ASANTE GOLD CORPORATION

CSE: ASE, FSE: 1A9, U.S. OTC: ASGOF

NI43-101 Technical Report
KUBI GOLD PROJECT
Ghana, West Africa

Effective Date: 11th March, 2022

Signature Date: 29th August 2022

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Issued by: **dMb Management Services**
Doc ref: KUBI GOLD PROJECT 2022
Date: 29th August, 2022

Number of copies: 2

DATE AND SIGNATURE PAGE

This Report titled - **"NI43-101 Technical Report, Kubi Gold Project, Ghana, West Africa"** - was prepared on behalf of Asante Gold Corporation Limited (CSE:ASE; FSE:1A9; U.S. OTC:ASGOF). The Report is compliant with the National Instrument 43-101 and Form 43-101F1. The effective date is 11th March, 2022.

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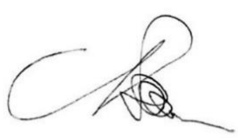

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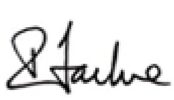

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1. SUMMARY

1.1 Introduction

This Preliminary Economic Assessment ("PEA") is submitted in conjunction with a National Instrument 43-101F1 ("NI43-101") Technical Report of the Kubi Gold Project ("Kubi" or the "Project") 100% owned by Kubi Gold (Barbados) Limited ("KGBL"). Asante Gold Corporation (CSE:ASE/Frankfurt : 1A9) ("Asante" or "the Company") has an Asset Purchase and Sale Agreement with Goknet Mining Company Limited ("Goknet"). This Technical Report has been prepared on behalf of Asante, a gold exploration and development company listed on the Canadian Securities and Frankfurt Stock Exchanges. This Technical Report has been prepared in accordance with the terminology, definitions and guidelines of CIM (2014) and the National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101).

The Company has recently announced plans to co-list on the Ghana Stock Exchange. On 9th August, 2016 Asante Gold Corporation entered into the Final Asset Purchase and Sale Agreement regarding the transfer of Goknet's Kubi Mining Leases on terms substantially contained in the Kubi Definitive Option Agreement dated 28th February, 2015. In addition, the Company will acquire Goknet's interest in eight Prospecting Licences; two of which are adjoining to the west of the Kubi Mining Lease. The Kubi project is situated in Ghana, West Africa.

Ghana is a West African country approximately 600km north of the equator on the Gulf of Guinea. It is bordered by Burkina Faso to the north, the Ivory Coast to the west and Togo to the east (Figure 1). Ghana has an area of approximately 239,000km² and an estimated population of 26 million people. English is both the official and commercial language while Twi is the most widely spoken language.

The Project is located 8km north of the town of Dunkwa in the Adansi South District of the Ashanti Region of Ghana approximately 170km from the capital Accra and 80km from the regional capital of Kumasi. The Company estimates that over US$30 million in exploration and development work has occurred at Kubi since the mid 1980's. Two small open pits were developed in 2006 by Anglogold Ashanti yielding approximately 59Koz of gold at an estimated 3.65g/t.

An NI43-101 Technical Report and compliant Mineral Resource Estimate ("MRE") for the Kubi Main gold deposit was completed in December 2010 by SEMS Exploration Services Ltd of Accra, Ghana ("SEMS"). An updated Technical Report and MRE, also by SEMS, was submitted in October 2014 and filed in December 2014 on www.sedar.com. Relevant sections of the SEMS 2014 report have been incorporated into this Technical Report where no updated information or material changes to the Project have been supplied or recorded.

This Technical Report is an update of the SEMS NI43-101 Technical Report (2014) but now includes a proposal for early underground development for exploration purposes and a PEA which demonstrates the potential viability of underground mining of the Kubi Main mineral deposit as defined in the SEMS 2014 MRE. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. This PEA is preliminary in nature and includes Inferred Mineral Resources that are considered too speculative geologically to have economic parameters applied to enable a mineral reserve category classification. There is no certainty that the PEA presented will be realized. No mining operations have continued since the 2014 SEMS Technical Report and no mining activity is currently in progress at Kubi.

The PEA outcome, covered in detail in Item 23, is very supportive of the proposed preliminary development plans to support further exploration and reports the following positive metrics:

- Processed ROM - 1.55Mt @ 4.19g/t Au for 6,510kg Au
- Process recovery - 92.5% recovery yielding 193,600oz Au at a recovered grade of 3.87g/t Au
- Revenue - at a gold price of US$1,750 and payability of 85% yielding US$288 million
- Capital cost - total project and sustaining capital cost of US$117.40 million
- Operating cost - US$99.92 million giving an AISC of US$911/oz
- Post tax NPV of US$30.70 million and Project IRR of 25% with a payback of peak funding in 2 years.

In addition, a total of approximately 13,000m of drilling in up to 120 holes is planned for the primary aim of delineating the portion of the resources that can be reached by the planned development from the 60mL elevation to the 180mL elevation. A US$2 million budget has been allocated to this program.

The report also includes an update on metallurgical test work results and the focused exploration programs planned and still active by the Company.

On funding, Asante will apply to renew the Temporary Mining Operating Permit to initiate an underground mine development program which will include exploration drilling, underground access development and trial mining, detailed project engineering and Life of Mine ("LoM") scheduling with associated operating plans and economic analysis. This will upgrade the resources, target and outline higher grade stopes for initial mining (targeting +8.0 g/t Au to 30.0

g/t Au areas indicated from drilling), allow for the preparation of a detailed mining schedule and operational plan while finalising full mining permit requirements. At the present time it is planned to toll mill the mineralised material off site.

The Government of Ghana will gain a measure of tax, royalty, and dividend income, and benefit from added economic activity within the region from the advancement of the Kubi Project. In addition, the prioritising of local employment, local administrations and traditional authorities will also result in tax and royalty income. Local authorities and stakeholder populations will be actively engaged and become recipients of targeted social programs.

Mr M Begg of dMb Management Services (Pty) Ltd (South Africa) and Messrs C Brown and I Jackson associates of Bara Consulting (Pty) Ltd (South Africa), collectively referred to as the Authors, were commissioned by Asante in January 2022 to compile the PEA and Technical Report as recognised Qualified Persons.

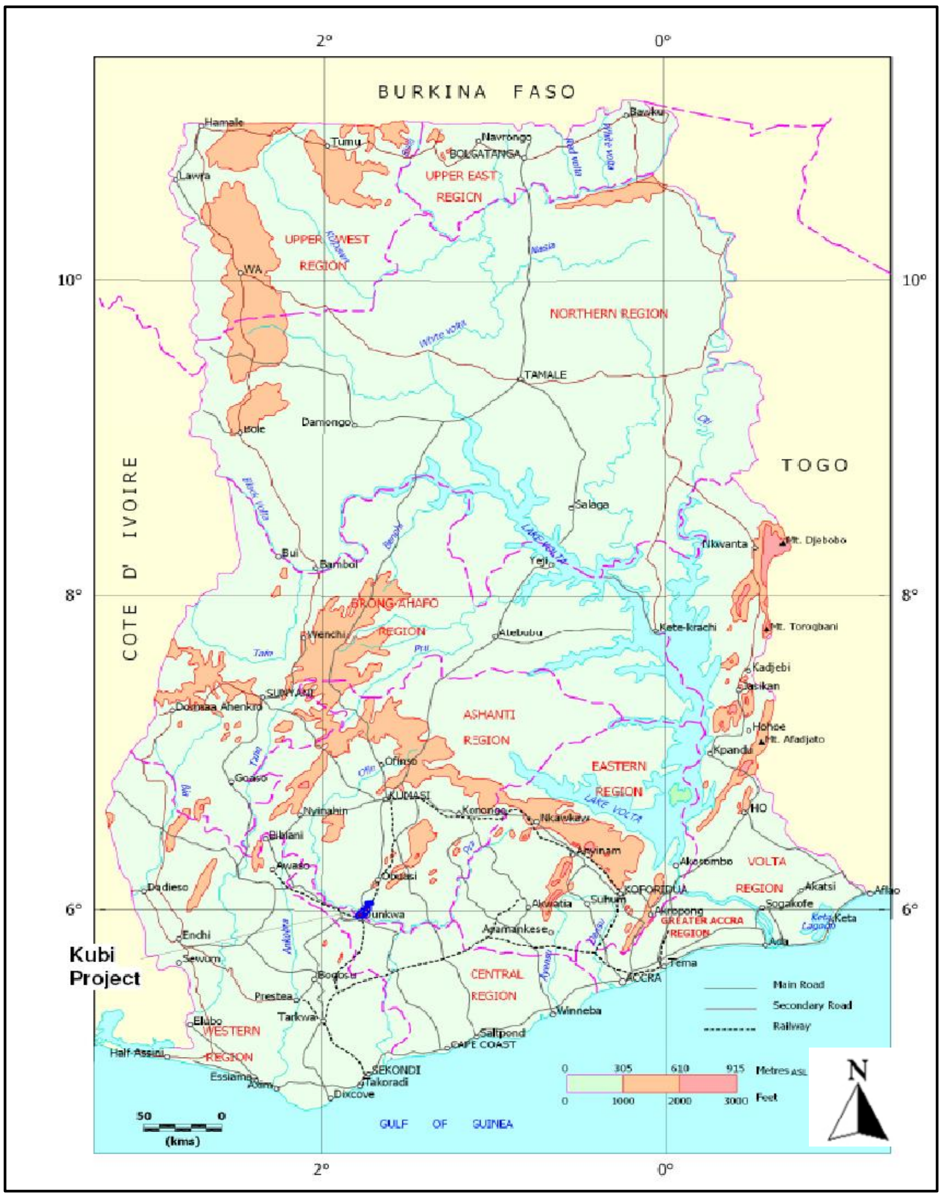


Figure 1: Location of Kubi Project, Ghana (SEMS 2014)

1.2 Property Description and Ownership

The Kubi Property is held under a Mining Lease granted by the Republic of Ghana. AngloGold Ashanti ("AGA") assigned the original leases back to Kubi Gold (Barbados) Limited (formerly known as Nevsun Resources Ghana Limited) ("Nevsun") after completing its mining of the oxide resources, by open pit, on 19th September 2007. A twenty-year extension was granted on the 18th September, 2008 which expires on the 17th September, 2028. Goknet acquired the holding company in 2014; and Asante Gold and Goknet entered into an Asset Purchase and Sale agreement in December 2016. The Mining lease has been confirmed by the Minerals Commission of Ghana and is in good standing. Land Registry number is 70/2008, File number is PL.3/30/Vol.3.

The Property boundaries are defined by a series of 'pillar points' in Ghana National Grid Degrees Longitude and Latitude, which are shown in the Mining Lease maps and coordinate tables included in later sections.

Dunkwa is the closest major town to the Project, falling within the southern portion of the Dunkwa Gyimigya Prospecting Licence. The Supuma Shelter Belt Forest Reserve traverses the northern end of the Kubi Mining Lease and covers approximately 10% of the total Kubi Gold Project landholding (Figure 2).

The Offin is a primary order perennial river which meanders eastward from the confluence demarcating the southern boundary of the concession. It receives all flows which originate on the property. About 25km to the east, it joins with the major Pra River which flows southward into the Gulf of Guinea in the Atlantic Ocean. Locally, the Apetisu and Sukuma are main streams which drain off the Kubi Hills. Various villages, including Kubi and Kubi Kwanto, rely on the Sukuma for both drinking and domestic purposes as an alternative to the wells during the rainy season. The Apetisu stream and its tributaries are sourced amongst the northern flanks and flow north into the main Gymini catchment. The stream is highly seasonal and dries immediately after the rains.

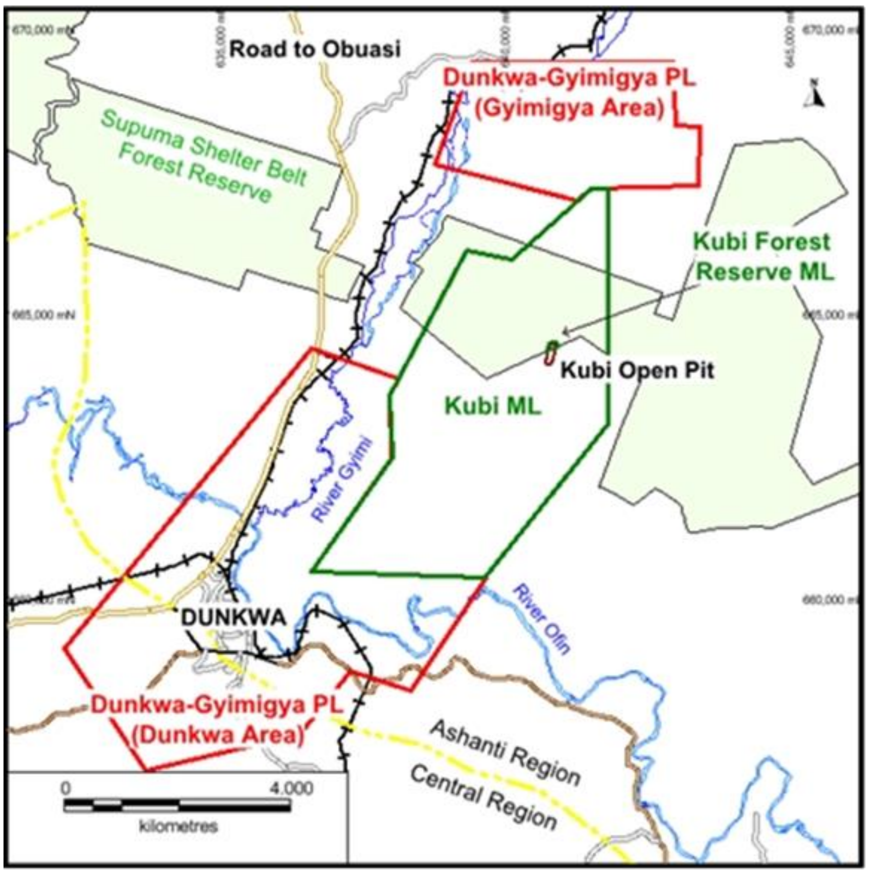


Figure 2: Kubi Gold Project, showing both Mining Leases and the Dunkwa Gyimigya Prospecting Licence UTM 30N, WGS84 (SEMS 2014)

The Kubi Gold Project lies on the western margin of the Ashanti Gold Belt and is bordered to the north by the AGA's Obuasi Mining Lease and to the southwest by Perseus Mining Limited's Edikan Gold Mine at Ayanfuri.

On advice from Asante, under the current ownership arrangement and status of holdings, there is no environmental liability held over Asante Gold for any of the KGBL concessions relating to the Kubi Gold Project area, with the exception of project works by the Company to date.

The farm that covered the southern part of the deposit was purchased by KGBL to allow for the previous mining, and as such minimal additional compensation may have to be paid to re-new mining activities. Further compensation will be made should the final mine design impact local farmers though present plans restrict the footprint to presently compensated and purchased land. No villages or settlements require relocation.

1.3 Geology and Mineralisation

On a regional scale, the Project is located on the eastern limb of the West African Precambrian Shield which is a cratonised complex of Archaean basement. The main components are Proterozoic greenstone belts, granitoids and post-orogenic sediments that extend through Ghana, Burkina Faso, Guinea and the Ivory Coast.

The geology of Ghana is dominated by metavolcanic paleo-Proterozoic Birimian Supergroup (2.25 – 2.06 billion years ago) sequences overlain unconformably by the predominantly coarse-grained clastic sediments of the Tarkwaian Group (2.12 - 2.14 billion years) in the central-west and northern parts of the country. Clastic shallow water sediments of the neo-Proterozoic Volta Basin cover the northeast of the country. A small strip of Paleozoic and Cretaceous to Tertiary sediments occur along the coast and in the extreme southeast of the country.

In Ghana, the paleo-Proterozoic Birimian terrains consist of five linear northeast-trending volcanic belts with intervening sedimentary basins. The volcanic belts have been folded by multiple deformation events and are generally 15-40km wide and extend for several hundred kilometres laterally (Leube, et al., 1990). The Kumasi Basin is 90km wide and lies between the Ashanti Belt to the south-east and the Sefwi Belt to the north-west. The combined Sefwi and Ashanti volcanic belts and intervening Kumasi Basin host most of the gold endowment in Ghana.

The Kubi Project is located on the western margin of the Ashanti Belt, approximately 15km southwest of the Obuasi gold mine. The explored deposit is situated at the intersection of a regional NE-SW trending shear zone, which represents a reactivated thrust fault system that forms the Birimian/Tarkwaian contact, and a major N-S trending basement fault.

Gold mineralisation at Kubi occurs in a distinct and laterally persistent 1m-15m thick rock unit within the Kubi Shear Zone ("KSZ") characterised by a dense concentration of garnets and amphibole development. This garnetiferous horizon occurs within Birimian metasediments close to the Birimian/Tarkwaian contact. This garnetiferous horizon is host to approximately 85% of the Kubi Main Zone Mineral Resource and contains fine grained gold associated with minor (5%-15%) pyrite and pyrrhotite as well as some coarser visible gold which is associated with relatively narrow quartz veins. The garnet rich units can be traced for two kilometres along a consistent 020° strike, and with a steep westerly dip of 75°-85°. It is open to extension at a depth of 700m.

1.4 Status of Exploration, Development and Operations

Most exploration work within the Kubi Project was completed by Nevsun between 1997 and 1998. During this time over 66,000m of RAB, RC and diamond core drilling was completed and almost 14km of trenches excavated.

PMI Gold ("PMI") commenced exploration activities on the Kubi Project in 2009. The objective of PMI's work was to further assess target areas outside the limits of the defined mineral resource. Exploration work included ground VLF-EM and Induced Polarisation surveys as well as an airborne magnetic and radiometric survey. PMI completed soil and auger geochemical sampling programs on selected parts of the Kubi Project followed by 2,559m of diamond drilling in 22 holes.

A total of 66,312m of diamond core drilling in 226 drill holes, within the Kubi Main Zone, were used for the MRE published by SEMS in December 2010.

Between 2011 and 2013 PMI continued to explore the Kubi Project completing 1,627m, comprising 38 diamond core drill holes, 283 air core drill holes and 1,306 auger drill holes. PMI also excavated three trenches and one set of channel samples.

Asante has completed additional trenching, ground geophysics and resource infill drilling and deep resource expansion exploration programs as part of an ongoing exploration strategy over the Kubi Main Zone and adjacent targets to the south and east. The objective, of up to 7,000m of RC and diamond drilling, is to fill in gaps in the current Kubi Main Zone NI43-101 (SEMS, 2014) Resource Model.

On a Project property scale, SI Geophysics (Ghana) were contracted to conduct ground and downhole EM surveys on 100m x 25m grid spacing. A total of 42,275km of local station Ground EM survey has been completed. A total of 18 diamond drill holes (2,959m) have been completed at specific points along the Kubi strike to extend the mineralisation to depth guided by the recent results of the ground EM survey. In addition, closed space drilling to the north is planned to evaluate additional near surface oxide potential.

The Company contracted Metso Outotec in 2020 to carry out metallurgical test work on three composite drill core samples from the Kubi Main Zone. The positive results of this test work are discussed in Item 13.

All this additional information, including all the data derived from the program outlined in this Technical report is completed, will form part of the follow-up Mineral Resource update and Technical Report. The current exploration model suggests that the Kubi Main Zone mineralisation plunges near vertical to more than 3km in depth within the KSZ, a part of the 300km long and highly mineralised Ashanti Shear Zone.

A Garnet Zone equivalent has been intersected with associated grade in boreholes drilled at Kubi South (3400N Local, 1.8km to the south), and at the new “513 Zone '' 1.2km to the south-east. The zone is hosted in a vertical to moderately east-dipping garnetized metagabbro with similarities to the garnet zone that hosts the gold mineralisation at Kubi Main. Best previous drill results are 4.8m at 3.76g/t Au from 85m, 8m at 3.68g/t Au from 64m, and 1.0m at 15.3g/t Au from 66m. Mineralisation consists of visible gold, minor pyrrhotite and arsenopyrite.

No development or other operations are being conducted at this stage on the Project.

1.5 Mineral Resource Estimates (MREs)

An independent MRE for the Kubi Project was completed in November 2010 by SEMS Exploration Services and again reported in the Updated NI43-101 Technical Report submitted by SEMS in 2014. Reported NI43-101 compliant Measured and Indicated Mineral Resources include 233,000oz Au contained in 1.32Mt at a grade of 5.48g/t Au. In addition, Inferred Mineral Resources are 115,000oz Au in 0.67Mt with an average grade of 5.31g/t Au (SEMS 2014). The Inferred Mineral Resources are geologically speculative and not included in Mineral Reserve estimates. In the 66,312m of diamond core drilling from 226 drill holes used for the Kubi Main Zone MRE, there were 83 drill core assays greater than 10.0g/t Au and ranging to 98.1g/t Au, highlighting the high-grade potential of the mineralising fluids.

The modelling of gold mineralisation for this MRE at that time was carried out on the assumption that narrow vein underground mining methods would ultimately be employed as the intended extraction method. The 2010 MRE, therefore, significantly reduced the tonnes of previous open pit guided Mineral Resource estimates but resulted in an increased gold grade. The MRE remains relevant for the proposed mining operation.

Asante is intending to access the Kubi Main mineralised zone using a long hole open stoping underground mining method and has therefore retained the MRE produced by SEMS in 2010 for the purposes of this Technical Report. All reference and information pertinent to Mineral Resources is therefore derived directly from the SEMS Report.

Table 1 below summarises the MRE at 2.0g/t Au block cut-off grades within the Kubi Main Zone.

	TONNAGE Mt	GRADE g/t Au	GOLD oz
Measured & Indicated Resource			
Measured	0.66	5.30	112,000
Indicated	0.66	5.65	121,000
Total M&I	**1.32**	**5.48**	**233,000**
Inferred Resource			
Inferred	0.67	5.31	115,000

Table 1: Identified Mineral Resource (2.0 g/t Au cut-off) November 2010 for the Kubi Gold Project (SEMS 2010)

MATERIAL TYPE	TONNAGE Mt	GRADE g/t Au	GOLD oz
Oxide	0.04	4.37	5,000
Fresh Rock	1.29	5.50	228,000
Measured & Indicated	**1.32**	**5.46**	**233,000**

Table 2: Mineral Resource Estimates by Material Type (2.0 g/t Au cut-off) November 2010 (SEMS 2010)

1.6 Mineral Reserve Estimates (MRev)

No Mineral Reserves are estimated for the Kubi project. The next phase of development for this Project is the detailed mine design and associated economic studies. The project presented is based on Inferred Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorised as mineral reserves and there is no certainty that the PEA will be realised.

The underground development and exploration drilling program proposed is designed to augment and upgrade the Mineral Resource to support future Reserve Estimation and outline the high-grade areas which will be priority targets for initial mining. This Technical Report submission indicates that if the expected resources, grade outlines, north plunging mineralised chutes, as well as the expected metallurgical behaviour are confirmed the project will be of significant economic interest.

1.7 Mining

The Kubi Gold Mine open pit period was operated by Ashanti Goldfields and AngloGold Ashanti in two phases between 1999 and 2007. The Kubi open pit is reported to have produced approximately 60,000oz of gold from 500,000t of oxidized mineralised material grading 3.65g/t Au.

No mining operations are currently in progress however this Technical Report outlines:

1. The early development to support the proposed underground exploration program including the following:

    - carrying out portal and decline ramp development,
    - primary hanging wall waste and reef drive development,
    - bulk sampling and trial mining
    - underground exploration drilling to define and expand current reserves and resources,
    - geotechnical studies and further metallurgical test work.

2. A preliminary mining plan for extraction of the current Resource which includes:

    - Additional waste and ROM development
    - Stoping outline and schedule
    - Capital and cost estimates for the mining operation.

1.8 Diamond Drilling Exploration

One of the main objects of the underground exploration program is to “drill off” high grade resources within the SEMS Indicated and Inferred Resource at nominal 25m centres, where possible from the access provided. This can be done much more efficiently and accurately from underground than from surface.

A total of 26 diamond drill stations are presently planned off the exploration decline on 16 sections, from local section 5650N to section 6025N. 13,500m of NQ diamond drill holes from underground stations off the decline are planned, in 120 drill holes. An additional 3,500m in 15 longer holes targeting lower levels could also be drilled contingent on results, timing, and requirements. Geotechnical holes will also be drilled to determine mining panel sizes, pillar requirements, the nature of the hanging wall, and the suitability of the chosen sites for the portal, vent raise collar, and crosscuts. A US$2 million budget has been allocated to this exploration program.

1.9 Environment and Social Impact

The Kubi project has already seen mining activities in the near past, via two small open pits by Ashanti Goldfields and later AngloGold Ashanti (AGA). As such it is in a "brownfield" situation.

Environmental studies, including a fauna and flora assessment, were carried out in 1998 for NS Ghana by SGS Environmental. Environmental Impact Statements were filed by AGC in 1999, 2002 and 2004. Monitoring and baseline measurements of air quality and ambient noise levels were carried out by AGC in 1999, 2000 and 2002. AGC also continued baseline water quality monitoring.

A sampling and measurements program to up-date the extensive historical baseline sampling results is recommended. In order to meet the requirements for the applications for a new scoping report and EIA, EIS and EMP documents that will be a prerequisite to start proposed underground mining and exploration operations.

A socio-economic survey was carried out by PMI/Adansi in November 2007. This will be updated, and the stakeholder communities formally re-engaged with documented meetings and discourse, during the update activities by the sociological-environmental consultant / contractor.

1.10 Infrastructure

The mining method has changed from surface pit to underground mining. A sanitary landfill and a septic system together with equipment maintenance, warehousing, magazines, offices and a change house are to be built on the property for the exploration mining program phase. Previous Impact Statements, other than baseline data, are obsolete but will be guided by the same principles: minimise impact to the environment and the local population in the short and long term.

Other infrastructure to support the project will include an upgrade to the access road, perimeter fencing, diesel generated power, water management and waste management facilities. An 11kV line has been extended to within 1km of the site from the main highway-Kubi junction.

1.11 Conclusions and Recommendations

The Authors have identified the following as the main project risks:

- Mineral Resource confidence – the study is largely based on Inferred Resources which inherently introduces geological risk
- Mine Development – the decline development may be affected by ground conditions near to surface
- Haulage - This toll treatment arrangement will require haulage of material over public roads.
- Processing – the study has assumed toll treatment at a nearby plant but no firm agreements are currently in place that include terms and conditions with regard to this decision.
- Economic analysis – the study is based on preliminary technical studies and includes Inferred Resources and is therefore at a low confidence level.

The plan is based on the completion of the underground development, exploration and trial mining as proposed to address the risks highlighted above.

The December 2010 MRE provides a clear guide for future mineral deposit reserve determination and the scoping of an underground mine plan which is the focus of this Technical Report update.

The Authors accept the retaining of the published October 2010 MRE produced by SEMS for the purposes of this Technical Report as no further work has been complete to materially change this estimate and it remains relevant to the scope of work being presented by the Company. It is accepted through review of the SEMS Technical reports that the appropriate assumptions and logic were applied to complement the intended underground mining methods by Goknet, and now similarly by Asante to exploit the Kubi Main Zone and the MRE therefore remains relevant and accurate.

The mining method and scheduling to be applied to the Kubi Project is fit for purpose and relevant to the project assumptions and interpreted geological and mineralisation characteristics. It is outlined in more detail in later sections.

Exploration activities, and the results thereof, undertaken by Asante since August 2016 and which are still ongoing, have not been included to augment the 2010 MRE for the purpose of this Report. The QP is confident that there has been no material changes arising from the ongoing exploration in and around the Kubi Mineralised deposit that will affect the current Resource Estimation parameters and outcomes used for the purpose of this PEA and Technical Report. The intersections in recent drilling within other areas of the property encourage further work and will be included in future Technical Document submissions.

The PEA presented fully supports the intention of the Company to carry out underground development with two main objectives, namely, focused exploration to improve the geological knowledge and resource estimates and preliminary mining activities in anticipation of a longer-term sustainable mining project.

The Authors have recommended a number of workstreams to progress the Kubi project which include:

- Permitting – a list of required permits and timelines for applications.
- Geology and Resources – resource drilling needs to commence as soon as possible from the underground development to upgrade Resource definition and confidence.
- Geotechnical – detailed geotechnical studies need to be completed to support the proposed mining designs.
- Processing – finalise the decision of toll treatment and implications thereof, including a trade-off study to investigate the construction of an on site processing plant.
- Infrastructure – hydrological study must be completed to identify adequate water supply.
- Environmental and Social – base line flora, fauna and water surveys should be updated and a comprehensive social engagement process with local communities continued.
- Following the completion of an updated MRE, a PFS should be commenced. This should include trade off studies on owner milling vs toll treatment, owner mining vs contractor.

2. INTRODUCTION

2.1 Overview

This report is a National Instrument 43-101 (NI 43-101) Technical Report on the Kubi Gold Project ("the Project") 100% owned by Kubi Gold (Barbados) Limited ("KGBL"). The Report is on behalf of Asante Gold Corporation ("AGC" or the "the Company") having entered into a Final Asset Purchase Agreement to acquire all the interests of Goknet. The mining and exploration concessions are owned 100% by KGBL and are located just south of AGA's Obuasi Mine in the Adansi South District, Ashanti Region, Ghana. The Ghanaian Government carries a 10% free carry.

This Technical Report supersedes the following historic reports:

- Kubi Gold Project, NI43-101 Technical Report (NI43-101 20th October, 2014) prepared by SEMS Exploration Services, Ghana
- Kubi Project Mineral Assets (August 2007) prepared by Golder Associates Africa (Pty) Ltd, South Africa.

The Project had an updated NI43-101 Technical Report (SEMS, NI43-101 20th October, 2014) which included a JORC compliant MRE completed in 2010 of the Kubi Main Deposit:

- Measured Resource of 0.66Mt @ 5.30g/t Au for 112,000oz
- Indicated Resources of 0.66Mt @ 5.65g/t Au for 121,000oz
- Inferred Resources of 0.67Mt @ 5.31g/t Au for 115,000oz.

In January 2022 the Authors were commissioned by Asante to complete a PEA and update the Technical Report for the Kubi project. The Report has been completed in accordance with National Instrument 43-101 (NI43-101 – 30th June, 2011), companion policy NI43-101CP and Form 43-101F1. The MRE used in this Technical Report remains unchanged from that previously reported in the NI43-101F1 Technical Report by SEMS (20th October, 2014). No Mineral Reserves are defined.

The Technical Report update was commissioned by Asante to support the planned underground mineral deposit access and reef drive development with resource expansion exploration drilling proposed for the Kubi Project. Therefore, the focus of this updated Technical Report is to include a PEA level mining development and exploration plan for the Kubi deposit not previously reported in the SEMS 2014 Report. Updated exploration programs and results are also included.

Asante wishes to initiate underground development below the historic Kubi Main Zone open pits to achieve the following outcomes in support of the commencement of full mining operations:

- continue with focused resource definition exploration,
- initiate primary underground reserve development,
- investigational bulk sampling and trial mining,
- further relevant geo-technical and metallurgical studies.

This is assuming that the Company has applied for and received the necessary regulatory permits required by Ghanaian law to proceed with the plans proposed and presented. Applications for such permissions are in progress.

This Technical Report presents the PEA for the preliminary development plan, the underground exploration program and introduces schedules and economics that will form the basis for long-term mining and production. A final schedule and life of mine plan will be developed thereafter to a higher level of confidence, augmented by new data collected from the underground bulk sampling, trial mining, current and proposed exploration drill program and the additional metallurgical and geotechnical studies.

Kubi Gold is planning a 4m wide x 4.5m high exploration decline at -9% grade on its Kubi Main Gold Deposit. It is proposed to develop crosscuts and exploration "ore" drives on three near surface levels to study the nature of the mineralisation, provide metallurgical samples and a test bulk sample for milling. The PEA presented carries development deeper in anticipation of positive exploration drilling outcomes to facilitate continuous mining operations. Therefore, a total of 16,078m of ROM development is planned at 3.7g/t Au delivering 1,529kg Au. The program presented also includes 1,144,000t of stoping at 4.4g/t Au for 4,981kg Au. Direct trucking of ROM from the mine site to be sold at the toll mill gate, is currently envisaged. The project presented is based on Inferred Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorised as mineral reserves and there is no certainty that the PEA will be realised.

At the present time it is planned to toll mill the run of mine mineralised material off site. The impacts and permitting related to truck haulage of mine production will need to be studied and mitigated. The environmental impact of constructing and operating a mill and tailings storage facility with associated decant ponds will not require assessment at this time unless plans are changed. Provision is being made in the infrastructure plan to leave adequate space for a compact mill, thickener, and tailings management area, should a mill on site be decided upon in the future. The required geotechnical, engineering, and environmental studies will be carried out in a timely manner should an onsite mill be planned in the future.

2.2 Authors & Qualified Persons

The principal Authors of this Technical Report are:

- Michael Begg (South Africa) a qualified geologist and mining professional with over 25 years' experience in exploration and mining. Director/Owner of **dMb Management Services Pty Ltd**
- Messrs Clive Brown (South Africa), Dominic Claridge and Ian Jackson (United Kingdom) all of whom are either qualified mining and metallurgical engineers with extensive experience in open pit and underground mining operations and design. They are all in the employ of Bara **Consulting Pty Ltd** (South Africa).

Additional information was compiled by relevant associated professionals from Bara Consulting in some subsections of the Report.

None of the Authors or Qualified Persons (”QP's”) involved in the compilation of this Report hold any interest in Asante Gold, its associated parties, or in any of the mineral properties which are the subject of this Technical Report.

The nominated list of Qualified Persons involved in the compilation of this Report are shown in Table 3 below.

Qualified Person	Company	Site Visit (Dates)	Item/Section
Michael Begg	dMb Management Services Pty Ltd	04/02/2022-12/02/2022	1-12 14 23-27
Clive Brown	Bara Consulting	Nil	15-16 18-22 24-27
Ian Jackson	Bara Consulting	NIL	13 & 17

Table 3: Qualified Persons, Companies, Site visits and Relevant Document Items

2.3 Issuer - Asante Gold Corporation

The Kubi Project is managed and operated by Asante Gold Corporation. The Company is a gold mining and exploration company listed on the Canadian Stock Exchange (CSE: ASE), Frankfurt Stock Exchange (FSE: 1A9) and the United States (OTC: ASGOF) with headquarters at 680-1066 West Hastings Street, Vancouver, British Columbia.

As at 9th February, 2022 the following is noted:

1. Asante Gold issued share ownership comprises management (15.1%), strategic (39.2%), institutional (5.0%), retail (40.7%) with 253,691,381 shares issued (334,076,946 fully diluted).
2. The top ten shareholders are: Fujairah Holding LLC (19.6%), Emiral Resources (19.6%), Nadia Abdul-Aziz (5.1%), MIA Investments Ltd. (4.8%), Goknet Mining Company (3.5%), EGH Arlep Anwia Bokazo Community (2.8%), Razak Awudulai (2.6%), Notre Dame Investments (2.6%), Delbrook Resources Opportunity Fund (2.5%) and Mohammad Aminu (2.1%)

The organisational diagram below indicates the current asset structure of the Company as at February 2022.

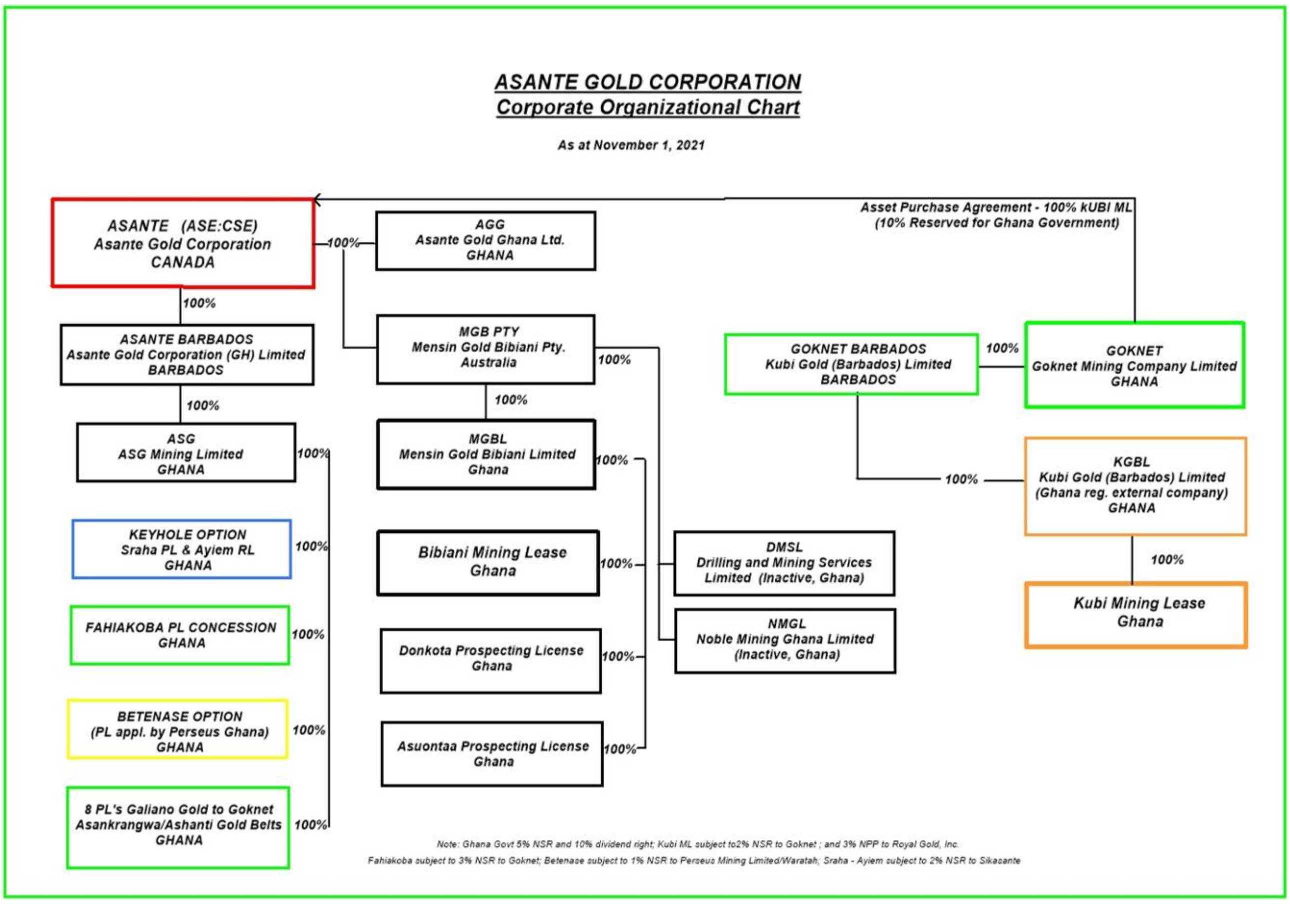


Figure 3: Asante-Kubi Asset Organisational Chart

Asante holds a strategic land position within the region surrounded by world class gold producers. It has interest in +90km² along strike of Anglogold's Obuasi Mine (Measured and Indicated Mineral Resource 22.37Moz, www.anglogold ashanti.com: R&R 2020, Mineral Resource and Ore Reserve Report as at 31st December, 2020) and Perseus' Edikan mine (Measured and Indicated Mineral Resource of 2.57Moz: www.perseusmining.com). It also has interest in +200km² along strike of Asanko Gold Incorporated; Esaase and Obotan operating mines.

The Qualified Person has not attempted to assess or verify the information available in the public space regarding the properties that surround the land holding under licence to Asante and therefore this information is by no means indicative of the mineralisation on the properties mentioned or described in this Technical Report.

Figure 4 below illustrates the various interests that Asante is investigating at this current time. It must be noted that some prospecting licences are subject to final transfer, royalties and Governmental approvals.

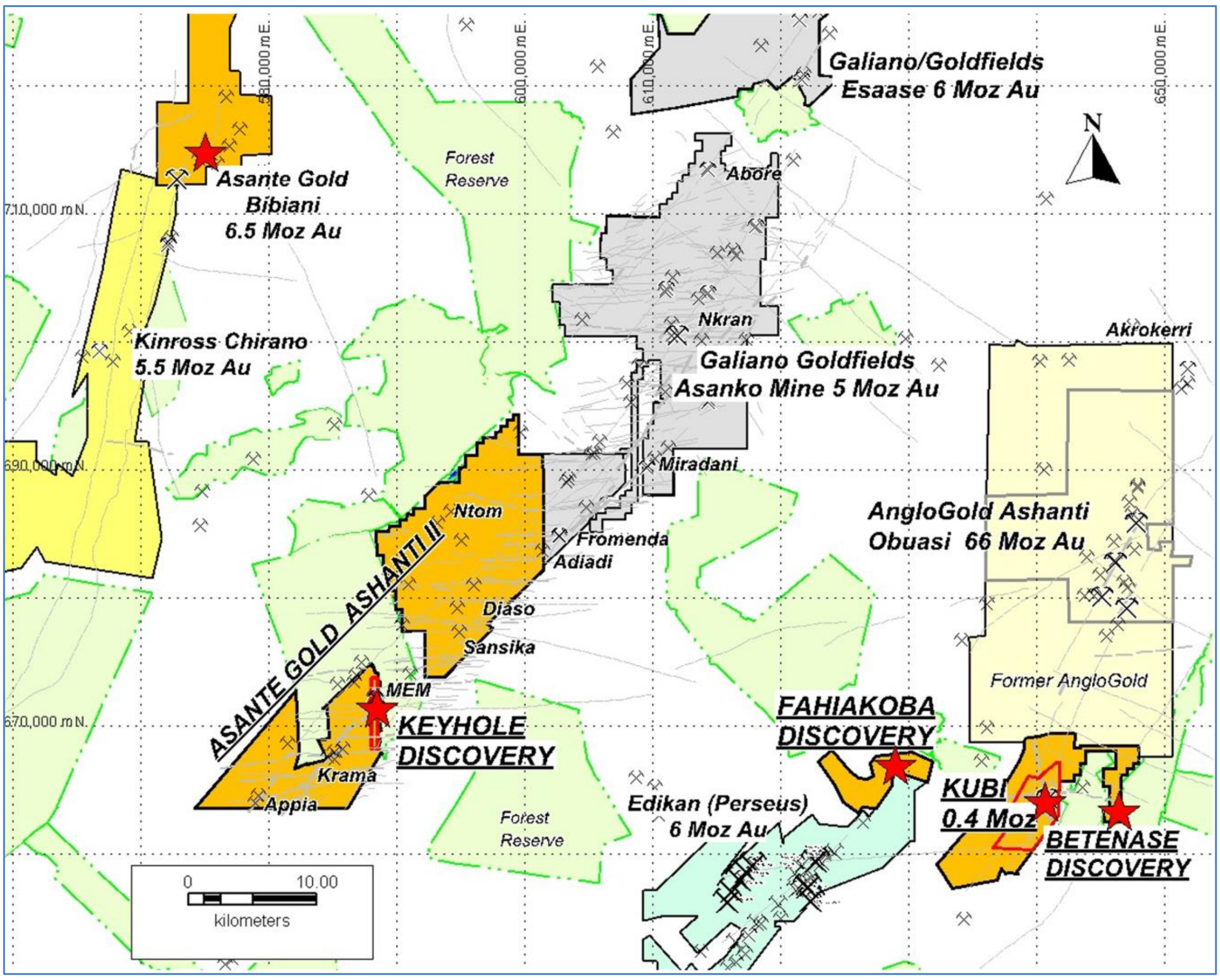


Figure 4: Asante land package position – South-western Region, Ghana. (Asante 2020)

2.4 References and Information Sources

Information used in compiling this Technical Report was primarily sourced from earlier NI43-101 Technical Reports submitted by SEMS Exploration Services Ltd, Ghana, and internal company documents for Items 1 through 14. However, this report includes Items 15 through 22 which were not presented in earlier SEM 2014 submissions. Information relevant to these Items was generated by the QP's with additional supporting information sourced from the data room and collection of historical reports, feasibility studies and other technical documents relevant to the Kubi Project, the historical operations, internal investigations and exploration.

Current planning has been derived from updated mine site visits, corporate reports and personal communications with the Asante staff, management, and associated consultants.

The Authors have made all reasonable enquiries to establish completeness and authenticity of the information provided. In addition, a final draft was provided to the Company along with a written request to identify any material errors or omissions prior to lodgement.

The Authors' opinions contained herein are effective as of August 2022 and are based on personal site visits, the information provided by Asante Gold Corporation's Management and site personnel.

The Authors are satisfied that Asante and its representatives have disclosed all material information pertaining to its Kubi Project. Asante has agreed to indemnify the Authors from any liability arising from its reliance upon the information provided or from information not supplied. A draft version of this report was provided to the Directors of Asante for comment in respect of omission and factual accuracy.

The Kubi Project site was visited by both Mr Claridge, Principal Consultant, Bara Consulting, AusIMM (4/12/2021 – 12/12/2021) and Mr Begg (4/2/2022-12/2/2022) on two separate occasions and were accompanied by, amongst others, Mr Bashir Ahmed (Vice President Production & Development, Director) and Mr Fred Akosah (Company Geophysicist).. In both site visits the core shed, core storage, logging and sampling protocols were witnessed and validated. The historical mine open pit workings were examined, the potential portal position and other geotechnical aspects of the mine proposal were discussed on site with accompanying members of mine management and the exploration team. Mr Begg was shown historical drilling collar positions and markers, as well as the current drilling completed by the Company and the position of validation twin holes. The position and collars of geotechnical drill holes were also located and verified. The roads to and from Kubi to the Company's Bibiani mine were travelled. The nearby settlements were also observed and established to ascertain the social impact of the mine proposal.

Members of dMb Management Services, Bara Consulting, or any other external sources involved in the preparation of this report, have no material interest in Asante or the mineral assets considered in this report.

All references and information sources are listed in Section 27.

2.5 Units, Currency and Abbreviations

Unless otherwise stated, all currencies are expressed in US dollars (US$), with metric units applied throughout this Technical Report.

Section and Item have been used interchangeably in this Technical Report.

Abbreviations and units are shown below (Table 4).

Abbreviation/Unit of Measurement	Description
%	Percent
°	Degrees
°C	Degrees Celsius
3D	Three-dimensional
Ag	Silver
AISC	All-in sustaining capital
As	Arsenic
Au	Gold
capex	Capital Expenditure
CIL	Carbon in leach
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
cm	Centimetre(s)
CP	Competent Person
Cu	Copper
CV	Coefficient of Variation
DC	Diamond core
DDH	Diamond drill hole
EPA	Environmental Protection Agency
FS	Feasibility study
g	Gram(s)
g/cm³	Grams(s) per cubic centimetre
g/t	Grams per tonne
G&A	General and administration
GPS	Global positioning system
h	Hour(s)
ha	Hectare(s)
kg	Kilogram
KNA	Kriging neighbourhood analysis
JORC	Joint Ore Reserves Committee
JORC Code, 2012	Current Australasian Code for the reporting of mineral resources and ore reserves (the JORC Code, 2012 edition)
kg/hr	Kilogram(s)
kg/hr	Kilograms per hour
km	Kilometre(s)
koz	Kilo ounce/thousand ounce (troy)
kt	Thousand tonnes
kW	Kilowatt
LoM	Life of mine
m	Metre(s)
m²	Square metre(s)
m³	Cubic metres(s)
Ma	Million years
MAMSL	Metres above mean sea level
mm	Millimetre(s)
MRE	Mineral Resource estimate

Abbreviation/Unit of Measurement	Description
MRev	Mineral Reserve estimate
mRL	Reduced level/depth or height of a place (in m) above a reference datum or mean sea level
Mt	Million tonnes
Mtpa	Million tonnes per annum
NI 43-101	Canadian Securities Administrators National Instrument 43-101
NPV	Net present value
opex	Operating expenditure
oz	Ounce (troy)
PFS	Pre-feasibility study
pH	Activity of hydrogen ions
ppm	Parts per million
QA	Quality assurance
QA/QC	Quality assurance/quality control
QC	Quality control
QP(s)	Qualified Person(s)
RC	Reverse circulation
RF	Revenue factor
ROM	Run of mine
SMU	Selective mining unit
t	Tonne(s)
t/m^3	Tonnes per cubic metre
tpa	Tonnes per annum
TSF	Tailings storage facility
TSX	Toronto Stock Exchange
UCS	Unconfined compressive strength
µm	Micron
US$	United States dollars
VTEM	Versatile time-domain electromagnetic surveying
XRD	X-ray diffraction
XRF	X-ray fluorescence
WRD	Waste rock dump
WRDF	Waste rock dump facility

Table 4: Abbreviation / Unit of Measurement

3. RELIANCE ON OTHER EXPERTS

The Qualified Persons have relied upon the legal, environmental and permitting information provided by employees of Asante. Asante has provided certain information, reports and data to the Authors in preparing this Report which, to the best of Asante's knowledge and understanding, is complete, accurate and true. Asante acknowledges that the Authors have relied on such information, reports and data.

This Technical report has been prepared on the understanding that the property is, or will be lawfully accessible for evaluation, development and mining as described in the following sections.

Section	Title	Responsibility
4.2	Licences and Mineral Tenure	Asante Gold Corporation
4.3	Agreements, Royalties and Encumbrances	Asante Gold Corporation
4.4	Environmental Obligations	Asante Gold Corporation
20	Environmental Studies, Permitting and Social or Community Impact	Asante Gold Corporation

Table 5: Reliance on other Experts

4. PROPERTY DESCRIPTION AND LOCATION

Ghana is in West Africa, approximately 600km north of the Equator and sharing boundaries with Togo to the east, Cote d'Ivoire to the west, Burkina Faso to the north and the Gulf of Guinea to the south.

Gold represents Ghana's major export commodity, followed by cocoa and timber products. Ghana is the world's tenth and Africa's second largest producer of gold. Manganese, bauxite, and diamonds are also mined. Tourism is growing rapidly.

Ghana has an estimated population of 30.7 million (2019 estimate) and covers an area of approximately 239,000km^2. Ghana has a large variety of African tribal, or sub-ethnic units. English is the official language, a legacy of British colonial rule. Twi is the most widely spoken local African language. The majority of the population are Christian (71%) whilst the northern ethnic groups are largely Muslim (17%) and indigenous beliefs (22%) are also practiced throughout the country.

Most of the major international airlines fly into and from the newly refurbished Kotoka International Airport in Ghana's capital city, Accra. Accra is a modern coastal city with a population of approximately 2 million people. Domestic air travel has increased significantly, and the country has a vibrant telecommunications sector, with six cellular phone operators and several internet service providers.

Ghana predominantly has a tropical climate and consists mostly of low savannah regions with a central, hilled forest belt. Ghana's one dominant geographic feature is the Volta River, upon which the Akosombo Dam was built in 1964. The damming of the Volta created the enormous Lake Volta, which occupies a sizable portion of Ghana's south-eastern territory.

Ghana has a market-based economy with relatively few policy barriers to trade and investment in comparison with other countries in the region. Ghana has substantial natural resources and a much higher per capita output than many other countries in West Africa.

4.1 Project Location and Area

The Kubi Project comprises a single Mining Lease which covers 19.16km^2 and the Dunkwa-Gyimigya Prospecting Licence which covers 28.26km^2 to give a total surface area for the Kubi Project of 47.42km^2. The property lies on the western margin of the Ashanti Gold belt and is bordered to the north by AngloGold, Ashanti's Obuasi Mining Lease, and to the southwest by Perseus Mining's Central Ashanti Gold Mine at Ayanfuri.

The Kubi Mining Leases are in the Adansi South District of the Ashanti Region. The Dunkwa Gyimigya Prospecting Licence falls within both the Adansi South District and the Upper Denkyira East Municipality of the Central Region. Kubi is located 25km south, by road, of the township of Obuasi and AngloGold Ashanti's Obuasi mine. It is 6km north of the town of Dunkwa on the Offin River. It is 170km, presently 6 hours by road northwest of Accra. The centre of the concession is located at approximately 6° 00' N Latitude and 1° 44' W longitude.

Villages are located at Kubi, Kubi Nkwanta, Jimiludo and Nyamebekyere within the Kubi Mining Leases. Dunkwa is the closest major town to the concession, lying within the southern area of the Dunkwa Gyimigya Prospecting Licence. The Supuma Shelter Belt Forest Reserve traverses the northern end of the Kubi Mining Lease and covers approximately 10% of the Kubi Gold Project.

The best access to the mine site is from the east along the Kumasi-Bibiani-Sefwi Bekwai tarred highway. The Kumasi airport can be accessed from Accra by a frequent and regular forty-minute flight using various national airlines.

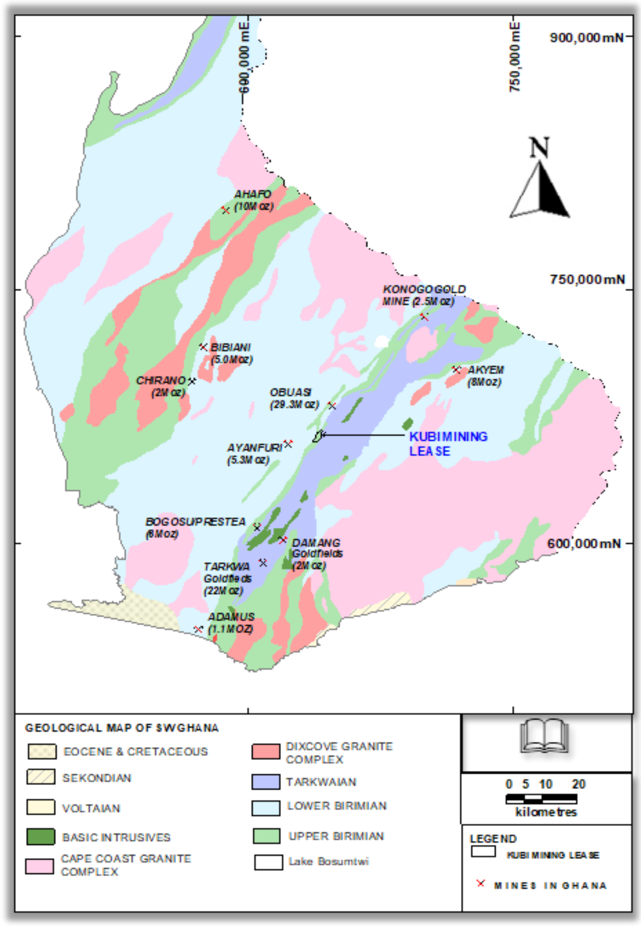


Figure 5: Kubi Location within Geology of South-western Ashanti Region, Ghana (SEMS 2014)

4.2 Licences and Mineral Tenure

The three mineral licences form a contiguous landholding that straddles the western flank of the Ashanti Gold Belt termed the Kubi Gold Project (Figure 6).

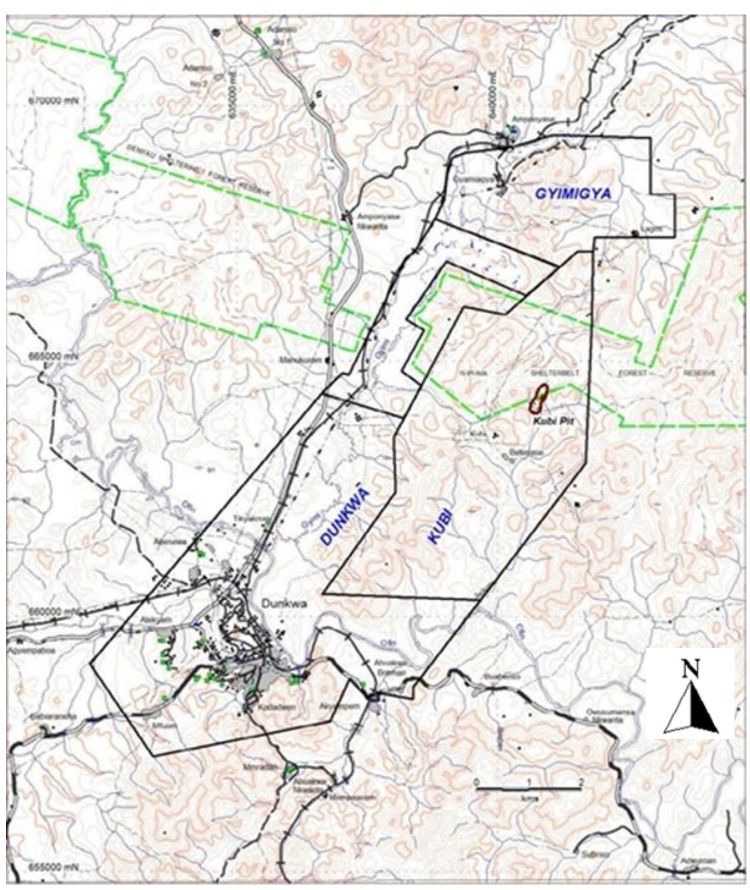


Figure 6: Kubi Gold Project, Concession boundaries and names. UTM 30N WGS84, SEMS 2014

4.2.1 Mining Leases

The Kubi Gold Project comprises one Mining Lease – the Kubi Mining Lease.

The Land Registry of Ghana issued a File Number of 70/2008 for this document and the Minerals Commission's file number for the Mining Lease is # PL.3/30.

The Mining Lease, granted in 2008, is a renewal of Mining Leases originally granted to Nevsun Resources (Ghana) Limited in 1998. The terms and conditions of the Mining Lease are identical, and the duration run for twenty years, expiring on 17th September, 2028. Goknet Mining Company Limited acquired the holding company in 2014; and Asante Gold and Goknet entered into an Asset Purchase and Sale agreement in December 2016. The Mining lease has been confirmed by the Minerals Commission of Ghana and is in good standing. Land Registry number is 70 / 2008, File number is PL.3/30/Vol.3.

4.2.2 Prospecting Licence

The Dunkwa Gyimigya Prospecting Licence consists of two areas within one Prospecting License; the Gyimigya Area covering 8.20 km^2 which lies to the north of the Kubi Mining Lease and the Dunkwa Area covering 20.06 km^2 which lies to the south of the Kubi Mining Lease and encloses the Dunkwa-on-Ofin town.

The Dunkwa Gyimigya Prospecting Licence expired on 19th August, 2014, having been renewed on two previous occasions. Adansi Gold lodged an application for a third renewal of the Prospecting Licence with the Minerals Commission on 29th August, 2014.

Pursuant to the settlement of arbitration between PMI Gold and Goknet, the terms of which were confidential, the ownership of 100% of the Dunkwa Gyimigya Prospecting Licence is currently in the process of being transferred, subject to Ministerial consent, from Adansi Gold (wholly owned subsidiary of Galiano Gold Inc.) to Goknet. Such transfer received confirmation from the Minerals Commission's Mineral Title Office in December 2021. The 2 PLs are on the desk of the Honourable Minister of Lands and Natural Resources awaiting his signature (Pers. Comm: Aries Yaayaa Blankson, Mineral Title Consultant, Geologist/Environmental Scientist, SYK Consulting Limited, Ghana, 7th February, 2022).

There are no known environmental liabilities or financial encumbrances on the Dunkwa Gyimigya Prospecting Licence held by Adansi Gold.

The Mining Lease and Prospecting Licence boundaries are defined by a series of 'pillar points' in Longitude and Latitude coordinates that have a unique Ghana datum referred to as Legion 1929 Datum. Pillar points, as registered with the Minerals Commission of Ghana are as follows (Table 5).

KUBI ML			DUNKWA PL			GYIMIGYA PL		
Pillar	LONG	LAT	Pillar	LONG	LAT	Pillar	LONG	LAT
p1	6° 01' 54"	6° 01' 54"	p1	6° 00' 24"	1° 45' 57"	p1	6° 02' 15"	1° 44' 46"
p2	5° 59' 39"	1° 43' 12"	p2	6° 00' 07"	1° 45' 07"	p2	6° 02' 27"	1° 44' 40"
P3	5° 58' 12"	1° 44' 18"	P3	5° 59' 58"	1° 45' 12"	p3	6° 02' 43"	1° 44' 38"
P4	5° 58' 16"	1° 45' 57"	p4	5° 59' 23"	1° 45' 12"	p4	6° 02' 54"	1° 44' 35"
P5	5° 59' 21"	1° 45' 11"	p5	5° 58' 16"	1° 45' 56"	p5	6° 02' 57"	1° 44' 27"
p6	5° 59' 21"	1° 45' 11"	p6	5° 58' 14"	1° 44' 18"	p6	6° 03' 00"	1° 44' 00"
p7	6° 01' 19"	1° 44' 28"	p7	5° 57' 17"	1° 45' 00"	p7	6° 03' 08"	1° 43' 32"
p8	6° 01' 14"	1° 44' 02"	p8	5° 57' 09"	1° 45' 00"	p8	6° 03' 06"	1° 42' 31"
p9	6° 01' 54"	1° 43' 17"	P9	5° 57' 13"	1° 45' 22"	p9	6° 02' 30"	1° 42' 31"
			p10	5° 57' 10"	1° 45' 29"	p10	6° 02' 30"	1° 42' 16"
			p11	5° 57' 40"	1° 45' 40"	p11	6° 02' 03"	1° 42' 16"
			p12	5° 56' 55"	1° 45' 52"	p12	6° 02' 03"	1° 43' 06"
			p13	5° 56' 33"	1° 47' 43"	p13	6° 01' 56"	1° 43' 06"
			p14	5° 57' 32"	1° 48' 22"	p14	6° 01' 56"	1° 43' 20"
						p15	6° 01' 47"	1° 43' 30"

Table 6: Kubi Gold Project, concession corner point coordinates

As at 31 December 2021, all mineral tenements were in good standing with the Government of Ghana. Furthermore, it has been confirmed that the properties are lawfully accessible for evaluation and also mineral production.

4.2.3 Mining Legislation

STATE LANDS ACT (1963)

Section 6(1) provides that any person whose property is affected by a public project is entitled to compensation and provides mechanisms through which people not satisfied with compensation may seek redress. Dissatisfied compensation claimants may seek redress by first notifying the minister, who refers the case to a tribunal consisting of three persons appointed by the President.

Notwithstanding the existence of these legal safeguards, and according to the World Bank, the records indicate that in the past the Ghanaian Government has defaulted in most cases and has failed to pay full compensation or help with the relocation of displaced persons.

MINERALS AND MINING ACT 703

The Minerals and Mining Act, 2006 (Act 703) (as amended by the Minerals and Mining (Amendment) Act, 2015 (Act 900) and the Minerals Commission Act, 1993 (Act 450) are the principal enactments setting out the framework of Ghanaian mining law. These acts express the basic position that minerals in their natural state are owned by the state; they also outline the licensing scheme for mineral operations, the incidents of the various mineral rights and the powers of the principal regulatory institutions. The following pieces of subordinate legislation add detail in specific areas to the regime set out in the principal legislation:

1. Minerals and Mining (General) Regulations, 2012
2. Minerals and Mining (Support Services) Regulations, 2012
3. Minerals and Mining (Compensation and Settlement) Regulations
4. Minerals and Mining (Licensing) Regulations, 2012
5. Minerals and Mining (Explosives) Regulations, 2012
6. Minerals and Mining (Health, Safety and Technical) Regulations, 2012.

The mining law divides the various licences that can be granted for a mineral right into three sequential categories, Reconnaissance Licence, Prospecting Licence, and a Mining Lease, defined under the Minerals and Mining Act, 2006 (Act 703). These licences are discussed below.

RECONNAISSANCE LICENCE (SECTIONS 31-33)

A reconnaissance licence entitles the holder to search for specified minerals by geochemical, geophysical and geological means. It does not generally permit drilling, excavation, or other physical activities on the land, except where such activity is specifically permitted by the licence. It is normally granted for 12 months and may be renewed for a period not exceeding 12 months, if it is in the public interest. The area extent is negotiable, related to the proposed reconnaissance program.

PROSPECTING LICENCE (SECTIONS 34-38)

A prospecting licence entitles the holder to search for the stipulated minerals and to determine their extent and economic value. This licence is granted initially for a period of up to three years covering a maximum area of 150km². This may be renewed for an additional period of two years, but with a 50% reduction in the size of the licence area if requested. A prospecting licence will only be granted if the applicant shows adequate financial resources, technical competence and experience and shows an adequate prospecting program. It enables the holder to carry out drilling, excavation and other physical activities on the ground.

MINING LEASE (SECTIONS 39-46)

When the holder of a prospecting licence establishes that the mineral to which the licence relates is present in commercial quantities, notice of this must be given to the Minister of Lands, Forestry and Mines and if the holder wishes to proceed towards mining, an application for a mining lease must be made to the Minister within three months of the date of the notice.

Issuer's title to the AGM concessions

4.3 Agreements, Royalties and Encumbrances

Pursuant to the settlement of arbitration between PMI Gold Corporation ("PMI Gold") of Vancouver and Goknet Mining Company Limited ("Goknet") of Accra on 15th August, 2014, the terms of which were confidential, the ownership of 100% of the shares of PMI Gold Kubi (Barbados) Inc. were transferred to Goknet. In the subsequent Asset Purchase Agreement entered into between Asante Gold and Goknet the following terms and conditions apply:

- Royal Gold Inc. of Denver, Colorado, USA holds a 3% NPP (Net Proceeds of Production) royalty interest on gold mined from the Kubi Gold Project, termed the Pre-Existing NPP
- Issue 7 million shares to Goknet;
- Reserve 8koz of gold for Goknet;
- A 2% NSR (Net Smelter Returns) royalty reserved for Goknet;
- The Government of Ghana will receive a 5% royalty on all gold processed from any future mining operations within the Kubi Mining Leases
- 10% free carry to the Ghanaian Government.

