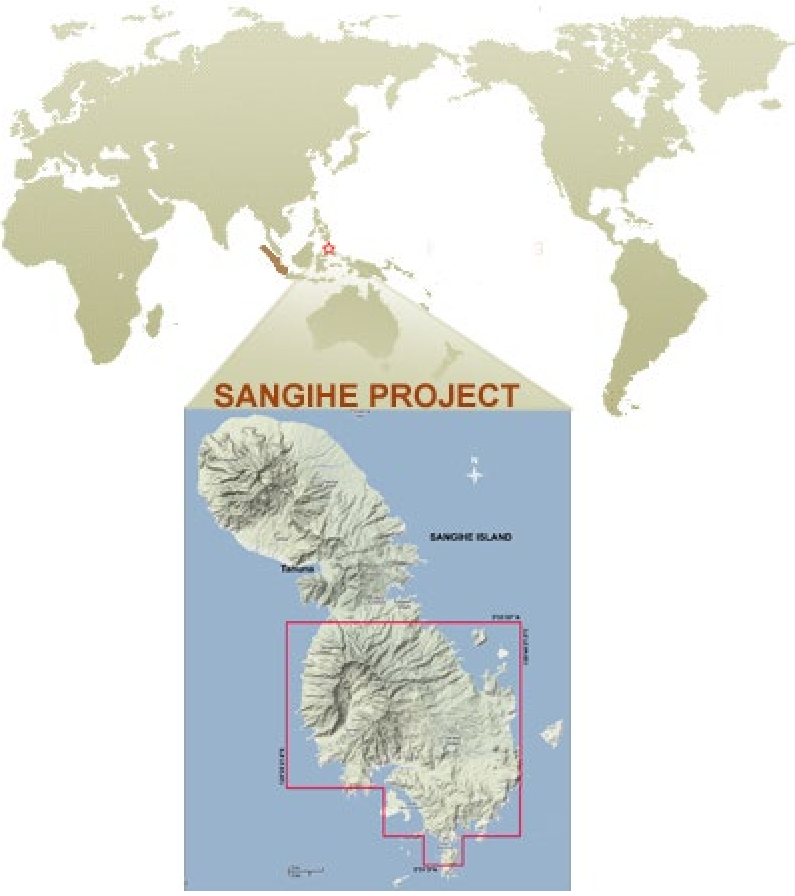
INDEPENDENT TECHNICAL REPORT ON THE UPDATED MINERAL RESOURCE ESTIMATES OF THE BINEBASE AND BAWONE DEPOSITS, SANGIHE PROJECT, NORTH SULAWESI, INDONESIA



Prepared by Mining Associates Pty Ltd

for

Baru Gold Corporation

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1 SUMMARY

At the request of Mr Frank Rocca, Chief Geologist of Baru Gold Corp ("BGC"), Mining Associates Pty Ltd ("MA") was commissioned in December 2024 to update the Mineral Resource Estimates and related National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") Technical Report on BGC's 70% owned Sangihe Project (the "Sangihe Project") in Indonesia. A Mineral Resource for this project had previously been prepared by MA in July 2013 for East Asia Minerals Corp ("EAMC") now Baru Gold Corp.

MA has based this report on information provided by Baru Gold Corp, third party technical reports, a site visit and resource modelling work conducted by MA.

The Mineral Resource Estimate outlined below was prepared in compliance with Canadian Institute of Mining, Metallurgy and Petroleum Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines ("CIM guidelines") and under the guidance of NI 43-101 disclosure standards for reporting Mineral Projects.

Mineral Resources for the Sangihe Project as of 06 January 2025 using a cut-off grade of 0.20 g/t Au for oxide material and a deposit dependent sulphide cut off of 0.50 g/t at Binebase and 1.0 g/t at Bawone.

INDICATED

3.15 Mt at an average grade of 1.12 g/t gold and 19.4 g/t silver containing an estimated 114,000 oz of gold and 1.93 Moz of silver.

INFERRED

2.30 Mt at an average grade of 1.22 g/t gold and 14.5 g/t silver containing an estimated 91,000 oz of gold and 1,08 Moz of silver.

1.1 LOCATION & OWNERSHIP

The Sangihe mineral tenement originally consisted of two blocks, one located on Talaud Island and one located on Sangihe Island in the Province of North Sulawesi, Indonesia. The Talaud Island block is not covered in this report. The Sangihe block covering 42,000 ha is centered at about ~786,673 m E and 380,239 m N (UTM Zone 51, WGS84). The Bawone and Binebase deposits, which are the focus of this report, are located in the eastern part of the Sangihe tenement on the southeast coast of Sangihe Island.

The Sangihe Project is covered by a Contract of Work system ("CoW") which was originally granted in 1997, lapsed and then was re-activated in 2009. It is covered by a 6th generation CoW between the Government of Indonesia and an Indonesian registered foreign investment company PT Tambang Mas Sangihe("TMS"). BGC is the owner of a 70% interest in PT Tambang Mas Sangihe and the remaining 30% interest is held by three Indonesian corporations.

No permits other than the granted CoW are required to conduct exploration programs and there are no known environmental impediments either existing or foreseeable. The CoW does not give its holder surface rights, which must be obtained from private land holders, other departments or ministries. Most of the Sangihe CoW area consists of "Other Use" land although a very small section of the

Binebase area is covered by “Protected Forest”. BGC have advised MA that the Sangihe CoW does not require a Borrow-Use Permit to allow exploration activities to proceed. A very small portion of the northwestern part of the Binebase area is within an area of HL or Protected Forest where open pit or surface mining is not allowed. BGC have advised MA that the HL area at Binebase does not cover the Resource area but a mangrove area within an adjacent lagoon and will have no impact on a potential mining project.

1.2 EXPLORATION

Exploration activities in the Sangihe area commenced in 1986 with PT Meares Soputan Mining (“MSM”) conducting stream sediment and rock chip sampling programs and ground magnetics and induced polarisation surveys. These activities led to the delineation of the first drill holes at the Taware copper-gold prospect in 1987-88. Elevated gold in stream and rock chip samples led to the discovery of the Binebase and Bawone deposits which were drilled by PT MSM/Ashton Mining between 1989 and 1993. Additional drilling was performed by Bre-X at the Taware prospect between 1994 and 1996.

Since 2007, EAMC (BGC) have undertaken a range of exploration activities including geological mapping, rock chip sampling, geophysical surveys, petrological studies, trenching and drilling. BGC has conducted over 16,000 metres of diamond drilling from 167 drill holes, over 14,000 core assays, about 1,600 metres of channel sampling, over 60 line km of induced polarisation surveys and almost 60 line km of ground magnetic surveys.

1.3 QA/QC

Quality control preparation and sampling procedures by EAMC (BGC) generally reflect industry best practice with an awareness to reduce contamination and precision error. EAMC (BGC) employed satisfactory Standard Operating Procedures (SOP) to help reduce sample labelling error and sample mix-up. Overall, given the accuracy and precision of the results provided, the QA/QC program implemented by EAMC (BGC) is considered acceptable for a Mineral Resource definition stage. It is MA’s opinion that the sample preparation, security and analytical procedures are adequate for the purposes of the current Mineral Resource Estimation.

1.4 GEOLOGY

The Sangihe Project is located in the Sangihe volcanic island arc which extends northwards over 400 km from the north-eastern arm of Sulawesi to Mindanao in the southern Philippines. The regional geology is characterised by Miocene to currently active calc-alkaline stratovolcanoes, formed during westerly directed subduction of the Molucca Sea plate beneath the Sangihe arc and the northern arm of Sulawesi. The subduction processes that formed the Tertiary-Quaternary aged magmatic arc including Sangihe Island also resulted in the development of a major metallogenic belt characterised by several base and precious metal deposits.

Sangihe Island is composed of volcanic rocks erupted from at least four volcanic centres, which progressively young from south to north. These volcanic centres include the extinct Tamako volcano in the centre of the island and the deeply eroded Taware volcanic centre in the south. The Binebase and Bawone deposits are immediately to the east of Tamako.

Prominent regional structures trend east and dissect the area between the volcanoes. Other major lineaments trend northwest and northeast, cross cutting all volcanic rocks. A set of regional north-northwest to northwest and north to northeast trending structures are the dominant features in the southern part of the island particularly in the Taware and Binebase-Bawone areas.

1.5 MINERALISATION

Known mineralisation within the project area occurs in two main localities, the Binebase- Bawone and the Taware areas. The Binebase and Bawone areas are classified as high sulphidation deposits and the Taware areas are prospective for copper-gold porphyry targets and low sulphidation epithermal targets.

Both oxide and sulphide types of gold mineralisation are present at the Binebase and Bawone deposits. Significant gold and silver mineralisation at both deposits is restricted to intensely silicified pyritised tuffs and breccias. Arseniferous pyrite is the most common sulphide. Sulphides are very fine grained and disseminated. The upper portion of the silicified and mineralised rock is oxidised and often weathered to a disaggregated and vuggy limonite stained baritic quartz sand. Minor copper enrichment occurs at the base of oxidation beneath all drill intercepts through the silicified zones, arising from the supergene deposition of chalcocite. Alteration at Binebase and Bawone is typical of high sulphidation alteration zoning.

Gold mineralisation at Binebase appears to form thin, roughly tabular oxide zones overlying more steeply dipping, breccia vein sulphide zones. The current area of interpreted oxide mineralisation at Binebase is over an area of about 950 m east by 600 m north and is about 25-50 m thick. Sulphide mineralisation at Binebase appears to occur in steeply dipping, breccia vein sulphide zones that may be interpreted as feeder veins to the overlying oxide mineralisation. The contact between the oxide and sulphide zones is quite irregular and generally deeper over the interpreted sulphide veins.

Geological modelling by MA at Bawone indicates that mineralisation occurs within near vertical tabular bodies. Very little oxide material is present, likely due to the presence of the Pinterang Formation. Sulphide mineralisation appears to be controlled by a lithological–structural contact zone between hornblende-biotite andesite porphyry and andesite crystal tuff that strikes north to northwest. A sinistral northeast striking fault appears to offset mineralisation through the middle. Defined mineralisation is approximately 300 m along strike, 25-75 m wide and extends 200 m below surface.

Regionally, there is potential for porphyry-style copper-gold mineralisation based on the occurrence of copper and gold bearing quartz vein stockworks associated with diorite and porphyry-style alteration assemblages at Taware. Base metal and gold bearing quartz veins peripheral to the Taware diorite have characteristics that are indicative of low sulphidation mineralisation.

1.6 MINERAL RESOURCE ESTIMATE

The current (06 January 2025, effective date) Mineral Resource Estimates for the Sangihe Project were prepared in compliance with CIM guidelines and under the guidance of NI 43-101 disclosure standards for reporting Mineral Projects. A NI 43-101 compliant Mineral Resource Estimate was undertaken by MA. Mineral Resources for the Sangihe Project include two separate deposits with oxide and sulphide mineralisation reported at different cut-off grades (table below). The table presented should be read in conjunction with the notes following.

Category	Type	Tonnes (t)	Au (g/t)	Ag (g/t)	Au (oz)	Ag (Moz)
Binebase Oxide at 0.20 g/t Au cut-off						
Indicated	Oxide	1,795,000	0.81	20.5	46,000	1.18
Inferred	Oxide	435,000	0.71	19.1	10,000	0.27
Binebase Sulphide at 0.50 g/t Au cut-off						
Indicated	fresh	689,000	1.05	22.7	23,000	0.50
Inferred	fresh	642,000	0.68	16.6	14,000	0.34
Bawone Oxide at 0.20 g/t Au cut-off oxide						
Indicated	Oxide	22,000	3.12	19.8	2,000	0.01
Inferred	Oxide	336,000	1.37	11.6	15,000	0.13
Bawone Sulphide at 1.00 g/t cut-off						
Indicated	fresh	645,000	2.02	11.1	42,000	0.23
Inferred	fresh	891,000	1.81	11.8	52,000	0.34
Mineral Resource (variable cut-offs)						
Total	Indicated	3,151,000	1.12	19.1	114,000	1.93
Total	Inferred	2,303,000	1.22	14.5	91,000	1.08

Notes to accompany the Mineral Resource Estimate:

- The Sangihe Project is 70 % owned by Baru Gold Corp ("BGC").
- The independent and qualified person for the mineral resource estimate, as defined by NI 43-101, is Ian Taylor, B.Sc.(Hons), G.Cert.Geostats. FAusIMM(CP), and the effective date of the estimate is January 1, 2025.
- The mineral resource estimate is classified as Indicated and Inferred Resources and follows the 2019 CIM Definition Standards.
- These mineral resources are not mineral reserves as they do not have demonstrated economic viability.
- Results are presented in situ and undiluted and are considered to have reasonable prospects for economic extraction
- Reported tonnage and grade figures have been rounded off from raw estimates to the appropriate number of significant figures to reflect the order of accuracy of the estimate. Minor variations may occur during the addition of rounded numbers.
- The estimate is reported as a potential open pit-constrained mining scenario, resources at cut-off grades of 0.20 g/t Au (oxide) and 0.50 g/t Au for sulphide mineralisation at Binebase and 1.0 g/t Au for sulphide mineralisation at Bawone.
- The following assumptions (USD) were used in the determination of a cut off grade under a pit-constrained scenario:
  - Long term gold price of USD2,643/oz (2024 12-month average),
  - Oxide: mining cost $2.90/t; processing cost $9.90/t; pit slopes of 45°, mining dilution of 10% and processing recovery of 90%
  - Sulphide: mining cost $3.40/t processing cost 19.80/t, pit slopes of 56°, mining dilution of 10% and processing recovery of 65% at Binebase and 30% at Bawone.
  - G&A is assumed to be $1.80/t and royalties of 3.75% are expected.
- Cut-off grades should continually be re-evaluated in light of future prevailing market conditions (metal prices, exchange rate, mining cost, etc.).

1.7 CONCLUSIONS AND RECOMMENDATIONS

MA has completed a Mineral Resource Estimates for the Sangihe Project as of 06 January 2025 using a cut-off grade of 0.20 g/t Au for oxide material and a deposit dependent sulphide cut off of 0.50 g/t at Binebase and 1.0 g/t at Bawone.

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Identified risk issues are related to the future renegotiations with the Indonesian Government on the CoW. Technical risk exists associated with regional seismicity with an intermediate level hazard risk of earthquakes and a high level risk of tsunami. Although the mineralised project areas are at elevated locations, other infrastructure facilities could be affected and appropriate building codes and precautions would be necessary for any future development.

There is exploration potential to the south and southeast of Binebase to expand the zone of mineralisation. Sulphide resources could be increased by extending modelled breccia veins along strike and at depth. Drill testing is required to support the modelled sulphide veins and to potentially locate more veins. Sulphide mineralisation at Bawone is similarly open at depth and not fully closed off along strike. Although infill drilling would increase the confidence level of the resource categories, extension drilling is recommended over infill in order to increase the resource base of the project. Drill sections should be spaced 50 m along strike for reasonable definition of tonnes and grade.

Reverse circulation drilling is recommended for infill drilling over approximately 1.2 kilometres of strike length between Binebase and Bawone. Phase-2 will be exploration drilling over 1.45 km from Bawone to south of Salurang following the continuation of the known geochemical anomaly and Phase-3 will be drilling of regional targets, including at Taware, Sede and Kupe.

Synthesis of previous exploration information has defined five prospective target areas (Binebase-Salurang Corridor, Upper Taware Valley/Kelapa/Kupa, Taware Ridge and Mou-Ninja, Hadakel Kecil, Sawang Kecil) recommended for a range of mapping, sampling and ground geophysical surveys (magnetics and IP) that have not yet been subject to significant drill testing. Additionally, the primary source of mineralisation for the current artisanal alluvial gold mining in the Taware region has not been identified.

Metallurgical test work has indicated that the Binebase oxide mineralisation leaches satisfactorily. Testwork to date shows moderate recovery of Binebase sulphide material and low recovery of Bawone sulphide material.

1.8 PROPOSED WORK PROGRAM & BUDGET

Details for an estimated budget for a twelve month exploration program are presented below. This budget includes provision for the drill programs discussed above, logistical support for the programs, consumables, tenement maintenance, the compilation and interpretation of data and the expansion of the camp facilities and the number of personnel. The budget does not include any overhead costs.

Sangihe Budget Items	USD
Indirect Costs	
Staff Salaries	78,376
Local Wages	5,576
Overtime Pay	2,836
BPJS (Labor insurance coverage)	9,856
Direct Costs	
Remote Sensing	44,526
Local geological mapping	18,871
Geophysical Surveys	50,526
Geochemical Survey	21,186
Reverse Circulation Drilling	336,026
Sample Analysis	151,726
Total	**719,507**

Anthony Woodward, Ian Taylor

Brisbane, Australia

1st February 2025

2 INTRODUCTION

2.1 ISSUER

This report is an Independent Technical Report ("NI 43-101 Report") of the geology, exploration and current mineral resource estimates for the Sangihe Project in North Sulawesi, Indonesia. It is issued in according to Canada's National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101"). The mineral resource estimates included in this report are prepared in compliance with Canadian Institute of Mining, Metallurgy and Petroleum Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines ("CIM guidelines").

Baru Gold Corporation ("BGC"), formerly East Asia Minerals ("EAMC"), is a Canadian listed public company based in Vancouver, British Columbia (Canada). BGC is an Asian-focused, Canadian mineral exploration company with gold exploration properties in Indonesia. In Indonesia, the Company has a 70% interest in an advanced gold property located in Sangihe Island, North Sulawesi.

2.2 TERMS OF REFERENCE AND PURPOSE

At the request of Mr Frank Rocca, Chief Geologist of Baru Gold Corp ("BGC"), Mining Associates Pty Ltd ("MA") was commissioned in December 2024 to update the Mineral Resource Estimates and prepare an Independent Technical Report on the Sangihe Project.

BGC intends that this report be used as an Independent Technical Report as required under Part 4 "Obligation to File a Technical Report", of Canada's National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101").

MA has not been requested to provide an independent valuation, nor has MA been asked to comment on the fairness or reasonableness of any vendor or promoter considerations, and therefore no opinion on these matters has been offered.

2.3 INFORMATION USED

The information presented in this report was derived from the following sources:

- Independent Technical Report, Sangihe Property. M. Stone. Caracle Creek International Consulting Inc., 22 September 2010 ("Stone, 2010").
- Independent Technical Report on the Mineral Resource Estimates of the Binebase and Bawone deposits, Sangihe Project, North Sulawesi Indonesia. I Taylor and A J Woodward. Mining Associates, 10 May 2017 ("Taylor and Woodward, 2017").
- Technical data provided by BGC to MA.
- Site visit undertaken by Mr Anthony Woodward.

BGC provided open access to all the records necessary, in the opinion of MA, to enable a proper assessment of the project.

BGC has warranted in writing to MA that full disclosure has been made of all material information and that, to the best of the BGC's knowledge and understanding, such information is complete, accurate and true.

Additional relevant material was acquired independently by MA from a variety of sources. The list of references at the end of this report lists the sources consulted. This material was used to expand on the information provided by BGC and, where appropriate, confirm or provide alternative assumptions to those made by BGC.

2.4 SITE VISIT BY QUALIFIED PERSONS

Anthony Woodward visited the Sangihe Project from 11 September to 13 September 2012. Mr. Woodward inspected outcrop, drill collars, viewed the topography and regional structures. He visited the core shed, inspecting drill core from the Binebase and Bawone deposits. He also collected independent samples for check assay.

Mr. Woodward has sufficient experience relevant to epithermal style of mineralisation and deposits under consideration and to the activity which he is undertaking to qualify as a Qualified Person as defined in NI 43-101 (Canada).

Mr. Woodward is a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists.

3 RELIANCE ON OTHER EXPERTS

The authors have relied on reports, opinions or statements of legal or other experts who are not Qualified Persons for information concerning legal, environmental, political or other issues and factors relevant to this report.

4 PROPERTY DESCRIPTION AND LOCATION

The Sangihe Project is located on Sangihe Island in the Republic of Indonesia, which is located between the northern tip of Sulawesi Island (Indonesia) and the southern tip of Mindanao Island (Philippines). The project area is within the North Sulawesi Province and lies some 240 km north of the provincial capital, Manado (Figure 4-1).

Figure 4-1: Sangihe Project Location.
Source: Bing Maps, 2012

The Sangihe Project covers an area of 42,000 ha and wholly encompasses the Binebase and Bawone deposits (Figure 4-2).

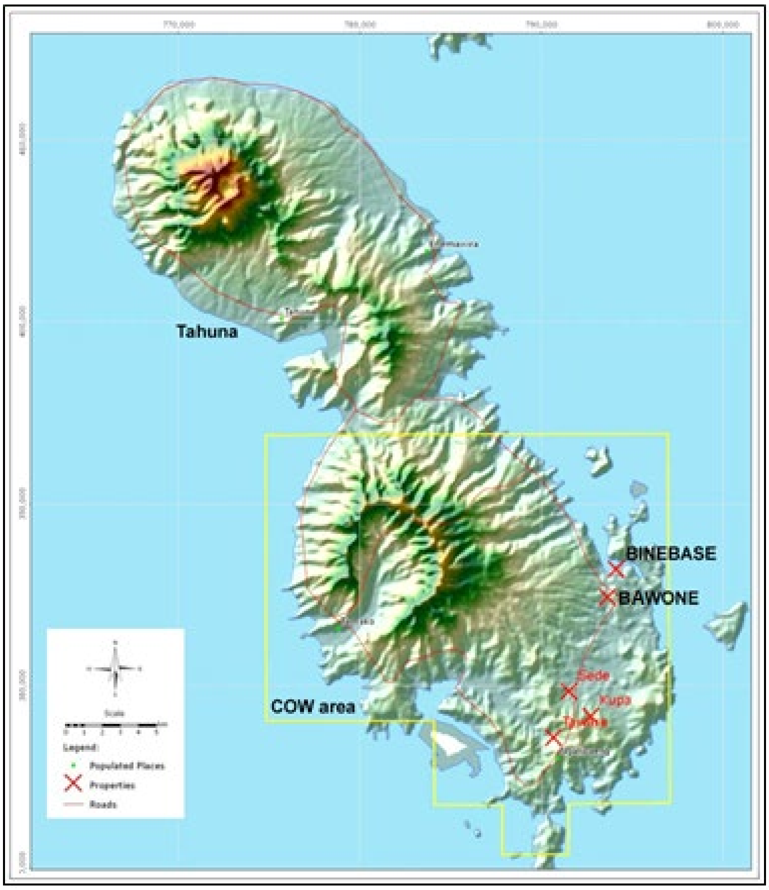


Figure 4-2: Sangihe Project CoW and Prospects.
(Source: after Stone, 2010)

4.1 TENURE

The Sangihe Project is covered by a Contract of Work system ("CoW") originally granted in 1997, which lapsed and then was re-activated in 2009.

4.1.1 Sangihe Project

The Sangihe Project tenement (Figure 4-3) is covered by a 6th generation CoW that was signed on April 27, 1997 between the Government of Indonesia and PMA company PT Tambang Mas Sangihe ("TMS"). The CoW document states that the Operating Period for each Mining Area shall continue for thirty (30) years beginning at the commencement of the first mining operation, or such longer period as the Department on the written application of the Company may approve.

The original shareholders of PT TMS were Laarenim Holding BV, a Dutch-based company owned by Bre-X Minerals Ltd, Calgary, Canada, and an Indonesian company named PT Sungai Belayan Sejati. The Sangihe CoW was suspended in May 1997 by the then Minister of Mines and Energy. In 2006 the Indonesian owner of the Sangihe CoW requested the Minister of Energy and Natural Resources to determine the status of this tenement. On August 31, 2009 the Government responded the request by re-activating the CoW.

On 10 December 2010, the CoW area was reduced, however the Sangihe Island portion (Block A) remains the same size as the original CoW area. The related document, Decree # 514.K/30/DJB/2010 is available in Appendix 1. Geographical co-ordinates of the CoW corners are listed in Table 4-1. This document states (in translation):

> *…Reduction 1: The Contract of Work area of 41,770 ha (33.72% of the area of the original CoW) and the beginning of Phase Exploration the Contract of Work PT. Tambang Mas Sangihe mine for over 36 (thirty six) months with effect from July 6, 2010 until the date of July 5, 2013.*
>
> *…Area of Contract of Work is an area of 123 850 (total area initially) reduced area of 41,770 Ha (Iuas Penciutan region I) becomes area of 82,080 ha (66.27% of the area of the original CoW) in accordance with a map and a list of coordinates published by the Information Section Mineral and Coal, d/h UPIWP with Area Code 10PK0189 as contained in the attachment to this decree.*

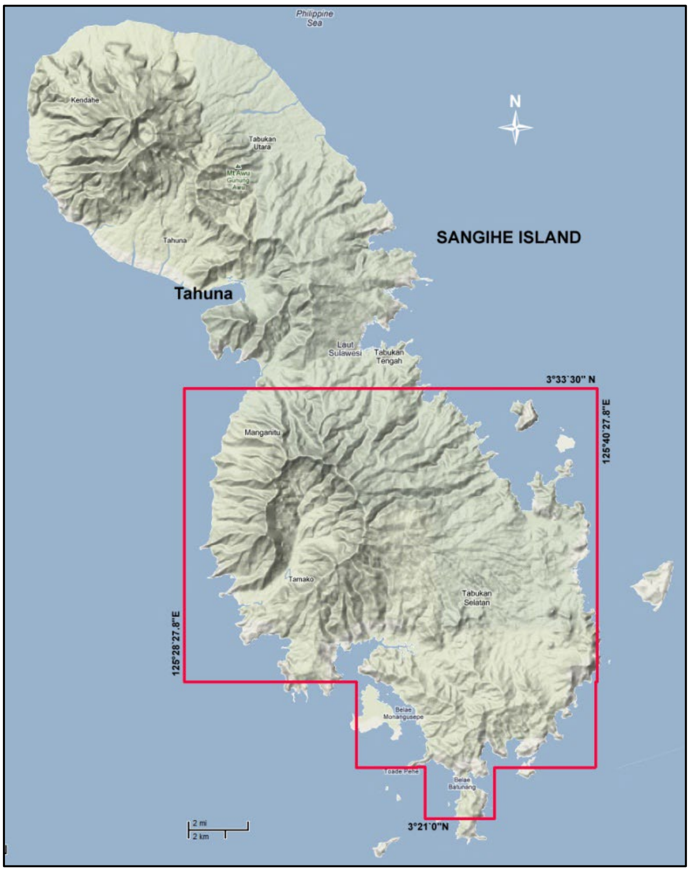


Figure 4-3: Sangihe Project Tenement Map showing Block A.
(Source: Google Maps 2011)

Table 4-1: CoW Sangihe Island Block A Corner Co-ordinates

Reference No.	Longitude East	Latitude North
1	125°28`27.8"	3°33`30"
2	125°40`27.8"	3°33`30"
3	125°40`27.8"	3°22`30"
4	125°37`27.8"	3°22`30"
5	125°37`27.8"	3°21`0"
6	125°35`27.8"	3°21`0"
7	125°35`27.8"	3°22`30"
8	125°33`27.8"	3°22`30"
9	125°33`27.8"	3°25`0"
10	125°28`27.8"	3°25`0"

4.2 PROPERTY OWNERSHIP

The Sangihe Project tenement is held under the current CoW by PT Tambang Mas Sangihe ("TMS"). Under a series of share purchase transactions and other material changes, the original articles of incorporation was amended to include EAMC (BGC) as the owner of 70% interest of PT. Tambang Mas Sangihe (TMS) in 2009. The remaining 30% interest is held by three Indonesian corporations.

PT. Tambang Mas Sangihe (TMS) has a Contract of Work (KK) Generasion VI with the Government of the Republic of Indonesia (RI) through Presidential Decree No. 8.143 / Pres / 3/1997 on March 17, 1997. TMS is a limited liability company (PT) between Sangihe Gold (70%), PT Sangihe Pratama Minerals (29.9%), PT Sangihe Prima Mineral (0.05%), and PT Sungai Belayan Sejati (0.04%), respectively.

4.3 ROYALTIES AND OTHER AGREEMENTS

Entities or individuals that carry out mining activities under IUPs or IUPKs are required to pay central taxes (including income tax and other centrally administered taxes, as well as import / customs duties), non-tax state revenue (principally royalties, dead rent and exploration contributions) as well 1as regional taxes and retributions.

There appears to be no royalties (other than the mandated government royalties under the Mining Law for any future production), back-in rights, payments, or other agreements or encumbrances on the property.

4.4 ENVIRONMENTAL LIABILITIES

The authors are unaware of any environmental liabilities to which the Property is subject, other than the normal licensing and permitting requirements that must be made prior to undertaking certain operations and environmental restrictions as set forth by mining regulations in Indonesia.

4.5 PERMITS AND OBLIGATIONS

4.5.1 Forestry Permits

According to the Directorate General of Forestry Planning and Ministry of Forestry Republic of Indonesia GIS Forestry website (http://webgis.dephut.go.id/), most of the Sangihe CoW is categorised as Areal Penggunaan Lain ("APL") or Other Use, with lesser areas of Hutan Lindung ("HL"), or Protected Forest as indicated in Figure 4-4. HL is forestland designated for protecting soil and hydrology. APL is land outside forestland which designated for non-forestry purposes. APL areas are designated primarily for a function other than production, protection, conservation, social services or multiple use. A very small portion of the northwestern part of the Binebase Deposit area is adjacent to or is covered by HL classification forest (Figure 4-4 inset). However, BGC have advised MA that the HL classification covers mangroves on the edge of a lagoon and does not affect the Binebase resource.

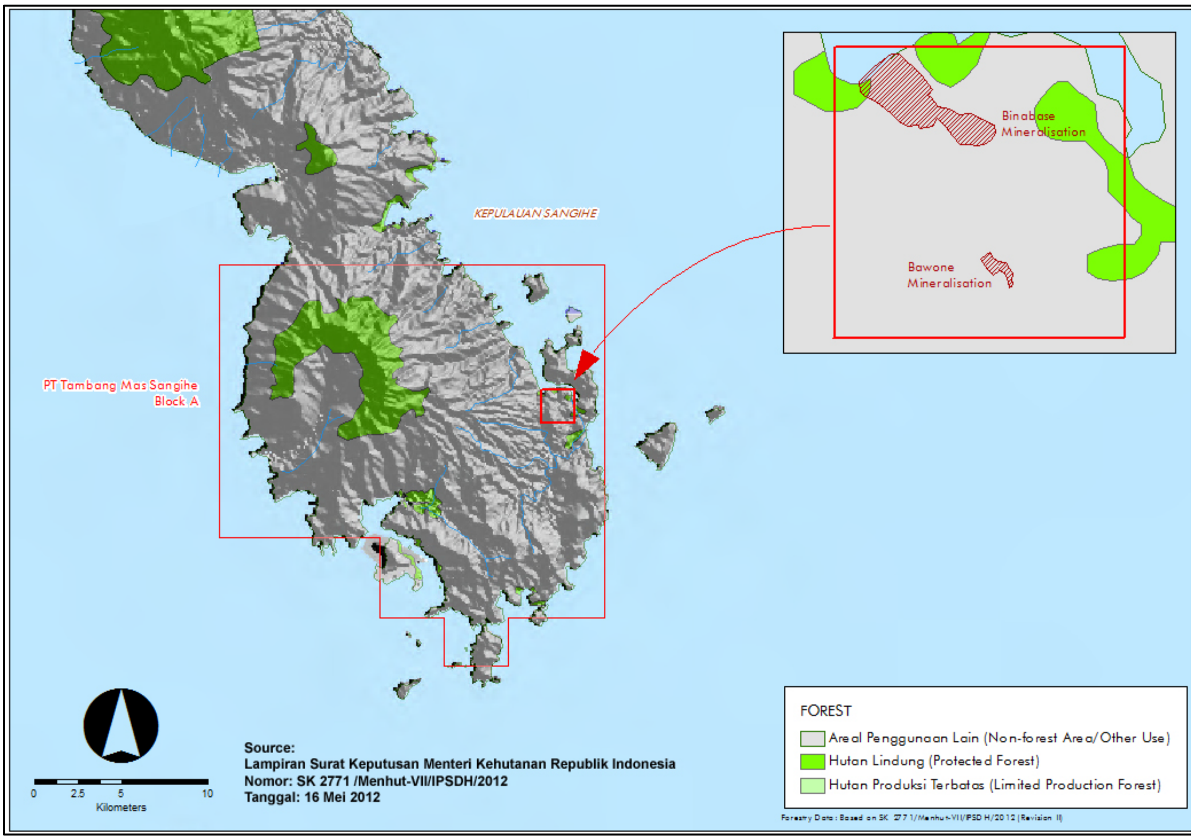


Figure 4-4: Forestry Map showing Sangihe CoW area and main prospect locations. (Source: after Ministry of Forestry, 2012)

4.6 OTHER SIGNIFICANT FACTORS

4.6.1 Social & Community

Local artisanal miners are active within the Sangihe CoW area, chiefly around the Taware area. Such artisanal mining may result in injury, environmental incident and/or reputational impact. BGC is monitoring the impact of such activities and working with local government and local community in maintaining a stable local workforce to discourage such activities. Sangihe Island police have advised BGC that artisanal miners will be temporarily relocated in areas where drilling operations are required. This temporary relocation is not expected to cause undue distress to local miners and impact on BGC reputation.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 ACCESS

Sangihe Island is serviced by Naha Airport (NAH), located 21 km from Tahuna although there are currently no commercial flights from Manado.

Flights to Manado are provided by Scoot Air (from Singapore), and Lion Air, Batik Air and Citilink (from Jakarta). Flights to the Sangihe Island from Manado take approximately 50 minutes by small plane.

Commercial passenger ferry services (9-12 hours) operate daily between Tahuna and Manado.

A sealed road connects major coastal and inland villages on the island. It is a 1.5 hour journey via sealed road from Tahuna to the main project camp area at Bawone.

5.2 TOPOGRAPHY, ELEVATION AND VEGETATION

The physiography of Sangihe Island is dominated by volcanoes, the most prominent being the large stratovolcano of Mount Awu which forms the northern half of the island. This volcano, rising to over 1,300 m, is periodically active with the last major eruption in 1966, and minor eruptive activity in 2004. The Sangihe Project area exhibits a moderately to highly dissected terrain. The northwest of the CoW is dominated by an extinct volcano comprising mountainous ridges and spurs (about 350 m ASL) dissected by straight and braided streams. Topography grades to sea level towards the southeast with undulating hills and meandering streams (Figure 5-1).

Little original tropical rainforest remains as much of the area is given over to plantations. Vegetation consists largely of cultivated coconut, clove and nutmeg with secondary re-growth.

