0.5	uncut	2.63	41.3	2.37	3.15	J. Arthur (2023) – RBF (leapfrog)
% Diff to 2018 MRE			**-7%**	**+10%**	**+3%**	
0.5	uncut	variable	40.8	2.37	3.11	J. Arthur (2023) – Ordinary Krige (leapfrog)
% Diff to 2018 MRE			**-8%**	**+10%**	**+1%**	

Despite using different methodology and search parameters the overall contained gold is very close to that which was estimated by Denny Jones in 2018. The principal difference appears to be in the tonnage estimates and there are several potential reason for this:

The datamine model used by Denny Jones used a variable block size but this was capped at a 2.5m vertical limit. This means that a proportion of the blocks reporting to the 2018 resource numbers lie partially above the topo surface.

The leapfrog model used for the current resource estimate uses a much smaller sub-cell size (0.375m vertically) which allows for a much better resolution against the topography.

Although the pit parameters used for the validation are roughly the same as those used by Denny Jones in 2018, the QP did not have access to the actual pit shell produced by Denny Jones and therefore a direct comparison cannot be made and some additional differences may be present in the input parameters for the whittle optimisation used in the two exercises. In particular Denny Jones state that the pit shell they used represents a gold price of "approximately" $1500, whereas the validation pit shell used for the reporting by the Lead Author used an exact $1500 gold price. The actual difference is not known and this may have an impact on the reported tonnes and grade as a higher gold price would generally lead to more tonnes at a lower grade.

The principal takeaway from the validation results is that the orebody appears to be robust in terms of the grade variability and continuity and these results, lead the QP to consider the Mineral Resource statement reported below, to be appropriate for the Akyanga Ridge deposit at the current level of investigation and reporting confidence.

14.8 Mineral Resource Reporting

In order to demonstrate that the mineralisation as estimated in the block model has a reasonable expectation of being mined economically in the foreseeable future, a pit optimisation exercise was carried out using the parameters provided in Table 14-2. Notwithstanding the pit optimisation exercise, it has not resulted in an engineered and operational open-pit mine design.

The results of the optimisation indicated that the resource potential was constrained by a pit shell which was used to define the limits of the Mineral Resource.

Table 14-2. Parameters for testing reasonable prospects of economic extraction (all costs in USD)

Parameter	Value
Gold Price ($/oz)	1,500
Royalties (%)	3
Overall Recovery (%)	94
Cut-off grade (g/t)	0.5
Processing + G&A ($/t)	18.00
Mining Dilution (%)	5%
Geotechnical Slope Angles (degrees)	35-45
Average Mining Cost ($/t)	3.00

This optimisation does not demonstrate that the mineralisation is economic, since the exercise is not at the level of a Pre-Feasibility Study ("PFS") and does not conform to the studies required for a PFS.

The resource classification definitions used for this estimate are those published by the CIM and outlined in the form. Classification was applied based on geological confidence, data quality and grade variability. In order for the grade estimate to form a part of the Mineral Resource, the criteria were also set that a block must fall within a pit shell as defined by a Whittle evaluation, thereby demonstrating under those economic assumptions that there is a reasonable chance of economic extraction.

The QP is satisfied that the information which was used to define the Mineral Resource is suitable for the estimation of Mineral Resources. The QP is also satisfied that the geological framework as defined by the geological interpretation is of relatively high confidence, and that any changes to the interpretation following the acquisition of new data would have minimal impact on the Mineral Resource.

14.9 Mineral Resource Statement

As stated in Section 1.2 of NI 43-101, the terms "mineral resource", "inferred mineral resource", "indicated mineral resource" and "measured mineral resource" have the meanings ascribed to those terms by the Canadian Institute of Mining, Metallurgy and Petroleum, as the CIM Definition Standards for Mineral Resources and Mineral Reserves adopted by CIM Council (May 19 2014).

The Mineral Resources are reported above a cut-off grade of 0.5 g/t Au. One potential outcome was provided for the pit optimization. Pit Shell 34-45 was the shell representing a gold price of approximately $1500 per ounce. Pit Shell 35-45 from the Whittle evaluation was chosen to represent the Mineral Resource.

Table 14-3. Akyanga Mineral Resource Statement – Effective Date June 30th 2023.

Category	Tonnes (millions)	Gold Grade (g/t)	Contained Gold (M.oz)
Measured	-	-	-
Indicated	-	-	-
Inferred	40.8	2.37	3.11

1. Mineral Resources which are not Ore Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues. The Mineral Resources in this Technical Report were estimated using CIM Guidelines.
2. An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity
3. Contained metal figures and totals may differ due to rounding of figures.
4. A cut-off grade of 0.5 g/t has been used to report the Mineral Resource

To the extent known, there are currently no environmental, permitting, legal, or marketing issues which would materially affect the estimate of Mineral Resources as outlined above.