4.4 Environmental Obligations

On the re-transfer of the Kubi Mining Lease from AngloGold Ashanti to Nevsun Ghana and subsequently to the Company, there were no contingent environmental liabilities. All mining on the property to date was completed by AngloGold Ashanti. It has been agreed between the Company and AGA that any unresolved environmental disturbances, at the time of renewal of the Mining Operating Permit, will be addressed by AGA pursuant to the conditions of the Mining Leases and EPA permits between AngloGold Ashanti and the Government of Ghana.

The Company has registered a reclamation bond with the Environmental Protection Agency (EPA) of Ghana and is awaiting approval prior to the commencement of the proposed underground exploration program. Given that the waste rock from excavating the decline and other underground development will be used to complete the EPA backfilling requirements outstanding from the AngloGold Ashanti mining program at Kubi, the Company does not anticipate any undue delays in acquiring the necessary approval from the EPA. This has not been independently verified by the Authors.

5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, TOPOGRAPHY AND LAND USE

5.1 Accessibility

Kubi is well situated and favourably serviced by major road, rail and air transport routes. Road access to the property is good from regional airports and seaports. The western boundary of the Kubi Mining Lease is adjacent to the main, north-south, bitumen highway linking the regional capital, Kumasi in the north, through Obuasi, Dunkwa and Tarkwa to the coastal port at Takoradi.

The Kubi Main deposit can be accessed via a 5km graded, laterite road that runs eastwards from the Kumasi highway junction.

The Kubi Main deposit is approximately 75km north of Golden Star's processing plant at the Bogosu gold mine, 15km northeast of Perseus Mining's processing plant at the Edikan gold mine in Ayanfuri and 20km south of AGA's processing plant at the Obuasi gold mine. The main Ghana Rail line from Kumasi-Obuasi-Takoradi passes along the western margin of the concession with a station stop in Dunkwa. The railway requires considerable work to upgrade to useful status. However, movement of materials or equipment from the port to site by truck would be straight forward. AGA has an operating airstrip 40km to the north at Obuasi.

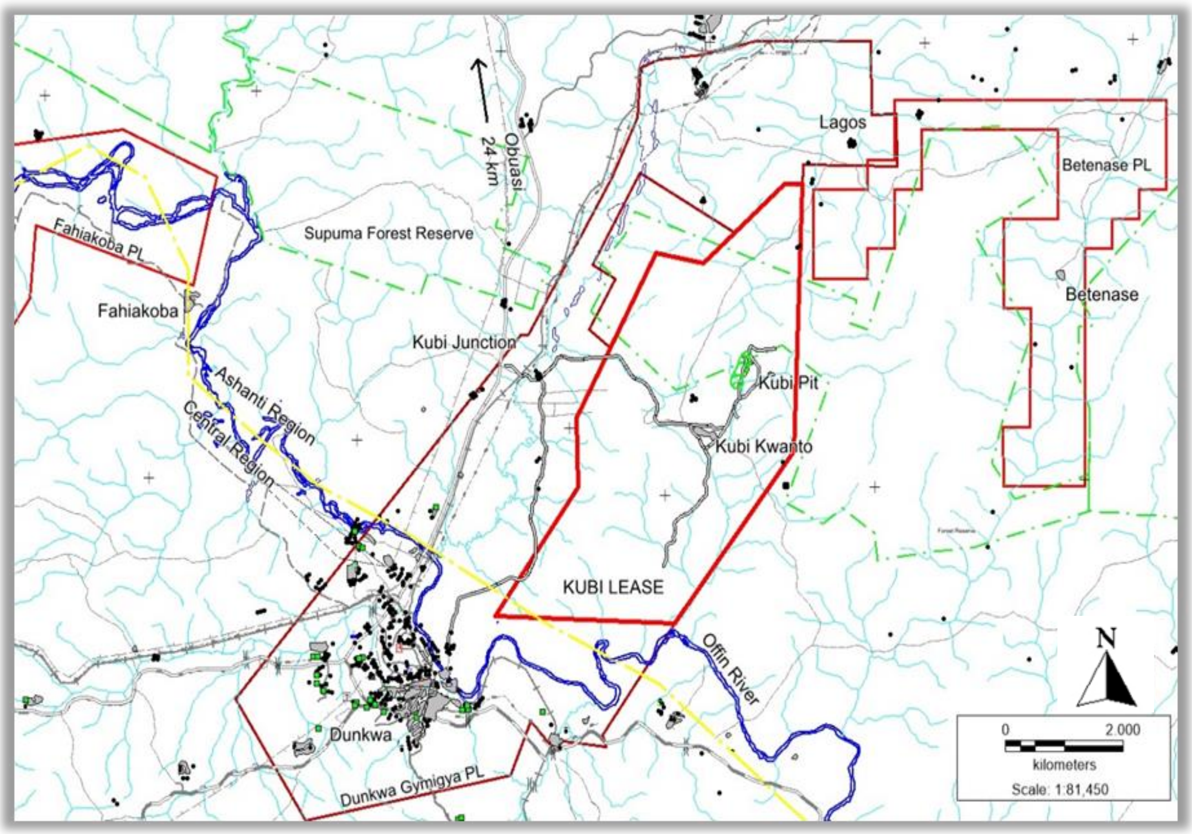


Figure 7: Kubi Lease Access Map (Asante 2021)

5.2 Climate

The Kubi Gold Project falls within the wet semi-equatorial climatic zone of Ghana. It is characterised by an annual double maximum rainfall pattern occurring in the months of May to July and from September to October. The mean annual rainfall for the Kubi concession is estimated to be in the region of 1487mm. The dry season is between December and March and a short dry spell in July/August. Maximum temperatures occur between January and April ranging between 25° and 35°C and minimum temperatures between May and December when values range between 18° to 24°C.

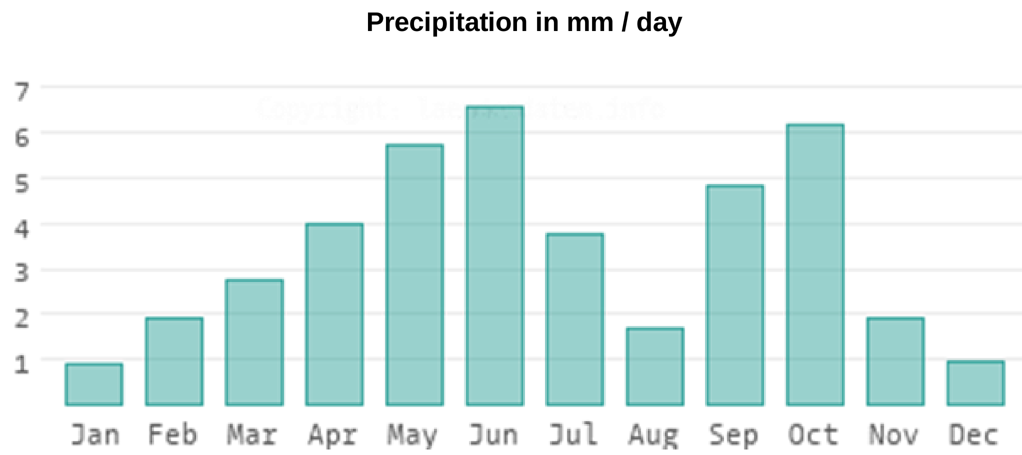


Figure 8: Average monthly rainfall (Source: worlddata.info/Africa/Ghana/climate-western)

5.3 Local Resources

The Kubi Mining Lease lies in the Akrofoum District of the Ashanti Region of Ghana and is administered from the Akrofoum Town. The district is bounded to the west and north by the Adansi North District, to the east by the Adansi East district and to the south by the Upper Denkyira East Municipality.

The southern boundary coincides with the regional boundary of the Ashanti Region with the Offin River, separating it from the Central Region. The district covers a land area of about 950km² with an estimated population exceeding 250,000.

The Kubi Mining Lease covers one moderate sized settlement at Kubi Nkwanta which has a population of 550 inhabitants. There are 5 additional smaller settlements through the south and east of Kubi Nkwanta. SGS counted 83 hamlets or small family farm stands scattered throughout the concession. The PEA design of operations presented in this Report anticipate that no villages or settlements will require relocation. Kubi Main deposit is bordering the Forest Reserve 2km north of Kubi Nkwanta.

5.4 Infrastructure

The Lease has 2 major settlements at Kubi Kwanto and Lagos, which combined have a population of 850. There are 5 additional smaller settlements to the south and east of Kubi Kwanto. Land is owned by the Akrokerri Stool of the Ashanti Region. Agricultural land use predominates. The non-agricultural land uses include forest reserve used for commercial logging and local gathering, human settlements and educational facilities, undeveloped inland valleys with limited swamps, and trunk and feeder roads. The existing farming system is dominated by cocoa production with occasional mostly mixed subsistence food crops and some rubber and oil palm farming in newly developed areas.

There is a major hospital owned and operated by AGA in Obuasi, as well as a small, well maintained, private hospital and a central Government Hospital in Dunkwa town, the Upper East Denkyira District Capital, a few kilometres south of Kubi. There are health centres operated by the Ministry of Health at Akrokerri and Fomena. There is a maternal and child health and family planning centre at Amponyase. Malaria is the most common ailment representing over 50% of reported cases.

An 11KV power line has recently been extended to Kubi Nkwanta village. Extending water to Kubi village from our development program will be the primary focus of the company's social responsibility program in the future as it, along with jobs, have been expressed to be a major priority of the local population. There remains about 1km to extend the power line to the Kubi pit area, as well as installation of transformers.

5.5 Topography and Land Use

Relief within the Kubi Project is characterised by two major, linear, SW-NE striking ridge forms. In the west of the property the Ashanti trend is dominated by a regionally continuous and dissected range of steep to moderate sloping hills of the Southern Bekansi Range. These characteristically steep sided hills rise on slopes of sometimes >30 degrees to a maximum of 300m. This ridge forms a very distinct linear, arcuate trace on a satellite image, geologically manifesting because of regional thrusting within the Tarkwaian system. It is known as the Dampaiyau Ridge and is composed of a very hard, annealed, weakly weathered quartzite. Valleys which dissect these ridges generally trend E-W and SE-NW and are possibly related to transfer faults along this major basin boundary suture.

Regionally this set of ridges is referred to as the Gold Coast Range and can be traced from Konongo in the north, 200km south to the coast at Takoradi. Regionally, this prominent topography hosts the historical deposits of the Ashanti Gold Belt. The Kubi Main deposit is straddled by these two major topographic features. The Kubi Main deposit, pre-mining by AGA, was situated under a 50m high, moderate to steeply (25-30 degrees) sloped hill which peaked at 150m elevation.

The Kubi Project falls within the cocoa-based system of the semi-deciduous forest zone of Ghana. Land is owned by the Akrokerri Stool of the Ashanti Region. Both agricultural and non-agricultural land uses are found on the concession. Agricultural land use predominates, mainly cultivated tree crops like cocoa, oil palm and rubber. Other crops include basic food crops and bush fallow.

The non-agricultural land uses include the forest reserve, which is used for commercial logging, human settlements with or without accompanying commercial, educational and government administration facilities, undeveloped inland valleys with limited swamps and trunk and feeder roads.

The farm that covered the southern part of the deposit was purchased by Kubi to allow for the new mining activities. Further compensation will be made should the final mine design impact local farmers though present plans restrict the footprint to presently compensated and purchased land. Additional land will be purchased just south of the current lease area to position the explosives magazines and to minimise future settlement encroachment.

No villages or settlements require relocation with the proposed mining and exploration operation.

6. HISTORY

In the late 1980's BHP carried out stream sediment sampling, soil sampling, VLF-EM and magnetometer surveys, litho-geochemical sampling, trenching, rehabilitated old adits, geological mapping, 12 diamond core drill holes, completed a preliminary mineral resource estimation and initiated metallurgical studies.

Nevsun optioned the property from BHP in 1993 and subsequently retained a consulting firm to manage exploration programs on the property. Nevsun took over management of the exploration on the property in 1997. Most exploration work at Kubi was completed by Nevsun Ghana and CME between 1995 and 1998. During 1997 and 1998 over 35,500 metres of RAB, RC and diamond core drilling was completed and almost 14km of trenches excavated. 226 diamond drill holes outline the deposit, and were used by CME, Nevsun, Pearson Hoffman & Associates, Golder Associates, PMI Gold, NDM and SEMS Exploration Services in resource calculations.

Ashanti, before merging with AngloGold, took ownership of the prospect in 1999 and following a further exploration phase, undertook mining of the surficial oxide deposits, producing 58,696oz gold from 500,230t of extracted mineralised material. The south-west end of the deposit was mined by open pit and ceased operation in 2005. Mineralised material was trucked to Ashanti's oxide plant at Obuasi. AngloGold Ashanti completed the back filling of the pit to "daylight" and the re-vegetation of the pit and east waste dump.

Ashanti produced Environmental Management Plans and Environmental Impact Assessment reports building upon the SGS baseline studies commissioned by Nevsun in 1998, and their own studies.

On completion of the mining of the oxide resources, AGA re-assigned the mining leases back to Nevsun as per the terms of their lease agreement with Nevsun. The pits were backfilled 'to daylight' and the remaining waste dumps contoured and planted.

Nevsun was purchased by PMI in 2007. Goknet acquired the company at the end of 2014 and renamed it to Kubi Gold (Barbados) Limited – both in Barbados and in Ghana.

On 9th August, 2016 Asante Gold Corporation publicly announced that it had reached agreement with Goknet to close the acquisition of the Kubi Mining Leases on terms substantially contained in the Kubi Definitive Option Agreement dated 28th February, 2015. In addition, the Company will acquire Goknet's interest in eight Prospecting Licences; two of which are adjoining to the west of the Kubi Mining Lease.

No formal mining activity is presently taking place on the property, though there are several small illegal pits in the area extracting mineralised material close to the surface. It is doubtful that these will cause any complications to future plans for the Kubi Gold Project.

6.1 Historical Exploration (Pre 2008)

In the late 1980's BHP carried out stream sediment sampling, soil sampling, VLF-EM and magnetometer surveys, litho-geochemical sampling, trenching, rehabilitated old adits, geologically mapped, drilled 12 diamond drill holes, completed a preliminary resource calculation and initiated metallurgical studies.

Nevsun Ghana optioned the property from BHP in 1993 and explored the Kubi property for six years until 1999. During that time the following work was completed:

- Soil Sampling: Over 143.6km of gridlines were cleared and 5,744 samples collected
- Ground Magnetics: A total of 179.8km surveyed at 10m station intervals
- IP survey: Covering 110.9km with 50m dipole intervals
- Radiometric surveys: Covering 37.5km at 10m station intervals
- Trenching: Excavation of 13.75km to 3m depth in 137 trenches
- Adits and shafts: Sampling and mapping of 27 old workings
- RAB Drilling: A total of 14,296m were drilled in 499 holes
- RC Drilling: A total of 19,274m were drilled in 229 holes
- DD Drilling: A total of 68,339m were drilled in 218 holes.

AGA, before merging with AngloGold, took ownership of the prospect in 1999 and following a further exploration phase undertook mining of the surficial oxide deposits. AGA completed the partial rehabilitation of the Kubi open pit in 2005.

6.2 Historical Mineral Resource Estimates

In August 2007 Golder Associates Africa (Pty) Ltd ("Golder"), undertook a review and mineral resource estimation of the Kubi Gold Project (Kubi Project Mineral Assets, August 2007). Their final MRE is presented in Table 26, below:

Category	Tonnage Mt	Grade g/t AU	Contained Gold oz
Indicated	5.13	3.66	604,000
Inferred	5.38	1.88	315,000

Table 7: Mineral Resource Estimation, 2007

The Golder MRE was based upon a geologically constrained wireframe that modelled a garnetiferous unit within which the bulk of the Kubi mineralisation is hosted. No cut-off grade was applied to the Golder Resource Estimation.

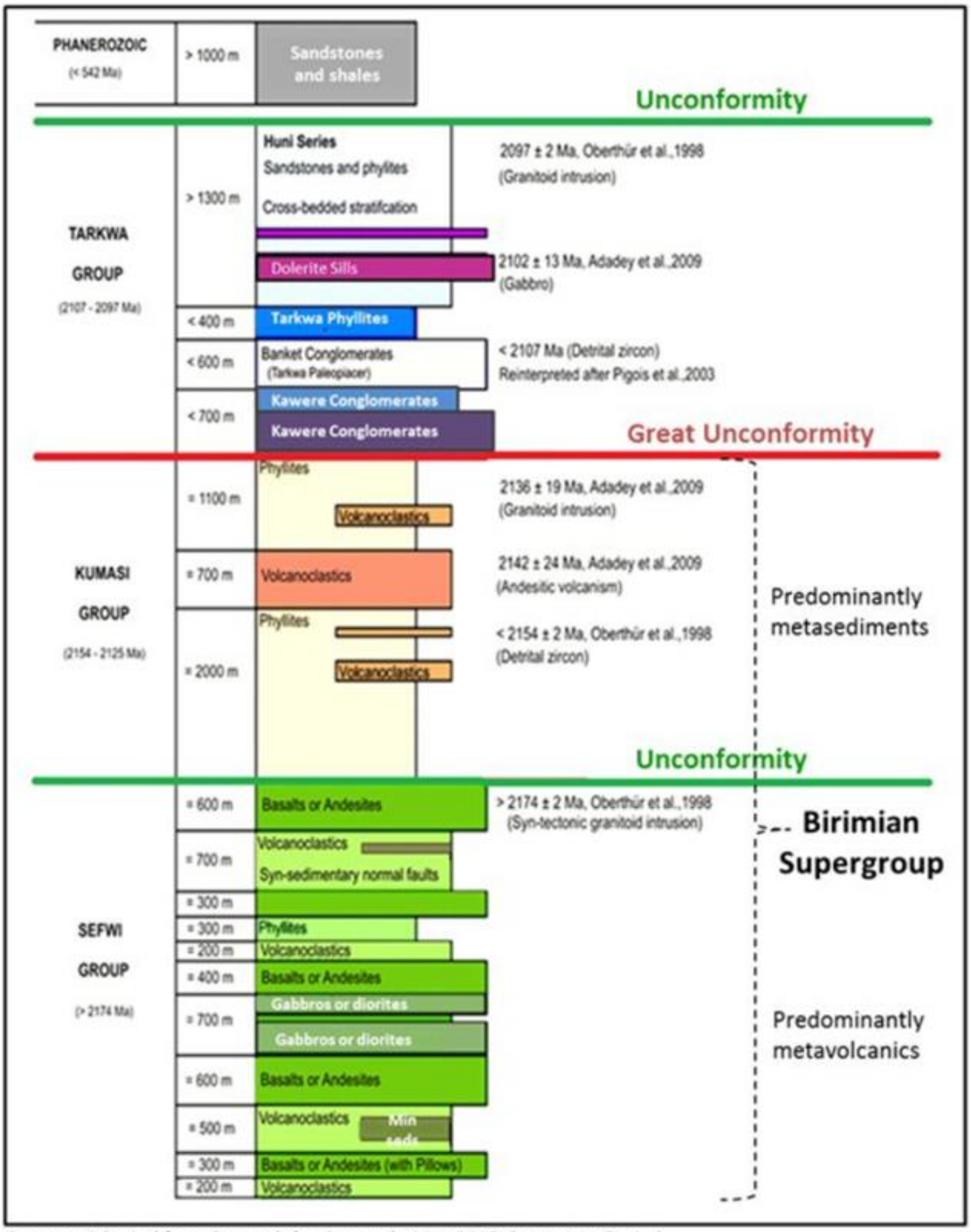
These historically declared Mineral Resources have not been verified by the Qualified Persons. It is accepted that the MRE was completed in accordance with the best practice guidelines and international mineral reporting codes by suitable qualified persons of Golder Associates. The current Mineral Resources are not based on the historical estimates.

7. GEOLOGICAL SETTING

7.1 Regional Geology

On a regional scale, the Project is located on the eastern margin of the West African Precambrian Shield, which is a cratonised complex of Archaean basement. The main components are Proterozoic greenstone belts, granitoids and post-orogenic sediments that extend through Ghana, Burkina Faso, Mali, Guinea and the Ivory Coast.

The Upper Birimian Formation is dominantly volcanic in origin, although the sequence starts with conglomerates, grits, quartzites and tuffaceous wackes. The dominant components of the Upper Birimian are basaltic and andesitic lavas, tuffs and tuffaceous sediments with subordinate rhyolite, quartz-feldspar porphyry and felsite. The Birimian Formation rocks are unconformably overlain by the Tarkwaian, which is composed of dominant coarse-grained sediments (Figure 9).



Scource: Adapted from Precambrian Research, May 2012, Perroutya, S. et al.

Figure 9: The Upper Birimian Formation

The known gold deposits are found along the margins of six volcanic belts. Supra-crustal deformation has folded the rocks giving rise to the northeast trending gold belts, which include the Kibi-Winneba, Ashanti, Asankrangwa, Sefwi-

Bibiani and Bole-Navrongo Belts. These volcanic belts are bounded by steeply dipping regional faults and are separated by sedimentary basins (Figure 10).

The Kubi concession comprises six major NE-SW trending, thrust bound, stratigraphic packages. West to east; Upper Birimian basinal sediments, Lower Birimian volcanics and derived sediments, Lower Tarkwaian conglomerates and grits, (a repetition of Lower Birimian volcanic derived sediments, and underpinning the prominent relief along the western boundary, two slices of mid to Upper Tarkwaian quartzites). Minor stocks, sills and dykes of gabbro, diorite porphyry and quartz feldspar porphyry intrude the package concordant to bedding and pre-existing structures.

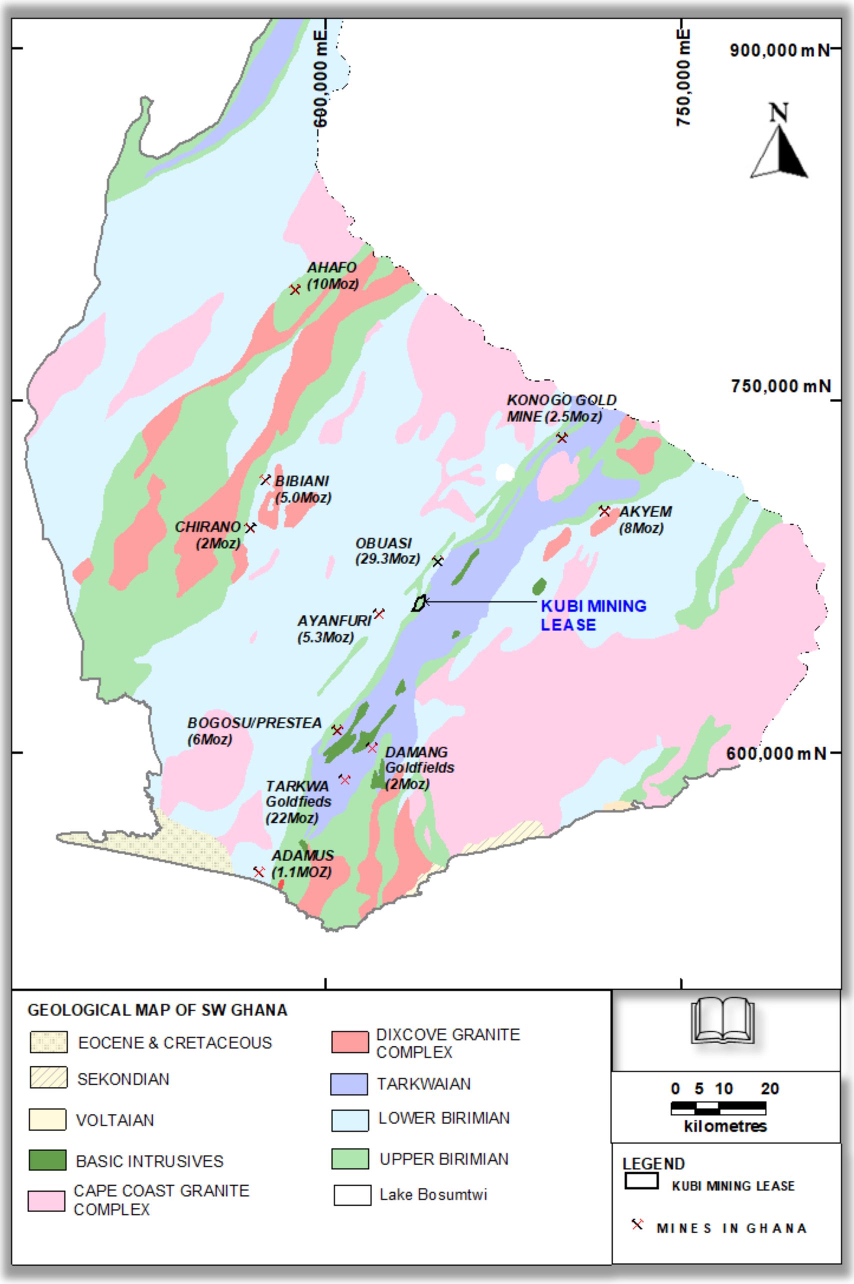


Figure 10: Regional Geological setting of the Kubi Gold Project. Latitude & Longitude, ACCRA (1929), SEMS 2014

Metamorphic grade ranges from lower greenschist facies in the Birimian sediments to upper amphibolite within intrusives and proximal to the main Birimian-Tarkwaian thrust. Major fault orientations are N-S, E-W and NE-SW. Early ductile folding, typically isoclinal, is overprinted along ENE trends typically tight to isoclinal, and finally overprinted again by open north-easterly plunging, westerly dipping folds. Generally, only north plunging anticlines are preserved.

7.2 Local Geology

The Kubi Main deposit is situated at the intersection of the main NE-SW trending Birimian-Tarkwaian thrust contact and a major N-S trending basement fault. It strikes 1.8km at 020° adjacent to the local grid 4000E, between lines 5200N and 7000N. As part of its exploration program Nevsun Ghana completed detailed geological and structural mapping and logging of trenches, access roads and drill pads, adits and oriented drill core to evaluate the geological complexity of the deposit and to develop an understanding of the three-dimensional controls to gold mineralisation within the deposit.

Observations made in adit mapping indicate that most of the minor fold hinges have been transposed and that rarely does a simple fold pair occur. Further, where kink folds are observed the eastern limb is always shorter than the west, indicating that fold vergence is to the east. The data would tend to indicate that the Kubi Main deposit was formed within the core, or hinge zone, of an antiformal fold.

Faults and shears, as the major dislocation features and obvious structures which will control mineralisation, exhibit two distinct orientation sets. A primary strike parallel set striking 000° - 020°, dipping 85° to the west, and a conjugate E-W set which strike 275° and dip 79° to the north. The primary set correlates well with the primary foliation orientation, and strike of the mineralised deposit. Within the three-dimensional model of the Kubi geology, a brittle, non-graphitic fault is consistently observed on, or close to, the western contact of the 'Garnet Zone,' it can be traced to the length of the deposit. Slickensides observed in the core indicate that the last phase of movement was strike-slip. Kinematic indicators, such as vein offsets and sense of shear on minor thrusts observed in the adits and trenches, indicate that the sense of movement was sinistral. The secondary set probably represents the E-W transfer faults which clearly displace the Birimian-Tarkwaian contact.

Quartz vein data was compiled to determine the primary fabrics of high-grade gold bearing structures. The rose diagram shows a spread of strike orientations between 330° to 020°, with the bulk between 350° to 020°. Pole concentrations observed on the stereo-net indicate three preferred orientation vein sets are developed within the Kubi Main deposit. A primary strike parallel set striking 000° and dipping vertical. A secondary vein set strikes approximately 338° and dips 55° to the southwest. A third set strikes 017°, dipping 77° to the east. There is close correlation between the primary and tertiary vein sets and the primary fault orientation.

7.3 Property Geology

Seven mineralised zones have been defined within three major generative corridors:

1. Main Garnet Zone
2. Birimian - Tarkwaian contact
3. Hanging Wall and Footwall Shears.

The Garnet Zone constitutes 85% of the Kubi Main Resource A distinct laterally persistent rock unit located within the major boundary shear zone and characterised by dense garnet and amphibole development, pyrrhotite and free gold within quartz veins. At Kubi Main, it can be traced for two kilometres along a consistent 020° strike (5000N - 7000N), and with a steep dip westerly of 85° - 75°, it is still open at a depth of 700 metres. A 'Garnet Zone' equivalent has been intersected with associated grade in boreholes drilled at Kubi South (3400N) and at the new "513 zone" discovery 1.2 km to the southwest of Kubi Main.

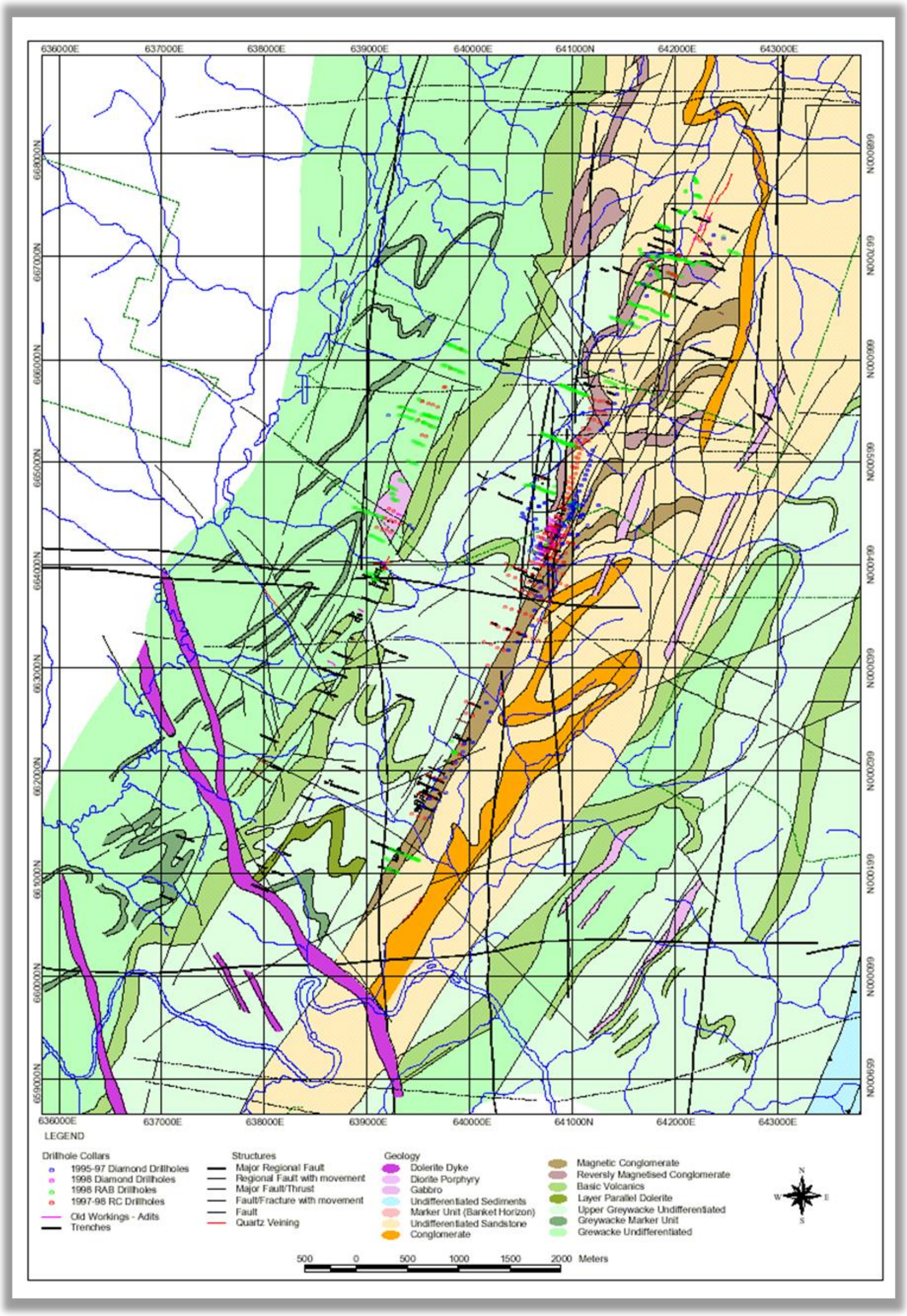


Figure 11: Geological map of Kubi Gold Project. UTM 30N, WGS84 (NEVSUN 2002)

Contacts range from finite welded junctions to moderately sheared gradational boundaries. The core of the unit is generally massive but light strain fabrics do develop shear-parallel along the contacts. Remnant layering fabrics are observed in some intercepts and may be interpreted as possibly sedimentary in origin. Welded contacts, where discernible, are acute to and cross-cut earlier shear fabrics. On close examination of the Garnet Zone, the contacts exhibit a 'feathering' of alteration equivalent units within the adjacent sheared sediments.

These host rocks exhibit varying degrees of hornfels alteration. Garnet development is ubiquitous throughout the contact zone and Tarkwaian rock package. They crosscut and overprint all earlier fabrics. The intrusives, found adjacent to the west of the Tarkwaian contact, have been identified as ortho-amphibolites, and exhibit garnet alteration. Variations in both size of individual porphyroblasts and density would seem to be controlled principally by host lithology and/or proximity to major faults. Up to 35% of the rock mass can comprise well formed, euhedral garnets. Larger, 2-5mm, garnets are generally more developed in association with biotite, chlorite, hornblende and minor pyroxenes, in a more massive microcrystalline matrix. Smaller, 1 - 2 mm, pinhead sized garnets are more preferentially represented within argillaceous sediments. In the Tarkwaian, the Kawere conglomerate is characteristically polymictic and exhibits a mix of metamorphic assemblages, dominantly controlled by the chemistry of the individual cobbles. Fine, well formed, rosettes of tremolite and actinolite can develop in association with pinhead garnets.

Figure 12 below taken from drill hole DDHK21-001 illustrates the typical mineralisation assemblage showing a closeup of the sulphides within the garnet zone.

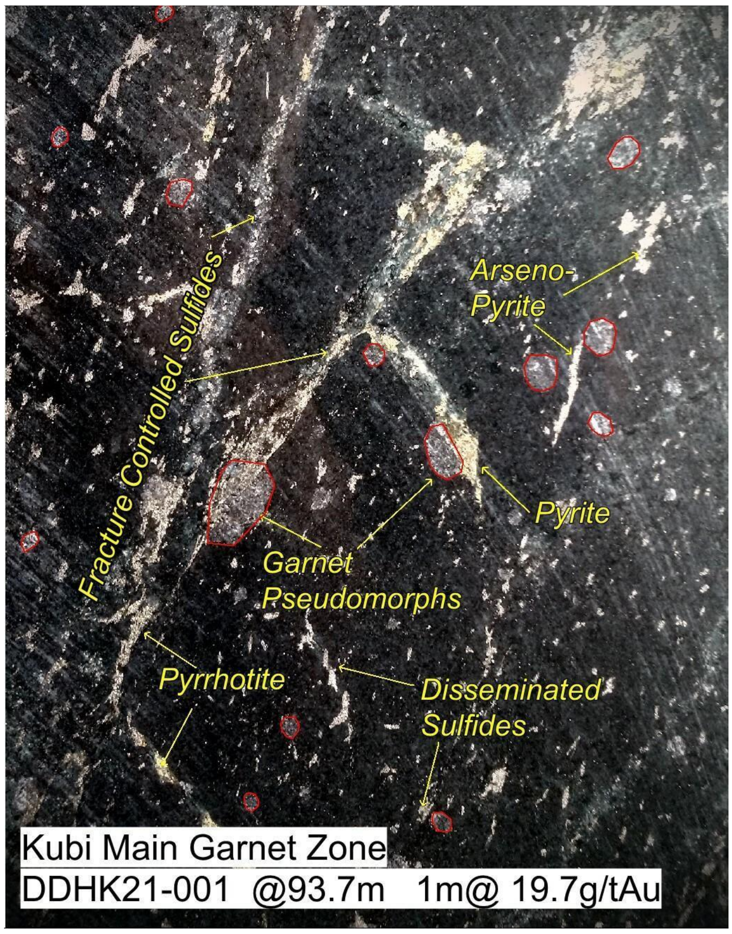


Figure 12: Photomicrograph of Kubi Main Zone mineralisation (Asante 2021)

The preferred orientations of quartz vein sets observed at Kubi Main deposit, correlates closely with the predictions made within the Reidel Model for orientation of shear fractures and extension fractures in a brittle - ductile shear zone.

The 'Garnet Zone', rheologically, is perceived to have reacted as a homogenous mass under sinistral shear. The rock package, as a whole, is not a homogeneous mass, and more intimate local controls on mineralisation may be imposed by the presence, attitude and geometry of the Garnet Zone, early cross-faulting, early fabric development and/or proximity along strike or dip of the fracture to the main conduit.

The presence of auriferous, oblique, cross-cutting extension veins should be monitored as they may constitute discrete high-grade flares within the mass. Hanging wall flares were investigated and found not to be significant over a distance of 20m laterally away from the main conduit.

Overall, it can be observed that quartz veins straddle and cross-cut the 'Garnet Zone' feathering into the surrounding host rock. Detailed selective sampling of both adits and core has demonstrated that although higher gold grades are often associated with quartz veins and zones of appreciable silica flooding, gold mineralisation within the host selvage proximal to the fracturing is also of economic tenor.

7.4 Mineralisation

The mineralisation occurs in a 1.0 to 15.0 metre thick garnetiferous horizon within Birimian metasediments. This garnetiferous horizon contains fine grained gold associated with minor (5-15%) pyrite, arsenopyrite and pyrrhotite as well as some coarser gold which is associated with relatively narrow quartz veins. Some mineralisation occurs in quartz veins and veinlets that cross-cut the Birimian-Tarkwaian contact, outside of the main garnetiferous horizon.

SEM (scanning electron microscope) and polished section studies have observed gold and associated sulphides such as pyrrhotite, pyrite, arsenopyrite and occasionally chalcopyrite, rimming and often replacing the included garnet blasts. The garnets are often highly tectonised with native gold, often coarse, and with sulphides coating the micro-fractures.

The grades exhibited on the Birimian-Tarkwaian contact (the "Contact" zone) are variable but generally low in tenor. The mineralisation is associated with moderate silicification and quartz veining. The predominant sulphides are pyrite and arsenopyrite.

The footwall and hanging wall zones are comparable to the traditional styles of Ashanti lode gold deposits, with the exception that the gold is free milling and not refractory - predominantly quartz vein hosted within faults and shears, with attendant pyrite and arsenopyrite haloes. Grades tend to be moderate to low, but continuity exists and potential high-grade pods are observed over restricted strike lengths.

Gold is native, is often coarse and nuggetty, hosted within quartz veins and microfractures in the host sulphides or alteration minerals. It is not intimately bound within the lattice of the sulphides. Kubi mineralisation is “free milling”, not refractory, hence 95% expected recoveries. Whilst higher gold grades are often associated with quartz veins and zones of appreciable silica flooding, gold mineralisation within the host selvage proximal to the fracturing is also of economic tenor.

8. DEPOSIT TYPES

Within the Birimian and Tarkwaian lithologies of Ghana there are three major types of gold mineralisation:

Type 1: Reef, Vein or Lode gold deposits associated with regional scaled shear zones, such as the Obuasi gold mine to the north of Kubi.

Type 2: Granitoid-hosted, mesothermal gold mineralisation, such as Ayanfuri gold mine to the south west of Kubi.

Type 3: Auriferous quartz-pebble conglomerate deposits such as at Tarkwa and recent alluvial gold concentrations.

The Kubi deposit mineralisation style is Type 1: Birimian aged, shear hosted, reef, vein or lode gold deposit.

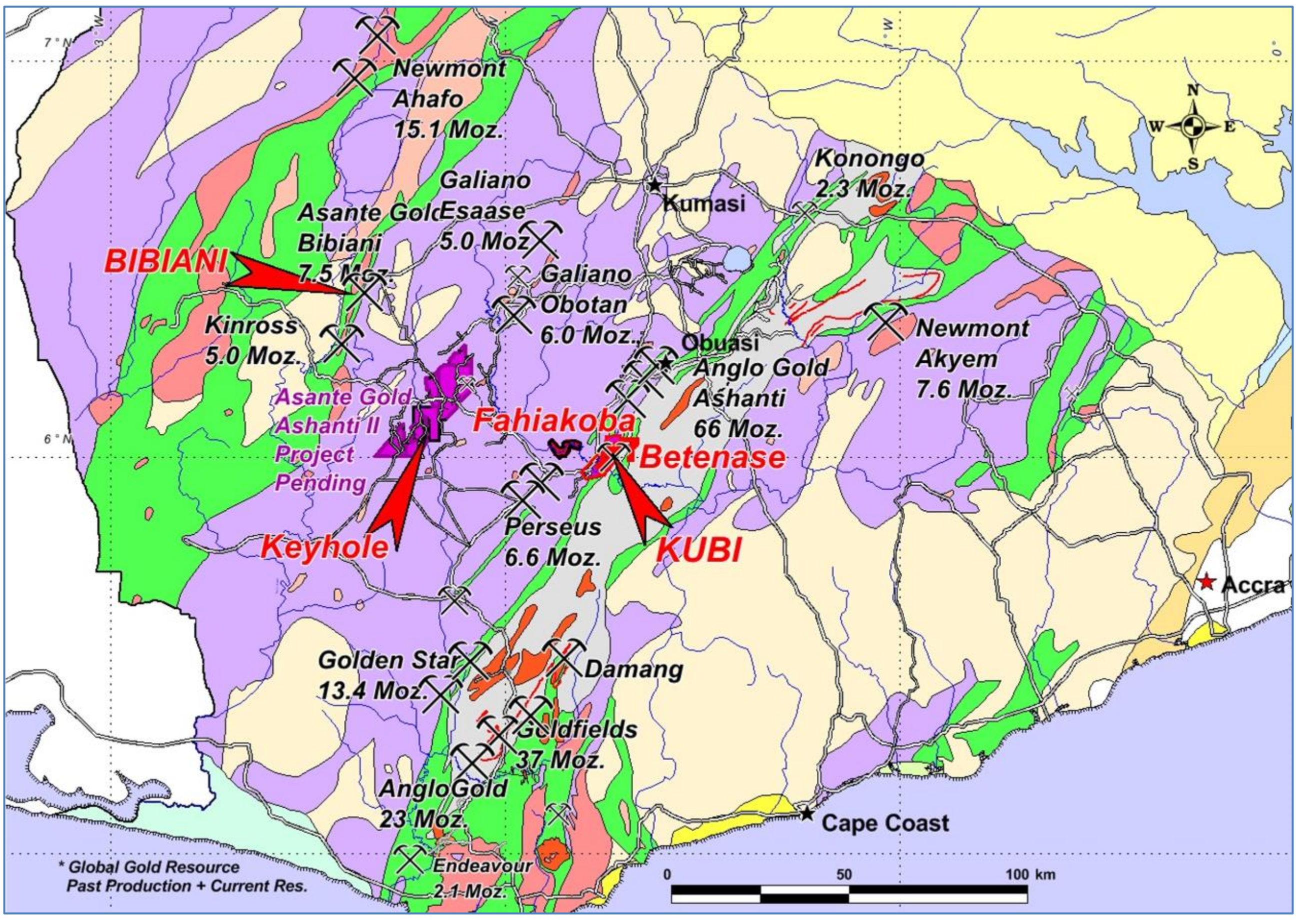


Figure 13: Location of Kubi project in relation to other related deposits in Southern Ghana (Asante 2020)

The Kubi deposit is interpreted to be situated at the intersection of the main NE-SW trending Birimian–Tarkwaian thrust contact and a major N-S trending basement fault. This same north south structure hosts the Konongo, Obuasi, Perseus and Golden star mines which occur north and south of the Kubi deposit.

9. EXPLORATION

Numerous owners have carried out focussed exploration programs since the late 1980's. The section below has been largely taken directly from the NI43-101 Technical Report 2014 (SEMS, 2014). Additional information has been included that pertains to updated exploration carried out by Asante Gold since acquisition in 2016.

9.1 PMI (2008 - 2013)

PMI explored the Kubi Project from 2008 to 2013. The initial focus of PMI's work was to further assess target areas outside the limits of the defined mineral resource. A summary of the work completed on both the Kubi Mining Leases and the Dunkwa Gyimigya Prospecting Licence by PMI is presented in this Report.

9.1.1 Geophysical Surveys

AIRBORNE GEOPHYSICAL SURVEY

New Resolution Geophysics carried out a high-resolution helicopter borne magnetic and radiometric survey for PMI over the Kubi Project during 18th May to 28th June 2010. A total of 1,390 line kilometres covering approximately 126km² were flown at an azimuth of 130º with an average terrain clearance of 30m and line separation of 100m. Data was recorded at about 2m intervals.

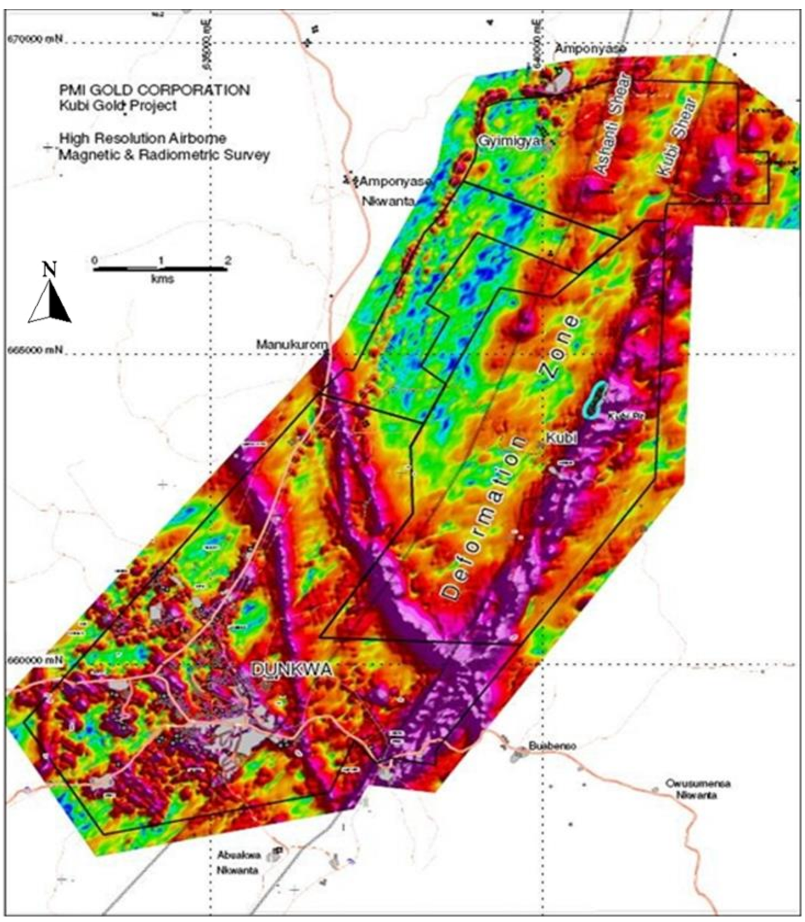


Figure 14: Analytical signal and total magnetic field. UTM 30N, WGS84 (PMI GOLD 2009)

Products delivered after the survey included GeoSoft format grids and database file, logistics summary report and geo-referenced tiff images of:

- Total field gradient enhanced magnetics
- Analytic signal (Figure 14)
- Reduced to pole magnetics
- First vertical derivative magnetics (Figure 15)
- Four channel radiometric data: Potassium, Thorium, Uranium and Total Count (Figure 16)
- Digital Terrain Model.

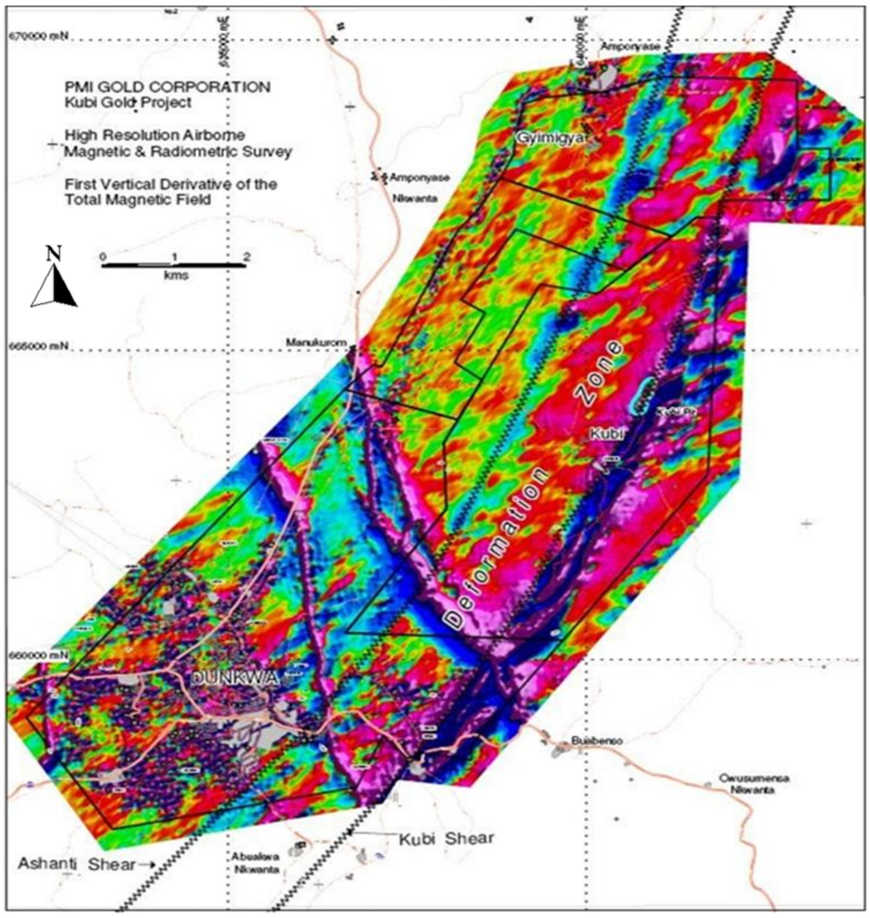


Figure 15: First vertical derivative of the total magnetic field. UTM 30N, WGS84 (PMI GOLD 2009)

The gradient enhanced total field data provides a better resolution of magnetic features; the vertical derivative enhances shallow features, contacts and structures; reduction to the pole transforms the magnetic data to that of the pole where the field is vertical and anomalies peak over their sources; and analytic signal is used to define edges and contacts and also remove remnant magnetism in some rocks.

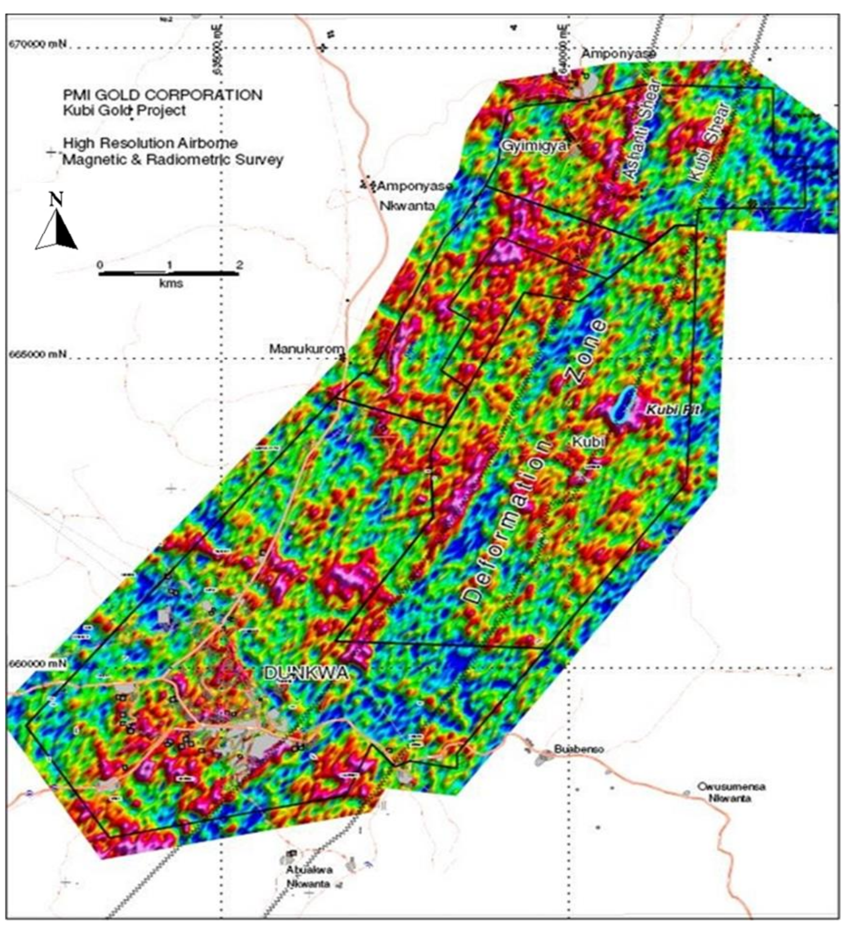


Figure 16: Potassium radiometrics. UTM 30N, WGS84 (PMI GOLD 2009)

GROUND GEOPHYSICAL SURVEYS

Very Low Frequency Electromagnetic ("VLF-EM") survey grids were laid out to follow up interpreted conductive zones outlined by Nevsun's 1995 helicopter born electromagnetic surveys (HEM).

An 18.6KHz portable Geonics Tx - 27 local source VLF - EM Transmitter was used in the data acquisition. An antenna line laid parallel to the dominant regional geological strike was used to generate and transmit the signals and the ground response was measured with a VLF receiver. Field strengths and dip angles were measured on 100m lines and readings were recorded at 12.5m station spacing.

Fraser and 7 point smoothing and averaging filters are applied to the dip angle and field strength data respectively and the residuals are gridded and contoured, with field strength highs corresponding with zones of relative high ground electrical conductivity. Contoured field strength highs represent conductive zones, generally graphitic shear zones, are summarised on Figure 17 (highs are not pronounced on the scale of the plot). Field strength lows located between prominent highs are also of interest in that they may represent resistive silicified zones. The resultant plot also defines the regional geological trend and some apparent cross structures.

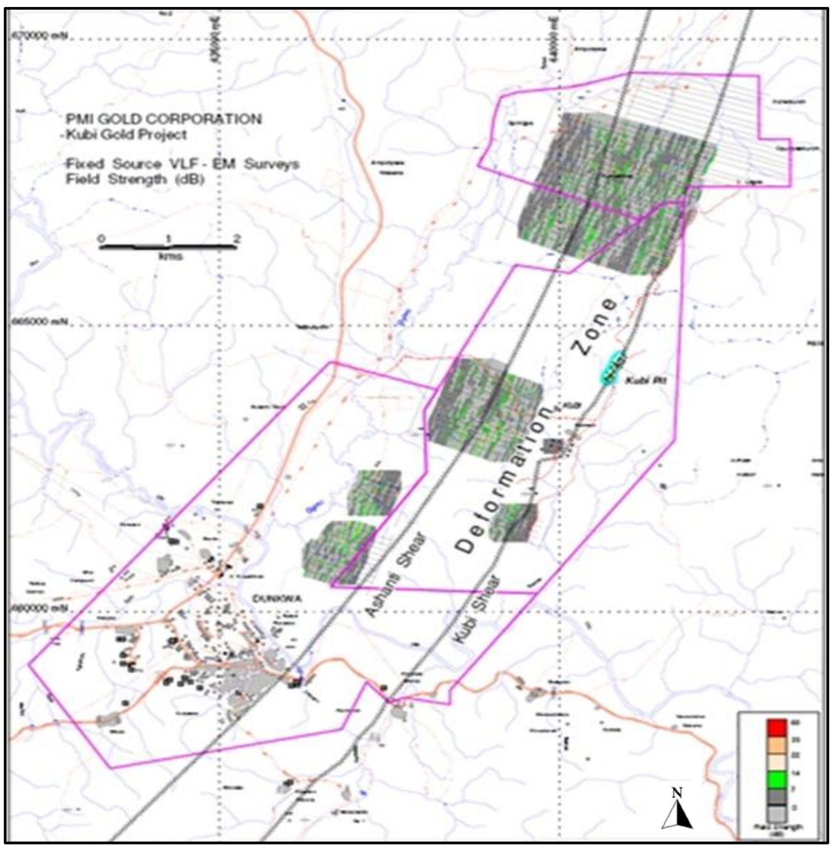


Figure 17: Fixed source VLF - EM surveys. UTM 30N, WGS84 (PMI GOLD 2009)

An IP Survey was also completed. A 3.6Kw GDD Instrumentation Tx II IP transmitter and an Iris 10 channel Elrec Pro receiver were utilised to acquire the data. Pole - dipole array, with a dipole spacing of 'a' = 50m, and 'n' = 6 dipoles was employed Survey lines were 200m apart and readings were recorded at 50m intervals.

Raw resistivity and apparent chargeability data were gridded and contoured after editing. This was found useful in mapping geologic boundaries and in defining the Kubi structure.

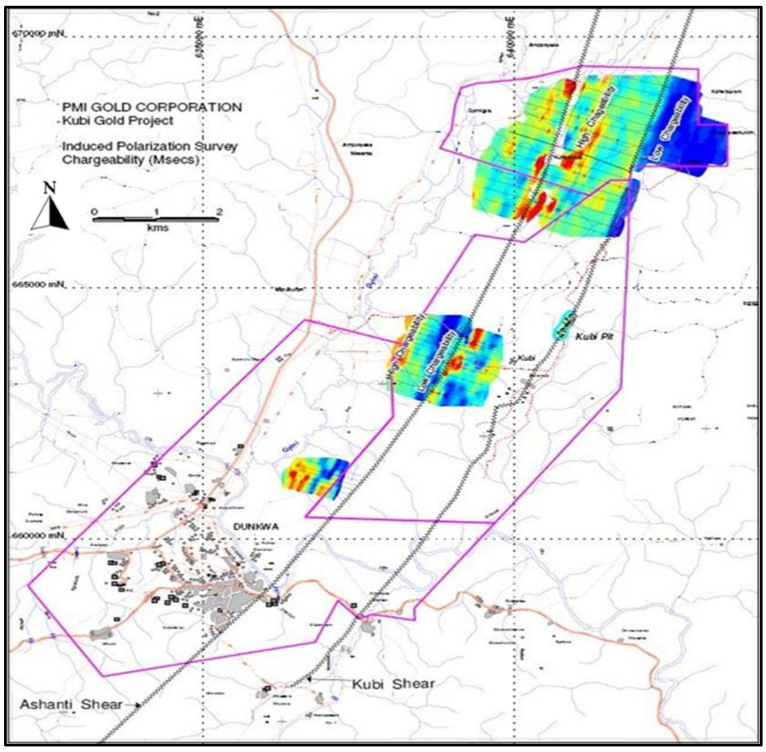


Figure 18: Induced Polarisation surveys - Chargeability map. UTM 30N, WGS84 (PMI GOLD 2009)

9.1.2 Geochemical Surveys

SOIL GEOCHEMISTRY

Soil sampling was conducted on the western part of the Gyimigya Prospecting Licence at 25m intervals on 9 lines spaced 200m to 400m apart. Samples were collected with a "so-so" tool (a local tool with steel blade and wood handle) at depths of 30cm to 60cm in the B soil horizon, well below the bottom of the A horizon. A total of 480 soil samples plus 26 duplicates and blanks were submitted to the SGS laboratory at Bibiani.

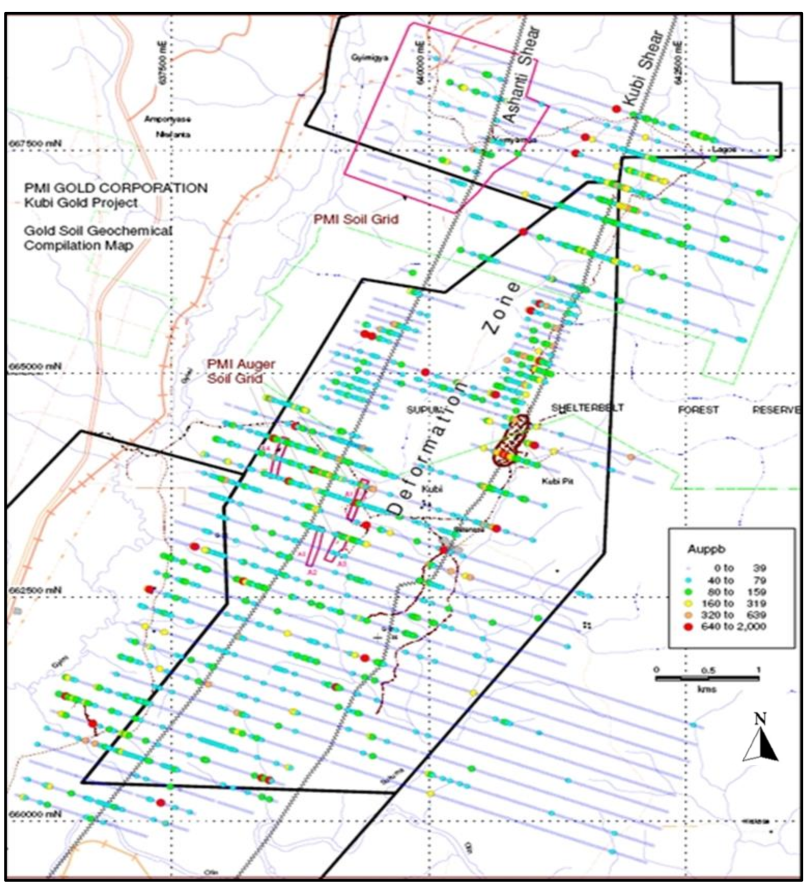


Figure 19: Soil Geochemistry - Au. UTM 30N, WGS84 (PMI GOLD 2009)

PMI and Nevsun sample data are summarised on Figures 19 and 20. The data plot shows a widespread weakly (40+ppb) to locally strongly anomalous (peaks 150ppb to 17,000ppb Nevsun grid; 543ppb PMI grid) gold values over a wide area. However, in view of the mostly subdued topography in the survey area, the colluvium to 4 metres thick, especially in low lying areas, intense saprolite development, and scattered high spot values, it is concluded that gold soil geochemistry can provide targets only in a very broad sense. Arsenic data is not available on all of the Nevsun grid.

Arsenic at +50ppm has a less dispersed distribution in soils and appears to have some use in defining shear zones, particularly the Kubi structure.

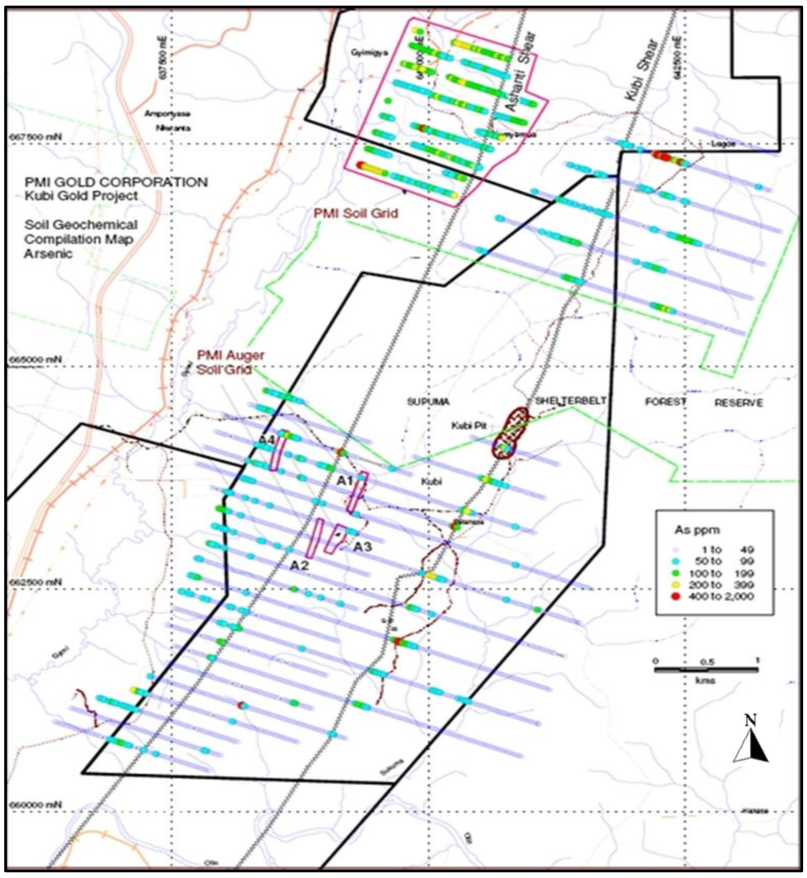


Figure 20: Soil Geochemistry - As. UTM 30N, WGS84 (PMI GOLD 2009)

AUGER SAMPLING

A program of auger sampling was conducted after an initial phase of diamond drilling discovered the "513 Target Zone". The program was completed to prioritise ground geophysical VLF-EM targets prior to diamond drill testing. Work was contracted to Kam Associates Ltd. who used a Cobra portable percussion drill rig. The auger holes were drilled on 12.5m centres and 50m line spacing across the four linear conductive zones delineated by local source VLF-EM surveys, named anomalies, 1 through 4. A total of 429 "spoon" samples collected at depths of 3m to 6m were submitted to SGS laboratories in Bibiani. All were analysed for gold by 50g Au fire assay with atomic absorption ("AA") finish and arsenic by AA.