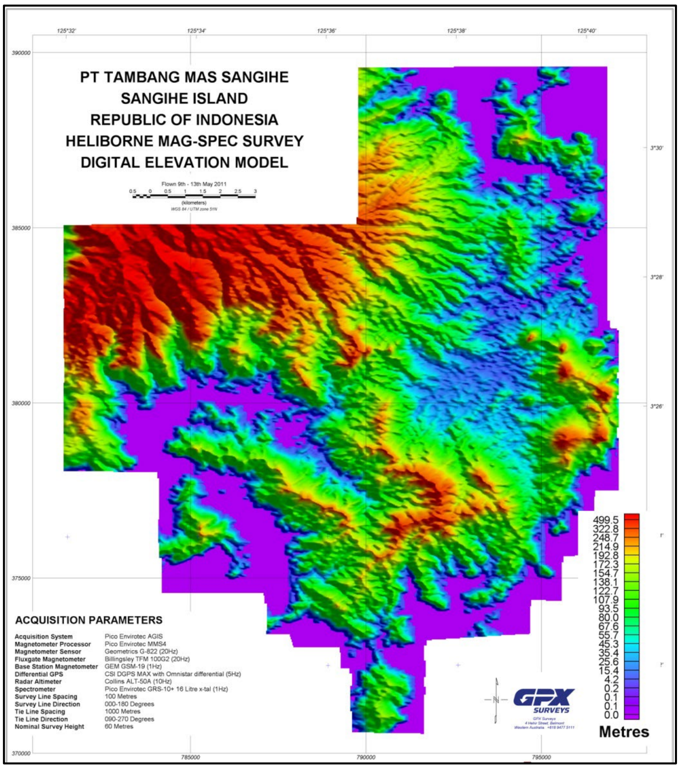


Figure 5-1: Digital Elevation of Sangihe CoW area.

(Source: GPX Surveys, 2011)

5.3 POPULATION AND INFRASTRUCTURE

About 80,000 people reside in villages in the southern portion of Sangihe Island. The largest of these villages include Laine, Salurang, Pintareng, Lapango, Ngalipaeng, Binebas and Soawuhu (Figure 5-2). Numerous small villages are located along the coast and the paved roads that cross the island. These settlements support fishing communities and clove, coconut and nutmeg plantations. The villages of Bowone and Binebas, which are closest to the prospects that are currently being explored, provide local labour to support BGC's activities. An extensive power grid exists on the island as well as a mobile telephone network. Basic supplies and light machinery are available from Tahuna.

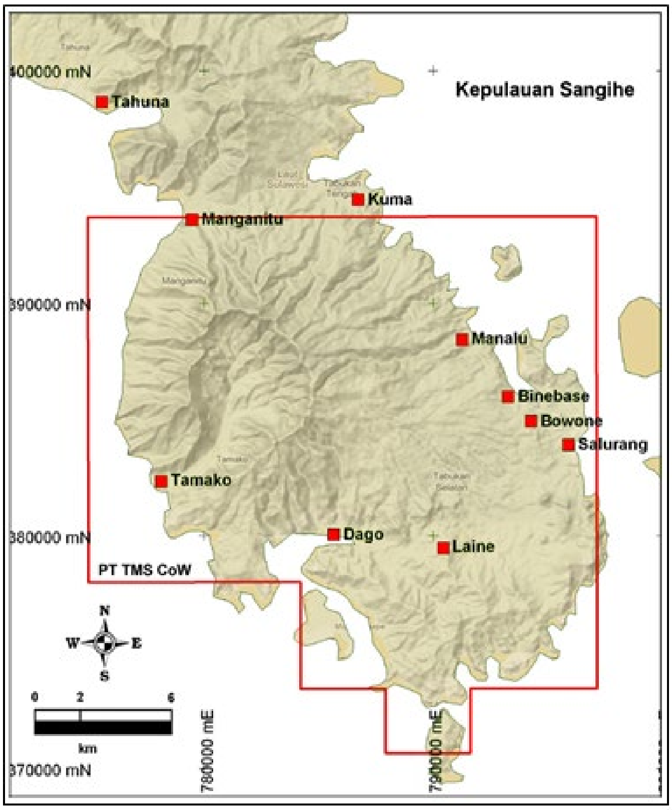


Figure 5-2: Sangihe CoW area showing local villages.
(Source: Stone, 2010)

5.4 CLIMATE

Sangihe Island has a tropical climate with an average daily temperature of 27°C (minimum ~21°C, maximum ~31°C). Rainfall is above 130 mm per month year-round, but peaks from December to March with an annual rainfall of 3.5 m (www.worldweather.org). Monitoring by EAMC (BGC) in 2008 indicated rainfall in excess of 4.5 m. The relatively dry season lasts from June to September. Figure 5-3 shows the rain and temperature averages for Manado (240 km south of Sangihe Island), which is approximately at sea level. It receives 276 cm of rain on average annually.

Typhoons occur in the region but are not common. Two typhoons have been recorded tracking within 200 km of the Sangihe Project over the period 1906 to 2012 (Figure 5-4).

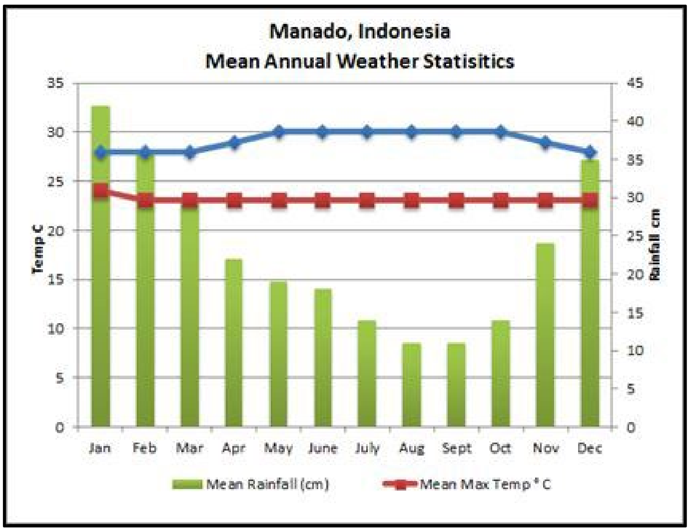


Figure 5-3: Rainfall, Temperature averages for Manado, North Sulawesi. (Source: Weatherbase.com)

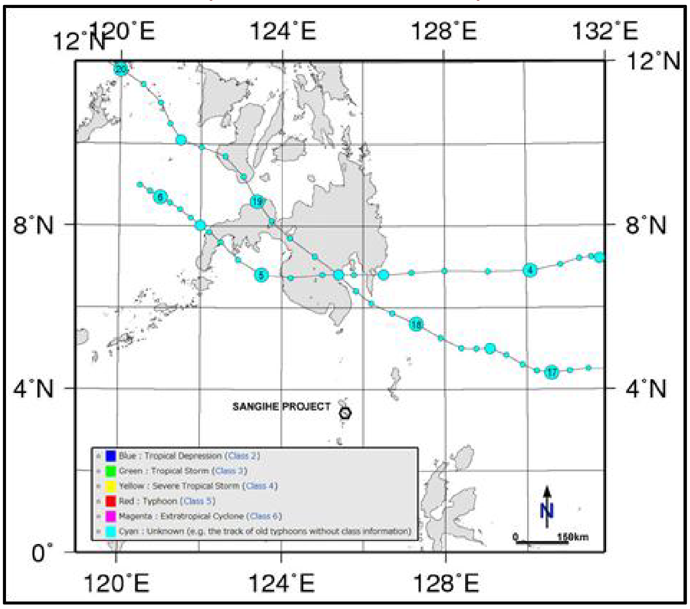


Figure 5-4: History of typhoons 1906 to 2012.
(Source: Kitamoto, 2012)

5.5 SURFACE RIGHTS, PERSONNEL, AREA FOR PLANT, PROCESSING & WASTE

The Sangihe Project is an exploration stage project working under the authority of the CoW and a Borrow-Use Permit as described in Item 4. In addition, BGC has local landowner agreements.

Personnel for exploration work are available from the villages of Bowone and Binebas.

6 HISTORY

6.1 PRIOR OWNERSHIP

The first CoW over the southern Sangihe Island area was held by PT Meares Soputan Mining ("PT MSM in 1986 in partnership with Muswellbrook. Ashton Mining Ltd. of Australia ("Ashton") acquired Muswellbrook's interest in the property in 1990. In 1993, Aurora Gold Ltd. ("Aurora") was formed from the gold assets of Ashton Mining. Following the relinquishment of the CoW area by Aurora and its Indonesian partner in 1994, Bre-X Minerals of Canada ("Bre-X") in partnership with PT Sungai Belayan Sejati obtained a new CoW application over the area. This CoW was suspended by the then Indonesian Ministry of Mines and Energy following the collapse of Bre-X in 1997. PT Kristalin Eka Lestari ("PT KEL") subsequently obtained a mining authorisation licence over the Binebase-Bawone-Salurang area.

In April 2007, PT TMS received the necessary approvals in principle from the Government and was granted a preliminary exploration permit ("SIPP") and finalised negotiations for the grant of its CoW. Under the SIPP, PT TMS was authorised to conduct all proposed exploration activities including drilling.

6.2 PREVIOUS EXPLORATION

There are no known records of historic gold production for the Sangihe Property. Mining was limited to small scale artisanal mining practices in the Taware area.

The following is a chronological list of historical exploration within the Sangihe Project area:

- 1986: PT MSM, in partnership with Muswellbrook, undertook systematic stream sediment sampling, reconnaissance rock chip sampling, and ground magnetic and induced polarisation ("IP") surveys in the southern part of the island. These field programs led to the discovery of several copper-gold and gold prospects and prompted unofficial artisanal mining of alluvial material and shallow quartz veins in the Taware area.
- 1987-88: Drilling was conducted at Taware and the surrounding area with no apparent success except for one (1) hole that apparently intersected marginal grade, porphyry copper-gold mineralisation (Bautista et al., 1998). Results of extensive soil and outcrop sampling and limited geophysical surveys were used to develop drill targets.
- 1989-1993: A 5,000 m diamond drilling program was completed mainly testing targets at Binebase and Bawone and to a lesser extent at Salurang. This work led to the discovery of gold mineralisation at Binebase and Bawone.
- 1994-1996: Bre-X undertook exploration including diamond drilling at Taware.
- 2006: PT KEL conducted limited trenching at the Bawone prospect. Exploration focused mainly on the Taware and Binebase- Bawone areas.

6.3 HISTORICAL RESOURCE AND RESERVE ESTIMATES

There are no historical mineral resource estimates reported for the Sangihe CoW prior to BGC'c involvement in the project.

6.4 HISTORICAL PRODUCTION

Apart from artisanal mining in the Taware region (for which there are no production records), there has been no previous mining or production.

7 GEOLOGICAL SETTING AND MINERALISATION

7.1 REGIONAL GEOLOGY

Regional geological framework for the Sangihe Island area is best covered by Hall (1996), Rangin et al. (1999), Pubellier et al. (1999) and Garwin et al. (2005).

The tectonics of the Sangihe region and the observations of older (mid Miocene) volcanics and younger (Pliocene and active Quaternary) volcanism led Hamilton (1979, 1988) to suggest the termination of westward subduction of the Molucca Sea microplate beneath the arc along the East Sangihe trench and the introduction of eastward subduction of the Celebes Sea plate beneath Sangihe Island chain. This is briefly reiterated by Darman and Sidi (2000) who use the term Minahasa-Sangihe volcanic arc for the Quaternary volcanism. Soeria-Atmadja et al. (1999) appear to include the Neogene component as part of the Western Sulawesi arc. Rangin et al. (1996), McConachy et al. (2004) and others simply refer to the island chain as the Sangihe arc. A later oceanic survey (together with current seismic data) has confirmed that the westward subduction is still in progress.

The Sangihe volcanic island chain extends some 400 km northwards from the Quaternary volcanoes on the northeastern tip of Sulawesi, near Manado, to the Kawio Islands near the border with the Philippines. This chain lies above a west-dipping Wadati-Benioff seismic zone whose subduction trench is obscured by accreted sediments and mélange, forming the Talaud-Mayu (Miangas-Pujada-Talaud) ridge. Depth to subducting Molucca slab at Sangihe Island is only about 135 km.

Tectonics of the region have been investigated (via oceanic gravity and seismic) by Rangin et al. (1996) and Lallemand et al. (1998) who describe the collision of the Halmahara arc (eastward subduction of the Molucca sea plate) with the Sangihe arc (westward subduction of the Molucca sea plate). The key elements are shown at Figure 7-1 and Figure 7-2.

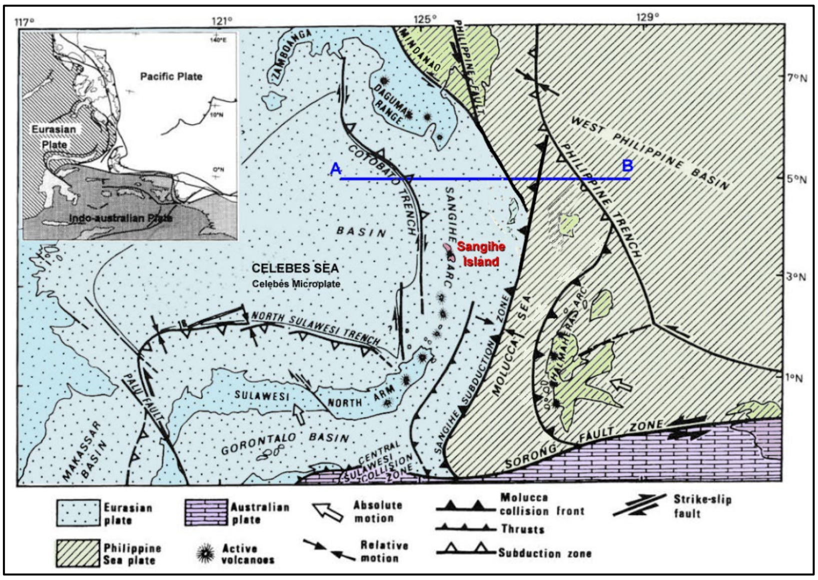


Figure 7-1: Schematic tectonic map, Northern Indonesia.
(Source: Ranginet al., 1996)

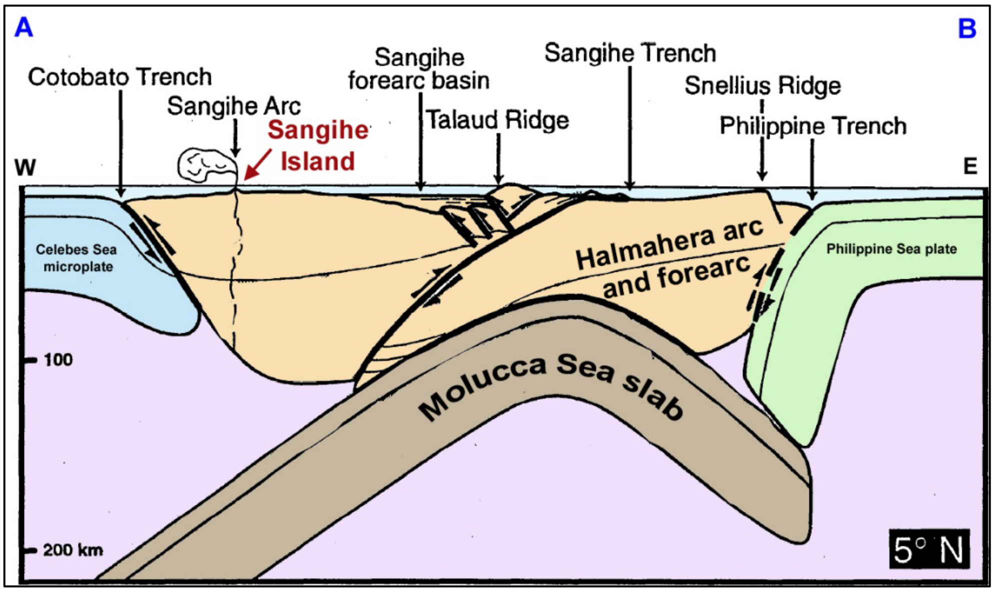


Figure 7-2: Schematic tectonic features in cross-section AB at 5° north.
(Source: Lallemand et al., 1998)

7.2 LOCAL GEOLOGY

Sangihe Island is composed of volcanic rocks erupted from at least four volcanic centres, which progressively young from south to north. These volcanic centres include: the active Awu volcano in the north of the island, the Tahuna caldera immediately to the south of Awu, the extinct Tamako volcano in the centre of the island and the deeply eroded Taware volcanic centre in the south.

In the south of the island the compositions of the volcanic rocks and their less abundant intrusive equivalents are calc-alkaline to calcic. Volcanic rocks in the north, where the Tahuna and Awu volcanoes occur, are intermediate to acidic in composition. The prominent regional structures trend east and dissect the area between the volcanoes. Other major lineaments trend northwest and northeast, cross cutting all volcanic rocks.

Five main volcanic successions and one sedimentary group have been identified in the south Sangihe area (Garwin, 1990). The oldest are the Taware and Binebase Groups (Figure 7-3 and Figure 7-4), which are overlain unconformably by the Malisang and Batunderang Groups. These pre-date the eruptive sequence from the Tamako volcano (Tamako Group).

Major lithology types within the volcanic successions consist of hornblende and/or clinopyroxene andesite flows, sills and dykes; lithic ash-lapilli tuffs, crystal tuffs and tuff breccias; lahars; porphyritic andesite and diorite intrusive; minor dacite flows and sedimentary rock.

The reworked volcanic and marine sedimentary rocks of the Pintareng Formation were deposited contemporaneously with the younger lithologies of the Tamako Group. BGC interpret the youngest lithologic units are unconformably overlying intercalations of epiclastic and marine sedimentary rocks of the Pintareng Formation. Hydrothermal breccias which formed as part of the alteration-mineralisation process were emplaced at Binebase and Bawone during or after accumulation of the Pintareng Formation.

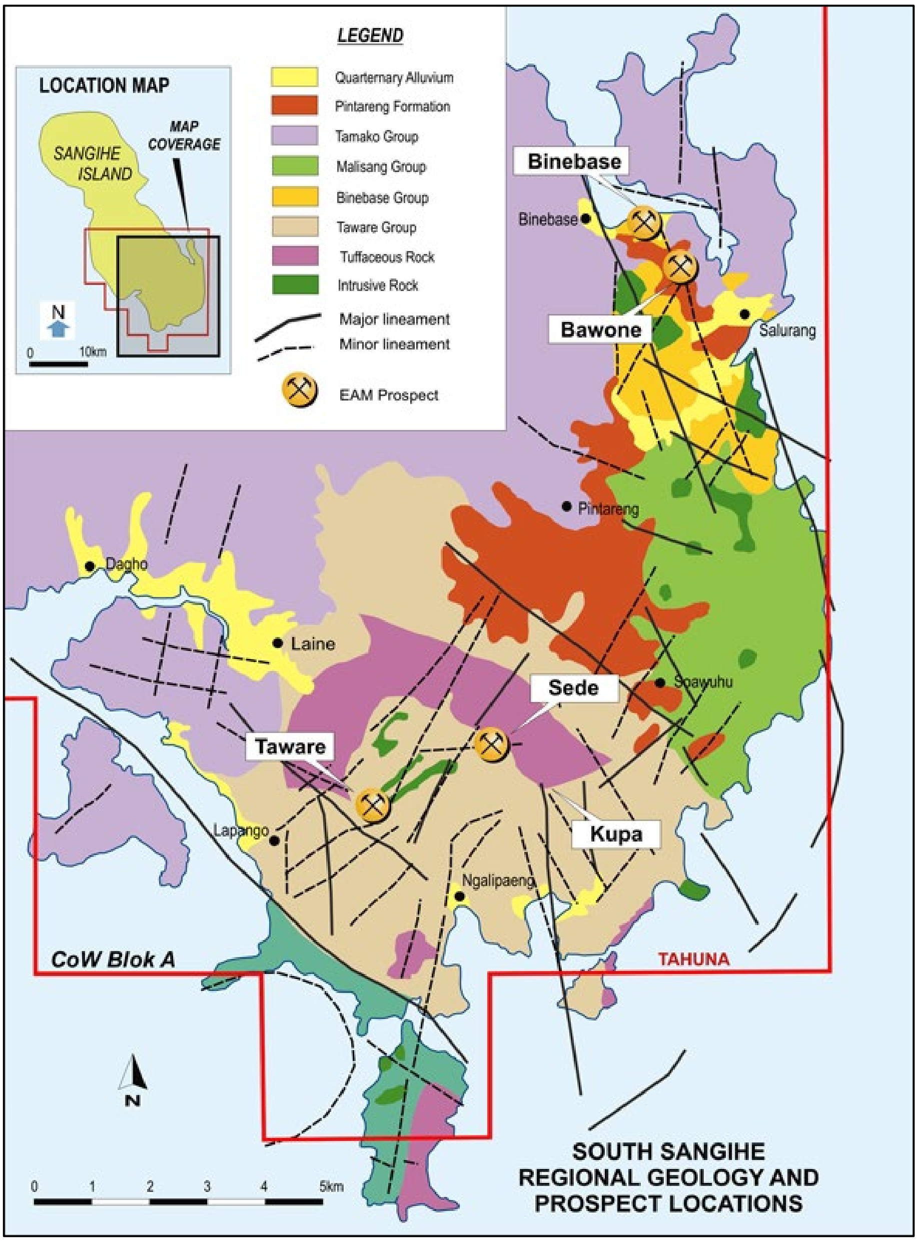


Figure 7-3: Local geology of the Sangihe CoW
Showing location of main prospects.
(Source: Garwin, 1990; modified slightly by Arodji & Johnnedy, 2009)

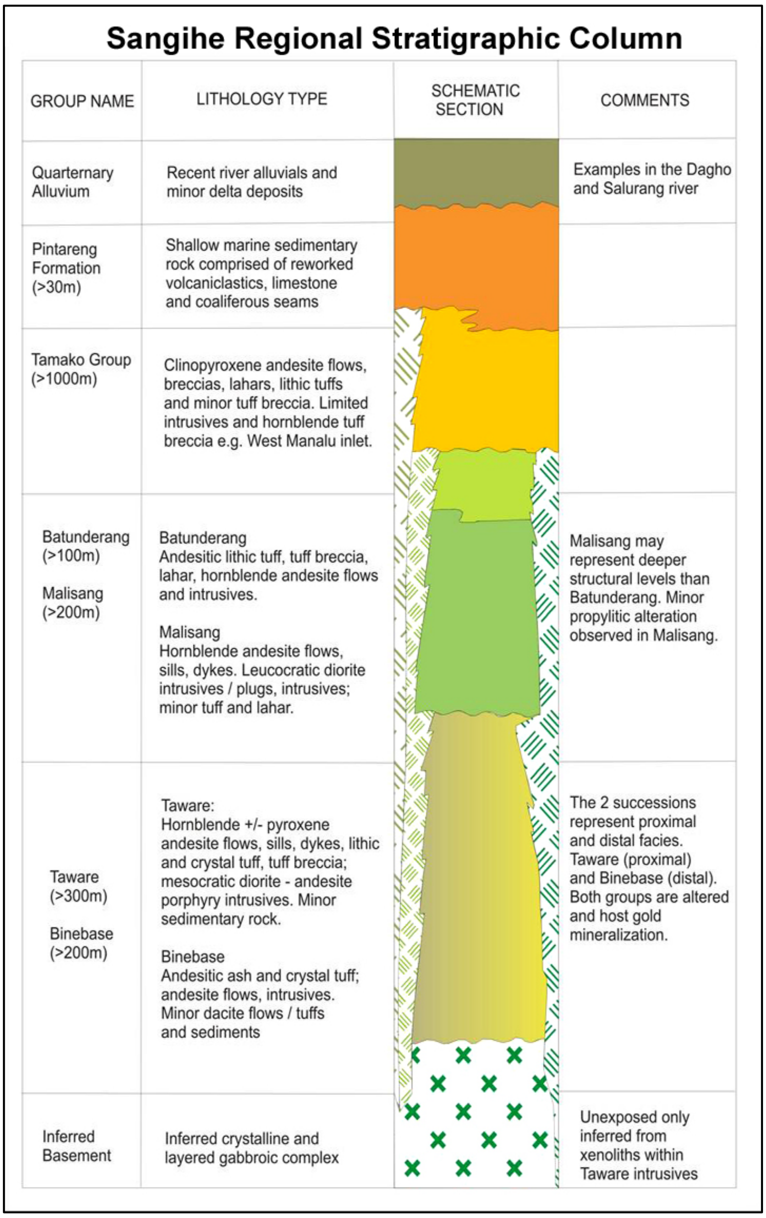


Figure 7-4: Schematic Stratigraphic Column of South Sangihe Island. (Source: after Ashton compilation 1992, from Arodji and Johnnedy, 2009)

7.3 PROSPECT GEOLOGY

At the Binebase- Bawone area, Garwin (1990) described the Binebase Group predominantly characterised by a tuffaceous sequence composed of well indurated ash tuffs. Crystal tuff with fine to medium grained plagioclase in an ash matrix is selectively altered and mineralised at Binebase. The tuffs form a poorly defined north-northwest trending belt approximately 5 km long from Binebase to south of Salurang. Subordinate fine grained hornblende-clinopyroxene andesite flows underlie and overlie the tuffaceous sequence.

Figure 7-5, Figure 7-6, Figure 7-7 and Figure 7-8 illustrate common rock types seen in the Sangihe area.

Tuff-andesite contacts exposed at Binebase- Bawone have north-easterly strikes and moderate to steep south-easterly dips. Internal tuff sequence contacts generally dip towards the south (Figure 7-9 and Figure 7-10).

Porphyritic biotite-hornblende andesite forms two major north-northwesterly trending exposures adjacent to outcrops of tuff and fined grained andesite in the Bawone area. Contacts are irregular and of variable local trends suggesting the unit to be a hypabyssal intrusive body (Figure 7-11 and Figure 7-12).

Minor dacite flow rock is associated with ash tuff close to a porphyritic andesite contact at Binebase South and siltstone forms intercalations within fine grained andesite south of Salurang.

Figure 7-5: Hydrothermal breccia at Binebase Drill hole BID131_21.67-21.96 m.

Figure 7-6: Dacite flows in Binebase Drill hole BID130_50.41-50.70 m.

Figure 7-7: Weakly altered diorite from Taware Drill hole TAD004 127.30-127.41 m.

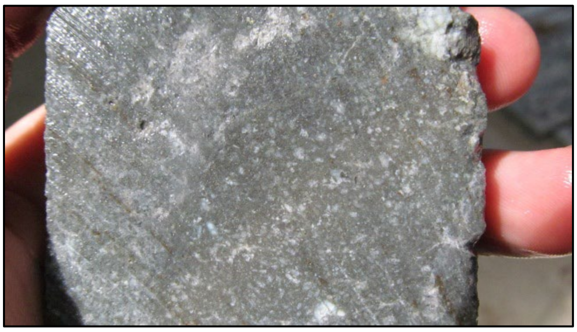


Figure 7-8: Altered andesite from Drill hole BID129_118.50-118.61 m.

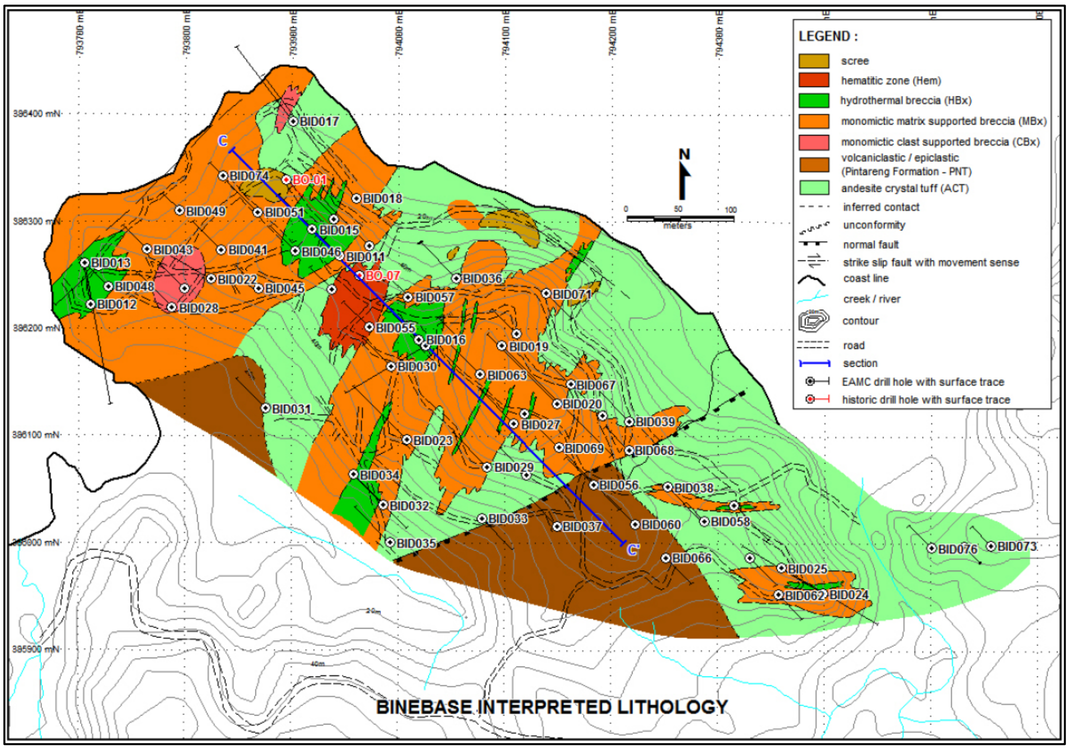


Figure 7-9: Binebase interpreted lithology plan view. (Source: Stone, 2010)

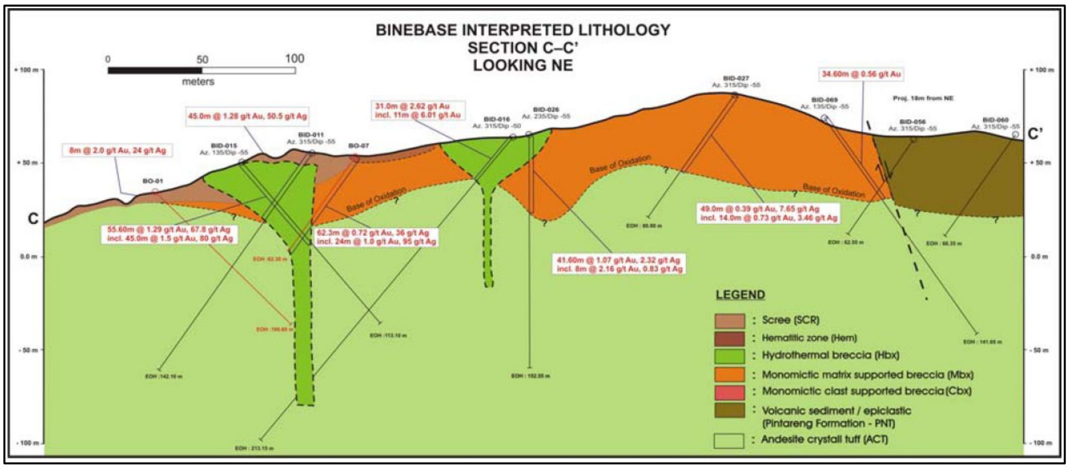


Figure 7-10: Binebase interpreted lithology section view. (Source: Stone, 2010)

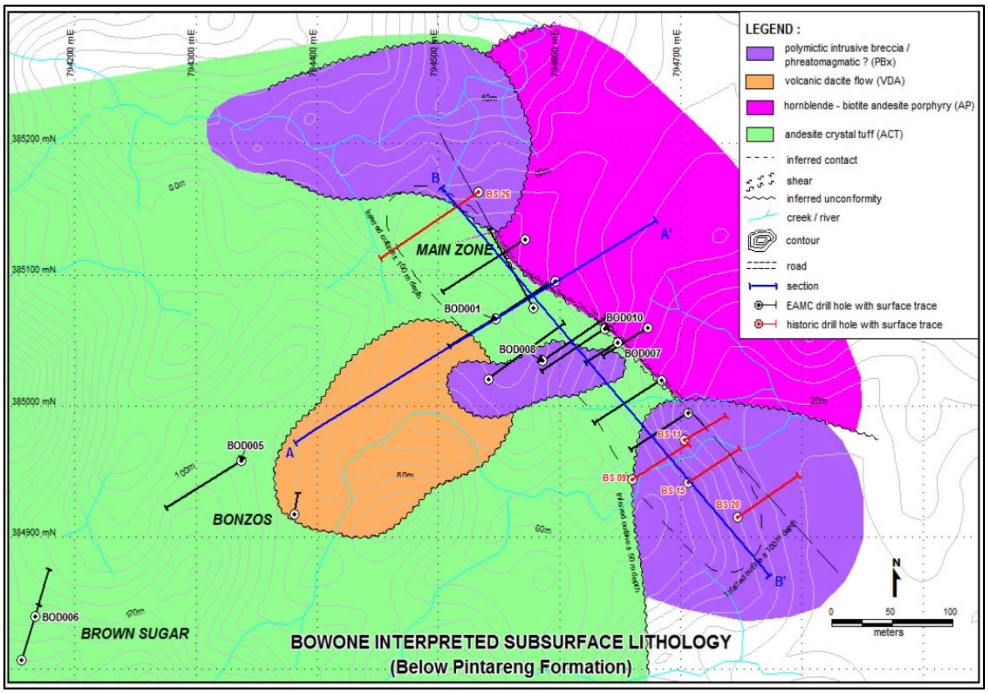


Figure 7-11: Bawone interpreted lithology plan view.
(Source: Stone, 2010)

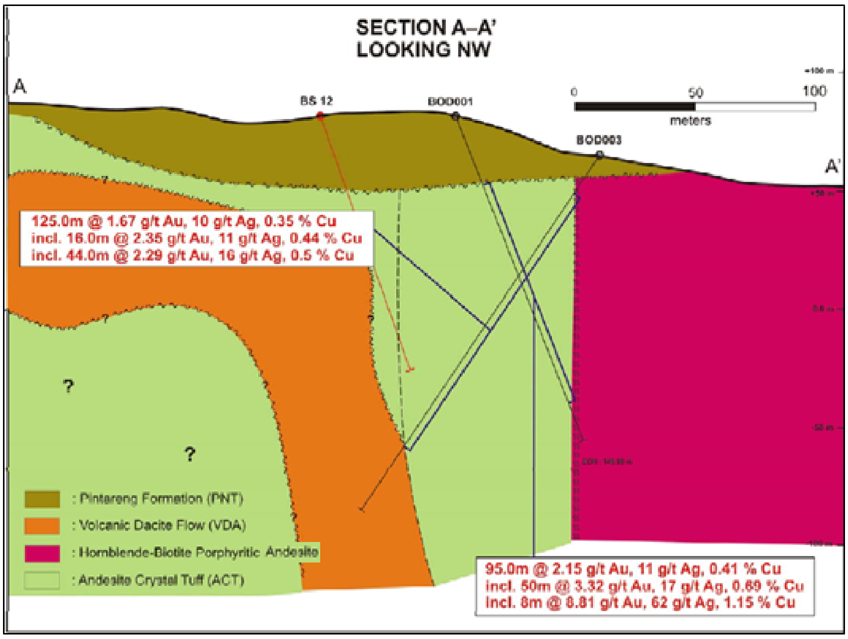


Figure 7-12: Bawone Deposit - Schematic cross section
Mineralised zone between the dacite and the porphyry intrusive.
(Source: modified from Arodji & Johnnedy, 2009)

7.3.1 Structure

The Binebase- Bawone area (and the southeast portion of Sangihe Island) are located within a broad north-northwest structural corridor, within which alteration and mineralisation appear to occur in northwest-trending dilational zones and to a lesser extent in northeast-trending zones.