Notwithstanding the above, following estimation of the grade model, the estimate was depleted for artisanal and small-scale mining production. It was estimated by an independent geologist that in the total Akyanga Ridge area, some 54,000 oz Au were produced prior to 2013, and that between 5,000 and 6,000 oz Au per annum has been produced since then. This would total 84,000 oz Au. With respect to depletion of the mineral resource, much of the mineralisation mined has either come from areas where there is no drilling and the resource is not modelled, or from the "soft rock" derived from the weathering and break-up of the mineralisation rather than in-situ vein mineralisation. In this model, a value of 50,000 oz Au has been removed from the grade-tonnage report within the pit shell within the confines of the optimised shell used to establish RPEEE. The presence of small scale miners in the area of the currently defined deposit could be considered a small risk to the estimate of Mineral Resources but the amounts estimated to have been extracted by artisanal miners constitute less than 2% of the total estimated gold content. The level of activity is not particularly high and the site inspection highlighted that the current miners are established locals and the site has not been subjected to large influxes of itinerant miners in the past thus meaning that the level of activity is relatively low and constant.

15 MINERAL RESERVE ESTIMATES

The project does not currently constitute an Advanced Property. A Mineral Reserve has not been estimated for Akyanga as of the Effective date of this report.

16 MINING METHODS

The project does not currently constitute an Advanced Property. A Mineral Reserve has not been estimated for Akyanga as of the Effective date of this report.

17 RECOVERY METHODS

The project does not currently constitute an Advanced Property. A Mineral Reserve has not been estimated for Akyanga as of the Effective date of this report.

18 PROJECT INFRASTRUCTURE

The project does not currently constitute an Advanced Property. A Mineral Reserve has not been estimated for Akyanga as of the Effective date of this report.

19 MARKET STUDIES AND CONTRACTS

The project does not currently constitute an Advanced Property. A Mineral Reserve has not been estimated for Akyanga as of the Effective date of this report.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

The project does not currently constitute an Advanced Property. A Mineral Reserve has not been estimated for Akyanga as of the Effective date of this report.

21 CAPITAL AND OPERATING COSTS

The project does not currently constitute an Advanced Property. A Mineral Reserve has not been estimated for Akyanga as of the Effective date of this report.

22 ECONOMIC ANALYSIS

The project does not currently constitute an Advanced Property. A Mineral Reserve has not been estimated for Akyanga as of the Effective date of this report.

23 ADJACENT PROPERTIES

24 OTHER RELEVANT INFORMATION

To the east of Akyanga lies the Akyanga East structure, which has been the subject of some early-stage exploration. Mr Ephraim Masibhera visited the Akyanga East property as part of his site visit, however, the information is not necessarily indicative of the mineralization on the Misisi Gold Project which is the subject of this Technical Report.

The mineralisation at Akyanga East has been explored by drilling at around 200 m centres with up to 500 m spacing at the limits. Mineralisation can be traced along strike for approximately 5500 m, primarily through the artisanal workings, with a gap in the workings through a valley that cuts through the mineralisation and covers the surface with scree. The valley area has not been explored. The mineralisation dips at around 53° to the southwest towards the Akyanga deposit.

Drill intersections cut the mineralisation with holes angled at approximately 70°. The true width of the mineralisation has been estimated using the dip of the mineralisation and the intersection angle of the drillhole. Down-dip length of the mineralisation has been measured from the intersections at 110 m for 100 m below the surface, and 165 m for 150 m below the surface. The mineralisation appears to have an average width of 3.6 m.

There is insufficient data on quantity and grade of the mineralisation at Akyanga East to define a resource.

25 INTERPRETATION AND CONCLUSIONS

The Misisi Gold Project, located in South Kivu Province, DRC, comprises three contiguous mining leases, valid until 2045, covering 133 km² and includes the Akyanga deposit which hosts an Inferred Resource comprising 44.3 million tonnes averaging 2.16 g/t gold containing 3.1 Moz gold. The Company has entered into an agreement to acquire a 73.08% indirect interest in the Misisi Gold Project and has commissioned Dr John Arthur, Mr Dian Page and Mr Ephraim Masibhera to prepare this report describing the project and preparing a Mineral Resource Estimate for the Akyanga deposit.

The Mineral Resource statement reported herein is produced and reported independently by Dr. John Arthur who is the Principal QP for the current report detailed herein. Dr. Arthur, therefore takes responsibility for the accuracy and veracity of the Mineral Resource statement contained within this report.

The Misisi Gold Project is located 250 kilometres south of Bukavu, covering 55 kilometres of strike along the highly prospective Kibara Gold Belt. Within the license area, aside from the main Akyanga deposit a number of exploration targets have been delineated through artisanal mining, soil and rock chip geochemistry, trenching, geophysics and limited diamond drilling including Akyanga East, Lubitchako, and Tulogwe targets.