Significantly, all 21 of the anomalous gold samples occur in a distinct linear trend from the A1 target Zone in the north 600m southerly to the centre of the A3 target area, both hereinafter referred to as the "513 Zone".

No anomalous gold values were encountered in drilling on the A2 and A4 targets. Subsequent diamond drilling on the A3 target encountered significant gold values in holes 521 and 522.

9.1.3 Trenching

During this period, PMI excavated three trenches and collected one set of channel samples. The trenching program did not produce any significant intersections, however, the channel sampling from artisanal workings close to Kubi open pit returned an intersection of 19m at 2.07g/t Au (Including 8,24g/t Au over 1m).

9.2 Asante (2016-Present)

Pursuant to a purchase and sale agreement of 2016, Asante has embarked on various methods of exploration to continue to enhance the potential and geological understanding of the Kubi Project and adjacent mineralised targets. These programs will form part of the bigger exploration strategy which is the focus of this Report and has been explained in earlier sections.

9.2.1 Kubi Main Area

Towards the latter part of 2019, Asante Gold Corporation initiated a field program to expose gold mineralisation in the north face of the Kubi pit and that work was successfully completed. Work consisted of cleaning debris and some vegetation from the first two benches of the pit to expose fresh rock; the establishment of local survey control points in order to accurately locate collars; and the taking of grab samples (5.93g/t Au over 3.0m true width) to confirm the boundaries of the gold mineralised zone.

3D MAGNETIC INVERSION

The results of a 3D Magnetic inversion exercise carried out by Asante show that the Kubi Main Zone gold resource is intimately associated with, and interfingers, the western sheared contact of a magnetic high feature that plunges to more than 3km depth.

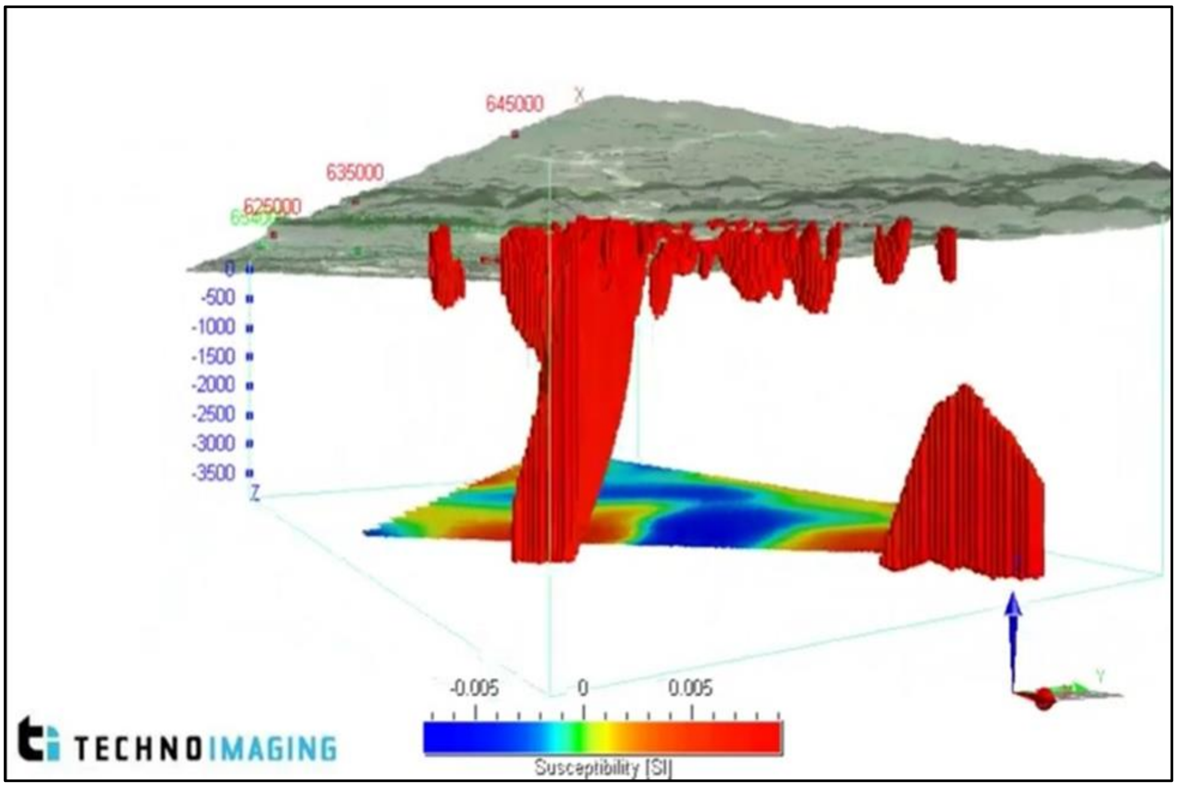


Figure 21: 3D Magnetic Inversion photo

9.2.2 Kubi East

GROUND GEOPHYSICAL SURVEYS

A combined Induced Polarisation/Resistivity (IP/Res) and ground magnetic (GMAG) program was launched in the latter part of 2019 to investigate the geological structure and define the sulphide mineral content of the newly discovered Kubi East target. New high induced polarisation (IP) target was discovered 350m to 500m to the east of our Kubi Main gold deposit, within the Obuasi-Dunkwa area, Ghana.

A total of 3.65km consisting of 8 lines of IP/Res and 3 lines totalling 1.35kms of GMAG were surveyed. The lines were all 100m apart and stations were picketed at 25m intervals. The baseline was oriented at 20.2^{o}N and was 800m long.

The IP and co-incident high resistivity anomaly observed in the program is interpreted as sulphide mineralisation along the sheared contact of highly magnetic Tarkwaian meta conglomerates, and strikes azimuth 020 degrees, a structural setting like that noted at the Kubi Main gold deposit. At Kubi, the tenor of the gold mineralisation is directly related to the sulphide content in a distinct garnet and quartz rich unit. IP surveys are typically used to map subsurface sulphide mineral content, and in this geographic area can be subdued because of deep saprolite weathering.

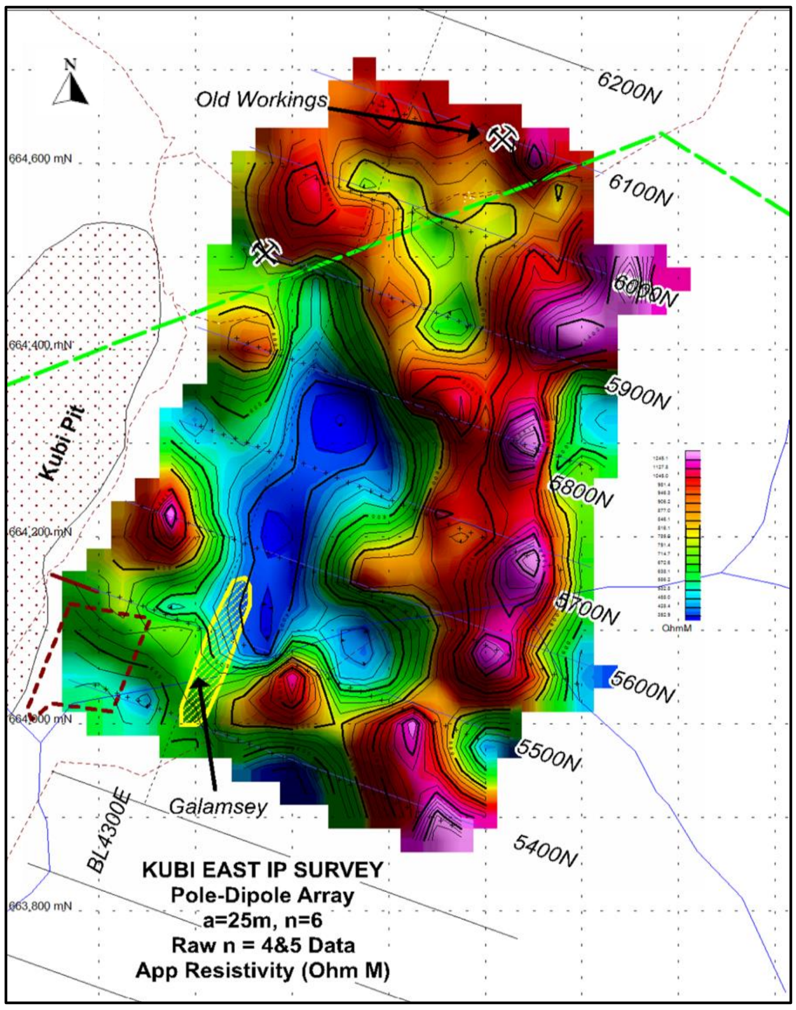


Figure 22: Kubi East - Apparent Resistivity (Asante 2020)

Two main high magnetic domains were observed on the magnetic survey data.

The first unit extends for about 200m at the west end on lines 5700 and 5800 and the second is localised at the eastern end of the grid on all the three lines.

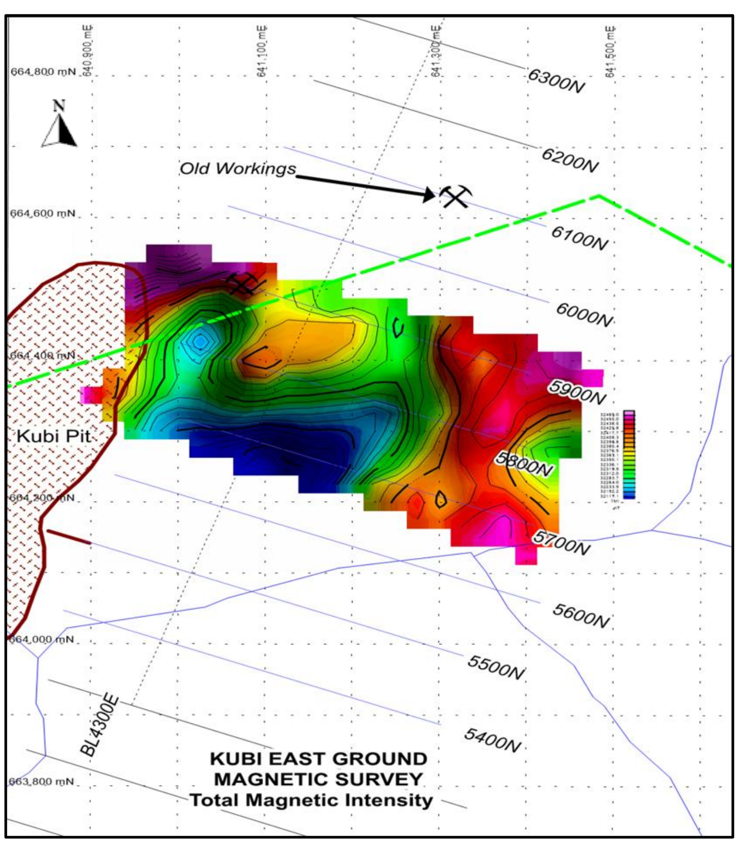


Figure 23: Kubi East - Magnetic Survey (Asante 2020)

TRENCH PROGRAM

During the months of January through March of 2020, a program to test previously located Induced Polarisation (IP) anomalies, consisting of six excavator trenches and hand dug extensions, totalling 216m in length, oriented at 110^{o} azimuth and to depths of 6m, were completed, with 53 channel samples analysed. Only background gold levels were noted. All trenches have now been backfilled using local village labour and returned to agricultural use.

TR-01 and TR-02 covering the highest priority IP targets outlined to date on the east side of the Kubi Gold Mine pit did not reach bedrock given the thick waste dump material encountered. Values to 3m at 4.5g/t Au in a garnet and sulphide rich zone were noted in a previous drill hole at a depth of 360m vertically below TR-01. TR-02 uncovered pit waste material which contained up to 5% finely disseminated sulphides and may explain the underlying IP anomaly. These two targets remain to be tested in a future drill program.

TR-03 to TR-06 were cut in saprolite. No sulphides, pervasive silicification or graphitic shear zones were noted. In TR-03 a 5m wide, distinct buff to white meta sandstone containing up to 5% coarse disseminated magnetite was noted. The lack of shearing may indicate that the source of these IP and magnetic anomalies is primary sulphides and magnetite in distinct stratigraphic units.

This paleo sedimentary environment can also concentrate gold. Further IP, magnetic and auger soil sampling is planned to the East, North and South of the current program.

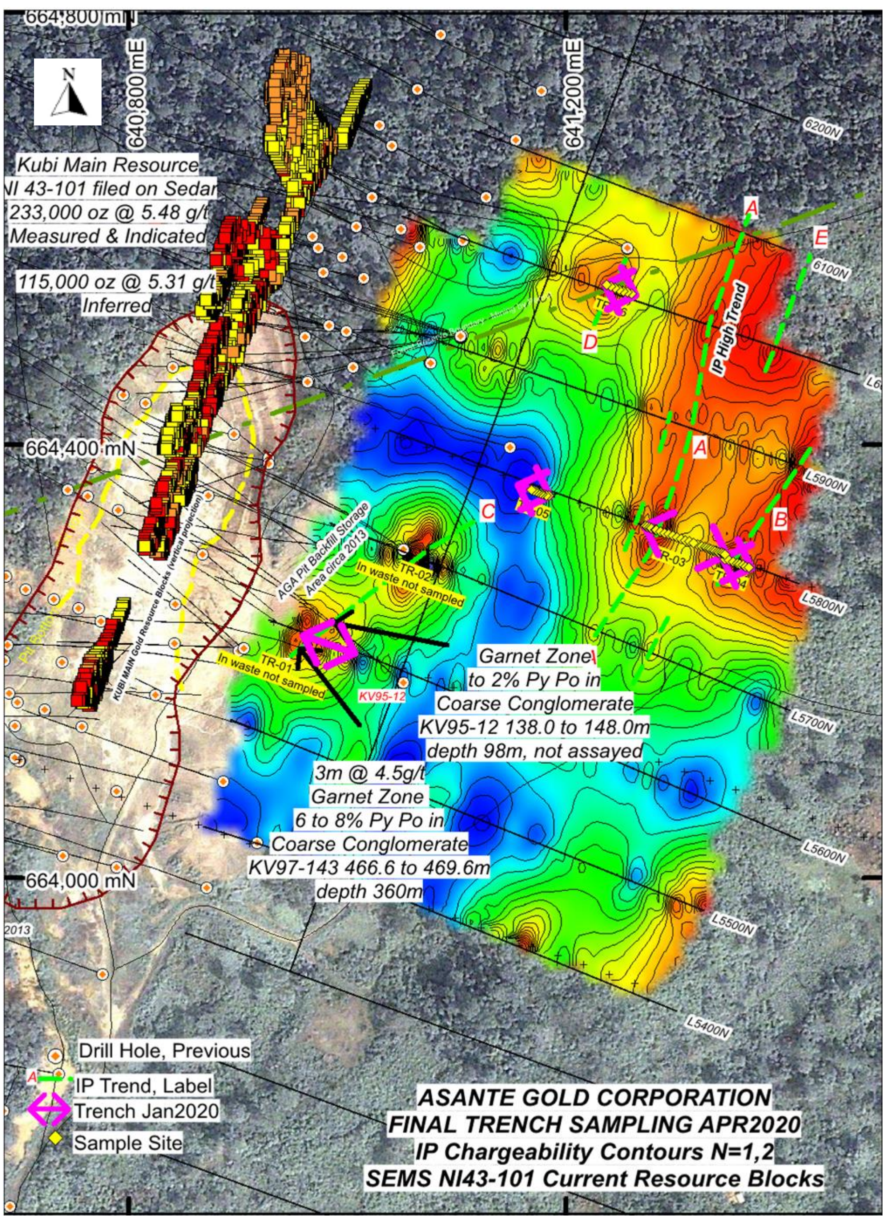


Figure 24: Kubi East - Final Trench Sampling overlaid on IP Chargeability (Asante 2020)

9.2.3 513 Target Zone

Ground geophysical surveys were conducted at the 513 Prospect area, which is about 1.2km south west of the Kubi main deposit.

The 513 Zone was first discovered in 2009 by ground geophysics and followed up with 3,077m of drilling in 25 shallow holes over a strike length of 540m. The zone is hosted in a vertical to moderately east-dipping garnetized metagabbro with similarities to the garnet zone that hosts the gold mineralisation at Kubi Main. Best previous drill results are 4.8m at 3.76g/t Au from 85m depth, 8m at 3.68g/t Au from 64m, and 1.0m at 15.3g/t Au from 66m. Mineralisation consists of visible gold, minor pyrrhotite and arsenopyrite.

TRENCHING/AUGER DRILLING

In February 2021 Asante also completed trenching and auger drilling on the Kubi 513 Zone located 1.2km southwest of the Kubi Main Zone. A total of 737 samples were collected from 11 trenches with a combined length of 436m. The object of the program was to determine the near surface mineralisation overlying previous drill results of 4.8m at 3.76g/t Au, 8m at 3.68g/t Au and 1.0m at 15.3g/t Au. Although results were disappointing and explained by the deep weathering of the laterite horizon not uncommon in the Ghana setting, they did suggest that the strike length of 700m is indicated and remains open to the north. TR20-02 returned a value of 4.0m at 1.88g/t Au which lies 115m beyond the previous most northern drill hole KV-09-517 (4.8m at 3.76g/t Au).

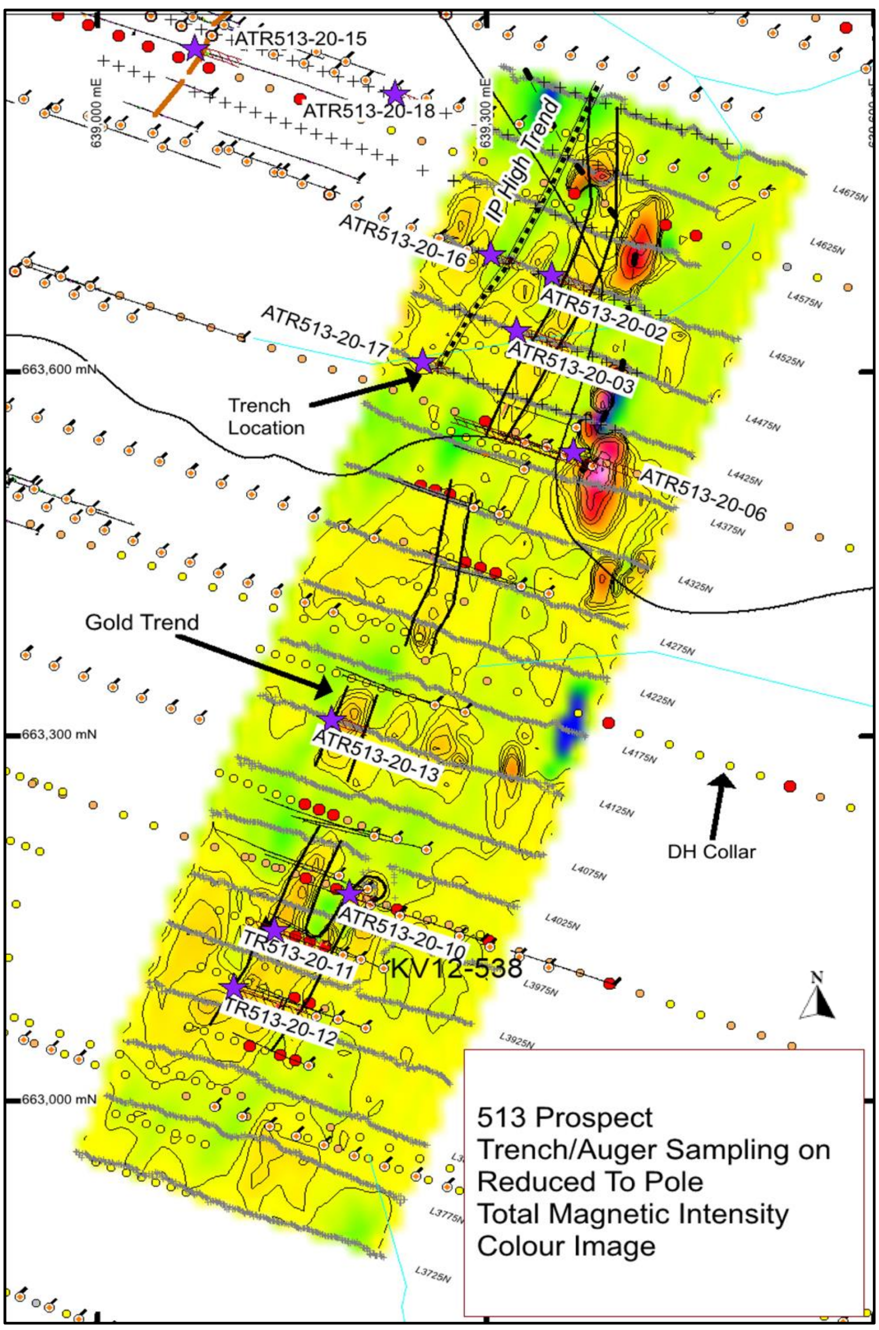


Figure 25: 513 Zone - Trenching and auger drilling (Asante 2021)

INDUCED POLARISATION/RESISTIVITY (IP/RES)

The IP/Res survey was conducted during the period between the 19th and 21st August, 2020. The grid consisted of 2 line kms. The lines were 50m apart and stations were picketed at 25m intervals. The baseline was oriented at 20ºN.

The pole-dipole electrode array was used, with an inter electrode spacing “a” of 25 metres and “n” separation 1 to 6. Readings were recorded at 25m intervals on 50m spacing survey lines. This gave a coverage to a theoretical depth of approximately 75m which certainly appears significant enough for the bedrock to be explored in the entire survey area. A state of the art programmable and software-controlled Iris instruments Elrec Pro receiver in combination with Instrumentation GDD transmitter TxII were deployed on the IP survey. The transmitter was powered by a 6.5 KVA Honda generator.

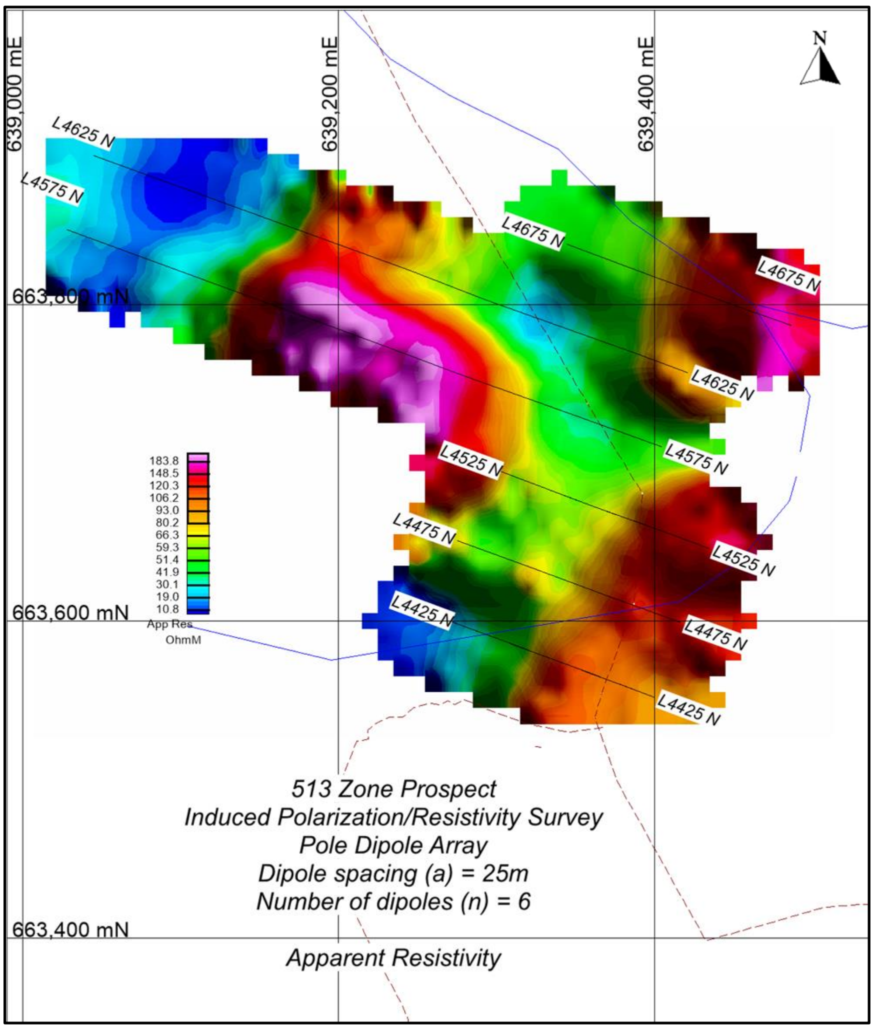


Figure 26: 513 Zone - IP/Resistivity Survey - Apparent Resistivity (Asante 2021)

GROUND MAGNETICS (GMAG)

The ground magnetic survey was conducted in two phases on the same IP survey lines. Phase 1 consisted of 10 lines and totalling 1,000m whilst 20 lines of 4,000m comprised the Phase 2 program. Phase One Ground magnetic survey was carried out between the 24th and 30th October, 2019 and the second phase was started on the 6th of August 2020 and completed on the 12th August, 2020.

A total of 2km of IP/Res and 5km of ground magnetic surveys were completed over the 513 Zone within the Kubi mining lease during the survey period under consideration.

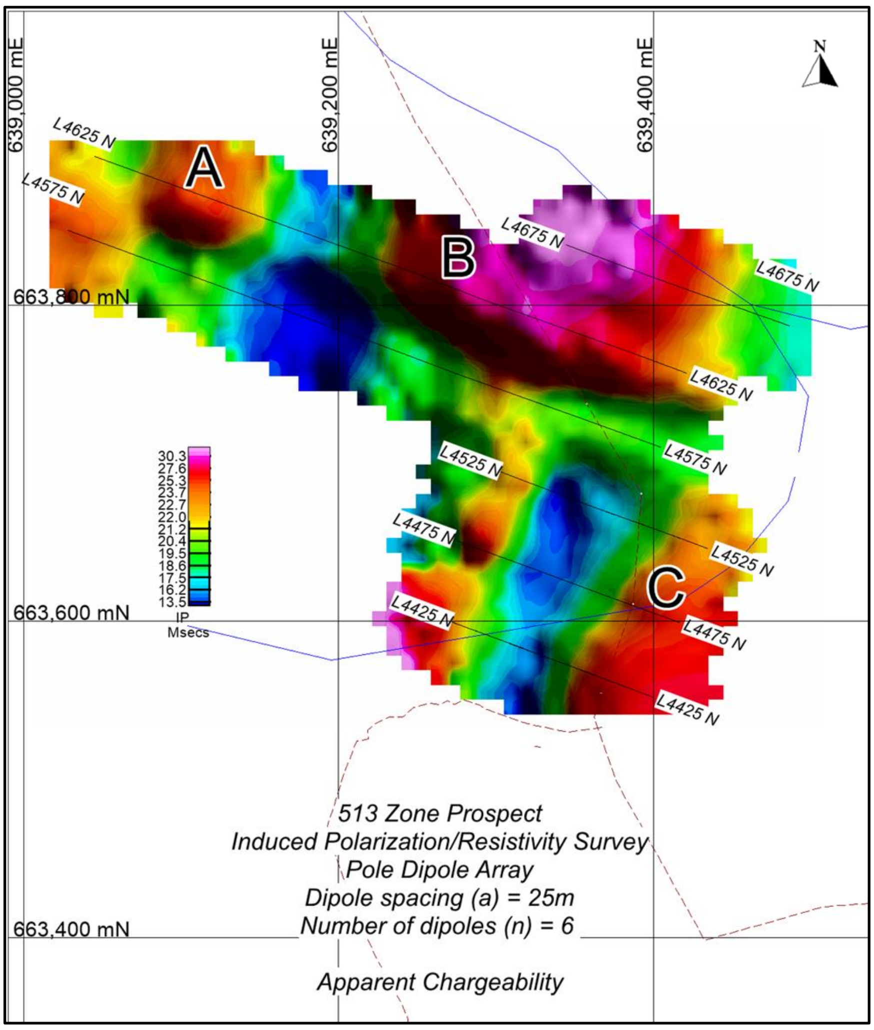


Figure 27: 513 Zone - IP/Resistivity Survey - Apparent Chargeability (Asante 2021)

9.3 Conclusions

The exploration results from drilling and other geophysical methods applied, both past and present, indicate positive extension potential to the Kubi Main mineralised body in strike and especially to depth. In addition, the recent discovery of the 513 mineralised deposit southwest of the Kubi Main has opened new possibilities of parallel mineralised shears within the Kubi Shear Zone environment.

Asante intends to further explore all these possibilities and the purpose of this Report, based on the SEMS 2014 Mineral Resource Estimate, includes the PEA for embarking on an expanded underground based exploration program to complete preliminary underground development and mining to advance both the exploration of the Kubi main mineralised deposit and to extract the current available resources.

The proposed underground exploration drilling and mining development program that is the focus of this Technical Report is covered in Section 10.5.

10. DRILLING

Asante Gold has integrated historical databases with more recent and ongoing drilling programmes. Drilling completed under Asante Gold ownership is described in the following sections. In the 66,312m of diamond core drilling from 226 holes used for the KMZ Mineral Resource estimate there were 83 drill core assays greater than 10g/t Au and ranging to 98g/t Au highlighting the high-grade potential of the mineralised deposit.

The information in this section related to the period before the involvement of Asante was reported by SEMS in the 2017 NI43-101 Technical Document. The work carried out subsequently by Asante has been added by the Authors to include the latest drilling programs and outcomes.

10.1 Type and Extent of Drilling

All surface exploration and resource drilling on the Kubi Gold Project has been undertaken by either diamond core drilling, RC or RAB drilling. All drill hole collars were surveyed; however, a number of earlier core holes were not surveyed down-hole with respect to azimuth and declination.

The database provided to SEMS in 2010 for geological modelling and resource estimation comprised data from 226 drill holes. Generally, the drill data was in a good condition however, the accuracy of downhole survey data in some holes may be unreliable. There may also be elevation inconsistencies between different drill hole collar survey campaigns.

10.2 PMI (2009 - 2010)

A total of 2,559m of reconnaissance diamond drilling in 22 holes was conducted in two phases. Drilling was contracted to Burwash Drilling, who used a Longyear 38 skid mounted drill rig with HQ and NQ size coring.

Regional strike of stratigraphy and structure is roughly 020º (north northeast) dipping near vertical. Drilling was conducted perpendicular to this strike at 110º or 290º, at angles of -45º to -65º, so that true widths of intercepts are approximately 50% to 65% of those obtained. Drill hole coordinates were surveyed with handheld GPS units with precision between 5 and 8 metres horizontally. Downhole surveys were collected on approximately 50m downhole intervals, using a Reflex EZ-Shot® an electronic single shot instrument manufactured by Reflex of Sweden.

Drill collar information is presented in Table 6.

Hole ID	Local Grid E	Local Grid N	WGS84 East	WGS84 North	Elevation Metres	Azimuth	Dip	Length m
KV09-501	2527	4680	639069	663942	146	110	-50	100.59
KV09-502	2646	4789	639218	664003	127	290	-50	321.78
KV09-503	3669	2753	639475	661739	124	110	-50	102.41
KV09-504	3585	2802	639413	661814	124	290	-50	81.08
KV09-505	1640	1206	637037	660988	130	290	-50	100.80
KV09-506	1471	1178	636868	661020	124	290	-50	114.00
KV09-507	1360	1203	636773	661082	138	290	-50	88.39
KV09-508	1092	1415	636594	661373	150	290	-50	95.71
KV09-509	2646	4789	639218	664003	127	110	-45	106.68
KV09-510	2646	4789	639218	664003	127	290	-65	134.72
KV09-511	2638	4725	639187	663951	124	290	-50	112.17
KV09-512	2619	4640	639169	663913	152	290	-50	79.25
KV09-513	2912	4400	639351	663534	138	290	-50	84.13
KV09-514	2200	5000	638855	664282	119	290	-50	111.25
KV09-515	1070	1300	636540	661266	137	290	-45	104.24
KV09-516	1719	1502	637220	661239	163	290	-45	170.99
KV09-517	2912	4425	639359	663558	137	290	-50	100.89
KV09-518	2913	4400	639351	663534	138	290	-65	126.49
KV09-519	2912	4375	639343	663510	140	290	-50	89.92

Hole ID	Local Grid E	Local Grid N	WGS84 East	WGS84 North	Elevation Metres	Azimuth	Dip	Length m
KV10-520	2950	3850	639166	663025	152	290	-50	89.45
KV10-521	2963	3900	639198	663065	143	290	-50	107.60
KV10-522	2963	3950	639207	663113	143	290	-60	126.49

Table 8: Kubi project diamond drilling collar details 2009 - 2010

Rock types encountered include greywacke, phyllite, gabbro (possibly as meta-basalt), tuff and minor felsic intrusions. Any intervals with shearing, presence of quartz veins, sulphides and garnet were sampled. Drill hole locations are presented and intercepts of grade x width of 1 gram-metre (e.g. 1g/t Au over 1m, 0.5g/t Au over 2m, etc.) or more are summarised in Table 7 below.

Hole ID	From m	To m	Intercept Length m	Estimated True m	Average g/t Au	Comments
KV09-501	89.00	92.00	3.00	1.93	1.00	Sheared, boudinaged qtz vein & tuff + py
KV09-502	55.00	58.00	3.00	1.93	0.75	Gabbro, tuff + qtz veins + py, shear zone 57.53-81.00 m
KV09-503	82.00	83.00	1.00	0.64	2.49	Large qtz veins, foliated tuff + minor graphite + py
KV09-504						No significant results
KV09-505						No significant results
KV09-506						No significant results
KV09-507						No significant results
KV09-508	61.50	62.50	1.00	0.64	1.32	Aspy; sheared phyll, many qtz boudins, chlor alt, py sp
KV09-509						No significant results
KV09-510						No significant results
KV09-511						No significant results
KV09-512						No significant results
KV09-513	71.25	73.75	2.50	1.60	1.29	Garnetized gabbro: + aspy specks, local specks free gold
Including	72.00	73.75	1.75	1.12	2.59	Garnetized gabbro: **+ free gold specks** +aspy specks
KV09-514						No significant results
KV09-515						No significant results
KV09-516						No significant results
KV09-517	79.00	80.25	1.25	0.80	0.87	Gabbro: coarse gr, scattered large reddish garnets; py stringers & blebs; some po blebs
KV09-517	85.25	90.00	4.75	3.05	3.76	abbro: mottled, med-coarse grained, red garnets, abundant po & py blebs
Including	85.25	85.75	0.50	0.32	11.95	Gabbro: **free gold bleb & grain**; aspy bleb; qtz vein (4 cm); silicified; po & py blebs
KV09-518	98.00	104.50	6.50	2.75	0.58	Gabbro: mottled, coarse grained, red garnets + qtz vein
KV09-519						No significant results
KV10-520						No significant results
KV10-521	64.00	72.00	8.00	5.14	3.68	Gabbro; coarse grained, large red garnets; py & po blebs
Including	64.00	67.00	1.00	0.64	15.35	Gabbro; v coarse grained, large red garnets; py & po blebs; cpy veinlet
Including	71.00	72.00	1.00	0.64	10.30	Gabbro; med grained, occ small red garnets; 10cm vuggy QV; py (5%)
KV10-522	75.40	77.00	1.60	0.80	0.68	Gabbro, coarse grained, gwke, phyl + large red garnets + py (2%)
KV10-522	96.00	99.00	3.00	1.50	1.19	Gabbro, med - fine grained + scattered qtz veinlets
KV10-522	113.00	119.60	6.60	3.30	0.80	Gabbro, med - fine grained + qtz veinlets & stringers

Table 9: Kubi Gold project summary drilling results (PMI Gold)

10.3 PMI (2011 - 2013)

Between 2011 and 2013 PMI Gold continued to explore the Kubi Gold Project completing 1,627 drill holes within the Kubi Mining Lease, comprising 38 diamond core drill holes, 283 air core drill holes and 1,306 auger drill holes.

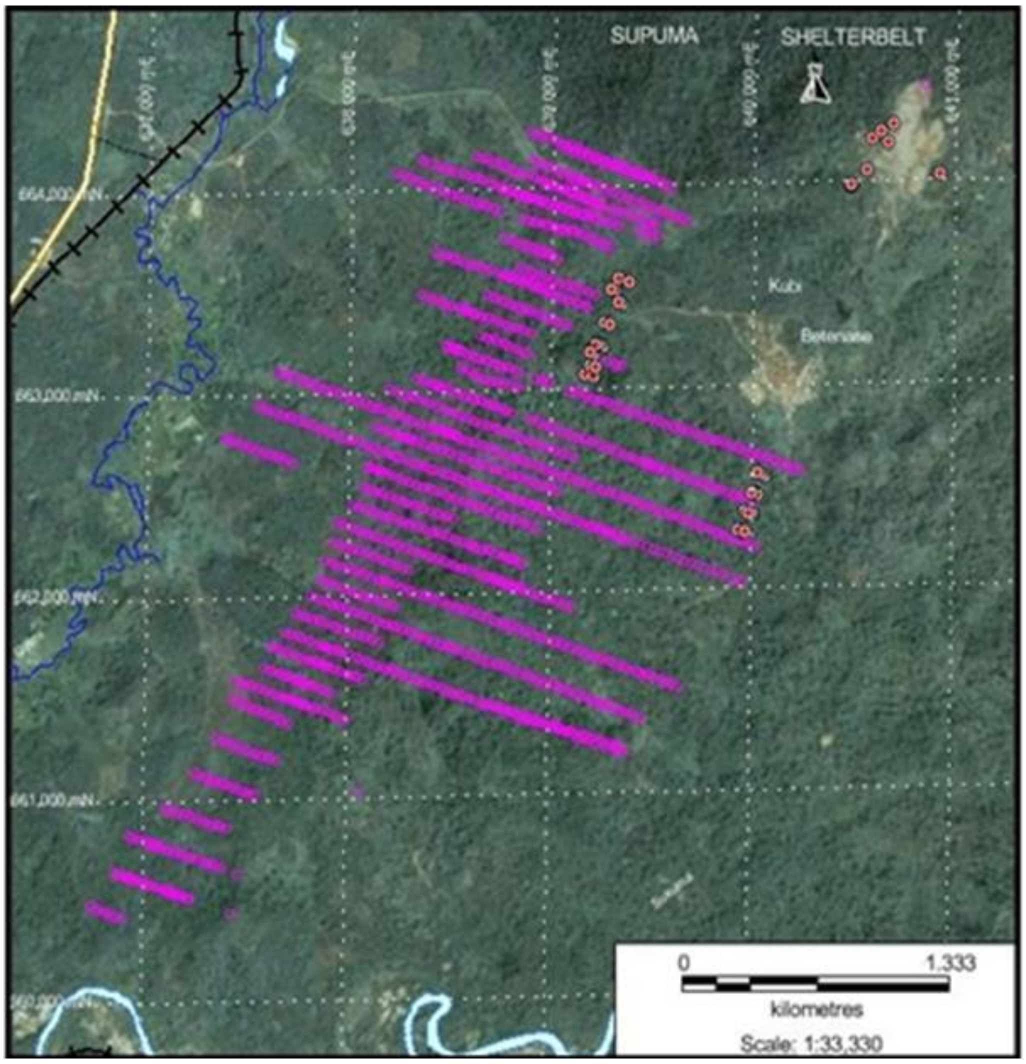


Figure 28: PMI Gold drilling; purple drill collars are air core holes, red collars are diamond core holes. UTM 3ON, WG584, GOOGLE EARTH IMAGE (SEMS 2014)

The Diamond drill holes targeted three separate zones within the Kubi Mining Lease. Seven holes were drilled under the southern extent of the historic Kubi open pit, twelve holes were drilled south of the Kubi village, targeting the southern extensions of the Kubi Main zone, and nineteen holes were drilled over the soil anomaly to the west of the Kubi mineralised trend. This zone is thought to cover the projection of the mineralised 'Ashanti Shear' mined at Obuasi. (Figure 28).

Sample ID	Hole ID	From m	To m	Sample Type	Au ppm	From m	To m	Interval m	Au ppm
125054	KV12-523	79	80	HCORE	**2.246**				
125055	KV12-523	80	81	HCORE	**2.395**				
125056	KV12-523	81	82	HCORE	**1.598**				
125057	KV12-523	82	83	HCORE	**0.264**				
125058	KV12-523	83	84	HCORE	**2.039**				
125059	KV12-523	84	85	HCORE	**6.091**				
125060	KV12-523	85	86	HCORE	**1.054**	**79**	**86**	**7**	**2.24**
126687	KV12-538	85	86	HCORE	**6.529**				
126688	KV12-538	86	87	HCORE	**4.476**				
126689	KV12-538	87	88	HCORE	**3.306**				
126690	KV12-538	88	89	HCORE	**1.411**				
126691	KV12-538	89	90	HCORE	**1.743**				
126692	KV12-538	90	91	HCORE	**1.872**				
126693	KV12-538	91	92	HCORE	**1.988**				
126694	KV12-538	92	93	HCORE	**1.213**				
126695	KV12-538	93	94	HCORE	**2.382**				
126697	KV12-538	94	95	HCORE	0.226				
126698	KV12-538	95	96	HCORE	**1.102**	**85**	**96**	**11**	**2.39**

Sample ID	Hole ID	From m	To m	Sample Type	Au ppm	From m	To m	Interval m	Au ppm
126981	KV12-540	103	104	HCORE	**3.648**				
126982	KV12-540	104	105	HCORE	**7.845**				
126983	KV12-540	105	106	HCORE	**2.03**				
126984	KV12-540	106	107	HCORE	**2.528**				
126985	KV12-540	107	108	HCORE	**1.501**	**103**	**108**	**5**	**3.51**
128867	KV12-549	116	117	HCORE	**1.185**				
128868	KV12-549	117	118	HCORE	0.926				
128869	KV12-549	118	119	HCORE	**1.422**				
128870	KV12-549	119	120	HCORE	**2.613**				
128872	KV12-549	120	121	HCORE	**2.894**				
128873	KV12-549	121	122	HCORE	**1.827**	**116**	**122**	**6**	**1.81**
130252	KV12-555	260	261	HCORE	**16.731**				
130253	KV12-555	261	262	HCORE	**1.254**	**260**	**262**	**2**	**8.99**
130628	KV12-556	230	231	HCORE	**1.292**				
130629	KV12-556	231	232	HCORE	**4.227**				
130630	KV12-556	232	233	HCORE	**15.639**				
130631	KV12-556	233	234	HCORE	**3.309**	**260**	**234**	**4**	**6.12**

Table 10: Diamond core drilling; significant sections 2011 - 2012 (PMI)

The diamond drill holes completed by PMI Gold between 2011 and 2013 did not result in any material change to the 2010 MRE. Six of these holes recorded mineralised intersections within the Kubi Main zone with values above the 2g/t Au cut off. The remaining holes have not identified any new or continuous mineralised zone.

A list of significant intersections is presented in Table 8.

An extensive program of air core and auger drilling was undertaken by PMI Gold between 2011 and 2012 targeting the interpreted position of the 'Ashanti Shear' zone which lies 15km to the west of the Kubi Main zone (Figure 28).

Several encouraging intersections were achieved in the air core drilling program. With a definite NNE trend identified coincident with the interpreted position of the Ashanti Shear (Figure 29).

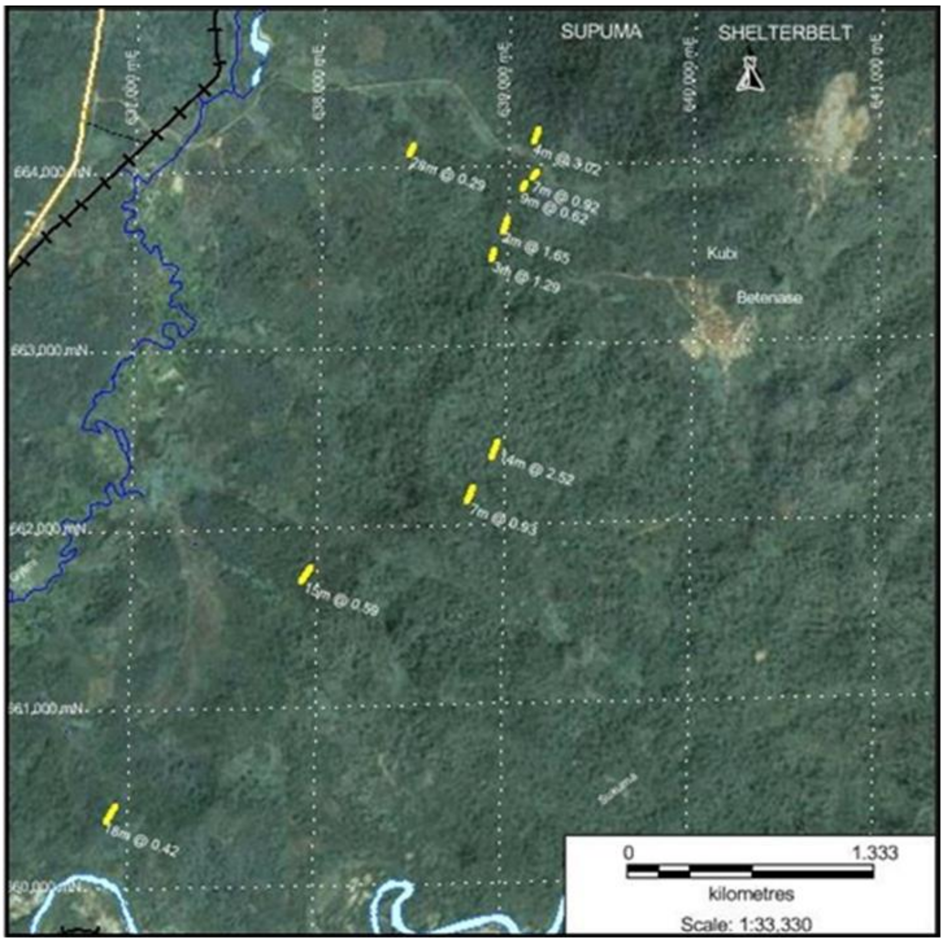


Figure 29: PMI Gold air core drilling; significant intersections plotted over a Google Earth Image of the Kubi ML. UTM 30N, WGS84, GOOGLE EARTH IMAGE (SEMS 2014)

The PMI air core drilling recorded a number of significant intersections that require further testing. The fact that several intersections on adjoining drill sections line up over the interpreted 'Ashanti Shear' is justification for a diamond drilling program. Note that the PMI diamond drill holes sited to the west of the Kubi Main zone appear to have been collared 350m to the east of the air core intersections.

A list of significant air core intersections is presented in Table 9 below.

Sample ID	Hole ID	From m	To m	Au ppm	From m	To m	Interval m	Au ppm	Comment
KU62590	KUAC12-051	51	52	**2.491**					
KU62592	KUAC12-051	52	53	**1.27**					
KU62593	KUAC12-051	53	54	0.101	**51**	**54**	**3**	**1.29**	**End of hole**
KU62996	KUAC12-058	49	50	**1.162**					
KU62997	KUAC12-058	50	51	**2.128**	**49**	**51**	**2**	**1.65**	**End of hole**
KU65416	KUAC12-138	6	7	0.218					
KU65417	KUAC12-138	7	8	0.118					
KU65418	KUAC12-138	8	9	0.099					
KU65419	KUAC12-138	9	10	**1.155**					
KU65421	KUAC12-138	10	11	**0.373**					
KU65422	KUAC12-138	11	12	**2.266**					
KU65423	KUAC12-138	12	13	**18.529**					
KU65424	KUAC12-138	13	14	**5.763**					
KU65425	KUAC12-138	14	15	**2.951**					
KU65426	KUAC12-138	15	16	**2.119**					
KU65427	KUAC12-138	16	17	**1.119**					
KU65428	KUAC12-138	17	18	0.196					

Sample ID	Hole ID	From m	To m	Au ppm	From m	To m	Interval m	Au ppm	Comment
KU65429	KUAC12-138	18	19	0.294					
KU65431	KUAC12-138	19	20	0.112	**6**	**20**	**14**	**2.52**	
KU72417	KUAC12-071	17	18	0.135					
KU72418	KUAC12-071	18	19	**9.506**					
KU72419	KUAC12-071	19	20	**2.274**					
KU72421	KUAC12-071	20	21	0.154	**17**	**21**	**4**	**3.02**	
KU73627	KUAC12-093	21	22	**1.134**					
KU73628	KUAC12-093	22	23	0.259					
KU73629	KUAC12-093	23	24	**0.261**					
KU73631	KUAC12-093	24	25	**0.058**					
KU73632	KUAC12-093	25	26	**2.298**					
KU73633	KUAC12-093	26	27	**1.876**					
KU73634	KUAC12-093	27	28	0.51					
KU73636	KUAC12-093	28	29	**1.878**					
KU73637	KUAC12-093	29	30	**2.021**					
KU73638	KUAC12-093	30	31	**1.563**					
KU73639	KUAC12-093	31	32	0.54	**21**	**32**	**11**	**1.13**	

Table 11: Air core drilling; significant intersections 2011 - 2013 (PMI)

10.4 Asante Gold (2016 - Present)

10.4.1 Kubi Main Zone

In February 2021, 3 geotechnical holes were drilled to intersect the Kubi Main Zone mineralisation at depths of 30m to 120m below surface to obtain a long intersection of mineralisation for testing purposes. Previous drilling in this section has shown the mineralisation to be near the surface and extend from surface to approximately 400m. The initial objective of the program is as follows:

The drill holes and core were used to obtain the geophysical signature of the gold mineralisation, measure the magnetic susceptibility, bulk density, IP and apparent resistivity. This information will be used in conjunction with the additional exploration information gathered during the proposed underground development phase, to fine tune the 3D modelling of the Kubi Main gold deposit and assist in the search for additional gold mineralisation at depth and elsewhere on the mining lease. Selected core was submitted for compressive strength testing (required for mining and milling purposes), and halved and quartered for assay, metallurgical testing, geological & structural logging and for storage, QA and QC purposes.

A second program of drilling began on 4th March, 2021 and ended on 27th August, 2021.

- A total of 18 Diamond Holes were drilled totalling 2959.55m
- RC= 105m; HQ= 2036.2m; NQ= 818.35m
- 1296 Samples were assayed including; 41 Blanks and 37 Standards (CRMS)
- SJ Geophysics were contracted to conduct ground and downhole EM surveys on 100m by 25m grid spacing. In all, a total 42.275 km of local station Ground Electromagnetic Survey were completed and awaiting the final report
- Reclamation and restoration of 0.025km² of illegal artisanal mined out areas was conducted.

Significant intersections include drillhole DDHK21-001, Table 10, which was collared 100m to the north of the Kubi Pit near the centre of the Kubi Main Mineral Resource. On this section gold mineralisation has been previously outlined to a depth of 450m. The drilling has confirmed the typical KMZ mineralisation. The result included:

- 30.0m at 7.47g/t Au (true width 7.5m) including
  - 14.31g/t Au over 10m,
  - 5.69g/t Au over 9m and
  - 10.75g/t Au over 16m.

Figure 30: Kubi Main Zone - Photo showing DDHK21-001-89.8m; Garnet Zone/Quartz Vein, Pyrrhotite/Pyrite - Visible Gold in Circles (VG) (true length 24.5cm) (Asante, 2021)

The drilling carried out has not altered the Resource Estimation submitted by SEMS 2014 which forms the basis of the proposed preliminary underground development and subsequent further exploration drilling program. The outcomes of this exercise coupled with the recent and ongoing surface exploration will result in an updated Technical Report to be completed by Asante.

Magnetic susceptibility testing of the core has confirmed the strong magnetic signature of the garnet zone (pyrrhotite association) gold mineralisation. This new information when combined with the recent 3D magnetic susceptibility inversion modelling suggests that garnet zone type mineralisation may extend as far as 3km below surface.

Geotechnical Drill Hole	From m	To m	Intercept m	50g Fire Assay AA Finish g/t Au	Weighted Average g/t Au
DDHK21-001	**73**	**103**	**30**	**-**	**7.47**
Including	**73**	**82**	**9**	**-**	**5.69**
Including	**87**	**103**	**16**	**-**	**10.75**
Including	**92**	**102**	**10**	**-**	**14.31**
	73	74	1	1.86	
	74	75	1	8.97	
	75	76	1	10.7	
	77	78	1	8.04	
	78	79	1	10.3	
	79	80	1	4.81	
	80	81	1	2.16	
	81	82	1	3.86	
	87	88	1	6.64	
	89	90	1	14.2	
	90	91	1	3.93	
	92	93	1	16.6	
	93	94	1	19.7	
	94	95	1	19.1	
	95	96	1	13.5	
	96	97	1	16.3	
	97	98	1	10.6	

Geotechnical Drill Hole	From m	To m	Intercept m	50g Fire Assay AA Finish g/t Au	Weighted Average g/t Au
	98	99	1	14.2	
	99	100	1	2.56	
	100	101	1	12.5	
	101	102	1	18.0	
	102	103	1	2.82	

Table 12: Significant intercepts from DDHK21-001 (Asante, 2021)

10.5 Exploration Drilling Program - 2022 Planning

One of the main objectives of the underground exploration program is to “drill off” high grade resources within the SEMS Indicated and Inferred Resource at nominal 25m centres where possible from the newly developed underground access and drill cubby positions provided. Considering the nature of the mineralisation, narrow shear hosted silica flooded, quartz veined, in a non-refractory sulphide bearing metasomatized rock, drill holes at even closer spacing may be required to outline potential high-grade areas.

A total of 26 diamond drill stations are presently planned off the exploration decline on 16 sections, from local section 5650N to section 6025N. “Off section” angled drill-holes are planned from each end. Ten sections have 2 drill stations on different levels, 6 one drill station, as permitted by the decline’s trajectory as presently planned.

A total of 13,505m of NQ diamond drilling in 120 holes, for the primary object of delineating the portion of the resource that can be reached by the planned development from the 60mL to the 180mL is planned. A US$2 million budget has been allocated at US$150 a metre for this diamond drilling. This capital has not been included in the Operating Capital and is assumed to be funded separately from the underground development and stoping project considered by the PEA.

A contractor will be engaged to accomplish this drilling. It is anticipated that one electric NQ capable drill will be utilised for this program. Should the need arise, the company or mining (or drilling) contractor may acquire a compressed air core drill, with the capacity to drill BQ to 250m or NQ to 125m to aid in the delineation program and to carry out any “test holes” if required. At a 25m per shift diamond drilling rate, conservatively, (50m per day) 270 days are required to accomplish the planned delineation drilling. At 6 days a week, 45 weeks or approximately 11 months. It can always be possible to add a second drill to the program should performance be inadequate to accomplish the task in a timely fashion.

Should the budget, and especially the time/schedule allow it, depending on the contractor performance, 3,490m in 15 contingent holes, which are mostly exploration holes or “gap” holes to depth could also be drilled from the drill stations provided. A total of 17,000 metres of drilling in 135 drill holes in total (primary and contingent) are anticipated.

10.6 Drill Sampling Approach and Methodology

The 2010 SEMS MRE was based upon drill hole data collected by Nevsun Ghana. Therefore, a review of Nevsun’s drill sample handling procedures was undertaken by SEMS.

SEMS analysis of drilling carried out by Nevsun Ghana:

- Diamond drill core was HQ size (63.5mm diameter) in upper oxidised material and NQ size (47.6mm diameter) in the lower fresh rock portion. Drill core obtained from diamond drilling is deposited directly from the core tube into core boxes
- The diamond drill core was geologically and structurally logged
- The core is then prepared for sampling by being cut lengthwise into two equal halves. Half core was generally sampled in one metre lengths although some sample lengths were shortened to conform to geological contacts where appropriate
- RC samples were collected in one metre intervals. Bulk samples (25kg to 30kg) were passed through a two-tier riffle splitter to produce a nominal 2kg to 3kg sample for assay.

SEMS analysis of drilling carried out by Resolute reported the following:

- All sampling conducted by PMI Gold was carried out under the direct supervision of senior personnel.
- Drill core was collected after each drill shift by company technical assistants and brought to the company’s office and warehouse site at the nearby town of Dunkwa

- Core was oriented in the core tray and measured and percentage recovery and Rock Quality Density (RQD) calculated and recorded by geological technicians
- Core was then logged and samples marked by Paul Abbot (Consultant Project Geologist). Sample intervals generally varied from 0.25m to 1m, depending on rock type or observed presence of free gold
- Drill core was photographed and cut longitudinally along the marked axis. The right hand side of the core was always submitted for analysis with the left side being stored in trays on site.

10.7 Conclusions

The site visit in December 2021 and February 2022 by two of the Authors confirmed the continuation and maintenance of the drilling and sampling procedures and protocols as presented and reported by SEMS. These are discussed in more detail in the following section.

Figure 31: Kubi Project core storage facility and quality of core (dMb 2022)

11. SAMPLE PREPARATION, ANALYSES, AND SECURITY

The Authors have relied on the investigation and comments made by SEMS in the compilation of the NI43-101 Technical Report of 2017. Recent site visits by Authors highlighted no concerns with current best practices and protocols that are applied to all the exploration work carried out by Asante on site geological team under the continued and highly experienced supervision of Mr Paul Abbott (Consultant Geologist). Mr Abbott was on site during site visits.

11.1 Nevsun Ghana

The 2010 SEMS MRE is based upon drill hole data collected by Nevsun Ghana. Therefore, a review of Nevsun's drill sample preparation and analysis procedures was undertaken by SEMS.

11.1.1 Sample Preparation, Analytical Procedures and QAQC Protocols

Core samples collected by Nevsun were routinely submitted to Rossbacher Laboratory in Vancouver and Intertek Testing Facility at Obuasi for preparation and analysis. The entire sample was oven dried, crushed to -10# using a Rhino Jaw Crusher and pulverised to 95% passing 75 micron by an LM2 puck pulveriser equipped with a B2000 (2.5kg) bowl. A 50g sub-split is taken for fire assay decomposition, lead collection, aqua regia digest, MIBK/AAS finish.

RAB drill program composite samples were prepared and analysed by Intertek Testing Services facility at Obuasi. Samples were oven dried, pulverised to 95% passing 75 micron using an LM2 Labtechnics puck pulveriser.

Fifty gram (50g) sub-splits were taken for fire assay decomposition MIBK - A.A.S. finish. Gravimetric checks were conducted on any samples grading 10g/t Au and over. The concurrent analytical quality control being conducted within the sample stream for RC was considered sufficient to cover the batches of RAB samples being analysed at the same time.

When Nevsun assumed control of the project from CME, considerable effort was made to review quality control of the prior sampling campaigns. Several steps were taken to try and verify the quality of the work and the results. After twinning some holes, duplicate sampling and the lab audits, there were no red flags raised. It was concluded that the CME results could be relied upon.

Procedural quality control was devised with the assistance of RSG and the close supervision of the Nevsun Ghana geologists. Industry standards and procedures were implemented in each facet of the project. To obtain samples with the minimum of contamination a rigorous adherence to quality sampling measures was employed. This included the cleaning of the cyclone as frequently as possible, cleaning of sample splitters after processing every sample, and the application of controlled tube sampling for wet samples.

Strict adherence to the data management protocol and the geological administrative framework facilitated the internal due diligence program. The standard procedures and collection formats seek to illustrate the quality of data handling achieved on the project. i.e. information capture and subsequent database validation.

Analytical quality control was monitored by the routine submission of commercial Standard Reference Materials ("SRM") purchased from GEOSTATS PTY Ltd. and an internally prepared blank alternately at every 25th and 75th sample position. Six gold standards were used as listed below.

Standard	Grade	Description
G396-2	**120 ppb**	to monitor accuracy and precision of analysis around the soil anomaly threshold
G996-3	**4.81 g/t**	to monitor the accuracy and precision of analysis around the high-grade oxide grades
G396-5	**7.25 g/t**	to monitor the accuracy and precision of analysis around the primary model head grade
G396-6	**13.19 g/t**	to monitor precision and accuracy of analysis in the high grades above 10 g/t Au - the gravimetric assay threshold
G396-10	**2.56 g/t**	to monitor precision and accuracy of analysis of the head grade oxide and cut-off for the primary model

Table 13: Standard Reference Materials (SEMS 2014)

Field duplicates were selected for every 15, 40, 65 and 90 sample numbers in a sequence and submitted blind as a batch monthly.

The ITS laboratory was also enrolled in two internationally recognised laboratory round-robin surveys. GEOSTATS - sample and assay monitoring service, and SGS - Laboratory Quality Services International (LQSI).

Assay results, provided by ITS Laboratory, Obuasi for samples submitted from the Kubi Gold Project in the course of the drilling program, were of acceptable standard.

11.2 PMI (2009 - 2013 Drilling)

All drill core samples collected by PMI were submitted to the SGS Mineral Services laboratory based in Tarkwa. The SGS quality system is stated to follow the guidelines of ISO17025 (International Organisation for Standardization accreditation). Sample procedure is as follows: 3kg or less of sample is dried, and jaw crushed to 3mm. Sample is pulverised to a nominal 95% passing -75 micron using an LM2 pulveriser. Two pulp samples are taken for analysis and pulp storage. Gold analysis is on a 50g charge, Fire Assay fusion, lead collection, Atomic Absorption spectrometry (AAS) determination to 0.1ppm. Arsenic is by AAS.

In addition to the internal quality control (QC) provided by SGS, blanks and standards were inserted by PMI into the sample stream. Blanks were prepared from locally available materials with known values of 0.1g/t Au or less. Standards, which became available later in the drill program, were purchased from WCM Minerals, a recognized Canadian producer of standard assay materials.

Duplicate samples of quarter cut samples from the remaining half were not included because of the wide assay variance noted in dealing with material of high nugget gold effect (e.g., samples with visible free gold on occasion return negligible assay values), and hence are of limited use in arriving at any conclusion regarding QC.

All crushing and grinding is carried out at the SGS analytical laboratory. Sample pulps and coarse reject material were returned to PMI Gold after completion of sample analysis and were stored at the Dunkwa warehouse. Some pulps may be available for further analysis, if required.

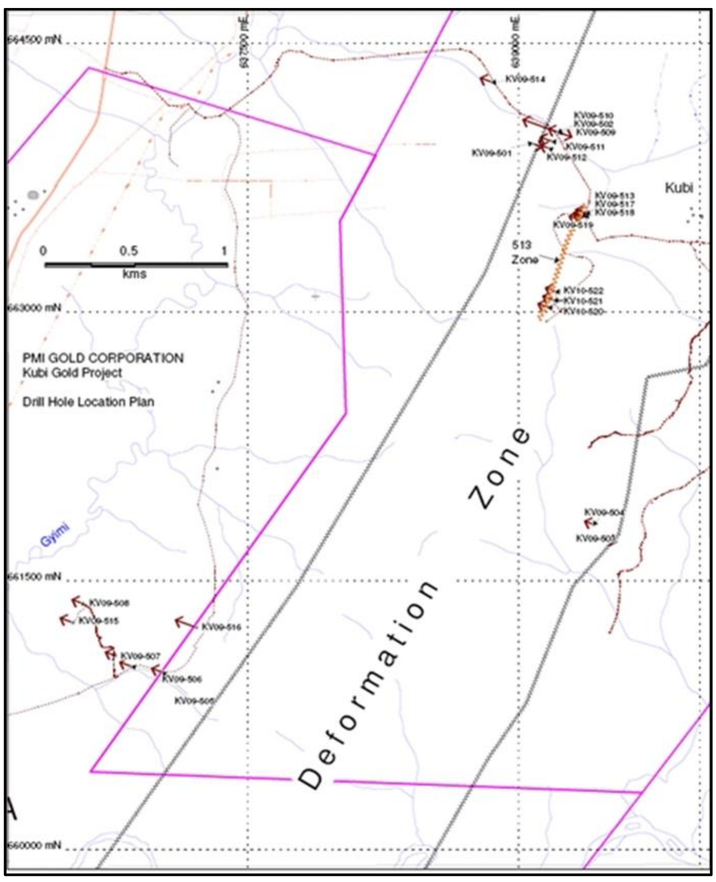


Figure 32: Drill collar location plan for holes drilled in 2009 / 2010. UTM 30N, WGS84 (PMI 2010)

Drill core is transported from the drill site to the company's core preparation facility by technical staff. Upon photographing, logging and sampling, individually bagged core samples are packed in heavy plastic sacks (i.e. 5 to 10 samples per bag), tied with heavy cord or binding wire and made ready for transport to the laboratory.

All samples are firmly secured and locked in a designated sample room at the Dunkwa field office, until pickup by representatives of SGS Laboratories. A sample submission form accompanies each shipment, which is transported to the assay laboratory in trucks operated by laboratory employees or contractors. The company geologist, responsible for core logging and sampling, or senior personnel holds the only key to the room where samples are secured. He is always responsible for their secure delivery to laboratory representatives.

SEMS concluded that the sample preparation, security, and analytical procedures are consistent with industry best practices.