7.4 MINERALISATION

Significant mineralisation within the Sangihe area occurs in two main localities:

- Binebase- Bawone (southeast corner of the island).
- Taware-Sede-Kupa (south central part of the island). Taware copper-gold mineralisation is porphyry related with outlying (possible low sulphidation) gold prospects (Sede and Kupa)

Mineralisation at Binebase and Bawone are described below.

7.4.1 Binebase

Gold-bearing oxide and sulphide zones have been defined at Binebase. Binebase oxide mineralisation is elongated to the northwest along 600 m of strike length. Oxide zones appear to form roughly tabular bodies overlying more steeply dipping sulphide zones. BGC's drilling indicates that the oxide zone is generally 20 to 60 m thick with an abrupt transition to sulphide mineralisation. However, the geometry of the transition appears quite irregular. Some irregularity is expected due to small scale faults, or more extensive alteration along rock type boundaries or within specific geological units where fluid flow would be expected to be higher but may also be related to the core logging process and the subjective interpretation of the location of the base of oxidation.

Significant gold and silver mineralisation is restricted to intensely silicified and pyritised tuff (Swift and Alwan, 1990). Arseniferous pyrite is the most common sulphide comprising over 50 % of the rock in some samples. Pyrite commonly occurs with framboidal or colloform textures. Covellite and chalcopyrite intergrowths occur as the most abundant copper bearing phase. Sulphides are very fine grained and disseminated. The upper portion of the silicified and mineralised rock is oxidised and commonly weathered to a disaggregated limonite stained baritic quartz sand. Minor copper enrichment occurs at the base of oxidation beneath all drill intercepts through the silicified zones, arising from the supergene deposition of chalcocite (although Garwin reported malachite and calcanthite). Narrow quartz-barite-sphalerite-galena veinlets occur within argillic-phyllic alteration. Quartz veins are sugary and crystalline, often vuggy with coarse bladed barite crystals and coarse, amber coloured sphalerite and minor galena. These veinlets are weakly anomalous in gold and silver.

Petrography (Ashley, 2008) and XRD (Raudsepp & Pani, 2008) identified titano-magnetite in weakly altered samples and confirmed the presence of enargite (and minor marcasite) at Bawone and minor enargite at Binebase.

Figure 7-13, Figure 7-14, Figure 7-15 and Figure 7-16 illustrate typical mineralised rocks at Binebase.

Figure 7-13: Oxide sample from Binebase Drill hole BID124_14.01-14.15 m.

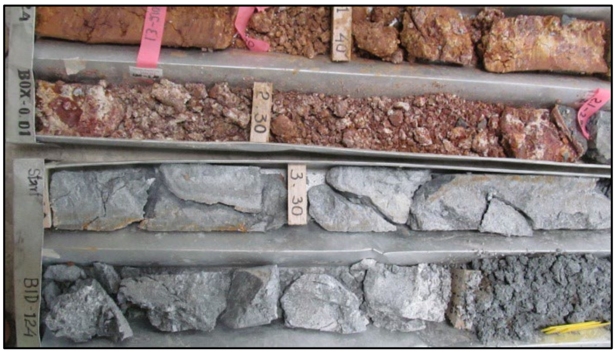


Figure 7-14: Core trays from Drill hole BID124 showing sharp contact between mineralised oxide (brown) and non-mineralised material (grey).

Figure 7-15: Silica and pyrite altered breccia Drill hole BID124_116.60-116.72 m.

Figure 7-16: Silica and pyrite altered breccia Drill hole BID124_110.21-110.35 m.

7.4.2 Bawone

At Bawone (approximately 1 km south of Binebase), three gold prospects have been identified. From north to south these are: Main Zone, Bonzos and Brown Sugar. At Main Zone, mineralisation is interpreted as an elongated southeast-northwest, steeply dipping tabular zone within fine crystal tuff with dimensions of 250 m long, 75 m wide and over 100 m deep and is open to northwest and southeast. Oxide zone mineralisation is about 25 m thick. Bonzos is located about 250 m southwest of Main Zone (Figure 7-11) and mineralisation is interpreted to have been deposited under a dacite flow (canopy) measuring 100 m x 200 m wide at a depth of 60 to 80 m. Brown Sugar is located about 500 m southwest of Main Zone.

Mineralisation is mostly hosted in an altered porphyritic lithic tuff. Relict phenocrysts are variably leached leaving barite ± quartz rimmed voids or clay altered (kaolinite dominant). The matrix shows intense silicification. Pyrite is the dominant sulphide; occurring as medium-fine grained, anhedral-euhedral zoned crystals. Sphalerite is a minor sulphide. No visible gold is seen in hand specimen or in thin section (BGC, 2008).

7.4.3 Alteration

Alteration at Binebase- Bawone as described by Garwin (1990) is of a typical high sulphidation style:

- Propylitic: Chlorite-pyrite with minor calcite-clay and rare epidote.

- Clay-pyrite:
- Phyllic: Illite-quartz-pyrite with minor kaolinite-gypsum-smectite-chlorite.
- Argillic: Kaolinite with minor illite-quartz-pyrite-gypsum-barite.
- Swift and Alwan (1990) reported sphalerite and galena mineralisation in this zone.
- Alunite: Alunite-barite with minor scorodite (hydrated iron arsenate) and halloysite. May host some gold-silver mineralisation.
- Silica: Quartz-barite-pyrite (vuggy) with minor kaolinite-chalcocite-covellite-chalcopyrite-gypsum-chalcedony. Enargite is also reported. Typically 10 to 50 % pyrite and 2 to 10 % barite occur with moderate to intense silicification. This innermost alteration zone hosts the gold-silver mineralisation.

7.4.4 Mineralisation Interpretation

Zoned alteration and gold-copper distribution at Bawone indicates that hot magmatic fluids flowed upward in the vicinity of late stage diatreme breccias, and then laterally along dilatant structures towards the southeast (i.e. towards Salurang). The size of the alteration zones, temperature of formation and metal grades all decrease moving from up-flow to outflow settings. The local sharp contacts between residual (vuggy) silica, silica-alunite and peripheral clay alteration indicate formation at a moderately high crustal level or distal to the inferred magmatic source, and are typical of an outflow portion of the hydrothermal system. Mineralisation occurs as filling of vughs in the residual silica as sulphide matrix to the brecciated competent residual silica and silica-alunite alteration.

While the bulk of the hydrothermal fluids flowed to the southeast along the dilatant structures, relatively small structurally controlled high sulphidation mineralisation occurs to the southwest at Brown Sugar and Bonzo. Here, observed rapid changes in alteration zonation are consistent with fluid quenching. This, and the presence of low temperature alteration minerals, reflects a distal setting to the inferred fluid upflow in the vicinity of the diatreme breccia.

At Binebase, alteration and mineralisation are interpreted to have been derived from fluids which flowed along the through-going north-northeast and then north-northwest structures and then intersected a permeable lapilli tuff unit. Low temperature alteration assemblages are consistent with the distal relationship to the inferred fluid source at Bawone. Chalcedonic quartz becomes increasingly vuggy down dip and to the south towards the inferred up-flow. The abundant gypsum and barite suggest that incursion of sea water could have occurred, possibly from the northwest.

8 DEPOSIT TYPES

Bawone and Binebase are classified as high sulphidation style gold deposits. The potential for porphyry-style copper-gold mineralisation within the project area is also recognized based on the occurrence of copper and gold bearing quartz vein stockworks associated with diorite and porphyry-style alteration assemblages at Taware. Base metal and gold bearing quartz veins peripheral to the Taware diorite have characteristics that are indicative of low sulphidation mineralisation.

8.1 CLASSIFICATION

Porphyry-related base and precious metal deposit styles of the magmatic island arcs of the southwest Pacific are discussed extensively by Corbett and Leach (1998) and Corbett (2004). These authors also provide a comprehensive discussion of the controlling factors and characteristics of porphyry systems and classify southwest Pacific Rim gold-copper systems into three main groups;

- Porphyry-related
- High sulphidation
- Low sulphidation

Figure 8-1 shows the interpreted genetic setting for the Sangihe Project deposits within the framework of Corbett and Leach (1998).

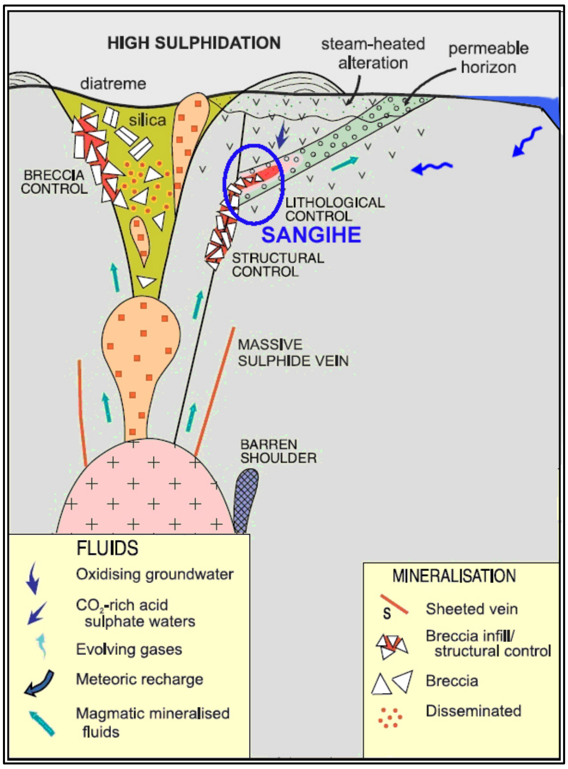


Figure 8-1: High sulphidation model.
With structural and lithological controls.
(Source: Corbett and Leach, 1998)

8.1.1 High Sulphidation Gold Model

High sulphidation deposits are also called alunite-kaolinite or acid sulfate deposits. Typical characteristics of high sulphidation deposits are summarised in Table 8-1.

Table 8-1: Characteristics from high sulphidation deposits

Feature	Characteristic
Form of deposit	Veins mostly subordinate Stockwork veining common Disseminated ore common Replacement ore common
Ore minerals	Enargite-luzonite, pyrite, chalcopyrite, covellite, tetrahedrite-tennantite, gold
Gangue minerals	Quartz, kaolinite, alunite, barite
Common textures	Wallrock replacement textures, drusy cavities, hydrothermal breccias, veins
Minor textures	Banded textures
Dominant metals	Cu, Ag, Au, As
Minor metals	Pb, Hg, Sb, Te, Sn, Mo
Alteration	(proximal) Argillic→advanced argillic→intermediate argillic→ propylitic (distal)
Host rocks	Rhyodacite typical
Timing	Similar ages, host and ore
Fluids	Oxidised, acidic, magmatic dominant
Tectonic Setting	Magmatic arc

9 EXPLORATION

9.1 EXPLORATION PRE-2007

A chronological list of historical exploration within the Sangihe Project area prior to 2007 is shown in Table 9-1.

Table 9-1: Previous Exploration

Year	Description of activities
1986	PT MSM in partnership with Muswellbrook, undertook systematic stream sediment sampling, reconnaissance rock chip sampling, and ground magnetic and induced polarisation ("IP") surveys in the southern part of the island. These field programs led to the discovery of several copper-gold and gold prospects and prompted unofficial artisanal mining of alluvial material and shallow quartz veins in the Taware area.
1987-88	Drilling was conducted at Taware and the surrounding area with no apparent success except for one (1) hole that apparently intersected marginal grade, porphyry copper-gold mineralisation (Bautista et al., 1998). Results of extensive soil and outcrop sampling and limited geophysical surveys were used to develop drill targets.
1989-1993	A 5,000 m diamond drilling program was completed mainly testing targets at Binebase and Bawone and to a lesser extent at Salurang. This work led to the discovery of gold mineralisation at Binebase and Bawone.
1994-1996	Bre-X undertook exploration including diamond drilling at Taware.
2006	PT KEL conducted limited trenching at the Bawone prospect. Exploration focused mainly on the Taware and Binebase- Bawone areas.

9.2 EXPLORATION 2007-2009

Field work by EAMC (BGC) on the Sangihe Property commenced in April 2007 when geodetic benchmark-controlled baselines were established at both Binebase and Bawone and detailed mapping and trench sampling was completed at Binebase. Prospect scale geological mapping and rock sampling was concurrently completed at Bawone in 2007. Drilling commenced in August 2007 at Bawone and in November 2007 at Binebase and was completed in 2009. Table 9-2 lists the exploration activities carried out between 2007 and 2009.

Table 9-2: Exploration by EAMC (BGC) 2007-2009

Activity	Prospect	Quantity
Drilling	Binebase	62 holes (5,561 m)
	Bawone	17 holes (2,000 m)
Core Sampling	Binebase	4,289 samples
	Bawone	1,217 samples
Channel Sampling	Binebase	1,532 samples
	Bawone	134 samples
	Sede	188 samples
	Kupa	156 samples
IP dipole-dipole Survey	Binebase- Bawone area	55.83 line km
	Sede	7.48 line km
Ground Magnetic Survey	Binebase- Bawone area	59.07 line km
Petrographic Study	Binebase- Bawone area	5 rock samples
XRD Study	Binebase- Bawone area	77 pulp samples
Benchmarks	Binebase- Bawone area	7 points
	Sede-Kupa	8 points
Total Station Drill Collar Survey	Binebase- Bawone area	72 holes

9.2.1 Geophysics

PT Geoservices conducted time-domain IP dipole-dipole surveys over the Binebase and Bawone deposits in December 2007. A small survey was also completed at the Sede prospect. A total of 48.3 line km of 50 m dipole-dipole IP data was collected at the Binebase and Bawone deposits over an area of 3.54 km2 on lines spaced at 50m. At the Sede prospect 7.48 line km of data were collected from lines spaced 25 to 50 m apart.

At Bawone, IP was able to distinguish anomalism through at least 30 m of post-mineralisation Pintareng Formation. Resistivity results appear to define intrusive bodies (Figure 9-1) and when interpreted in conjunction with positive chargeability anomalies, correlated well with known mineralisation and non-mineralised wallrock intrusions. Ashton Groups' 1991-92 IP survey also records high chargeability response from the pyritic gold mineralisation.

At Binebase the results were considered more difficult to relate to known mineralisation probably because of the effects of strong oxidation of sulphide minerals and clay alteration that characterise the zones of gold mineralisation.

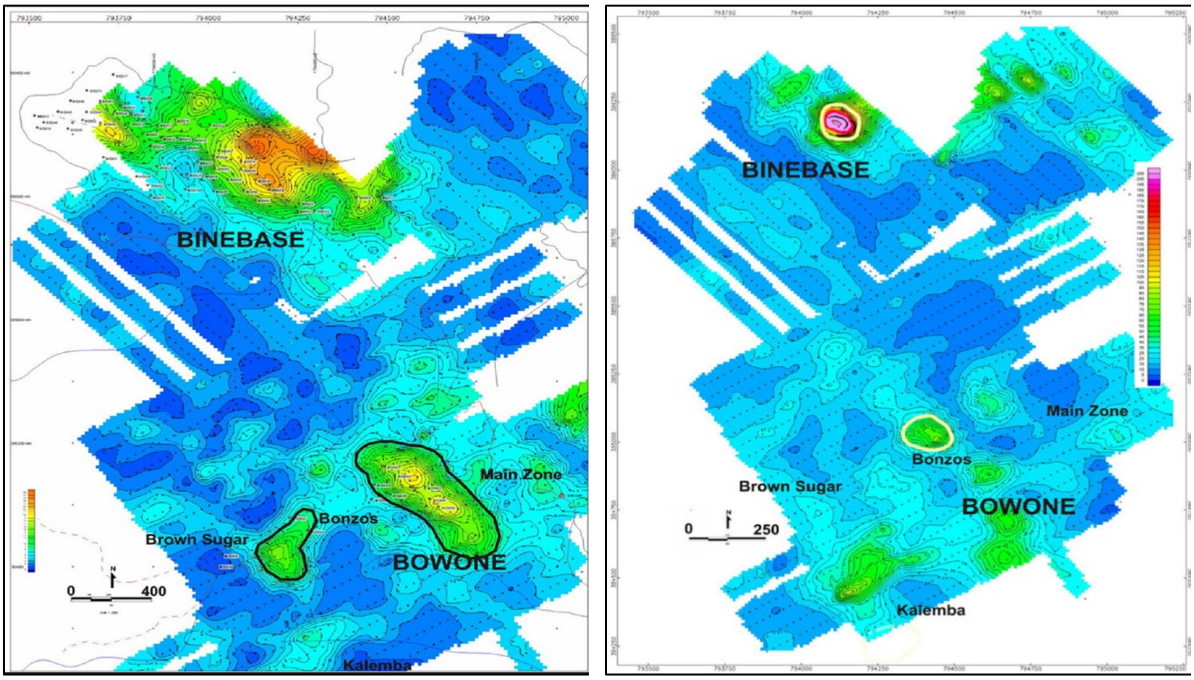


Figure 9-1: Chargeability (left) and Resistivity (right) maps.
(Source: Stone, 2010)

In 2008 a ground magnetic survey was completed by PT Geoservices. Survey lines were spaced at 50 m intervals with stations every 10 m. The reduced to pole data is shown in Figure 9-2 show a close spatial association of gold bearing sulphide mineralisation with linear zones of low magnetic intensity. Similar low magnetic intensity zones occur to the northwest, southwest and southeast of known mineralisation.

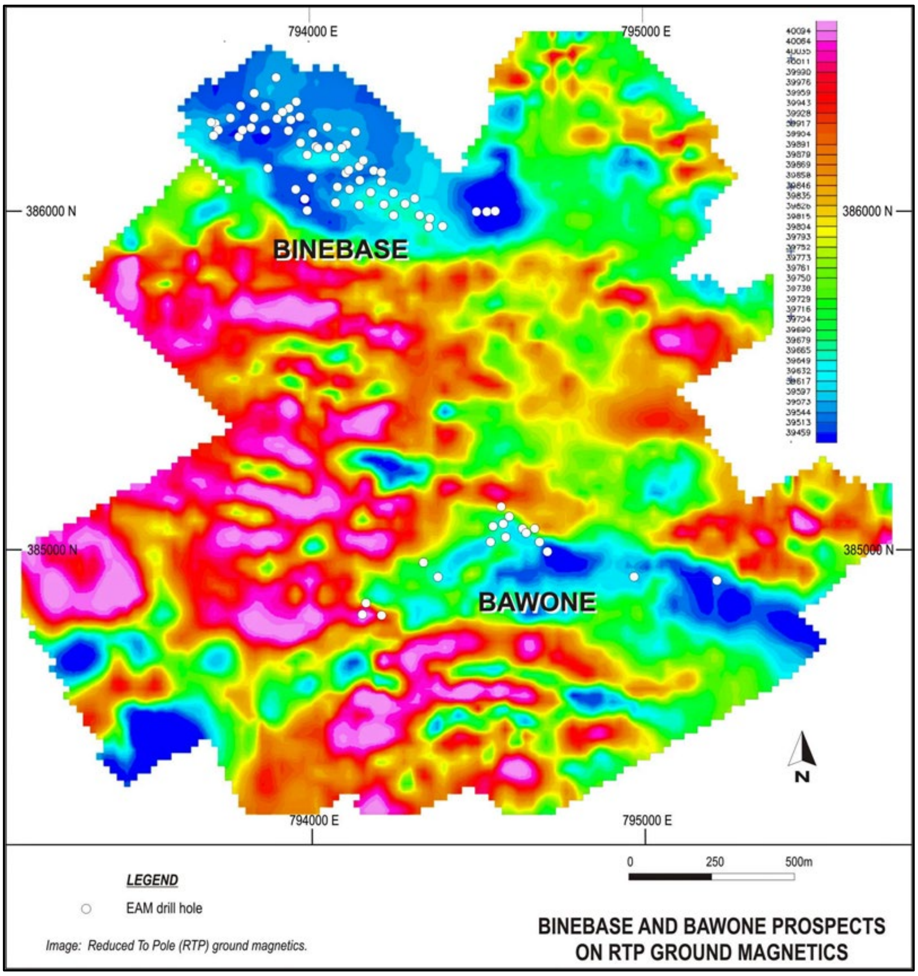


Figure 9-2: Ground magnetics map for the Binebase- Bawone area.
(Source: Stone, 2010)

9.2.2 Petrological Studies

Paul Ashley Petrographic and Geological Services ("PAPGS") conducted petrographic analysis of a suite of 23 drill core samples from Bawone and Binebase in December 2008 (Ashley, 2008). Twelve samples were from drill holes BOD-1 and BOD-3 at Bawone, and eleven samples were from drill holes BID-13 and BID-34 at Binebase. The samples represented a selection of strongly sulphide mineralised material and a couple of supergene oxidised equivalents, as well as fresh to strongly altered volcanic host rocks.

X-Ray powder-diffraction studies were also conducted on 15 samples by the Department of Earth and Ocean Sciences at the University of British Columbia (Raudsepp & Pani, 2008).

PAPGS concluded that the overall array of alteration assemblages in the suite, with several samples of argillic, advanced argillic and silicic-pyritic alteration, is consistent with formation in a high sulphidation epithermal system.

Pyrite is the dominant and usually the only sulphide phase in the Binebase samples. Only traces of other sulphides have been observed, viz. chalcopyrite, covellite, digenite and tetrahedrite. PAPGS considered that this observation is potentially significant, given the commonly strongly anomalous Cu assay values and the associated strongly anomalous Ag and locally Pb, Zn and Sb values.

PAPGS noted that no discrete precious metal phase, specifically gold or electrum, was observed in any sample in the suite, despite careful observations under high magnification. This is again significant because of the commonly strongly anomalous (ore grade) Au and Ag assay values. PAPGS considered that explanations for this phenomenon include the possibility that gold occurs in sub-microscopic particles and/or that it is held chemically (invisibly) in (arsenian) pyrite. The same explanations might be relevant for the location of some of the Ag and base metal assay values. PAPGS concluded that these observations have relevance to metallurgical treatment of ore grade material and PAPGS strongly recommended that if a potentially economically viable gold resource is located, then metallurgical testwork is performed at the earliest feasible stage to better quantify the location(s) of gold and to devise strategies to optimise its recovery.

A few samples in the suite display supergene oxidation effects, with partial to locally complete oxidation of pyrite (and other sulphides). The occurrence of traces of covellite (and very rare digenite) in some samples might also be due to supergene effects imposed on enargite and chalcopyrite. No particulate gold has been observed in these samples.

PAPGS concluded that the effects of supergene oxidation point to potential environmental consequences of open pit mining if an economic resource were proven at Bawone and/or Binebase. The highly pyritic nature of the rocks and the absence of any significant buffering agencies (e.g. carbonate, feldspar) would ensure that acid production by oxidation would be very strong and that acid rock drainage would be a major consequence. It is predicted that such drainage would also contain high values of dissolved As and Cu.

9.3 EXPLORATION 2010-2012

EAMC (BGC) contracted GPX Survey of Western Australia to undertake a helicopter based airborne magnetic survey in May 2011. The 2,232 line kilometre survey covered the entire Sangihe block area at a line spacing of 100 m.

Synthesis of previous exploration information defined 5 prospective target areas (Binebase-Salurang Corridor, Upper Taware Valley/ Kelapa/ Kupa, Taware Ridge and Mou-Ninja, Hadakel Kecil, Sawang Kecil) recommended for a range of mapping, sampling and ground geophysical surveys (magnetics and IP) that have not been subject to significant drill testing.

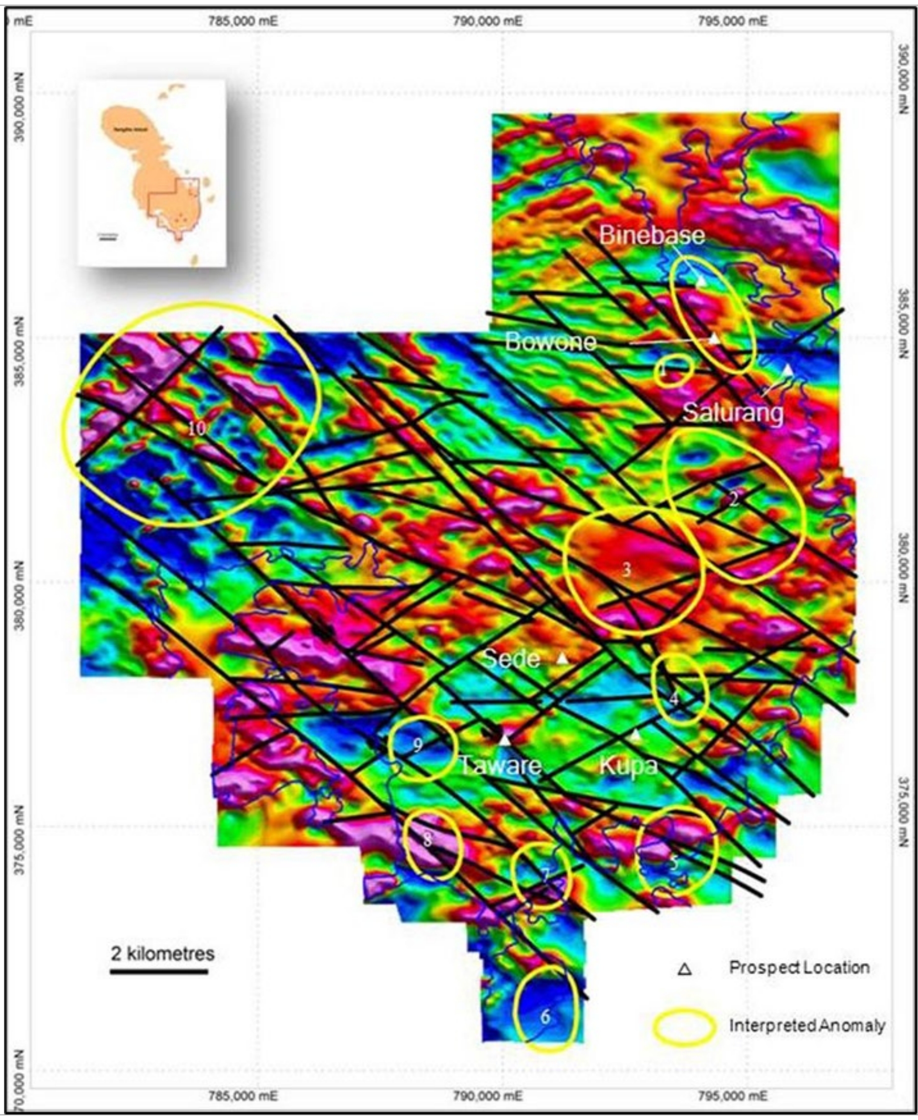


Figure 9-3: Target areas - Reduced to Pole (RTP) airborne magnetic survey.
(*Source: BGC, 2011*)

9.4 EXPLORATION 2012-2013

Exploration activities resumed in late 2012 with a 4,600 m drilling program at Binebase, Bawone and Taware and rock chip sampling and geological mapping programs. Rock chip and geological mapping programs were undertaken at the new West Bawone prospect, Kupa prospect, Salurang prospect, Kalemba, Bonzos, Brown Sugar and Taware.

Drilling program details are covered in Item 10.

9.5 EXPLORATION 2021

In September 2021 Baru Gold Corp ("BGC") undertook reconnaissance mapping and identified four new prospects.

The new prospects are known as Darelupang, West Bawone, Southwest Bawone and South Salurang.

- The Darelupang prospect is located 300 metres west of the Binebase Resource. It is expressed as a low sulphidation (LS) vein system composed of a sheeted quartz vein zone of 1.2 metres width within a volcanic breccia host rock. Textures that are visible on individual veins within this zone are vuggy, zoning, and colloform bending.
- The West Bawone prospect is located 300 metres west of the Bawone Resource It is expressed as high sulphidation (HS) silica-alunite system composed of a 1 metre wide hydrothermal breccia with chloritic and hematitic alteration within a volcanic breccia host rock. The hydrothermal breccia has a chalcedonic-silica ground mass.
- The Southwest Bawone prospect is located 1.1 km southwest of the Bawone Resource. It is defined as a low sulphidation (LS) vein system composed of a hydrothermal breccia of 1 metre width with hematitic alteration within a volcanic breccia host rock.
- The South Salurang prospect is located 100 metres southeast of Salurang village. It is expressed as high sulphidation (HS) silica-alunite system composed of a 1 metre wide oxidized sheeted-stockwork zone with a density of 10 veinlets/ metre. The veinlets with the stockwork zone have a brecciated texture. At a separate location in the South Salurang was an outcrop of oxidized vuggy silica rock with a width of 1.5 metres which consists of a brecciated and vuggy texture.

All outcrops encountered in these new prospects have been mapped and grab and channel samples taken and submitted to the Intertek Laboratory in Jakarta for assay analysis.

In October 2021 BGC appointed Murphy Geological Services ("MGS") to conduct a structural study of the entire Sangihe Island Contract of Work (CoW) area. The study involved the acquisition, processing, and interpretation at 1:10,000-1:15,000 scale of Sentinel-2 and Hi-Res (WorldView, GeoEye and Pleiades) satellite imagery to develop a structural synthesis for the geological occurrence of known gold occurrences and generate future exploration targets. A high resolution (Hi-Res) mosaic for the Sangihe CoW was interpreted at up to 1:2,000 scale. The Sentinel-2 images were draped onto an ASTER based Global Digital Elevation Model (GDEM) to help accentuate topographically controlled structure and domal features.

Target identification was based on criteria that includes the presence of major faults, inflections along major faults, major fault intersections, radial major/second order faults related to the Kakiraeng stratovolcano, location within the newly identified Kakiraeng-Taware Fault Zone (KTFZ) or along its bounding structures, domal/circular features, linear resistant features, eroded volcanic center/caldera rim, artisanal workings, prominent aeromagnetic lineaments, and proximity to known gold mineralisation.

Twelve of the 23 target areas generated were classified as Priority 1, eight as Priority 2, and three as Priority 3. Field analysis is planned to verify the geometry and kinematics of the major structures identified from the satellite image interpretation.

Mapping and sampling of artisanal workings and outcrops within the Priority 1 Rome Target area. Samples obtained from strongly oxidised 0.15 m and 0.2 m wide quartz veins in tuffaceous andesite returning assays ranging from 41.9 g/t to 72.0 g/t for gold and 5.30 g/t to 97.0 g/t for silver.

At the Canberra East prospect samples obtained from strongly oxidised silica, alunite, pyrite breccia and from strongly oxidised silica clay altered tuffaceous rocks returned assays ranging from 0.31 g/t to 5.88 g/t for gold and 0.80 g/t to 20.70 g/t for silver.

10 DRILLING

A summary of drilling different prospects and time periods is shown in Table 10-1.

Table 10-1: Summary drilling details from Sangihe

Prospect	Company	No. drill holes	Metres Drilled	Dates
Binebase and Bawone	PT MSM/Ashton Mining	not available	5,000	1990-1993
Binebase	EAMC	62	5,561.1	2007-2009
	EAMC	39	2,570.3	2011-2012
	EAMC	25	2,484.7	2012-2013
Bawone	EAMC	17	2,003.55	2007-2009
	EAMC	4	466.70	2011-2012
	EAMC	6	975.5	2012-2013
Regional	EAMC	14	not available	2007-2012
	Various	not available	2,525	1986-1997
Taware	PT MSM + Bre-X	39	9,614	1994-1997
Taware	EAMC	10	1,703.4	2012-2013

10.1 TRENCHING

EAMC (BGC) excavated 35 trenches totalling 1,492 m at Binebase and 7 trenches totalling 126m at Bawone during 2007-2009. Trenches were excavated using an excavator or by hand.

10.2 DRILLING PRE-2007

Core drilling has occurred since the establishment of the CoW in 1986. Detailed drill program results for drilling conducted prior to 2007 have not been witnessed by MA.

10.3 DRILLING 2007-2009

Drilling commenced in August 2007 at Bawone and in November 2007 at Binebase (Figure 10-1 and Figure 10-2). Drilling was performed by PT Asia Drill Bara Utama using a man portable AD-250 drill rig. Drilling targets were in part defined by anomalies identified from the dipole-dipole IP surveys completed in 2007. Additional drilling was completed at Binebase in 2008 using a more regular pattern drill approach. A complete description of the 2007-2009 drilling program is given in Stone (2010). EAMC (BGC) completed the drill program at Sangihe in 2008, which included 7,561 m of drilling in 79 shallow holes at the Binebase and Bawone deposits.