The geology of the project area is dominated by Proterozoic meta-sediments comprising interbedded quartz muscovite schists, schistose arkoses, muscovite quartzites, and quartzites; pebble conglomerates and foliated mafic intrusion. Gold mineralization is associated with numerous zones of stacked quartz veins that occur sub parallel to bedding. The mineralised zones have strike lengths of up to 2,000 m are generally less than 10 m thick. At the southern end of the Akyanda deposit the vein zones dip moderate to shallowly to the southeast. In the central and northern part the deposit steepens at surface, such that at the northern end the mineralisation is near vertical at surface and flattening out down dip. The depth of weathering is estimated to be approximately 30 m. Mineralisation is structurally and lithologically controlled, in association with local deformation zones, and occurs along north-south striking structures. The current interpretation is that the base of a mafic unit provides a contact with hardness contrast along which there has been structural movement.

Modern exploration was carried out by Anvil Mining from 1998 through 2008, followed by CASA from 2011 to 2018 that included 21,610 metres of diamond drilling in 133 holes, 2,810 metres of reverse circulation drilling in 23 holes, 2,011-line metres of trenching, in addition to metallurgical studies, geophysical surveying, sampling and prospecting. This work generated a large amount of data and reports, including three historical resource estimates and a Scoping Study [1] all reported using the JORC Code.

Possible risks to the Misisi Project and the Akyanga MRE

- Grade and thickness variability along strike and down dip combined with pinching and swelling of the mineralized quartz vein zones could require tightly spaced drilling to advance the resource from Inferred to Indicated and Measured categories.
- Near surface depletion of resource by artisanal mining although this is considered low risk at the current level of artisanal working.
- Politicial risks typically associated with projects located in the Democratic Republic of the Congo.
- The lack of infrastructure, including lack of adequate roading to the project.

Potential opportunities at the Misisi Project and the Akyanga MRE

- The mineral resources at the Akyanga deposit have not been closed off and are open to potential expansion down dip and along strike.
- The Akyanga East target has the potential to advance to resources with further drilling.
- Based on the initial metallurgical testing gold recoveries from gravity and cyanide leaching appear to be high. Detailed metallurgical studies should be conducted.
- 50km strike length of prospective exploitation concessions that have multiple large soil geochemical anomalies, artisanal mining, with limited trenching and a very limited drilling offer significant chance for further discovery.

26 RECOMMENDATIONS

The following table provides a breakdown of what is considered to be appropriate next phase of work for the Misisi Gold Project.

It is recommended that the focus should be on bringing the Mineral Resource at Akyanga up to a level of confidence such that detailed mining studies can be considered to contribute to a Pre-feasibility study.

The following table outlines the proposed budget for an initial phase of infill drilling for 26 holes with an average depth of 154m and totalling some 4000m. The aim of this phase would be to bring the confidence category uo to at least the Indicated category for the starter pit area. It is likely that this smaller number of metres could be drilled to get a starter pit planned to Scoping/PEA level of study

A further 57 holes are recommended for infill drilling along the strike and dip extents of the current mineral resource outline, to include confirmatory drilling to test the strike extension to the south. The drilling would be phased. This is an effective way of adding value to the project. In parallel it is recommended that a wide and regularly spaced drilling campaign be planned for the adjoining Akyanga East deposit as additional Resources from here would add to the economics of a centralised plant and infrastructure at Akyanga. Only the initial starter pit drilling is budgeted at this stage.

Table 26-1. Estimated Cost for proposed next phase of work at Akyanga.

Description	Units	Cost (USD$)
Infill drilling Akyanga (Starter pit only)	4000m	1,000,000
Evaluation of exploration targets		500,000
Updated metallurgical studies		50,000

Preparation of PEA technical report	100,000
Sub-total	**1,650,000**
Contingency (7.5%)	123,750
Total	**1,773,750**

27 CITATIONS

[1] MDM Engineering, “Project No: 1363S1 - Misisi, DRC Akyanga Deposit Project Scoping Feasibility Study Independent Technical Report,” 2014.

[2] Denny Jones Pty Ltd, “ARC Minerals - Summary of the Akyanga Resource Estimate 2018-06,” 2018.

[3] African Mining Consultants Litd, “Technical Report – Mineral Resource Estimate Update - Akyanga Gold Deposit - May 2017,” 2017.

[4] Wardrop, “Technical report for the Fizi Project, South Kivu Province, Democratic Republic of Congo, April 2012,” 2012.

[5] D. D. Vermaakt, “Akyanga Ridge – Modelling and Resource Estimation July 2016,” 2016.

"John Arthur"

Dr John Arthur
CGeol FGS (1005744)
August 1, 2023

"Ephraim Masibhera"

Mr Ephraim Masibhera
South African Council for Natural Scientific Professionals, 200093/12
August 1, 2023

"Dian Heinrich Page"

Mr Dian Heinrich Page
South African Council for Natural Scientific Professionals, 008281/13
August 1, 2023