Verification of data presented was not conducted by the Authors however this is recommended in a follow up feasibility stage and revised geological model and subsequent MRE for the Kubi development. It has already been stated that the SEMS 2014 Mineral Resource Estimate methodology and data verification has been carried forward into this Technical Report which focuses on the PEA of the extraction of the reported Measured and Indicated Resources presented by the SEMS 2014 MRE.

11.3 Asante Gold (2017 – Present)

The sampling methodology and procedures used by the Asante geological team at the Kubi Project were presented to the Authors during the respective site visits and are deemed best practice and are described below. All exploration drill core, geochemical and other exploration related samples continue to be assayed by an external accredited laboratory (SGS Tarkwa or Intertek).

DRILL CORE SAMPLING
Sampling is undertaken after geological, structural and geotechnical logging. Sampling intervals are selected by the geologist, and for both HQ and NQ core conform to a minimum sample length of 30cm and maximum of 200cm. The following procedures are followed:

- Cutting is done along the temporal cutting lines on the core making sure core is cut into two equal halves. If the indicated cutting line (parallel to the orientation line) is not exactly 90° in rotation to the orientation line the core is referred to the orientation crew for correction.
- During the structural logging, if the cutting line is not perpendicular to the dominant fabric, so that structures and veins are divided equally between the two halves; logging geologists redefine the cutting line.
- Sampling is done using the marked intervals by the logging geologists.
- The half core that doesn't contain the orientation line be taken and broken into the sample bag with the other half left in the box as archive.
- Sample bags are legibly labelled with the unique sample numbers and one of the two paper sample tickets containing the sample number placed in it. Sample bag numbers and ticket numbers are matched to ensure that they correspond.
- The drill hole ID, interval, sample type and requested analysis are recorded in the ticket book stub to provide a permanent archive record of the samples.
- Samples of about 2 to 3 kg are collected carefully and placed in plastic bags.
- Insertion of QC samples is done by either the project geologist or the supervising geologist.
- Under no circumstance is a submission be made to the laboratory without control samples in it (standards and blanks).
- Only the indicated standard types by the logging geologist is inserted; making sure there are no swaps and wrong insertions. If the indicated standard is out of stock it is communicated to the project geologist for replacement with a similar one.
- The standard identification sticker (serial number) is removed and attached to the corresponding ticket stub in the ticket book to provide a record of the inserted standard.
- Records of submission must be kept on the assay submission tab table on the exploration network drive as soon as the samples are dispatched.

SOIL GEOCHEMICAL SAMPLING
Soil samples are collected at the sampling points (stations) defined by the geologists in local grid or UTM using handheld GPS with accuracy within 4m. The sampling grid or sampling spacing may vary from one place to another and is determined by factors that control mineralisation and the level of information required.

Sampling programs are typically undertaken on 400m x 50m spacing and the sampling lines azimuth is determined by the orientation of the structure suspected to be associated with mineralisation. In some cases, the sampling spacing is be reduced to 200m x 25m or 100m x 25m. Samples are not collected if:

- Sampling point is located on an alluvial channel.
- Sampling point is located on indurate material (duricrust, ferricrete);
- Sampling point is located on an outcrop of fresh or even weathered rock (saprolite and sap-rock).

The vegetation is cut inside a circle more or less 1.5m in diameter centered on the sampling point. The topsoil is removed to approximately 5cm depth centered on the sampling point. The sampling hole is dug 60cm deep and consists of a circular pit more or less 20cm in diameter.

SAMPLE QAQC
Quality control and quality assurance procedures are as follows:

- Control samples such as duplicates, standards and blanks are undertaken as indicated on the sampling sheet by the supervising geologist prior to submission to the laboratory.
- Sampling sheets have the names of the geologist and Senior Technician supervising the sampling.
- Sample bags are clearly labelled with the sample numbers and the duplicate sample numbers with a ticket from the ticket book placed in them.
- Serial numbers of standards inserted are attached to the corresponding ticket stub in the ticket book to provide a record of the inserted standard.
- Bulk sample bags are clearly labelled with the hole number and sample interval.

11.4 Opinion of Qualified Person

The Author is of the opinion that the drilling and other exploration programmes have been undertaken according to strict industry standard protocols. The sample preparation, analysis and sample security measures applied by the Asante geological personnel follow accepted industry standards and are therefore considered adequate for future Resource Estimations.

In additional support of these comments, the Asante's exploration drilling and regional exploration activities are undertaken by independent drilling contractors (Geodrill Limited) and supervised by the highly experienced West African services of Mr Paul Abbott (CEO/Owner at Protea Geoservices, Ghana Limited), as well as qualified geologists employed on a fulltime basis by Asante on the Kubi Project. The data generated is considered suitable for incorporation into subsequent improved geological models and MREs. The drilling programmes are intelligently planned to be appropriate for the nature and style of mineralisation.

12. DATA VERIFICATION

The Authors have not undertaken any primary data verification by way of independently sampling drill holes or surface expressions and assaying those samples. The Authors have therefore relied on the assurances of the Directors of Kubi Gold that there has been no deliberate misrepresentation of the data provided.

SEMS 2014 carried out verification procedures that involved inspection of results of blanks and standards inserted by PMI Gold (the latter when standards became available), and by comparing assays with geological intervals and adjacent sample intervals. Examination of these results indicates that laboratory services provided by SGS were deemed acceptable.

Further comment on the sampling and assaying practices and protocols relevant to the Mineral Resource Estimation published by SEMS can be found in the SEMS 2014 NI43-101 Technical Report.

In December 2021 the following actions were taken by the Authors to review and validate previous and current exploration activities. The project is an advanced exploration property with a history of exploration by several previous owners and check sampling was deemed unnecessary.

12.1 Site Visit

The Kubi Gold Project was visited by both Mr Claridge and Mr Begg on two separate occasions. The objective of both visits was to inspect the condition of the historic Kubi open pit walls and view drill core obtained recently by current Asante drilling programs and historic drilling by PMI Gold since the 2010 MRE. On both occasions the visit was attended by senior management, geophysicists and geologists related to the Project.

The journey from Bibiani Mine (also an Asante asset) to the Kubi Project was by road via Obuasi arriving and took approximately two and half hours. The bitumen road from Bibiani to Obuasi is in good condition and travels through some rural settlements and larger villages. The Obuasi to Kubi road, a distance of 30km, was in a poor state of repair. The gravel feeder road from the Obuasi - Dunkwa bitumen road to the Kubi open pit, a distance of 5km, is currently being used by timber trucks and in a poor state of repair. This road could be easily refurbished using a grader upon the resumption of operations at Kubi.

12.2 Drill Core Inspection

During the site visit, NQ core from drill hole DDHK21-001 (a geotechnical hole) was laid out and inspected. It is clearly apparent that the mineralised zones are related to pyrrhotite and pyrite rich shears with intermittent quartz that enhances gold grades. Fig 30 in Item 10 illustrates the presence of visible gold seen on the site visit.

Of note was the visible competence of both the foot and hanging wall rocks. Core losses are a minimum as the country wall rocks are highly silicified.

Drill core from previous owner exploration programs is well stored and available for inspection. No issues were found that would adversely affect the quality of the core handling and sampling. This was also supported by SEMS in the 2014 NI43-101 submission.

12.3 Kubi Open Pit

Road access to the Kubi open pit was drivable by four-wheel drive vehicle to about one kilometre south of the pit. All illegal mining activities have been stopped by the Company. The pit walls are heavily vegetated, and the AGA backfill has also become completely vegetated. Side walls appear stable.

Figure 33: Photograph showing galamsey illegal mining south of the Kubi Main Pit. (dMb, 2022)

Figure 34: Galamsey workings in old tailings at north end of Kubi main Pit (dMb, 2022)

12.4 Drill Sites

Four drill holes completed by Asante in 2021 were visited. Three of the holes were sited at Kubi North extension DDHK21-001,002,003 (Section 5971 North) and the other hole (Hole 6) was situated in the central zone of the pit in section with the proposed portal position. Historic PMI drilling collars were also observed, and all collars were capped and preserved as short concrete pillars.

12.5 Opinion of Qualified Person

The Principal Author and qualified person has reviewed the data verification and QA/QC measures currently adopted by Asante and included the reports submitted by SEMS (2010, 2014). The QP is confident that quality control processes as reviewed and related to the drilling, sampling and assaying provide sufficient verification for the purposes of this Report.

13. MINERAL PROCESSING AND METALLURGICAL TESTING

Asante engaged Metso Outotec to assist with development of a metallurgical flowsheet for the Kubi Project. As part of this assistance Metso Outotec managed metallurgical laboratory testing by SGS at its laboratory in Randfontein, South Africa, and used the results in a Conceptual Study of a facility for processing of mineralised material from Kubi. (Metso:Outotec "Asante Gold Kubi (Ghana) Conceptual Study" dated 5th November, 2021).

Bara Consulting has reviewed the laboratory and conceptual study reports and is satisfied with Metso Outotec's interpretation of the test results in defining process design criteria. The laboratory test programme and the principal findings are summarised in section 13.2 below.

13.1 Historical Metallurgical Test Work

13.1.1 BHP Metallurgy

Preliminary metallurgical work was completed on both oxide and primary mineralisation found at the Kubi Main zone. Oxide material from trenches and adits was subjected to bottle roll tests on 1.0 kg samples carried out at S.G.S. Laboratories in Ghana. Samples were pulverised to –150 mesh and bottle rolled for 24 hours. Recoveries from four samples varied from 60.2% to 100%.

Bottle roll tests on sulphide material taken from drill core were subjected to the same procedure as above on 500g of material. Gold recoveries varied between 64.4% and 84.4%. BHP carried out similar tests on the sulphide mineralisation in their own laboratory in California. Test time was extended to 48 hours and material was pulverised to –325 mesh. Gold recoveries on three tests varied between 97.1% and 98.6%. **It was also determined that graphite was in the crystalline state and had no effect on gold recoveries**. The pyrrhotite and arsenopyrite had no serious effect on cyanide consumption.

13.1.2 CME - Metallurgy (for Nevsun)

In 1996 preliminary metallurgical work on core samples was carried out by Process Research Associates (PRA) of Vancouver. 76.8kg of material in 60 individual samples were received via Rossbacher Labs. All the samples had been previously crushed. They were composited into one sample and then split into five sub-samples calculated to average 4.29g/t Au. Further assaying using the metallics method on 10 sub-samples indicated an average grade of 5.16g/t Au (other evidence, Lynda Bloom, Analytical Solutions Ltd. 1998, also suggests a circa 10% to 20% upgrade on the drill database Rossbacher MIBK leach assays by standard fire assay). Coarse gold, insufficiently digested by the MIBK method, was deemed to be responsible for the variation in average head assay. A Bond Work Index of 15.8 was calculated.

Gravity concentration tests using a Knelson concentrator indicated a gold recovery of 66%. A gravity concentration stage in the milling circuit was advised.

Flotation recovered 91.6% of the gold into 7.1% of the mass.

Cyanidation tests indicated that recoveries more than 97% were attainable but that leach times of over 50 hours were required. Coarse gold was deemed to be a contributing factor to the long leach times.

13.1.3 Nevsun Metallurgy

PRA was later contracted to do further tests directly by Nevsun. Approximately 200kg of mineralised core was received. Various tests were conducted, including:

1. Cyanidation tests, pulverising 80% to –200 mesh using extraction times of 72 hours
2. Flotation tests
3. Amalgamation tests
4. Bond Work Index determinations.

Additional cyanidation tests were subsequently done using various grinds and extraction times. A gravity concentration test at 75% passing –200 mesh was carried out. In addition, active graphite material was added to cyanidation tests to determine the effects this would have on gold recoveries. (Note NDM: despite BHP's assessment that the graphite at Kubi is crystalline and not preg-robbing – probably due to higher metamorphism at Kubi than the norm in the Birimian). Amalgamation tests reported a potential gold recovery of 62.8% while gravity concentration tests indicated recoveries of 66%. Flotation tests reportedly recovered 91.6% of the gold into 7.1% of the mass. Cyanidation tests indicated recoveries in the order of 97% were possible, but long leach times, more than 50 hours, were required. The presence of undissolved coarse gold seemed to be problematic. Gravity concentration in the milling circuit was therefore suggested. A Carbon-in- Leach circuit was recommended.

In April 1998 Nevsun contracted Lakefield Research Ltd. to conduct additional test work, focusing on the gravity separation and dynamic cyanide amenability of the Kubi oxide ores. In August 1998 Kappes-Cassidy & Associates (Reno, Nevada) were contracted to test the static leach characteristics of the mineralised material types and assess the physical and chemical attributes of the Kubi material for possible heap leach processing. The test work indicated a requirement of a 60-day column leach.

13.1.4 Gekko Systems Ltd. for PMI Gold 2011

The head grades and calculated grades of the 69.7kg of core sample provided to Gekko Systems in 2010 by PMI Gold are summarised in the Tables below and indicate good repeatability. There were no nugget effect issues in this sample.

	Au ppm	S%
Head Assay	5.6	1.7
Coarse Gravity Test	6.4	1.8
Fine Gravity Test	5.9	1.7

Table 14: Head grade of samples

A vertical shaft impactor (VSI) crusher amenability test was carried out. The sample had a medium to low, but acceptable amenability to this method of comminution.

	Mass % Rec	Au	% Rec
Coarse Gravity Test (100P 600m)	1.2%	102	18.5%
	21.5%	17.5	59.4
Fine Gravity Test (80P 106 micron)	0.7%	353	39.7%
	26.4%	18	81.4%

Table 15: Gravity test results

At the finer size tested 40% of the gold can be recovered into a small mass. (Continuous gravity concentrators In Line Pressure Jig and batch centrifugal concentrators).

	Mass %	Au %	S%	Tails Au
Coarse Gravity Tails Flotation	2.2	32.6%	26.4%	2.42
Fine Gravity Tails Flotation	1.3	82.2%	77.2%	0.42

Table 16: Flotation tests of the Gravity tails

	Mass %	Au %	S%
Coarse Gravity Flotation	12.2	66.3%	51.0
Fine Gravity Flotation	17.8	**94.1%**	84.9

Table 17: Combined gravity flotation test results

Combined gravity and flotation results show very good recoveries.

	Hours	Recovery
Fine Gravity Con 1:	6hrs	99.9%
Fine Gravity Con Reground (P80 75 micron)	6hrs	99.9%
Fine Gravity Con 2-5:	24hrs	86.5%

Table 18: Intensive leaching on gravity concentrates (with oxygen added)

Note, regrinding significantly increased levels of As in the leach solutions.

13.1.5 Conclusions

It was concluded from all these early tests that a suitable flow sheet would be grinding to a "normal fine grind", i.e., 75% passing 80-100 microns, maximising residence through a gravity concentrator, continuous or batch – i.e. a Knelson – shaker tables combo – followed by perhaps 18hrs-24hrs of cyanidation in leach tanks of the gravity cyclone tails. 35%-40% gravity recoveries seem probable, and 94%+ recovery of the Au in the tails by cyanidation.

The mineralisation is also amenable to flotation with good cost-effective recoveries should sales of concentrates only be considered.

13.2 Current Metallurgical Test Work

13.2.1 Sample Composition

Three composite samples of drill core in wooden trays were delivered to SGS. The origin and weight of each sample are shown in Table 17. The spatial location of the drillhole(s) from which the composites were made is not recorded.

	Depth m	Mass kg	Composite Mass kg
Composite 1	73-75	23.1	74.6
	75-78	25.0	
	78-81.9	26.5	
Composite 2	88-91.0	25.5	74.0
	91.0--94.1	24.3	
	94.1-97.1	24.2	
Composite 3	106-107	25.3	73.6
	109-112	24.6	
	112-114	23.7	

Table 19: Sample Origins and Weights

Detailed chemical analyses are provided in the laboratory report. The average gold and silver grades of the composite samples were:

- Composite 1: 6.63 g/t Au, 1.17 g/t Ag
- Composite 2: 16.7 g/t Au, 1.83 g/t Ag
- Composite 1: 11.4 g/t Au, 1.07 g/t Ag.

Due to the relatively low silver content, only test results relating to gold extraction are presented in this report.

Composites 1 and 2 had similar amounts of sulphide (~2.9%) and iron (~11%), while Composite 3 contained less sulphide (1.5%) and iron (8.2%). Most of the carbon was associated with carbonates, while a minor portion existed as graphitic carbon (0.17% - 0.39%). The concentrations of arsenic and other toxic elements such as antimony, mercury and lead are considered low.

The mineralogical compositions of the respective composite samples are presented in Table 18. Pyrite (0.5% - 4.6%) and pyrrhotite (1.5% - 4.4%) were the only sulphide minerals identified and the ratio between them was variable. The primary gangue constituents were quartz, plagioclase and chlorite.

Name	Approximate Formula	Approximate Abundance (%)		
		Composite 1	Composite 2	Composite 3
Pyrite	FeS_2	4.6	2.0	0.5
Pyrrhotite	Fe7S8	1.5	4.4	3.4
Plagioclase	Ca-Na-Al-silicate	32.4	23.8	22.0
Quartz	SiO2	17.6	28.2	42.6
Dolomite	Ca-Mg(CO3)2	8.5	7.5	6.0
Mica	K-Al-(OH)-silicate	10.5	13.3	9.0
Ilmenite	FeTiO2	2.6	2.3	1.5

Name	Approximate Formula	Approximate Abundance (%)		
		Composite 1	Composite 2	Composite 3
Chlorite	Mg-Fe-Al-silicate	14.6	12.5	13.6
Siderite	$FeCO_3$	7.7	4.7	0.0
Amphibole	SiO_4	0.0	1.3	1.5

Table 20: Mineralogical Analyses

13.2.2 Comminution

Bond Ball Work Index tests at a limiting screen size of 106µm were performed on samples of each composite after crushing to -3.35mm and the results are summarised in Table 19. There is little difference between the values for the three composites tested and the mineralised material is classified as 'hard'.

Sample	Work Index, kWh/t
Composite 1	16.8
Composite 2	15.7
Composite 3	16.8

Table 21: Bond Ball Mill Work Index Values

13.3.3 Diagnostic Leaching

Sub-samples of each of the composites were milled to 80% -75µm and subjected to a diagnostic leaching process which involved the sequential solubilisation of the least stable minerals via various pre-treatments followed by the extraction of the gold released at each stage by cyanidation. The results are shown in Table 20.

	Gold Deportment, %		
	Composite 1	Composite 2	Composite 3
Available to direct cyanidation	93.8	94.8	89.9
Preg-robbed – CIL	0.68	0.96	4.41
HCl digestible minerals	3.08	2.21	3.44
HNO_3 digestible minerals	0.70	0.32	0.29
Carbonaceous matter	0.57	0.22	1.15
Quartz (balance)	1.13	1.51	0.80
Total	**100**	**100**	**100**
Available via CIL Recovery	94.5	95.7	94.3

Table 22: Diagnostic Leach Results

Gold available to direct cyanidation was similar for Composites 1 and 2 (93.8% and 94.8% respectively) and slightly lower for Composite 3 at 89.9%. Composite 3 had the highest preg-robbing component of 4.4%. The gold available for recovery by CIL was similar for all three composites, ranging from 94.3% to 95.7%. Most of the gold unrecoverable by CIL (2.2% to 3.4%) was associated with HCl digestible minerals which are dolomite and siderite.

13.2.4 Gravity Concentration

Each composite was milled to 50% -75µm and passed through a KC-MD3 Knelson concentrator. Each gravity concentrate was then submitted to intensive cyanidation. The results are summarised in Table 21. Consumption of sodium cyanide ranged from 19.9kg/t to 24.1kg/t of gravity concentrate.

	Au Recovery, %	Gravity Concentrate Grade Au g/t	Leach Tail Grade Au g/t	Leach Dissolution %	Total Gravity Extraction %
Composite 1	38.1	251	3.75	98.5	37.5
Composite 2	47.4	590	5.65	99.0	46.9
Composite 3	59.1	883	0.50	99.9	59.0

Table 23: Gravity Concentration and Intensive Cyanidation Results

The samples tested were highly amenable to gravity concentration and readily leached by intensive cyanidation.

13.2.5 Direct Cyanidation

Carbon-in-leach (CIL) bottle roll tests were performed on the composite and gravity tails samples at grind sizes of P80 106µm, 75µm and 53µm. The results are shown in Table 22.

	Whole Ore CIL			Gravity + Tail CIL		
	Composite 1	Composite 2	Composite 3	Composite 1	Composite 2	Composite 3
Head grade, Au g/t	6.63	12.40	12.50	6.63	12.40	12.50
Gravity tail grade, Au g/t	N/A	N/A	N/A	4.54	6.63	5.59
CIL tail grade, Au g/t						
P80 53 µm	0.37	0.49	0.33	0.30	0.38	0.31
P80 75 µm	0.41	0.72	0.52	0.38	0.54	0.42
P80 106 µm	0.58	1.00	0.72	0.54	0.77	0.57
CIL extraction, %						
P80 53 µm	94.4	96.1	97.4	93.4	94.3	94.5
P80 75 µm	93.8	94.2	95.8	91.7	91.9	92.6
P80 106 µm	91.2	92.0	94.2	88.2	88.4	89.9
Total recovery (gravity + CIL) [1]						
P80 53 µm	94.4	96.1	97.4	95.5	96.9	97.5
P80 75 µm	93.8	94.2	95.8	94.3	95.6	96.6
P80 106 µm	91.2	92.0	94.2	91.9	93.8	95.5

[1] Loss of recovery in intensive cyanidation of gravity concentrate not accounted for – tailing would return to the milling circuit and contained gold assumed to be recovered in CIL for this comparison.

Table 24: Direct Cyanidation Results

Gold dissolution increased with fineness of grind for all composite and gravity tails samples tested. For Whole Ore CIL, the average extraction increased from 92.5% at P80 106µm to 96.0% at P80 53µm and with gravity concentration included the average extraction increased from 93.7% at P80 10 µm to 96.6% at P80 53µm. Extraction using gravity concentration and gravity tailings CIL is marginally higher than when using Whole Ore CIL.

Each gravity tail sample was reground to 80% -10µm and subjected to cyanidation under 'standard' conditions. The extraction from each composite was greater than 99%.

13.2.6 Flotation and Cyanidation

Scouting rougher flotation tests were performed on each composite at grind sizes of 70% -75µm, 80% -7 µm and 90% - 75µm.

The material was first conditioned with 50g/t $CuSO_4$ and then with 100g/t SIBX and 50g/t Senkol 294, which served as flotation collectors. Dowfroth 250 (30g/t) was then dosed during the rougher rate test. Five concentrates were collected to establish the mineral recovery over time. The final cumulative concentrate grade and recoveries are presented in Table 23.

It was decided that increasing the fineness of grind from 80% -75µm to 90% -75µm yielded only a small increase in recovery and carried a higher risk of creating slimes and a grind size of 80% -75µm was selected for subsequent flotation tests.

A bulk test was performed at this grind size to produce concentrate for cyanidation tests and the results of this bulk flotation are also included in Table 23. The mass pull in each of the bulk tests was less than in the respective scouting tests and this caused the recovery of gold to the flotation concentrate to also be lower.

	Whole Ore CIL			Gravity + Tail CIL		
	Composite 1	Composite 2	Composite 3	Composite 1	Composite 2	Composite 3
Mass pull, %						
70 % -75 µm	16.4	13.0	14.1	-	-	-
80 % -75 µm	18.2	14.6	114.4	13.3	12.8	10.8
90 % -75 µm	17.9	15.4	14.6	-	-	-
Au recovery to flotation concentrate, %						
70 % -75 µm	82.4	83.6	91.7	-	-	-

80 % -75 µm	86.8	89.8	93.5	79.7	80.3	85.0
90 % -75 µm	88.7	91.1	95.1	-	-	-

Table 25: Flotation Results

Concentrates from bulk flotation of the three composite samples were subjected to cyanidation and the results of those tests are summarised in Table 24.

	Composite 1	Composite 2	Composite 3
Flotation concentrate grade, Au g/t	28.3	41.3	49.5
Cyanidation test tail grade, Au g/t	1.10	2.23	1.25
Dissolution, %	96.1	94.6	97.5
NaCN consumption, kg/t feed	0.54	0.58	0.48
CaO consumption, kg/t feed	0.10	0.05	0.04

Table 26: Summary of Flotation Concentrate Cyanidation Test Results

13.2.7 Comparison of Processing Methods

- Flowsheet 1
  - Grinding to 80% -53µm
  - Whole ore cyanidation
- Flowsheet 2
  - Grinding to 80% -53µm
  - Gravity concentration with intensive cyanidation of gravity concentrate
  - Cyanidation of gravity tailing
- Flowsheet 3
  - Grinding to 80% -75µm
  - Froth flotation
  - Cyanidation of flotation concentrate

The extraction of gold from each of the three composites that was achieved by the three processes tested is shown in Table 25. Note that the extraction for each process has been calculated from the difference between the head grade and tailing grade for each test and averaged for the three composites.

	Composite 1	Composite 2	Composite 3	Average
Head grade, Au g/t	6.63	12.40	12.50	10.51
Flowsheet 1: Whole Ore Cyanidation				
Tailing grade, Au g/t	0.41	0.72	0.52	0.55
Extraction, %	94.4	96.1	97.4	96.0
Flowsheet 2: Gravity Concentration + Gravity Tail CIL				
Recovery to gravity concentrate, %	37.5	46.9	59.0	47.8
CIL tailing grade, Au g/t	0.30	0.38	0.31	0.33
Total extraction, %	95.5	96.9	97.5	96.9
Flowsheet 3: Gravity Concentration, Flotation & Flotation Concentrate CIL				
Recovery to gravity concentrate, %	37.5	46.9	59.0	47.8
Recovery to flotation concentrate, %	79.7	80.3	85.0	55.0
Extraction from flotation concentrate, %	96.1	94.6	97.5	96.1
CIL tailing grade, Au g/t	1.10	2.23	1.25	1.53
Total extraction, %	83.4	82.0	90.0	85.1

Table 27: Summary of Gold Recovery for Flowsheets Tested

14. MINERAL RESOURCE ESTIMATES

Asante Gold is retaining the MRE published in the NI43-101 Technical Report submitted by SEMS (2014) for the purpose of the intention of developing an underground exploration programme and preliminary mining exercise within the Kubi Main Zone mineralised deposit. The MRE used in the 2014 Technical Report was initially compiled in 2010 by SEMS and is focused on the Kubi Main Zone mineralised deposit. No additional work that has been done is deemed to have any material effect on this MRE. Therefore, any references herein to the MRE are based on the Resource Estimate audited by Simon Meadows Smith of SEMS, Ghana. Mr Smith is a Member of the Institute of Materials, Minerals and Mining (IMO3), London and has the requisite experience to qualify as a QP as defined in NI43-101.

The Author would like emphasise that the methodology applied by SEMS (2014) was based on the intent of developing an underground mining operation. This intent has not changed and Asante has the same vision for the development of the mineralised deposit. Therefore, the sub-paragraphs below describing the methodology and outcomes of the resource estimation have been directly extracted from the SEMS 2014 Technical Report without change or alteration. The Author has studied the methodology used and is satisfied that it and the outcome remain relevant to the purposes of this PEA and Technical Report.

SEMS competent persons re-modelled the Kubi Main mineralised zone and used parameters that the Author considers appropriate for a gold deposit that is likely to be exploited by underground mining methods. The deposit was modelled on gold values that were greater than 2.0g/t Au and which displayed a geological continuity of width greater than two metres over more than one cross section.

A site visit by the Author to the previous open pit operations allowed visual validation of the geological characteristics and nature of the mineralised deposit as was modelled by SEMS. No mining activities have taken place on the property since the SEMS (2014) submission to alter the outcomes of the Resource Statement produced. Therefore, it is the opinion of the Qualified Person that the mineralised material defined in the SEMS 2014 MRE has reasonable prospects for economic extraction. However, Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resource will be converted into Mineral Reserves.

The site visit has also validated the position of historical drilling used in the Mineral Resource Estimate. An inspection by the Author of the stored drill core also supports the confidence in the quality and content of the data interpreted in the geological model and subsequent Resource Estimate.

It is planned by Asante, and explicitly expressed to the Author, to complete an updated geological model and Mineral Resource Estimate once the ongoing property wide surface and proposed underground exploration exercises are finalised, to include all current exploration and structural interpretations.

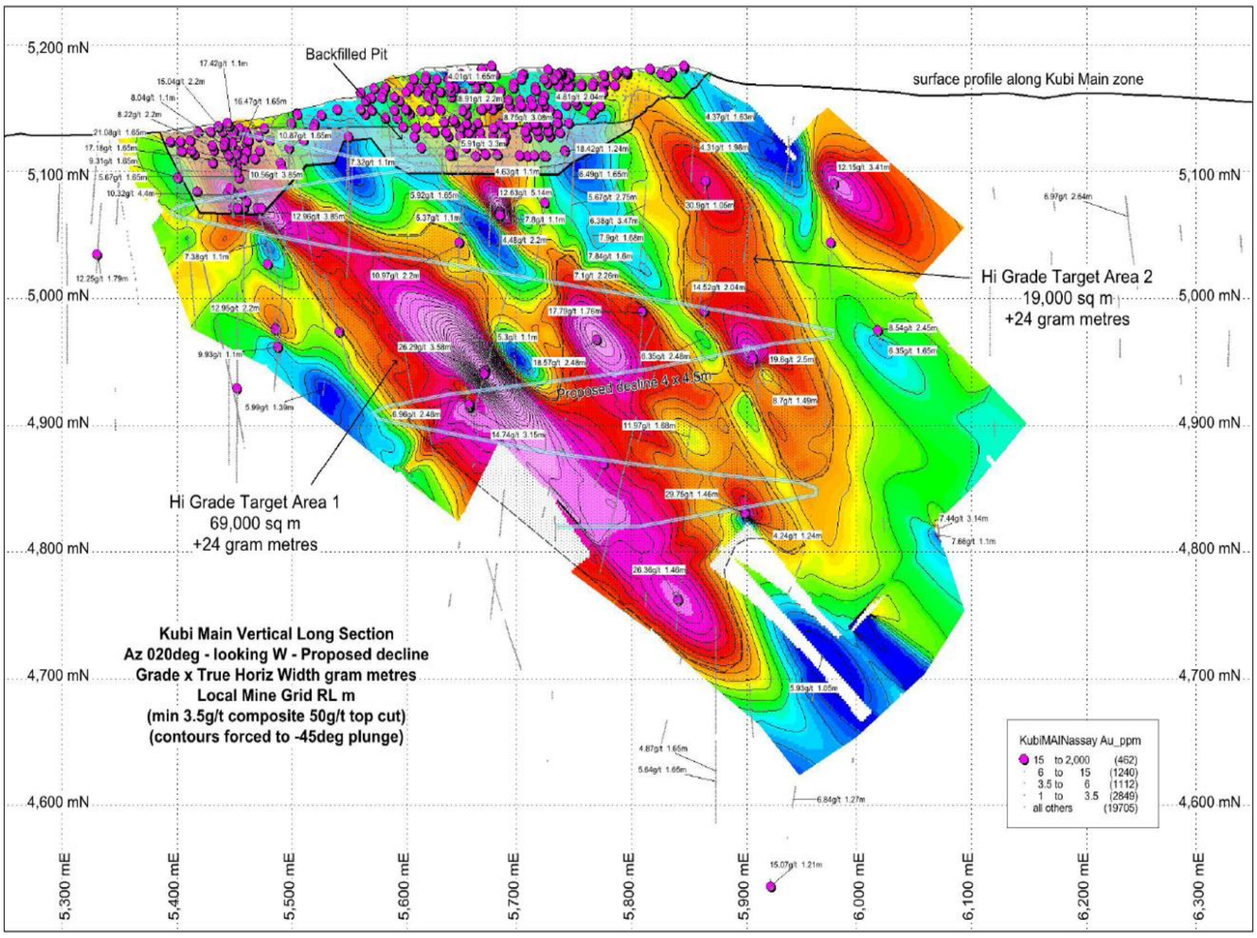


Figure 35: Kubi Main Zone - Vertical projection showing surface, drilling and grade intersections (Asante 2020)

This Technical Report, which focuses on presenting the proposal by Asante for additional underground exploration and preliminary mining development for the Kubi Project, has not made any alteration to the SEMS 2014 MRE. The Authors deem this still appropriate for the mining programme submitted. The Company has completed extensional and validation drilling since 2017 and this must be included in the next phase of mine planning development requiring an updated geological model and Resource Estimation to be completed.

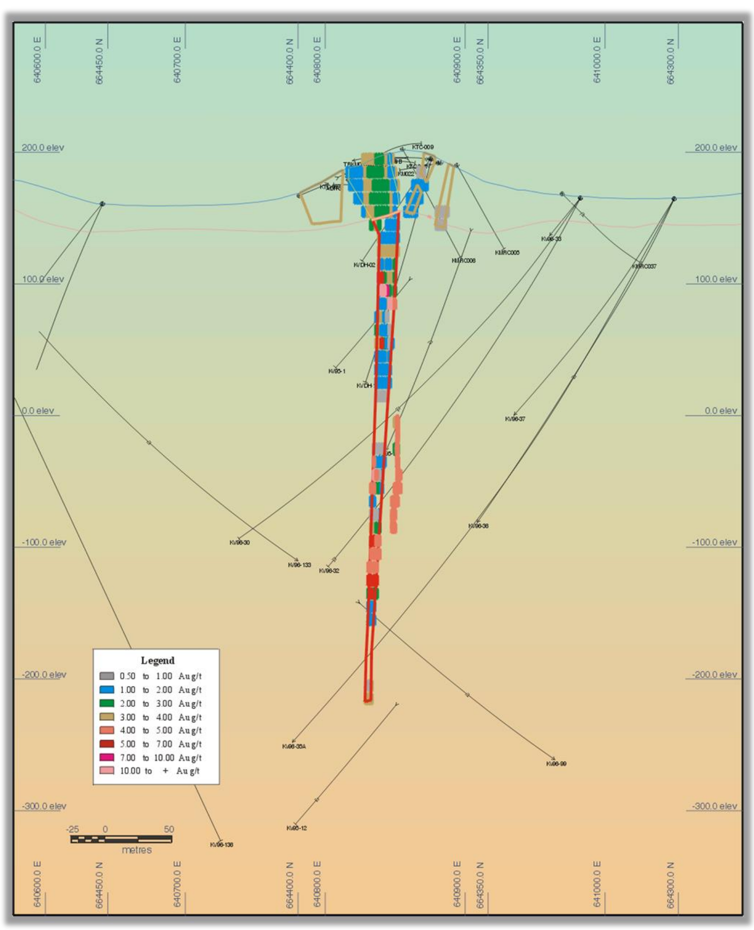


Figure 36: Section 5700N Local Grid, pre-AGA's pit. (Nevsun)

Therefore, the SEMS (2014) NI43-101 Technical Report section with respect to the Kubi Project MRE is presented below.

14.1 Mineral Resource Estimate, SEMS November 2010

In November 2010 SEMS Exploration (Pty) Ltd undertook a MRE for the Main Zone of the Kubi Gold Project for PMI Gold, using parameters considered appropriate for a gold deposit that is likely to be exploited by underground mining methods. The MRE was prepared in accordance with the Definition Standards for Mineral Resources and Mineral Reserves set out by the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM"). All work was carried out using Datamine software. The drilling data was verified in accordance with standard QA-QC procedures.

The drill hole database for the resource estimate of the Kubi property consisted of a total of 226 drill holes (219 diamond and 7 RC), of which 129 holes (38,975m) were located in the MRE area, covering a strike distance of 1,000m. The remaining drilling covered areas north and south along strike that were only sparsely mineralised.

The known mineralised portion of the Kubi Main Zone covers a strike length of 2km but is only sufficiently developed for mineral resource estimation within the central 1,000m, where depths extend to over 600m. The deposit is a high grade, high nugget effect, narrow vertical sheet-like structure, separated into several individual lodes, which could best be exploited by underground mining. Drilling tested mainly fresh mineralisation, and mineral resource delineation is solely focused on fresh rock. Although mineralisation outcrops, most of the near surface oxidised material has either been mined out or is subject to constraints due to a forest reserve.

Modelling of the Kubi Main mineralised zones was achieved by sectional digitising of mineralisation outlines on 40m spaced sections perpendicular to the mineralisation strike. End sections were usually constrained by other data and were not extrapolated.

The continuity of mineralisation down dip is particularly strong and modelling was extrapolated up to 70m down dip from drill intersections dependent on supporting sections and the strength of intersections. Mineralisation was generally modelled to depths of not more than 400-500m below surface, with a maximum depth of 700m in one instance.

Gold grades for the reported Mineral Resource model were determined using Inverse Distance Squared interpolation. The final open pit surface, as mined by AGA, was depleted from the model.

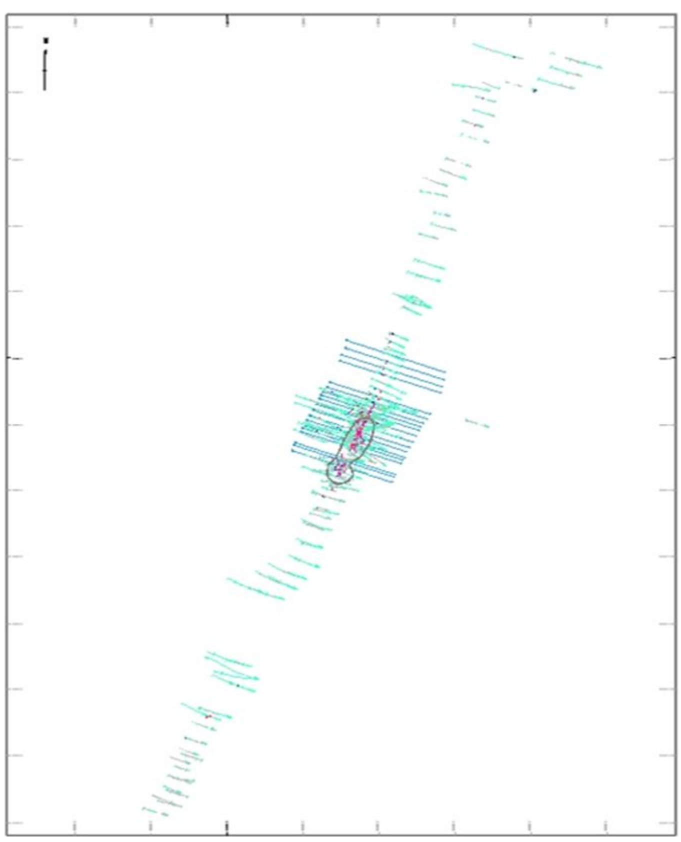


Figure 37: Surface plan of drill hole locations for the Kubi Property (resource estimation area denoted by section lines) DATEMINE MODEL (SEMS 2014)

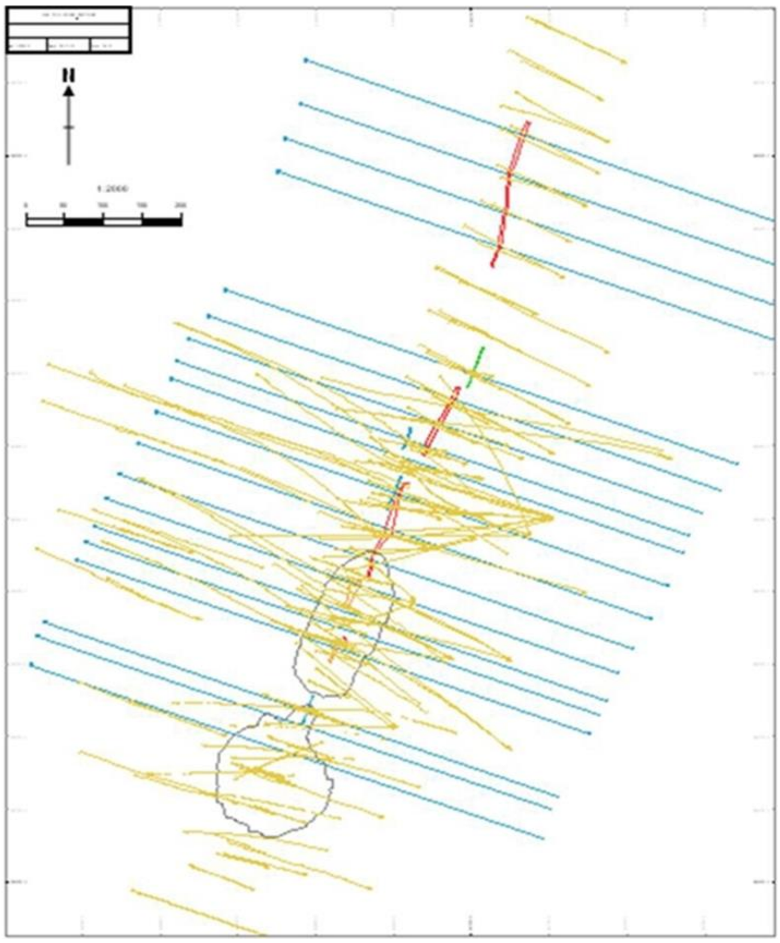


Figure 38: A surface plan of interpretive sections, drill hole traces, pit outline and mineralisation wireframe model. DATAMINE MODEL (SEMS 2014)

14.2 Modelling Approach

Wireframes were created from the digitised mineralisation outlines to be representative of the nature and structure of the Kubi Main mineralised zones. A block model was created from the wireframes into which the various attributes such as grade, density, oxidation state, classification, etc, could be assigned and stored.

The Kubi MRE was constrained within four geological domains that limit the influence of grade interpolation to an individual domain.

The methodology of generating the Kubi Main resource model is described briefly below:

- Surface drill hole sample data were loaded into and validated using Datamine, which was then used for Mineral Resource modelling
- Modelling of the mineralisation was achieved by sectional digitising of mineralised outlines on 19 perpendicular sections, at an average 40m spacing but varying from 35m-50m depending on drill density
- A nominal 2.0g/t Au cut-off grade was used in defining the mineralisation but ensuring continuity between sections. A minimum width of 2m true width was applied to the mineralised outlines
- The digitised mineralised outlines were used for support in the creation of mineralised wireframes
- Mineralised zones were further separated into 4 separate domains, (separate structures) for the purpose of preventing cross-interpolation of samples between these domains. The estimation parameters were similar for each
- Assays within the mineralised zones were composited to constant 1m lengths before undertaking statistical analyses on the gold grades per zone. Histograms were generated to determine an appropriate top cut
- Digital topographical surfaces for topography and the mined out Kubi open pit were created
- A block model of the various zones was then created within the mineralised solids, depleted to the topography and mined out pit. The blocks were assigned grades using an inverse distance squared interpolation algorithm
- Where the model was extended beyond available information, the distinction between 'Measured' and 'Indicated' resources was made at approximately 25m and 50m respectively from the nearest drill hole sample within areas showing geological and grade continuity. In addition, areas where the interpretation is based on limited data, the areas were classified as 'Inferred.'

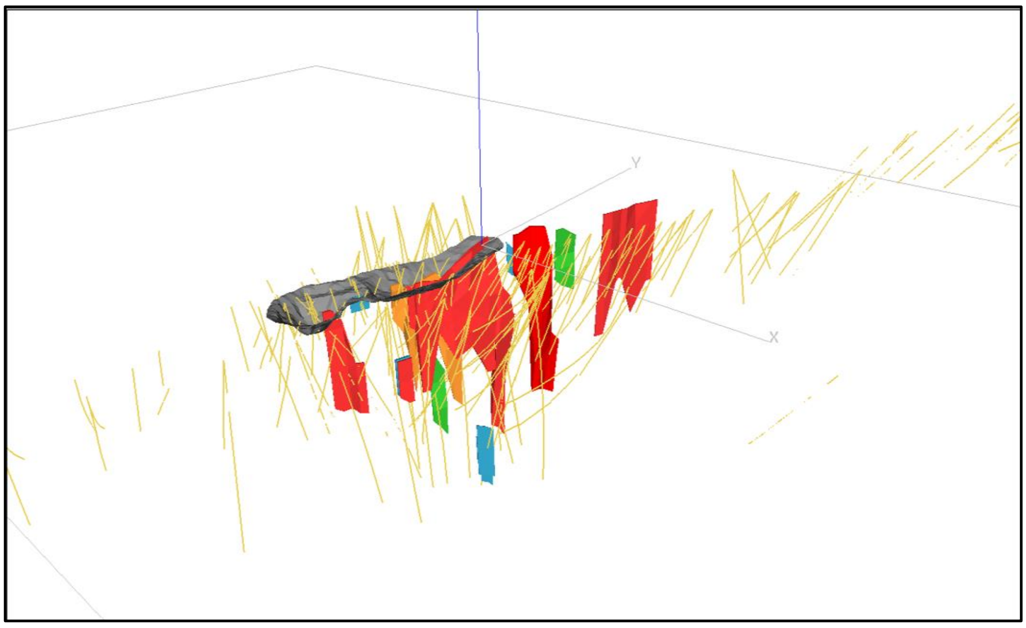


Figure 39: The Kubi Main Zone resource model wireframe at a 2g/t cut off and drill hole traces, DATAMINE MODEL (SEMS 2014)

14.3 Data Received

A set of files were received from PMI Gold on 12th November, 2010 containing drill hole data, drill hole intersection data, density test results, and triangulated topographic and mined out pit surfaces. The drill hole files were validated and imported into Datamine, and a final de-surveyed drill hole file created. Minor errors of overlapping assay intervals were detected and corrected. A total of 226 drill holes were received.

Lithology data received included both numeric and alphanumeric lithology codes for RC and diamond drill logging. No specific data was received denoting oxidation surfaces, although most of the deposit is at depth and considered primary material.

14.4 Density Determinations

Limited bulk density testwork results were made available to SEMS. However, the reported numbers relating to primary rock density are consistent and within expected values for Birimian lithologies such as those identified at Kubi. No density data was available for the oxide portions of the mineralisation model so suitable density values have been assumed. The oxide portion of the Kubi model comprises less than 6% of the overall mineral resource ounces so this lack of information was not considered significant.

Table 27 below presents the average density results calculated by Nevsun Ghana for the primary zone and density values which were assigned by SEMS for the oxide and transitional zones. This distribution resulted in an average density for the entire Kubi resource model of 2.83t/m^3.

Material Type	Depth Below Surface m	Density
Oxide, soft	25	2.0
Oxide, hard	40	2.3
Sulphide upper	55	2.6
Sulphide primary	Below 55	2.9

Table 28: Relative Density determination for all material types

14.5 Descriptive Statistics of Assay Data

The Kubi Main Zone drill hole data set consisted of 226 holes of which 129 holes fell within the area used in the resource estimate. Most of the other 97 holes had been drilled through the northern and southern extensions of the resource zone and these holes typically did not meet the criteria used in the study to generate the interpreted mineralisation outlines.

Summary statistics were calculated for the different sample data, presented in Table 28 below.

Description	Number	No. Missing Values	Min g/t	Max g/t	Mean g/t	Var.	SD	CoV
All drill hole data	18.871	4,610	0	98.1	0.33	5.8	2.4	7.3
All Mineral Resource are drill hole data	9,356	2,470	0	98.1	0.60	11.5	3.4	5.7

Table 29: Summary of raw drill hole statistics

14.6 Geological Interpretation and Modelling

The Kubi deposit is structurally complex, but due to the lack of structural data, interpretations of geological structures were not considered during modelling. Based upon observations made by SEMS personnel during the open pit mining by AGA it was assumed that the deposit is generally continuous in strike extent.

A three-dimensional wireframe model was constructed from the available geological and analysis data and then filled with blocks. Block sub-ceiling was to half parent size, and blocks were allowed to split on the E-W wireframe boundaries. The geological boundaries, such as the garnetiferous unit, were used as a guideline to general extrapolation of grade. However, the resource wireframe was constrained by assay values and a strict adherence to a 2.0g/t Au cut-off was followed. A small number of cases were recognised where narrow mineralisation intersections were expanded slightly to meet minimum width criteria. The resultant model comprised a relatively continuous, northerly plunging main zone and three sub - parallel, hanging wall, discontinuous zones.

The subdivision of a resource model into domains is based on observed continuity of mineralisation which were each assigned a numeric code. Attempts were made to follow the strike and plunge directions that exist at Kubi Main and to limit the number of mineralised zones.

The bock model was defined within the following geographical limits:

	Min	Max	Range	Cell Size	Cell No.
East	640,740	641,090	350	5	70
North	664,150	665,060	910	5	182
EL	-500	230	730	5	146

Table 30: Kubi block body model parameters (SEMS 2014)

14.7 Statistical Analysis of the Mineralised Data

The mineralised wireframe model was used to select samples within the mineralised zones for analysis and later grade interpolation. Selected samples were composited to 1.0m. Summary statistics, histogram and log histograms, and log-probability plots were generated on the composites. An assay top cut of 25g/t Au was determined based on these graphs.

Summary statistics for the selected composited data are presented in Table 30 below.

Description	Number	No. Missing Values	Min g/t	Max g/t	Mean g/t	Var.	SD	CoV
Selected 1m composites	474	14	0.002	98.1	6.2	107	10.4	1.7
Composites after top cut	474	14	0.002	25	5.1	35	5.9	1.2
No. Samples cut to 25 g/t	17	0	25.6	98.1	46.9	530	23	0.5

Table 31: Summary of statistics of selected 1m composite samples

14.8 Grade Estimation

An ellipsoid expanding search volume was used to select samples for block estimation. Search ellipses for grade interpolation were orientated according to the main trends of the mineralisation, along strike and down dip (Table 31). Grade interpolation was carried out using inverse distance squared. Only the selected one metre composites were used for the estimation. Figure 38 below illustrates the grade distribution within the SEMS resource model.

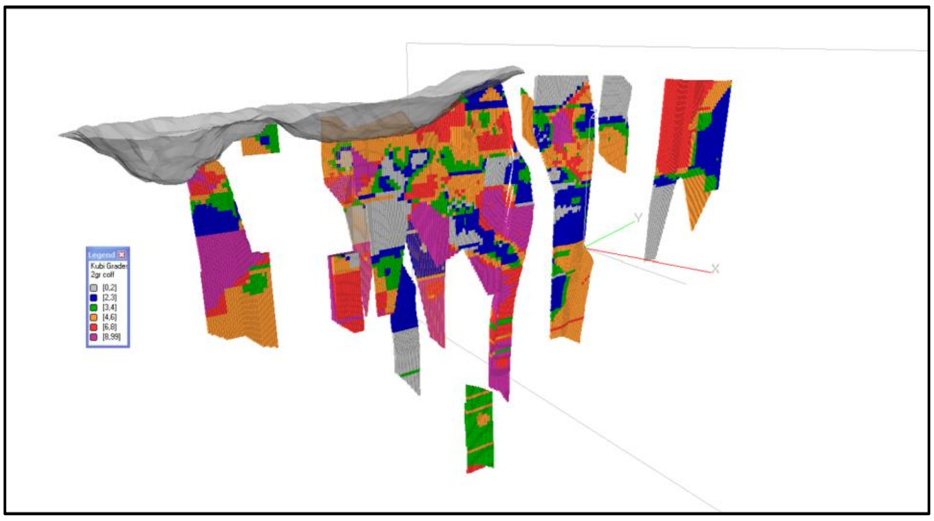


Figure 40: View of the Kubi mineralised body model beneath open pit – looking NNW (SEMS 2010)

Search ellipsoids in the mineralised zone were created with 37m x 32m x 18m in the down dip, strike and minor directions, taking into account average drill hole intersection separations and reflecting generally closer spaced data in the strike direction. Blocks that fell outside of the first pass ellipsoid were re-estimated in a second pass with a relaxed search ellipsoid and flagged for later classification at a lower level. The main estimation parameters are as follows:

Parameter	Value
Assay top cut (g/t)	25
Strike direction (°)	20
Dip (°)	90
Pass 1 Search Radius x (m)	32
Pass 1 Search Radius y (m)	37
Pass 1 Search Radius z (m)	18
Min No. samples	2
Min No. samples	10

Table 32: Grade estimation parameters

14.9 Mineral Resource Classification

The Mineral Resources were classified according to the CIM guidelines, which include the CIM Definition Standards on Mineral Resources and Mineral Reserves (10th May, 2014) and the CIM Estimation of Mineral resources and Mineral Reserves Best Practice Guidelines (29th November, 2019).

The data density, data reliability and data quality, and continuity of mineralisation and structure in areas where drill holes are heavily developed, determine how the mineral resource can be classified into areas of a particular level of confidence.

In this classification, Mineral Resources were divided into Measured, Indicated and Inferred blocks, as follows (Table 32):

- Measured Mineral Resource consists of model blocks which were interpolated by data within 25m in the plane of the structure
- Indicated Mineral Resources are those blocks which were interpolated by data within 50m in the plane of the structure and having a minimum number of points used to estimate a block grade
- Inferred Mineral Resources are model blocks which were interpolated by data within the wire-framed resource but lying outside the 50m search distance. Geological continuity suggests that additional representative drill sampling might raise much of the inferred category to be comparable with the Indicated category.

Classification	Search Ellipse m
Measured	Within 25 x 25 x 15
Indicated	Within 50 x 50 x 30
Indicated	Beyond 50 x 50 x 30

Table 33: Model classification parameters

14.10 Mineral Resource Statement

Considering the grade, quantity, and characteristics of the Kubi Gold Project Mineral Resources, SEMS considered there were reasonable prospects for the eventual economic extraction of the mineralised zones, primarily, by underground mining.

Mineral Resources were reported using a 2.0g/t Au cut-off grade. This cut-off grade took into account the estimated extraction costs and parameters considered appropriate for the period. Table 33 summarises the Mineral Resource for the Kubi Main deposit at a 2.0g/t Au cut off.

Grade-tonnage curves for the modelled resources, using variable Au cut-off increments, are presented in Figure 39. It should be noted that this does not represent a mineral resource statement and is only to illustrate sensitivity of block model resources to block cut-off grade:

	TONNAGE **Mt**	**GRADE** **g/t Au**	**GOLD** **oz**
Measured	0.66	5.30	112,000
Indicated	0.66	5.65	121,000
Measured & Indicated	**1.32**	**5.48**	**233,000**
Inferred	**0.67**	**5.31**	**115,000**

Table 34: Kubi Main Mineral @ 2.0g/t Au cut-off. Effective date 3rd December, 2010

Classification	**Material Type**	**Tonnage** **Mt**	**Grade** **g/t Au**	**GOLD** **oz**
Measured & Indicated	Oxide	0.04	4.37	5,000
Measured & Indicated	Fresh Rock	1.29	5.50	228,000
Measured & Indicated	**Total**	**1.32**	**5.46**	**233,000**
Inferred	Oxide	0.08	5.39	14,000
Inferred	Fresh Rock	0.59	5.30	101,000
Inferred	**Total**	**0.67**	**5.31**	**115,000**

Table 35: Kubi Main Mineral Resource by Material Type @ 2.0g/t Au cut-off. Effective date 3rd December, 2010

Grade-tonnage curves for the Identified resources, using variable Au cut-off increments, are presented in Figure 39 below:

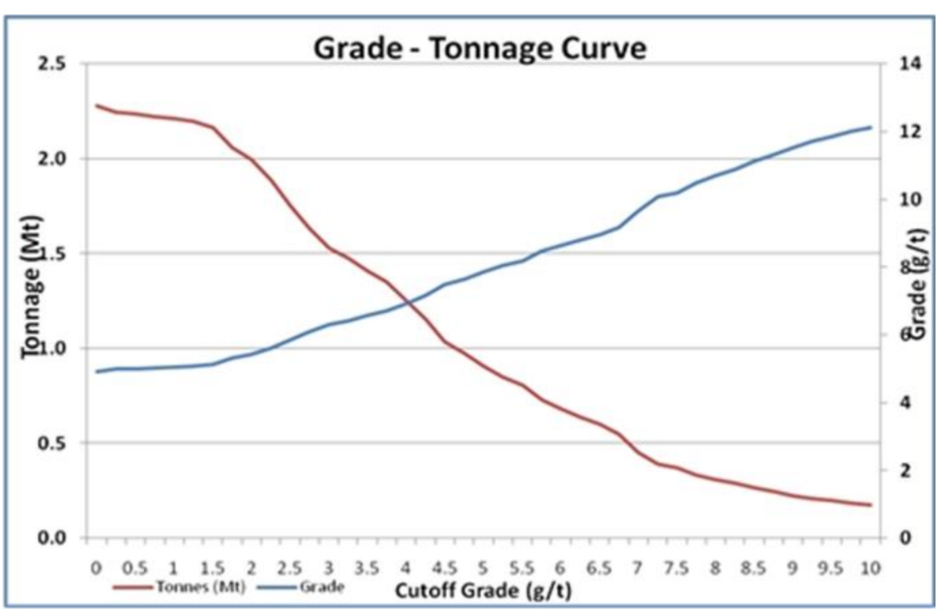


Figure 41: Grade-tonnage curves for the modelled resources. SEMS 2014

14.11 Authors Interpretation and Conclusions

It is noted and accepted by the Author that SEMS was satisfied that the data was sufficiently reliable and the geological modelling sufficiently robust to be able to apply a mineral resource classification as part of the mineral resource estimation

The geological model produced an increase in the average Mineral Resource grade within the Kubi Main Zone in comparison to historical estimates and an increased confidence in the model as demonstrated by the inclusion of a measured category. This result has provided a clear guide for future ore reserve estimation and the driving force behind the focus of this report to develop the underground potential and continue with deeper exploration to extend the current resources to depth.

The Author has reviewed the approach adopted by SEMS in understanding the geological characteristics of the complex, steeply dipping vein hosted mineralised deposit. The use of defined geological boundaries were used to constrain mineralised grades and an appropriate cut-off of 2g/t Au was also applied. The creation of wireframes to represent the identified mineralised zones and subsequent three-dimensional block model which addressed the grade, density, oxidation state and other relevant attributes is the recognised process of Resource estimation for similar mineralised deposits.

The Authors concur with the SEMS 2014 conclusion that, except for the Supuma Belt Forest Reserve, there are no significant external factors such as environmental, socio-economic, legal, marketing and political factors that could have a material effect on the MRE and current plans to develop the Kubi Project. The recent geophysical exploration and diamond drilling that has been ongoing since Asante initiated such exercises in 2016 will only add deeper geological understanding and extend the mineralised zones in depth and along strike.

However, the Forest Reserve itself is not considered a constriction to underground mining. While it is possible that the choice of underground mining method could influence the amount and size of underground stability pillars and the crown pillar, this is unlikely to be significant and would not have a material effect on the overall MRE.

The Authors note that exploration programs that have been ongoing since 2017 under the management of Asante must be finalized and will subsequently result in an updated and revised geological model and Mineral Resource Estimate. The cut-off grade will require re-evaluation in any future updated MRE to reflect the relevant economic environment.

The Authors are confident that given the current Resource Estimation and the intention and commitment of Asante to continue with exploration from a developed underground platform within the Kubi Main zone that the resource material defined has reasonable prospects for eventual economic extraction. Given also, the intention to toll treat run of mine material at the facilities of a neighbouring mining operation. Section 16 covers the proposed mining method that is suitable for this type of mineralised deposit.

A gold price of US$1,750/oz has been applied. In addition, the following parameters were also assumed:

- Cut-off grade of 2g/t
- Minimum mining width of 2m
- Unplanned dilution of 10% and Ore Loss of 5%
- Metallurgical recovery of 92.5%
- Mining cost of US$51.76/ton
- Processing cost – included in toll treatment pay out arrangement
- G&A costs of US$5.79/ton

It is the opinion of the Qualified Persons that given these parameters the mineralised material as reported in the SEMS 2014 MRE has reasonable prospects for eventual economic extraction.

The Report is however based on the estimation of Inferred Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorised as Mineral Reserves and this implies that there is no certainty that the PEA will be realised as presented.

15. MINERAL RESERVE ESTIMATES

In accordance with the guidelines of NI 43-101 Standards of Disclosure for Mineral Projects and the CIM Definition Standards for Mineral Resources and Mineral Reserves, only those Mineral Resource blocks classified in the Measured and Indicated categories are allowed to drive mine optimization for the declaration of a Mineral Reserve at a prefeasibility or feasibility level of study. Inferred Mineral Resources and non-categorized mineralised blocks, regardless of grade and recovery, bear no economic value and are treated as waste.

No Mineral Reserve can be disclosed on the basis that Inferred Mineral Resource material has been included in the mine planning optimization process and the level of confidence of this PEA study does not meet the requirements of a prefeasibility or feasibility level of study.

16. MINING METHODS

16.1 Mining Overview

Previous mining at Kubi was by open pit mining methods. The Kubi Gold Mine open pit was operated by Ashanti Goldfields and AngloGold Ashanti in two phases between 1999 and 2007. The Kubi open pit is reported to have produced approximately 60,000oz of gold from 500,000t of oxide material grading 3.65g/t Au.

No mining operations are currently in progress. The work described in the following subsections is a preliminary mine design completed as part of a PEA undertaken to test the viability of an underground mining operation and to justify further expenditure on geological exploration, to improve confidence in the underground resource, and more detailed technical study work on an underground mine.

16.2 Resources Considered for Mining

The mine design for Kubi is based on the MRE prepared by SEMS and discussed in Section 14 of this report. The Mineral Resources were provided toBara in a Datamine block model named “ResBlocks_local_model”. Measured and Indicated and Inferred (M&I) Mineral Resources are included in the mining plan. The total Measured and Indicated and Inferred Mineral Resources amount to 1.99Mt at an average grade of 5.44g/t Au. The Mineral Resources occur between the elevations of 5,175m and 4,617m RL (175 to -383 metres above mean sea level).

The Kubi mineralised deposit strikes south-west to north-east and dips approximately vertically. The total strike length of the resource is 940m. The mineralised deposit consists of two roughly parallel veins and along strike the resource is broken by a number of barren gaps. In limited areas both veins exist alongside one another with a middling ranging from 2m to 25m between the veins. Figure 40 shows a long section of the resource model with the blocks coloured according to its Mineral Resource category. Figure 41 shows the resource coloured by grade.

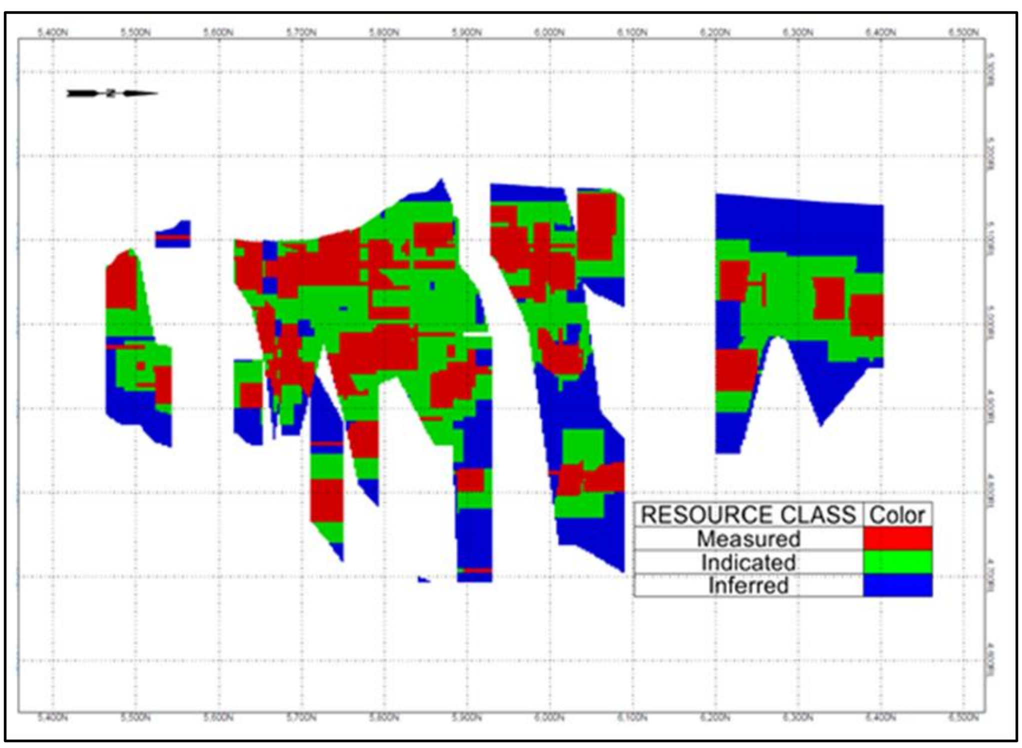


Figure 42: Vertical projection showing blocks coloured by resource category (Bara 2022)

It must be noted that the mine plan includes Inferred Mineral Resources that are considered speculative geologically. The same economic parameters have been applied to all resource categories (Measured, Indicated and Inferred) to determine the project economics for this PEA. There is no certainty that the results of the PEA presented will be realized.