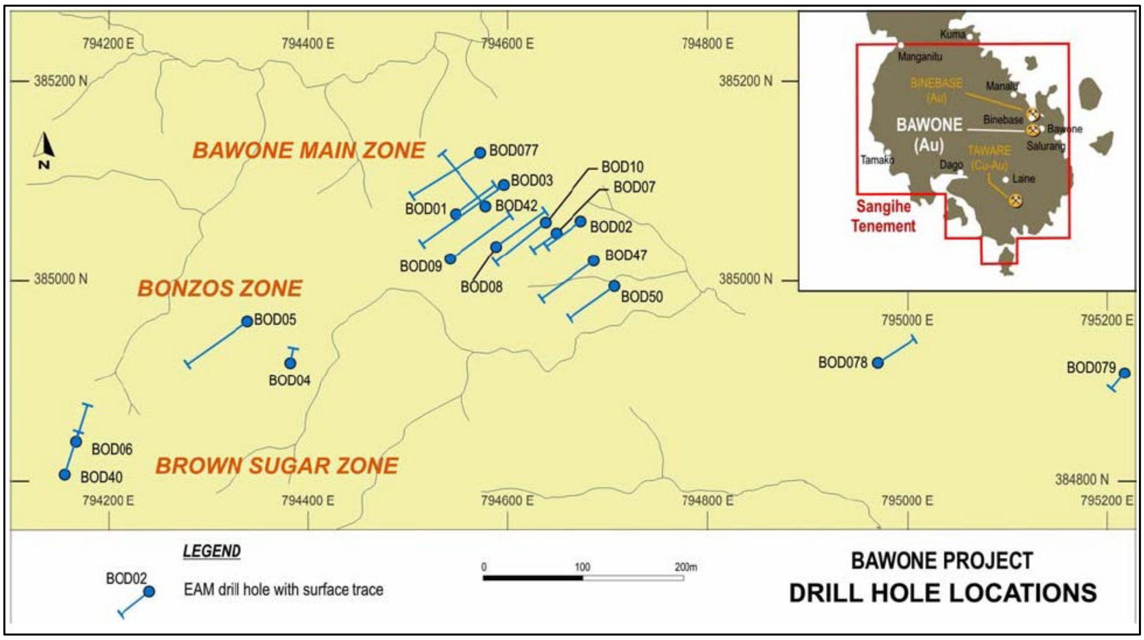


Figure 10-1: Bawone Deposit – 2007-2009 drilling.
(Source: Stone, 2010)

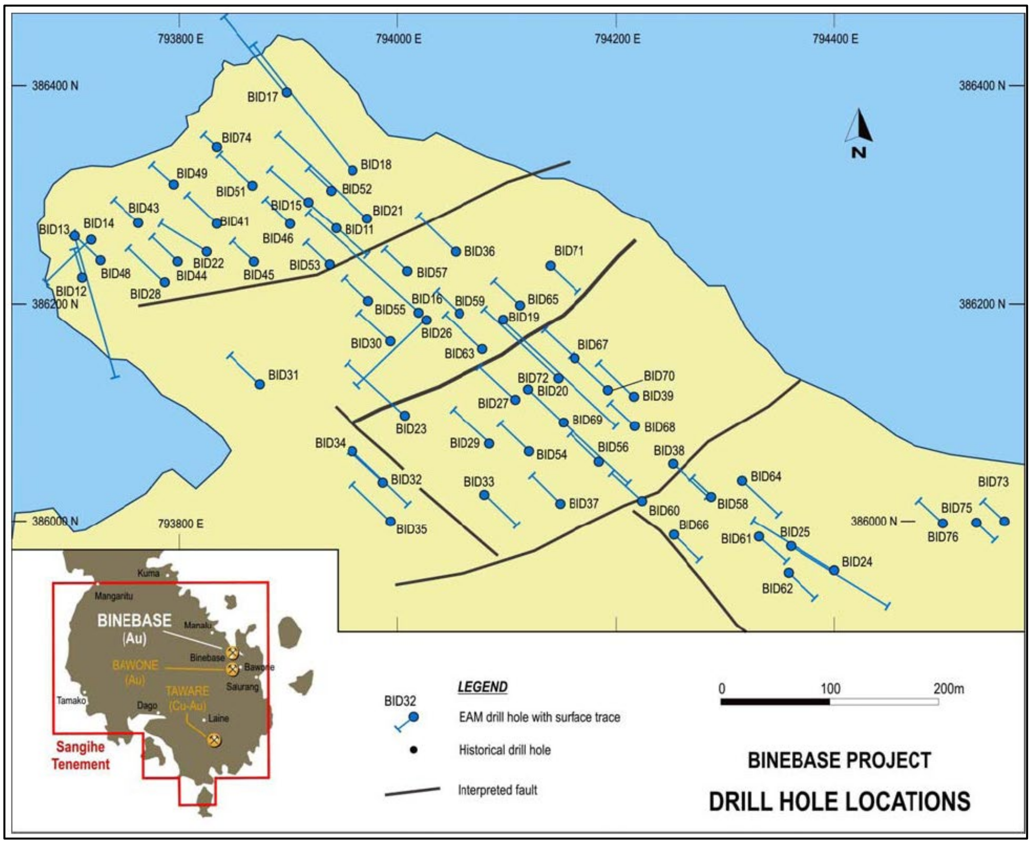


Figure 10-2: Binebase Deposit – 2007-2009 drilling.
(Source: Stone, 2010)

10.4 DRILLING 2011-2012

Drilling at Sangihe re-commenced in 2011. The drilling program consisted of 39 diamond drill holes at Binebase and 4 at Bawone. Drill collars were surveyed by PT Geo Padma Sarana using Total Station equipment. This drilling was conducted by contractor PT Indodrill using a drill rig with a capacity of 250 m of NQ coring. Holes were collared and drilled to ~100 m depth with HQ core, then completed by NQ coring. Holes were inclined between 45° and 70° on varying azimuths. Downhole surveys were conducted using a Camteq Proshot Survey Instrument.

Upon completion, drill hole collars were marked with a concrete pad and the hole identification, orientation and end of hole depth were etched into the surface (Figure 10-3).

Figure 10-3: Binebase drill collar marker for BID-72.
(Source: Stone, 2010)

10.5 DRILLING 2012-2013

Diamond drilling at Sangihe re-commenced in December 2012 and finished in April 2013. The 2013 drilling program consisted of 41 diamond drill holes: 25 at Binebase, 6 at Bawone and 10 at Taware.

10.5.1 Drill Hole Details

Signed permission forms were received from local chiefs for drill collar locations on their land and compensation arranged for disturbances. Drill pad access roads were cleared using parangs and minor excavator work. Drill pads were mostly hand cleared level surfaces of about 10 m x 8 m. Two hand dug, poly lined sumps of about 2 mx2 mx1 m were constructed at each drill hole.

A total of 5,163.6 m was drilled during the 2012-2013 drilling. Drillhole lengths ranged from 46.5 m to 225.5 m. Drill hole dips ranged between -55° to -75° but were commonly -60°. All drill holes were completed by diamond drilling methods. Drill holes were collared PQ size until about 30 m, cased off, and continued until end of hole in HQ. Down hole surveys were taken every 15 m using a Reflex EZ Shot instrument. Upon completion, the drill hole collars were marked with a concrete pad with the hole identification, orientation and end of hole depth etched into the surface.

10.5.2 Drilling

Drilling was performed by PT Maxidrill Indonesia (Jakarta) using MD195 man-portable and MD200-track mounted drill rigs. The MD195 averaged about 28 m/active day and the MD200 averaged about 32 m/active day over the entire program.

Recovery and RQD measurements were performed by local EAMC (BGC) staff members at the drill rig site. Core was carefully loaded into appropriately sized core trays and transferred to the Bawone base camp core shed via Toyota Hilux utility vehicles. Core trays were covered with a lid and the lid tightly fastened with plastic ribbon to preserve the integrity of the samples.

10.6 DRILLING 2017

Between August and December 2017 BGC completed additional drilling to gather geotechnical information for pit wall design for the Binebase starter pits as part of the Indonesian Pre-Feasibility Study (IFS). PT Groundcheck Drillindo Nusantara (GCD) undertook the metallurgical and geotechnical drilling and associated laboratory testwork. PT Ground Risk Management (GRM) analyzed geotechnical and hydrological data to characterize rocks and generate mine geometry parameters in addition to heap leach design and waste material disposal.

The program consisted of:

- Three metallurgical holes; BH BIM 23, BH BIM 46 and BH BIM 52; drilled from 50 to 55 degrees towards 315 degrees to depths of 26 m, 19.5 m and 24.5 m respectively for core to be used for metallurgical studies.
- Four boreholes within the proposed Binebase Pit area; BH GT 01 to BH GT 04; drilled at 60 degrees towards 135 degrees to depths of 60 m, except BH GT 03 which was drilled to 12 m for core to be used for geotechnical studies on pit wall design, fragmentation of ore and ore excavation rates.
- Two boreholes for hydrogeological studies that included falling head testing and insitu soil testing; BH HD 01 and BH HD 02 each drilled vertically to 60 m depth to help locate and identify the water table level within the pit design and best water sources for proposed drilling and processing.
- Three geotechnical boreholes for infrastructure design purposes; BH GWD 01, BH GWD 02 for the main waste dump to the south of the Binebase Pit, and BH GHL 01 for the process plant site.

These holes are not included in the Sangihe drillhole database.

10.7 ACCURACY & RELIABILITY

10.7.1 2007-2009 Drilling

Average core recovery for the 2007-2009 diamond drilling at Binebase and Bawone was 90.3 % and 92.26 % respectively. Table 10-2 lists core recovery statistics.

Table 10-2: 2011-2012 Core Recovery Statistics

Recovery	Binebase		Bawone	
	Samples	% of Total	Samples	% of Total
<80% recovery	1,582	20%	276	14%
80-99% recovery	1,091	14%	322	16%
100% recovery	5,216	66%	1,363	70%
Total	7,889	100%	1,961	100%

10.7.2 2011-2012 Drilling

Average core recovery for the 2011-2012 diamond drilling at Binebase and Bawone was 97.4 % and 99.6 % respectively. Table 10-3 lists core recovery statistics.

Table 10-3: 2011-2012 Core Recovery Statistics

Recovery	Binebase		Bawone	
	Samples	% of Total	Samples	% of Total
<80% recovery	99	4%	1	0%
80-99% recovery	245	10%	12	3%
100% recovery	2,077	86%	335	96%
Total	2,421	100%	348	100%

10.7.3 2012-2013 Drilling

Average core recovery for the 2012-2013 diamond drilling at Binebase and Bawone was 98.85 % and 96.55 % respectively. Table 10-4 lists core recovery statistics.

Table 10-4: 2012-2013 Core Recovery Statistics

Recovery	Binebase		Bawone		Taware	
	Samples	% of Total	Samples	% of Total	Samples	% of Total
<80% recovery	42	2%	41	5%	29	2%
80-99% recovery	171	7%	58	7%	69	3.5%
100% recovery	2,162	91%	749	88%	1,647	94.5%
Total	2,375	100%	848	100%	1,745	100%

10.8 PROPOSED 2025 DRILLING

Baru Gold Corp has informed MA that a drilling program is planned to commence in 2025. Drilling will happen in three phases. Phase-1 will be infill drilling over approximately 1.2 kilometres of strike length between Binebase and Bawone, Phase-2 will be exploration drilling over 1.45 km from Bawone to south of Salurang following the continuation of the known geochemical anomaly and with guidance from the ongoing structural study, and Phase-3 will be drilling of regional targets, including at Taware, Sede and Kupe.

10.9 COLLAR PLAN & REPRESENTATIVE SECTIONS

Figure 10-4 shows the drill collar plan for the Bawone deposit and Figure 10-5 shows the drill collar plan for the Binebase deposit. Figure 10-6 and Figure 10-7 show representative cross sections through the same deposits.

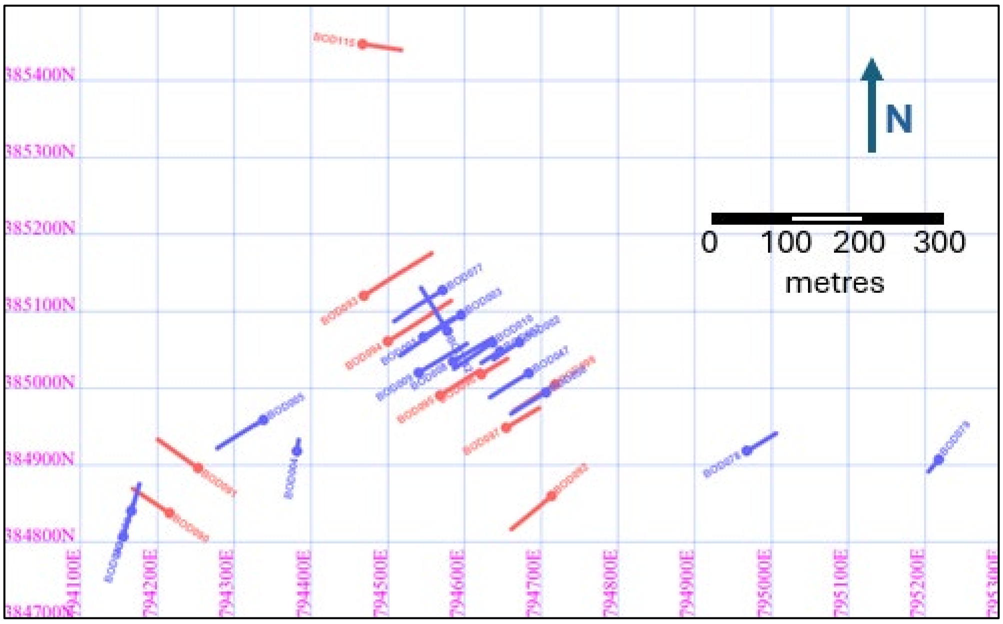


Figure 10-4: Bawone drill collar plan showing 2012-2013 drill holes in red and 2007-2011 drill holes in blue.

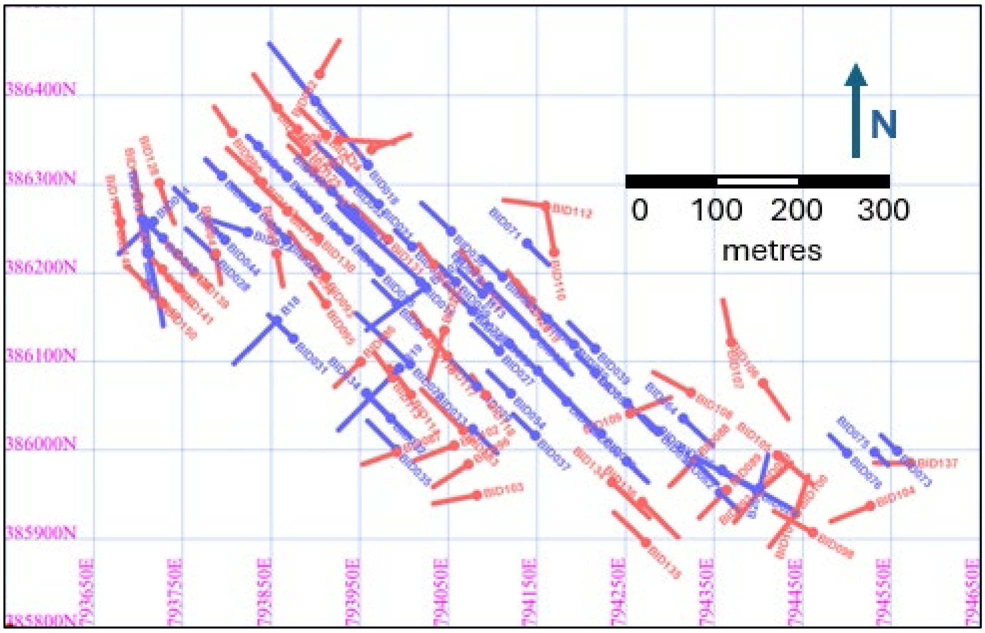


Figure 10-5: Binebase drill collar plan showing 2012-2013 drill holes in red and 2007-2011 drill holes pre-2012 in blue.

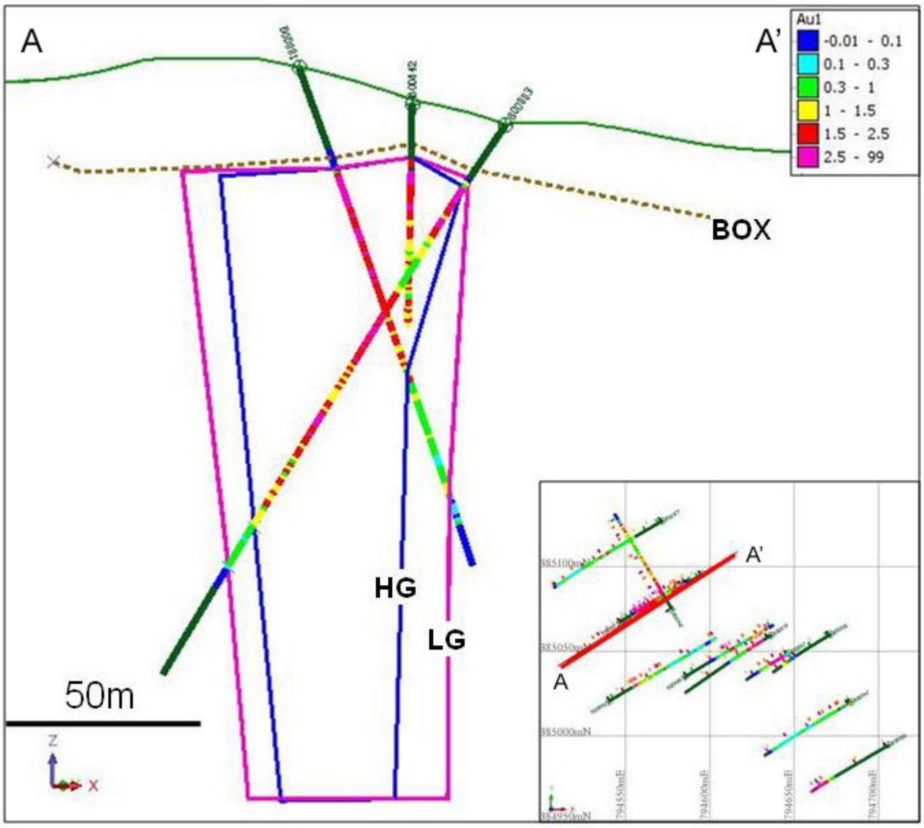


Figure 10-6: Typical Bawone cross section. BOX= base of oxidation, LG= Low grade domain boundary, HG= High grade domain boundary from MA model.

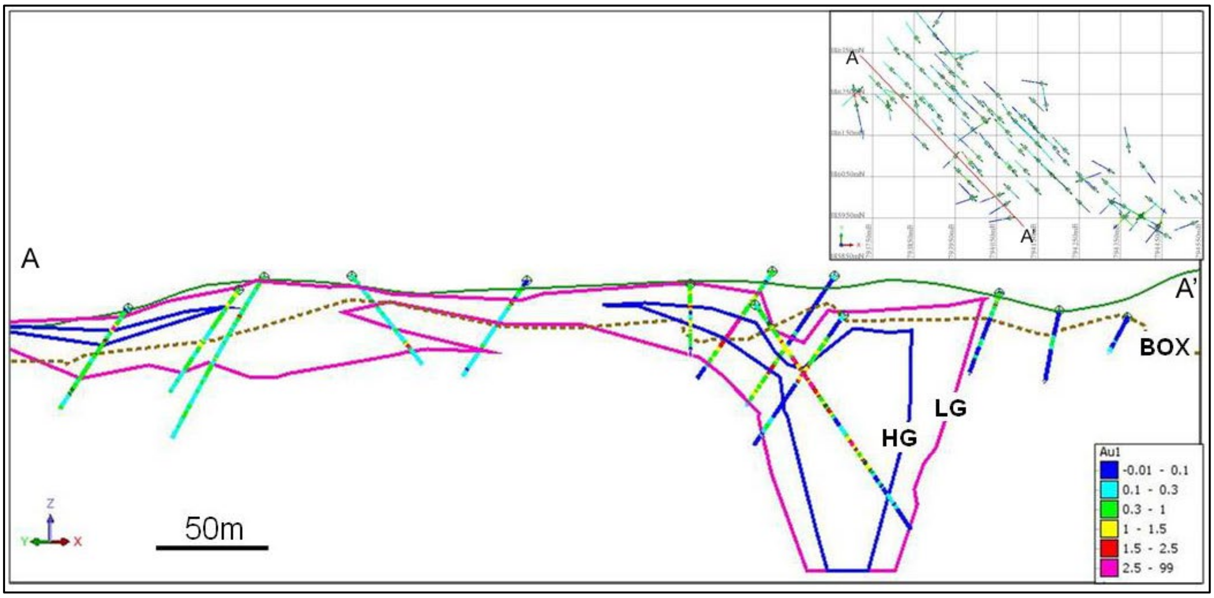


Figure 10-7: Typical Binebase long section. BOX= base of oxidation, LG= Low grade domain boundary, HG= High grade domain boundary from MA model.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

The procedures and preparation details detailed in this section relate to exploration activities undertaken from 2011 to 2013. Detailed procedures, sample preparation and QA/QC for exploration activities from 2007 to 2010 are reported by Stone (2010).

11.1 SAMPLE PROCEDURES

11.1.1 Surface Sampling

Soil, trench, channel and rock chip sampling has been conducted in the Sangihe Project area. MA has not seen standard operating procedures pertaining to these methods or observed them. These samples are not used in the resource calculation.

11.1.2 Drill Core Processing

Core trays arriving from the drill rigs are processed at the Bawone core shed by trained local EAMC (BGC) staff. Processing involves metre marking the drill core; core tray mark up with Hole ID, Tray Number, From (m) and To (m); specific gravity measurements and core photography.

Metre marking involves drawing a black line around the circumference of the core at a measured metre mark. These lines are helpful for logging depths and for core cutting. The drillers' core blocks are also reconciled during this step to ensure the correct meterage is being recorded.

Core tray mark-up involved writing on the end of the core tray the From and To metres of the contained drill core, the core tray sequence number and the drill Hole ID (Figure 11-1). The Start depth, end depth, Hole ID and core tray sequence number was drawn on the top edge of the core tray.

Density measurements used a 20 cm length of drill core cut at every 5 m interval. SG measurements employed the water displacement method. Details of the SG sampling method are described in Section 11.1.5.

Core photography was performed on a purpose made rack (Figure 11-2). Two core trays were supported at a small angle on the rack which also displayed the Date, Hole ID, From and To metres and core tray sequence numbers. Core photographs were taken wet and the images saved on the base camp server with their appropriate labels.

Figure 11-1: Core tray mark-up example.

Figure 11-2: Core photography.

11.1.3 Drill Core Sampling Procedure

Drill core cutting and sampling was performed at the Bawone base camp core shed by trained and authorised locals on a roster basis supervised by an authorised local staff member. Visibly mineralised or suspected mineralised core was sampled in nominal 1 m lengths whereas adjacent barren core was sampled in 2 m lengths. Sample lengths were adjusted if major changes in mineralisation, alteration, or lithology were noted during logging or where core loss occurred. Core was sampled over several metres on both sides of each observed mineralised zone.

After selecting the length of core to be sampled a line was drawn down the middle of the core and the selected segment sawn in half along the line using a Sandvik 3C1410 gasoline-powered diamond core saw (Figure 11-3). The core saw was washed between samples to prevent contamination. Soft or friable core was split with a knife. Broken core was sampled with a scoop, which was washed between samples. The left hand side of the cut core was consistently sampled (Figure 11-4). Half the sawed, split or scooped core was sent for assaying and the remaining half returned to the tray. Where a duplicate sample was taken the left hand side was sampled as a duplicate and the right hand sample was the original.

The half core interval for assaying was placed in a labelled calico bag together with an EAMC number tag. EAMC used the following format, "DC0000000SGH" for sample labelling (Figure 11-5). DC is for Drill Core, then a seven digit sequential number followed by the project area code (SGH) for Sangihe. Calico bags were tied off with their cotton thread and placed in small cardboard boxes. These cardboard boxes were enclosed by a white polyweave bag with bag number, sample number, from and depths and number of samples recorded on the polyweave bag. The polyweave bag was secured with plastic ribbon along its seams and made ready for transport (Figure 11-6). The remaining core was stored in labelled and stacked core trays at EAMC's guarded and maintained base camp at Bawone.

Coarse crush and pulp rejects from laboratory sample preparation were stored sequentially in labelled boxes in a secured facility in Manado.

Figure 11-3: Core saw being used at Sangihe.

Figure 11-4: Core sampling.

Figure 11-5: Label example.

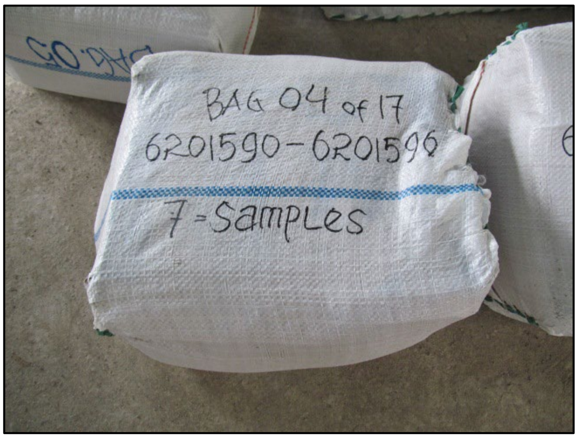


Figure 11-6: Samples packaged ready for transport.

11.1.4 QA/QC Sample Preparation

QA/QC standard and blank samples were prepared at the Bawone base camp. QA/QC sampling used certified reference material from Geostats Pty Ltd. These reference materials were stored in sealed, clearly labelled, plastic and glass containers. Standard and blanks samples were prepared in batches, usually once a month during drilling and involved three local crew members following the below procedure:

- Clean the work area by dusting and mopping.
- Create individually labelled sampling spoons and store in labelled, sealed zip lock bags
- Open standard container and spoon sample into small, appropriately labelled sample bag, to about 75 g sample.
- Seal sample bag immediately and record standard number and standard type in the appropriate spread sheet
- When the same sample ID is finished clean all equipment and mop work area.

MA notes the following actions were taken to help reduce sampling contamination;

- All sampling was supervised by a site geologist
- Crew members worked their own individual stations
- Sampling was performed in a clean, enclosed and wind free room
- Clear labelling and storage
- Separate sampling tools for separate reference materials helped reduce cross contamination

11.1.5 Density Sampling

Density measurements from diamond drill core for the 2011-2011 and 2012-2013 drilling programs involved the selection of 20 cm core lengths at 5 m intervals ensuring that the sample was selected from the same lithology and alteration type. An example of the density log sheet used by EAMC (BGC) in shown in Table 11-1. Dry weight (after oven drying) of the core is recorded (W1), and then the sample is wrapped in plastic film and re-weighed in water (W2a). The sample is then unwrapped, submerged and weighed again (W2b) and finally the wet sample is weighed out of water (W3). Density is calculated using the following equations:

- Density (dry) (W1/(W1-W2a))
- Density (wet) (W1/(W3-W2b))

Table 11-1: Density Log Sheet

SPECIFIC GRAVITY

TAMBANG MAS SANGIHE

PROJECT:	Sangihe	DATE:	22-03-2013
PROSPECT:	Binebase	LOGGED BY:	
HOLE ID: BOD094		CHECKED BY:	

Seq No.	Depth From	Depth To	Porosity Code	Rock type	Core Length (cm)	Core Size	W1 (gram)	W2a (gram)	W2b (gram)	W3 (gram)	SG3 (gr/ml)	SG2 (gr/ml)	Comment
1	1.45	1.65	4		20	PQ	1666	x	x	x	#VALUE!	#VALUE!	Canceled
2	5.75	5.95	4		20	PQ	1573	130	506	1421	1.72	1.09	
3	10.80	11.00	6		20	PQ	1624	65	393	1486	1.49	1.04	
4	15.15	15.35	6		20	PQ	1657	268	541	1619	1.54	1.19	
5	19.65	19.85	6		20	PQ	1897	25	672	1797	1.69	1.01	
6	24.00	24.20	1		20	PQ	1854	306	738	1819	1.72	1.20	
7	27.60	27.80	1		20	PQ	1933	429	815	1942	1.72	1.29	
8	32.30	32.50	1		20	PQ	1934	374	752	1895	1.69	1.24	
9	36.90	37.10	1		20	PQ	2035	572	879	2018	1.79	1.39	
10	41.75	41.95	2		20	PQ	1972	540	855	2009	1.71	1.38	

Note :		Porosity Code :
W1	: a: Core Weight In Air (dry)	1.00 : Cylindrical, complete, massive, hard
W2a	: b: Core Weight In Water (+ wrapper & Tape)	2.00 : Cylindrical, complete, vuggy, fracturing / cleavage
W2b	: c: Core weight In Water Unwrapped	3.00 : Cylindrical, not complete
W3	: d: Core weight In Air (wet)	4.00 : Cylindrical, complete, soft, absorb the water (such as argillic)
SG3	: [a/(d-c)] SG Unwrapped	5.00 : Broken, fragmented (fragment dominant)
SG2	: [a/(a-b)] SG Wrapped	6.00 : Broken, predominant with matrix supported

11.2 SECURITY - SAMPLE TRANSPORTATION

Typically, within two to three days after core logging and sampling the packaged samples are transferred to Tahuna via a hired utility vehicle (enclosed roof) where they are transported by commercial ferry and then to the appropriate sample preparation facility in Manado. The samples are accompanied by EAMC (BGC) personnel the entire journey.

11.3 SAMPLE ANALYSES

11.3.1 2011-2012 (SGS)

11.3.1.1 Preparation

Samples for the 2011-2012 drilling program were shipped and accompanied by EAMC (BGC) personnel to Manado where the samples were prepared in an SGS Indonesia ("SGS") preparation facility in Manado according to the steps outlined in Figure 11-7. After preparation the samples were shipped by SGS to their laboratory in Balikpapan for analysis.

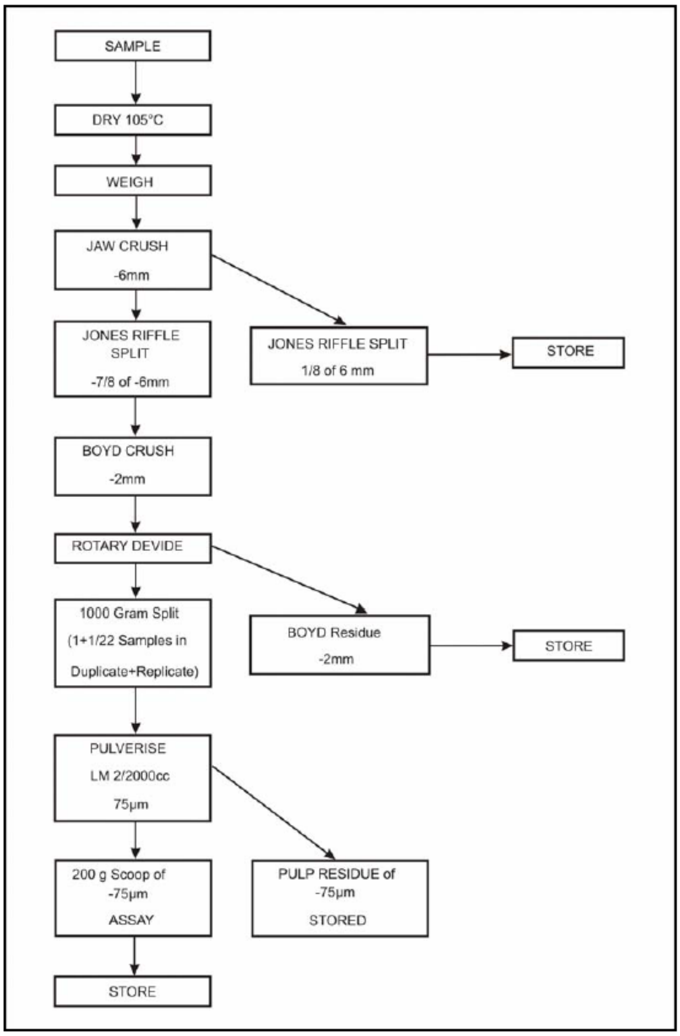


Figure 11-7: Sample preparation flow chart. ***(Source: Stone, 2010)***

11.3.1.2 Lab Accreditation

SGS at Balikpapan was the primary analysis laboratory for samples from Sangihe's pre-2013 drilling programs (Photo 27). SGS is accredited for ISO/IEC 17025:2005 by Standards Council of Canada. ISO/IEC 17025 is the main standard used by testing and calibration laboratories. SGS Indonesia is regularly audited by SGS quality personnel and participates regularly in the SGS LQSi IRR program as well as many other independent IRR programs like Geostats.

ALS Group ("ALS") was used as a "check" laboratory for EAMC (BGC) during the 2011-2012 drilling program. ALS is accredited for ISO/IEC 17025:2005 and ISO 9001 by Standards Council of Canada.

11.3.1.3 Analysis

SGS sample analysis for gold used the FAA505 method, which is a lead collection fire assay of a 50 g sample with an atomic absorption spectroscopy ("AAS") finish. Gold values between 0.1 and 100 g/t are reported using this method. Over limit results are re-assayed using the FAG505 method, which is also a lead collection fire assay (50 g sample), but uses a gravimetric finish. The reporting range for gold analysed by this method is 0.5-100,000 ppm. Repeat analyses on low and high gold assays are routinely performed by the laboratory as part of its quality assurance and quality control procedures (QA/QC). BLEG analyses, using a cyanide leach for 0.5 hours on 6 g of pulp (analytical code: BLE64F) is undertaken on every sample that provides a fire assay result >0.5 g/t Au. This is undertaken to give a qualitative idea of the leachability of the pulverised gold samples. It cannot be regarded as a rigorous or accurate metallurgical test. Base metals and other elements are determined with an aqua regia acid digestion and AAS. Lower detection limits for the other six elements are 0.2 ppm Ag, 1 ppm Cu, 2 ppm Pb, 1 ppm Zn, 5 ppm As and 5 ppm Sb.

11.3.2 2012-2013 (ITS)

11.3.2.1 Preparation

The 2012-2013 drill core samples were delivered to PT Intertek Utama Services ("ITS") prep facility in Manado.

The samples were dried at 105°C and weighed when dry. The samples were crushed with a jaw crusher to -6mm and split using a Jones riffle splitter. One eighth of the material was stored. Seven eights were crushed with a Boyd crusher to -2mm. An aliquot of 1,000g is pulverised to -75 µm. A portion of 200g was used for analysis and the remainder was stored as pulp residue.

After preparation, the samples were shipped by ITS to their laboratory in Jakarta for analysis.

11.3.2.2 Lab Accreditation

PT Intertek Utama Services laboratory in Jakarta, Indonesia ("ITS") were used for the 2012-2013 drill sample analysis by EAMC. ITS is accredited for ISO/IEC 17025:2005 by Standards Council of Canada.

11.3.2.3 Analysis

Analyses for gold were done at ITS using the FA50 method, a fire assay procedure with AAS finish (50 g nominal sample weight). The gold detection and reporting range is 0.005-100 ppm Au. Repeat analyses on low and high gold assays were routinely performed by the laboratory as part of its quality assurance and quality control procedures (QA/QC).Lower detection limits for the other elements are 1 ppm Ag, 2 ppm Cu, 4 ppm Pb, 0.01 % Zn, 2 ppm As, 1 ppm Sb and 0.01 % S.

11.4 QUALITY ASSURANCE & QUALITY CONTROL (QA/QC) PROGRAM

Quality Assurance ("QA") concerns the establishment of measurement systems and procedures to provide adequate confidence that quality is adhered to. Quality Control ("QC") is one aspect of QA and refers to the use of control checks of the measurements to ensure the systems are working as planned.

QC terms commonly used to discuss geochemical data are:

- Precision: how close the assay result is to that of a repeat or duplicate of the same sample, i.e. the reproducibility of assay results.
- Accuracy: how close the assay result is to the expected result (of a certified standard).
- Bias: the amount by which the analysis varies from the expected result.

The following control checks are considered as a minimum standard for QC programs:

- Accuracy: Certified Reference Materials ("CRM" or "Standards", "STD") assess accuracy.
- Low, medium and high grade CRM are usually added at a planned rate of 1 every 20 samples or 5%.
- Precision or reproducibility: Duplicate Samples assess precision.
- Field Duplicates ("FD"): Both samples are inserted into the sampling stream (with consecutive numbers) and prepared and assayed like any other sample. This sample is used to monitor sample batches for poor sample management, contamination and tampering and laboratory precision.
- Coarse splits or crusher duplicates: Usually the second half of every 20th to 50th crusher or first splits is collected by the laboratory (under instruction of the client) and processed as a coarse split duplicate. This sample is used to monitor sample batches for poor sample management, contamination and tampering and laboratory precision.
- Contamination: Field Blanks ("FB") assess contamination.
- Samples of a "blank", known to contain low level of economically interesting metals are inserted into the sample stream, preferably with known mineralised samples. Field blanks are usually inserted at a planned rate of one every 20 samples. Blanks can be either unmineralised rock (in term of the target metal) or CRM blanks.
- Bias: Referee Laboratory duplicates assess bias.
- At least 5% of the total analysed duplicates ("replicates"), i.e. sample pulps and coarse splits, are sent for duplicate assay to another independent laboratory. The results are then plotted against the original laboratory results to check for anomalous results, contamination or equipment failure or calibration trends (bias).

- In addition, independent laboratories conduct their own internal QA/QC which is independent of the client QA/QC, consisting of CRM analysis, blanks, duplicate assaying and repeats along with the primary sample analysis.

11.5 SANGIHE PROJECT QA/QC ASSESSMENT (2007-2013 DRILLING)

The following section includes QA/QC analysis for all drilling programs at Sangihe since 2007. Separate 2007-2009 drilling QA/QC analysis is documented in Stone (2010).

11.5.1 QA/QC Sample Insertions

Table 11-2 lists the QC insertion statistics for all Sangihe drilling programs since 2007 (for 15,545 samples in 167 drill holes).

Table 11-2: QC Insertion Statistics

Type	Count	Insertion Rate
CRM	428	2.75%
Blanks (Field)	556	3.6%
Blank CRM	185	1.19%
Duplicates	281	1.81%
Umpire Replicates	214	1.38%

The following comments are made from MA's review of the QAQC data:

- CRM insertion rates are adequate for current mineral resource estimate categories, but are below industry standards. MA notes that CRM insertion rates (4.4 %) for EAMC's most recent drilling phase (2012-2013) meet industry standards.
- Field and CRM Blank insertion rates are slightly below industry standards but are considered adequate for current mineral resource estimate categories.
- Duplicate insertion rates are adequate for current mineral resource estimate categories, but are below industry standards. MA notes that duplicate insertion rates (4.66 %) for EAMC's most recent drilling phase (2012-2013) meet industry standards.
- Umpire replicate insertion rates are considered adequate for current mineral resource estimate categories.

11.5.2 Standards

Accuracy is identifying the true grade of a sample, achieved by submitting certified reference material ("CRM") commonly referred to as standards ("STD").

EAMC (BGC) used eight (8) standards sourced from independent laboratory Geostats Pty Ltd to assess the accuracy of gold analyses (Table 11-3). MA notes these CRM's are well selected to encompass low, medium and high grade gold values. Standards GBMS304-4 and GBMS304-5 were also certified for silver, copper, lead, zinc, sulphur and arsenic analyses. Results for these other elements were also checked as part of EAMC's quality control program.

The performance gates listed in Table 11-3 are based on two and three standard deviations ("SD"). As an industry guide these performance gates identify possible failed results (i.e. values outside expected value +/- 2 SD), and failed results (values outside expected value +/- 3SD).

Table 11-3: Performance Criteria for Gold Standards, Fire Assay Analysis

STD_ID	Element	Units	Mean	1SD	MINUS_1 SD	PLUS_1 SD	MINUS_2 SD	PLUS_2 SD	MINUS_3 SD	PLUS_3 SD
G301-2	Au	ppm	1.46	0.08	1.38	1.54	1.3	1.62	1.22	1.7
G903-10	Au	ppm	0.21	0.02	0.19	0.23	0.17	0.25	0.15	0.27
G907-2	Au	ppm	0.89	0.06	0.83	0.95	0.77	1.01	0.71	1.07
G910-1	Au	ppm	1.43	0.06	1.37	1.49	1.31	1.55	1.25	1.61
G903-1	Au	ppm	9.27	0.35	8.92	9.62	8.57	9.97	8.22	10.32
G301-1	Au	ppm	0.85	0.05	0.8	0.9	0.75	0.95	0.7	1
GBMS304-5	Au	ppm	1.62	0.08	1.54	1.7	1.46	1.78	1.38	1.86
GBMS304-4	Au	ppm	5.67	0.31	5.36	5.98	5.05	6.29	4.74	6.6

11.5.2.1 G301-1

Of the 276 G301-1 analyses, only 138 data points were used for assessment. The remaining analyses used a leach method (BLE64F) instead of the fire assay method that the standard has been certified for.

G301-1 fire assay analyses are consistently slightly below the certified gold grade of 0.85 ppm, indicating a slight negative bias. However, all but one of the data points lie within the acceptable 3SD performance gate (Figure 11-8). This individual sample cannot be explained by a labelling error or sample mix up (i.e. value is not similar to any other standards). Overall, the G301-1 data is acceptable and the individual failure is considered a statistical outlier.

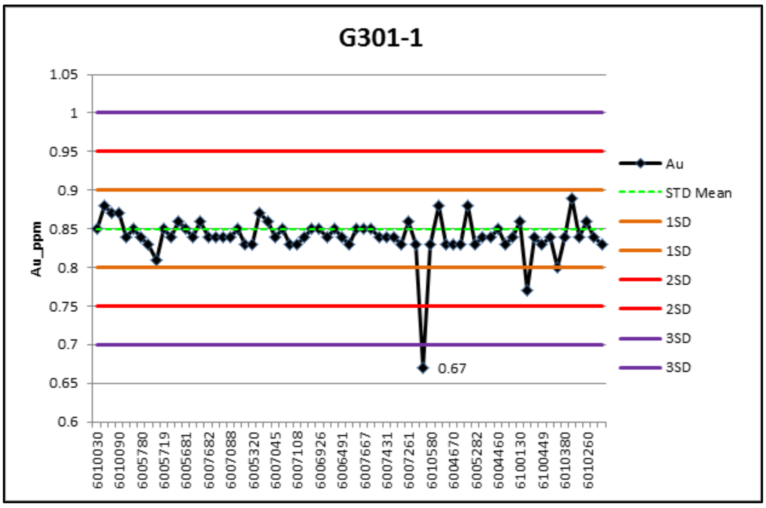


Figure 11-8: Standard G301-1 Results.

11.5.2.2 G301-2

Of the 112 G301-2 analyses, only 56 used the same digest and analytical method that the standard was certified for (Figure 11-9). Fire assay analyses average slightly above the certified value (1.46 ppm Au) for this medium-high grade gold standard suggesting a slight positive bias. However, all of the data points are within the acceptable limits and the results for this standard are deemed acceptable.

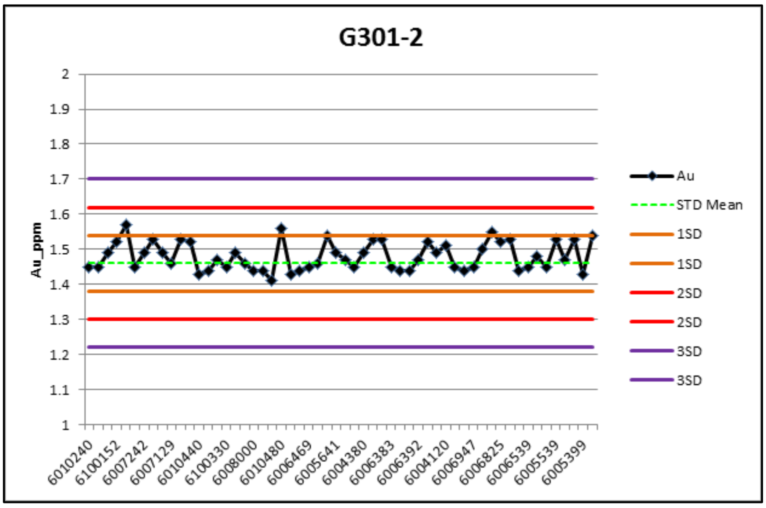


Figure 11-9: Standard G301-2 Results.

11.5.2.3 G903-1

Of the 12 data points, only 6 are used for the assessment of this very high grade gold standard (9.27 ppm Au, Figure 11-10). This small count is not enough to provide a robust assessment but will give an indication. All the data points are below the expected value indicating a negative bias but are within the acceptable limits. One result was just outside the -2SD performance limits. This individual sample cannot be explained by a labelling error or sample mix up. Overall, the G903-1 data is acceptable, and the individual failure is considered a statistical outlier.

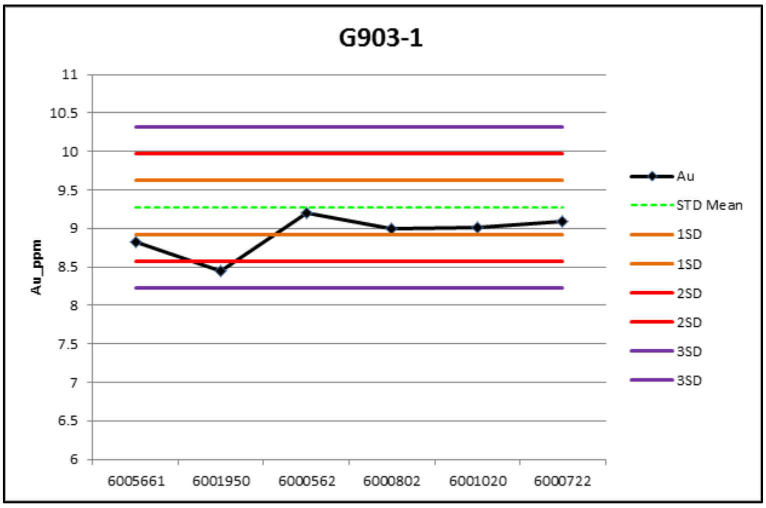


Figure 11-10: Standard G903-1 Results.

11.5.2.4 G903-10

Of the 292 data points for this low grade gold standard (0.22 ppm Au, Figure 11-11), only 146 are used for this assessment. The data points show no bias and are all within the acceptable limits.

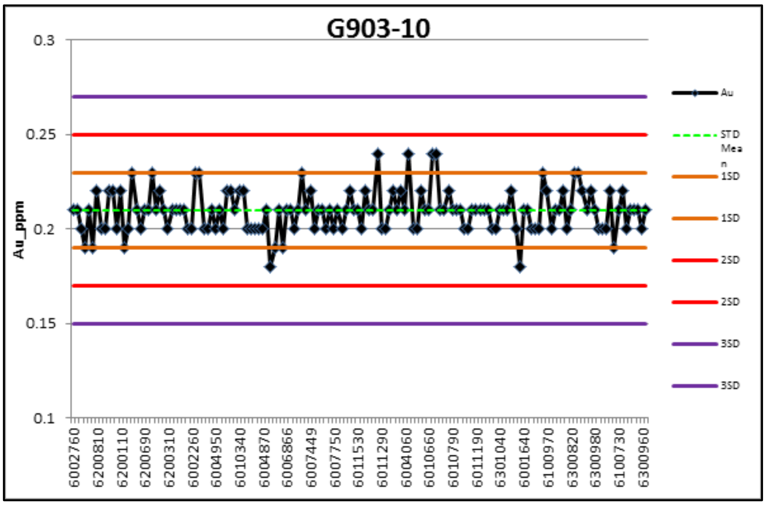


Figure 11-11: Standard G903-10 Results.

11.5.2.5 G907-2

Of the 140 analyses of this medium grade (0.89 ppm Au, Figure 11-12) standard only 43 used the same analytical method and digest as the standard was certified for. These data points are consistently slightly below the expected mean suggesting a small negative bias. However, all the data points are within the acceptable limit.

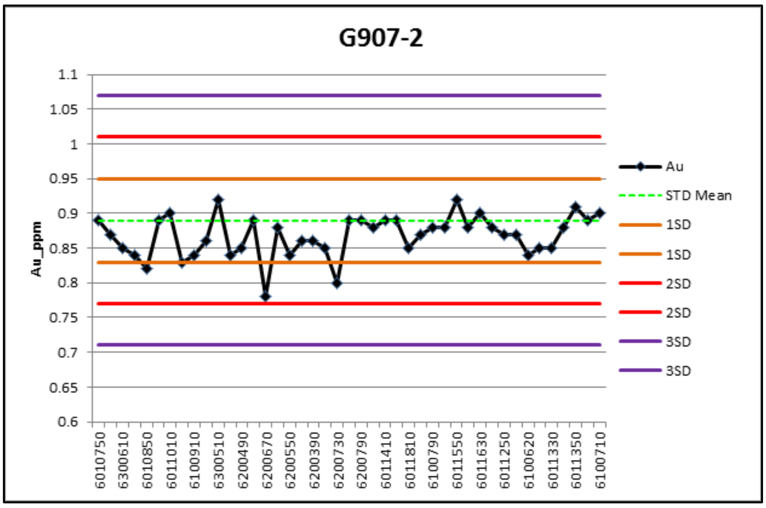


Figure 11-12: Standard G907-2 Results.

11.5.2.6 G910-1

Of the 80 data points for this medium-high grade gold standard (1.43 ppm Au, Figure 11-13) only 24 show a similar analysis method and digest to the standard; these 24 are used in this assessment. The data points are consistently slightly below the expected mean suggesting a small negative bias. There are two data points that lie outside the 2SD limits and, although not an automatic failure (i.e. outside 3SD), they still require investigation. No labelling error or sample mix up could be identified and these standards were from different batches whose standards have been deemed acceptable. Overall, the G910-1 data is acceptable, and the two examined data points are considered statistical outliers.

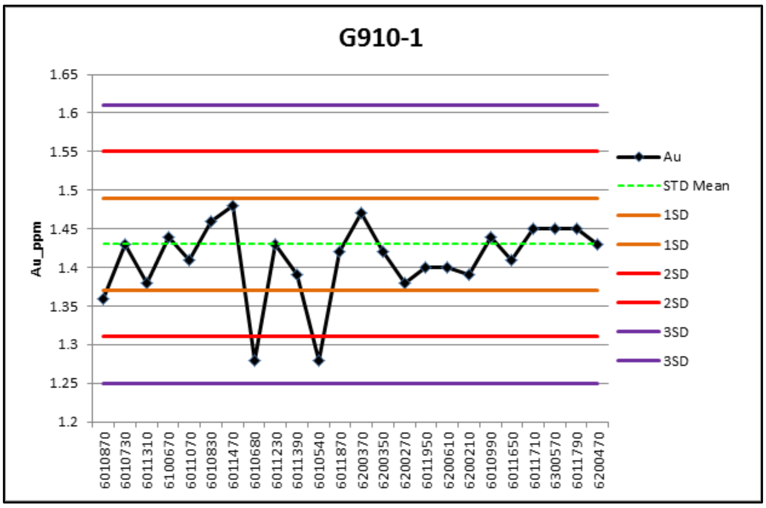


Figure 11-13: Standard G910-1 Results.

11.5.2.7 GBMS304-4

This multi-element standard assesses the precision of gold, silver, copper, lead, zinc and arsenic. Overall, the standard is deemed acceptable. Observational points regarding these elements are described below:

- Gold shows no bias from the 8 analyses with similar methods and digests to the standard and all are within acceptable limits indicating it is acceptable.
- Silver analyses were close the detection limit of the analytical method used, but were all within acceptable limits.
- Copper, lead, zinc and arsenic all show a small positive bias (i.e. above expected value) but all analyses fall within acceptable limits.

11.5.2.8 GBMS304-5

This multi-element standard assesses the precision of gold, silver, copper, lead, zinc, arsenic and sulphur. Overall, the standard is deemed acceptable however arsenic is a failure. Observational points regarding these elements are described below:

- Gold shows a small positive bias but all data points are within the acceptable limits and it is deemed acceptable.
- Silver analyses were close the detection limit of the analytical method used, but were all within acceptable limits.
- Copper shows no bias. There is one failure. No labelling or sample mix up could be identified, and the original lab results (MS Excel) show no errors. Records indicate that this batch was re-assayed, however the new results for copper still appears to be a failure. This element is deemed acceptable and the one failure is considered a statistical outlier.

- Lead shows a moderate positive bias with one failure. This failure correlates to the same batch (drill hole SED003) as the copper failure above. The re-assayed lead values are recorded as a failure. This element is deemed acceptable and the one failure is considered a statistical outlier.
- Zinc shows a small negative bias with one failure. This failure corresponds to drill hole BID015 (not the same batch as the above failures). No label error or sample mix up could be identified and the original lab results (MS Excel) match. This element is deemed acceptable and the one failure is considered a statistical outlier.
- Arsenic shows a strong negative bias with 8 failures. No labelling errors or sample mix up could be identified for the failures. This element is considered a failure in the GBMS304-5 standard.
- Sulphur shows a small negative bias. All data points are within the acceptable limits and is deemed acceptable.

11.5.3 Blanks

EAMC used two types of blanks to test for contamination: standard blanks and field blanks.

11.5.3.1 Standard Blanks – GLG302-4

GLG302-4 from Geostats Pty Ltd is a low level gold reference with a mean of 3.23 ppb; well below the detection limit (0.01) of the atomic absorption method and fire assay digest methods used for these analyses. The 185 data points for this standard are presented in Figure 11-14. This figure highlights that all the data points were below detection and have been assigned the detection limit. GLG302-4 is deemed acceptable, and no contamination bias is evident.

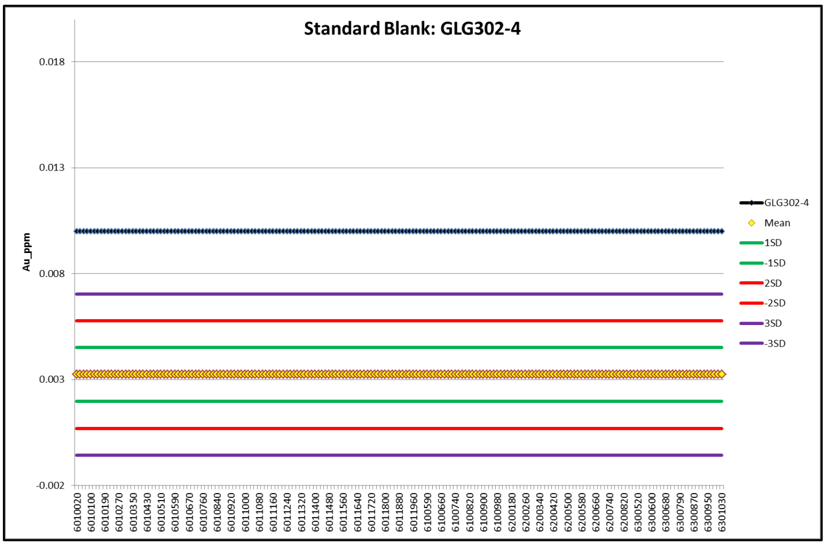


Figure 11-14: Standard Blanks – Au Results.

11.5.3.2 Field Blank

A total of 556 field blanks were inserted. The field blank raw data for gold (Figure 11-15) show two populations; corresponding to two different labs (different detection limits) used over the course of the different drilling programs. The data highlight two outliers. The first sample recording a result of 0.09 ppm appears to be contamination or data entry error. The sample before it also has a gold result of 0.09 ppm so the lab has perhaps copied the same gold number across. As a check, a blank sample inserted 32 samples before this failure passed suggesting if it is due to contamination it is only localised. The other outlier sample recorded a gold value of 0.23 ppm. The sample previous also recorded a gold value of 0.23 ppm perhaps indicating a lab data entry error again. As a check, a standard sample inserted 10 samples before this outlier passed suggesting that if it is contamination it is localised. Since both the outliers have the same value as the sample before them it appears that lab data entry is the cause of these two outliers. Overall, the field blanks are acceptable.

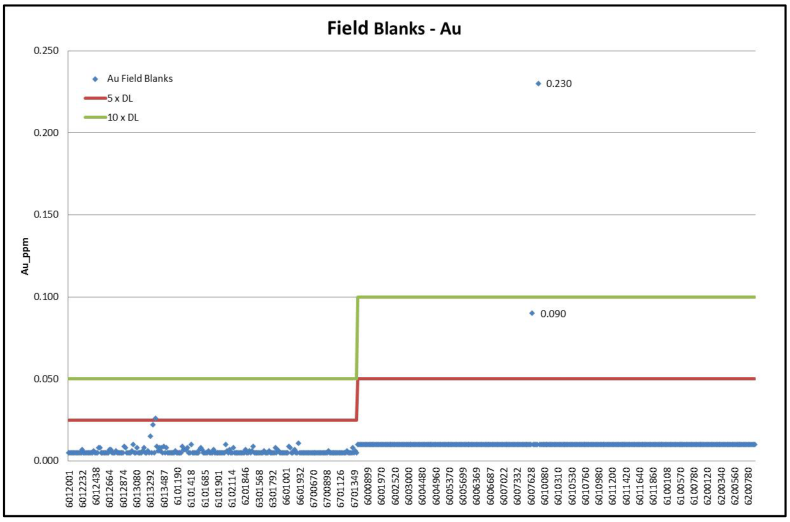


Figure 11-15: Field Blanks – Au Results.

Silver analyses for the field blank were all below 5x detection limit acceptable range. Two analyses were above the detection limit but below 5x detection limit: one corresponds to the same sample number as the proposed data entry error for gold, and the other, after investigation, appears to be a statistical outlier. Silver data for the field blank is deemed acceptable.

11.5.4 Duplicates

For drill core, duplication refers to two volumetrically identical samples collected from exactly the same location downhole. Thus duplicate pairs are equally representative of the original sample interval. Duplicate sampling at Sanighe follows important criterion for duplication (equal size and volume) by sampling and submitting duplicate ¼ core samples for the same downhole location.

When interpreting field duplicate only precision (repeatability) is important. Precision is assessed using the Med-APD (Absolute Percentage Difference) which is a robust and unbiased estimation of the standard deviation particularly the two sigma precision. Med-APD is generated by the equation:

Med-APD = Mean of all APD values; APD= ((((absolute(x1-x2)/mean(x1+x2)) x 100 %)*2

Where x1 is the assay value of the original sample and x2 is the assay value of the duplicate sample. This equation is based on the formulation of precision by Thompson and Howarth (1978) and an evolution of the "HARD" method (Shaw et al., 1998). When assessing duplicates a Med-APD of <35 % is generally acceptable.

All data was filtered to be above 10x detection limit. Assay values <10x detection limit cause significant errors and give a false indication of precision as most of the variance will be related to these samples. Gold and silver analyses at Binebase and Bawone showed acceptable precision, with Med-APD values less than 35%. Lead and zinc at Binebase, and antimony and arsenic at Bawone were less precise (Figure 11-16), probably reflecting a more heterogeneous occurrence style than gold.

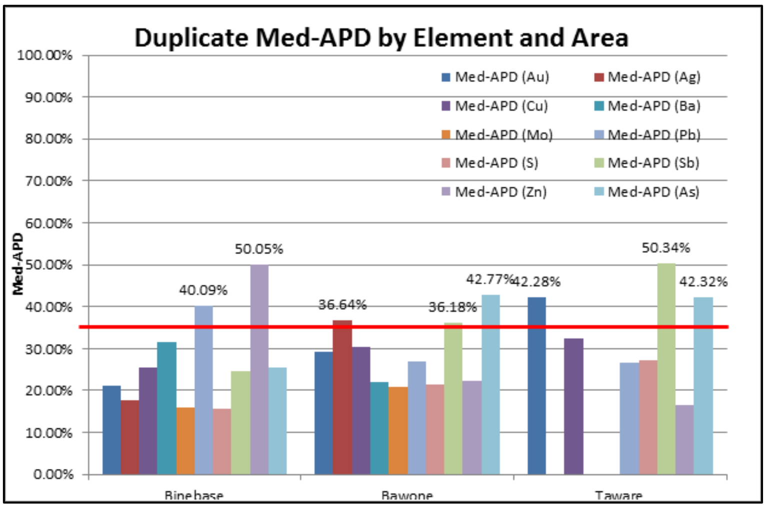


Figure 11-16: Duplicate Results.

11.5.5 Replicates

Inter-lab replicates have been used twice by EAMC. A total of 214 drill core pulps originally assayed by SGS Indonesia were re-assayed by ALS Chemex (28 samples) and PT Intertek Utama Services (ITS) (186 samples). Similar to duplicates, Med-APD is used to assess the precision between the two labs for the same sample. Data points <10x detection limit have been removed.

The SGS vs ALS results show good precision with all the gold and silver data below the recommended 35 % limit (Figure 11-17). The SGS vs ITS results show good precision with all the gold and copper data below the recommend 35 % limit. All the silver data for SGS vs ITS was below the 10x detection limit.

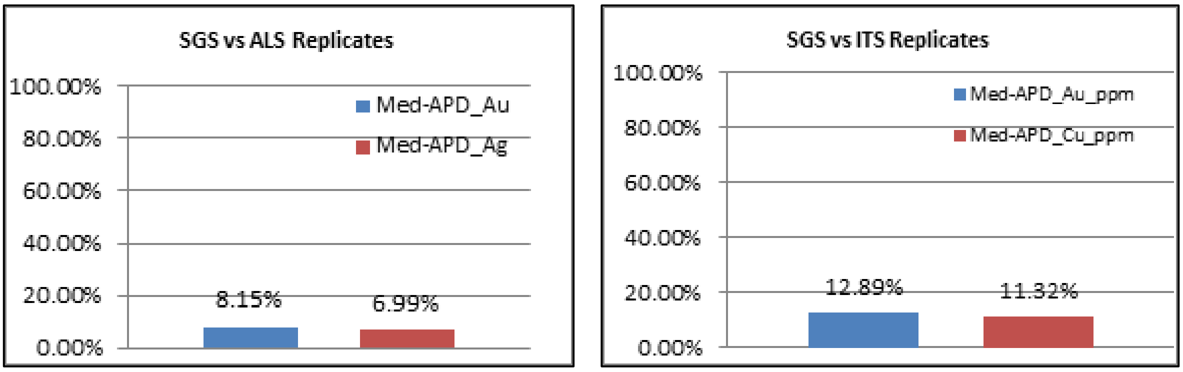


Figure 11-17: Replicate Results.

11.5.6 Laboratory QA/QC

Independent laboratories conduct their own internal QA/QC usually consisting of CRM testing, duplicate assaying and assay repeats along with the primary sample analysis. MA has not reviewed these results.

11.5.7 Authors Opinion

EAMC adopted QA/QC protocols in line with mineral industry standard practice. Protocols involved analysis of certified reference materials (standards), certified blank samples, field blanks, field duplicates and referee laboratory check analysis of pulp duplicates.

The above described QA/QC assessment is considered adequate for the determination of accuracy and precision. EAMC's QA/QC program is acceptable for the purposes of this report but could be improved with the addition of the following:

- continued use of umpire laboratory re-assay but with the use of equivalent assay techniques
- use of principal laboratory analytical methods that match the same method as the CRM being used
- investigate use of a different material field blank that has a lower copper content

EAMC's quality control preparation and sampling procedures reflect industry best practice with an awareness to reduce contamination and precision error. EAMC employ satisfactory SOP's to help reduce sample labelling error and sample mix-up.

Overall, given the accuracy and precision of the results provided, the QA/QC program implemented by EAMC is considered acceptable for a mineral resource definition stage. It is MA's opinion that the sample preparation, security and analytical procedures are sufficiently adequate for the purposes of the current mineral resource estimation.

12 DATA VERIFICATION

12.1 SITE VISIT

Anthony Woodward of Brisbane visited the Binebase, Bawone and Taware areas on Sangihe Island from 11 to 13 September 2012. During the site visit, Mr. Woodward viewed mineralised drill core and drill hole collars for both Binebase and Bawone deposits and visited the drill core processing and storage facility at the base camp near Bawone. He viewed and sampled the mineralised vein systems and outcrops.

12.2 INDEPENDENT SAMPLES

Mr Woodward collected two independent samples from surface outcrop exposures (Figure 12-1 and Figure 12-2).

Table 12-1 lists the samples and description and Table 12-2 lists the assay results.

Figure 12-1: Collar of drill holeBID083.

Figure 12-2: MA sample site at Bawone.

Table 12-1: MA Independent Sample Descriptions

Sample ID	Sample Description
6700401	Bawone (Brown Sugar) deposit outcrop in old sample trench near BOD090. 794186mE, 384854mN
6700402	Binebase deposit outcrop in old sample trench. 793699mE, 386243mN

Table 12-2: MA Independent Sample Assay results

Sample	Au1	Au2	Ag	Cu	Pb	Zn	As	Sb
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Det. Lim.	0.005	0.005	1	2	4	2	2	1
Method	FA50	FA50	GA02	GA02	GA02	GA02	IC01	IC01
6700401	0.692	0.658	27	349	300	11	575	16
6700402	2.41	2.36	70	1060	446	128	216	33

Assay results shown in Table 12-2 are consistent with grades of gold and silver mineralisation from EAMC exploration data.

12.3 DATABASE VERIFICATION

EAMC (BGC) data tables were supplied to MA in MS Excel format. EAMC do not operate a relational database for the Sangihe project. These data tables were imported into Microsoft Access to create the drill holes used for the Mineral Resource estimate for Binebase and Bawone. Database integrity checks were run with Gemcom Surpac^{TM}. No data entry errors were detected. Geostatistical analyses were run as part of the resource estimation procedure and no anomalous database issues were noted.

12.4 LIMITATIONS ON VERIFICATION

Core sampling, analytical and QA/QC protocols used by EAMC (BGC) at Sangihe are in line with industry practice. There are no limitations on the verification of the data used in the resource estimation.

No recent site visit has been undertaken and Mr Woodward (QP) is satisfied that no material exploration work related to the MRE has occurred on the project since April 2013.

12.5 OPINION ON ADEQUACY OF DATA

MA is of the opinion that the ranges of gold and copper values reported by EAMC (BGC) are representative of the values that can be expected from the Sangihe Project deposits. It is MA's opinion that the data is adequate for the mineral resource estimation described in this report.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 METALLURGICAL TESTWORK 2007

According to an EAMC new release on 18 September 2007, Sangihe channel samples assayed with greater than 0.5 g/t Au were tested for cyanide leach recoveries by SGS Indonesia. Preliminary cyanide leach tests of Bawone samples returned gold recoveries of 91.2% to 92.4% for oxidized and partially oxidised material. Binebase samples returned recoveries of 85.3 % to 94.7 % with the extraction rate being for lower grade gold material.

13.2 METALLURGICAL TESTWORK 2014

Ausenco Services Limited (Ausenco) was engaged by EAMC to undertake a sighter metallurgical test work program designed to highlight key metallurgical parameters associated with the Sangihe gold deposits. Three composite samples were prepared.

- Binebase Oxide; Binebase Sulphide; and Bawone Sulphide.

The three composites were subjected to the following metallurgical tests:

- Head elemental analysis
- Ore characterisation by XRD
- Cyanide leach tests
- Batch flotation rougher tests.

Key findings from the metallurgical test work program are summarized below:

13.2.1 Binebase Oxide:

Binebase Oxide leaches well with +90% Au recoveries after 24 hours at both grind sizes tested (P80 of 125 and 75 µm)

- Gold (Au) leaching kinetics are fast, with over 85% of the gold leached within the first two hours
- Cyanide consumption was not excessive, averaging 0.5 kg/t, while lime consumption was high, averaging 4.0 kg/t
- The natural pH of the composite was low at pH 4.3
- Silver (Ag) is relatively high in the Binebase oxide sample at 66 g/t Ag
- The Merrill Crowe recovery process may be economically feasible instead of the more typical Carbon in Leach (CIL) or Carbon in Pulp (CIP) processes.

Ausenco commented that it was unknown how representative the test work samples were of future plant feed as the test work samples assayed 3.3 g/t Au and 66 g/t Ag.

13.2.2 Binebase Sulphide:

Binebase Sulphide cyanide leach recovery was relatively low at 65% Au after 24 hours for both grind sizes (P80 of 125 and 75 µm with leach test work showing that:

- The majority of gold not recoverable via cyanide leaching is locked in sulphides
- Gold recovery may be increased with the addition of more cyanide and oxygen
- Gold leaching kinetics is quick for Binebase Sulphide, with over 60% of the gold leached within the first two hours, irrespective of grind size.
- Flotation, fine grinding (P80 of 15 µm) of the concentrate and cyanide leaching did not improve gold recovery when compared to whole ore cyanide leaching, indicating that gold losses are due to the semi refractory nature of the composite.
- Cyanide and lime consumption was high for Binebase Sulphide, averaging 1.5 kg/t cyanide and 5 kg/t lime.
- The natural pH of the composite was low at pH 3.0.

The test work results do not clearly define a process route for the Binebase Sulphide composite. Further work was recommended to better define the geology and mineralogy of the deposit and quantify if the semi refractory material identified during test work is consistent throughout the deposit or localised to the samples tested.

13.2.3 Bawone Sulphide:

- Gold appears to be associated with pyrite, while the predominant copper mineral present is enargite (Cu_3AsS_4) with little to no chalcopyrite ($CuFeS_2$) present. Further mineralogical test work was recommended
- The ability to produce a saleable concentrate is limited with the high pyrite concentration (39% pyrite) in the feed. Test work indicates that an upgrade ratio of two should be achievable which equates to a rougher concentrate grade of between 4 - 5 g/t Au and 2.6% Cu.
- At pH 9.5 it was not possible to separate the pyrite from the enargite to produce a clean copper concentrate. High operating costs are expected; lime consumption was 36 kg/t
- At pH 11.0 and with 100 g/t cyanide added to depress pyrite, it was still not possible to separate the pyrite from the enargite to produce a clean copper concentrate.
- High operating costs are expected; lime consumption was 52 kg/t
- Cyanide leaching resulted in very low metal recovery; below 30% for gold, silver and copper.
- High operating costs are expected; lime consumption was in excess of 43 kg/t and cyanide consumption was in excess of 3.2 kg/t.
- Pre-oxidation showed minimal improvement in recovery
- The natural pH of the Bawone Sulphide composite is extremely low at pH of 1.9
- Approximately 10% of the initial sample mass was lost after the addition of water with high sulphate levels present in the tested solution (leachate). There is potential for environmental issues during mining via Acid Mine Drainage (AMD); environmental test work was recommended
- The current test work results do not clearly define a process route for the Bawone Sulphide composite. Bio-oxidation may be a feasible process route and could be considered during future test work programs. Further work is recommended to better define the geology and mineralogy of the deposit as well as potential AMD issues
- It is currently unknown how representative the test work samples are of future plant feed. For the Bawone Sulphide sample the 2010 resource estimate shows 1.1 g/t Au and 1.0 g/t Ag at a cut-off grade of 0.25 g/t Au, compared to the test work samples at 2.0 g/t Au and 12 g/t Ag.

- Further test work is recommended once the mine cut-off grades are defined and predicted plant feed grades quantified.

13.3 METALLURGICAL TESTWORK 2017-2018

PT Groundcheck Drillindo Nusantara (GCD) were used for metallurgical and geotechnical drilling and geotechnical testwork. The metallurgical testwork on 71 samples of Binebase oxide mineralisation by PT Geoservices Metallurgical Laboratory included Head assaying, Coarse Size Bottle Roll Tests, Percolation Tests, Agglomeration Tests and Column Tests.

Bottle Roll Test of the Cyanide Soluble assay results showed gold recoveries of 85% and silver recoveries of 96%. Agglomeration test results were reported as positive. Carbon Column Test work after two weeks in the column reached 80% recovery of gold.

Selected samples from 3 drillholes were composited and then assayed. Assay results of composites are summarized below.

Table 13-1: Assay results of composited samples

Element	Unit	BIM-23_HG	BIM-46_HG	BIM-52_HG
Au	ppm	1.03	0.84	2.65
Ag	ppm	13.6	35.0	42.4
Cu	ppm	591	920	263
S_TOT	%	0.48	3.26	1.99
S2S	%	0.22	2.98	1.73

13.3.1 Diagnostic Leach Test

Diagnostic leach test of ground head samples are summarized below.

Table 13-2: Diagnostic leach tests Summary

Locked Gold in destroyed minerals	BIM23		BIM46		BIM52	
	Au	Ag	Au	Ag	Au	Ag
Gravity / Free Cyanidable Metal Content Determination	97.1	42.1	63.2	24.2	97.4	86.9
Carbonate Locked Metal Content Determination	0.5	2.5	7.6	38.3	0.5	2.2
Arsenical Mineral Locked Metal Determination	1.3	0.8	24.6	11.5	1.2	0.7
Pyritic Sulphide Mineral Metal Content Determination	1.1	0.6	4.5	1.2	0.5	0.3
Silicate Encapsulated Metal Content Determination	0.0	54.0	0.0	24.8	0.4	9.9

13.3.2 Cyanidation

Coarse size cyanide bottle roll tests were done at grind sizes of P100 26.5mm and P100 12.5mm. NaCN 1000ppm initially, then maintained at 500ppm. Results are summarized below.