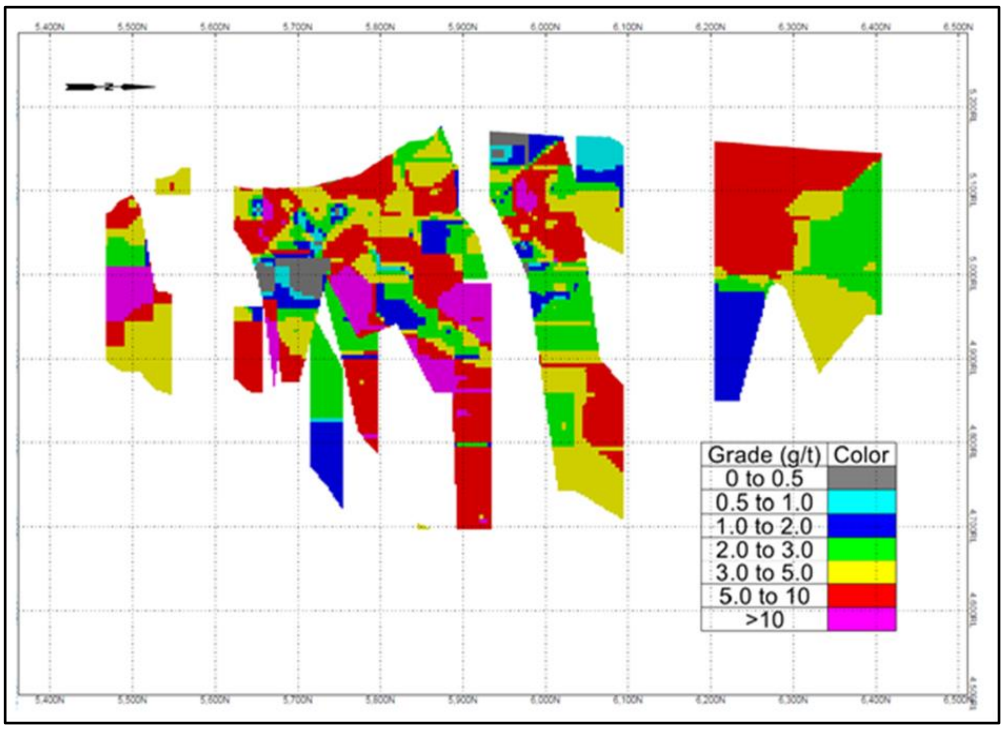


Figure 43: Vertical projection showing blocks coloured by gold grade (Bara 2022)

Most of the vein width is greater than 2m wide with limited areas as wide as 10.0m. The average vein width is 3.5m.

16.3 Mining Geotechnical Considerations

A geotechnical study was undertaken by Middindi Consulting (Pty) Ltd (South Africa) who were subcontracted by Bara Consulting for this purpose. The objective of the geotechnical study was to use the available data to evaluate the rock properties at Kubi and to use this data to prepare a set of conceptual geotechnical design criteria to be used in the PEA underground mine design.

16.3.1 Geotechnical Data

The geotechnical data from eight (8) boreholes in the study area was used to characterise the rock mass that would constitute the crown pillar and boxcut/portal area. The geotechnical data from the four (4) boreholes which intersect the orebody were used to characterise the hanging wall, footwall, and mineralized zone for stope designs. The list of boreholes is presented in Table 35. A 3D plot of the boreholes positioning relative to the mineralised zone is presented in Figure 42. The raw data was used to derive the Q-Index, Q-Prime Index, Mining Rock Mass Rating (MRMR), and Modified Stability Number (N').

Boreholes Intersecting Mineralised Zone	Boreholes in Study Area - Not Intersecting
KV12-556	KV12-554
DDHK21-001	KV12-555
DDHK21-006	KV12-557
RCDHK21-017	KV12-559

Table 36: Boreholes used in study

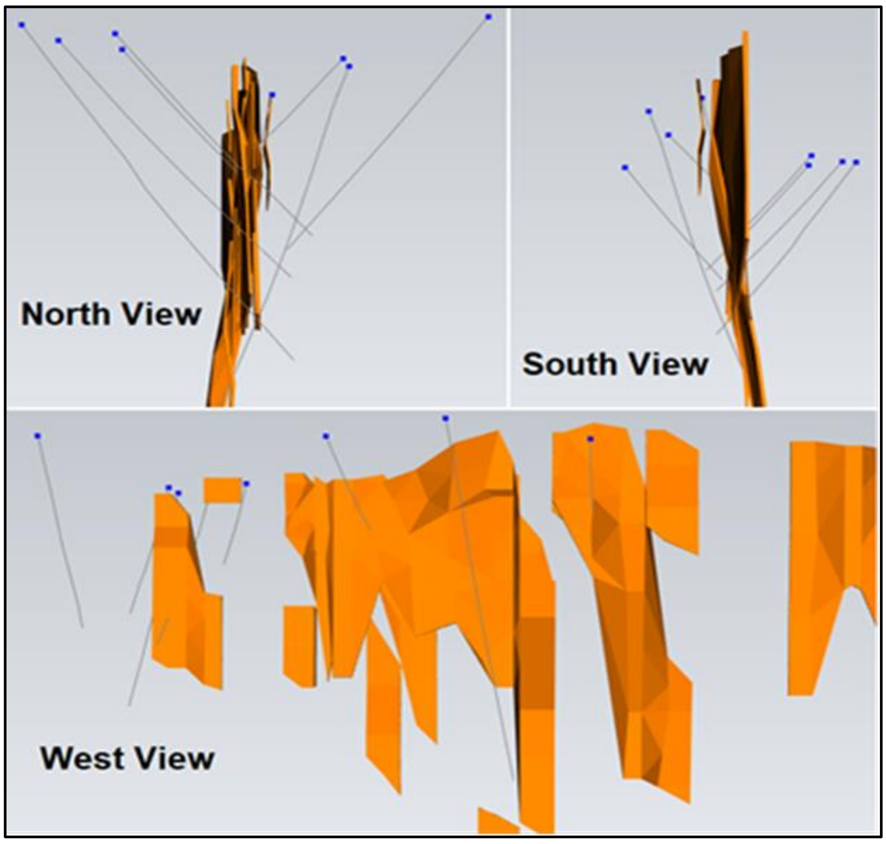


Figure 44: Locations of boreholes used in study (Bara 2022)

Most of the rock properties were derived from the boreholes, as stated in the previous section, while other properties had to be benchmarked, such as UCS, tensile strength, and shear strength. The rock mass quality indices and mechanical properties used for this study are presented in Table 36 and 37.

Rock Type	Q-Index	Q-Prime	MRMR	UCS MPa
Greywacke	21.5	82.3	52.3	120.0
Conglomerate	16.1	67.3	43.3	85.0
Phyllite	12.4	51.3	43.4	80.0
Saprolite	1.7	16.9	12.4	15.0
Garnetised Conglomerate	5.1	19.6	36.9	85.0
Garnetised Greywacke	7.5	28.3	53.3	120.
Granite	13.2	50.0	61.1	160.0

Table 37: Rockmass properties for each dominant rock type in study area (Middindi 2022)

	Design Area	Q-Index	Q-Prime	MRMR	N'
Crown Pillar	From Surface	**2.9**	n/a	n/a	n/a
	Below Pit	**8.8**	n/a	n/a	n/a
Boxcut	Weathered and Transitional Material Slope	n/a	n/a	16.2	n/a
	Fresh Material Slope	n/a	n/a	**44.9**	n/a
	Overall Slope	n/a	n/a	**30.6**	n/a
Stopes	Mineralised Deposit	**6.4**	**25.3**	**41.5**	**31.0**
	Hangingwall	**6.6**	**26.3**	**36.5**	**25.4**
	Crown	**3.1**	**19.7**	**27.5**	**17.0**

Table 38: Rock mass properties used in design (by design area) (Middindi 2022)

*n/a - values not used in study

16.3.2 Mineralised Deposit

The deposit trends 021^{0} azimuth, and has an average dip of approximately 80^{0}, with large parts dipping 90^{0}, particularly nearer to surface. The orebody has an average width of 3.5m but does extend to a maximum width of 20m in small sections near the surface. The orebody has already been partially extracted through an open pit which has been backfilled to approximately 35m from pit bottom.

16.3.3 Weathering Depth

The study area exhibits a very thick layer of weathered material, with some boreholes indicating up to 80m of weathered material and an average throughout the study area of greater than 35m. The weathering depths were plotted spatially in Figure 43.

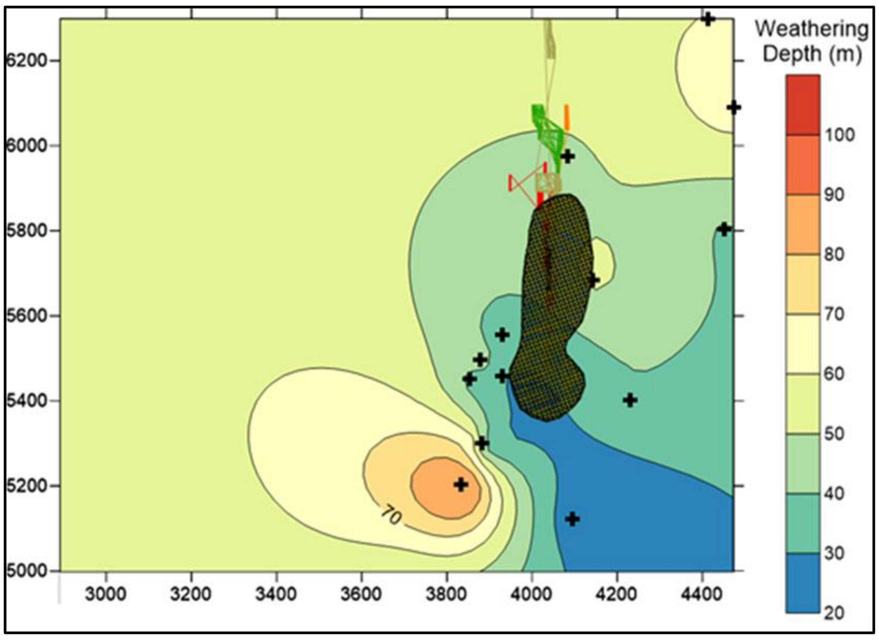


Figure 45: Weathering depth contoured across study area (Middindi 2022)

16.3.4 Crown Pillar Design

The crown pillar width from surface and below the existing pit were determined using the Scaled Span method by Carter (2014). The scaled crown span is derived on the basis of the relation to the rock mass Q-index and the critical span; the critical span used in the assessment was 6.0m. For a given value of Q, crown pillars are potentially unstable if the scaled crown span, C_S, is greater than the critical span, S_C.

The critical span, S_C, is calculated using the following formula:

$$S_C = 3.3 \times Q^{0.43} \times sinh^{0.0016} Q$$

Where: S_C is the critical span (m), and Q is the Q-index rating.

The scaled crown span, C_S, is calculated using the following formula:

$$C_S = S\left[\frac{\gamma}{t(1 + S_R)(1 - 0.4\cos\theta)}\right]^{0.5}$$

Where: S is the crown pillar span (m), γ is the specific gravity of the rock mass (tonnes/m³), t is the thickness of the crown pillar (m), θ is the dip of the mineralised body, S_R is the span ratio (crown pillar span/crown pillar strike length). As a function of the critical span and the scaled crown span, a probability of failure can be determined using the method derived by Carter (2000). The probability of failure can be calculated as follows:

$$P_f(\%) = 100/\left(1 + 441e^{\left(\frac{-6}{F_C}\right)}\right)$$

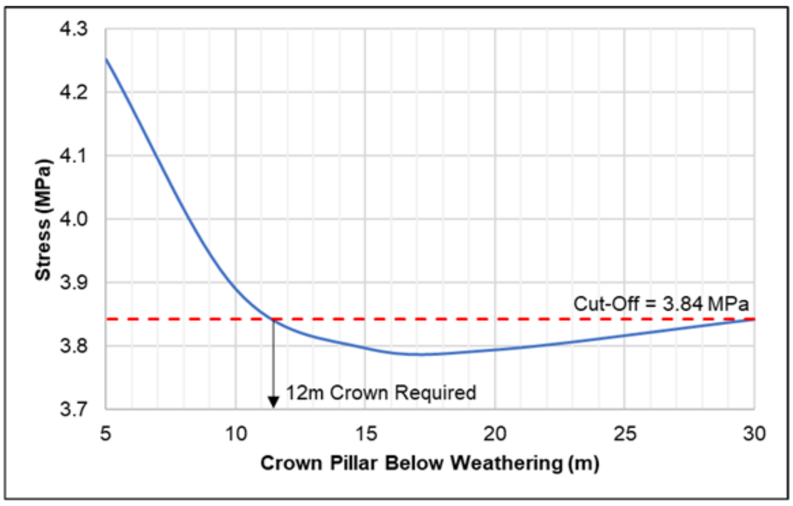
Where: P_f is the probability of failure and F_C is the ratio between S_C and C_S (i.e., FC = SC/CS). A description of the threshold ranges for the probability of failure is presented in Table 38.

Probability of Failure %	Minimum Factor Of Safety	Life Expectancy	Years	Operational Surveillance Required
100-50	<1.0	Effectively Zero	<0.5	Ineffective
50-20	1.0	Extremely short-term	1	Continuous sophisticated
20-10	1.2	Very short-term, temporary stope crowns	2-5	Continuous with instruments
10-5	1.5	Short-term	5-10	Continuous simple monitoring
5-1.5	1.8	Medium-term	15-20	Conscious superficial
1.5-0.5	2.0	Long-term	20-100	Incidental superficial
<0.5	>2.0	Very long-term, permanent crown pillars	>100	None required

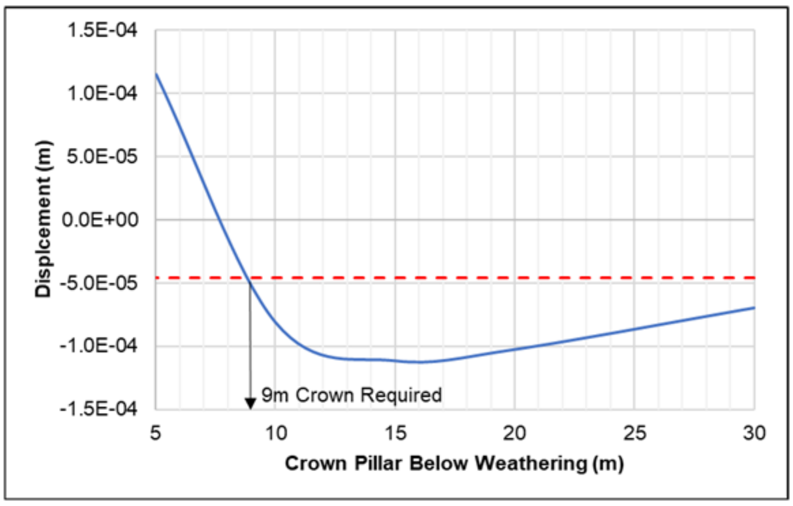
Table 39: Probability of failure thresholds for crown pillar design (Carter, 2014)

The crown span, or crown pillar thickness, can then be plotted against the probability of failure to find the appropriate crown pillar thickness. From Table 38, the probability of failure should not exceed 1.0% since it will need to remain stable for the LoM.

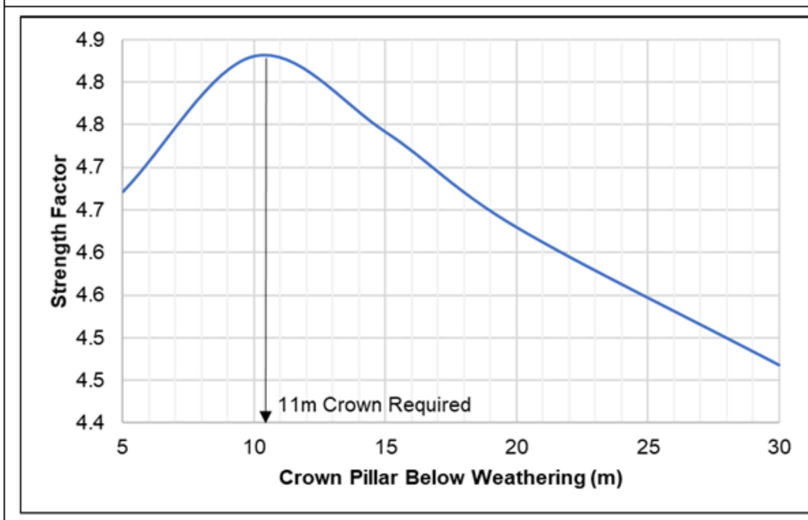
This method indicated a crown pillar of thickness 50m from the surface, and 20m below the pit. However, due to the variable weathering depth in the area, the crown pillar width could be optimised based on the varying depth of weathering. The Rocscience programme RS2 was used to determine a suitable crown pillar width which would need to be applied within the fresh material. The RS2 models examined the stress, deformation, and strength factor (Factor of Safety (FOS)) within the crown below the weathering horizon. Crown widths of 5m, 10m, 15m, 20m, and 30m were assessed, and compared with the in-situ (pre-mining) stress and deformation state. The crown pillar width was determined based on the width which allowed the crown material to operate in a near in-situ state. The plots of crown pillar width against stress, deformation, and strength factor are presented in Figure 44.



Plot of stress vs crown pillar width, indicating a 12.0m pillar is required to limit the stress state to pre-mining levels



Plot of displacement vs crown pillar width, indicating a 9.0m pillar is required to limit the deformation to pre-mining levels



Plot of strength factor vs crown pillar width, indicating an 11.0m pillar provides the maximum strength factor

Figure 46: Crown pillar modelling results (Middindi 2022)

The modelling results suggest the crown pillar will need to have a width of the weathering depth, plus an additional 12m of fresh material to be stable. This does not include areas where a 20m crown pillar is required below the pit bottom. Contours of the required crown pillar width across the study area is presented in Figure 45. The bottom surface of the crown pillar, relative to the mineralised deposit and existing open pit is presented in Figure 46. The crown pillar will range between 30m and 60m across the study area.

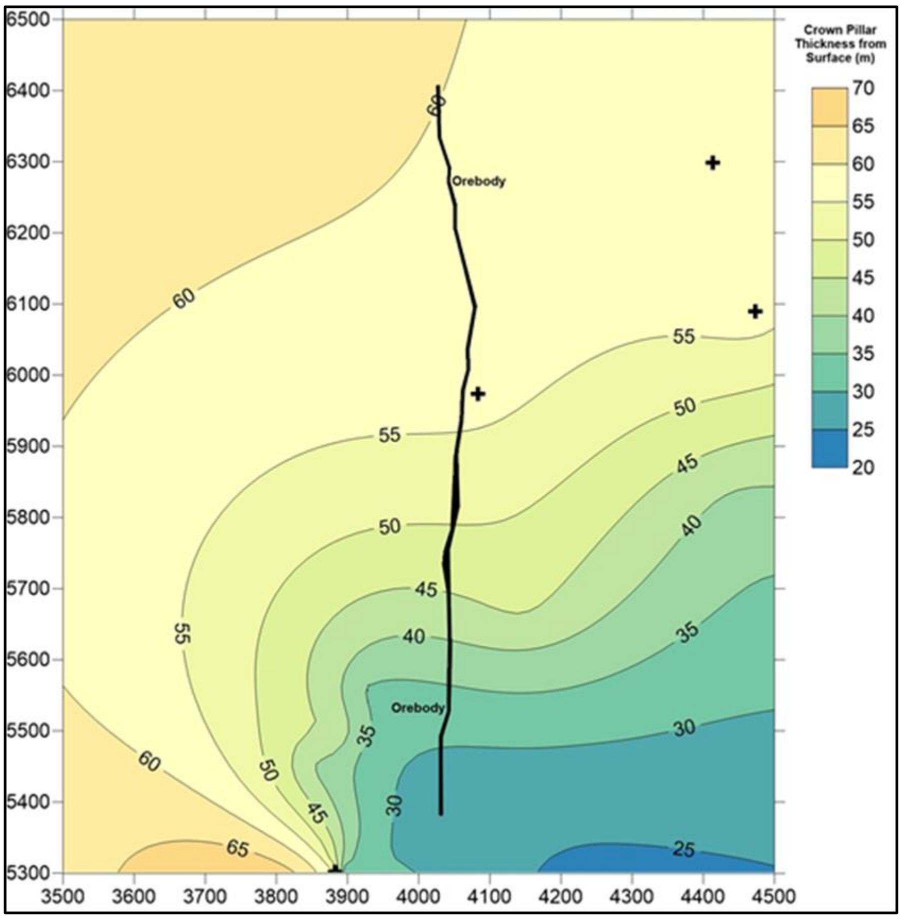


Figure 47: Contour plot of required crown pillar width across study area (Middindi 2022)

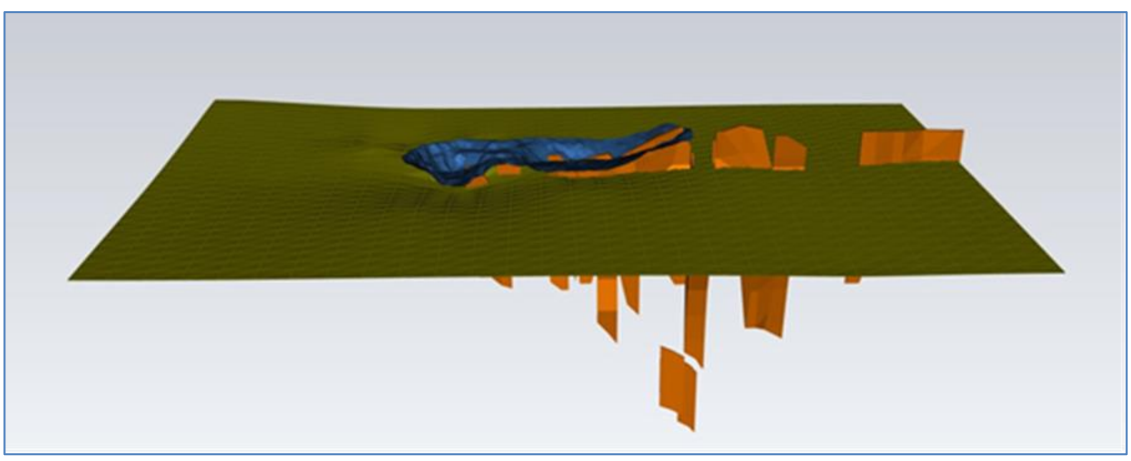


Figure 48: Bottom surface of required crown pillar (Middindi 2022)

16.3.5 Portal Design

The potential boxcut/portal positions, relative to the mineralised deposit and existing open pit, are illustrated in Figure 47. Each potential site can be described relative to the weathering depth as follows:

- Position 1:
    - Located within the existing pit which has been backfilled to a point which is approximately 20m above the weathering horizon. The pit bottom is approximately 20m below the weathering horizon.
- Position 2:
    - Located alongside the open pit. Boxcut will need to be developed through approximately 30.0m of weathered material. This location would require a 45m deep boxcut.
- Position 3:
    - Located to the south of the pit. The boxcut will need to be developed through approximately 17m of weathered material. This location would only require a 25m deep boxcut. However, this position has been ruled out as unsuitable for development of infrastructure due to wet and muddy ground conditions.

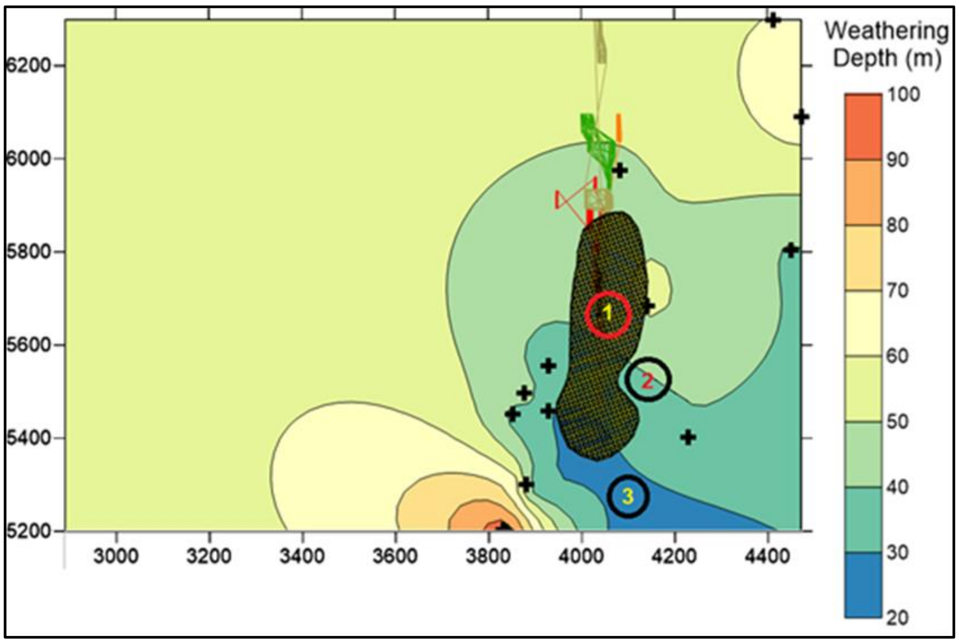


Figure 49: Potential boxcut locations (Middindi 2022)

Position 1 was selected as the preferred option, within the open pit and with the portal being developed into the more competent east wall of the pit.

Borehole DDHK21-006 was drilled near to the selected portal site, the data from this borehole can be used to assess the quality of the rock mass the portal will be developed through. The portal and decline will need to be developed through 25m of very poor-quality weathered material, and an additional 10m of poor-quality transitional material, before reaching the more competent fresh material.

The figure demonstrates that the maximum unsupported span is below the required portal width of 4m up to 35m below the portal entry position, this entire section of the decline will need to be supported with concrete and steel sets since the rock mass is too weak for the use of rock bolts and cable anchors. The support requirements are summarised in Table 39.

Depth Range m	Q-Index	Maximum Unsupported Span m	Recommended Support	Comments
0.0-25.0	0.3	2.0	Constructed concrete and steel sets lining the sidewalls and hanging wall of the portal and decline	Bolt and cable anchor support will be unsuitable due to the low rock mass quality and strength of material in hanging wall above the decline
25.0-35.0	1.4	3.6	Constructed concrete and steel sets lining the sidewalls and hanging wall of the portal and decline	Bolt and cable anchor support will be unsuitable due to the low rock mass quality and strength of material in hanging wall above the decline
35.0-45.0	2.7	4.7	• 4.5m grouted cable anchors, 3.5m x 3.5m spacing, • 2.4m grouted bolts, 1.5m x 1.5m spacing, • 50cm shotcrete, wire mesh and lacing	Bolts, cable anchors, and shotcrete required once weathering and transitional zones have been developed through.
45.0-50.0	1.2	3.4	• 4.5m grouted cable anchors, 3.5m x 3.5m spacing, • 2.4m grouted bolts, 1.75m x 1.75m spacing, • 50cm shotcrete, wire mesh and lacing	
50.0-100.0	8.5	7.3	• 4.5m grouted cable anchors, 3.5m x 3.5m spacing, • 2.4m grouted bolts, 1.75m x 2.25m spacing	

Table 40: Support requirements for adit and initial decline development (Middindi 2022)

The Haines and Terbrugge (1991) chart was used to derive the indicative slope angles for the highwall which the portal will be developed through. The chart plots slope height against Mining Rock Mass Rating (MRMR), with reference also made for factor of safety (FOS). The results from the chart presented in Figure 48.

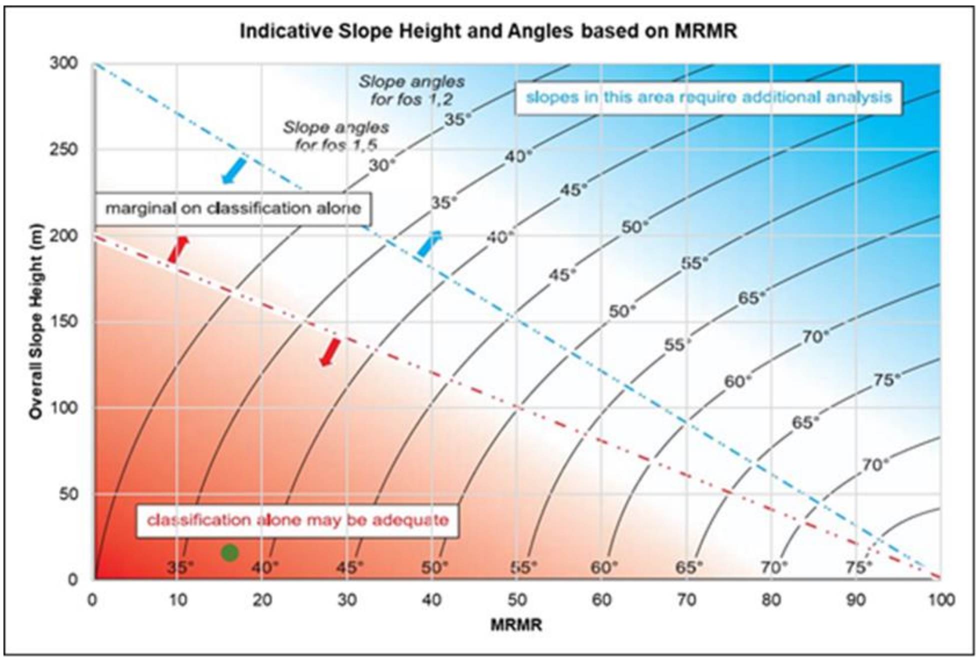


Figure 50: Chart for determining indicative slope angles (Haines and Terbrugge, 1991)

The overall slope height above the portal is 16 m so using the chart a slope angle of 37 degrees was determined.

The recommended support for the highwall, based on typical practice, is listed below:

- Shotcrete
  - ≥100mm shotcrete liner
- Mesh and lacing
  - Tensioned mesh and lacing
  - Rock bolts or soil nails may be required to fasten mesh and lacing, 2.4m long bolts are recommended.

16.3.6 Stope Design

HYDRAULIC RADIUS

The hydraulic radius (HR), introduced by Laubscher and Taylor (1976), is obtained by dividing the area of an excavation face by the perimeter of the excavation face. The hydraulic radius can be calculated using the following formula:

$HR = (H \times L)/(2 (H + L)))$

Where: HR is the hydraulic radius (m), H is the excavation height (m), and L is the excavation length (m). The critical hydraulic radius, which is defined as the limiting hydraulic radius for stability, is obtained from stability charts, using the mining rock mass rating (using the Laubscher chart) or the modified stability number (using the Matthews-Potivin chart).

The stability charts relate the stability number to a critical hydraulic radius which is then related to stope dimension limits. The stability charts used are presented in Figure 49 and Figure 50, respectively, with a summary presented in Table 40, wherein the values used in the design area are highlighted.

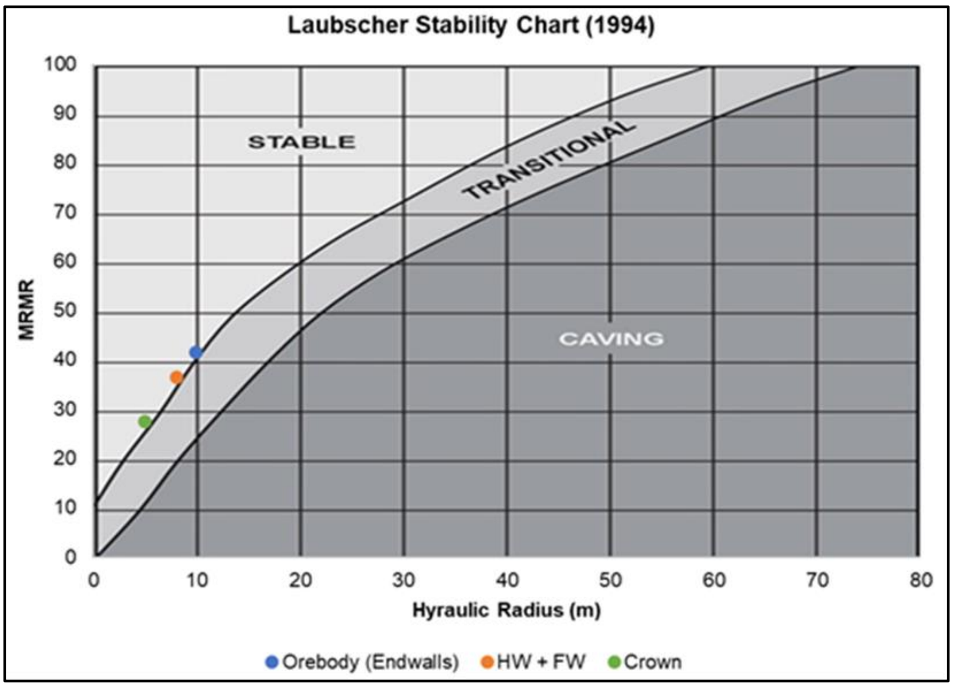


Figure 51: Laubscher stability chart (Laubscher, 1994)

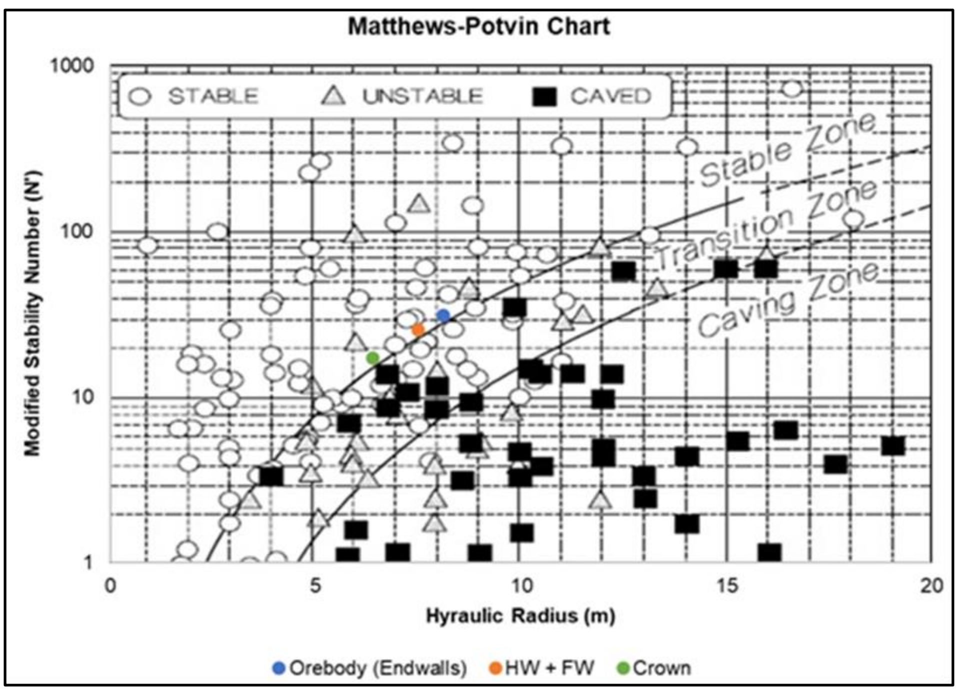


Figure 52: Matthews-Potvin stability chart (Hutchinson & Diederichs, 1996)

Geotechnical Unit	MRMR	N'	Hydraulic Radius (m)	
			Laubscher (1994)	Matthews-Potvin (1992)
Orebody (End walls)	41.50	31.00	9.90	8.10
HW + FW	36.50	25.40	8.10	7.50
Crown	27.50	17.00	5.00	6.40

Table 41: Hydraulic radius for each design area (Middindi 2022)

The maximum vertical heights and strike spans were determined based on the hydraulic radii and varying mineralised body widths. The limiting vertical height was determined for the mineralised body. The limiting strike spans were determined based on the critical hydraulic radius of the hanging wall ("HW") and crown of the stope. These spans will vary based on the width of the mineralised body.

A summary of the limiting strike spans is presented in Table 41.

Design Aspect	Width m	Span m
Limiting Vertical Height (m)	6	20.0
	12	
	20	
Limiting Strike Span (m)	6	50.0
	12	40.0
	20	18.0

Table 42: Summary of limiting strike spans based on mineralised body widths (Middindi 2022)

PILLAR DIMENSIONS

The potential failure mechanisms for sill and rib pillars are flexural and sliding failure, respectively. This was analysed using the Mitchell (1991) approach. Factors of Safety (FOS) were calculated for varying stope spans and pillar widths. A Factor of Safety ("FOS") threshold of 2.0 was adopted for sill pillars, while an FOS of 1.5 was used for the rib pillars.

The sill and rib pillar dimensions were determined by plotting pillar thickness against factor of safety, from these graphs the most suitable pillar width was selected. The sill pillar widths were determined for varying orebody widths and are illustrated in Figure 51 and the rib pillar widths were determined for varying depths below surface (50m to 500m below surface (mbs)) and are illustrated in Figure 52, with a summary in Table 42.

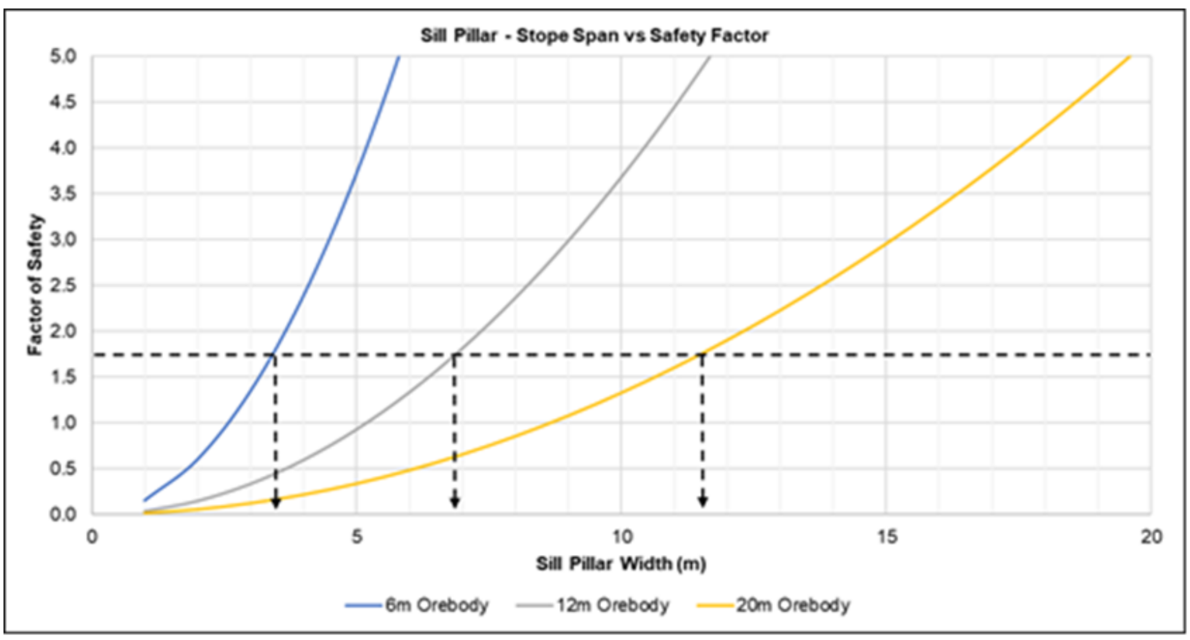


Figure 53: Sill pillar width for varying mineralised body widths (Middindi 2022)

The chart indicates the sill pillar widths should be 3m, 7m, and 12m, for the 6m, 12m, and 20m mineralised body widths respectively. However, a 3m wide sill will not be sufficient for long-term stability, therefore, the sill pillar width for a 4m orebody width was set to a minimum of 6m.

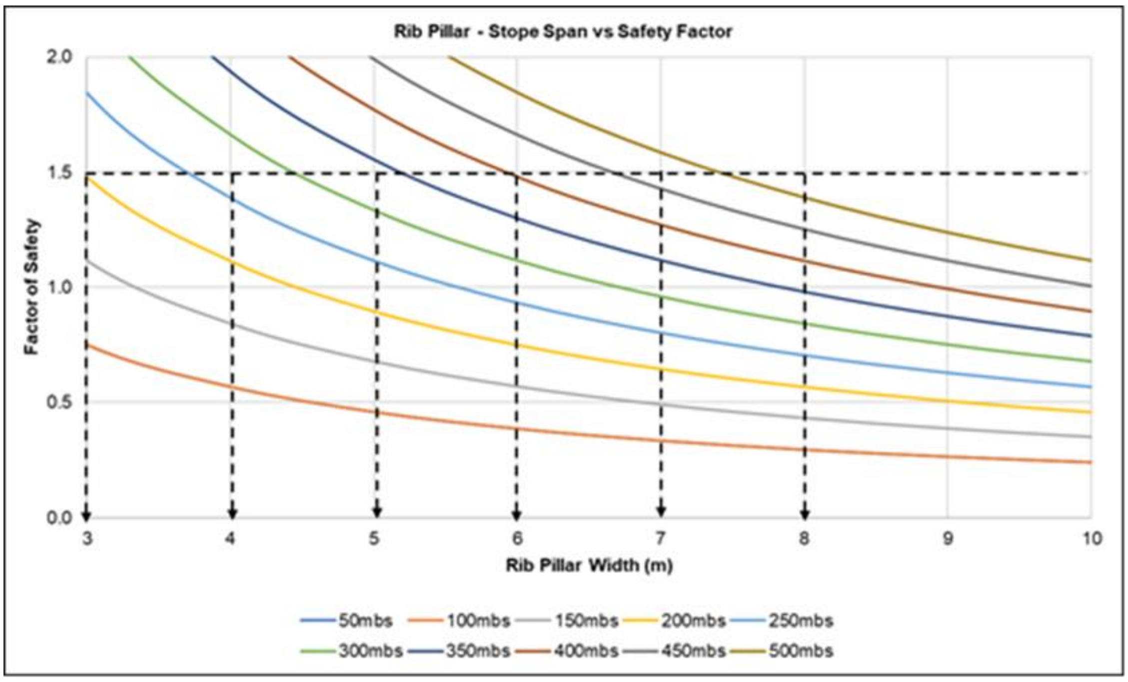


Figure 54: Rib pillar widths for varying depths below surface (Middindi 2022)

The chart indicates that from 50mbs to 200mbs, a rib pillar smaller than 3m is possible, however, a rib pillar less than 3m wide will not be able to provide adequate support and will likely not be able to support its own weight, therefore, a minimum pillar width of 3.0m was used.

Depth m	Rib Pillar Thickness m
50mbs	3.0
100mbs	3.0
150mbs	3.0
200mbs	3.0
250mbs	4.0
300mbs	5.0
350mbs	6.0
400mbs	6.0
450mbs	7.0
500mbs	8.0

Table 43: Rib and sill pillar dimensions for varying depths below surface (Middindi 2022)

16.3.7 Design summary

A summary of all design requirements is presented in Table 43. All design parameters and results within this study are at a concept level of accuracy and require additional geotechnical data to be gathered and substantial design work to be carried out to progress the study to higher levels of accuracy.

Category	Design Parameter			Units	Design Value	Comments
Geomechanical Properties	Crown Pillar	Q-Index	From Surface	n/a	2.9	
			Below Pit	n/a	8.8	
	Boxcut	MRMR	Weathered	n/a	16.2	
			Fresh	n/a	44.9	
			Overall	n/a	30.6	
	Stopes	Q-Index	Orebody	n/a	6.4	
			Hanging wall	n/a	6.6	
			Crown	n/a	2.9	
		MRMR	Orebody	n/a	41.5	
			Hanging wall	n/a	36.5	
			Crown	n/a	27.5	
	Orebody Width			m	6.0	The crown pillar should be from the surface up to 12m below the weathering horizon, unless below the open pit, then the crown pillar should extend to 20m below the pit bottom.
	Crown Pillar Height (m)	From Surface		m	Weathering Depth + 12.0m	
		Below Pit		m	20.0	

Category	Design Parameter		Units	Design Value	Comments
Portal Design	Support Requirements	0.0mbs-25.0mbs	n/a	Constructed concrete and steel sets lining the sidewalls and hanging wall of the portal and decline	Bolt and cable anchor support will be unsuitable due to the low rock mass quality and strength of material in hanging wall above the decline.
		25.0mbs-35.0mbs	n/a	Constructed concrete and steel sets lining the sidewalls and hanging wall of the portal and decline	
		35.0mbs-45.0mbs	n/a	4.5m grouted cable anchors, 3.5m x 3.5m spacing, 2.4m grouted bolts, 1.5m x 1.5m spacing 50cm shotcrete, wire mesh and lacing	Bolts, cable anchors, and shotcrete required once weathering and transitional zones have been developed through.
		45.0mbs-50.0mbs	n/a	4.5m grouted cable anchors, 3.5m x 3.5m spacing, 2.4m grouted bolts, 1.75m x 1.75m spacing 50cm shotcrete, wire mesh and lacing	
		50.0mbs-100.0mbs	n/a	4.5m grouted cable anchors, 3.5m x 3.5m spacing, 2.4m grouted bolts, 1.75m x 2.25m spacing	
Stability Criteria	Modified Stability Number N'	Orebody	n/a	31.0	
		Hanging wall	n/a	25.4	
		Crown	n/a	17.0	
	Hydraulic Radius	Orebody	m	8.1	
		Hanging wall	m	7.5	
		Crown	m	5.0	

Category	Design Parameter		Units	Design Value	Comments
	Hydraulic Radius	Orebody	m	8.1	
		Hanging wall	m	7.5	
		Crown	m	5.0	
Stope	Limiting Vertical Height		m	20.0	
	Limiting Strike Span between rib pillars	6m Orebody	m	50.0	
		12m Orebody	m	40.0	
		20m Orebody	m	18.0	
	Minimum rib pillar width	50mbs-200mbs	m	3.0	
		250mbs	m	4.0	
		300mbs	m	5.0	
		350mbs-400mbs	m	6.0	
		450mbs	m	7.0	
		500mbs	m	8.0	
	Minimum sill pillar width	6m Orebody	m	6.0	
		12m Orebody	m	7.0	
		20m Orebody	m	12.0	

Table 44: Design parameter summary table (Middindi 2022)

16.3.8 Requirements for Next Phase of Study

For this study to progress to the next phase, being a PFS or FS level of accuracy, the following work programmes are suggested:

- Additional drillhole data
  - At least seven (7) additional boreholes should be drilled from the surface and intersect the mineralised zone. This will provide data about the weathering depth, crown pillar, mineralised width, geological structures, and rock mass qualities of the weathered material, HW, FW, and the mineralised zone
  - At least three (3) boreholes located at boxcut/portal site. This will provide data about the weathering depth, geological structures, and rock mass qualities within the boxcut, portal, and decline
  - Unless ATV/OTV surveys will be done upon completion of the borehole drilling, the boreholes should be orientated so alpha and beta angles can be measured for the structures which are intersected.
- Testing of samples collected within the crown pillar, HW, mineralised zone, and boxcut. The following tests are recommended:
  - Uniaxial compressive strength (UCM) tests for the crown pillar, HW, mineralised zone, and boxcut
  - Triaxial compressive strength (TCM) tests for the crown pillar, HW, mineralised zone, and boxcut
  - Base friction angle (BFA) tests for the crown pillar, HW, mineralised zone, and boxcut
  - Brazilian tensile strength (UTB) tests for the crown pillar, HW, mineralised zone, and boxcut.
- Compilation of geological structure database
  - Through means of geotechnical logging, or ATV/OTV downhole survey, a comprehensive database of geological structures, including joints, bedding planes, foliations, shear zones, veins, faults, and dykes. This data should be collected from within each rock type present in the study area
  - The structural data should be collected at the portal site, and for the HW, crown pillar, and mineralised zone. The highly weathered nature of the rockmass at the portal site may necessitate the structural data being derived through scanline mapping the exposed pit wall
  - This data will enable kinematic assessments for underground excavations as well as the portal highwall.
- Complete geological modelling
  - The geological block model should highlight which rock types make up the HW, FW and mineralised zone. This will inform the design of the interaction between the various rock types, particularly the meta-sediments, which are a concern in terms of stability or overbreak.

16.4 Mining Method Selection

Previous underground mining study work includes only a report on the preliminary development to establish an underground drilling platform from which to conduct further geological exploration. The mining method was not discussed in the report. Mining methods that could be considered at the PEA level of study include:

- Shrinkage stoping
- Long hole open stoping
- Alimak stoping
- Drift and fill.

Table 44 lists the advantages and disadvantages of these mining methods.

Mining Methods	Advantages	Disadvantages
Shrinkage Stoping	• Allows mineralised zone to be followed, reducing dilution and increasing Run of Mine (ROM) material. • Allows greater level spacing.	• Labour intensive and requires specialist skills. • Not selective on a small scale, i.e. unpay areas within the stope panel cannot be left in-situ. • Safety issues associated with men working in stopes.

Mining Methods	Advantages	Disadvantages
		• Broken ROM stocks are tied up in stope with production ramp up and working capital implications.
Alimak Stoping	• Allows mineralised zone to be followed, reducing dilution and increasing ROM. • Allows greater level spacing.	• Requires specialist skills. • Capital intensive, requires specialist equipment.
Drift and Fill	• Allows mineralised zone to be followed, reducing dilution and increasing ROM.	• Requires more development and hence labour, equipment and associated costs. • Requires backfill which will add cost to the mining operation. • Dilution will be incurred in narrow portions of the mineralised zone to maintain minimum mining dimensions.
Long Hole Open Stoping	• Non entry stoping method with associated safety enhancements. • Amenable to mechanisation so less labour intensive.	• Requires smaller level spacing with associated additional development requirements • Requires relatively consistent orebody geometry between levels

Table 45: Mining Method Comparison (Bara 2022)

The unavailability of tailings backfill, since the ROM will be treated off-site, negates the use of drift and fill. Alimak stoping is not favoured due to the capital requirements for specialist mining equipment and specialist skills required for this method. Considering the methods listed above the two methods which are most suited to this body are shrinkage stoping and long hole open stoping.

An analysis of the vein widths was undertaken which showed that the average vein width is 3.5m. 80% of the mineralised tonnage is contained in veins with a width of greater than 2.0m. While shrinkage stoping works well in narrow stoping widths of 2.0m and less, it is not ideal for wider bodies as it requires men to work under the overhand face, which when stope widths are wider, presents a risk of injury due to falling rocks. Shrinkage stoping also results in a large inventory of blasted rock being tied up during the mining operation, before it can be drawn from the stope and hauled to surface.

Consequently, for this PEA level study, the Authors recommend long hole open stoping as the preferred mining method. The option exists to apply shrinkage stoping in the narrower areas of the mineralised zone if long hole open stoping proves problematic in these areas. The main levels are located 50m apart which is an appropriate level spacing for shrinkage stoping. The application of shrinkage stoping will not require any additional or different mining equipment other than airleg rockdrills for stope drilling.

16.5 Primary Access

Access to the mine will be via a single decline which will serve as a conduit for the transport of men, material, rock and as the primary in-take airway. The portal for the decline will be in the Eastern wall (FW) of the previously mined open pit, on the elevation of 5142m RL. The elevation of the current backfill in the pit is 5138m RL. Figure 53 shows a photograph of the proposed portal position.

Figure 55: Photograph of proposed portal location (dMb 2022)

The decline will be 4.0m wide by 4.5m high and be developed at an inclination of -9 degrees (1 in 6.3 or 15.8%). The primary objective of the decline, in the short term, is to provide access to the underground to allow underground diamond drilling to be undertaken to increase the confidence in the resource. However, the design must provide for the fact that this will ultimately become the access to underground for development of the mine and production of mineralised material from underground. In designing the layout of the decline, the location of drill stations, specified by the geological team were considered. Figure 54 shows the initial decline development required for diamond drilling, and the total life of LoM decline. The proposed exploration drill stations provided by the geological team are shown in Figure 54. These will need to be adjusted slightly to align with the new decline design.

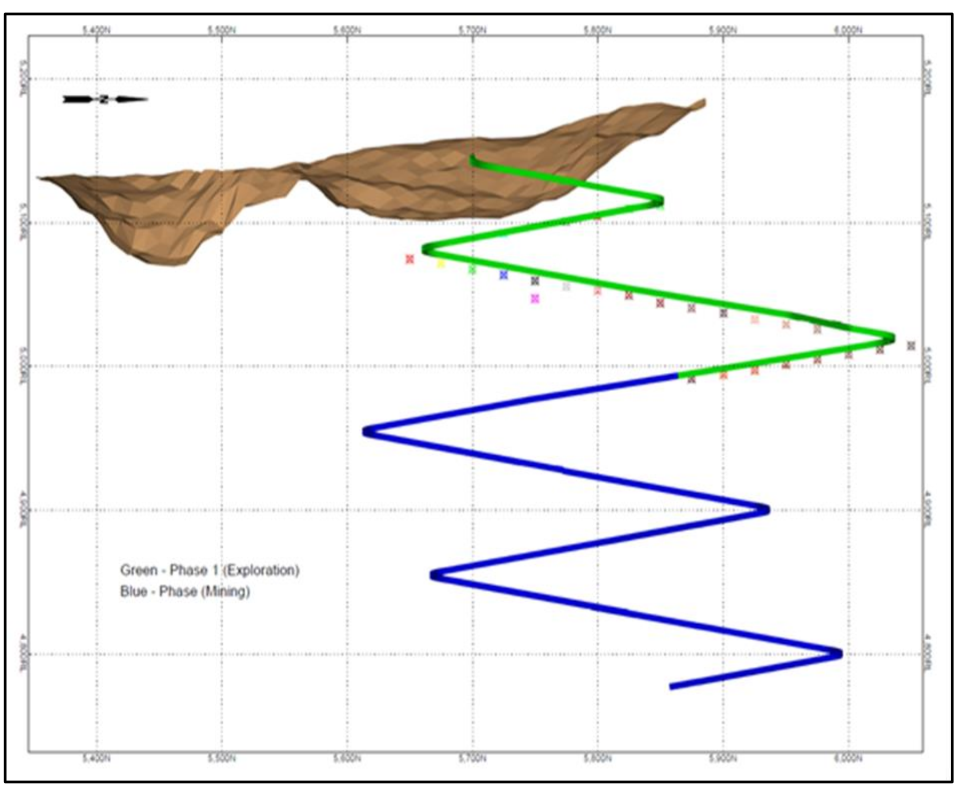


Figure 56: Vertical projection looking west - Exploration decline (Bara 2022)

16.6 Level Access and Development

The level spacing has been set at 15m vertically. This results in a vertical stope height of 12m, with a reef drive height of 3m. Where a sill pillar is required between stopes the spacing is adjusted by the sill pillar thickness of 5m to 20m footwall to footwall distance.

Footwall drives will be developed on the main levels which are located 50m apart, vertically. This allows for three sublevels of 15m each and a sill pillar of 5m between main levels. The footwall drives provide access to the various chutes in the mineralised zone which are separated by low grade or barren areas. An alternative approach to providing the footwall drives on the main levels would have been to extend all the reef drives on the sublevels across the barren areas between chutes. An evaluation of the development metres required showed that the footwall drive option resulted in reduced metres and provided more scheduling flexibility in the mine plan.

Figure 55 shows a vertical projection, looking west, of the mine development.

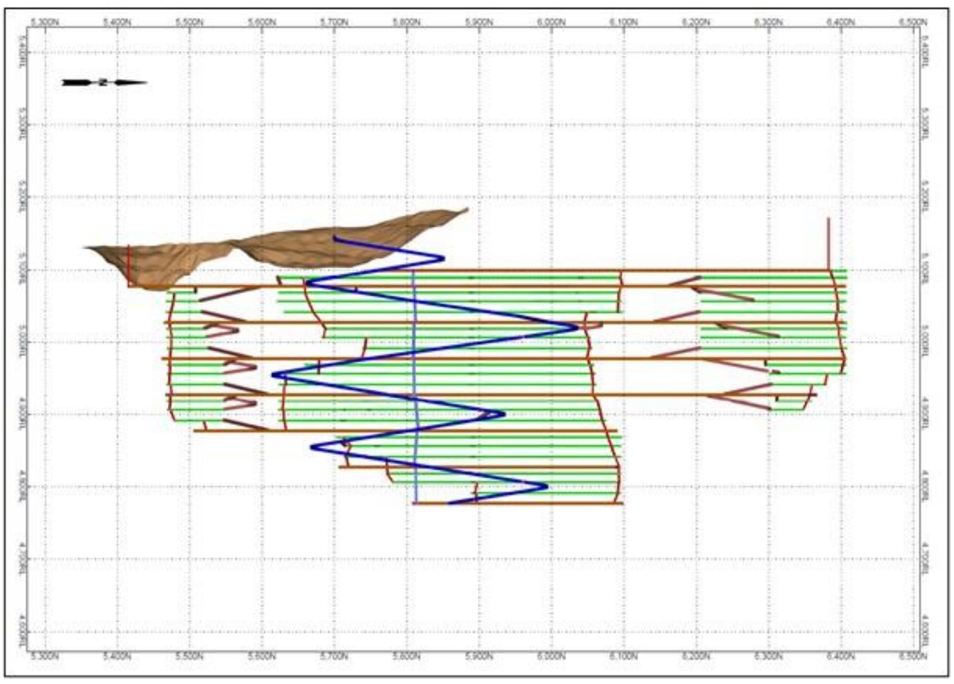


Figure 57: Vertical projection looking west - Development (Bara 2022)

Development profiles were designed to cater for the selected equipment to be used as well as other constraints such as ventilation requirements. Table 45 shows the development sizes of the various ends.

Excavation	Width m	Height m	Density t/m³	t/m
Decline	4.00	4.50	2.9	52.2
Crosscut	3.50	3.50	2.9	35.5
Footwall Drives	4.00	4.50	2.9	52.2
Ore Drives	3.00	3.00	2.9	26.1
Cubby	4.00	4.00	2.9	46.4
Drill Cuddy	4.00	4.00	2.9	46.4
Vent Cubby	3.00	3.00	2.9	26.1
Vent Raise (upcast)	2.50	2.50	2.9	18.1
Service Raise	3.50	3.50	2.9	35.5

Table 46: Development end dimensions (Bara 2022)

Figure 56 and 57 show cross sections through the ramp and reef drive with typical mining equipment and services installed.

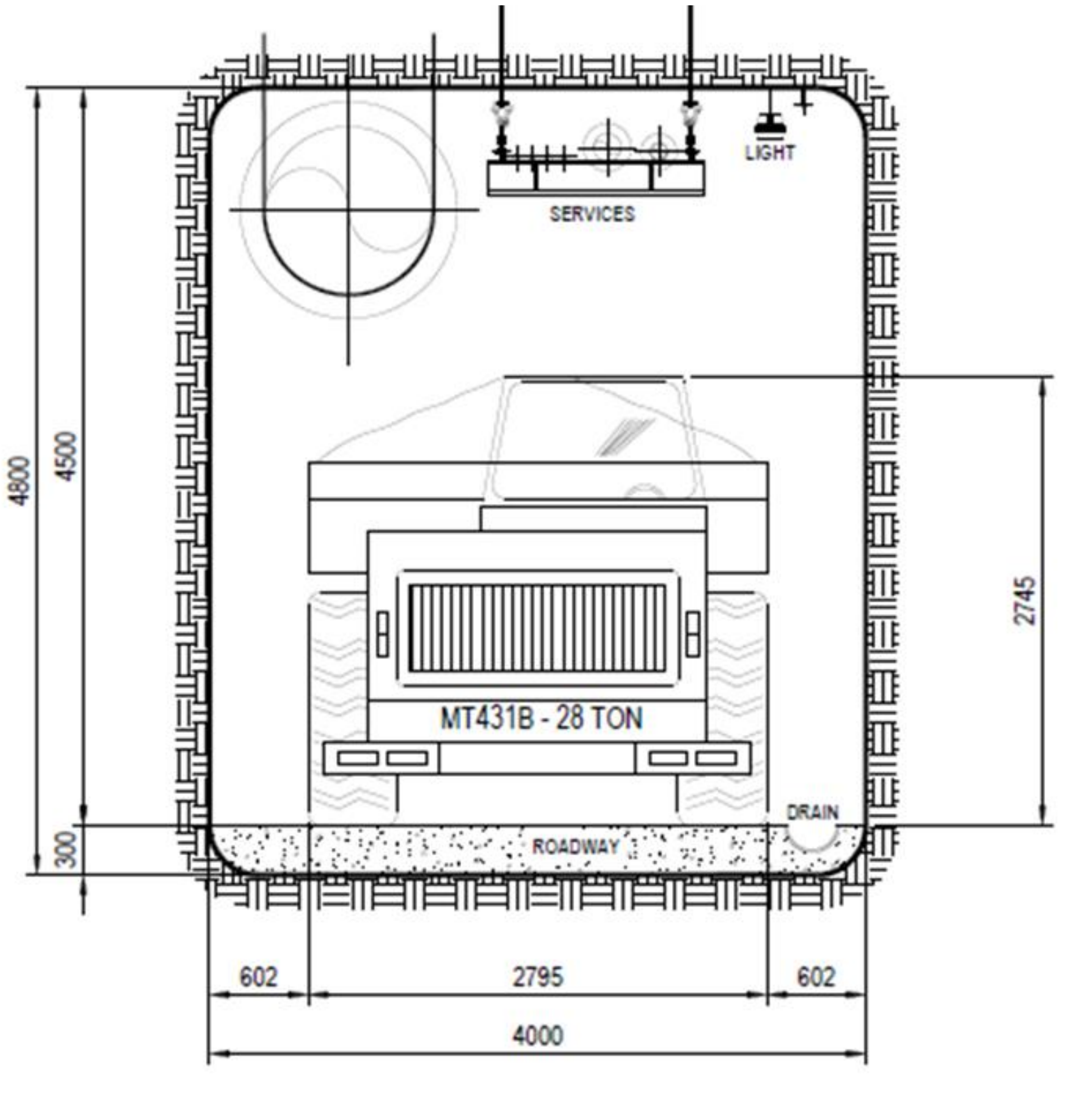


Figure 58: Cross-section through ramp

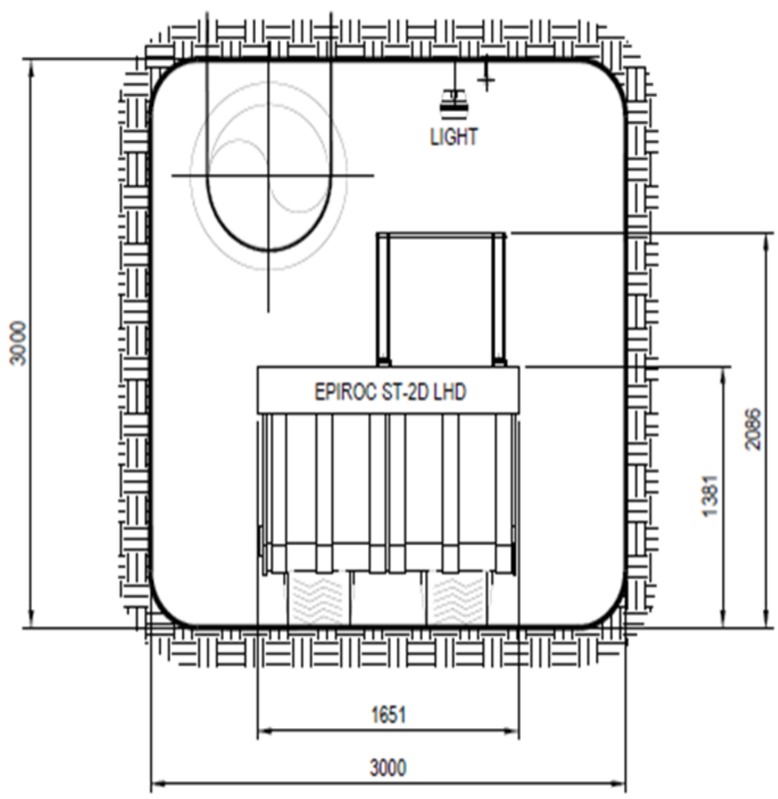


Figure 59: Cross-section through mining drive

16.7 Mining Method Description

In the long hole open stoping method access onto a level, from the ramp, will be via an access crosscut. From the access crosscut reef drives will be developed to the extent of the mining block. The mining block will be split into stopes of a maximum span of 50m long. This is based on the geotechnical design criteria which allows for a maximum of 50m strike span and a vertical span of 45m. Stopes will be separated by a rib pillar of 5m width, where the payable zone extends beyond the strike length of 50m.

The sublevel spacing will be 15m. This is a compromise between drilling accuracy and dilution control on the one hand versus stope tonnes per development metre and operating cost on the other. 15m has been assumed in this case given the relative narrow stop width and potential for significant dilution of the levels spacing is excessive.

The required dip span between sill pillars has been determined by the geotechnical study. By selecting a level spacing of 15m, a sill pillar can be left every third level to give a dip span of between 45m. The sill pillars are required to be 5m thick based on an average orebody width of 3.5m.

The stopes are mined in a top-down sequence with drilling taking place from the mining drive on the bottom of the stope. Mucking is by remote loader from the mining drive.

The stope slot raises can be developed by conventional raising with handheld rock drills or by long hole blasting methods. Once the slot raise is complete the slot is opened up to the full width of the orebody, creating a mining face, from where stope blasting can commence, advancing back towards the stope access crosscut.

Stope blast hole drilling will be done by an electrohydraulic production drill rig drilling typically 64mm diameter holes. Typically, one metre of blast hole will produce 3t of ore.

Figure 58 shows a schematic of the proposed mining method.