Table 13-3: Summary of Cyanide Bottle Roll Tests

Comp ID	Feed Grind Size P100 26.5mm								
	Extraction, %		Leach Time,	Calc. Head Grade, ppm		Leach Residue Grade, ppm		Reagent Consumption	
	Au	Ag	hrs	Au	Ag	Au	Ag	NaCN, kg/t	Lime, kg/t
BIM23	94.6	18.0	313	1.15	13.5	0.06	11.0	0.4	2.9
BIM46	73.4	60.2	380	1.11	39.3	0.30	23.6	1.6	7.4
BIM52	95.4	37.8	380	2.73	37.9	0.16	24.6	1.0	3.0
Comp ID	Feed Grind Size P100 12.5mm								
	Extraction, %		each Time, hr	Calc. Head Grade, ppm		Leach Residue Grade, ppm		Reagent Consumption	
	Au	Ag		Au	Ag	Au	Ag	NaCN, kg/t	Lime, kg/t
BIM23	97.5	26.8	289	0.99	10.6	0.04	12.7	1.0	3.5
BIM46	87.5	76.4	168	0.88	44.2	0.11	7.9	2.6	9.0
BIM52	95.1	52.6	289	2.73	23.9	0.16	11.4	1.0	2.4

13.3.3 Column Test

Column test cyanide testing confirmed coarse size bottle roll test results, where the Au extraction of BIM23 and BIM52 >80%. Leaching kinetic of single BIM23 and BIM52 are faster at initial 10 days, rather than BIM Comp. BIM23 and BIM52 increase insignificantly after day-30. BIM Comp is predicted to increase after day-55. Cyanidation of BIM23, BIM52 and BIM Comp extracted low Ag and Cu.

Figure 13-1 below show the kinetic profile of Au, Ag and Cu extractions of BIM Comp for about 50 days cyanide column test based on assayed head grades.

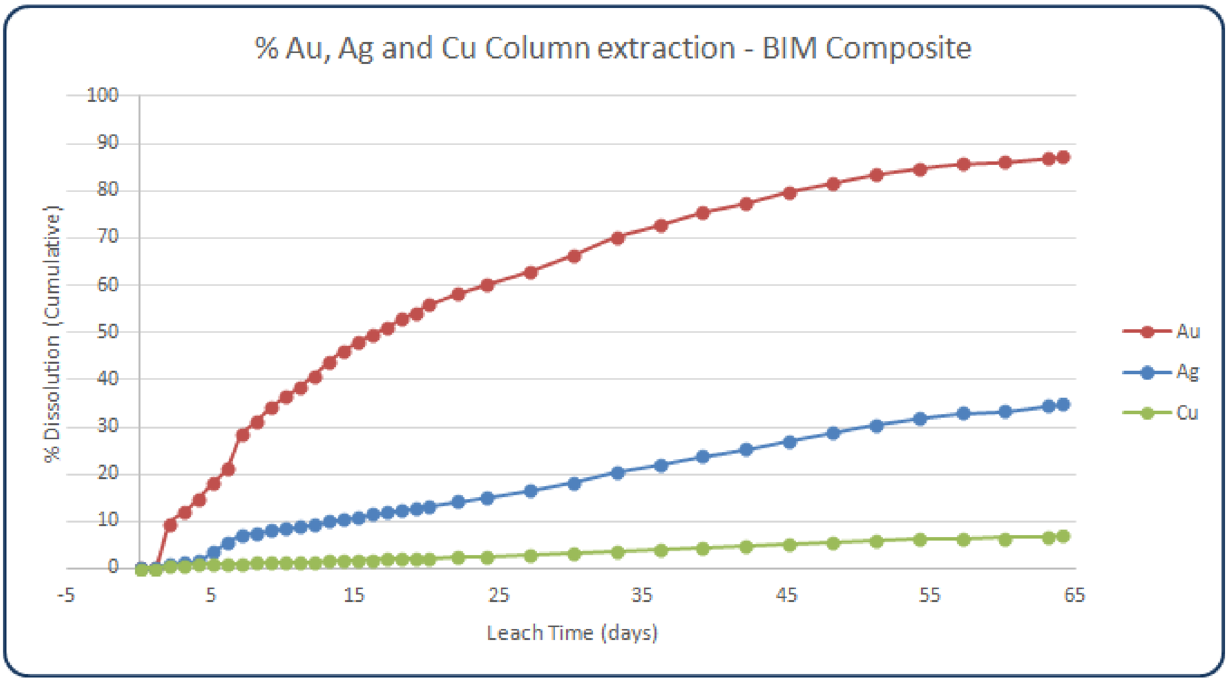


Figure 13-1: Metal extraction of column test of BIM Composite

14 MINERAL RESOURCE ESTIMATES

This is the third NI 43-101 mineral resource report for the Sangihe Project reported by EAMC (BGC). Previous estimates were reported in September 2010 by Stone (2010) and July 2013 reported by Taylor and Woodward (2017). No new estimates have been undertaken for the reporting of the January 2025 MRE. Revised cut off parameters and 2019 CIM guidelines for the reporting of Mineral Resources have been applied.

14.1 ESTIMATION METHODOLOGY

14.1.1 Supplied Data

MA was supplied with historical drill hole data from 2007 up to 2013. Data was supplied as MS Excel spreadsheets. Data from the 2012-2013 drilling was supplied as individual MS Excel spreadsheets at the completion of drilling (last data 28/05/2013). A MS Access database was compiled from historic and recent drilling data MS Excel spreadsheets. The database MA created was titled MA_Surpac_Sangihe_DB. Database table names and descriptions used for this Mineral Resource Estimate are described in Table 14-1.

Table 14-1: Description of database tables supplied by EAMC (BGC)

Table Name	Records	Description
COLLAR	172	Easting, northing and elevations of drillhole collars in regional (UTM zone 51N) grid coordinates (WGS84).
ALTERATION	6711	Type of alteration with depth interval down hole (from and to). Uses pre-set codes.
ASSAY_INTERVAL_FINAL	14,156	Assay results by sample ID for samples from downhole intervals (from and to depths with drillhole ID). Au results listed for all samples with Ag, As, Cu and Hg results for different sample subsets.
LITHOLOGY	1308	Interpreted lithology type with depth interval down hole (from and to). Tabulated from drillhole logging. Uses pre-set codes.
OXIDATION	334	Oxidation intensity with depth interval down hole (from and to). Codes can be "OX", "UOX".
SURVEY	575	Measured magnetic azimuth and calculated AMG azimuth (Zone 51=-0.5°) and dip of drill holes at specified depths.
SG	1351	Density of sample from depth interval downhole (from and to) measured by water immersion method. Raw weight data included for samples (dry weight, wet weight, wet wrapped weight).
GEOTECHNICAL	18073	Recovery and RQD values for specified down hole depth intervals and core size.
ma_intercepts	316	Mineralised intercepts table created by MA for the resource estimate

In addition to the drill hole database, assay data for trenches at Binebase were also supplied as an MS Excel file containing trench ID and X,Y,Z coordinates for the midpoints of 2 m composite trench samples and assay data for Au, Ag, As, Sb, Cu, Pb and Zn. Trench data was not used for estimation of this Mineral Resource Estimate but was utilised for validation purposes.

Trench midpoint coordinates were compared onscreen to topography. This comparison demonstrated that trench data is typically above the topography by about 1 to 6 m, but there were also examples where the trench data was below the topography. Trench data locations cannot be verified, unlike drill hole collars that were surveyed using differential global positioning system ("DGPS") techniques. Another area of concern with using trench data for the estimation is that the samples will not be as representative of the underlying volumes as drill hole data. Drilling data was sufficient to estimate all Binebase in the first pass. Trench data was utilised for validation of block model grades at surface and was found to be consistent.

The digital terrain model ("DTM") was supplied to MA by EAMC (BGC). This DTM is a modelled surface derived from elevation data collected by radar altimeter subtracted from an aircraft DGPS height. The DTM supplied to MA by EAMC (BGC) needed to be corrected in the vicinity of drill hole collars. A vertical height difference of 1 to 3 m was commonly observed between the drill hole collars and the supplied DTM. MA used the surveyed drill hole collars as the exact RL, because the vertical accuracy of DGPS surveys was greater than that of the DTM. Drill hole collars were surveyed using base station adjusted DGPS. MA adjusted the DTM to snap to the drill hole collars and created a 20 m buffer around the collar to follow the gradients of the original topography dtm.

14.1.2 Geological and Mineralisation Interpretation

The supplied information is sufficient to permit geological modeling for use in the estimation of mineral resources.

Gold mineralisation at Binebase forms thin, roughly tabular oxide zones overlying more steeply dipping breccia-vein sulphide zones. The current area of interpreted oxide mineralisation at Binebase is over an area of about 950 m east by 600 m north and is about 25 to 50 m thick (Figure 14-1 and Figure 14-2). Sulphide mineralisation at Binebase appears to occur in steeply dipping breccia vein-like sulphide zones that may be interpreted as feeder veins to the overlying oxide mineralisation. The contact between oxide and sulphide zones is quite irregular and generally deeper over interpreted sulphide veins.

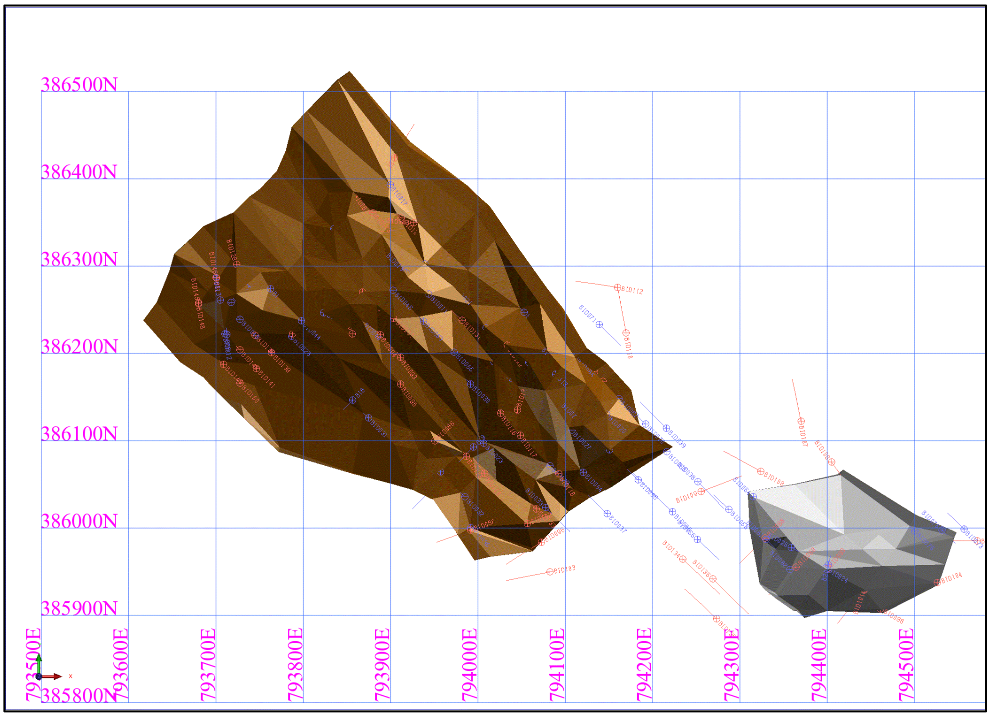


Figure 14-1: Binebase plan showing mineralisation outline.

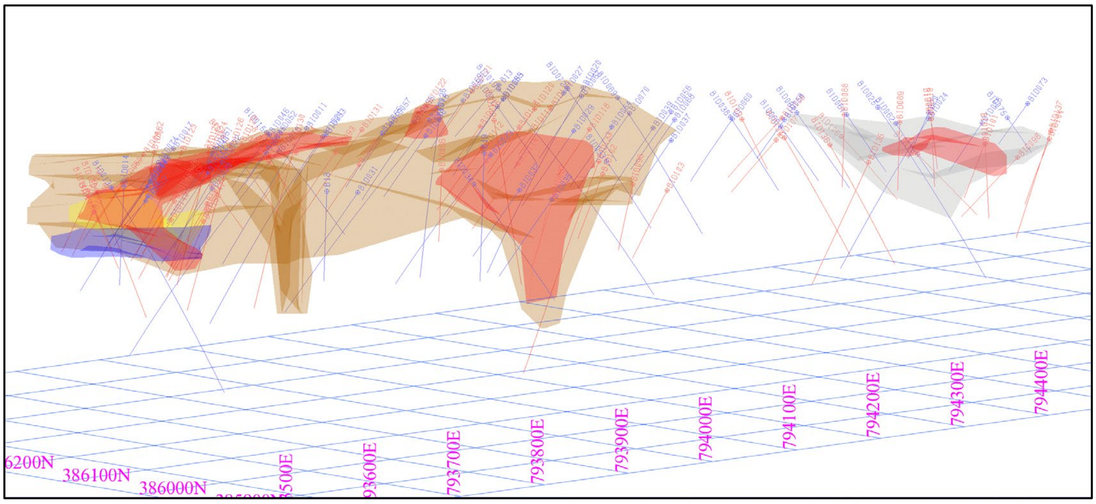


Figure 14-2: Binebase mineralised domains on oblique section looking west.

Geological modelling by MA at Bawone indicates that mineralisation occurs within near vertical tabular bodies (Figure 14-3 and Figure 14-4). Very little oxide material is present, likely due to the presence of the Pinterang Formation. Sulphide mineralisation appears to be controlled by a lithological–structural contact zone between porphyritic andesite and andesite crystal tuff that strikes north to northwest. A sinistral northeast striking fault appears to offset mineralisation through the middle. Defined mineralisation is approximately 300 m along strike, 25-75 m wide and extends 200 m below surface.

Low and high grade mineralised domains were tagged in drill holes at Binebase and Bawone according to the criteria described in the section 14.1.3. Tagged intercepts were used to define boundaries of three dimensional wireframes created using Gemcom Surpac™ 6.4.1 software ("Surpac"). Low grade domain wireframes were modelled first and high grade domain wireframes were modelled second, to ensure that the former fully enclosed the latter. Drill hole spacing and orientations at Sangihe were amenable to wireframe generation by linking successive cross-section interpretations with 25 m oblique (330 to 315°) sections. Solids were created for low and high grade domains at Binebase and Bawone.

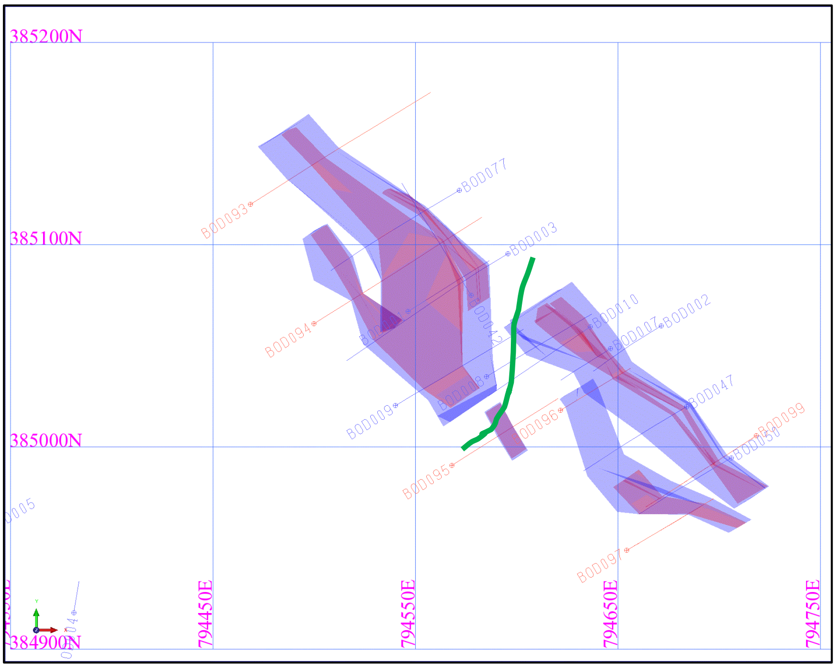


Figure 14-3: Bawone plan image showing transparent high grade (red), low grade (blue) domains and the approximate line of an offsetting fault.

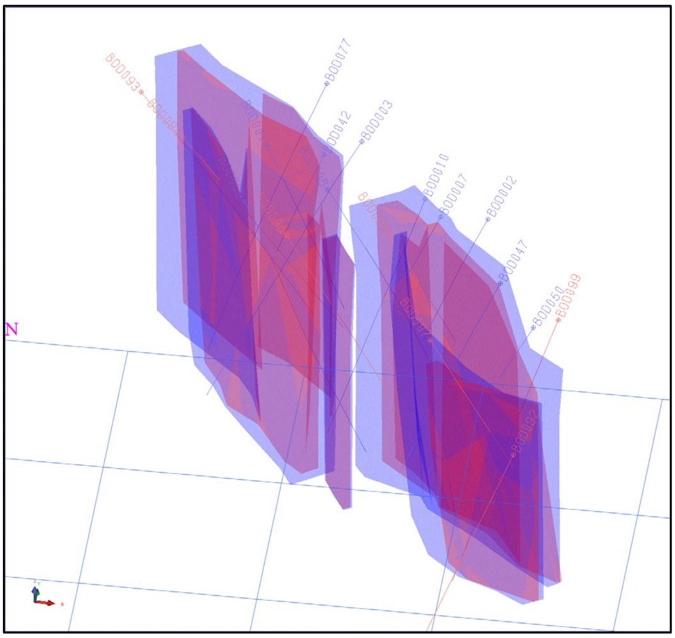


Figure 14-4: Bawone oblique image looking north showing transparent high grade (red) and low grade (blue) domains.

Solids were extended laterally for approximately half the drill spacing, typically about 12.5 m, where mineralisation was not closed off by drilling. The depth of extrapolation below drill holes was also typically about half the average drill spacing, about 12.5 m. Two sulphide zones at Binebase were extended vertically 15 m below their respective lowest drill hole intercept points. Bawone mineralisation was extended vertically 15 m below the lowest drill hole intercepts. Domain solids were used to constrain the block model during estimation. Drill holes intercepts were tagged for each domain corresponding to either low grade or high grade mineralisation in each deposit as shown in Table 14-2.

In addition to low grade and high grade domains, mineralisation was further subdivided into oxidised and sulphide. Surface dtms were created for the contact between oxide and sulphide rock at Binebase and Bawone based on drill hole logging results contained in the oxidation table of the supplied database.

Table 14-2: Codes used for mineralised Domains

Area	Type	Domain
Binebase	Low grade	BID1_LG
	High grade	BID1_HG
Bawone	Low grade	BOD2_LG
	High grade	BOD2_HG

14.1.3 Statistical Analysis

Raw assay data was extracted from drill holes and analysed using Surpac's statistics module. Univariate statistics were considered for gold, silver and sample length for drill samples (Table 14-3). Gold was considered the main economic element for investigation.

Table 14-3: Univariate statistics for raw drill hole samples

Item/Element	Count	Min	Max	Mean	Std.Dev.	CoV
Au	12,483	0.01	56.50	0.40	0.99	2.49
Ag	9,008	0.50	1180.00	12.06	33.36	2.77
length	14,156	0.30	36.40	1.08	0.61	0.56

The log probability plot of raw gold drill assay data showed a main inflection at 0.3 g/t Au, which was used as the basis for a lower cut off to define mineralisation (Figure 14-5). Another inflexion occurred at about 1 g/t Au, which was considered the boundary between low grade and high grade mineralisation.

Mineralisation was tagged hole by hole with intercepts averaging 0.3-1.0 g/t Au denoted as low grade and intercepts more than 1 g/t Au flagged as high grade. Zones were allowed to include some internal dilution (samples less than 0.3 g/t Au), but only if the average grade of the zone was more than 0.3 g/t Au for low grade and more than 1 g/t Au for high grade. Continuity of the mineralisation was checked by ensuring tagged holes were not isolated.

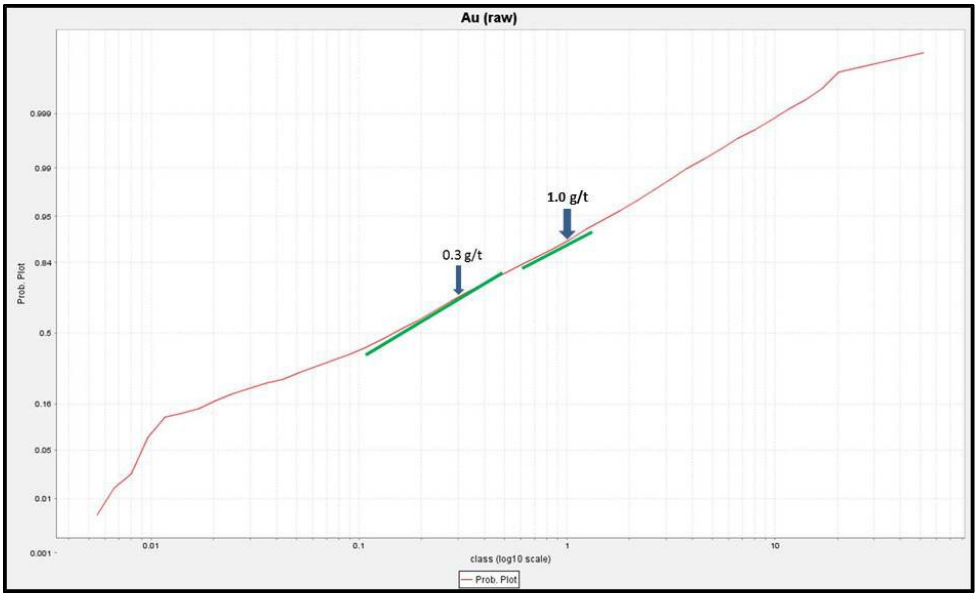


Figure 14-5: Log probability plot showing inflection points used as cut-off points for mineralisation.

14.1.4 Compositing

Two metre down-hole composites were selected for statistical analysis and grade estimation of Au and Ag in the domains at Binebase and Bawone.

The objective of compositing data is to obtain an even representation of sample grades and to eliminate any bias due to sample length (Volume Variance). The dominant sample length at Sangihe is one metre. An important factor in compositing is the mining method, the critical feature is the perceived bench height, and in an open pit gold mine a 2.5 metre flitch height is common. To limit clustering of informing data in the z direction and after consideration of the flitch height and the raw sample length, a composite length of two metres was selected. The mean remains reasonably un-affected and the variance is marginally reduced with two metre composites. A two metre composite length also provided better sample support for the block size used.

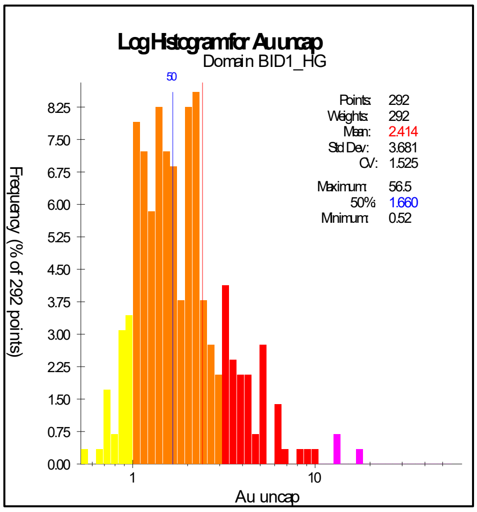
Assay intercepts within each tagged zone were composited to one, two and three metre lengths using Surpac. Univariate statistics of different composited sample lengths were compared to decide the most suitable composite to use as informing samples for estimation. Although there is little difference in mean and variance of one versus two metre composites in drilling, two metre composites were chosen. Univariate statistics and histograms were generated from 2 m composite values for high grade and low grade domains (Table 14-4, Table 14-5 and Figure 14-6).

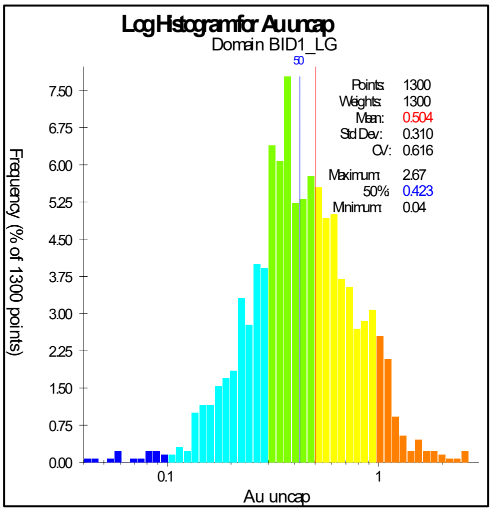
Table 14-4: Univariate Statistics by domain for Gold (ppm)

Domain	Count	Min	Max	Mean	Std. Dev	CV	50%	90%	95%	97.50%
	2186	0.04	56.5	1.01	1.72	1.70	0.59	2.12	2.85	4.03
Domain BID1_HG	292	0.52	56.5	2.41	3.68	1.52	1.66	4.03	5.22	6.57
Domain BID1_LG	1300	0.04	2.67	0.50	0.31	0.62	0.42	0.92	1.08	1.20
Domain BOD2_HG	319	0.37	13.81	2.13	1.78	0.83	1.56	3.70	5.38	9.11
Domain BOD2_LG	275	0.05	2.00	0.61	0.29	0.47	0.57	0.94	1.10	1.32

Table 14-5: Univariate Statistics by domain for Silver (ppm)

Domain	Count	Min	Max	Mean	Std. Dev	CV	50%	90%	95%	97.50%
	2186	1.00	1145	18.34	42.83	2.34	7.09	41.00	72.00	108.25
Domain BID1_HG	292	1.00	1145.00	52.24	94.79	1.81	19.80	131.00	193.50	260.00
Domain BID1_LG	1300	1.00	379.93	15.21	26.27	1.73	8.00	32.99	54.60	76.00
Domain BOD2_HG	319	1.00	103.50	11.39	14.76	1.30	7.00	22.96	43.00	60.50
Domain BOD2_LG	275	1.00	65.00	5.23	7.94	1.52	2.95	10.85	18.69	32.49





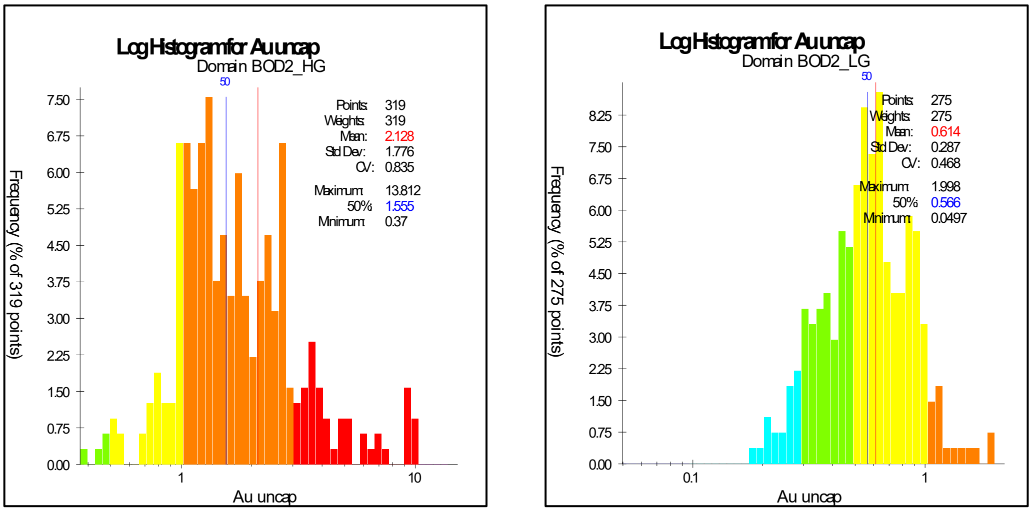


Figure 14-6: Log Histograms for Au uncapped at Binebase and Bawone high grade and low grade domains.

14.1.5 Grade Capping

Capping is the process of reducing the grade of outlier samples to a value that is representative of the surrounding grade distribution. Reducing the value of an outlier sample grade minimises the over-estimation of adjacent blocks in the vicinity of an outlier grade value. At no stage are sample grades removed from the database if grade capping is applied.

Two metre composite data for high grade and low grade domains in Binebase and Bawone were generated with assays for gold and silver which were input to MA's top cut analysis spreadsheet.

MA's top cut spreadsheet automatically presents a range of possible values to cut the population with, and displays the effect of these top cuts on the mean, variance, loss of metal and Sichel's mean. It also indicates an appropriate grade cut based on the Sichel mean, which assumes a generalised inverse Gaussian distribution (Sichel distribution). This information was used as a guide to the value selected by the geologist for the grade cap to be used for estimation. Grade cap details by domain are shown in Table 14-6 and Table 14-7.

Table 14-6: Grade Capping Statistics for Gold from 2 m composites

Domain	No. Samples	Uncapped Mean Grade	Capped Mean Grade	Uncapped Coefficient of Variation	Capped Coefficient of Variation	Grade cap used Au g/t	# Samples capped
BID1_HG	277	2.26	2.22	0.84	0.73	10.5	3
BID1_LG	1269	0.50	0.50	0.62	0.62	2.6	1
BOD2_HG	302	2.11	2.09	0.84	0.79	9.2	3
BOD2_LG	293	0.58	0.58	0.48	0.44	1.4	4
Total	2141	1	1	0.69	0.65		11

Table 14-7: Grade Capping Statistics for Silver from 2 m composites

Domain	No. Samples	Uncapped Mean Grade	Capped Mean Grade	Uncapped Coefficient of Variation	Capped Coefficient of Variation	Grade cap used Ag g/t	# Samples capped
BID1_HG	277	49.30	46.27	1.82	1.36	300	2
BID1_LG	1221	15.41	15.33	1.74	1.69	300	2
BOD2_HG	302	11.29	10.68	1.31	1.11	60	8
BOD2_LG	264	5.06	4.77	1.42	1.20	30	6
Total	2064	18	17	1.58	1.34		18

Capped gold data in all domains display good grade distribution and continuity for gold, with capping having the most effect on reducing coefficient of variation values of high grade domain data without lowering the means too much. Silver data has higher initial coefficient of variation, which is probably due to using gold grades to define domains. Gold and silver capped data is considered suitable to be used for estimation purposes.

14.1.6 Bulk Density

Detailed procedures for the measurement of density are given in Section 11.1.5.

385 density measurements from drilling since 2007 were used in this mineral resource estimate. No clear relationships between gold grade and density were seen in the data; densities were assigned according to the averages shown in Table 14-8. Assigned densities applied in this Mineral Resource Estimate are equal to the mean of the constrained sample population rounded to two decimal places.

Table 14-8: Density by Domains

Domain	Weathering	No. Samples	Density (t/m^3)
BID1_HG	Oxide	22	1.99
	Sulphide	14	2.28
BID1_LG	Oxide	78	1.83
	Sulphide	126	1.98
BOD2_HG	Oxide	37	2.25
	Sulphide	51	2.63
BOD2_LG	Oxide	4	2.11
	Sulphide	53	2.48

14.2 VARIOGRAPHY

The most important bivariate statistic used in geostatistics is the semi-variogram. The experimental semivariogram is estimated as half the average of squared differences between data separated exactly by a distance vector 'h'. Semi-variogram models used in grade estimation should incorporate the main spatial characteristics of the underlying grade distribution at the scale at which mining is likely to occur.

Semivariogram analysis was undertaken for gold within each domain that contains sufficient data to allow a semivariogram to be generated. In this case, Binebase high grade and low grade domains contained enough samples for a valid semivariogram, so semivariogram parameters generated from this domain were used for all domains. Three dimensional (3-D) semi-variograms may be generated using two principal orthogonal directions; any apparent dip component would likely be secondary structures within the lode.

For each variable, the experimental variogram containing the clearest structure and greatest difference in range between each direction was selected for use in model fitting where possible. The semivariogram modelling process is described as follows:

- Experimental variograms with small lags orientated down hole to aid interpretation of nugget effect.
- Omni-directional variogram to determine optimal lag distance and range for directional component of semivariogram
- Select lowest variance direction on the variogram map, which computes 36 directions in the reference plane and normal to the reference plane. The lowest variance was parallel to the strike of the currently defined deposits.
- Modelled directional variograms with 2 directions in reference plane (along strike-down dip) oriented parallel to the average orientation of the wireframe models of each domain, plus variogram normal to the plane (across strike).

Semi-variograms were computed from two metre composite drill data from Binebase and Bawone domains for gold and silver. Directional variograms for gold and silver were able to be produced for all domains except for Binebase high and low grade silver. Omnidirectional variograms were used for Binebase silver estimates as directional variograms in these domains did not produce meaningful results. Downhole variograms did produce reliable estimates of nugget variance in each domain. Semi-variogram parameters produced from modelling are shown in Table 14-9 and Table 14-10.

Table 14-9: Variogram Parameters for Gold by domain

Parameters	BID1_HG	BID1_LG	BOD2_HG	BOD2_LG
axis1	220.0	289.6	140.0	95.4
axis2	-10.0	-7.6	50.0	75.9
axis3	0.0	-6.5	90.0	-44.6
majorsemi	1.0	4.8	1.0	3.5
majorminor	2.0	9.5	1.0	7.0
nugget	0.2	0.2	0.2	0.3
sill1	0.8	0.5	0.4	0.2
range1	50.0	95.0	10.0	50.0
sill2	0.0	0.3	0.5	0.5
range2	0.0	140.0	90.0	90.0
numstructures	1.0	2.0	1.1	2.0
majorsemi2	1.0	1.7	3.0	1.8
majorminor2	2.0	2.8	2.0	1.8

Table 14-10: Variogram Parameters for Silver by domain

Parameters	BID1_HG	BID1_LG	BOD2_HG	BOD2_LG
axis1	0.0	0.0	128.3	50.0
axis2	0.0	0.0	49.0	80.0
axis3	0.0	0.0	-74.7	0.0
majorsemi	1.0	1.0	1.6	1.0
majorminor	1.0	1.0	3.0	2.0
nugget	0.2	0.3	0.1	0.2
sill1	0.7	0.6	0.9	0.4
range1	10.0	10.0	90.0	30.0
sill2	0.1	0.2	0.0	0.4
range2	30.0	35.0	0.0	75.0
numstructures	2.0	2.0	1.0	2.0
majorsemi2	1.0	1.0	1.6	1.0
majorminor2	1.0	1.0	3.0	2.0

14.3 BLOCK MODELLING

14.3.1 Grade Interpolation Method

Ordinary Kriging ("OK") is a robust grade estimation technique and is the main algorithm used in estimation of the model grades. OK is a globally unbiased estimator which produces the least error variance for grade estimates.

OK uses grade continuity information from the semi-variogram to estimate grades into blocks. It is also able to accommodate anisotropy within the data and is able to replicate this in the block estimates. Another important feature of kriging is that it automatically deals with clustering of data which is important in areas where the data density is not uniform.