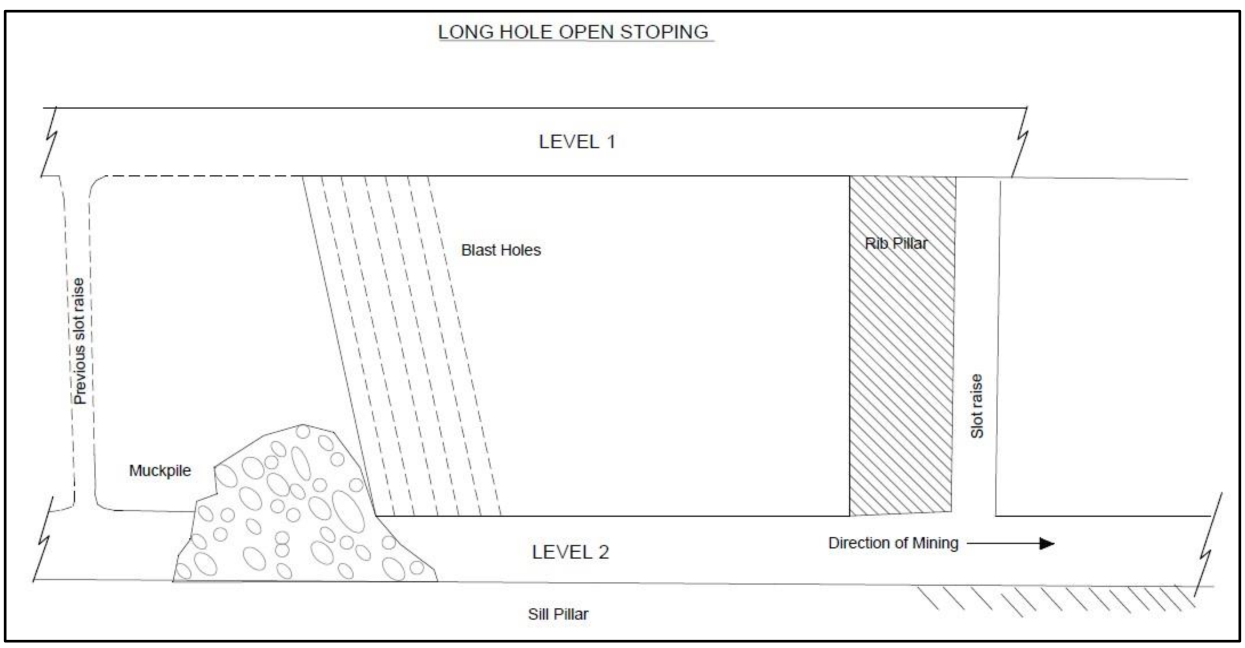


Figure 60: Typical long hole stoping arrangement (Bara 2022)

Blast holes in a stope will be pre-drilled, allowing the drilling and blasting processes to be decoupled. This means that the blasting and loading process can continue independent of drilling. In narrow stopes typically two rings are blasted at a time, resulting in a face advance of around 1.5m per blast, with shifts alternating between blasting and loading out.

16.8 Ore and Waste Handling

Blasted ROM and waste will be loaded in the face by loader (LHD). The loader will tip directly into a truck. If no truck is available, the LHD will tip into a stockpile and re-handle the material into a truck when one is available. The trucks will move ROM to the ROM pad on surface and waste to either the waste dump area on surface or into a stope void when sufficient stope voids are available for waste tipping.

16.9 Mining Equipment and Productivities

The mining equipment fleet at Kubi has been selected with the mineralised body dimensions and geometry in mind. To minimise dilution small mining equipment will be utilised. Narrow vein mining equipment is available from several suppliers. Table 46 shows a summary of the selected equipment.

The productivity of the selected equipment fleet at Kubi was calculated. The shift cycle will be two by 12 hour shifts per day, 7 days per week. This amounts to an average of 30 working days or 60 shifts per month. A total of two hours per shift was allowed as unproductive time. This accounts for:

- Travelling time in and out of the mine
- Pre-shift meeting
- Pre-shift equipment checklist
- Postproduction handover.

Equipment availability and utilisation were applied to the remaining 10 hours per shift to estimate the total working hours per month for each unit of mining equipment (loaders, jumbos and trucks).

Based on the operating conditions, which include haul distances and estimated travelling speeds the productivity of the loaders and trucks was estimated and are shown in Table 46.

Equipment Type	Model	Capacity	Quantity
Development Jumbo	Epiroc Boomer S1	250m /month (multiple heading) 70 m/month (single end)	3
Production Drill	Epiroc Simba S7	10m/hour	2
Loader (Stoping)	Epiroc ST2D	26t/hour	3
Loader (Development)	Epiroc ST1030	68t/hour	1
Truck	Dux DTS-12	20t.km/hour	3

Table 47: Summary of selected mining equipment (Bara 2022)

Figures 59 to 62 show illustrations of the primary mining equipment.

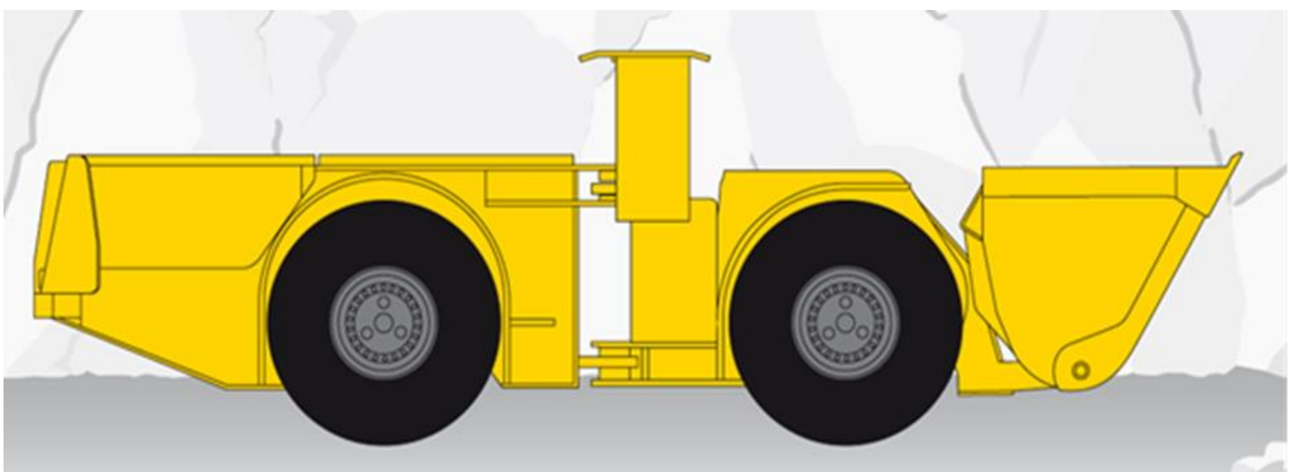


Figure 61: Loader (ST2D)

Figure 62: Articulated dump truck (MT41B)

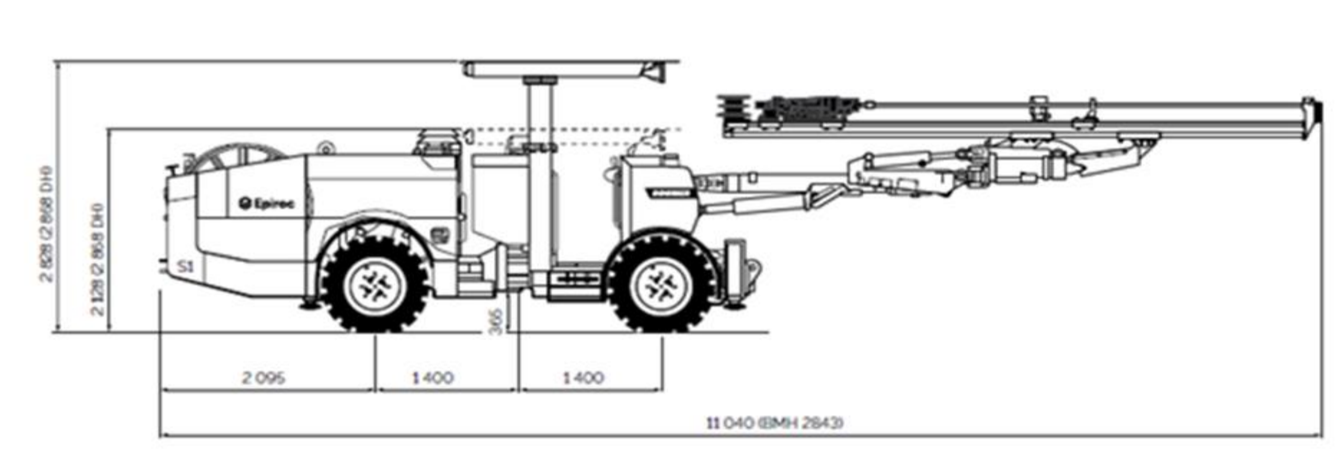


Figure 63: Development jumbo (Epiroc S1)

Figure 64: Stoping drill rig (Epiroc S7)

It is assumed that due to space constraints only one loader will work in a particular stope. This means that while the stope is being loaded, the production rate from the stope is set by the productivity of the loader. It is assumed that sufficient trucking capacity will be provided to keep up with the loader.

The time to drill, charge and load a stope face were calculated, based on the average stope width of 3.5m. Table 47 shows the calculation which results in an overall production rate of 8,750 tonnes per stope per month. Three operating stopes will be required to maintain the production rate of 30,000 tonnes per month, which will include ROM from development as well.

Stoping Productivity		Unit
Stoping width	3.5	m
Sublevel spacing	15	m
Stope length	20	m
Mining drive height	3	m
Stope height	12	m
SG of mineralised rock	2.9	t/m³
Dilution	10	%
Stope advance	134	t/m
Tonnes per stope	2,680	t
Stope Drill and Blast		
Stope drill/month	5,026	m
Spacing	1.2	m
Burden	1.5	m
Holes per ring	4	no
Tonnes per hole	63	t
Tonnes per ring	201	t
Tonnes per m drilled	3.8	t/m
Stope drill per month	19,130	t
Metres per ring	53	m
Metres per stope	704	m
Drilling rate	10	m/hr
Days to drill stope	4	days
Days to charge rings	2	days

Stoping Productivity		Unit
Days to muck stope	3	days
Stope	**292**	**t/day**
Stope	**8,746**	**t/mth**

Table 48: Stoping productivity (Bara, 2022)

In order to estimate the development advance rates to be used during mine scheduling the advance per development end and per development jumbo were calculated. The blast hole length that will be drilled by the single boom drilling jumbo is 3.5m. It is assumed that an effective advance of 3.2m per blast will be achieved. Table 48 shows the estimate of advance rates in both waste and reef development.

	Unit	Ramp / Access Crosscut	Ore Drive
Shifts per day	Unit	2	2
Days per month	Unit	30	30
Blast hole length	Metres	3.7	3.2
Effective advance	Metres	3.2	2.5
Time to drill and blast	Shift	1	1
Time to muck and support	Shift	1	1
Grade control	Shift	0	1
Blasts per day	Unit	1.0	0.67
Advance per day	Metres	3.2	1.7
Blast efficiency	%	73%	80%
Advance per month	**Metres**	**70**	**40**
Holes per round	Unit	55	30
Metres drilled/round	Metres	204	96
Metres drilled/m advance	Metres	64	38

Table 49: Scheduling advance per month per end type (Bara 2022)

16.10 Mine Scheduling

A mining layout was developed using DeswikCad mining software and based on the mine design described in the sections above. The mining layout was then exported to DeswikScheduler which was used to generate a mine schedule. The productivity per activity (development and stoping) described in section 16.7 was used in the mining schedule.

The mining schedule commences in Month 1 with the excavation and support of the Portal. Development of the decline commences with the priority being the decline and exploration drill cuddy development. The last identified drilling position is developed by Month 18 of the project.

Figure 63 shows the progression of the mining by the time the last drilling cubby is completed for the drilling programme. This is referred to as Phase 1 of the project. Mining after this is based on the premise that the exploration programme will be successful and is termed Phase 2 and includes development and production ramp up to steady state production of 1,000tpd of mineralised material. Table 49 shows the mining physicals split by phase.

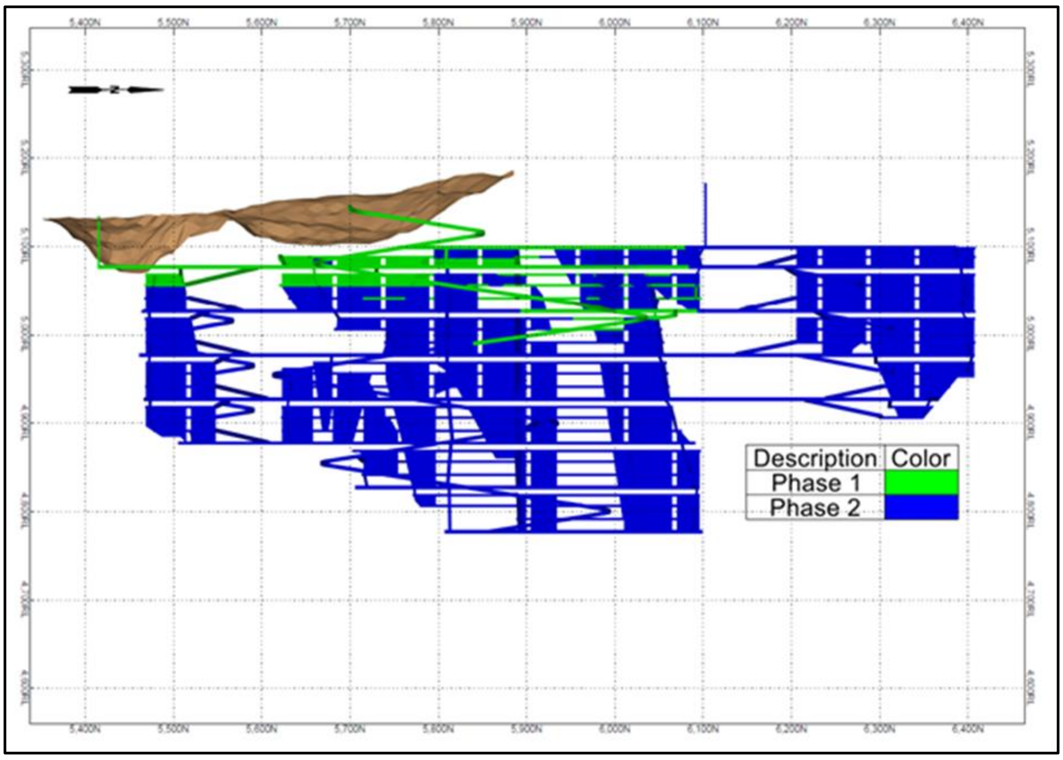


Figure 65: Mine plan coloured by phase (Bara 2022)

	Unit	Phase 1	Phase 2	Total
Waste Metres	m	4,157	15,291	19,448
Waste Tonnes	t	181,330	643,698	825,028
Production				-
Mining Drive Metres	m	3,297	12,781	16,078
Mining Drive Tonnes	t	84,391	326,097	410,488
Development Grade	g/t	3.5	3.8	3.7
Stope Tonnes	t	66,684	1,077,334	1,144,017
Stope Grade	g/t	4.1	4.4	4.4
Total Production Tonnes	t	151,075	1,403,430	1,554,506
Total Production Grade	g/t	3.80	4.23	4.19
Total Contained Gold	kg	574	5,936	6,510
Total Contained Gold	oz	18,442	190,856	209,298

Table 50: Mining physicals by phase (Bara 2022)

First gold is produced from reef development in Month 8. Between months 8 and 14, when stoping commences a total of 37,000t of mineralised material is produced from development. Once stoping commences in Month 14 it takes a further three months to build up to the steady state production target of 30,000tpm. This is maintained for 48 months after which there is a tail off of production over the last two months of the mine life.

Table 50 shows a summary of the mine schedule by year while Figure 64 illustrates production tonnes and grade over the LoM.

Figure 65 shows the mine schedule coloured by year.

Kubi Underground	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	TOTAL
Waste Tonnes	t	124,235	279,568	264,301	151,163	5,744	-	**825,010**
Development								
Mineralised Dev Metres	m	884	5,199	3,480	4,654	1,860	-	**16,078**
Mineralised Dev Tonnes	t	22,773	132,977	89,265	118,286	47,187	-	**410,488**
Mineralised Dev Grade	g/t	3.5	3.9	4.1	3.2	3.9	-	**3.7**
Mineralised Dev Gold	kg	80	515	368	383	183	-	**1,529**
Stoping								
Stope Tonnes	t	-	196,561	283,976	233,910	312,812	116,758	**1,144,017**

Kubi Underground	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	TOTAL
Stope Grade	g/t	-	3.8	4.2	4.6	4.5	4.5	**4.4**
Stope Gold	kg	-	744	1,205	1,088	1,415	529	**4,981**
Total RoM Tonnes								
Total RoM Tonnes	t	22,773	329,538	373,241	352,196	359,999	116,758	**1,554,506**
Total Contained Gold	kg	80	1,259	1,573	1,470	1,598	529	**6,510**
Total Contained Gold	g/t	3.5	3.8	4.2	4.2	4.4	4.5	**4.2**
Total Contained Gold	oz	2,576	40,477	50,584	47,269	51,374	17,018	**209,298**

Table 51: Summary of Mining Schedule (Bara 2022)

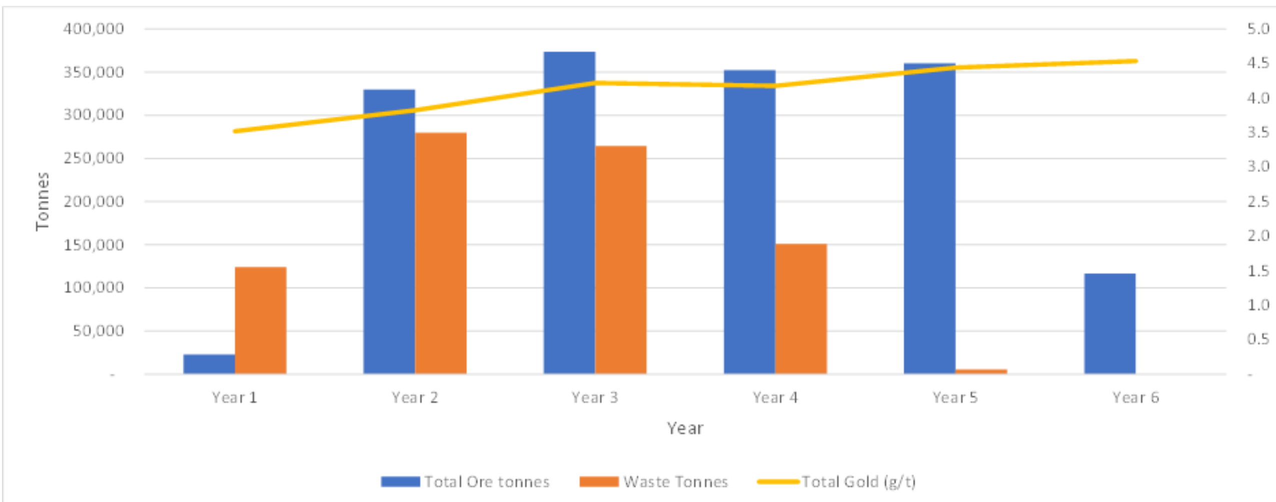


Figure 66: Run of mine tonnes and grades (Bara 2022)

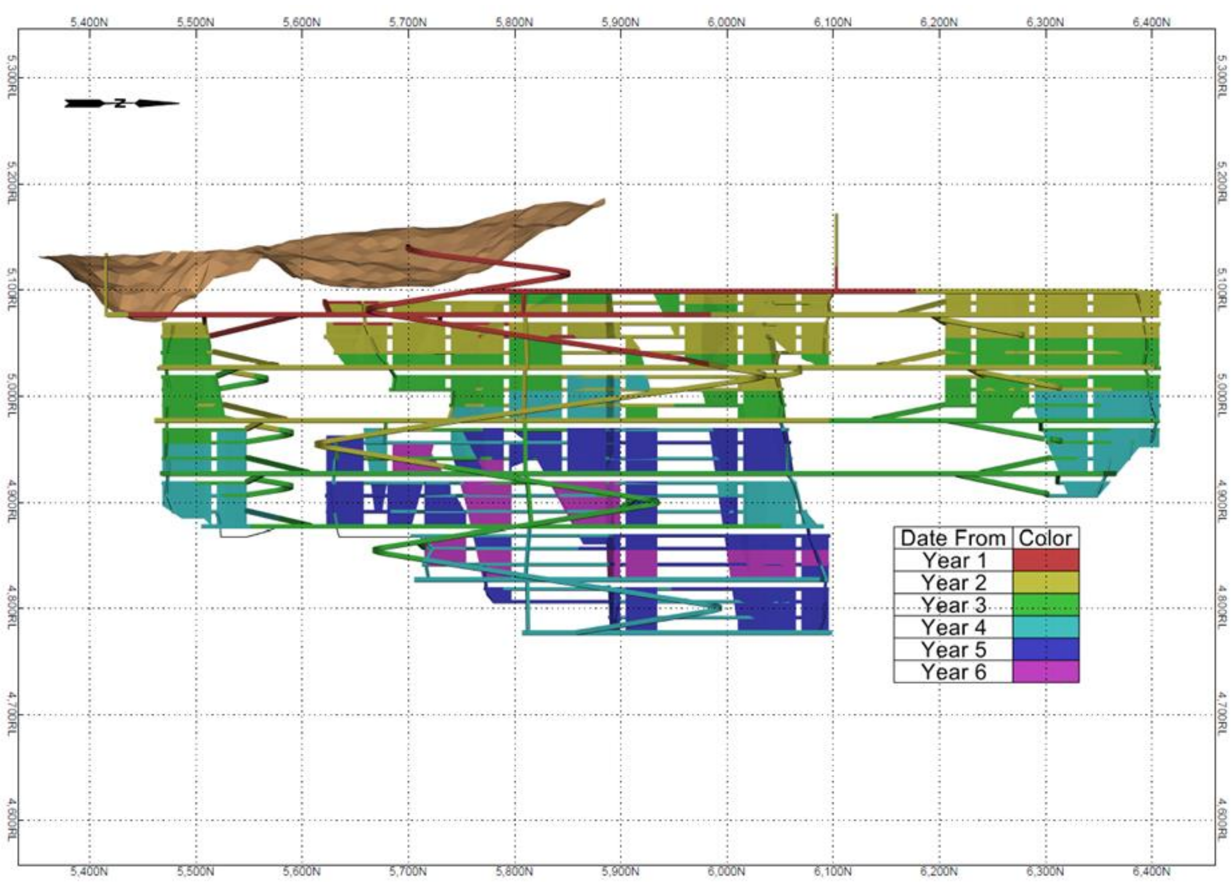


Figure 67: Mining schedule coloured by year (Bara 2022)

16.11 Mining Modifying Factors

The modifying factors applied in converting the resource to a mining inventory are discussed below.

CUT-OFF GRADE

A breakeven grade was calculated based on the operating costs for mining and processing as well as the prevailing metal prices. Table 51 shows the break-even grade calculation.

	Breakeven	Marginal Cut-off (Development)	Comment/Source
Gold Price (US$/oz)	1,750	1,750	Asante
Gold Price (US$/g)	56.26	56.26	
Toll treatment payout (%)	85%	85%	Asante study (2020)
Received gold price (US$/g)	47.82	47.82	
Mining cost (US$/t)	51.76	-	Mining operating cost from PEA cost model
Processing cost (US$/t)	-	-	Included in toll treatment payout %
G$A Cost (US$/t)	5.79	5.79	PEA cost model
Sustaining capital cost (US$/t)	49.21	49.21	PEA cost model
Total AISC cost (US$/t milled)	106.76	55.00	
Breakeven recovered grade (g/t)	2.2	1.2	
Metallurgical recovery (%)	92.5%	92.5%	Asante, based on Autotech Report
Breakeven mined grade (g/t)	2.4	1.2	

Table 52: Cut-off grade calculation (Bara 2022)

Based on this calculation a mining cut-off of 2.4g/t Au was estimated. The cut-off grade applied in the mine plan was reduced to 2.0 g/t in the anticipation that the resource will be expanded, and that the cut-off grade is likely to reduce in the future. Only stopes with grades above the cut-off were targeted in the plan.

A marginal pay limit was calculated in the same manner, but by setting the mining cost to zero, to determine the cut-off grade for development ore. The marginal cut-off grade is 1.2g/t in-situ. This can be applied to development material, which has been drilled, blasted, and hauled to surface, so the contribution from this mineralised material only has to cover the transport and processing cost for it to add value to the project. In this PEA mining schedule, the mineralised development cut-off has not been applied and all development material is included in the RoM tonnes delivered to the plant.

DILUTION

Dilution occurs in underground mining from two main sources:

- Planned dilution – this is the inclusion of waste or unpay material into the planned stope volume in order to create a practical mining shape. In the case of Kubi this includes the application of a minimum mining width of 2.0m. Where the vein width is less than two metres the mining width is increased to 2.0m resulting in planned dilution
- Unplanned dilution – this is due to mining inaccuracies during the drilling, blasting and hauling processes. An allowance of 10% of the stope tonnes at zero grade has been made for unplanned dilution.

ORE LOSS

An allowance was made for ore loss to account for:

- Broken mineralised material not recovered from stopes
- Mineralised material not broken due to inaccurate mining or mining complications such as stope bridging
- Mineralised material lost during the mucking and hauling process, between the stope and the RoM pad.

Based on experience from other narrow vein gold operations ore loss was set at 5%.

The modifying factors discussed above were applied to the resource and a mine design was developed. The mine design was drafted and scheduled using DeswikCad mining software. The total mining inventory from the underground mine amounts to 1.555Mt at average grades of 4.2g/t Au.

16.12 Ventilation

16.12.1 Ventilation Design Criteria

Internationally accepted ventilation design criteria, as tabled below, have been applied in this preliminary ventilation design for the Kubi underground project.

Description	Unit
Downcast shafts - Men, Material and Rock [equipped]	10 - 12 m/s
Upcast shafts [unequipped]	18 - 22 m/s
Intake airways [personnel] including declines	8 m/s
Return airways [personnel and equipment]	8 m/s
Dedicated return airways	10 m/s
Workshops	0.4 m/s
Conveyor airways	4.5 m/s
RBHs [upcast and downcast]	15 - 25 m/s

Table 53: Ventilation design velocities (Bara 2022)

Ventilation velocities play a very important part in the overall mine design. The excavation dimensions specified in the mine design are tabled below.

Description	Unit
Ramp	4.0m (w) x 4.5m (h)
Foot wall drive	4.0m (w) x 4.5m (h)
Production Crosscuts	4.0m (w) x 4.5m (h)
Access Drive	4.0m (w) x 4.5m (h)
Return Airway	3.0m Diameter RBH
Service Raise	3.5m x 3.5m

Table 54: Excavation dimensions (Bara 2022)

For diesel exhaust dilution, 0.06 m3/s/kW rated is applied at point of use. Dilution assumes latest specification engines [Tier 2 or better], low sulphur diesel, catalytic converters, particulate filters, and good engine maintenance.

To determine the total airflow required where mobile diesel equipment is being used a factor of 80% of the kilowatt ratings for trucks and LHDs was applied. Drill rigs, as well as service and utility vehicles will be used for relatively short periods at varying times of the shift cycle, these will be accounted for with 30% and 50% of the kilowatt rating. The estimate of ventilation quantity driven by the diesel fleet is tabled below.

Equipment	Rating kW	Number	Utilisation	Total kW	Air Required m^3/s
Development Drill Rigs (Waste)	72	2	30	144	3
Development Drill Rigs (Ore)	72	1	30	72	2
Simba Drill Rigs	65	2	30	130	3
LHDs (10t)	186	1	80	186	9
LHDs (4.0t)	74	3	80	222	11
ADTs (32t)	298	3	80	894	43
Telehandler	74	2	50	148	5
Pickup	98	4	50	392	12
UV Personnel Carrier	98	1	30	98	2
UV Fuel and Lube	79	1	30	79	2
UV Charging unit	79	2	30	158	3
UV Emulsion Transport	79	1	30	79	2
Grader	96	1	50	96	3
Sub Total		24		2698	**100**
		Plus 20% Leakage			**20**
		Plus 20% Commitments			**20**
		Total			**140**

Table 55: Diesel fleet ventilation requirement (Bara 2022)

The above table indicates that the total quantity required for only the diesel exhaust dilution will be 140 m^3/s.

16.12.2 Ventilation Design

PRIMARY AIRFLOW SYSTEM

The decline system will consist of one 4m x 4.5m decline, this decline and the 3.5m x 3.5m service raise will serve as the main intake airways. Air will flow down the decline and the service raise to the lowest level where the 3.0m diameter RAWs have holed in the footwall drive of each ventilation district and then flow up the RAWs to surface through the Main Fans situated on the first level below the surface, thus forming a ventilation circuit. In all the levels above these suction points the RAWs will be sealed with concrete walls.

Due to the geometry of the mineralised body, consisting of pay chutes separated by un-pay zones, the mining area will consist of four ventilation districts, each district served by an independent RAW system and a Main Fan.

The schedule indicates that only three districts will be required to achieve the designed production rate, but the system has been designed so that all four ventilation districts can operate if required.

The main fans will consist of 1 x 70 m^3/s axial flow fans operating at a pressure of 3.5KPa for each ventilation district and will operate on the first level below surface, with two districts and two main discharging into one 3.0m diameter RBH.

When three districts are operating the Primary Airflow Quantity will be 210 m^3/s.

A schematic of the Primary Ventilation is shown below:

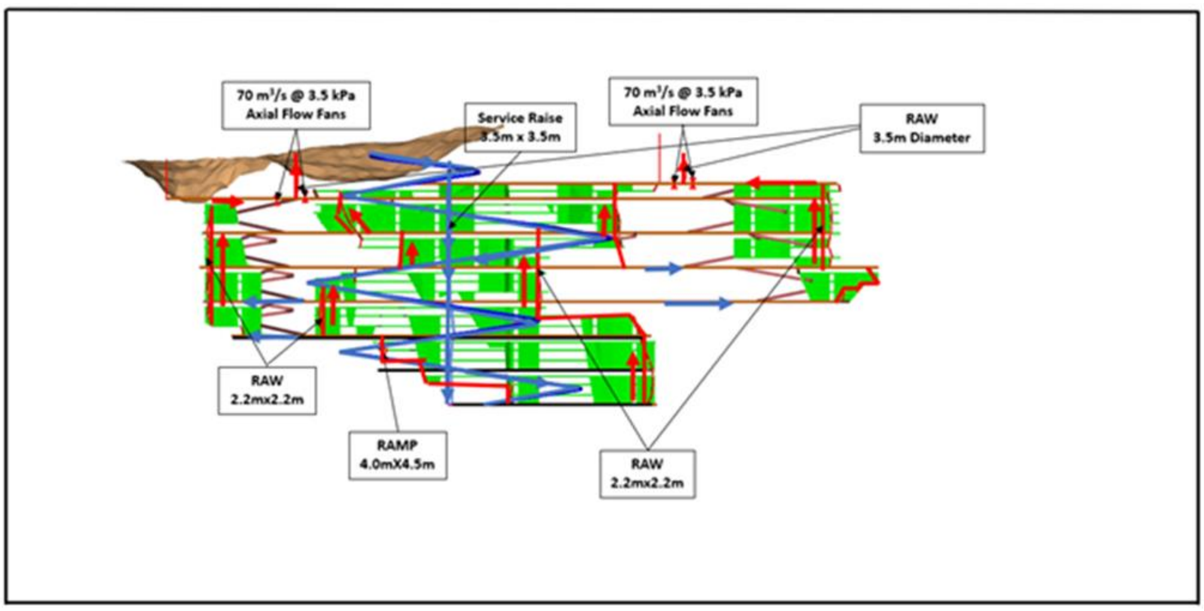


Figure 68: Primary ventilation flow (Bara 2022)

PRODUCTION VENTILATION SYSTEM

Note must be taken that the diesel exhaust dilution is required at point of operation therefore the minimum quantity of 11m^3/s of fresh air wherever the LHD and will be required to operate and 18m^3/s wherever the haul truck must operate. Where both the truck and the LHD must operate then a total quantity of 29m^3/s will be required.

Each operating level of each ventilation district will be equipped with a 55kW axial flow fan situated in the wall of the RAW at the end of the footwall drive, thus creating through ventilation from the decline through the level access into the footwall drive and then through a 55kW fan and up the RAW to the Main Fan.

The 55kW production fans will be situated in the footwall drive with a 1,015mm ducting ventilating a production crosscut.

Note the haul truck cannot enter the footwall drive, it will be loaded in the level access crosscut, where there will be adequate air.

DECLINE DEVELOPMENT

The diesel exhaust gases that need to be diluted and the heat of the diesel engines of rock loading and transport equipment must be taken into consideration. In the areas beyond the point of through ventilation it will be necessary to ventilate for both the LHD and a truck and thus it will be necessary to use twin 1,200mm diameter lay flat ducting each powered by a two stage 75kW axial flow fan. As the twin ducts proceed down the decline to the next level where one duct will ventilate the level and the other will ventilate the decline. Development on the level to establish the footwall drives and the RAWs is the priority so that through ventilation can be established and the fans moved forward. A schematic of the decline development ventilation is shown below.

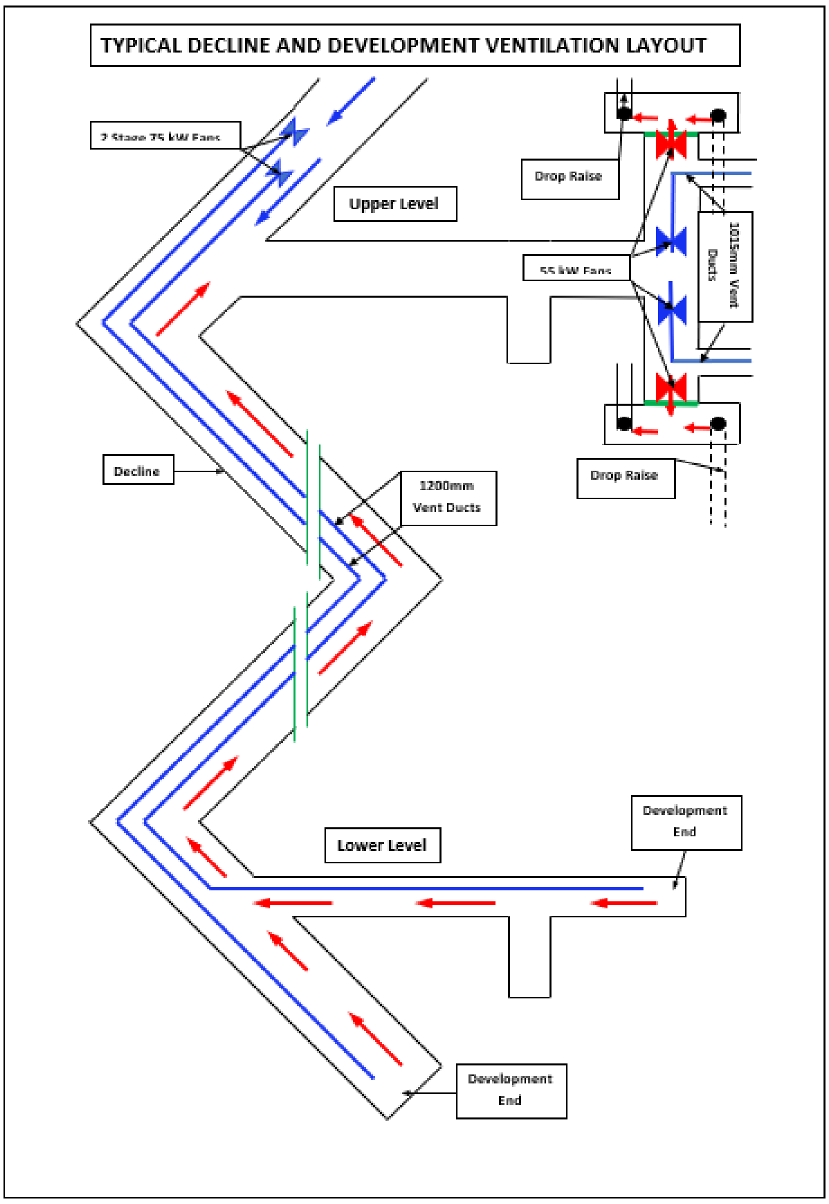


Figure 69: Schematic of decline development ventilation arrangements (Bara 2022)

REFRIGERATION COOLING

The absence of any rock thermal properties makes it difficult to predict if this mine will require refrigeration cooling. It is recommended that these items namely rock thermal properties and climatic data be obtained so that computer simulations can be run during the next phase of the feasibility studies.

ESCAPE AND RESCUE STRATEGY

This project situated in Ghana will be subject to Internationally accepted best practice and guidelines. From these rules and regulations, the following items must be included in the planning:

A. There must be a second outlet to the surface
B. Where diesel equipment is used underground all persons must be supplied with an approved self-contained self-rescuer
C. Escape routes must be clearly marked and all persons in the area trained in using them
D. A refuge chamber or fresh air base must be available within the operating time of the SCSR to the working place of every person underground
E. It is recommended that the Service Raise which is used as an Intake Airway be equipped on every level with a man door airlock, communication system and potable water. Then this area behind the airlock is a fresh air base
F. All persons within a working area must be made familiar and trained in the use and operation of refuge chambers and fresh air bases

G. In an area where no second outlet is available for example decline development, portable refuge chambers must be used that can move with the development and other controls like limiting the number of persons operating in the area.

POWER REQUIREMENTS

The power required to power the ventilation fans is tabled below.

Item	Power Rating Kw	Number Operating	Total Kw
Main Fans	300	4	1200
Level RAW Fans	55	8	440
Production Fans	55	8	440
Decline Dev Fans	2 x 75	2	300
Totals			**2380**

Table 56: Power required for ventilation (Bara 2022)

16.13 Underground Services and Infrastructure

16.13.1 Service Water

The mine service water system will serve to provide raw water to production and development drill rigs for flushing water in addition to providing water for auxiliary tasks such as watering down and mixing cement.

SERVICE WATER REQUIREMENTS

The mine service water requirements have been calculated using empirical usage ratios. The system has been designed to service the peak production and development rates. Over a 30 day per month shift cycle and a usage ratio of 0.5t of water required per tonne of rock broken, a maximum of 856m^3/day of service water is required during peak production and development activities in year 3 of the project. With two drilling shifts at an effective 6hr per shift, a peak system load of 15l/s may be expected during this period. The mine service water usage calculation for year 3 is presented in Table 56 with the life of mine service water requirement presented in Figure 68.

Description	Units	Value
Mechanised Service Water Usage Factor	tonne / tonne	0.50
Waste Production	ktpm	21.6
Ore Production	ktpm	29.8
Total Rock Movements	ktpm	51.4
Total Service Water Usage	ktpm	25.7
Days per Month	days / month	30
Total Service Water Usage	m^3 / day	856
Drilling Shifts per Day	shifts / day	2
Effective Drilling	hr	6
Drilling Shift Usage	%	75
Peak Design Water Usage	**l/s**	**15**
Base Load	**l/s**	**3**

Table 57: Mine service water usage (Year 3) (Bara 2022)

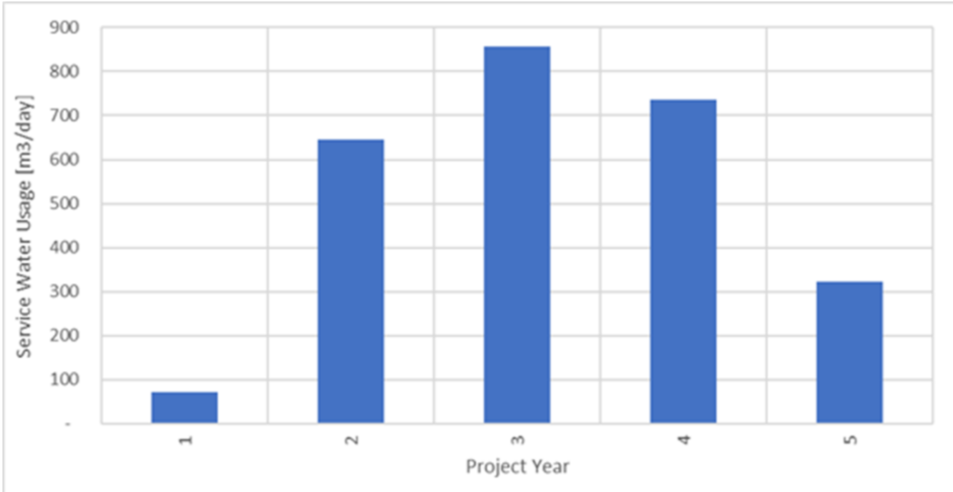


Figure 70: Mine service water usage over LoM (Bara 2022)

SYSTEM DESCRIPTION

Service water will be obtained from excess water which is pumped from the underground workings and treated at the mine water treatment facilities situated at the surface complex. Service water will be supplied to the underground mine by a service water header tank located on the surface. From the service water header tank, service water will be transferred through the access portal and decline into the underground workings. The system pressure will be controlled through a series of cascade dams installed at specific locations such that the overall service water pressure does not exceed 16 bar throughout the mine.

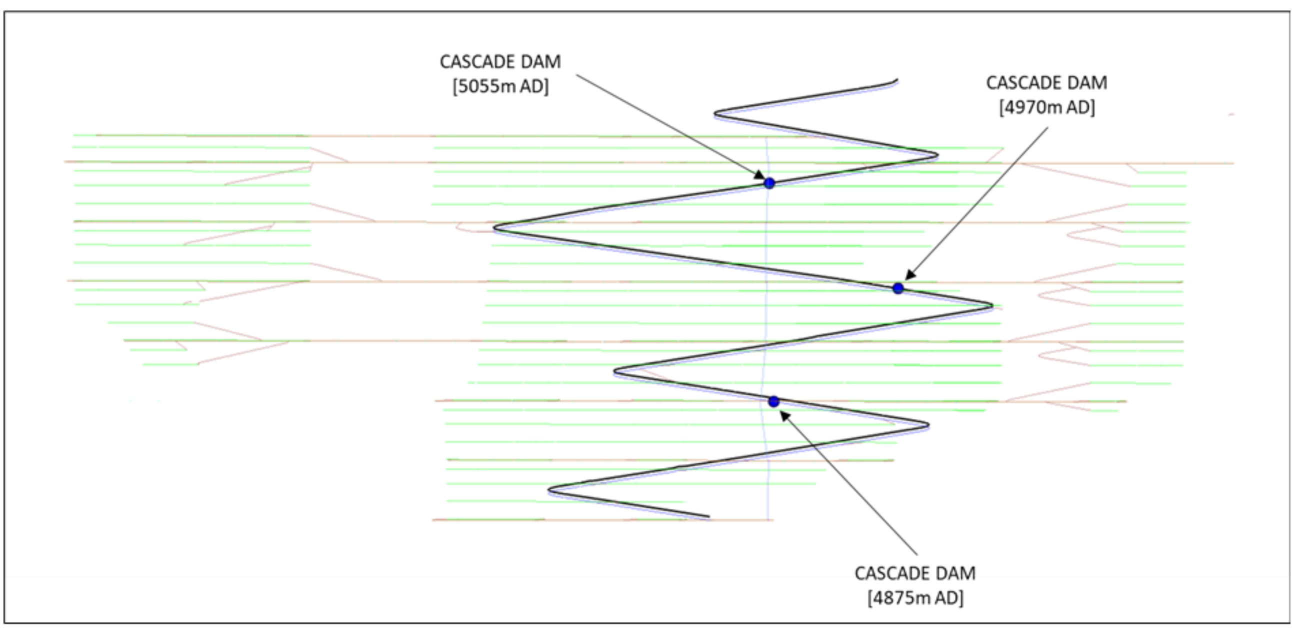


Figure 71: Service water cascade dam locations and primary reticulation routing (Bara 2022)

SERVICE WATER CASCADE DAMS

Service water cascade dams function to relieve the service water system pressure. The cascade dams will be situated in the decline in cubbies or disused muck bays. The dams are 5m wide, 4m long and will have a live height of 3m. The water level in each dam will be controlled through float valves. In total, three (3) cascade dams are installed through the LoM; their locations are presented in Figure 69.

SERVICE WATER RETICULATION

The primary service water backbone is installed in the decline; the route is presented in Figure 69 in black. The primary backbone will be 100mm nominal diameter steel piping with 16 bar flanges. Water from the primary backbone will be reticulated to the development and production working areas by means of 80mm nominal diameter steel piping with 16 bar flanges in the footwall drives, and 90mm PN16 HDPE piping in the ore drives. All piping in the decline and horizontal sections will be supported by means of parrot hanger supports which are anchored into the hanging wall. Allowances have been made in this respect; however detailed pipe stress analysis must be undertaken at the detail design phase of work.

16.13.2 Dewatering

The mine dewatering system is a dirty water handling system and will serve to collect and transfer mine water from the production and development areas to the surface water treatment facility. The system has been designed to accommodate the service water load from the mining activities in addition to a constant groundwater inflow rate.

WATER HANDLING REQUIREMENTS

Table 57 presents the dirty water handling requirements for year 3, which is the point in the mine's life where the service water load reaches the maximum. The LoM pumping requirement is presented in Figure 70. No geohydrological study has been undertaken on the underground mine. For the study, it is assumed that 2Ml per day groundwater inflows will need to be managed. The magnitude of this value has no basis, it is an estimate and provisions the capital and operating cost estimate with additional cost relating to pumping infrastructure. Should 2Ml per day groundwater be intersected, it can be expected that the mine will be in water excess and the pumping system will need to handle 2.9 Ml per day, peaking at approximately 38 l/s.

Description	Units	Value
Physicals		
Production Tonnes	tpa	357 763
Waste Tonnes	tpa	258 834
Shift Cycle		
Days per Month	day/month	30
Drilling Shifts per Day	shift/day	2
Drilling Hours per Shift	hr	6
Service Water		
Production Usage Ratio (Production)	tonne/tonne	0.5
Production Usage Ratio (Development)	tonne/tonne	0.5
Service Water per Month	ML/month	25.69
Service Water per Day	ML/day	0.86
Peak Service Water Drilling Shift	l/s	14.9
Ground Water		
Ground Water Inflow	ML/day	2.00
Ground Water Inflow	l/s	23.15
Pumping Requirement		
Total Pumping Requirement	ML/day	2.86
Pumping Duty	l/s	38.0
Water Balance		
Total Inflows	ML/day	2.00
Service Water (Recirculation)	ML/day	-
Ground Water	ML/day	2.00
Total Outflows	ML/day	0.57
Footwall Loss	ML/day	0.05
Ventilation Loss	ML/day	0.28
Rock Hoisting Loss	ML/day	0.24
Total Underground Makeup (-) / Excess (+)	**ML/day**	**1.43**
Total Underground Makeup (-) / Excess (+)	**m^3/hr**	**59.69**

Table 58: Underground water handing (pumping) requirement year (Bara 2022)

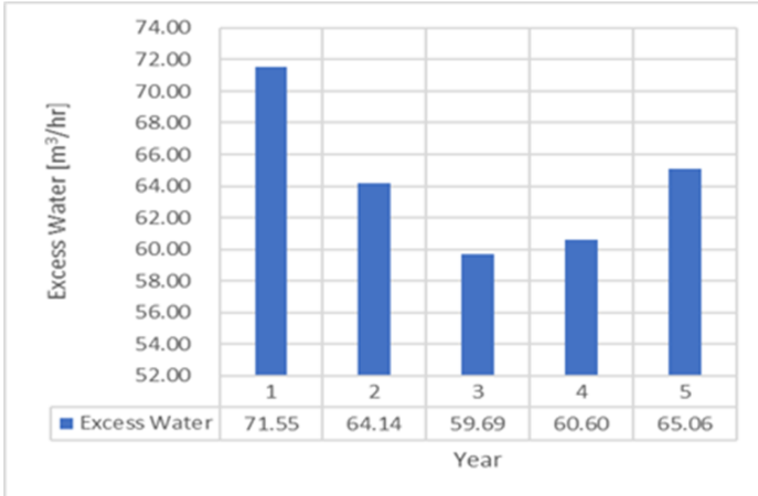


Figure 72: Pumping requirement over LoM (Bara 2022)

SYSTEM DESCRIPTION

The primary dewatering system includes dirty water pump stations which transfer all water to the surface water treatment facility. The pump stations will transfer, by means of cascade pumping, the dirty water to surface mine water treatment facilities. The location of the pump stations and the routing of the primary dewatering reticulation is presented in Figure 71.

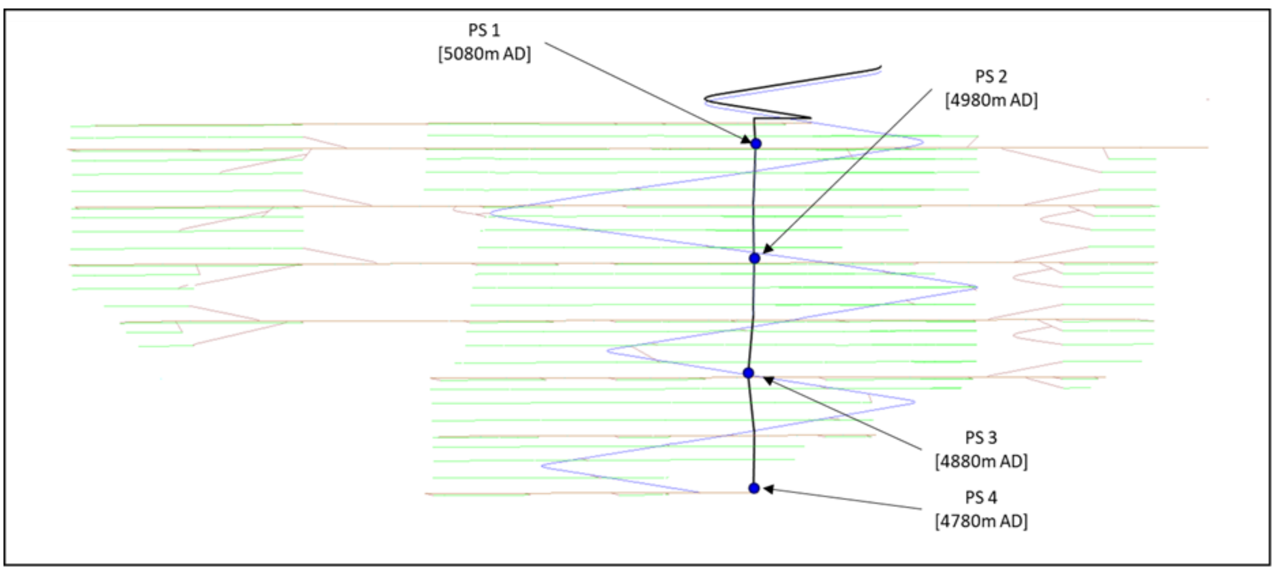


Figure 73: Dirty water pump station locations and primary reticulation routing (Bara 2022)

In addition to the primary dewatering system, the design includes various secondary infrastructures and equipment to collect and transfer water to the primary dewatering system. The secondary infrastructures include drain columns, submersible pumps and mobile skid dams.

DIRTY WATER PUMP STATIONS

The dirty water pump stations will be spaced approximately every 100m. The pump stations are the primary infrastructure related to mine dewatering and there are four (4) pump stations installed during the life of mine. The pump stations will transfer, by means of cascade pumping, the dirty water to surface mine water treatment facilities. The location of the pump stations is presented in Figure 71.

The primary pumping duty is driven by the peak expected inflows, which is determined to be approximately 38l/s. The pump station duties are presented in Table 58.

Pump Station	Units	PS1	PS2	PS3	PS4
Flow Rate	l/s	41	41	41	41
Density	kg/m³	1 050	1 050	1 050	1 050
Dynamic Viscosity	kg/m.s	1.00E-05	1.00E-05	1.00E-05	1.00E-05
Pipe Diameter	mm	180	180	180	180
Pipe Length	m	415	121	114	125
Pipe Outer Diameter	mm	181	181	181	181
Pipe Wall Thickness	mm	17	17	17	17

Pipe Inner Diameter	mm	146	146	146	146
Fluid Velocity	m/s	2.5	2.5	2.5	2.5
Pipe Roughness	[]	2.00E-02	2.00E-02	2.00E-02	2.00E-02
Friction Loss	m	11	3	3	3
Static Head	m	68	100	100	100
Additional Static	m	3.00	3.00	3.00	3.00
Frictional Head	m	11	3	3	3
Total Head	m	82	106	106	106
Configuration	no	1+1	1+1	1+1	1+1
Absorbed Power	kW	34.8	45.0	45.0	45.1
Installed Power	kW	55	55	55	55

Table 59: Dirty water pump station duties (Bara 2022)

DIRTY WATER RETICULATION

The primary dewatering reticulation is installed in the service raises and in the decline; the route is presented in Figure 71 in black. The reticulation includes 180mm nominal diameter HDPE PN16. All piping in the decline and horizontal sections will be supported by means of parrot hanger supports which are anchored into the hanging wall. Certain sections of the reticulation will require bearer support such as the transition points from the vertical service raise to the horizontal development. Allowances have been made in this respect, however detailed pipe stress analysis must be undertaken at the detail design phase of work.

SECONDARY PUMPING EQUIPMENT AND INFRASTRUCTURE

Secondary pumping arrangements comprise all infrastructures and equipment required to transfer water from the production and development ends to the primary dewatering system (the dirty water pump stations). Typically, the equipment is mobile and moves with the requirement. A schematic of the secondary system is presented in Figure 72.

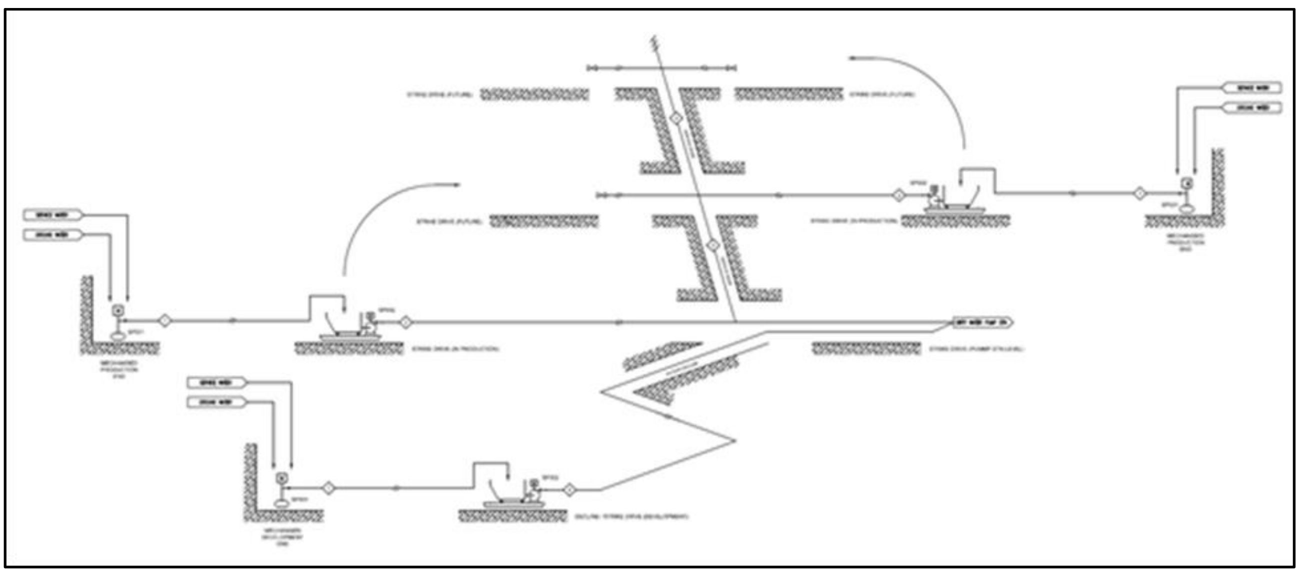


Figure 74: Secondary pumping system schematic (Bara 2022)

Dirty water from the production areas will be transferred to dirty water pump stations by means of mobile skid dams, submersible pumps and drain columns. All water from the stoping areas will be transferred to mobile skid dams through submersible pumps. These skid dams will transfer water to a drain column which is installed in the decline. The drain column reports directly to the dirty water pump station dam. The drain column is specifically sized for gravity feed and available head and is constructed of 200mm nominal diameter HDPE PN10.

Dirty water from the development ends will also be transferred to the dirty water pump stations by means of submersible pumps and skid dams.

16.13.3 Compressed Air

Compressed air is solely used for the purposes of refuge bay ventilation as all mining activities will be undertaken by electro-hydraulic drilling. Compressed air requirements are therefore a function of the number of underground mine personnel that will use the refuge bays in an emergency.

COMPRESSED AIR REQUIREMENTS

International guidelines have been used for the quantity of air to be delivered to a refuge bay under standby or operational conditions. The quantity of compressed air delivered to a refuge bay should be 85l/minute per person occupying the refuge bay. This value is based on a research paper 'Criteria for the design of emergency refuge stations for an underground metal mine,' by D J Brake and G P Bates of Monash University in Australia.

The maximum number of underground employees will occur during the day shift. In accordance with the labour estimate presented in this report, the maximum number of employees during day shift will be approximately 183 people. Applying the usage criteria to the day shift labour requirements then the compressed air requirements for a system whereby the air is only used for the purpose of ventilation of refuge bays is calculated in Table 59.

Description	Operational	Standby	Units
Refuge Bay Requirements			
No of People Per Shift	183	183	people
Refuge Bay Capacity	12	12	people
Refuge Bay Utilisation	75%	75%	%
No. Refuge Bays	21	21	no
Atmospheric Properties			
Atmospheric Pressure	90	90	kPa
Atmospheric Temperature	30	30	C
Gas Constant	287	287	
Atmospheric Density	1.03	1.03	kg/m³
Compressed Air Utilisation			
Usage Ratio	85	-	l/min/man
Refuge Bay Ventilation	-	580	l/min
Leakage Allowance	30.00	30.00	%
Compressed Air Usage			
l/min	27 846	15 835	l/min
m³/s	0.464	0.264	m³/s
kg/s	0.449	0.255	kg/s
CFM	983	559	CFM

Table 60: Compressed air requirements (Bara 2022)

The calculation shows that for a refuge bay capacity of 12 people, and an emergency case utilisation of 75%, approximately 21 refuge bays will be required during the day shift. During an emergency, these refuge bays will be ventilated with approximately 1000 CFM of compressed air. In situations where the refuge bays are not in use, it is still recommended that air passes through the refuge bays; sufficient to keep positive pressure on the refuge bay door and to ensure constant fresh airflow through the refuge bay. Based on pressure loss calculations, it is determined that refuge bays are ventilated by at least 0.01kg/s of fresh air during standby situations. For a total of 19 refuge bays, the compressed air requirement in the standby condition is approximately 560 CFM.

COMPRESSED AIR RETICULATION

Compressed air will be reticulated from the surface compressor house to the underground refuge bays by means of 100mm nominal diameter steel piping and will be SABS 62 4.7mm wall. The compressed air reticulation is installed in the decline; the route is presented in Figure 73 in black.

From the primary decline reticulation, compressed air is reticulated to the refuge bays by means of 80mm nominal diameter steel piping and will be SABS 62 4.7mm wall. All piping will be flanged to SABS 1123 1000/3. All pipe reticulation was sized through compressed air flow modelling, such that pressure losses are acceptable throughout the system.

All piping in the decline and horizontal sections will be supported by means of parrot hanger supports which are anchored into the hanging wall. Allowances have been made in this respect; however detailed pipe stress analysis must be undertaken at the detail design phase of work.

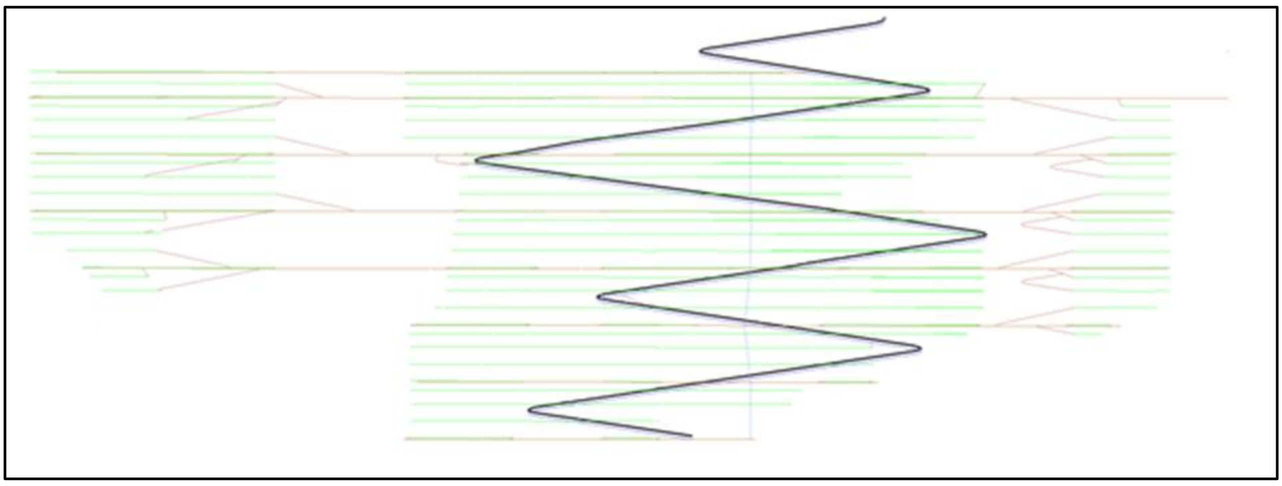


Figure 75: Compressed air pipe routing (Bara 2022)

16.13.4 Electrical Reticulation

The underground supply from the main substation will be at 11kV, supplied via cable installed from the surface down the decline ramp to the first level. From the first level the feeder cable will be installed in the service raises to access the lower levels. Ring main units (RMU) and mini-substations units (MSU) will be installed to provide the required reticulation for the underground load. A snapshot of the underground reticulation is provided in Figure 74.

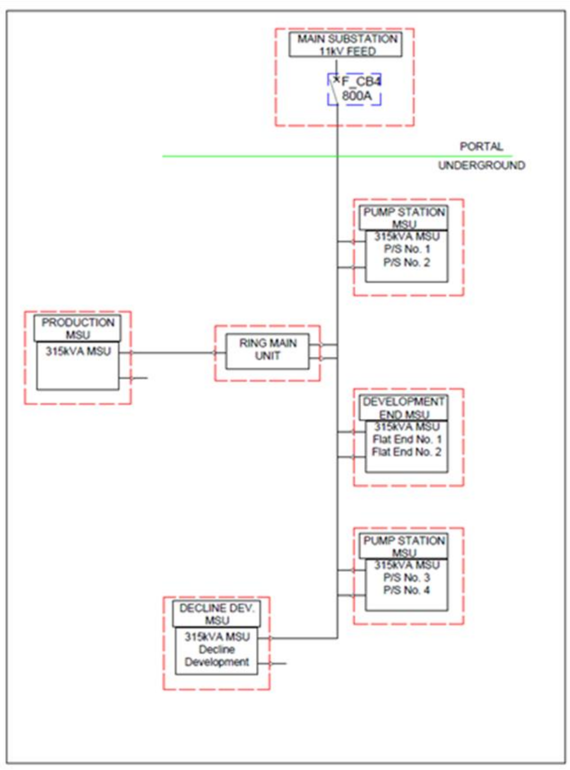


Figure 76: Kubi Mine underground MV Single line diagram (Bara 2022)

16.13.5 Communication and Control Systems

The following communication and control systems have been specified for the Kubi operation:

- Fibre optic ethernet based backbone network
- Time and attendance
- Environmental monitoring
- IT infrastructure
- UG radio system
- UG fire detection and monitoring
- Centralised blasting.

16.14 Manpower

The maximum personnel requirements and monthly salary costs are shown in Table 60. The annual employee by discipline labour costs were provided by HR Hawks, a HR consulting company with extensive experience in mining related industries in Ghana. The total cost includes the full salary for employment and company on costs. Items included are; base salary, shift allowances, holiday pay, meals allowances, medical cover, PPE allowance, transport to work, training allowance.

Management	Personnel No	Remuneration USD/month
Mine Manager	1	22,145
OHS and Training Manager	1	3,654
HR Manager	1	6,180
Administration / IT / Supply	10	30,750
Technical Services		
Chief Geologist	1	15,214
Mine Geologists	2	9,628
Mine Grade Control	3	6,582
Chief Mining Engineer	1	15,214
Mining Engineers	3	14,442
Geotechnical Engineer	1	4,814
Surveyors	2	11,100
Survey Offsider	2	4,388
Fitters (Fixed and Mobile Plant)	9	36,054
Electricians (Fixed and Mobile Plant)	6	24,036
Mine Supervision		
Mine Foreman	1	Contractor
Shift Supervisors	3	Contractor
Shift Supervisors (Maintenance)	3	Contractor
Mine Production		
Development Drilling	9	Contractor
Development Drilling (offsider)	9	Contractor
Production Drilling	6	Contractor
Production Drilling (offsider)	6	Contractor
Telehandler	6	Contractor
Loading	12	Contractor
Hauling	12	Contractor
Fuel and Lube	3	Contractor
Mobile Charging	6	Contractor
Auxiliary	12	Contractor
Service Crew	9	Contractor
Personnel Carrier	3	Contractor
Grader	1	Contractor
Total	**144**	**204,201**

Table 61: Monthly Mine Labour Costs

The number of equipment operators was estimated based on equipment requirements, assuming that 3 shift crews will be employed with two crews working whilst one crew is rostered off. A crew will work one week of dayshift, change to one week of night shift and then have one week off. It is expected that the workforce will be sourced within Ghana. Provision in employment costs for getting personnel to site has been made.