Gold grade was interpolated into a constrained block model using OK estimation with parameters based on directional variography. All blocks within domain solids were filled using two estimation passes for each Domain.

14.3.2 Block Size and Extents

The block dimension is one of the major variables that affect grade estimation. Grade estimates are smoother and the error of estimation is larger for a smaller block size (Armstrong and Champigny, 1989). Generally an estimation block dimension equal to one half of the drill hole sample spacing is considered as industry standard. When the variogram range is greater than 1.5 times the sample spacing, block estimates (for block sizes at least half the sample spacing) are adequate to distinguish ore from waste (Armstrong and Champigny, 1989).

The Sangihe block model uses regular shaped blocks measuring 15 metres by 15 metres by 5 metres in height (Table 14-11).

Table 14-11: Sangihe Block Model Extents

Type	Y	X	Z
Minimum Coordinates	384750	793550	-175
Maximum Coordinates	386550	794750	170
User Block Size	15	15	5
Min. Block Size	1.875	1.875	0.625
Rotation	0.000	0.000	0.000

Block size selection was based on kriging neighbourhood analysis ("KNA"). This analysis is used to indicate the optimum number of samples and block sizes to use for the final block model. Conditional bias slope, kriging efficiency, slope of regression and number of informing samples outputs from test block model indicate that an estimation block size of 15 metres by 15 metres by 5 metres in height is optimal for the Sangihe Project. Sub blocks down to 1.875 m by 1.875 m by 0.625 m height were used to improve the resolution of the model at the edges of domains and to better represent narrow, high grade mineralisation at depth.

Blocks above topography were tagged and excluded from the model estimation. Blocks were tagged with a weathering code to indicate if mineralisation was oxide or sulphide.

14.3.3 Block Model Attributes

The block model stores variables as attributes which can be assigned, estimated or calculated from other variables. Sangihe block model attributes are shown in Table 14-12.

Table 14-12: Sangihe Block Model Attributes

Attribute Name	Type	Decimals	Background	Description
ag_ppm_ids	Real	2	0	Ag ppm inverse distance squared
ag_ppm_krig	Real	2	0	Ag ppm ordinary krig
ag_ppm_nn	Real	2	0	Ag ppm nearest neighbour
au_ppm_ids	Real	2	0	Au ppm inverse distance squared
au_ppm_krig	Real	2	0	Au ppm ordinary krig
au_ppm_nn	Real	2	0	Au ppm nearest neighbour
code_area	Character	-	Sangihe	Deposit Name
code_domain	Character	-	undefined	codes for domains within ore
code_rock	Character	-	undefined	air, rock, ore
fill_pass	Integer	-	0	estimation iteration used to fill this block using Au kriging
krg_au_block_var	Real	3	0	block variance
krg_au_cond_bias_slope	Real	2	0	conditional bias slope
krg_au_dst_avg	Real	2	0	average distance to informing samples
krg_au_dst_near	Real	2	0	distance to nearest sample
krg_au_krig_effic	Real	2	0	kriging efficiency
krg_au_lagrange_multi	Real	2	0	lagrange multiplier
krg_au_neg_weights	Integer	-	0	number of negative weights
krg_au_numsamp	Integer	-	0	number of informing samples
krg_au_var	Real	3	0	kriging variance for Au
nearest_hole	Character	-	undefined	name of nearest drill hole
rescat	Character	-	Other	Resource category, can be Measured, Indicated, Inferred
sg	Real	2	0	in-situ dry bulk density
weathering	Character	-	undefined	air, ox, fresh

14.3.4 Estimation Parameters

Estimation parameters used in OK are summarised in Table 14-9 and

Table 14-10. Search ellipses were based on the semi-variogram parameters described in Section 14.2.

Numbers of informing samples were chosen based on KNA. Minimum and maximum samples of 12 and 22 respectively were applied to the first pass estimates. The minimum number of samples was reduced to 3 during the second pass to ensure all blocks were filled.

Maximum search radii were taken from variogram ranges for each domain for the first pass estimates. For the second pass estimates, all maximum ranges were set to 300 m to ensure all blocks were filled.

Based on the block sizes and sample density, discretization points of 5(X) x 5(Y) x 2(Z) were selected.

14.3.5 Validation

The Sangihe block model was validated by visual and statistical comparison of drill hole and block grades. Block grades were visually checked in section view against drill assay data to ensure grades represented in the block model reflected the drill hole grades (Figure 14-7, Figure 14-8, Figure 14-9 and Figure 14-10). Colour scales for the images below are the same for the block model and drill hole composites.

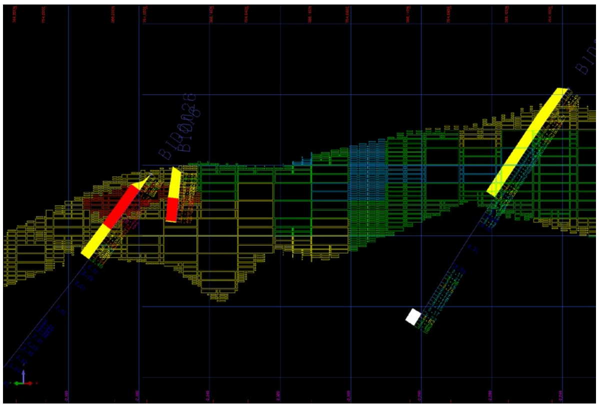


Figure 14-7: Validation images at Binebase showing similar corresponding block colours to assayed grade.

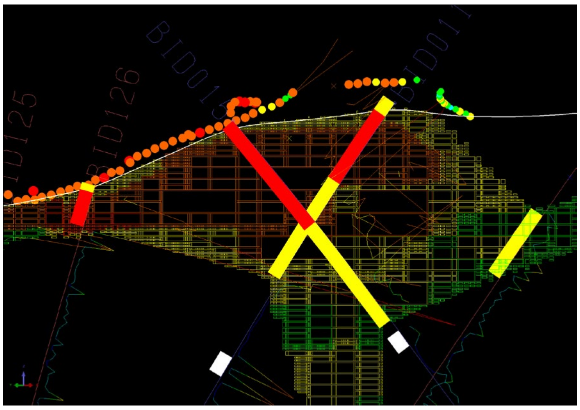


Figure 14-8: Validation images at Binebase using trench data.

Figure 14-9: Validation images at Bawone showing well constrained blocks with similar corresponding block colours to assayed grade.

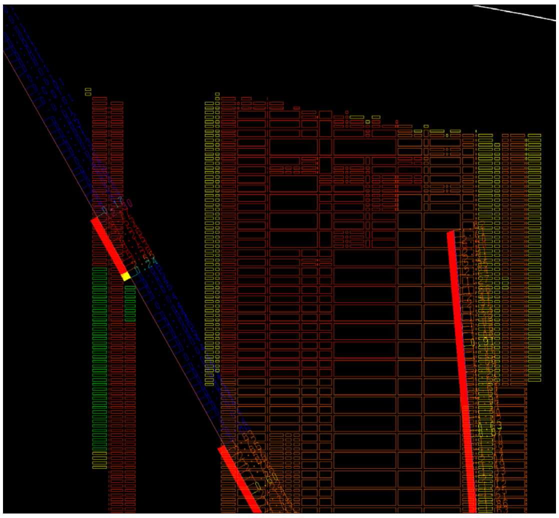


Figure 14-10: Validation images at Bawone showing well constrained blocks with similar corresponding block colours to assayed grade.

To ensure the kriged estimate is not reporting a global bias, alternative estimation methods (nearest neighbour and ID2) were utilised. The correlations returned by the alternate estimates are considered reasonable.

The trend of nearest neighbour estimate is relatively erratic as block grade is not assigned by an averaging technique (the single closest sample rather than several weighted samples are used to inform a block leading to conditional bias). The Inverse Distance estimate is an averaging technique (weighted by distance), but lacks the ability to assign anisotropy, de-cluster the input data, or account for the nugget effect. Ordinary kriging is also an averaging technique that weights the samples based on a variogram (which incorporates the nugget effect and anisotropy). Ordinary Kriging provides a reliable global estimate due to the ability to de-cluster data and weight the samples using a nugget effect and anisotropy (as defined by the variogram).

Trend analysis compares average grade of blocks versus average grade of informing samples within section slices through the block model. Trend analyses were constructed for gold and silver in low grade and high grade domains in Binebase and Bawone by section Northing. Results are shown graphically in Figure 14-11 and Figure 14-12.

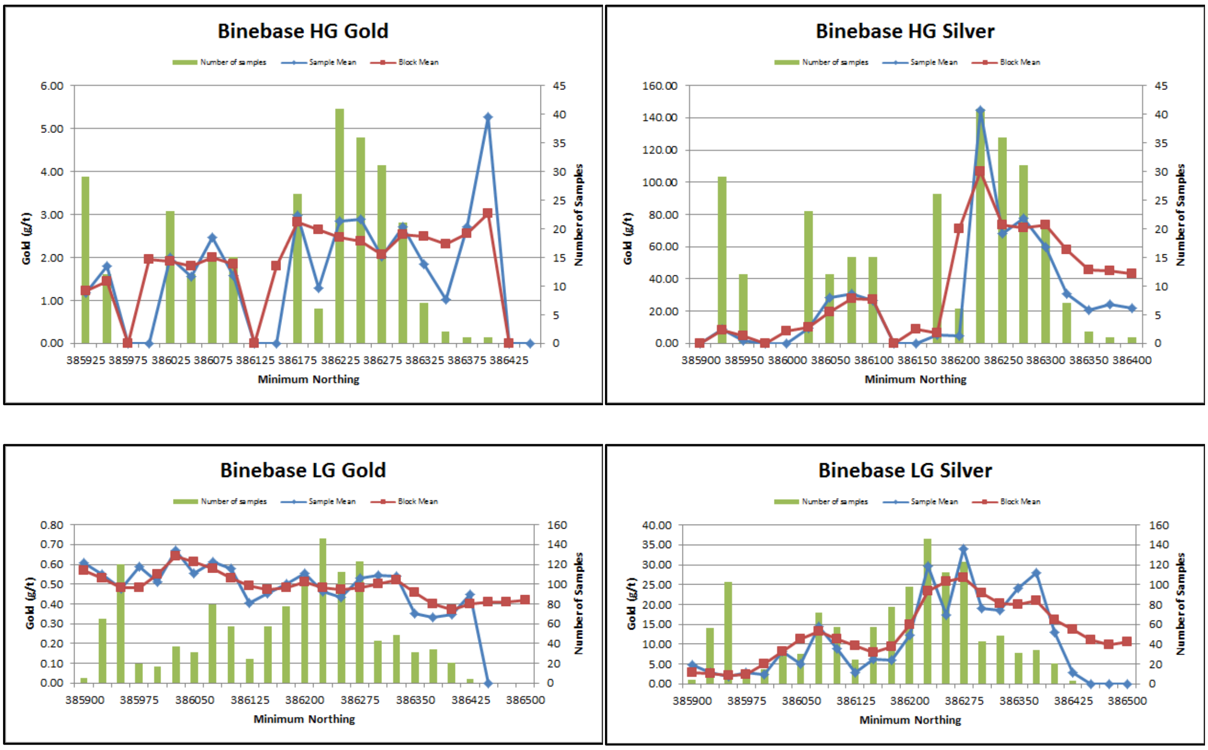


Figure 14-11: Trend analysis for gold and silver in HG and LG Domains, Binebase

Figure 14-12: Trend analysis for gold and silver in HG and LG Domains, Bawone

Gold and silver generally show good correlation between estimated block grades and sample means for each section, with smoothing of grade expected from ordinary kriging. Generally, northings where abundant informing samples are present show small differences between estimated block mean and sample mean, particularly at Binebase with high and low grade gold and silver domains due to clustering of drill data in both areas.

14.3.6 Comparison to Previous Mineral Resource Estimates

The first Mineral Resource Estimate for the Sangihe project as reported by Stone (2010) (Table 14-13). MA. The main differences between the Bawone estimations are due to increased drilling, geological and mineralization interpretation, cut off values and density measurements.

Table 14-13: Superseded 2010 Mineral Resource Estimates (Stone 2010)

Inferred resources at Binebase at 0.25 g/t Au cut-off						
Type	Au Range (g/t)	Tonnes	Au (g/t)	Ag (g/t)	Au (oz)	Ag (oz)
Oxide	0.25 -> 9999	7,851,000	1.10	25.13	277,661	6,343,299
Sulphide	0.25 -> 9999	10,002,000	0.49	13.60	157,573	4,373,443
Inferred resources at Bawone at 0.25 g/t Au cut-off						
Type	Au Range (g/t)	Tonnes	Au (g/t)	Ag (g/t)	Au (oz)	Ag (oz)
Oxide	0.25 -> 9999	3,475,000	1.66	9.16	185,464	1,023,406
Sulphide	0.25 -> 9999	5,999,000	1.12	0.97	216,020	187,089
Source: Stone, 2010						

A Mineral Resource Estimate for the Binebase and Bawone deposits based on drilling results up to July 2013 was published in a NI 43-101 Technical Report (Taylor and Woodward, 2017). The 2017 Mineral Resources for the Sangihe Project included two separate deposits with oxide and sulphide mineralisation reported at different cut-off grades (Table 14-14).

Table 14-14: Superseded 2017 Mineral Resource Estimate

Category	Type	Tonnes (t)	Au (g/t)	Ag (g/t)	Au (oz)	Ag (oz)
Binebase Oxide at 0.25 g/t Au cut-off						
Indicated	Oxide	2,286,100	0.77	20.6	56,600	1,511,900
Inferred	Oxide	893,100	0.63	14.8	18,000	424,700
Binebase Sulphide at 1.00 g/t Au cut-off						
Indicated	Sulphide	204,800	2.12	32.8	14,000	215,900
Inferred	Sulphide	81,100	2.09	33.6	5,500	87,600
Bawone Oxide at 0.25 g/t Au cut-off oxide						
Indicated	Oxide	21,700	3.12	19.8	2,200	13,800
Inferred	Oxide	335,800	1.38	11.6	14,900	125,400
Bawone Sulphide at 1.00 g/t cut-off						
Indicated	Sulphide	644,800	2.02	11.1	41,900	230,800
Inferred	Sulphide	1,226,300	1.69	10.6	66,600	417,900
Mineral Resource (variable cut-offs)						
Total Indicated		3,157,400	1.13	19.4	114,700	1,972,400
Total Inferred		2,536,300	1.29	13.0	105,000	1,055,600

The current Mineral Resource Estimate for the Binebase and Bawone deposits is based on drilling results up to July 2013 and considers the additional metallurgical and geotechnical drilling results undertaken in 2017 (Table 14-15). No new block model estimate was undertaken, the previous model is reported to CIM 2019 Guidelines using current long-term projections of metal prices and costs.

The main changes to the reported resource (Table 14-16) is primarily due to the application of revised cut off parameters (Section 14.4.1) and reporting to a constraining surface (Section 14.4.2).

Due to the steep pipe like shape of Bawone deposit most of the previous resource (despite the reduced processing recoveries applied) remains unaffected. There is significant shallow inferred oxide material to the north of Binebase encroaching the lagoon, for this reason that material is not reported in the MRE. The reduced cut off applied to Binebase sulfide mineralization captures a significant increase in available sulfide material reported in the MRE.

Table 14-15: 2025 Current Sangihe Project Mineral Resource Estimate

Category	Type	Tonnes (t)	Au (g/t)	Ag (g/t)	Au (oz)	Ag (Moz)
Binebase Oxide at 0.20 g/t Au cut-off						
Indicated	Oxide	1,795,000	0.81	20.5	46,000	1.18
Inferred	Oxide	435,000	0.71	19.1	10,000	0.27
Binebase Sulphide at 0.50 g/t Au cut-off						
Indicated	fresh	689,000	1.05	22.7	23,000	0.50
Inferred	fresh	642,000	0.68	16.6	14,000	0.34
Bawone Oxide at 0.20 g/t Au cut-off oxide						
Indicated	Oxide	22,000	3.12	19.8	2,000	0.01
Inferred	Oxide	336,000	1.37	11.6	15,000	0.13
Bawone Sulphide at 1.00 g/t cut-off						
Indicated	fresh	645,000	2.02	11.1	42,000	0.23
Inferred	fresh	891,000	1.81	11.8	52,000	0.34
Mineral Resource (variable cut-offs)						
Total	Indicated	3,151,000	1.12	19.1	114,000	1.93
Total	Inferred	2,303,000	1.22	14.5	91,000	1.08

Table 14-16: Variances between 2017 and 2025 Reported Resources

Resource	Category	Type	Tonnes (t)	Au (g/t)	Ag (g/t)	Au (oz)	Ag (Moz)
Previous Superseded 2017	Indicated	Oxide	2,308,000	0.79	20.6	59,000	1.53
	Indicated	Sulphide	850,000	2.04	16.3	56,000	0.45
	Inferred	Oxide	1,229,000	0.83	13.9	33,000	0.55
	Inferred	Sulphide	1,307,000	1.72	12.0	72,000	0.51
Current Resource 2025	Indicated	Oxide	1,817,000	0.83	20.5	49,000	1.20
	Indicated	Sulphide	1,334,000	1.52	17.1	65,000	0.73
	Inferred	Oxide	771,000	1.00	15.8	25,000	0.39
	Inferred	Sulphide	1,533,000	1.34	13.9	66,000	0.68
Difference	Indicated	Oxide	-21%	5%	0%	-17%	-21%
	Indicated	Sulphide	57%	-26%	5%	16%	64%
	Inferred	Oxide	-37%	20%	14%	-24%	-29%
	Inferred	Sulphide	17%	-22%	15%	-8%	35%

The 2017 mineral resource was reported at greater than 0.5 g/t in oxide and 1.0 g/t in sulphide material, the current mineral resource utilises multiple cut off grades based on material type and metallurgical recoveries. Oxidized mineralisation is reported above 0.25 g/t gold and 0.5 g/t at Binebase and 1.0 g/t at Bawone deposit. The global percentage change in resource categories is shown in Table 14-17.

Table 14-17. Change in Resource Categories

Category	Tonnes (t)	Au (g/t)	Ag (g/t)	Au (oz)	Ag (Moz)
Indicated	-0.2%	-0.6%	-1.7%	-0.6%	-2.0%
Inferred	-9%	-5%	12%	-13%	2%

14.4 RESOURCE CLASSIFICATION

Block model tonnage and grade estimates have been classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves 2019.

Resource classification for Sangihe is based upon the confidence in geological continuity, number of informing samples, kriging variance, average distance to informing samples, conditional bias slope, estimation pass and sample density.

14.4.1 Economic Parameters - Cut-off grade

The 2025 MRE considers a potential open pit scenario for both Binebase and Bawone deposits, each of which was assigned specific cut-off grades as described in Table 14-18. Assumed extraction methods and volumes are only used to establish reasonable cut-off grades for various portions of the deposits. No PEA, PFS or FS studies (as defined by the CIM Definition Standards) have been completed to support the economic viability or technical feasibility of exploiting any portion of the mineral resource by any particular mining method. The cut-off grade must be re-evaluated in light of prevailing market conditions and other factors, such as gold price, exchange rate, mining method, related costs, etc.

The cut off calculations use a reasonable long term metal price (2024 average, www.kitco.com) and gold processing recoveries from the completed metallurgical test work, silver recoveries are assumed to be 2/3 of the gold recovery. The operating costs relating to mining, processing, general and administrative and royalties are taken form the IFS.

Table 14-18: Cut off Calculation Economic Assumptions.

Metric	Units	Oxide	Binebase (sulphide)	Bawone (sulphide)
Gold Price	US$/oz	2,643	2,643	2,643
Silver Price	US$/oz	28	28	28
Recovery Au	%	90%	65%	30%
Recovery Ag	%	60%	43%	20%
Effective Revenue (gold)	US$/g	76.48	55.23	25.49
Effective Revenue (gold + silver)	US$/g	77.02	55.62	25.67
Less Royalty	%	3.75%	3.75%	3.75%
Refining charge	$ per oz	30.00	30.00	30.00
Realized Revenue (gold)	US$/g	72.64	52.20	23.57
Cost to Mine/t ore	US$/t	2.90	3.40	3.40
Costs to Process	US$/t	9.90	19.80	19.80
General & Admin	US$/t	1.80	1.80	1.80
Dilution	%	10%	10%	10%
Cutoff	g/t	0.21	0.50	1.09
Rounded Cutoff grade applied	g/t Au	0.20	0.50	1.00

Cut-off grade = (mining + processing cost + G&A)/(selling price*1- dilution)*recovery/oz)

14.4.2 Constraining Surfaces

Mineral Resources that are amenable to open pit mining methods, should consider constraining surfaces (pit shells). Manual pit shells (constraining surfaces) were created in Surpac 7.8 with wall angles of 56°in sulphide material and 45° in oxide material (Figure 14-13). The combined strip ratio defined by the manual pits shells is 1.5 t of waste per tonne of mineralisation. The constraining surface and cut parameters along with deposit location and scale, environmental and social consideration, and geologic and grade continuity were considered in the classification of resources.

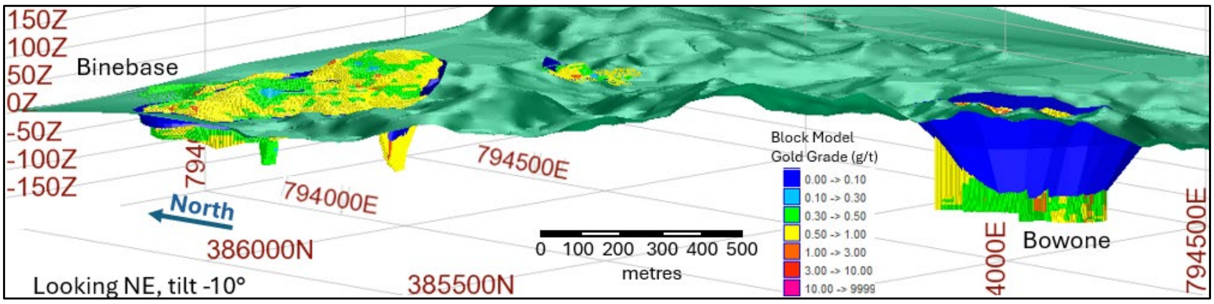


Figure 14-13: Manual Pit shells constraining the Mineral Resource

Blocks within the defined manual pit above cut off are classified as indicated or inferred based on the guideline criteria shown in Table 14-19, Table 14-20, Table 14-21 and Table 14-22. The dominant difference between these tables is the range of the variogram. Although the minimum informing sample count for Inferred Resource category was 3, most blocks were filled in the first pass which used a minimum of 12 samples. No blocks could be classified as measured because of insufficient sampling density and weak confidence in geological continuity at a local scale.

Figure 14-14 illustrates resource categories for domains at each deposit.

Table 14-19: Resource Classification Criteria for Binebase LG (BID1_HG)

Criteria	Inferred	Indicated
Number of informing samples	Blocks informed by at least minimum informing samples (3)	50% of the Maximum allotted (12)
Distance to nearest sample	-	1/3 the defined variogram range (15m)
Average Distance to samples	-	Less than the variogram range (50m)
Conditional bias slope	>0.2	Majority greater than 0.7
Estimation Pass	1 or 2	1
Sample Density		Within 50m of surface, based on the effective drill depth density

Table 14-20: Resource Classification Criteria for Binebase LG (BID1_LG)

Criteria	Inferred	Indicated
Number of informing samples	Blocks informed by at least minimum informing samples (3)	50% of the Maximum allotted (12)
Distance to nearest sample	-	1/3 the defined variogram range (40m)
Average Distance to samples	-	Less than the variogram range (100m)
Conditional bias slope	>0.2	Majority greater than 0.7
Estimation Pass	1 or 2	1
Sample Density		Within 50m of surface, based on the effective drill depth density

Table 14-21: Resource Classification Criteria for Binebase LG (BOD2_HG)

Criteria	Inferred	Indicated
Number of informing samples	Blocks informed by at least minimum informing samples (3)	50% of the Maximum allotted (12)
Distance to nearest sample	-	1/3 the defined variogram range (30m)
Average Distance to samples	-	Less than the variogram range (90m)
Conditional bias slope	>0.2	Majority greater than 0.7
Estimation Pass	1 or 2	1

Table 14-22: Resource Classification Criteria for Binebase LG (BOD2_LG)

Criteria	Inferred	Indicated
Number of informing samples	Blocks informed by at least minimum informing samples (3)	50% of the Maximum allotted (12)
Distance to nearest sample	-	1/3 the defined variogram range (30m)
Average Distance to samples	-	Less than the variogram range (90m)
Conditional bias slope	>0.2	Majority greater than 0.7
Estimation Pass	1 or 2	1

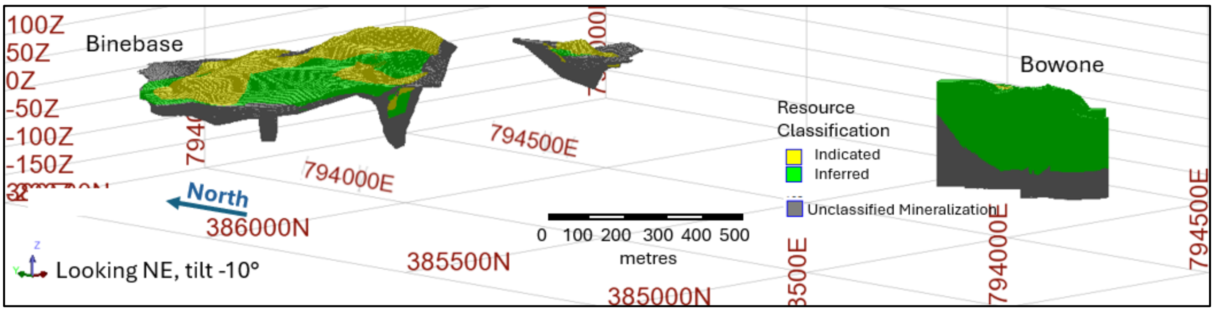


Figure 14-14: Oblique view looking north-east at the Resource Categories. Green is Inferred, yellow is Indicated.

14.5 MINERAL RESOURCE SUMMARY

14.5.1 NI 43-101 Mineral Resource Statement

The undiluted Sangihe project mineral resource statement is presented in Table 14-23 below. Mineral Resource estimates for the Sangihe Project were prepared in compliance with CIM guidelines and under the guidance of NI 43-101 disclosure standards for reporting Mineral Projects. A NI 43-101 compliant mineral resource estimate was undertaken by MA.

The results reported in the mineral resource have been rounded to reflect the approximation of grade and quantity which can be achieved at this level of resource estimation. Rounding may result in apparent differences when summing tonnes, grade and contained metal content. Tonnage and grade measurements are in Metric units. Mineral resources are not mineral reserves do not have demonstrated economic viability and may be materially affected by modifying factors including but not restricted to mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors. Inferred mineral resources are that part of a mineral resource for which the grade or quality are estimated on the basis of limited geological evidence and sampling. Inferred mineral resources do not have demonstrated economic viability and may not be converted to a mineral reserve. It is reasonably expected, though not guaranteed, that the majority of Inferred mineral resources could be upgraded to Indicated mineral resources with continued exploration.

Mineral Resources for the Sangihe Project as at 06 January 2025 and estimated using a cut-off grade of 0.20 g/t Au for oxide material and 0.50 g/t Au for sulphide material at Binebase and 1.00 g/t Au for sulphide material at Bawone are:

INDICATED

3.15 Mt at an average grade of 1.12 g/t gold and 19.4 g/t silver containing an estimated 114,000 oz of gold and 1.93 Moz of silver.

INFERRED

2.30 Mt at an average grade of 1.22 g/t gold and 14.5 g/t silver containing an estimated 91,000 oz of gold and 1,08 Moz of silver.

Oxide and sulphide resources from Binebase and Bawone are shown in Table 14-23.

Table 14-23: January 2025 Sangihe Project Mineral Resource Estimates (effective 06 January 2025)

Category	Type	Tonnes (t)	Au (g/t)	Ag (g/t)	Au (oz)	Ag (Moz)
Binebase Oxide at 0.20 g/t Au cut-off						
Indicated	Oxide	1,795,000	0.81	20.5	46,000	1.18
Inferred	Oxide	435,000	0.71	19.1	10,000	0.27
Binebase Sulphide at 0.50 g/t Au cut-off						
Indicated	fresh	689,000	1.05	22.7	23,000	0.50
Inferred	fresh	642,000	0.68	16.6	14,000	0.34
Bawone Oxide at 0.20 g/t Au cut-off oxide						
Indicated	Oxide	22,000	3.12	19.8	2,000	0.01
Inferred	Oxide	336,000	1.37	11.6	15,000	0.13
Bawone Sulphide at 1.00 g/t cut-off						
Indicated	fresh	645,000	2.02	11.1	42,000	0.23
Inferred	fresh	891,000	1.81	11.8	52,000	0.34
Mineral Resource (variable cut-offs)						
Total	Indicated	3,151,000	1.12	19.1	114,000	1.93

Total	Inferred	2,303,000	1.22	14.5	91,000	1.08

Note - Reported tonnage and grade figures have been rounded off from raw estimates to the appropriate number of significant figures to reflect the order of accuracy of the estimate. Minor variations may occur during the addition of rounded numbers.

Notes to accompany the Mineral Resource Estimate:

- The Sangihe Project is 70 % owned by Baru Gold Corp ("BGC").
- The independent and qualified person for the mineral resource estimate, as defined by NI 43-101, is Ian Taylor, B.Sc.(Hons), G.Cert.Geostats. FAusIMM(CP), and the effective date of the estimate is January 1, 2025.
- These mineral resources are not mineral reserves as they do not have demonstrated economic viability.
- The mineral resource estimate is classified as Indicated Resources and follows the 2019 CIM Definition Standards.
- Results are presented in situ and undiluted and are considered to have reasonable prospects for economic extraction.
- MA has reviewed the company procedures and protocols for EAMC (BGC) drilling and has visited site on one occasion.
- EAMC (BGC) drill core was available for inspection on site. MA conducted a review of the drill hole data
- Diamond core of PQ, HQ and NQ diameters with standard and triple tube core recovery systems were used by EAMC(BGC).
- Binebase mean core recovery for all drilling was 93.19 % from 12,685 measurements. Bawone mean core recovery was 94.23 % from 3,157 measurements.
- Drill hole data was plotted in UTM Zone 51, WGS84 datum.
- QA/QC program implemented by EAMC (BGC) is considered acceptable for a mineral resource definition stage. It is MA's opinion that the sample preparation, security and analytical procedures are sufficiently adequate for the purposes of the current mineral resource estimation.
- Mineralisation interpretation used in this Mineral Resource Estimate is based entirely on ½ diamond drill core samples submitted for geochemical analysis.
- The Mineral Resource Estimate at Binebase is based on 110 drill holes out of a total of 126 drill holes, from which 2,966 informing samples totalling 3,079.25 m were selected. The Mineral Resource Estimate at Bawone is based on 17 drill holes out of a total of 27 drill holes, from which 1,119 informing samples totalling 1,136.40 m were selected.
- The geological resource is constrained by domains consisting of 3D wireframes/solids. Drill hole data was displayed in section and elevation slices showing assays and geology. Intercepts were selected and coded for each domain based primarily on a grade greater than 0.3 g/t Au and less than 1 g/t Au for low grade, and more than 1 g/t Au for high grade.
- Solids were extended laterally for approximately half the drill spacing, typically about 12.5 m, where mineralisation was not closed off by drilling. The depth of extrapolation below drill holes was also typically about half the average drill spacing, about 12.5 m. Two sulphide breccia veins at Binebase were extended vertically 15 m below their respective lowest drill hole intercept points. Bawone mineralisation was extended vertically 15 m below the lowest drill hole intercepts.
- Drill intercepts within each lode are flagged in a database table and composited to give informing sample downhole composites. Domains are based on at least 2 drill hole intercepts.
- Informing samples were composited to 2 m lengths.
- Grade caps were applied to gold and silver informing composite values to remove outliers. Grade cap values for Binebase range from 2.6 g/t and 10.5 g/t for gold and 300 g/t for silver. Grade cap values for Bawone range from 1.4 g/t to 9.2 g/t for gold and 30 g/t to 60 g/t for silver.

- Density measurements on drill core samples taken by EAMC (BGC) use the water immersion method. 385 density measurements were used in this mineral resource estimate. Densities used in this mineral resource estimate were equal to the mean of the domained sample population rounded to two decimal places. Density values for Binebase range from 1.83 t/m^3 to 2.28 t/m^3. Density values for Bawone range from 2.11 t/m^3 to 2.63 t/m^3.
- Estimation parameters were based on directional variograms for gold and silver for each domain except for Binebase high and low grade silver. Omnidirectional variograms were used for Binebase silver estimates. Downhole variograms did produce reliable estimates of nugget variance in each domain.
- Grade was interpolated by domain using Ordinary Kriging.
- All blocks within domain solids were filled using two passes. Maximum search radii were taken from variogram ranges for each domain for the first pass estimates. For the second pass estimates, all maximum ranges were set to 300 to ensure all blocks were filled.
- The estimation block size was 15 m (x) by 15 m (y) by 5 m (z). A sub-block size of 1.875 m (x), 1.875 m (y) and 0.625 m (z) was used to increase the resolution of the model at the edges of Domains and to better represent narrow, high grade mineralisation. Block size selection was based on kriging neighbourhood analysis “KNA”.
- Volume of each domain was defined by wireframes in 3D space that were used to flag resource blocks.
- Results are stored in a block model that was screened for topography by block.
- Numbers of informing samples were chosen based on KNA. Minimum and maximum samples of 12 and 22 respectively were applied to the first pass estimates. The minimum number of samples was reduced to 3 during the second pass to ensure all blocks were filled.
- Based on the block sizes and sample density, discretization points of 5(X) x 5(Y) x 2(Z) were selected.
- Resources have been classified as Indicated or Inferred based upon the confidence in geological continuity, number of informing samples, kriging variance, average distance to informing samples, conditional bias slope, estimation pass, and sample density.
- The Sangihe block model was validated by visual and statistical comparison of drill hole and block grades.
- Cut-off grade of 0.20 g/t Au for oxide resources assumes processing by heap leaching. Cut-off grade of 0.5 g/t (Binebase) and 1 g/t Au (Bawone) for sulphide mineralisation is based on available evidence that the material is refractory in nature and therefore MA has selected a conservative figure to meet the requirements of NI 43-101 for “reasonable prospects for economic extraction”. Further metallurgical testwork on sulphide mineralisation is required to more accurately define sulphide cut-off grade.
- Reported tonnage and grade figures are reported within a constraining surface (manual pit shell) and have been rounded off to the appropriate number of significant figures to reflect the order of accuracy of the estimate. Minor variations may occur during the addition of rounded numbers.

Grade-tonnage charts for oxide and sulphide resources in indicated and inferred categories at Binebase and Bawone are shown in Figure 14-15, Figure 14-16, Figure 14-17 and Figure 14-18. Charts show the sensitivity of resources to selection of cut-off grade. Except for the Binebase Indicated charts, there is minimal additional material below 0.30 g/t Au because mineralisation wireframes were defined using a geological cut-off of 0.30 g/t Au. The small amount of material below 0.30 g/t Au shown on the Binebase Indicated charts perhaps reflects the more gradational mineralisation boundary at this deposit. All Bawone Indicated oxide occurs in the high grade zone and all material is over the 1.5 g/t Au cut off.