17. RECOVERY METHODS

A study was undertaken by Metso:Outotec on the potential for a stand-alone processing plant at the Kubi project, however, it is the intention of Asante Gold to initially send all run of mine to a nearby gold toll treatment plant.

A gold processing plant is located approximately 30km from the mine's location which has spare treatment capacity. For the purposes of the Kubi economic model, it has been assumed that plant feed material will be trucked to the existing plant. Estimated toll treatment costs have been used as the basis of economic modelling.

17.1 Outotec Process Design

The process flowsheet defined by Metso Outotec is presented in Figure 75.

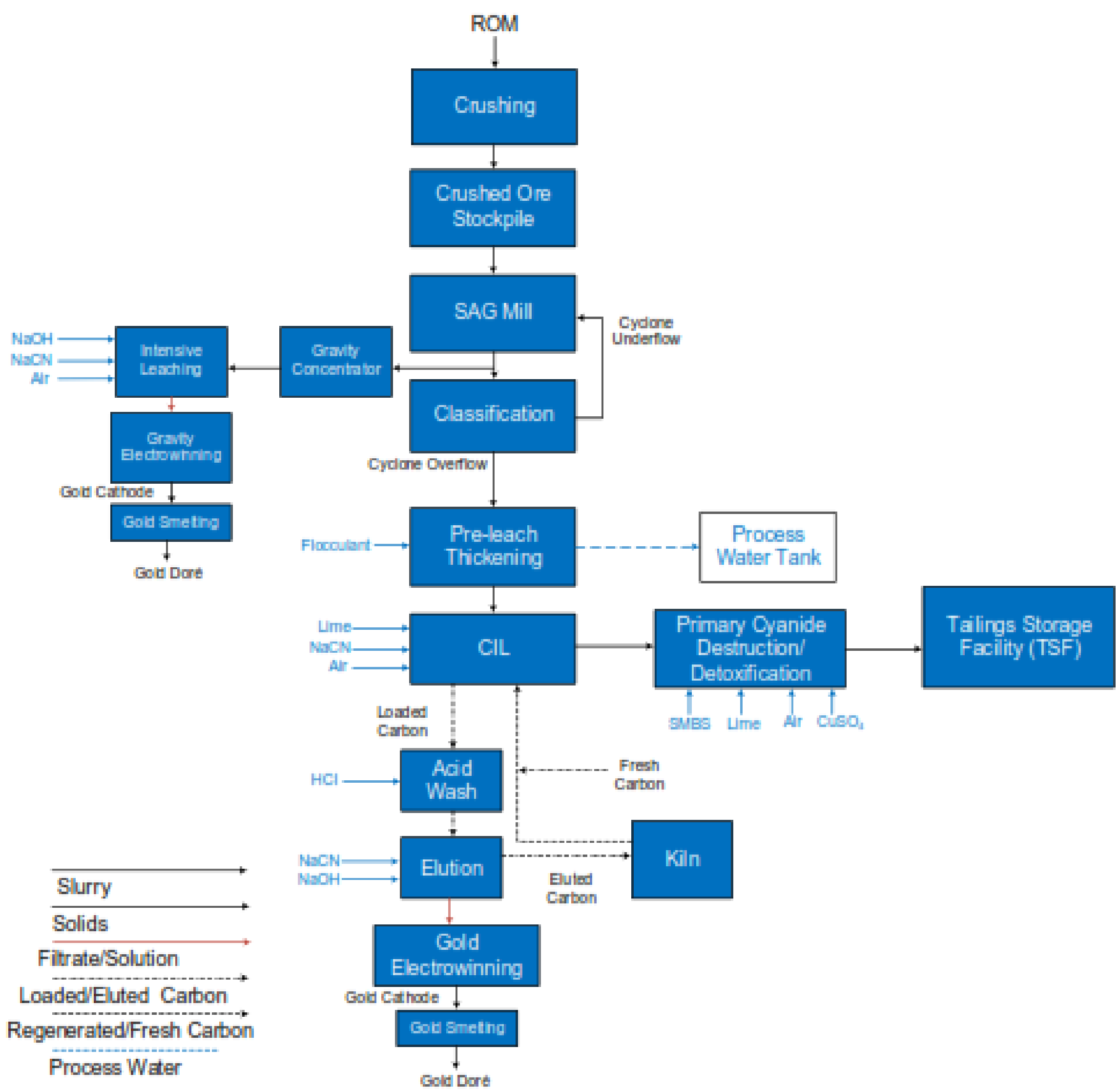


Figure 77: Process Flowsheet (Metso Outotec)

17.1.1 Comminution and Gravity Concentration

Run-of-mine feed is tipped onto the RoM pad and reclaimed by a front-end loader (FEL) to the RoM feed bin. A vibrating grizzly feeder screens the RoM material and feeds oversize to a jaw crusher. Grizzly undersize and jaw crusher discharge are conveyed together to a stockpile. Two feeders draw from the stockpile and material is conveyed to a semi-autogenous grinding (SAG) mill.

The SAG mill discharges onto a trommel screen from which the oversize reports to a bunker for removal by front end loader. The trommel undersize reports to the mill discharge pump box and is pumped to a cluster of hydrocyclones. The combined cyclone underflows gravitate to the SAG mill feed chute while the overflows flow under gravity to the pre-leach thickener via a vibrating trash screen.

The gravity concentration circuit is fed from the mill discharge pump box. A dedicated pump delivers slurry to a vibrating scalping screen which protects the gravity concentrator from large particles. The screen undersize reports to a centrifugal gravity concentrator and screen oversize gravitates back to the mill discharge pump box.

Gravity recoverable gold is collected by the concentrator whilst gravity concentrator tailings return to the mill discharge pump box. The gravity concentrator operates on a batch basis, concentrate being periodically discharged to the intensive cyanidation circuit. Feed to the gravity concentrator is by-passed back to the mill discharge pump box during concentrate discharge.

The gravity concentrate is leached with concentrated cyanide and caustic soda solution. LeachAid or lead nitrate may also be added to the solution. The solution is circulated for 16 hours, during which time approximately >99% of the gold is dissolved. The leachate is then pumped to the electrowinning circuit. The residual solids report to the milling circuit.

The leachate generated in the intensive cyanidation process is circulated through a single electrowinning cell. Gold-bearing sludge is rinsed off the cathodes periodically with a high-pressure washer and the resultant slurry is filtered and dried before smelting.

17.1.2 Leaching and Adsorption

Pre-leach thickener underflow slurry is pumped to the conditioning tank in the CIL area. The pre-leach thickener overflow gravitates to the process water tank.

Lime slurry is added to the conditioning tank to adjust the pH to the target setpoint of 10.5. Aeration is provided to maintain the dissolved oxygen concentration of the slurry.

The slurry overflows from the conditioning tank to the leaching tank via a launder. Sodium cyanide solution is added to the leaching tank and aeration to maintain the dissolved oxygen concentration of the slurry is provided by low-pressure blowers. The slurry gravitates from the leach tank to the first of six mechanically agitated CIL tanks. The slurry is transported between tanks via launders which allow each of the tanks to be bypassed for maintenance purposes if necessary.

Each CIL tank contains activated carbon which is retained by interstage screens. The activated carbon is advanced counter-currently to the slurry flow and is moved progressively from the last CIL tank to the first by carbon transfer pumps.

Regenerated carbon is reintroduced to the last CIL tank via the carbon sizing screen which removes undersized carbon particles and slimes before the carbon enters the CIL process. If the last CIL tank is offline the carbon returns to the second-last CIL tank.

Slurry is pumped from the first CIL tank to the loaded carbon screen which separates carbon from slurry. The slurry returns to the first CIL tank (or to the second CIL tank if the first is offline) while the loaded carbon is transferred to the acid wash column.

Slurry discharges from CIL circuit through the CIL safety screen which recovers any carbon that has passed through the last interstage screen. The tails slurry gravitates to the cyanide destruction circuit.

17.1.3 Cyanide Destruction

The SO2/air process for cyanide destruction, in which sulphur dioxide (SO2) and air, in the presence of soluble copper acting as a catalyst, oxidise the cyanide to cyanate (OCN-), has been adopted for the facility. The SO2 is provided as liquid sodium metabisulphite and the soluble copper as copper sulphate solution. Tailings slurry from the CIL circuit is pumped into the first of two cyanide destruction tanks in series. Slurry discharging from the second cyanide destruction tank is pumped to the tailings storage facility.

17.1.4 Elution and Electrowinning

Loaded carbon is washed with hydrochloric acid before elution by the AARL process. Acid washing and elution are performed in separate columns. These processes are performed in batches of 4 tonnes of carbon.

Eluate is pumped through electrowinning cells in which gold deposits on the cathodes. When stripped eluate is barren it is pumped to the leach feed box. The electrowinning cells are drained, and the sludge rinsed off the cathodes with a high-pressure washer. The sludge is filtered before drying and smelting.

The eluted carbon is hydraulically transferred from the elution circuit to the regeneration kiln, for thermal reactivation, via a dewatering screen. The hot carbon exiting the regeneration kiln is quenched and sized to remove carbon fines before returning to the last CIL tank.

17.1.5 Reagents

Sodium cyanide is used in the CIL and elution circuits and is received in 1 tonne bulk bags of solid pellets. These are held in a storage shed adjacent to the mixing facility and delivered to the mixing station as required. Cyanide solution is prepared on site and dosed to the leach/CIL and elution processes as necessary.

Caustic soda is received in 1t bulk bags of solid pellets. These are held in a storage shed adjacent to the mixing facility and delivered to the mixing station as required. Caustic solution is prepared on site and dosed to the leach/CIL and elution processes as necessary.

Hydrochloric acid is delivered to the site as a 30-32% (w/w) solution by bulk tanker in 24t loads and pumped into a storage tank from where it is dosed to the acid wash column as required.

Lime is supplied in the form of quicklime (CaO) which must be slaked (hydrated) to Ca(OH)2. Quicklime is supplied in powder form in 25t bulk truck deliveries and pneumatically transferred into the lime silo. A screw feeder transfers the quicklime from the silo to a slaker. The slaking process is operated in batches. The milk of lime slurry is transferred to the mechanically agitated milk of lime dosing tank from where it is pumped to the leaching/CIL and cyanide destruction processes via a ring main.

Sodium metabisulphite ("SMBS") is supplied in crystalline form in bulk bags. SMBS solution is prepared on site and dosed to the cyanide destruction process as necessary

Copper sulphate pentahydrate is delivered in 0.9t bulk bags in crystal form. Copper sulphate solution is prepared on site and dosed to the cyanide destruction process as necessary

Flocculant is required to settle solids in the pre-leach thickener. The flocculant is delivered to the reagent store in 0.7t bulk bags in powder form. Flocculant solution is prepared on site and dosed to the pre-leach thickener continuously.

17.1.6 Key Process Design Criteria

The key criteria listed in Table 61 have been applied in the design of the processing plant and sizing of equipment. Results of metallurgical testing have been used where available and industry norms have been applied otherwise.

Parameter	Unit	Value	Notes
Annual throughput	t/a	547,500	
Crusher operating time	h/a	2,190	Nominal 8 h/d
Crushing rate (nominal)	t/h	250	
Mill/CIL operating time	h/a	7,796	89% Annual Utilisation
Milling rate (nominal)	t/h t/d	70 1,680	24-h basis
Average gold head grade	g/t	10.6	Test work
Feed specific gravity	t/m³	2.9	Test work
Crusher product P100 P80 P50	 mm mm mm	 210 105 60	Determined By Metso Outotec. Size Distribution Of ROM And Crusher Product To Be Confirmed.
Bond work index (106 µm)	kWh/t	16.4	
Cyclone overflow P80	µm	53	
Mill circulating load ratio	%	350	
Gravity concentrator feed	t/h	58	
Gravity recovery	%	35	Lower than lab results to provide a safety margin for CIL design
Thickener feed density	% solids	29	
Thickener underflow density	% solids	50	
Leach conditioning			

Parameter	Unit	Value	Notes
Residence time	h	4	
No. Tanks		1	
Tank diameter	m	8	
Tank operating height	m	8	
Leach			
Residence time	h	4	
No. Tanks		1	
Tank diameter	m	8	
Tank operating height	m	8	
CIL			
Residence time	h	24	
No. Tanks		6	
Tank diameter	m	8	
Tank operating height	m	8	
Carbon concentration (nominal)	g/l	15	
Loaded carbon grade (Au)	g/t	3,120	
Carbon advance rate	t/d	4	
CN Detox			
Residence time	h	2.5	
No. Tanks		2	
Tank diameter	m	5.5	
Tank operating height	m	5.5	

Table 62: Key Process Design Criteria (Bara 2022)

18. PROJECT INFRASTRUCTURE

18.1 Surface Infrastructure

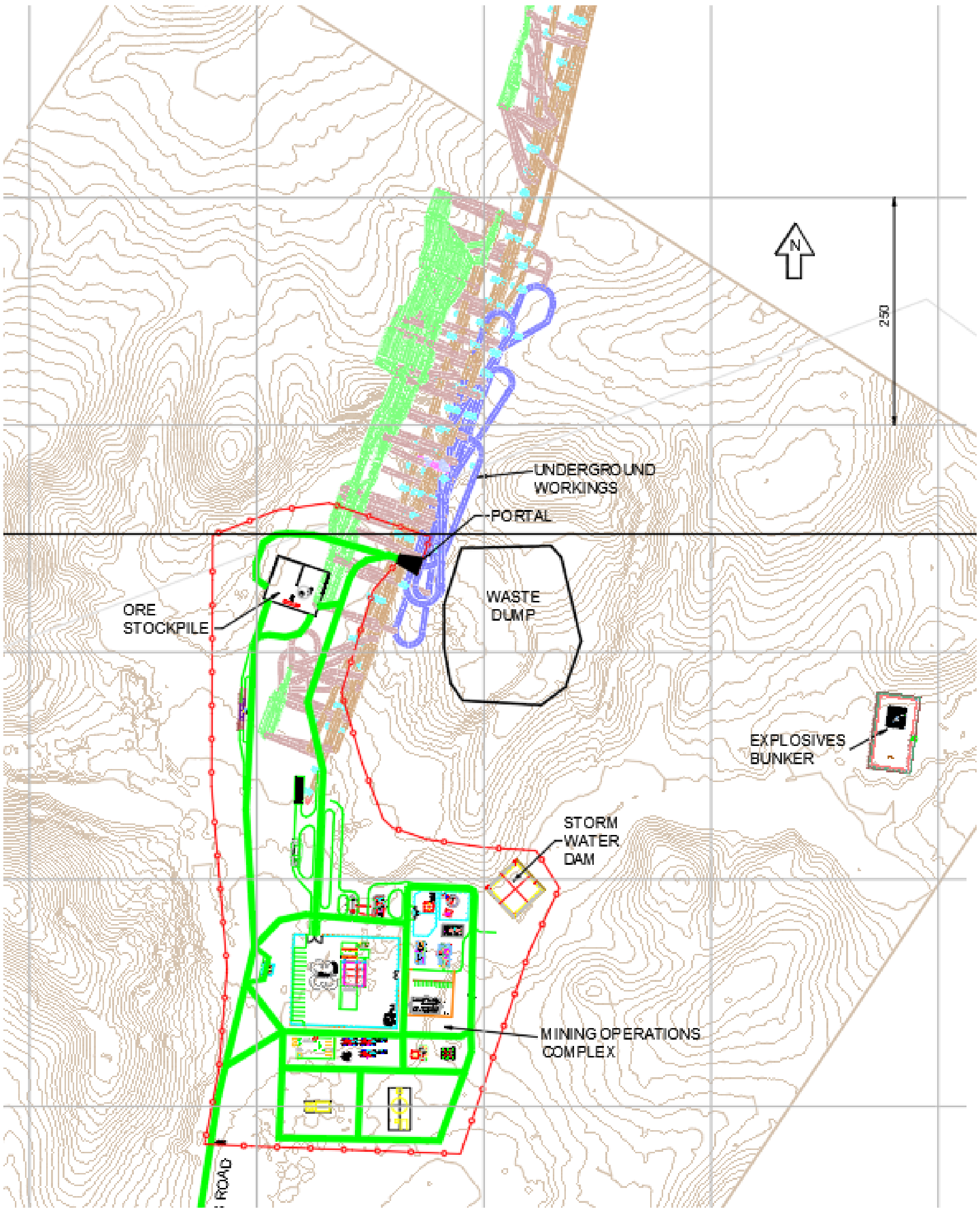


Figure 78: Sketch of the proposed mine site for Kubi (Bara 2022)

18.2 Proposed Mining Site Layout

Mineralised material transported from the underground operations will be dumped on the specified stockpile at the portal entrance. Front end loaders will load the material into road haulers for transport to the plant, which is located off site, for toll treatment.

The following surface infrastructure was provided for to support the mining operation:

- Provision to upgrade the existing access road to the mine
- Terraces and internal mine roads
- Storm Water Dam
- Borehole water extraction
- Terraced areas with provision for storm water drainage
- Storm Water Dam with silt trap
- Service water treatment and storage facilities
- Mineralised material handling facilities
- Brake test Ramp
- Bus and taxi Rank
- Light vehicle parking areas
- Access Control and fencing

- General administration offices
- Ablution facilities
- Workshop offices
- Training centre building
- Clinic
- Canteen
- Control Room
- Mine store building
- Explosives destruction Bunker
- Trackless mining equipment workshop
- General workshops
- Emulsion storage and dispensing facilities
- Fuel Storage and Dispensing
- Wastewater treatment plant and reticulation
- RO plant for potable water supply
- Fire-water suppression system
- Borehole dewatering systems for provision of water.

18.3 Water Supply

Water demand at Kubi will be relatively low as no mineral processing will be done on site. The primary water consumers include:

- Dust suppression
- Human consumption
- Change house and laundry
- Equipment washing
- Service water supply for the underground equipment.

The estimated daily requirement for water make-up will be 350m^3/day.

The water sources available for the Kubi mine operation includes:

- Surface water sourced and abstracted from the river(s) around or within the lease area, namely Offin River, Gyimi River, Sukuma River or any one of their tributaries
- Rainwater harvesting to augment inadequate sources where necessary
- Groundwater sourced and abstracted from multiple boreholes drilled within the lease area for both domestic and operational use.

The surface water available from the local waterways would be generally unfit for use, due to the high turbidity and contamination created by small-scale mining activities throughout the area. In periods of low rainfall, the surface water supplies would not meet operational demand.

Rainwater harvesting could potentially be a significant source of water for operational use due to the high annual rainfall ranging from 1,500mm to 2,000mm. All-purpose built water catchments require permitting from the Water Resources Commission (Ghana). Figure 77 shows the water drainage patterns within the mining lease. Investigations into potential water collection sites would be required to determine optimal locations for storage dams.

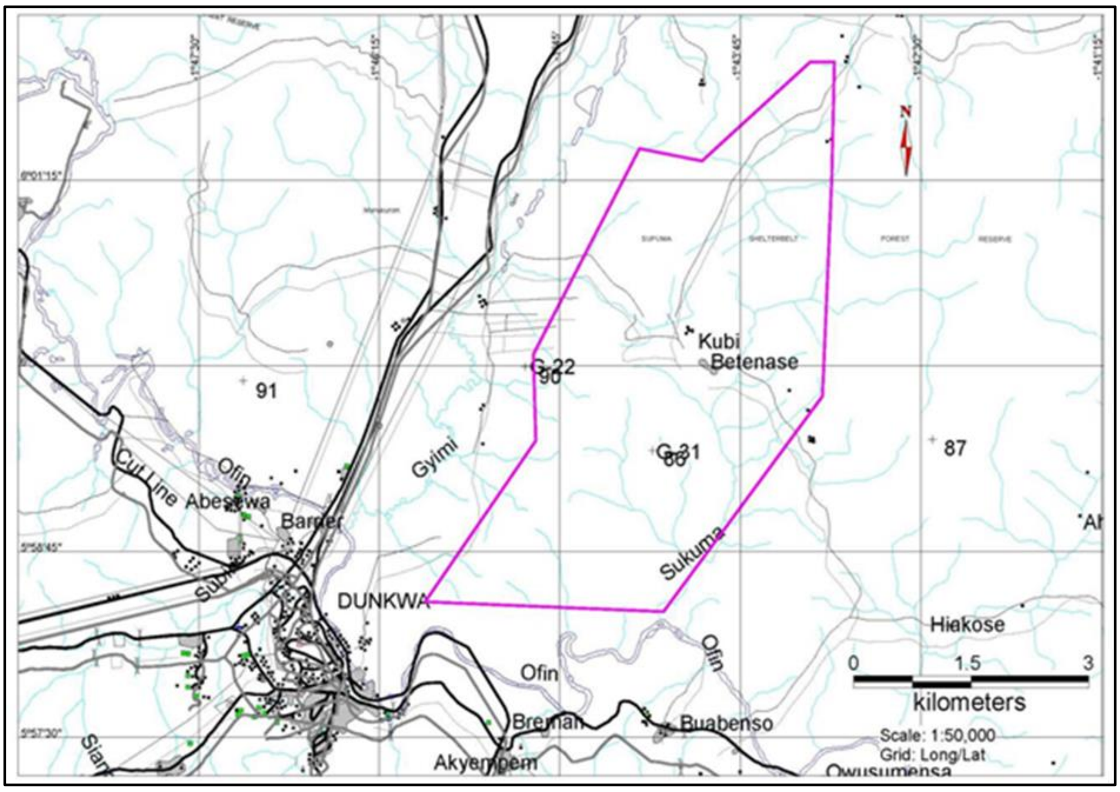


Figure 79: Water drainage pattern within the Kubi Mining Lease (Asante 2022)

Groundwater resources in Ghana are being increasingly recognized as an invaluable but largely untapped resource. Ghana is thought to have considerable groundwater resources, with good but highly skewed rainfall distribution and per-capita groundwater availability, water supplies within the country is far from uniform, with the southwestern part better endowed than the coastal and northern regions (Gumma M. K. and Pavelic P., 2012).

Ghana's groundwater resources are associated with three major geological formations in the percentage of 54%, 45% and 1% ((Yeleliere E., Cobbina S. J. and Duwiejuah A. B., 2018). They include the basement complex, comprising of crystalline igneous and metamorphic rocks ; the consolidated sedimentary formations of the Volta basin, which include limestone areas; and the Mesozoic and Cenozoic sedimentary rocks (Gill 1969). (Figure 78).

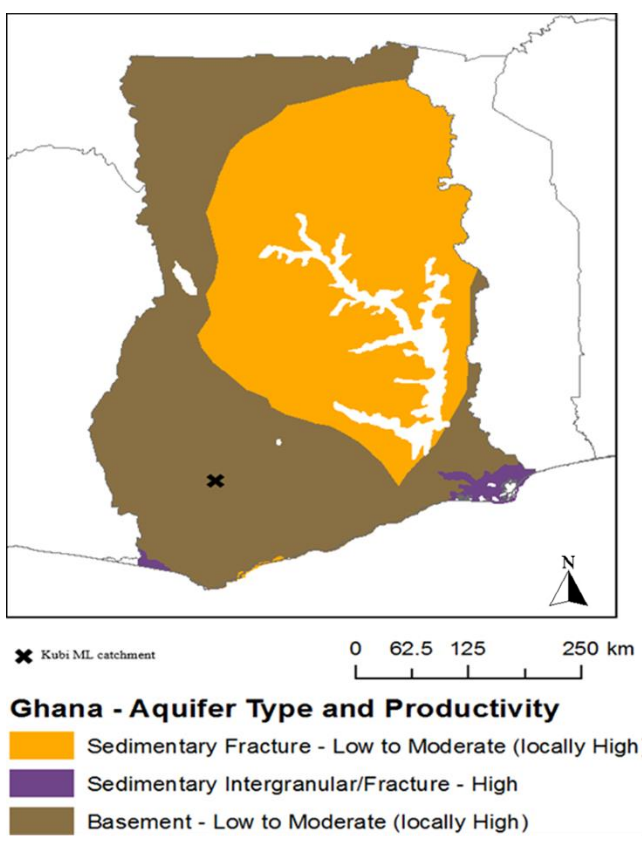


Figure 80: Map showing location of Kubi Lease area within aquifer type and productivity in Ghana (Asante 2022)

Groundwater occurrence in the basement complex is associated with the development of secondary porosity as a result of jointing, shearing, fracturing and weathering. Typically, a regolith layer overlies the crystalline basement and provides potential for increased groundwater storage which can be more than 100m thick but is typically in the range 1–70m thick (Asomaning 1993). The thickness of the aquifers is normally between 10 and 60m and yields rarely exceed 6m³/hr (Ghana National Water Policy 2007; WRC Ghana 2012).

The Kubi lease area is located within the basement complex (Figure 79) with groundwater potential zones ranging from very poor to moderate (Figure 80). However locally hsigh yielding aquifers exist.

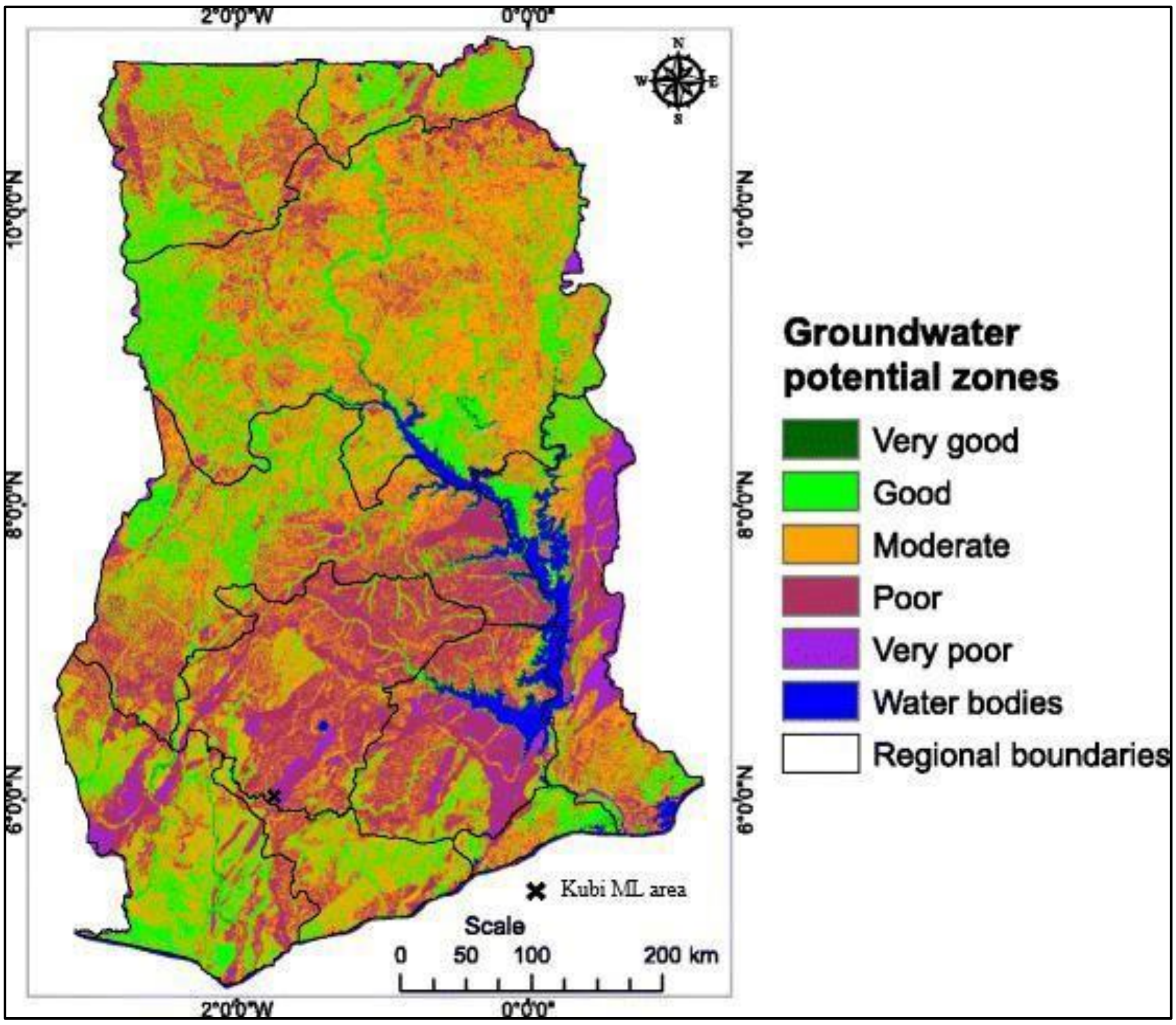


Figure 81: Map showing the location of Kubi Lease area within groundwater potential zones in Ghana (Asante 2022)

The quality of groundwater is generally better as pollution engineered by small-scale and illegal mining activities and other nuisance perpetuated by indigenes are directly in surface water (Yeleliere E., Cobbina S. J. and Duwiejuah A. B., 2018). Groundwater chemistry and pollution of the aquifer in the gold-ore bearing formation are usually characterized by the mineral composition of the rock hosting the aquifer as well as the degree of weathering and fracturing of the rock. Bempah C.K. et. al., 2015, research indicates very high concentrations of As and Fe ions above the guideline values in groundwater in the region while trace elements, Cu, Mn and Zn concentrations were below the World Health Organization ("WHO") guideline values for drinking water.

Of the proposed water sources for the Kubi mine operations, the most feasible are water from groundwater sources augmented with harvested rainwater during the wet season. It is recommended that;

- A hydrological investigation of the Kubi lease area watershed is carried out to identify a reliable and economical source of water supply of required quantity and quality for the Kubi operations
- A hydrogeological study is carried out within the Kubi lease area to identify most prospective sites for borehole drilling. The number of boreholes to be drilled based on the required water demand for the Kubi mine operations
- Thorough scientific investigation is carried out to identify the most suitable locations for subsurface dams for rainwater harvesting.

18.3.1 Potable Water

Potable water will be sourced via a bore field in the vicinity of the mining operations and then pumped to a central holding tank. The water will be treated appropriately to ensure its fitness for human consumption.

Laboratory and/or pilot tests are recommended prior to the final selection of the water treatment process.

18.3.2 Effluent Treatment

Sanitary water will be collected and supplied to a sanitary treatment unit. A low cost and efficient system for the technology of the plant sewage treatment unit should be based on the Biorotor technology which has proven to be operative for varying flows, dilute or concentrated effluent.

In the operating phase, all sanitary water is collected and pumped into a continuous flow Biorotor unit. In the Biorotor process, the solids are separated from the liquids and the liquids then purified for discharge. The heavy sludges are emptied via tankers as required and taken to the local commercial systems for disposal.

18.4 Power Supply

Bulk power for the Kubi operation will be supplied from the Electricity Company of Ghana Limited (ECG). A new line will be constructed from the Glico Substation in Dunkwa to the mine site. Back-up power will be provided for critical equipment from a local diesel generating plant.

Asante has considered the possibility of installing solar power for the Project. This will be included in future studies to develop and finalise more detailed mine design and implementation planning initiatives.

18.4.1 Incoming Supply

ECG will supply power to Kubi at 33kV via a new overhead line approximately 10km in length. The main substation will consist of two 2.5MVA 33/11kV transformers supplying the Kubi main substation, from which power will be distributed to the surface and underground load areas. Figure 81 shows the single line diagram for the main substation.

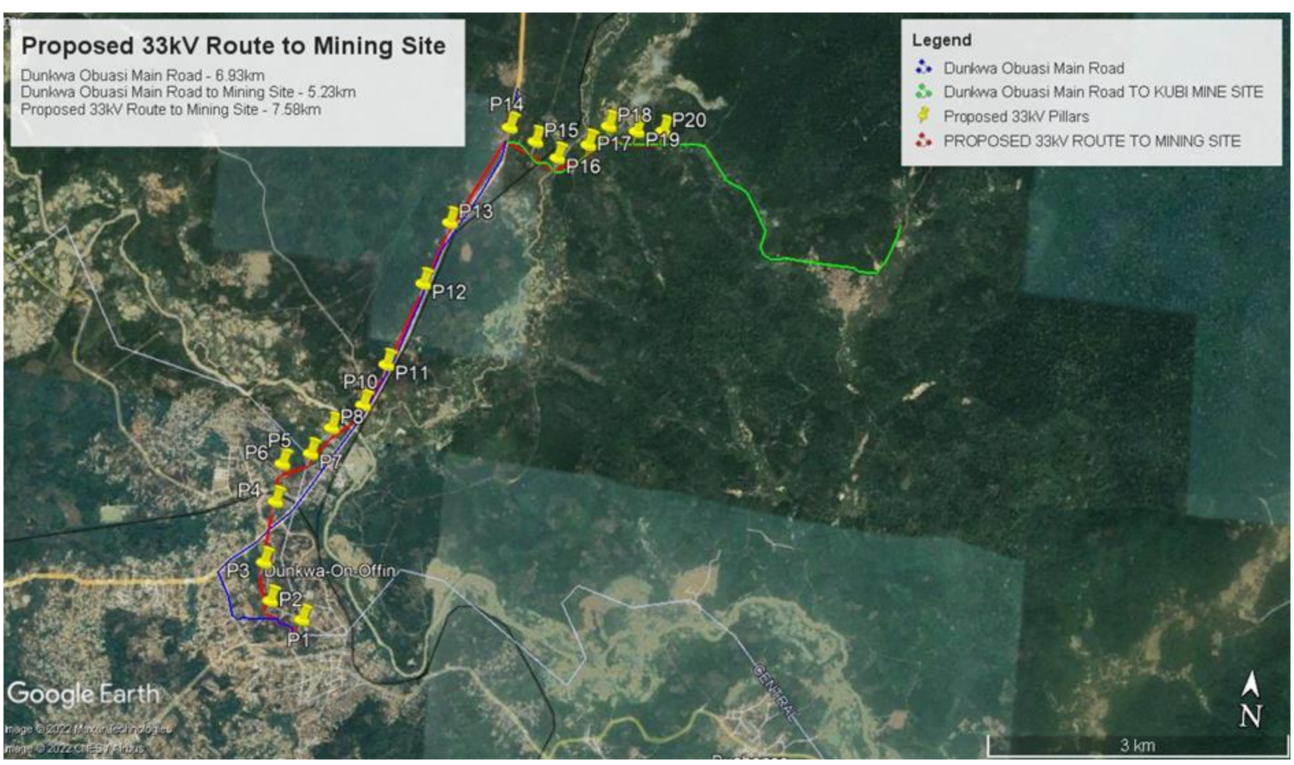


Figure 82: Proposed 33kV overhead line route (Asante 2022)

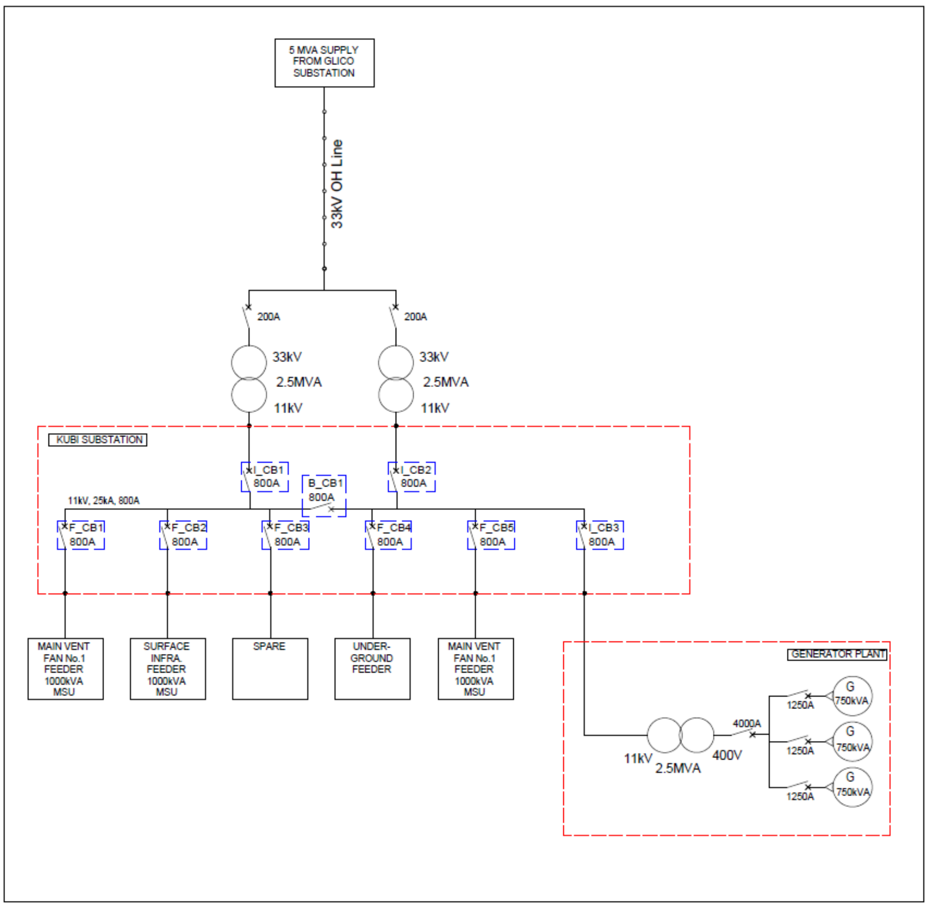


Figure 83: Kubi Mine substation single line diagram (Bara 2022)

18.4.2 Load Profile

Peak demand of 4.1MVA has been calculated during year 4 of the operation, with contributions from the areas shown in Table 62.

Description	Installed kW
Surface Infrastructure	782
Main Ventilation Fans	1220
Main De-watering System	550
Mining and Ventilation	1304
Level Infrastructure	545
Total	4400
Peak Running Load – Year 4	3467
Power Factor	0.85
Peak Demand (MVA)	**4.1**

Table 63: Kubi Mine load list

The LoM load profile is shown in Figure 82. Peak power consumption occurs during year 4, calculated at 23,041,000kWh. The applicable tariff structure is still to be confirmed, for the purpose of this study and financial model, an internet researched figure of US$0.127/kWh was used.

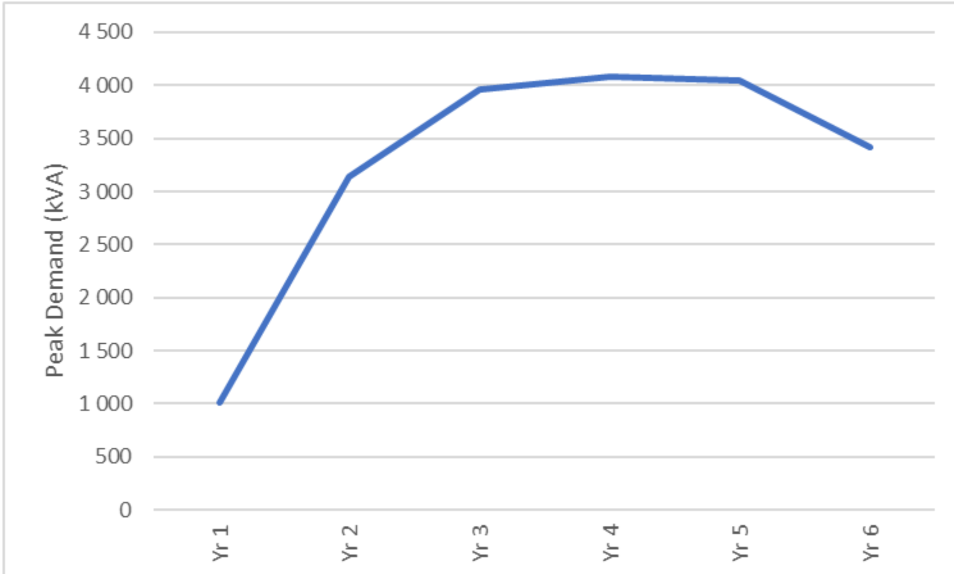


Figure 84: Kubi Mine load profile

Emergency power has been allowed to supply the following loads:

- Critical surface infrastructure
- One set of main surface ventilation fans
- Underground dewatering pump stations
- Station level lighting and small power requirements.

The peak emergency power is calculated at 1.4MVA, which will be supplied via three 750kVA generating units configured in an N+1 arrangement.

18.4.3 Surface Distribution

Main distribution voltage will be at 11kV, with MV cables used to reticulate the power from the main substation to the load centres. Suitably rated MSU's will be installed to supply equipment operational voltage levels. The surface distribution will include an 11kV infrastructure feeder to a 1000kVA MSU supplying 400V to the surface loads. The main ventilation fans stations will be supplied from dedicated breakers in the main substation, with 1000kVA MSU's supplying each of the main fan areas.

19. MARKET STUDIES AND CONTRACTS

At the time of authoring this report, global commodity prices have been significantly influenced by ongoing geopolitical uncertainty in Europe, including the ongoing COVID-19 pandemic, which is inducing significant volatility, particularly for gold.

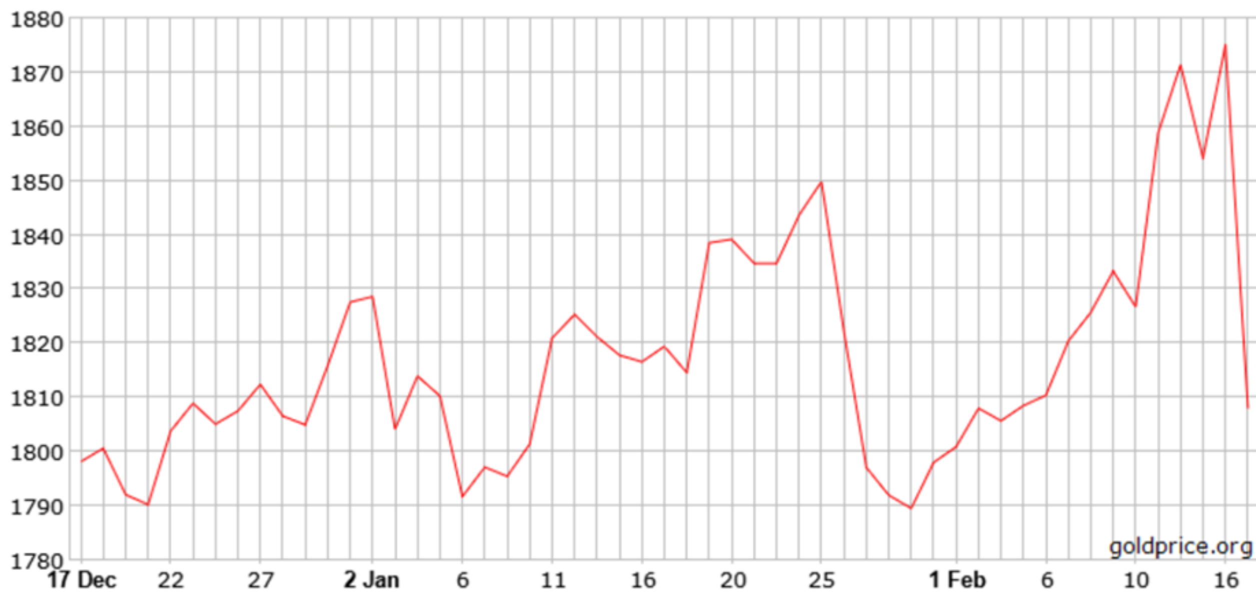


Figure 85: 3 Month Gold Price Trend (Goldprice.org)

No contracts are currently in place for the sale of gold from the Kubi mine.

It is currently anticipated that the plant feed from the Kubi project will be sold "at mine gate" to a toll gold processing plant located in the vicinity of the Kubi mine.

For purposes of economic evaluation, the gold will be sold to the toll plant for a flat fee of 15% of recovered gold. All costs associated with transport, processing, royalties are covered by the processing plant. 85% of the gold will be paid to Asante Gold.

A flat gold price of US$1,750/oz has been used in the economic model for life of mine.

The two year (2021/2022) trailing average gold price is $1,7985/oz (Source gold.org).

20. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 Introduction

The project area is in the Adansi South District of the Ashanti Region of Ghana. Kubi is located 25km south of the township of Obuasi and 6km north of the town of Dunkwa on Offin. The Lease area forms part of Ghana Survey topographical field sheets 0502A1 and 0602C3 covering a total area of 19.16km² (91.24 Mineral Cadastral Blocks) lying within the bounds of latitudes 5° 58' 12"N and 6° 01' 54"N and longitudes 1° 43' 07"W and 1° 45' 57"W (Figure 84).

Figure 84 Map showing the Kubi Lease area within District Assemblies.

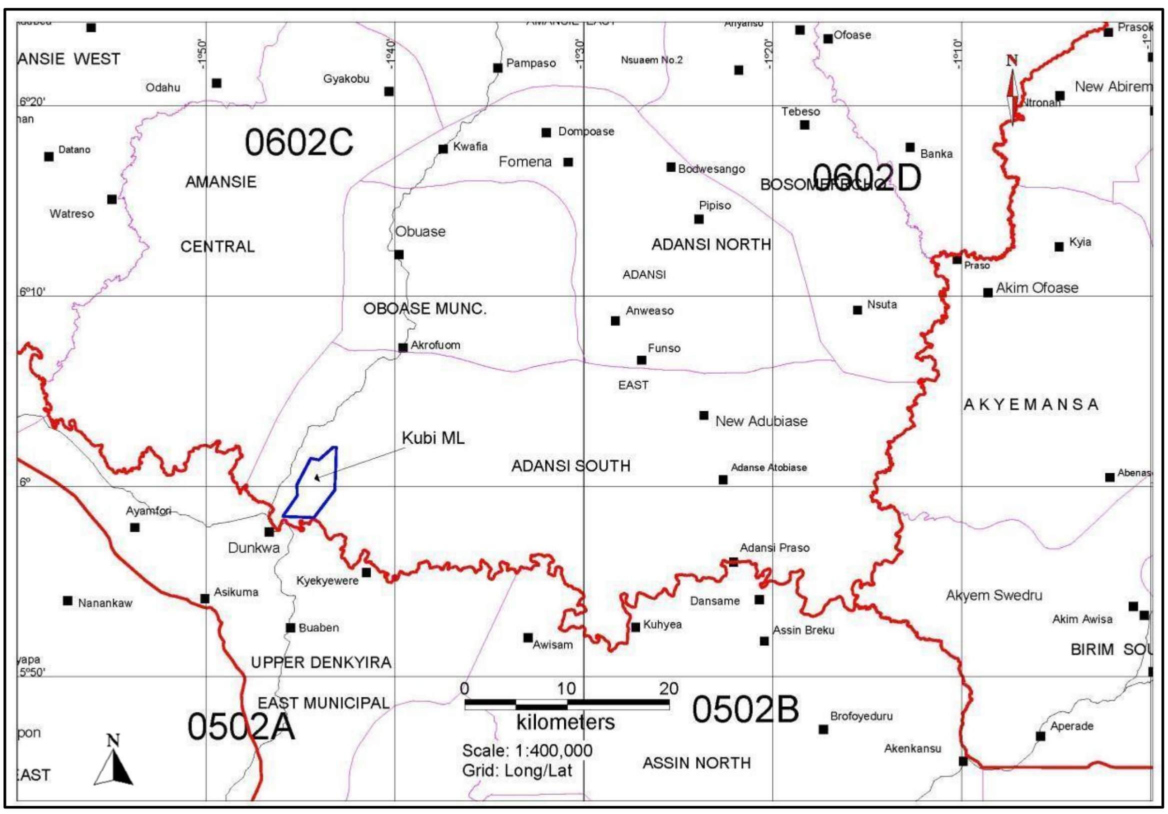


Figure 86: Map showing the Kubi Lease area with District Assemblies (Asante 2022)

20.2 Current Baseline

The Kubi project has previously been mined, via two small open pits by AG and later AGA. Mining commenced in September 1999 in the Kubi West Concession, (outside the Forest Reserve) and continued until June 2000. Following a scoping study and public hearings in 2003, the portion of reserves within the Supuma Forest Reserves was fully mined by 2007. Figure 85.

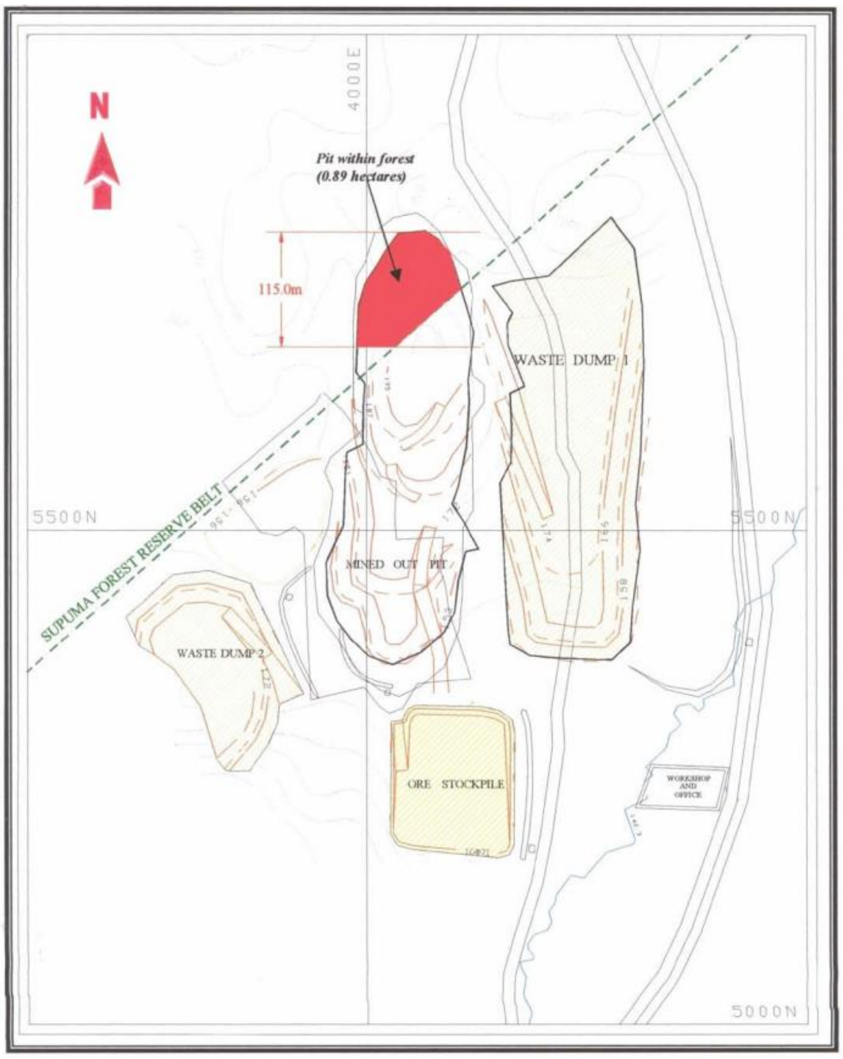


Figure 87: Mineralised deposits mined within the Supuma Forest Reserve (Ashanti Goldfields EIA 2003)

Environmental studies, including a fauna and flora assessment, were carried out in 1998 for NS Ghana by SGS Environmental. Environmental Impact Statements were filed by AGC in 1999, 2002, and 2004. Monitoring and baseline measurements of air quality and ambient noise levels were carried out by AGC in 1999, 2000, and 2002. AGC also continued baseline water quality monitoring.

20.2.1 Flora

The original ecological value of Moist Evergreen Forest in the Kubi Lease, particularly the western portion of the Supuma Forest Reserve, has already been considerably downgraded by past and ongoing human activities, including logging and artisanal mining. What remains is a myriad of secondary growth vegetation types. No important, rare, or "black star" species have been identified.

20.2.2 Fauna

The SGS baseline study assessed the potential faunal diversity of the Kubi property and surroundings. Of the 29 species of large mammals recorded, four are endangered. One bird species observed, the European swift (Apus apus), is a Palearctic migrant of conservation importance.

Fauna, birdlife, and their spoor are mostly seen in the eastern Supuma Shelterbelt Forest area, and that of the endangered species exclusively in the eastern forest reserve, east of Lagos – Kubi, east of the Kubi Lease. As mining activities will be restricted to west of Lagos - Kubi, south of the degraded Western Supuma-Shelterbelt Forest, and primarily underground, there will be no impact on the remnant fauna and therefore no impediment to the establishment of a mining operation.

20.2.3 Surface Water Environment

The Kubi area is in the lower basin of the Offin River. It is drained principally by the Sukuma stream and its tributaries which empty into the Offin. The northern portion of the property is drained by the Apetisu stream before it joins the Gymini River. The Gymini flows along the western border of the lease and receives runoff from its western portion. All of these water bodies flow into the Offin River before the latter joins the Pra River which eventually flows into the Atlantic between Cape-Coast and Takoradi.

The Sukuma stream takes its source from the eastern Sukuma Shelterbelt Forest Reserve. Its channel is generally well defined and protected by vegetation. The stream is seasonal in character and dries up partially to totally from December to April. It flows to the south and passes near several villages such as Ohiampanika, Old Kubi, Kubi-Kwanto, and Ananekrom. All the smaller villages rely, partially to totally, on the Sukuma for domestic purposes.

20.2.4 Surface Water Flows

The estimated mean annual discharge of the Sukuma stream based on records at Dunkwa on the Offin river (1960-1979) is 0.153m³ per second.

The flow in the Apetisu which drains the northern portion of the Kubi lease was also measured and found to be only 0.0036m³ per second.

Just south of the lease boundary a tributary called the Akyekyereso joins the Supuma. It is spring-fed and some water can be found in its upstream reaches all year round. During the survey, a nominal flow of less than 1 litre per second was observed.

20.2.5 Groundwater / Hydrogeology

Within and around the lease area Kubi-Kwanto, Lagos, Nyamebekyere, Amaadee, Gyebbrisu, Ohiampanike, and Kubi village have access to underground water, mostly through hand pumps over hand-dug wells. Kubi Kwanto has three functional hand pump activated wells and an additional two that since 2002 were no longer functional. Gyebrisu has one functional well, and Kubi village and Ohiampanika share one functional well for domestic water supply. As noted above the Supuma is the preferred source of domestic water when it flows sufficiently. The other settlements named above have one open well each.

The western part of the lease area falls within the Birimian system which is known to yield relatively substantial amounts of groundwater, particularly where the rocks are highly weathered, fractured, and/or interbedded with quartz veins. Where rocks outcrop or sub-crop, considerable water penetrates through the joints, fractures, or other openings, especially if such partings are not filled with impermeable weathered products. The bedrock is not inherently permeable but has secondary permeability or porosity developed as a result of fracturing and weathering. In general, two types of aquifers are identified, namely: weathered rock aquifers and fractured rock aquifers. These aquifers tend to act as confined or semi-confined (leaky) aquifers.

20.2.6 Water Quality

AGC, SGS and PMI Gold/Adansi baseline studies on the surface and groundwater have been previously carried out. It is proposed to carry out supplemental baseline sampling initially for up to 6 months in support of relevant mining permits and an EIS for the proposed underground mine.

SUMMARY OF RESULTS, SGS ANALYSIS, SURFACE WATER

The pH of surface waters ranged from 6.45 to 7.10 with a mean of 6.8.

Apparent colour was generally below the WHO guidelines except for samples in the Apetisu stream and the Gymini River upstream from the Kubi lease which exceeded the maximum 15 units proposed by the WHO.

Turbidity levels were found to be lower than the WHO guideline value of 5 units for all the samples analysed. In general, higher values will be found during dry season sampling as most streams and rivers in Ghana will carry, in suspension, fine organic and inorganic particulates.

Levels of Total Suspended Solids (“TSS”) were lower than the 20mg/l quoted by the WHO guideline values except in the Gymini River upstream from the Kubi lease.

A minimum of 90.0mg/l and a maximum of 964.0mg/l for Total Dissolved Solids (“TDS”) were found in the Sukuma stream and the Jimi River respectively. The levels recorded in the Gymini River can be considered very high. Electrical conductivity was high for the Gymini River samples both upstream and downstream of the lease, which recorded values around the WHO's maximum value of 150mS/cm. (Note: water samples from the Gymini river upstream from Obuasi also record similar values - AGC Environmental).

Calcium (Ca) and magnesium (Mg) were the predominant nutrients in the surface water samples analysed and exceeded WHO guidelines in both Gymini River samples. Concentrations of other nutrients were generally low and close to a presumed natural background again except in the samples taken from the Gymini. For these samples, levels of sodium and sulphate were lower than WHO guidelines but were 10-30 times higher than the other samples.

Concentrations of Chemical Oxygen Demand (“COD”) were all lower than the 250mgO2/l proposed by the Ghana EPA with a maximum of 77.2 and a minimum of 70.02mgO2/l.

Ten trace metals were analysed. All concentrations of total iron (FE) exceeded the WHO guideline values with a minimum of 0.87mg/l and a maximum of 1.98mg/l recorded. These values are just lower than the 2mg/l proposed by the Ghana EPA, a standard more suited to tropical conditions.

Levels of aluminium (Al) were found to be higher than WHO guidelines with a maximum of 0.7mg/l reported in Apetisu stream.

Concentrations of manganese (Mg) were generally high, with quite high values found in the Gymini.

Zinc was generally low, except for a reading of 0.25mg/l in the Apetisu.

Lead (Pb), mercury (Hg), chromium (Cr), and Cadmium (Cd) were not detected in all surface waters sampled.

Copper (Cu) arsenic (As) and Nickel (Ni) were found in the Gymini river in concentrations exceeding WHO guideline values. Arsenic was detected in the other water bodies sampled but the levels were low or close to the detection limit of 1mg/l.

All surface water samples were found severely contaminated with total coliforms. Faecal coliforms were also present with concentrations ranging from 7 to 1,600MPN/100ml. This is consistent with the extensive use of the surface water network as a source of domestic water supply (including washing and bathing) for the various villages and scattered settlements. Inappropriate local toiletry habits (free-range defecation) also contribute to this contamination.

SUMMARY OF RESULTS, AGC ANALYSIS
1999 sampling: Narrow pH range of 6.8 - 6.9, mean of 6.8. These may be considered neutral (SGS had reported somewhat more acidic numbers).

Electrical conductivity ranged from 173pS/cm in the Offin to 224pS/cm in the Sukuma. The range of suspended solids was from 23mg/l in the Offin to 93mg/l 1km downstream of the confluence of the Sukuma and Offin. The occurrence of high SS usually coincided with high turbidity values.

The surface waters sampled were of moderate total hardness with a range of values from 62mg/l in the Sukuma to 105mg/l in the Offin. This was reflected in the comparatively higher cations - Mg, Zn, and Fe and anions - Cl, NO3, and SO4 found in the Offin.

All the surface waters sampled in 1999 were again contaminated with very large quantities of both faecal and total coliforms with counts greater than 200 / 100ml.

The coliform in the surface waters probably originates from storm waters and run-off from adjacent shifting agriculture fields. E.coli was also present in all surface waters.

AGC/AGA sample results for years 2000 and 2003 are also recorded.

Kubi pit water (now non-existent as the pit was backfilled), representing a mixture of ground and surface waters (monitored between September 1999 and June 2002), was generally good in quality. Arsenic (0.82mg/l) and total coliforms (>200 counts/100ml) values however fell outside the acceptable standards for potable water. (AGC Feb 2004 EIS).

GROUND WATER QUALITY: SUMMARY OF RESULTS, SGS ANALYSIS
Physical-chemical parameters of the groundwater samples recorded values generally well within WHO standards except for the pH which ranged between 5.10 and 6.00.

Levels of nutrients and trace metals were lower than the WHO guideline values except for iron which was found to exceed the 0.10g/l standard. Concentrations of 0.09mg/l for copper and 1.2mg/l for aluminium were found in two samples. Arsenic with a detection limit of 1mg/l was hardly detected.

All the wells were highly contaminated with total coliforms and recorded a high to very high value for total plate count. Faecal coliform was also analysed and detected in the wells at Amaade, Kubi-Kwanto and Gyebrisu.

20.2.7 Air Quality

Baseline air quality monitoring was carried out between21st – 28th February, 2002, and 20th – 29th April, 1999, at Old Kubi Village and Ohiampenika, the two proximal settlements.

In 2002 concentration values of dust ranging between 24.74mg/ cubic m and 31.22mg / cubic metre with an average of 26.90mg / cubic metre were recorded at Kubi village while values ranging between 25.24mg/m³ and 34.48 mg / cubic m with an average of 29.14mg/m³ were measured at Ohiampenika.

Average arsenic concentration figures of 0.39mg/m³ and 0.41mg/m³ were recorded at Ohiampenika and old Kubi respectively.

In 1999 dust, arsenic particulates, and sulphur dioxide were measured in the same locations. Concentration values of dust ranging from 27.84mg/m³ and 36.00mg/m³ with an average of 32.23mg/m³ were recorded at Kubi village while values ranging between 28.87mg/m³ and 38.94mg/m³ with an average of 33.29mg/m³ were measured at Ohiampenika.

Average arsenic concentration figures of 0.51mg/m³ and 0.43mg / cu m were recorded at Ohiampenika and Kubi village respectively.

Sulphur dioxide concentration values ranging 5.54mg / cu m and 5.4mg/m³ were recorded at Ohiampenika and Kubi respectively.

The above concentration figures are well within the Ghana EPA Annual Arithmetic mean guideline limits of 100mg/m³, 3mg/m³, and 80mg/m³ for particulates (dust), arsenic and sulphur dioxide respectively. It is anticipated that air quality will be maintained using normal dust abatement practises during construction and mining. This will be monitored.

Humidity is usually high. The annual relative humidity is 85% at 09:00hrs and 68% at 15:00hrs with an annual mean RH of 77%.

The mean monthly pan evaporation rate per day from a Class A pan at Obuasi for the period from 1991 to 2000 ranges from 3.7mm in August to 6.5mm in February.

20.2.8 Noise

Baseline survey on noise carried out at Kubi village and Ohiampenika by AGC Environmental Department (19th April,1999) revealed average ambient noise values of 82.0dB and 82.3 dB at Kubi and Ohiampenika respectively.

The Jan 20-Feb 4, 2002, measurements returned a mean of 82.0dB at Ohiampenika and 82.9dB at Kubi village.

20.2.9 Soils

The soils of the concession area were evaluated for their suitability for rain fed agricultural uses according to FAO methods. The survey assessed eight soil units at series level developed from weathered products of Tarkwaian and Birimian rocks. The units encountered are Dampia, Mawso, Asuboa and Debia series developed from Tarkwaian rocks and Piki, Asikuma, Ansum and Oda series developed from Birimian rocks. Their development has been affected by the prevailing climatic conditions of high temperatures and rainfall, vegetation and the rolling, undulating landscape.

Soils of the summits and upper slopes of hills were found to be shallow, concretionary and "bouldery" and not suitable for agriculture. The upper and middle slopes soils are deep, concretionary, well drained, acidic soils that require effective methods to control soil erosion and infertility. The best agricultural soils are very deep, concretionary and gravel free, medium textured colluvial soils of lower slopes. The valleys carry hydromorphic soils that are very deep, poorly drained, clay soils that require drainage and fertilisation to sustain agriculture.

The soils have been leached off the bases, rendering them acidic and low in nutrients. Intensive agriculture has impoverished the soils, for higher and more constant yields they need to be put under effective fertilisation and anti-erosion management.

Soils within the (former) pit areas fell within the Asuboa series of the Dampia-Mawso soil association and were moderately suitable for agriculture. Vegetation and food crops – mostly plantain and cassava – covers the surface of the backfilled pit. These squatter farmers were fully compensated in March 2015, before planting season, so they could continue their activities unhindered elsewhere.

The updated baseline study to be contracted in the near future will inspect the soil cover at this time to record any changes brought about by previous mining and other activities since the extensive SGS survey.

20.2.10 Wind

Wind directions are predominantly south-west or north-west throughout the year. Average wind speeds are low, around 3.4 km / hour. (Dunkwa meteorological observation post).

20.2.11 Net Acid Generation / Acid Base Accounting (ABA)

The dominant lithology of the footwall and hanging wall rock is talc-sericite schist. Sulphur content of 170 core samples averaged 0.98%, while the carbonate content averaged 2.63%. This indicates that natural buffering will negate any possible acid generation.

Net acid generation tests on Kubi waste dump material in August 2003 indicated non-net acid generating potential. (AGA).

20.2.12 Archaeological / Anthropological

During the environmental and social baseline studies no sites of cultural importance, such as Community sacred groves etc, were found and none were reported during meetings with the locals. No sites of archaeological importance were noted.

The only mention of a site of cultural significance one could point to is near Old Kubi, one km from the proposed mine site, on the stream. Investigations revealed no evidence that stream water is used for ritual cleansing or other cultural purposes. (March 2003 AGC Scoping). This is the recent / modern site for libations / ritual sheep and cock sacrifices by traditional authorities. The aged Odukro lives at Old Kubi, and the caretaker chief lives at Kubi Kwanto.

20.2.13 Sociological Baseline

Relevant socio-economic information has been collected since 1998, including a list of the stakeholder communities (villages, hamlets, and settlements) in the Lease. Old Kubi and Ohiampenika are 600m-650m from the proposed mining compound and will be the most impacted.

Informal interviews and conversations with village chiefs and representatives, farmers living within and adjacent to the lease, and local habitants of the settlements were carried out during socio-economic and land use surveys. Formal meetings and discussions with stakeholder and interested parties were also carried out, as is normal practice, by Nevsun Ghana, AGC, and PMI/Adansi. It has been observed that a lot of "questionnaire" fatigue has been expressed.

The main occupation is farming based on traditional methods and techniques, dominated by migrant farmers producing tree cash crops (very predominantly cocoa) and subsistence food crops such as plantain, cassava, maize and cocoyam with minor surplus for marketing.

Local village dwellings are mostly of poor wattle and daub or mud brick construction. The closest medical facility is a maternal and child health and family planning centre at Amponyase. Kubi-Kwanto and Kubi Lagos have 5 and 1 church respectively. Each of these villages has one primary school each (two JSS2 in 'Kwanto). Kubi-Kwanto has 3 functional hand dug wells fitted with hand activated pumps, Kubi Lagos relies on one open well.

Places of convenience are inadequate, there are no incinerators and refuse disposal is poor.

Many tribal groups are represented in the population (Mossis, Gonja, Ewe, Nzema, Fanti, Krobo, etc) but the local Asante predominate.

A socio-economic survey was carried out by PMI/Adansi in November 2007. This will be updated, and the stakeholder communities formally re-engaged with documented meetings and discourse, during the update activities by the sociological-environmental consultant / contractor.

20.3 Environmental Impact Assessment (EIA) Statement, Mitigation

MANAGEMENT PLAN – EXPLORATION, DEVELOPMENT & MINING

The exhaustive information gathered in the successive and ongoing baseline studies as summarised above flows into a simple environmental impact assessment statement.

An updated baseline sampling program will be carried out to verify if there are any changes in the parameters of importance, as there has been a substantial amount of recent artisanal alluvial mining on and near the Lease.

The mining method has changed from surface pit to underground mining. A sanitary landfill and a septic system together with equipment maintenance, warehousing, magazines, offices and a change house are to be built on the property for the exploration mining program phase so previous Impact Statements, other than baseline data, are obsolete but we are guided by the same principals: minimise impact to the environment and the local population in the short and long term, and endeavour to actually have a positive impact on the vegetative environment in the long run once the site is rehabilitated. (Indigenous tree plantation, or cash crop tree plantation etc).

At the present time it is planned to toll mill the production off-site. The impact of trucking production will have to be mitigated. The environmental impact of a mill and tailings dam with associated decanting ponds will not require assessment at this time unless plans are changed. Provision is being made in the infrastructure plan to leave adequate space for a compact mill and thickener, and a tailings area, should a mill on site be decided upon in the future. The required geotechnical, engineering, and environmental studies will be carried out in a timely manner should an onsite mill be planned in the future.

20.3.1 Air Quality

Dust arising from the movement of vehicles, heavy equipment and from general wind pick-up from the exposed surfaces of the waste dump (and tailings if any) are the most significant sources of particulate dust pollution. Less significant long-term sources are associated with the initial site clearing, road reconstruction or rehabilitation, and construction of the plant if any.

20.3.2 Dust Management

Airborne dust problems will be at a maximum during the principal dry season between December and February and to a lesser extent in August. At other times of the year, rainfall will help damp down dust, supplementing the dust control practice of regular spraying by pressurised bowsers. Environmentally friendly dust abatement chemicals can also be called into play should the need arise, especially during dry spells (i.e. coherex). Special care will be taken by the company during the construction phase so that contractors are well cognisant of this potential problem so as not to disturb local inhabitants.

20.3.3 Flora and Land-Use

The western portion of the Supuma Forest Reserve just north of the proposed mine site is considerably downgraded by past logging (legal and illegal) and galamsey activities.

Outside of the Forest Reserve agricultural land use predominates with traditional cocoa farming, food crop farming, other cultivated tree crops and bush fallow. A review of the soil suitability shows that soils in the lease area are generally suitable for some food crops such as cassava, maize, plantain and cocoyam but cannot sustain viable cocoa production after 15 years or so from establishment.

Galamsey (artisanal miners) activity is common, predominantly alluvial but also some hard-rock operations along the Ashanti Trend west of the Kubi Trend. Activities occur into the forest and immediately west of the present clearing and company property on hanging wall veinlets in the Birimian of the Kubi Zone. Some galamsey activities have also occurred on the north-east wall of the pit, mining veinlets of the contact zone in the Tarkwaian.

Management: After consultation with the Forestry Department, and the local population to assure of their cooperation and participation, the company will budget as part of its corporate social responsibility program a "refurbishing" program for the degraded western Supuma Forest reserve.

Again, as part of its social responsibility program, and a long term budgeted and funded "sustainable development" action plan for affected / stakeholder communities, we foresee a program of rejuvenation of the Cocoa industry (or alternate better suited cash crops if experts deem it so) in the area, sponsoring willing young farmers (in a gender-sensitive manner if at all possible) to plant new hybrids and be trained in better husbandry practises (this will probably require some sort of short term subsidy, and grant / loan schemes).

After stakeholder meetings, in the past and recently, the priority for the local population is employment and also electrification for the area. Financing this may be the first priority of the company therefore, longer term socio-economic programs will follow once a mining decision is made, revenues start flowing, and this priority has been financed.

Subsistence artisanal mining, alluvial and "hard rock" is a common occupation, especially out of the farming season, as elsewhere in Ghana. For safety reasons, hard-rock galamsey will not be permitted near or on any of the active mining areas. It is hoped that some of these displaced, hardworking and resourceful young men and women, if local, will be found suitable for some sort of job training employment by the company or its contractors. A surprising and substantial number of the artisanal miners are outsiders.

The surrounding communities have communal rights to the forest to pick non-timber products such as leaves, herbs, snails, mushrooms etc. One of the present access routes to the western forest reserve is through the proposed fenced in mining compound, but an alternate route is provided for, a path-way parallel to the eastern fence line. (The Forestry Services will be consulted). Presently the lock on the Forestry access road gate is frequently broken as this road is used to access the “Lagos” area as the bridge at Aponyase cannot support large equipment such as excavators. Access control will be enhanced by the company's presence. This road access is currently planned to be re-routed around the proposed mine site.

20.3.4 Fauna

The baseline study revealed that all of the fauna and spoor noted is located in the Eastern Supuma-Shelterbelt Reserve. The only bird of conservation importance, the European swift, was observed both inside and outside the reserve.

FAUNA MANAGEMENT

The project is outside of, and south of the Western, degraded Forest Reserve, well west of the eastern Reserve which shows a biodiversity of interest. As such the underground mining activities will not impact the present fauna. Public education programs among employees regarding minimising "bush meat" purchases could be implemented as they could increase the demand for such to the detriment of the present biodiversity. Perhaps sponsoring grasscutter and snail rearing etc in local villages as part of the community sustainable development program could also lessen the pressure on this precious resource.

20.3.5 Blasting and Noise

Excavation and blasting of the portal, decline and raises, during the construction phase will be the greatest source of noise. Once the excavation reaches 50+ metres in length or depth, the blast noise will be quite muted, and should only be felt as minor ground tremors. The initial blasts will have down-hole initiating caps, minimising blast noise. Two to three blasts a shift will be initiated, including at night, so the two closest communities will be affected.

The construction phase will also engender a lot of noise, which at night could be a source of annoyance to the nearby communities. This will be discussed and mitigated with them.

Once mining and full production starts, plant noise and surface equipment noise will be omnipresent night and day, as a constant background noise.

Noise Management: Sound levels will be monitored at Old Kubi and Ohiampenika and compared with the baseline values. Once the initial more temporary and potentially more disturbing construction phase is completed (more instances of instant loud noises as opposed to a constant background) ambient noise levels will be closely monitored to assess if there is a significant problem. It is the present belief that it will probably not be: the mine 500 - 600m distant will be a "white noise" hum in the background. Although the operations will be supplied with grid power, the backup diesel generator plant will be suitably shielded.

Underground mine blast noise will not be a problem, or any derived vibration. Once full production commences the largest blasts in stopes will be in the range of 2000t to 3000t, at most 2 or three times a week, and will be heard and felt, if at all, as a distant rumble. Development heading blasts, 50t to 150t, during the exploration development phase and during future production phases, should not cause any disturbance.

Blasting times in the initial stages will be made known to the nearby communities to avoid undue alarm. It is the intent and expectation of the company that constant friendly and respectful dialogue with full transparency will be maintained with local communities.

20.3.6 Surface Water

The results of the baseline studies revealed that the surface streams in the area are fair in quality except for their bacteriological content. The quality of the perennial rivers, the Offin and Gymini, which receive the run-off from the Lease area, and from "up-country" and Obuasi, is poor. The Gyimi River (aka "Jimi river") passes by AGA's operations in Obuasi, and many communities. Upstream from Kubi, near Obuasi, the Gyini River is dammed by AGC (now AGA) as a source of water. Water quality of the Gyini is poor both upstream and downstream of the Kubi lease at this time. Both locations will be continuously monitored to ensure that our project does not add to the Gyimi's contamination.

The Offin suffers from a large particulate matter load, due to extensive past and present alluvial operations near and at times within it.

WATER MANAGEMENT

The surface waters of the area, as is common in populated areas of Western Ghana due to human activities - farming, artisanal mining, inappropriate toilet practises, free range sheep, goats, chickens and pigs, and unorganised domestic waste disposal, are in poor enough state that the company does not want to compound the problem. Sewage disposal on site will be in septic systems and alternate treatment solutions. Garbage will be disposed of in a sanitary land-fill on-site or in Dunkwa.

The largest risk to the surface waters is run-off from rock dumps, and if installed in the future, a tailings dam system. Rock dumps will be scarified and roughened to increase water infiltration and thereby decrease the volume of run-off should it ever become a problem. The rock dumps will not be acid generating, based on historical tests. Samples from the pilot holes (decline), will be subjected to acid Generation Tests as a precaution. The tailings dam system if installed in the future will be well engineered, and if deemed necessary surrounded by clay lined, impermeable berms.

Lining of dumps (development, and ROM ore) and if installed the tails/settling ponds will be carried out if it is deemed necessary by investigations. Final tails, if any on site, it is planned, will be super thickened (to toothpaste consistency) and will therefore contain very little water. Complete chemical cyanide destruction will be practised at the thickening plant should recycling not be 100%. The residence time in the first settling pond at the head of the Tails front will be sufficient (3 days minimum) for complete cyanide destruction by UV rays (the sun) should prior efforts (recycling and chemical destruction) not be 100% effective. Mill process water will be recycled in a closed circuit, supplemented by a pipeline from the Gymini or wells if needed.

The entire mine site will be ditched to isolate it from the surroundings, and the quality of the final discharge to the environment from this closed circuit, from the last clear water pond if necessary, will routinely be monitored as is common industry practice. These diversion ditches and grassed waterways will intercept run-off. Trenches 30cm deep, 60cm wide at the top with 45 degree sloping sides with gradients between 1:40 and 1:30 will be constructed, to report at a common collection point, an exclusive sedimentation pond or if any the tail's second settling pond.

Monitoring of the surrounding surface water quality will be a continuous process, as is common industry practise during both the construction phase and during the LoM and beyond to complete rehabilitation to the EPA's and mining department's satisfaction.

20.3.7 Groundwater

Past analysis of various groundwater samples indicates generally good chemical quality, but it generally suffers from the usual ubiquitous coliform contamination. The update sampling baseline program will indicate if conditions have changed since the last monitoring.

Groundwater Management
Most comments in the section above regarding surface waters and avoiding contamination also apply here.

Mining along 600m-800m of strike length to potentially a 500m-600m depth eventually will lower the ambient water table, affecting surface and even deep wells to a fair distance from the project.

It is proposed to drill a couple of wells and place piezo-electric monitoring devices in suitable places in the near future between the project area and habitations. This will give us a measure of annual fluctuation, and monitor the possible fall of the water table as mining goes down.

Domestic water quantity and quality is always a problem to the local population. The mine site will also need a source of potable water. It is proposed to drill one or two domestic water wells perhaps east of the mine site, east of Ohiampenika and Old Kubi or any suitable site proposed by our hydrological specialist experts (the Birimian to the west may be a better source of groundwater than the Tarkwaian to the east) beyond any probable negative drawdown effect on the water table of the mine development. A water tower will be constructed, and water lines built to supply treated potable water to the mine site, and if required later by the draw-down of the water table to strategically placed standpipes in the proximal communities. Monitoring of these standpipes to avoid abuse (problem of breakages or constantly open valves) is a problem that can be solved with the communities' co-operation.

Monitoring of community well water quality will be a continuous process, as is common industry practice during both the construction phase and during the life of the mine and beyond to complete rehabilitation to the EPA's our, and mining departments' satisfaction.

20.3.8 Impact on Landforms and Physical Features

Previous mining by open pit changed the landscape. There is now a few hectares of flat grass revegetated ground, up to the 40m north face of the pit into Kubi Hill. Some farmers had encroached into the "mine compensated compound". The squatter farmers who had planted food crops on the fill surface in the pit were compensated in March of 2015 so they could resume farming elsewhere. Other squatter farmers within the surface rights owned by the company east of the pit may also have to be compensated once construction work commences.

With the construction of an underground mine and possibly of an accompanying mill the natural landscape will indeed change, as will the tailings disposal system, waste rock pile, mill building and potential solar power farm.

20.3.9 Mitigation Management

Mine closure / decommissioning plans will include the mill, if any. Mine and office buildings will be offered to the government (District Assembly, health or education authorities etc) should they be of use and the EPA approves or they will be destroyed for the complete rehabilitation of the site. Re-vegetation of the rock pile and tailings (if any) will begin as soon as is practical, to alleviate both dust and visual impact.

The compound will be fenced, and a path east of the fence will be provided.

20.3.10 Socio-Economic

Village infrastructure and amenities are currently poor to very poor, reflecting the general poverty and economic subsistence level of the general population residing within the lease. Cocoa farming is hardly sustainable at this time, and other tree cash crops are few.

Socio-Economic Management

Company policy is to have suitable social responsibility programs to make the stakeholder communities, and especially the ones most directly affected, feel they are respected, consulted, and informed at all stages of the project. Affected communities expect some tangible benefits from our presence. Managing expectations is always a challenge though.

First request / demand / hope is for jobs. Company policy on this has been elaborated elsewhere. Next is water, and electricity. Addressing this also is in the company's plans as noted in the preceding sections. Help with infrastructure (upgrading schools, supplying accommodation to teachers to help retain them, build clinics / nurse accommodation (after consulting the Health Dept) to attract such services, and malaria control spraying, are the sort of projects that as budgets permit will be considered, and are often priorities for these communities.

Electrification programs can be sponsored and subsidised, aiding local self-help committees, unit committees, government / ECG programs and district assemblies. This is a very large budgetary item, and would consume a large proportion of any CSR program budget, expectations for addressing other concerns rapidly should be tempered should this be financed. Our relationship with the stakeholder communities is good and cordial, at this time, and they are very understanding of these issues.

In addition to these infrastructure programs which are usually ad hoc and at the request of the local authorities, and of visible, long-lasting benefit to the general population, gender-sensitive if possible so-called "sustainable development" activities and programs are also on the agenda: alternative income generation and livelihood training, micro credit (with a grant component for good compliance) community development activities, capacity building / skills training if interest is shown.

Ghanaians have proven to be too individualistic for group / co-operative endeavours. It is our opinion that it is best to aid / sponsor individuals for income-generating and alternative livelihood or farm improvement activities. As farming is the current lead occupation and likely to continue in the future, and is struggling, a focus on agric / cocoa training, (and alternative tree crops) with demo plots of "willing" sponsored farmers could be an avenue for future income generation, and small upgrade in living standards.

All this will not happen overnight and is well understood by the population from recent conversations, but over the probable 8-10 years of the project's life, if it comes to fruition after the advanced exploration stage being proposed, it is our intent that the general socio-economic status of the stakeholder communities, with help from the government, will have benefited from our presence.

20.3.11 Environmental Monitoring

As is common industry practice, environmental monitoring programs will be implemented, and sustained throughout the life of the project for surface and groundwater, settling ponds, perimeter ditches, quality of water discharges from sediment control facilities, noise and air quality. Blast vibrations will be monitored, though are not expected to be a problem as most blasts will be deep underground. Monthly monitoring returns will be filed with the EPA as per regulations.

Occupational hygiene of company and contractor personnel, as well as safety programs will also be instituted and sustained.

Socio-economic monitoring by upper management will also be carried out to ensure company policy in these matters is followed, in a bid to foster and maintain good relations with the communities within the Kubi Lease.

20.3.12 Ongoing Monitoring

At the exploration stage, and to update the baseline studies it is thought to engage a local contractor / consultant to carry out required environmental sampling and measurements as well as social, archaeological, and anthropology studies. After the circa one-year baseline program is completed, and once mining starts, the company will probably task its own staff with the ongoing environmental sampling and measurements and statutory reporting and records, with support from consultants as necessary.

20.4 Baseline Program

SYK, a local Ghanaian hydro-geological, environmental and sociological consultancy and contractor has been contacted and has submitted a technical proposal to carry out update baseline sampling and measurements, submit a scoping study and EIS - EIA - EMP reports on the Kubi Lease. Ongoing monitoring during the exploration phase could also be carried out by this contractor / consultant.

Summary of the SYK proposal and recommendations:

- "One Off" updated study items to be reported:
- Hydrology
- Hydrogeology
- Flora
- Fauna
- Culture and Heritage
- Soils (An update from SGS 1998)
- Socio – Economic
- Traffic
- Medical
- Monthly baseline sampling and measurements for 12 months / one year
- Surface water quality
- Ground water
- Air quality
- Noise measurements.

A field visit by SYK professionals provided an evaluation of the Environmental Impact Assessment (EIA) requirements for this brownfield project, as per the Environmental Assessment Regulations of Ghana 1,999 L.I. 1652.

It was recommended that though the relationship with the affected communities is currently very good, cordial and transparent, community engagements should be done in a more coordinated manner, though the informal relationship should be maintained. In addition to this it is required to have a more formal community relation and engagement plan, which would include communities' representation and participation.

The above sampling and measurement program were suggested in preparation of an Environmental Management Plan (EMP).

30 proposed sites were selected for sampling and / or monitoring for various baseline components, considering previous sites of the SGS/Nevsun, Ashanti, and PMI/BizGeo sampling programs.

It is recommended to install air monitoring equipment at 5 locations, rain gauges at 2 locations, and a weather station (wind speed & direction) at one location.

21. CAPITAL AND OPERATING COSTS

21.1 Basis of Cost Estimate

21.1.1 Base Date and Terms

The mining cost estimate for the Kubi project is based on designs, costs and information as of February 2022. All monetary values are presented United States Dollars (USD) and in real money terms, free of escalation or inflation.

21.1.2 Estimating Methodology

The capital and operating cost estimates have been determined through the application of budget quotations, database costs and estimated costs to bills of quantities, material take offs and estimated quantities. Most of the capital cost is related to the mine design and mine plan, the quantities of which were computationally modelled and scheduled in three-dimensional space. Other costs relate to specific engineering designs, for which conceptual designs have been produced and quantities have been generated from the designs. This strategy is applicable for a scoping study.

21.1.3 Exclusions

The cost estimate does not make provision for any environmental or closure costs related to the infrastructure or mine plan presented in this report. No provisions have been allowed for escalation of any costs.

21.2 Capital Costs

21.2.1 Definition of Capital Cost

Capital costs have been defined in terms of project capital cost and sustaining capital cost. Project capital cost include all capital costs from the initiation of the project to the production of the first gold, this includes:

- The cost of all site preparation and surface infrastructure related to the mining infrastructure complex, including but not limited to the offices, change houses, workshops and other surface facilities
- The cost of mine development and underground facilities and services up to the point where gold is first produced
- Indirect and contingency costs related to the above.

Sustaining capital includes:

- The cost of mine development, underground facilities and services after the point at which gold is first produced
- Indirect and contingency costs related to the above.

21.2.2 Structure of Estimate

A high-level work breakdown structure ("WBS") was formulated for the capital estimate. The tier 1 elements of the WBS are;

- Mine development
- Surface Infrastructure
- Underground Infrastructure
- Indirect Costs
- Contingency.

21.2.3 Summary of Capital Estimate

A summary of the Total Capital Cost is presented in Table 63. The table presents the Project Capital, Sustaining Capital and Total Capital cost against the first tier of the WBS.

Area	Project Capital Cost USD	Sustaining Capital Cost USD	Total USD
Mine Development	10,632,319	57,130,462	67,762,781
Surface Infrastructure	17,092,204	0	17,092,204
Underground Infrastructure	2,852,562	3,679,668	6,532,230
Indirect Costs	2,136,745	394,214	2,530,960

Contingency	8,178,458	15,301,086	23,479,544
Total	**40,892,288**	**76,505,431**	**117,397,718**

Table 64: Summary of Capital Cost

Mine development capital cost comprises all the cost of the development of excavations such as the declines, footwall drives, station connections, return air ways and cross cuts. Mine development costs have been determined by reference to benchmark development rates obtained from a number of operating mines in Ghana. The benchmarked rates were standardised to a US$/m^3 rate, which was then applied to the various end sizes in the mine plan to determine a US$/metre rate for each end size, which are tabled below.

Development End Type	Face area (m^2)	US$/m	Project Capital Cost USD	Sustaining Capital Cost USD	Total USD
Decline (m)	18	4,324	3,238,320	7,236,754	10,475,074
Crosscut (m)	12.25	2,943	2,455,060	20,164,617	22,619,677
Footwall Drive (m)	18	4,324	4,024,496	20,394,114	24,418,610
Cubby (m)	16	3,844	63,033	315,713	378,746
Drill Cuddy (m)	16	3,844	764,311	3,459,756	4,224,068
Vent cubby (m)	9	2,162	19,952	2,006,192	2,026,144
Vent Raise (m)	9	2,162	289	2,660,082	2,660,371
Service Raise (m)	12.25	2,943	66,858	893,234	960,092
Total Capital Development			**10,632,319**	**57,130,462**	**67,762,781**

Table 65: Mine development Capital Cost

Capital costs for the surface infrastructure was factored from recent similar projects undertaken. The conceptual layout was used to estimate quantities for certain items. Generic building prices for similar sized projects were used.

Surface Facilities	Project Capital Cost USD	Sustaining Capital Cost USD	Total USD
P&G	2,275,927	-	2,275,927
Bulk Supply	871,056	-	871,056
Portal Area	1,647,550	-	1,647,550
Mining Complex	652,169	-	652,169
Buildings	3,468,764	-	3,468,764
Electrical supply	5,659,800	-	5,659,800
Surface Vehicles	2,516,938	-	2,516,938
Total	**17,092,204**	**-**	**17,092,204**

Table 66: Surface infrastructure Capital Cost

Underground infrastructure costs comprise all costs related to facilities, utilities and services required to support the mining operation. This includes facilities, such as pump stations, fan installations and dams. In addition, all compressed air, water handling and electrical infrastructure is included as utilities and reticulation. A summary of underground costs and related infrastructure is presented in Table 66. Most of this cost was developed through cost estimation of conceptual engineering designs. The estimates are largely based on budget quotations, database costs and estimates.

U/G Facilities and Services	Project Capital Cost USD	Sustaining Capital Cost USD	Total USD
Compressed Air	33,547	108,699	142,246
Service Water	49,082	291,037	340,119
Dewatering	86,256	1,126,907	1,213,163
Potable Water	17,540	52,373	69,913
Electrical	315,931	592,269	908,200
Ventilation	2,140,072	1,099,728	3,239,800
Steelwork	210,134	408,656	618,790
Total	**2,852,562**	**3,679,668**	**6,532,230**

Table 67: Underground infrastructure Capital Cost

Indirect cost includes an allowance for engineering design and drawings. It is estimated at 10% of the engineering bill. Indirect cost is estimated at USD2.5 million.

Contingency has been included at 25% of total capital cost. Total contingency equates to USD23.5 million over the LoM.

21.2.4 Capital Cost Cash Flow

Capital expenditure through LoM is presented in Figure 86. The capital cash flow expenditure was approximated through the distributing the total capital costs over periods provided by the mining plan and a high level implementation schedule.

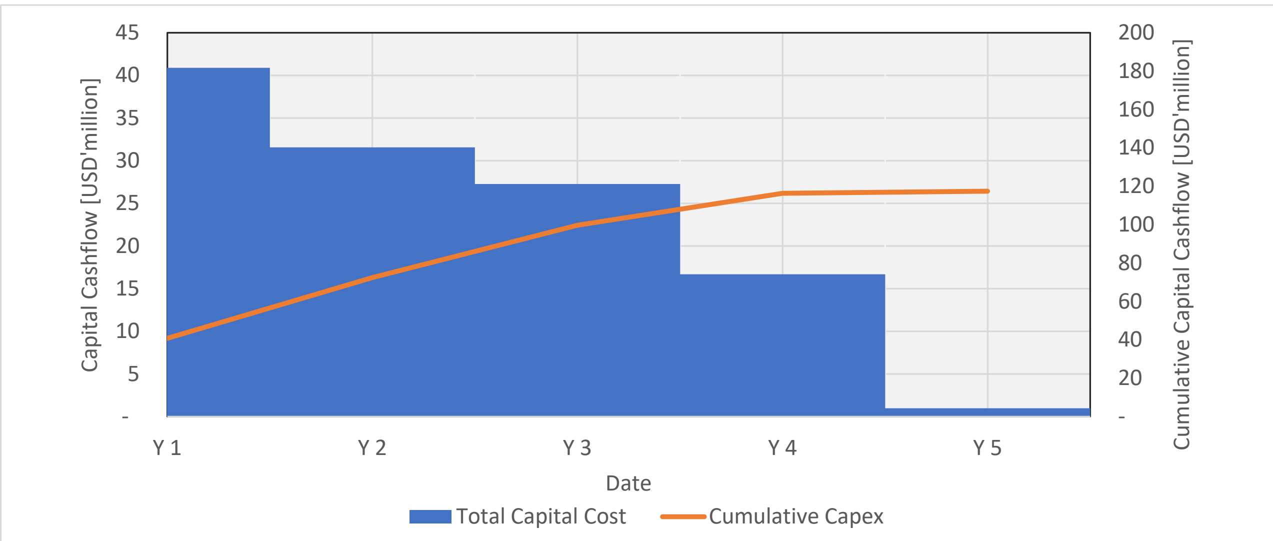


Figure 88: Capital expenditure through LoM

21.3 Operating Costs

21.3.1 Definition of Operating Cost

Operating costs have been defined as the cost all activities related to mineralised material mining and production, including;

- Direct variable mining costs, including the cost of consumables (explosives, drilling consumables, fuel, etc.) for mineralised material development and stoping activities
- Direct fixed mining costs, including the cost for labour required for mine production, technical services, surface and underground engineering
- Power cost for all mining activities
- General administration costs including mine management labour.

It is specifically noted that operating costs are exclusive of processing cost. Processing is undertaken through a toll treatment agreement whereby the plant operator pays for treatment in exchange for 15% of the recovered gold.

21.3.3 Summary of Operating Cost Estimate

The operating cost estimate is presented in Table 67. The table presents the LoM total and the unit operating cost per tonne milled and per ounce of gold recovered, by activity or area.

Operating Cost	LoM Total	Cost/t USD	Cost/oz USD
Mining	**77,440,464**	**49.82**	**400.00**
Ore Drives	34,760,086	22.36	179.55
Stoping	22,880,348	14.72	118.18
Hauling	779,048	0.50	4.02
Power	10,289,032	6.62	53.15
Maintenance	8,731,950	5.62	45.10
General and Administration	***22 475 000***	***14.46***	***116.09***
Provision	7 772 528	5.00	40.15
Owner Labour	14 702 472	9.46	75.94
Total	**99 915 464**	**64.27**	**516.09**

Table 68: Summary of Operating Costs

Mining costs have been determined through bench marking with other similar projects in West Africa. The methodology of estimating the development cost is described above in section 21.2.3. This methodology was applied to mineralised development as well. Stoping costs were estimated at US$20 per stope tonne mined based on a recent contractor cost for a similar mining approach in West Africa.

Power costs were determined through application of a cost for power to the LoM load schedule. Power costs were assumed to be USD0.127/kWh as per the tariff obtained for grid power.

The cost for maintenance was determined from the capital estimate by applying an estimated useful life of each item to the capital cost of that item; the resulting cost is applied as a variable cost per tonne.

In terms of general and administration, labour costs, which include management and technical services, was determined through application of labour rates to a labour schedule. Estimated allowances have been made with respect to other costs in regard to consumables for general and administrative purposes and outside contractors for mining and administrative activities.

21.3.4 Contingency

No contingency allowance has been calculated or has been allowed for in operating cost.

21.3.5 Operating Cost Cash Flow

Life of mine operating cost cash flow per annum presented in Figure 87 with the unit cash operating cost per tonne on the secondary axis. The operating cost cash flow is largely estimated by applying unit rates to the mine production schedule, with fixed costs applied over the life of mine where appropriate.

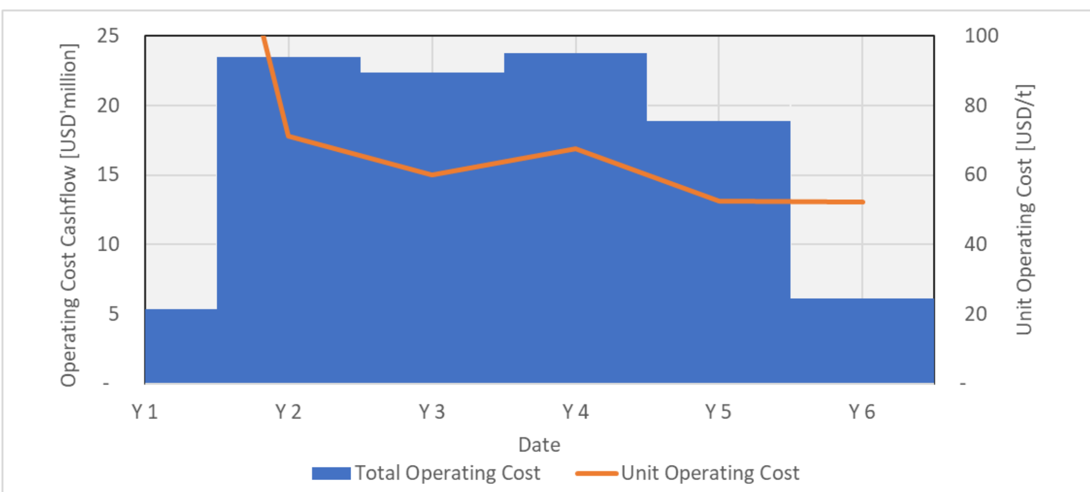


Figure 89: Operating Cost cash flow and unit Operating Cost (Bara 2022)

22. ECONOMIC ANALYSIS

22.1 Evaluation Methodology

The economic evaluation of Kubi was undertaken through a discounted cash flow (“DCF”) modelling approach. This approach includes determined project cash flows through deduction of capital and operating costs from operational revenues. The resulting project cash flows are used to determine key financial metrics such as payback period, peak funding requirement, net present value (‘NPV”) and internal rate of return (“IRR”).

The economic analysis presented below is based on Mineral Resources including Inferred Mineral Resources and that Mineral Resources are not Mineral Reserves and as such do not have demonstrated economic viability.

22.2 Revenue

The revenue was calculated by applying the gold price to the respective quantity of gold recovered from the processing facility. The sales pricing of gold applied in the evaluation is USD1,750/oz. The gold price was provided by Asante Gold as their forecast pricing for projects. It is also slightly below the 2-year trailing average for gold. (2021-2022 = $1785/oz) Assumed process recovery and physicals which drive the calculation of revenue is presented in Table 68. It should be noted an 85% payability is applied as per the terms of the toll treatment agreement. A total project revenue of US$288 million has been calculated over the LoM.

Description	Unit	Value USD
Processed Tonnes	t	1,554,506
Processed Gold (Au) Content	kg	6,510
Processed Gold (Au) Grade	g/t	4.19
Process Recovery	%	92.5
Recovered Content	kg	6,022
Recovered Content	oz	193,600
Recovered Grade	g/t	3.87
Gold Price	USD/oz	1,750
Payability	%	85.0
Total Revenue		**287,980,557**

Table 69: Calculation of project revenue

This PEA is preliminary in nature and includes Inferred Mineral Resources in its economics that are considered speculative geologically. There is no certainty that the PEA presented will be realized.

22.3 Royalties

While the Ghanaian government typically leverages 5% royalties, the royalties are paid by the processing facility as per the conditions set in the toll treatment agreement. Kubi therefore attracts no cost with respect to government royalties.

22.4 Tax

Taxation calculations are based on a 35% mining corporate tax rate with a 20% deductibility rate on capital allowance applied to assets. A summary of the tax calculation is presented in Table 69.

Description	Unit	Value
Gross Profit/Loss	USD	100,197,918
Depreciation	USD	29,530,543
Taxable Income	USD	71 272 494
Tax Rate	%	35.0
Tax Paid	USD	24,945,373

Table 70: Calculation of project tax

22.5 Discounted Annualised Cash Flow Analysis

An annual cashflow model and discounted cashflow model were prepared based on the mining schedule discussed in Section 16. The annualised production schedule and cashflows are tabled below.

Description	Total	Unit	Y1	Y2	Y3	Y4	Y5	Y6
Physicals								
Mining								
ROM Tonnes	1,554,506	tonnes	22,773	329,538	373,241	352,196	359,999	116,758
ROM Content	6,510	kg	80	1,259	1,573	1,470	1,598	529
ROM Grade	4.19	g / tonne	3.52	3.82	4.22	4.17	4.44	4.53
Processing								
Milled Tonnes	1,554,506	tonnes	22,773	329,538	373,241	352,196	359,999	116,758
Milled Content	6,510	kg	80	1,259	1,573	1,470	1,598	529
Milled Grade	4.19	g / tonne	3.52	3.82	4.22	4.17	4.44	4.53
Recovery	92.5	%	92.5	92.5	92.5	92.5	92.5	92.5
Recovered Content	6,022	kg	74	1,165	1,455	1,360	1,478	490
Recovered Grade	3.87	g / tonne	3.25	3.53	3.90	3.86	4.11	4.19
Recovered Content	193,600	oz	2,383	37,441	46,790	43,724	47,521	15,742
Revenue								
Gold Price	1,750	USD/oz	1,750	1,750	1,750	1,750	1,750	1,750
Payability	85.0	%	85.0	85.0	85.0	85.0	85.0	85.0
Total Revenue	287,980,557	USD	3,544,351	55,693,924	69,599,958	65,038,805	70,687,221	23,416,298
Operating Cost								
Mining	77,440,464	USD	2,794,183	19,343,082	18,056,669	19,565,090	14,638,223	3,043,217
Processing		USD	-	-	-	-	-	-
General Administration	22,475,000	USD	2,564,276	4,098,103	4,316,617	4,211,394	4,250,406	3,034,204
Royalties		USD	-	-	-	-	-	-
Total Operating Cost	99,915,464	USD	5,358,459	23,441.184	22,373,286	23,776,484	18,888,629	6,077,421
Unit Operating Cost	64	USD/tonne	235	71	60	68	52	52
Unit Operating Cost	516	USD/oz	2,249	626	478	544	397	386
Capital Cost								
Project Capital Cost								
Mine Development	10,632,319	USD	10,632,319					
Surface Infrastructure	17,092,204	USD	17,092,204					
Underground Infrast.	2,852,562	USD	2,852,562					
Indirect Costs	2,136,745	USD	2,136,745					
Contingency	8,178,458	USD	8,178,458					
Total Project Capital Cc	40,892,288	USD	40,892,288					
Sustaining Capital Cost								
Mine Development	57,130,462	USD		22,944,707	20,923,223	12,503,298	759,235	-
Surface Infrastructure	-	USD		-	-	-	-	-
Underground Infrast.	3,679,668	USD		2,075,770	810,316	770,585	22,997	-
Indirect Costs	394,214	USD		222,384	86,812	82,555	2,464	-
Contingency	15,301,086	USD		6,310,715	5,455,088	3,339,110	196,174	-
Total Sustaining Capital	76,505,431	USD		31,553,576	27,275,438	16,695,548	980,869	
Total Capital Cost								
Project Capital Cost	40,892,288	USD	40,892,288					
Sustaining Capital Cost	76,505,431	USD		31,553,576	27,275,438	16,695,548	980,869	-
Total Capital Cost	**117,397,718**	**USD**	**40,892,288**	**31,553,576**	**27,275,438**	**16,695,548**	**980,869**	
Cumulative Capex		**USD**	**40,892,288**	**72,445,864**	**99,721,302**	**116,416,849**	**117,397,718**	**117,397,718**
Tax								
Depreciation								
Opening Balance		USD		19,944,766	17,034,345	12,339,527	7,402,399	1,525,036
Additions	29,530,543	USD	24,930,958	2,594,713	1,012,895	963,232	28,746	-
Deductibility Rate	20	%	20	20	20	20	20	20
Depreciation	29,530,543	USD	4,986,192	5,505,134	5,707,713	5,900,359	5,906,109	919,917
Closing Balance		USD	19,944,766	17,034,345	12,339,527	7,402,399	1,525,036	605,119
Tax								
Gross Profit/Loss	100,197,918	USD	17,775,438	3,293,877	20,964,129	25,530,004	50,846,470	17,338,877
Carried Forward Net Loss		USD		22,761,630	24,972,887	9,716,471	-	-
Depreciation	29,530,543	USD	4,986,192	5,505,134	5,707,713	5,900,359	5,906,109	919,917
Net Profit/Loss		USD	22,761,630	24,972,887	9,716,471	9,913,174	44,940,361	16,418,960
Taxable Income		USD				9,913,174	44,940,361	16,418,960
Tax Rate	35.0	%	35.0	35.0	35.0	35.0	35.0	35.0
Tax Paid	24,945,373	USD				3,469,611	15,729,126	5,746,636
Cash-Flows								
AISC	176,420,894	USD	5,358,459	54,994,760	49,648,724	40,472,032	19,869,497	6,077,421
Unit AISC	911	USD/oz	2,249	1,469	1,061	926	418	386
AIC	217,313,182	USD	46,250,747	54,994,760	49,648,724	40,472,032	19,869,497	6,077,421
Unit AIC	1,122	USD/oz	19,411	1,469	1,061	926	418	386
EBITDA	188,065,094	USD	1,814,108	32,252,740	47,226,672	41,262,321	51,798,592	17,338,877
Pre-Tax Project Cash Flow	70,667,375	USD	42,706,396	699,164	19,951,234	24,566,773	50,817,724	17,338,877
Pre-Tax Projected Cash Flow (Cumulative)		USD	42,706,396	42,007,232	22,055,998	2,510,775	53,328,498	70,667,375
Post-Tax Project Cash Flow	45,722,002	USD	42,706,396	699,164	19,951,234	21,097,162	35,088,597	11,592,241
Post-Tax Projected Cash Flow (Cumulative)		USD	42,706,396	42,007,232	22,055,998	958,836	34,129,761	45,722,002

Description	Total	Unit	Y1	Y2	Y3	Y4	Y5	Y6
Government Free Carry	8,842,840	USD		69,916	1,995,123	2,109,716	3,508,860	1,159,224
Post-Tax, Post Dividend	36,879,162	USD	42,706,396	629,247	17,956,111	18,987,446	31,579,738	10,433,017

Table 71: Summary of annualised cash-flow model

A summary of the results of the DCF analysis is presented in Table 71. The table shows that the post-tax project NPV is US$30.7 million at a discount rate of 5% and the post-tax IRR is 25%. The peak funding requirement for the project is approximately US$42.7 million with a pay back period of two years. Post-tax project cash flows are presented in Figure 88.

Metrics	Units	Value (LoM/Avg)
Physicals		
Tonnes Mined	t	1,554,506
Gold Produced	kg	6 022
Gold Produced	oz	193,600
Recovered Grade	g/t	3.87
Life of Mine (incl. Construction)	years	6
Time to First Gold (incl Construction)	years	1
Capital Cost		
Project Capital Cost	USD	40,892,288
Sustaining Capital Cost	USD	76,505,431
Total Capital Cost	USD	117,397,718
Operating Cost		
Total Operating Cost	USD	99,915,464
Unit Operating Cost	USD / t_{ROM}	64
Unit Operating Cost	USD / oz	516
AISC	USD / t_{ROM}	113
AISC	USD / oz	911
Economics		
Revenue	USD	287,980,557
Free Cash flow	USD	45,722,002
Pre-Tax Project NPV_5	USD	50,162,728
Post-Tax Project NPV_5	USD	30,695,861
Pre-Tax Project IRR	%	33
Post-Tax Project IRR	%	25
Operating Margin	%	65
Peak Funding Requirement	USD	42,706,396
Payback Period	years	2

Table 72: Summary of discount cash flow analysis

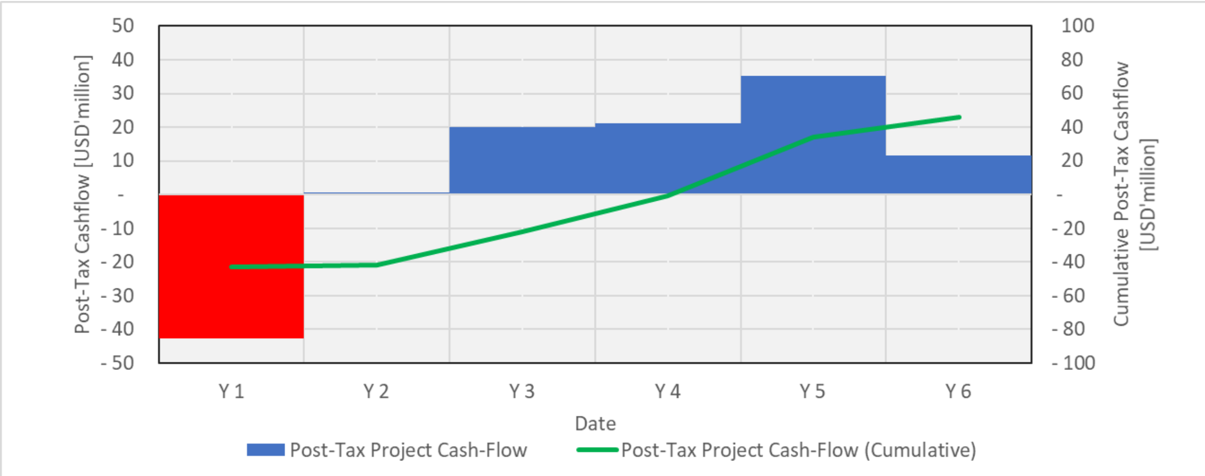


Figure 90: Post tax project cash flow over LoM

22.6 Sensitivity Analysis

A sensitivity analysis was performed on the financial model in order to determine the effect of likely variances on the capital cost, operating cost and revenue on the project. The analysis determined that the project is mostly sensitive to changes in operating cost and revenue. The results of the analysis are presented in Figure 89 and Figure 90. The figure presents post-tax NPV and IRR in relation to changes in capital cost, operating cost, and revenue respectively.

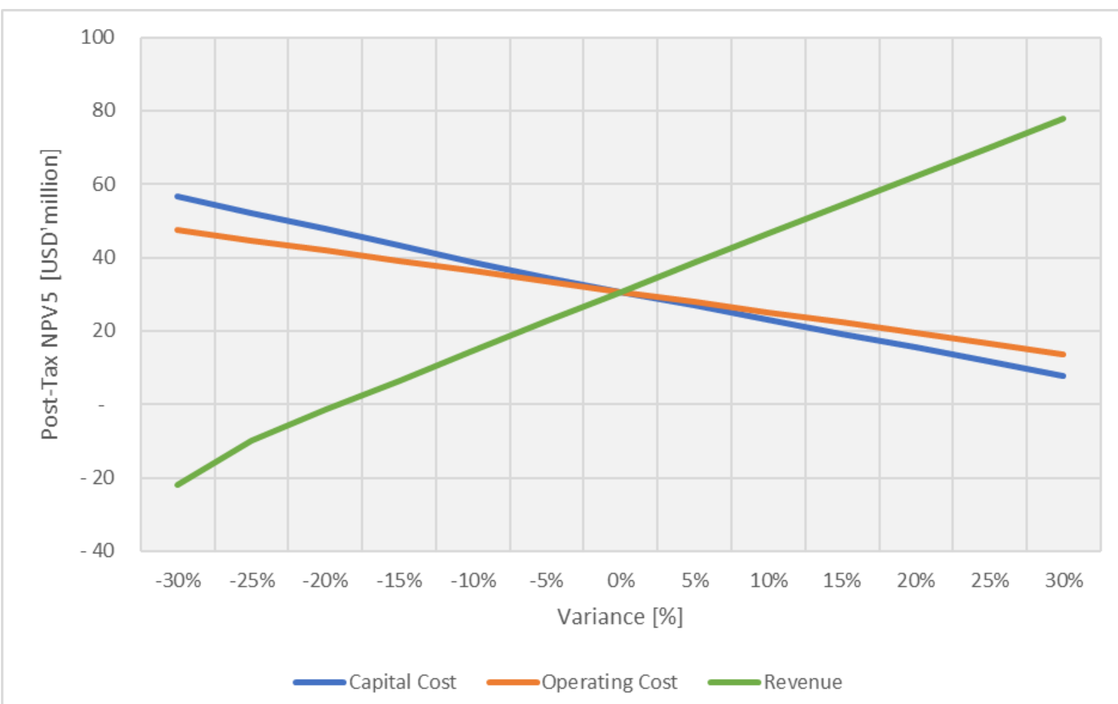


Figure 91: Post tax NPV sensitivity

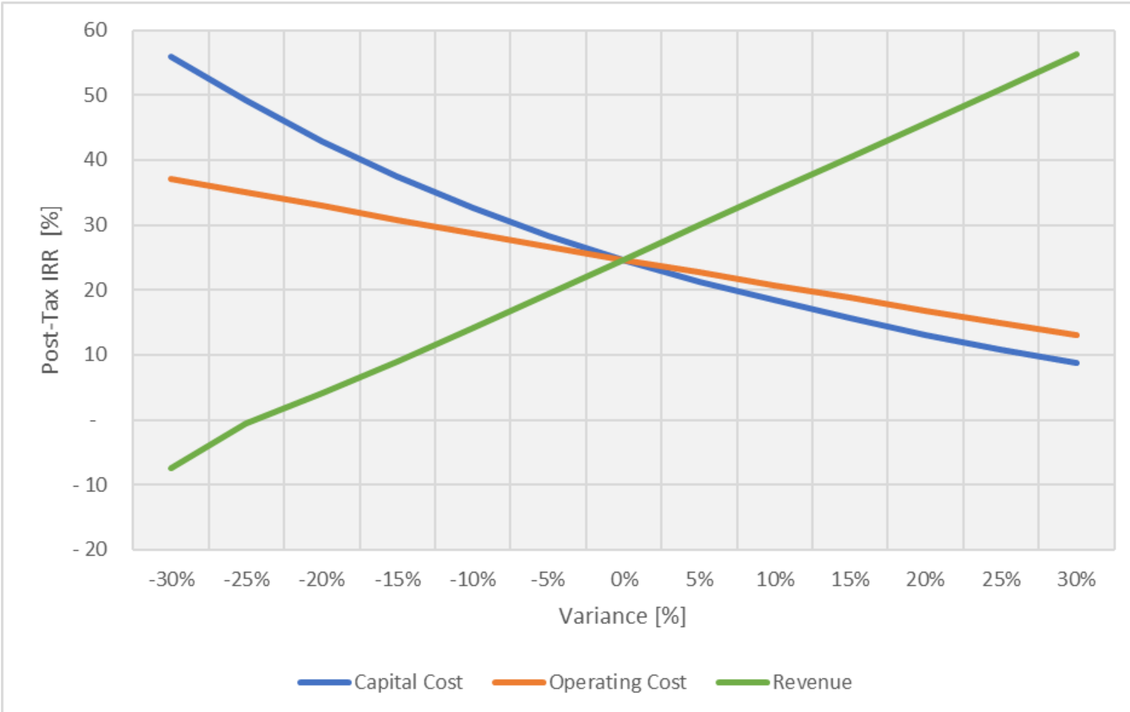


Figure 92: Post tax IRR sensitivity

23. ADJACENT PROPERTIES

In Ghana, Africa's largest gold producer, many big mines are located along northeast trending regional shear systems that exceed 250km in length. Studies indicate that the hydrothermal gold mineralising system that generated the Ashanti Gold belt deposits was "gigantic and extended to at least 10km to 15km in depth" (Schmidt Mumm et al 1996).

This shear zone hosts the largest single gold mine Resource in Ghana, the 66Moz AngloGold Ashanti Obuasi Mine which typically contains mineralised shoots hosting 3Moz at head grades of 10g/t to 15g/t and plunges to more than 2km in depth. Fine refractory gold occurs in arsenopyrite disseminated with pyrrhotite and pyrite with free milling coarse gold in late quartz veins. This major shear zone cuts Kubi 15 km southwest of Obuasi.

Perseus Mining's Edikan gold deposits at Ayanfuri lie about 18 kilometres to the west southwest of Kubi.

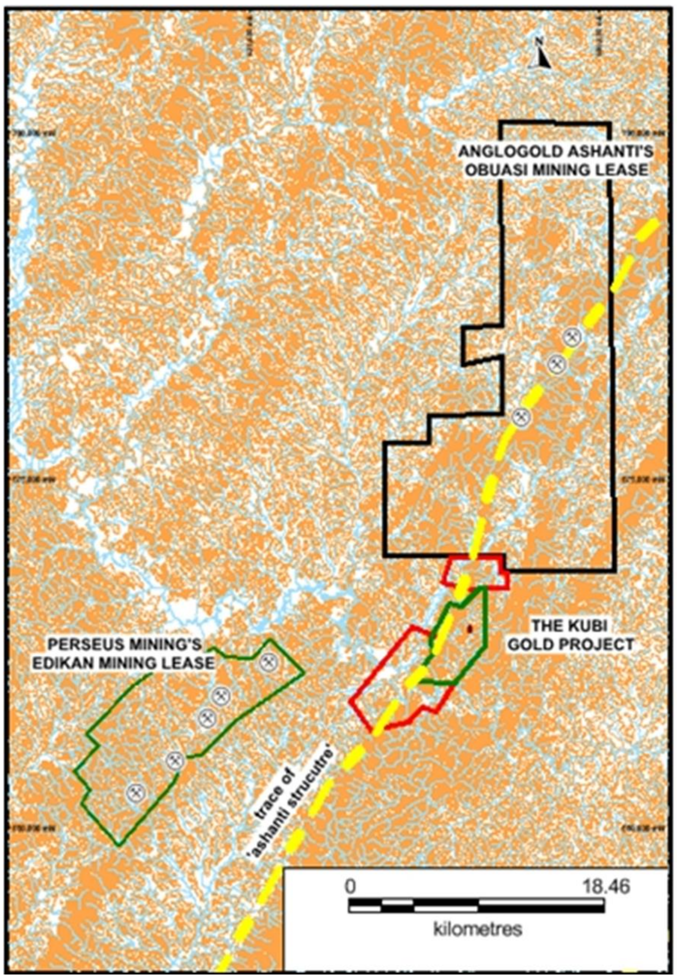


Figure 93: Kubi Gold Project in relation to Obuasi & Edikan gold mines and Ashanti Shear. (SEMS, 2014)

The Authors have relied on the information from publicly disclosed documentation and current website information for the respective companies mentioned as nearest neighbours to the Kubi project. The qualified Persons have not visited these operations and are unable to verify the information presented.

The mines mentioned in this section all lie within the same geological environment and host rocks and share the structurally controlled vein type mineralisation characteristics. However, this information is not necessarily indicative of the gold endowment experienced within the Kubi Project as reported.

24. OTHER RELEVANT DATA

There is no further relevant data that the Authors are aware of that pertains to the Kubi Gold Project. All relevant data and information at this stage of the project development has been included within the respective sections of this Technical Report.

25. INTERPRETATION AND CONCLUSION

Project Risk

The Authors have identified the following as the main project risks:

- Mineral Resource confidence – the study is largely based on Inferred Resources which inherently introduces geological risk
- Mine Development – the decline development may be affected by ground conditions near to surface
- Haulage - This toll treatment arrangement will require haulage of material over public roads.
- Processing – the study has assumed toll treatment at a nearby plant but no firm agreements are currently in place that include terms and conditions with regard to this decision.
- Economic analysis – the study is based on preliminary technical studies and includes Inferred Resources and is therefore at a low confidence level.

The plan is based on the completion of the underground development, exploration and trial mining as proposed to address the risk s highlighted above.

Geology and Resources

The SEMS (2014) NI43-101 Technical Report estimated the presence of Measured and Indicated Resources of 233,000oz Au in 1.32Mt at a grade of 5.48g/t Au and Inferred Resources of 115,000oz Au in 0.67Mt with an average grade of 5.31g/t Au. This has encouraged the Company to consider a more focused underground exploration and development program to enhance the economic potential of this Kubi Project.

The Authors have reviewed all the documentation and information supplied by Asante and relevant to the Kubi Project. As stated earlier in the report the NI43-101 MRE submitted by SEMS in 2014 has formed the basis of this PEA investigation. The data and methodologies used in the Resource Estimation are consistent with similar deposits and therefore the recommendations and assumptions made by SEMS are supported by the Authors. The 2010 Mineral Resource utilised a 2.0g/t Au cut-off grade and adhered to strict mineral deposit widths when constructing the Kubi Mineral Resource model. The 2010 Mineral Resource model, compared to previous models, produced an increased average Mineral Resource grade within the Kubi deposit and an increased confidence level to the model demonstrated by the inclusion of a Measured Resource category.

The Authors concur with the SEMS 2014 conclusion that, except for the Supuma Belt Forest Reserve, there are no significant external factors such as environmental, socio-economic, legal, marketing and political factors that could have a material effect on the MRE and current plans to develop the Kubi Project. The recent geophysical exploration and diamond drilling that has been ongoing since Asante initiated such exercises in 2016 will only add deeper geological understanding and extend the mineralised zones in depth and along strike. Exploration activities, and the results thereof, undertaken by Asante since August 2016 and which are still ongoing, have not been included to augment the 2010 MRE for the purpose of this Report. The QP is confident that there has been no material changes arising from the ongoing exploration in and around the Kubi Mineralised deposit that will affect the current Resource Estimation parameters and outcomes used for the purpose of this PEA and Technical Report. The intersections in recent drilling within other areas of the property encourage further work and will be included in future Technical Document submissions.

Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resource will be converted into Mineral Reserves.

The Report is based on the estimation of Inferred Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorised as Mineral Reserves and this implies that there is no certainty that the PEA will be realised as presented.

Two Authors have visited the site and have inspected the quality of work carried out by Asante in the present exploration and sampling exercises as well as inspect historic core and drill hole positions. The Company continues to follow industry best practise protocols and use accredited laboratories for all exploration related sampling and assays.

The outcomes of the estimations and the proposed mining and exploration programme form the basis of ongoing extensional exploration and the intention to produce an updated geological model and subsequent Mineral Resource Estimate incorporating recent exploration results and other relevant information.

Economic Analysis

The PEA presented in this Technical Report has indicated that this is a justifiable approach and the Authors support that the Project as presented has the potential to return a positive economic outcome for the proposed program and subsequent future of the Kubi Gold project. The preliminary mining study and preliminary economic assessment presented in this report have demonstrated that there are no fatal flaws in the preliminary mining plan and that, based on the assumptions documented in the mining study, there is no reason why the project should not be progressed to more detailed level of study.

26. RECOMMENDATIONS

The following is presented as further points for consideration.

26.1 Permitting

A full list of all permits required to commence mining operations should be collated. The list should itemise all requirements necessary for each permit and an estimate of realistic timeframes for permits to be sanctioned by the authorities. The permitting schedule is frequently underestimated by companies when setting start up dates for mining operations. Understanding permitting timeframes can set the agenda for other aspects of project development.

26.2 Geology and Resources

During development of the exploration decline, a resource drill program should be commenced as soon as practical. Sectional drilling could be undertaken as the decline/foot wall drives are developed along strike. Mineral Resource Estimates would be revised as the drilling progresses to minimise time lost between the drilling program completing and release of an updated MRE. Drilling contractor negotiations could commence to ensure negotiations are completed on time and the most appropriate contractor chosen based on safety record, availability, pricing and efficiency.

26.3 Geotechnical

Due to the deep weathering profile in the area planned for decline development and infrastructure placement, a geotechnical evaluation program should be completed. Geotechnical drilling of the decline route will be required to determine the optimal and cost-effective ground support methods through the weathered zones. In addition, geotechnical studies on the planned infrastructure locations (offices, changerooms, workshops, substations etc) will be necessary. Geotechnical test pits, trenches and drill holes will be required to determine the civil foundation designs required.

Although there is a plan for underground drilling to be undertaken from the exploration decline, it is advised that some surface drilling be undertaken to clarify the geotechnical parameters of the crown pillar prior to commencement of the decline. The crown pillar properties will determine the placement of the 1st level underground.

26.4 Mining and Reserves

A selection of mining contractors (Local and International) should be created and eventually short listed for evaluation. Proven expertise in narrow mining methods (stoping and development) will be essential for the success of the Kubi project. Both geohydrological and geotechnical studies should be progressed to at least pre-feasibility study level of detail such that they can support a more detailed mine plan and ultimately support a Mineral Reserve Estimate for Kubi.

26.5 Processing

Run of mine mineralised material treatment options must be clarified in greater detail. Negotiations should be conducted with all potential gold processing plants within a practical haulage distance. Offtake Term Sheets to process the Kubi ROM should be collected from each potential processing plant for detailed evaluation. All costs, deductions and full payment terms need to be provided, along with availability of plant capacity to accept Kubi ROM in both the short and long term.

This Report has discussed and focussed on a toll milling solution for the processing of the Kubi ROM within a 30km radius. However, in follow up studies once the exploration and mining development has been achieved and results received, the Company should assess the economic opportunity and possible benefits of trucking ROM directly to Bibiani Gold Mine, a distance of 80km which is also owned by Asante Gold Corporation.

26.6 Infrastructure

A detailed study of the area should be made on suitable and sustainable water supplies for the operation. All options should be reviewed and considered for the supply of both production and potable water for the project. The three potential water sources being 1) local rivers, 2) rainwater runoff with associated catchment dams and 3) water bores.

26.7 Environmental and Social

Limited environmental and social studies have been undertaken over the last two decades in the project area and hence a thorough Environmental and Social Impact Assessment (ESIA) should be commenced. Base line flora, fauna and water surveys should be updated and a comprehensive social engagement process with local communities begun. The development of a social management plan will allow the local communities to adjust to alternate occupations, where mining activities will disturb their existing farming and artisanal mining roles.

26.8 Economic Analysis and Outcomes

Following the completion of an updated MRE, a PFS should be commenced considering information gathered as noted above. Trade off studies may be required based on the outcome of information gathered. i.e. Owner milling vs Toll treatment, Owner mining vs contractor.

The work streams proposed to progress the Kubi Gold Project include:

- Underground development for exploration purposes
- Diamond drilling programme to improve mineralised deposit confidence
- Revision of Mineral Resource Estimate to include all available data after compilation of drilling programme
- Site specific geotechnical study:
    - Geotechnical logging of additional boreholes
    - Collection of samples and laboratory testing of uniaxial compressive strength, triaxial compressive strength, base friction angle and Brazilian tensile strength
    - Compilation of a geological structure database
- Geohydrological study
- Revision of mine plan based on latest geotechnical, geohydrological and geological data, to at least pre-feasibility level of detail, to support a Mineral Reserve Estimate
- Additional metallurgical and processing work to include:
    - Trade off study to investigate economic benefit of toll treating with neighbour mines (within 30km) or trucking to Asante owned Bibiani Gold Mine (80km)
    - Trade-off study on toll treatment versus on-site processing
    - Samples that are representative of the likely run of mine grade
    - Variability testing
    - Revision of the plant design, capital and operating cost to match the planned production rate.
- Commencement of the ESIA process and ESG studies to support the application for the Mine Operating Permit.

WORKSTREAM	USD 000's
Exploration Decline	20,000
Diamond Drilling	2,600
MRE Update	30
Geotechnical Study	50
Geohydrological Study	100
PFS Level Mine Design	50
Metallurgical Testwork	150
ESIA	200

Table 73: Estimated costs to complete recommended actions

27. CERTIFICATES OF QUALIFIED PERSONS

David Michael Begg

This Certificate of Author has been prepared to meet the requirements of National Instrument 43-101 Standards of Disclosure for Minerals Projects as published 30th June, 2011, Part 8.1.

a. Name, Address, Occupation
David Michael Begg
38 Gemsbok Street, Scarborough, Western Cape, South Africa, 7985,
Director, dMb Management Services Pty Ltd

b. Title And Effective Date of Technical Report
Kubi Gold Project National Instrument 43-101 Technical Report, Ghana, West Africa. Effective date: 28th February, 2022.

c. Qualifications
Honours Degree in Geology from University of Cape Town (UCT) (BSc Hons Geology).
Member with the Geological Society for South Africa (MGSSA).
Registered with the South African Council for Natural Scientific Professions (Pr. Sci. Nat).
Member with the South African Institute of Mining & Metallurgy (MSAIMM)
I have over 25 years' gold experience in exploration and mining operations; senior and executive management; project planning and execution; technical due diligence; mineral resource and reserve estimation.
I have read the definition of "qualified person" set out by National Instrument 43-101 and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43- 101) and past relevant work experience I am a "Qualified Person" for the purpose of NI 43-101.

d. Site Inspection
I have visited the Kubi Gold Project between 4th and 12th February, 2022

e. Responsibilities
I am responsible for Sections 1-12, 14, 23-27 and for the compilation of this NI43-101 document in collaboration with relevant Qualified Persons and technical experts from other consultancies.

f. Independence
I am currently Director of dMb Management Services Pty Ltd. I am independent of the issuer according to the definition of independence described in section 1.5 of National Instrument 43-101

g. Prior Involvement
I have not been involved with the Asante Gold Corporation on the Kubi Gold Project prior to this Technical Report.

h. Compliance with NI 43-101
I have read National Instrument 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with same.

i. Disclosure
As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

29th August, 2022

David Michael Begg **Date**
BSc (Hons) Geology. GSSA, Pr. Sci. Nat., MSAIMM
Director dMb Management Services Pty Ltd

CERTIFICATE OF QUALIFIED PERSON

Ian Jackson

This Certificate of Author has been prepared to meet the requirements of National Instrument 43-101 Standards of Disclosure for Minerals Projects as published 30th June, 2011, Part 8.1.

- I am self-employed as a mineral processing engineer by Jackson's Unique Mineral Process Services Limited, Worthy House, 14 Winchester Road, Basingstoke, Hampshire, RG21 8UQ England.
- I graduated with a Bachelor of Engineering degree in Mineral Process Engineering from the Camborne School of Mines in 1987.
- I am a Chartered Engineer registered with the Engineering Council (UK). I am a Fellow of the Institute of Materials, Minerals and Mining (IOM3) and a Member of the Southern African Institute of Mining & Metallurgy (SAIMM).
- I have worked as a Metallurgist and Process Engineer on production plants and performed project evaluation and engineering roles in project engineering companies for a total of 34 years since my graduation.
- I have read the definition of "qualified person" set out in the National Instrument 43-101 ("NI-43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101.
- I did not visit the Kubi Gold Project
- I have reviewed the work carried out by other professionals and take responsibility for Sections 13 and 17 of the Technical Report.
- I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- I have no prior involvement with the property that is subject of the Technical Report.
- I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- To the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 29th August, 2022

Original Document signed by

Ian Jackson, BEng, ACSM, CEng, FIMMM, MSAIMM

CERTIFICATE OF QUALIFIED PERSON

Clive Brown

This Certificate of Author has been prepared to meet the requirements of National Instrument 43-101 Standards of Disclosure for Minerals Projects as published 30th June 2011, Part 8.1.

a. Name, Address, Occupation
Clive Wyndham Brown
40 Groenekloof Road, Hilton, Kwazulu-Natal, South Africa
Principal Mining Engineer, Bara Consulting Pty Limited

b. Title And Effective Date Of Technical Report
NI 43-101 Technical Report, Kubi Gold Project, Ghana, West Africa
28th February, 2022

c. Qualifications
BSc (Eng) Mining University of the Witwatersrand
Pr. Eng. (Engineering Council of South Africa)
Fellow of South African Institute of Mining and Metallurgy

I have 30 years of experience in mining operations, management, technical services and mineral reserve estimation. More than five years of this experience has been directly in gold mining. I have read the definition of “qualified person” set out by National Instrument 43-101 and certify that, by reason of my education, affiliation with a professional associations and relevant work experience. I am a “Qualified Person” for the purpose of NI 43-101.

d. Site Inspection
I did not undertake a site visit to the Kubi site.

e. Responsibilities
I am responsible for Section 15-16,18-22, 24-27 of this report.

f. Independence
I am independent of the issuer according to the definition of independence described in section 1.5 of National Instrument 43-101.

g. Prior Involvement
I have not had prior involvement with the property that is the subject of the Technical Report.

h. Compliance with NI 43-101
I have read National Instrument 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with same.

i. Disclosure
As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

29th August, 2022

Clive Wyndham Brown
BSc (Eng) Mining, Pr.Eng

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