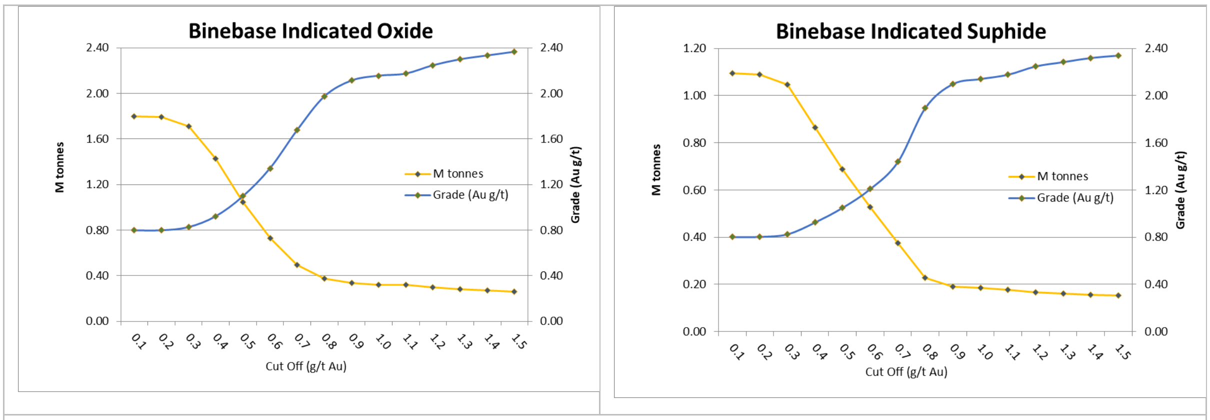


Figure 14-15: Grade-tonnage charts, Indicated Category for Binebase.

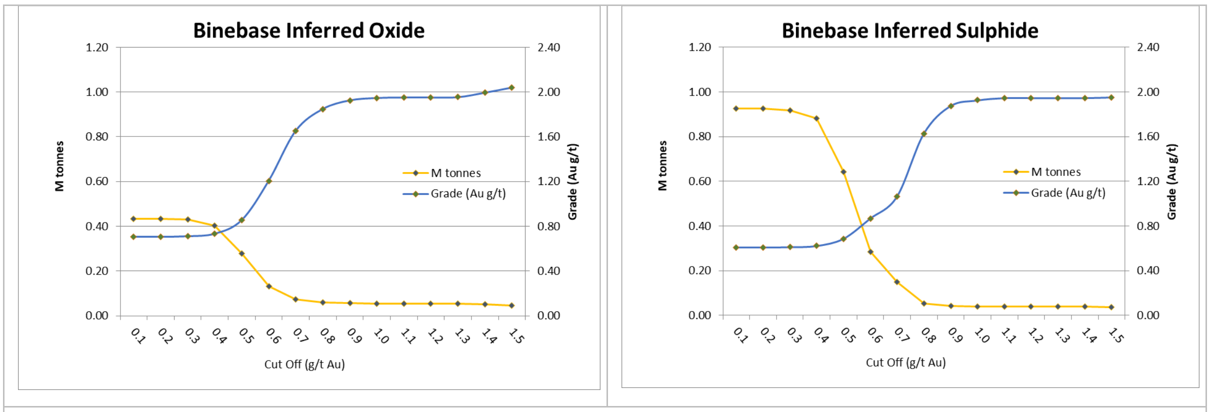


Figure 14-16: Grade-tonnage charts, Inferred Category for Binebase.

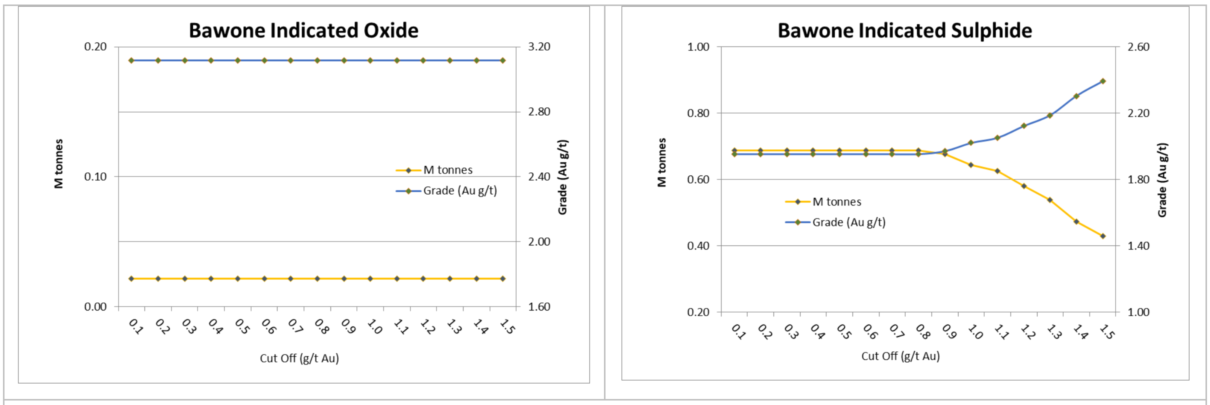


Figure 14-17: Grade-tonnage charts, Indicated Category for Bawone.

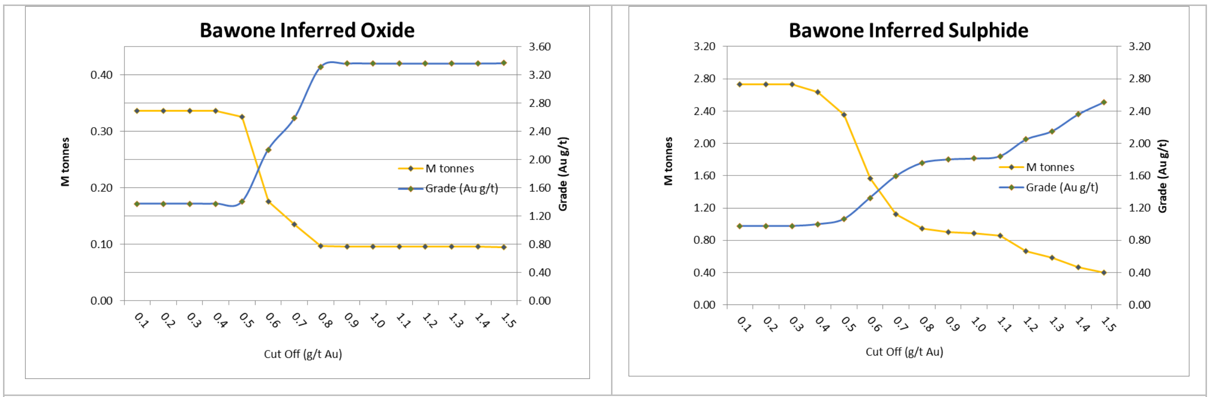


Figure 14-18: Grade-tonnage charts, Inferred Category for Bawone.

14.6 FACTORS POTENTIALLY AFFECTING MATERIALITY OF RESOURCES

Mineral resources which are not mineral reserves do not have demonstrated economic viability. The following factors could potentially impact on the materiality of the mineral resource estimate:

- The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
- It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
- Ore samples were also analysed for other elements (Table 14-24). The extent of impact these elements may or may not have on the materiality of the mineral resource estimate is not commented on in this report.
- Limited metallurgical test work has been undertaken on the sulphide mineralisation, further test work will impact the decisions around what recovery factors are used.

Table 14-24: Element statistics for assays within mineralised Domains.

Variable	Count	Min	Max	Mean	Std Dev.	CoV	50%ile	90%ile	95%ile	97.5%ile
Au	2127	0.0	17.1	1.0	1.2	1.3	0.6	2.1	2.8	4.0
Al	4	5.2	8.0	6.4	1.1	0.2	6.2	8.0	8.0	8.0
As	2118	2.0	14963.2	317.9	596.0	1.9	149.6	735.6	1193.6	1774.0
Ba	1201	10.0	16350.0	2089.6	2468.4	1.2	1160.0	5407.5	7355.0	9057.8
Co	4	55.0	78.0	65.4	8.6	0.1	64.3	78.0	78.0	78.0
Cu	2127	14.8	10001.0	1357.2	1990.7	1.5	488.0	4122.2	6099.6	7670.9
Fe	4	6.9	9.6	8.4	1.0	0.1	8.5	9.6	9.6	9.6
K	3	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Mo	334	2.0	355.5	18.9	25.7	1.4	13.0	38.0	50.2	63.0
Na	4	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Pb	2103	7.2	6322.5	330.9	542.2	1.6	141.0	776.9	1260.5	1782.5
S	373	0.1	44.3	11.1	9.6	0.9	6.8	26.0	29.8	35.1
Sb	2093	0.5	486.5	24.4	39.7	1.6	11.3	58.8	91.8	138.8
Zn	2124	2.4	10001.0	464.6	1169.5	2.5	69.0	1390.4	2889.8	4199.2

15 MINERAL RESERVE ESTIMATES

This section of not applicable for this NI 43-101 Report.

16 MINING METHODS

This section is not applicable for this NI 43-101 Report.

17 RECOVERY METHODS

This section is not applicable for this NI 43-101 Report.

18 PROJECT INFRASTRUCTURE

This section is not applicable for this NI 43-101 Report.

19 MARKET STUDIES AND CONTRACTS

This section is not applicable for this NI 43-101 Report.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 ENVIRONMENTAL STUDIES 2007

In January 2007, PT Hatfield Indonesia conducted an environmental baseline study of the project area. Hatfield's work concluded that river water samples from watersheds in areas of artisanal mining were not contaminated with heavy metals.

Local mercury "hot spots" were found in river bottom sediments near existing alluvial mining activities in the Taware area. Evidence of mercury contamination was also found in soil samples collected from the Binebase - Bawone area. Mercury levels in stream biota were found to be variable with the highest levels in eel (0.53 mg/ kg) being slightly above the limit of 0.5 mg/kg set by British Columbia, Canada, but below the 1 mg/ kg set by the European Union and the US Food and Drug Administration.

Hatfield concluded that the level of mercury in samples did not appear to be a serious health concern but did note that unprotected handling of the metal by artisanal miners was likely to pose health risks to those individuals.

Although first-growth forest and original vegetation was deemed to no longer exist in the area, Hatfield recommended that EAMC (BGC) minimise further disturbance of the vegetation from its drilling program and maintain careful management and monitoring of its operations.

20.2 ENVIRONMENTAL STUDIES 2017

PT Tambang Mas Sangihe's proposed gold mining activities requires an environmental approval process known as AMDAL. PT Sulindo Eko Consultant were engaged by PT Tambang Mas Sangihe ("TMS") to complete the environmental baseline study and AMDAL study in the area of the Sangihe gold deposit.

The AMDAL Study for the Sangihe Project compiled by consultants PT Sulindo Eko Consultant was submitted to the Environmental Commission in the second Quarter of 2018. The AMDAL Study is the Indonesian equivalent of an Environmental Impact Assessment and an Environmental Management Plan for the Sangihe Project. The Indonesian Pre-Feasibility Study for the Sangihe Project was submitted to the Indonesian Department of Mining, Energy and Mineral Resources (MEMR) in the third quarter of 2018.

BGC has informed MA that the Environmental Permit was issued by North Sulawesi Provincial authorities in September 2020. The Environmental Permit covers an area of 65.48 hectares out of an overall concession area of 42,000 hectares (420 sq.km.) covered under the Operational Permit, granted by the Decree of the Minister of Energy and Mineral Resources.

Environmental management of the proposed gold mining activities of PT Tambang Mas Sangihe, will be needed to deal with the significant and negative impacts on the environment and community in Binebase Village, South Tabukan Subdistrict and Bowone Village, Central South Tabukan Subdistrict and the surrounding areas,

20.3 SOCIO-ECONOMIC ASPECTS

The proposed gold mining activities of PT. Tambang Mas Sangihe (TMS) are located in in Binebas Village, South Tabukan Subdistrict and Bowone Village, Central Tabukan Sub-District of Sangihe Island.

The main accessibility to the mining area lies on the highway that connects Kampung Binbach and Kampung Bowone from the direction of Tahuna. The total area of Kampung Bowone and Kampung Binebas is 396 ha (3.96 sq.km), the population of 2016 was 881 people. The geographic density level in the two Kampung areas 2016 is 223 persons / sq.km.

In South Tabukan Subdistrict and Central Tabukan Subdistrict of the Sangihe Islands Regency, the main source of livelihood for the population is from agriculture including traditional fishing. In general, cultivating crops on dry land with the dominant crops; coconut, cloves and sago. In addition to plantation crops, the population grows food crops such as tubers, corn and rice in paddy fields. There has been development planning for further commodities both in the field of marine fishery, plantation and food crops but the economic activity of the community in general is still traditional. Farming and fishing has been done for generations with equipment and technology that is still relatively simple.

PT Tambang Mas Sangihe plans to conduct community development activities in the surrounding communities directly affected by gold mining activities.

To help the development of the area around the mine. PT Tambang Mas Sangihe has established partnerships for social programs and community development in the Sangihe Islands District. In 2022 BGC reported that the company was assisting with community activities such as education and community facilities.

20.4 LAND USAGE

Operational activities of PT Tambang Mas Sangihe are planned to be entirely in the Other Use Areas (APL) and is directly adjacent to Mangrove Protected Forest area (HL Mangrove). Therefore, PT TMS believes it does not need to acquire a permit to use a forest area (IPPKH)

Based on the 2017 survey results, the project site location is dominated by approximately 50% bush cover, around 40% of mixed gardens and 10% of secondary forest. In addition to this land use, the mine is directly adjacent to Binebas village, Bowone highway and there are areas that are designated as tourist sites and marine fisheries.

21 CAPITAL AND OPERATING COSTS

This section is not applicable for this NI 43-101 Report.

22 ECONOMIC ANALYSIS

This section is not applicable for this NI 43-101 Report.

23 ADJACENT PROPERTIES

There are no adjacent properties in the area of the Sangihe CoW which MA could identify during this review.

24 OTHER RELEVANT DATA AND INFORMATION

There is no additional information considered to be relevant to the Project.

25 CONCLUSIONS

MA has completed a Mineral Resource Estimates for the Sangihe Project as of 06 January 2025 using a cut-off grade of 0.20 g/t Au for oxide material and a deposit dependent sulphide cut off of 0.50 g/t at Binebase and 1.0 g/t at Bawone.

INDICATED

3.15 Mt at an average grade of 1.12 g/t gold and 19.4 g/t silver containing an estimated 114,000 oz of gold and 1.93 Moz of silver.

INFERRED

2.30 Mt at an average grade of 1.22 g/t gold and 14.5 g/t silver containing an estimated 91,000 oz of gold and 1,08 Moz of silver.

This is the third NI 43-101 compliant resource estimate produced for this deposit. The current Resource Estimate is suitable for mining planning and production schedules.

Risk issues are related to the mineability in or close to areas of Protected Forest, and the future renegotiations with the Indonesian Government on the CoW.

Technical risk exists associated with regional seismicity with an intermediate level hazard risk of earthquakes and a high level risk of tsunami. Although the mineralised project areas are at elevated locations, other infrastructure facilities could be affected and appropriate building codes and precautions would be necessary for any future development.

25.1 FORESTRY ISSUES

As noted in Section 4, a very small part of the Binebase deposit within an area of HL or Protected Forest where open pit or surface mining is not allowed. BGC have advised that the HL at Binebase does not cover the Resource but a mangrove area within an adjacent lagoon.

25.2 FUTURE CONVERSION OF CONTRACT OF WORK

The new Mining Law of January 12th 2009 terminated the CoW system; with the exception of CoW agreements signed prior to the enforcement of the implementation regulations. The existing Sangihe CoW can be extended to become an IUP without tender under this law.

25.3 SEISMIC RISK

The Sangihe Island region is seismically active due to the tectonic setting (Figure 25-1). The Philippine Sea plate moves west-northwest with respect to the Sunda plate at about 62 mm/yr. The Sangihe and Halmahera micro plates collide, and wedged between them is the Molucca Sea micro plate, which subducts beneath both (USGS, 2009).

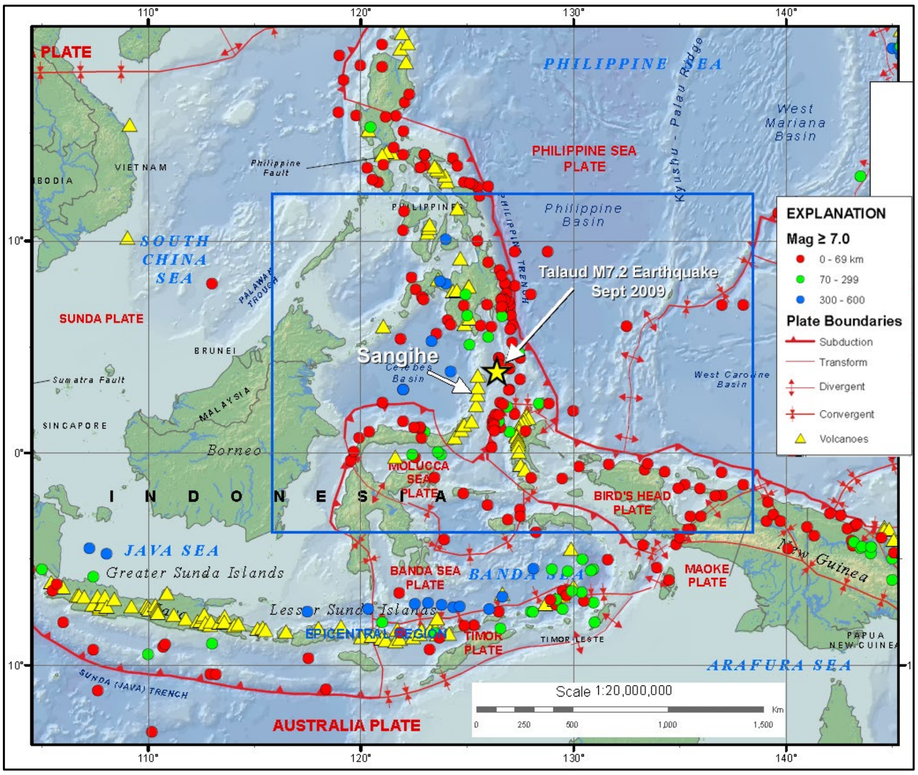


Figure 25-1: Tectonic Setting.
(Source: USGS, 2009)

Sangihe Island is characterised as intermediate level hazard according to the seismic hazard study issued by the US Geological Survey (Figure 25-2). The exact timing or magnitude of future earthquakes cannot be predicted.

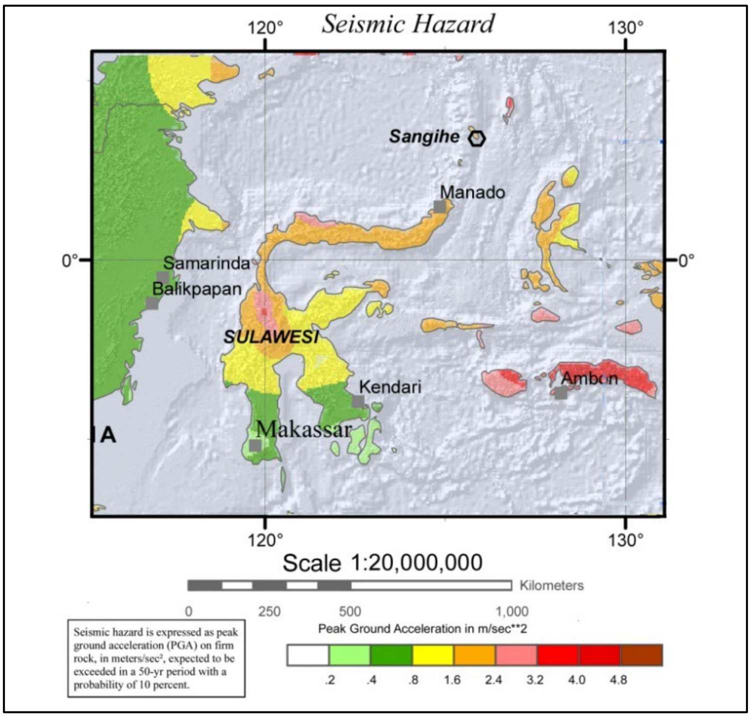


Figure 25-2: Seismic Hazard Map.
(Source: http://earthquake.usgs.gov/hazards)

There have been 21 earthquakes recorded within a 25 km radius of Sangihe Island since 1973, 100 within a 50 km radius, and 700 within a 100 km radius according to the USGS earthquake database (USGS 2012). Figure 25-3 illustrates the number and depths of seismic events since 1973 in the Sangihe Island to Talaud Island area.

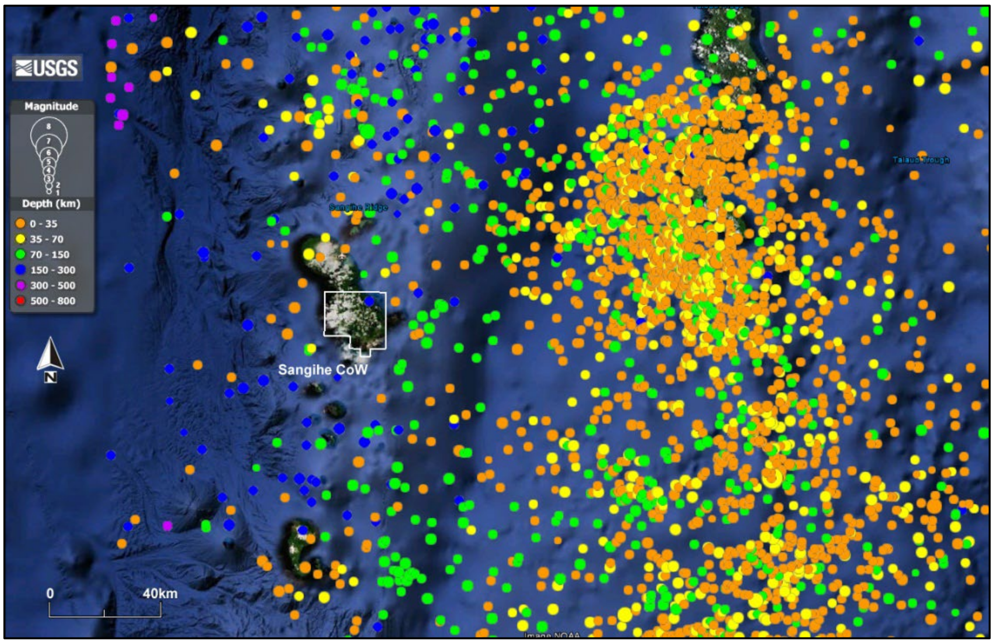


Figure 25-3: Earthquakes recorded since 1973.
(Source: after USGS, 2012)

Additionally there is the related risk of tsunami which is characterised as high level according to the Tsunami Risk Map issued by the Badan Nasional Penanggulangan Bencana (National Disaster Management Agency) (Figure 25-4). The exact timing or magnitude of future tsunami cannot be predicted.

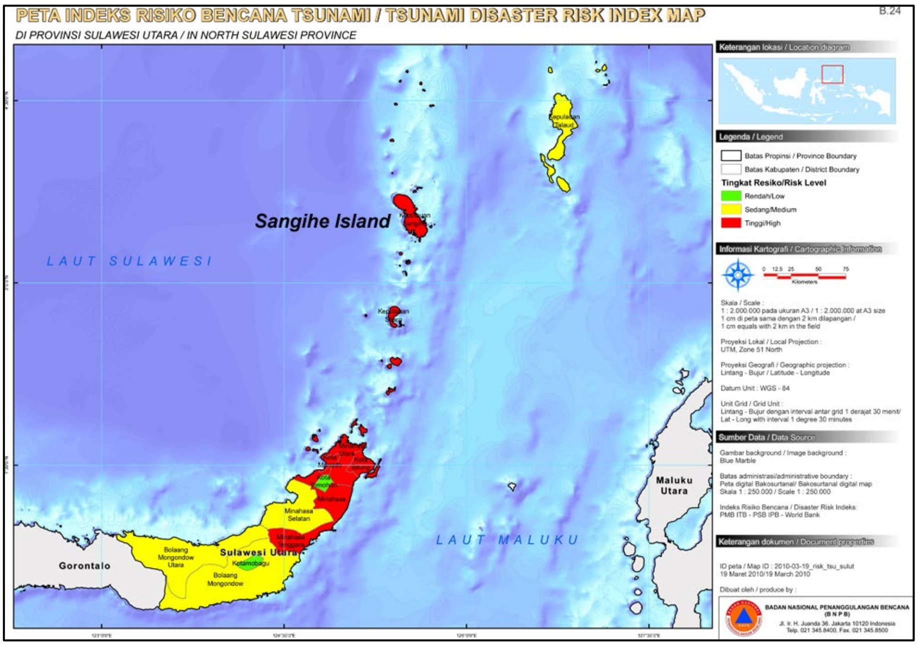


Figure 25-4: Tsunami Risk Map.
(Source: BNPB, 2010)

MA notes that the mineralised project areas are at elevated locations however other infrastructure facilities could be affected by tsunami. Any future development must take into consideration the inherent seismic-related risks of the region and appropriate building codes and precautions would be necessary.

26 RECOMMENDATIONS

There is exploration potential to the south and south-east of Binebase to expand the known zone of mineralisation. Sulphide resources could be increased by extending modelled breccia veins along strike and at depth. Drill testing is required to support the modelled sulphide veins and to potentially locate more veins. Sulphide mineralisation at Bawone is similarly open at depth and not fully closed off along strike. Although infill drilling would increase the confidence level of the resource categories, extension drilling is recommended over infill drilling in order to increase the resource base of the project. Drill sections should be spaced 50 m along strike for reasonable definition of tonnes and grade.

Synthesis of previous exploration information has defined five prospective target areas (Binebase-Salurang Corridor, Upper Taware Valley/Kelapa/Kupa, Taware Ridge and Mou-Ninja, Hadakel Kecil, Sawang Kecil) recommended for a range of mapping, sampling and ground geophysical surveys (magnetics and IP) that have not been subject to significant drill testing. There may also be opportunities from reprocessing of old geophysical data. Additionally, the primary source of mineralisation for the current artisanal alluvial gold mining in the Taware region has not been identified.

26.1 WORK PROGRAM AND BUDGET

Details for an estimated budget for a twelve month exploration program are presented in Table 26-1. This budget includes provision for the drill programs discussed above, logistical support for the programs, consumables, tenement maintenance, the compilation and interpretation of data and the expansion of the camp facilities and the number of personnel. The budget does not include any overhead costs.

Reverse circulation drilling in 2025 is recommended for infill drilling over approximately 1.2 kilometres of strike length between Binebase and Bawone. Phase-2 will be exploration drilling over 1.45 km from Bawone to south of Salurang following the continuation of the known geochemical anomaly and Phase-3 will be drilling of regional targets, including at Taware, Sede and Kupe.

Table 26-1: Sangihe Project - Proposed Budget 2025

Sangihe Budget Items	USD
Indirect Costs	
Staff Salaries	78,376
Local Wages	5,576
Overtime Pay	2,836
BPJS (Labor insurance coverage)	9,856
Direct Costs	
Remote Sensing	44,526
Local geological mapping	18,871
Geophysical Surveys	50,526
Geochemical Survey	21,186
Reverse Circulation Drilling	336,026
Sample Analysis	151,726
Total	**719,507**

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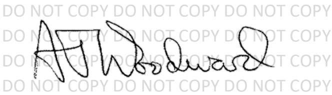
DATE AND SIGNATURE PAGE

This report titled "Independent Technical Report on the Mineral Resource Estimations of the Binebase and Bawone Deposits, Sangihe Project, North Sulawesi, Indonesia" and dated 01 February 2024, was prepared and signed by the following authors:

Dated at Brisbane, Qld

01 February 2025



Anthony Woodward,

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Qualified Person

Dated at Brisbane, Qld

01 February 2025

Ian Taylor

BSc Honours, MAusIMM(CP), MAIG

Qualified Person

CERTIFICATES OF QUALIFIED PERSONS

CERTIFICATE: IAN TAYLOR

I, Ian A Taylor, hereby certify that:

a) I am an independent Consulting Geologist, business address, Level 6, 445 Upper Edward Street, Springhill, Queensland 4004, Australia, and am employed by Mining Associates Pty Ltd based in Brisbane, Australia.

b) This certificate applies to the Technical Report entitled: "INDEPENDENT TECHNCIAL REPORT ON THE UPDATED MINERAL RESOURCE ESTIMATIONS OF THE BINEBASE AND BAWONE DEPOSITS, SANGIHE PROJECT, NORTH SULAWESI, INDONESIA" dated 01 February 2025

c) I graduated from James Cook University with a Bachelor of Science Degree (Honours) in 1993. I completed a Graduate Certificate Geostatistics from Edith Cowen University in 2014.
   - I am a Fellow of the Australian Institute of Mining and Metallurgy and Chartered Professional under the Discipline of Geology (FAusIMM(CP))
   - I have over 25 years' experience in the minerals industry and have had diverse experience in Australian and international mineral exploration, project assessments, and ore resource estimation.
     i. I have specialist experience in gold, copper silver, and base metals in a wide range of geological environments.
     ii. My experience includes mining, resource evaluation, due diligence studies and feasibility studies.
     iii. I have worked more recently as a consulting geologist, and have consulted primarily in relation to gold resource estimates (epithermal gold – high and low sulphur systems), copper and gold (porphyry) resource projects in Australia, Argentina, Columbia, Indonesia, Papua New Guinea, and Philippines.

d) I have not visited the site.

e) I am responsible for Sections 14 and am a co-author of Sections 1, 12, 25 and 26 of this Technical Report.

f) I am independent of Baru Gold Corp as described in Section 1.5 of the Policy. I have no direct or indirect interest in the property that is the subject of this report. I do not hold, directly or indirectly, any shares in Baru Gold Corp or other companies with interests in the Sangihe Project.

g) I have not had prior involvement with the property that is the subject of the Technical Report.

h) I have read the Policy and this report is prepared in compliance with its provisions. I have read the definition of "qualified person" set out in 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 requirement to be a "qualified person" for the purposes of NI 43-101.

i) at the effective date of the technical report, to the best of my knowledge, information and belief, the report contains all scientific and technical information that is required to be disclosed in order to make this report not misleading.

.

Dated at Brisbane this 1st February 2025.

Ian Taylor

BSc (Hons), FAusIMM(CP)

Qualified Person

CERTIFICATE: ANTHONY JAMES WOODWARD

I, Anthony James Woodward hereby certify that:

a) I am an independent Consulting Geologist residing at 14 Carlia St, Wynnum West, Queensland 4178, Australia with my office at the same address.

b) This certificate applies to the Technical Report entitled: "INDEPENDENT TECHNCIAL REPORT ON THE UPDATED MINERAL RESOURCE ESTIMATIONS OF THE BINEBASE AND BAWONE DEPOSITS, SANGIHE PROJECT, NORTH SULAWESI, INDONESIA" dated 01 February 2025

c) I graduated from the James Cook University, Townsville, Australia in 1976 with a MSc in Exploration and Mining Geology.
   - I am a Member of the Australian Institute of Mining and Metallurgy and a member of the Australian Institute of Geoscientists.
   - I have over 35 years' experience in the minerals industry and have had diverse experience in Australian and international mineral exploration, project assessments, and ore resource estimation.
     i. I have specialist experience in gold, copper silver, and base metals in a wide range of geological environments.
     ii. My experience includes exploration management, mining, resource evaluation, due diligence studies and feasibility studies.
     iii. I have worked more recently as a consulting geologist, and have consulted primarily in relation to gold and base metal exploration and resource estimation (epithermal gold – high and low sulphur systems), copper and gold (porphyry) on projects in Australia, Indonesia, Papua New Guinea and the Philippines.

d) I visited the Sangihe Project from 11 to 13 September 2012.

e) I am responsible for Sections 2-11, 13, 15-24, and 27 and am a co-author of Sections 1, 12, 25 and 26 of this Technical Report.

f) I am independent of Baru Gold Corp. as described in Section 1.5 of the Policy. I have no direct or indirect interest in the property that is the subject of this report. I do not hold, directly or indirectly, any shares in Baru Gold Corp. or other companies with interests in the Sangihe Project.

g) I have not had prior involvement with the property that is the subject of the Technical Report.

h) I have read the Policy and this report is prepared in compliance with its provisions. I have read the definition of "qualified person" set out in 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 requirement to be a "qualified person" for the purposes of NI 43-101.

i) At the effective date of the technical report, to the best of my knowledge, information and belief, the report contains all scientific and technical information that is required to be disclosed in order to make this report not misleading.

Dated at Brisbane this 1st^{h} February 2025.

Anthony James Woodward

BSc Hons, M.Sc., MAusIMM, MAIG

Qualified Person

GLOSSARY OF TECHNICAL TERMS

This glossary comprises a general list of common technical terms that are typically used by geologists. The list has been edited to conform in general to actual usage in the body of this report. However, the inclusion of a technical term in this glossary does not necessarily mean that it appears in the body of this report, and no imputation should be drawn. Investors should refer to more comprehensive dictionaries of geology in printed form or available in the internet for a complete glossary.

"Au"	chemical symbol for gold
"block model"	A block model is a computer based representation of a deposit in which geological zones are defined and filled with blocks which are assigned estimated values of grade and other attributes. The purpose of the block model (BM) is to associate grades with the volume model. The blocks in the BM are basically cubes with the size defined according to certain parameters.
"bulk density"	The dry in-situ tonnage factor used to convert volumes to tonnage. Bulk density testwork is carried out on site and is relatively comprehensive, although samples of the more friable and broken portions of the mineralised zones are often unable to be measured with any degree of confidence, therefore caution is used when using the data. Bulk density measurements are carried out on selected representative samples of whole drill core wherever possible. The samples are dried and bulk density measured using the classical wax-coating and water immersion method.
"cut off grade"	The lowest grade value that is included in a resource statement. Must comply with JORC requirement 19 "*reasonable prospects for eventual economic extraction*" the lowest grade, or quality, of mineralised material that qualifies as economically mineable and available in a given deposit. May be defined on the basis of economic evaluation, or on physical or chemical attributes that define an acceptable product specification.
"diamond drilling, diamond core"	Rotary drilling technique using diamond set or impregnated bits, to cut a solid, continuous core sample of the rock. The core sample is retrieved to the surface, in a core barrel, by a wireline.
"drill-hole database"	The drilling, surveying, geological and analyses database is produced by qualified personnel and is compiled, validated and maintained in digital and hardcopy formats.
"Domain"	A domain is a three-dimensional volume that delineates the spatial limits of a single grade population, has a single orientation of grade continuity, and is geological homogeneous and has statistical and geostatistical parameters that are applicable throughout the volume.
"down-hole survey"	Drill hole deviation as surveyed down-hole by using a conventional single-shot camera and readings taken at regular depth intervals, usually every 50 metres.
"g/t"	grams per tonne, equivalent to parts per million
"g/t Au"	grams of gold per tone
"gold assay"	Gold analysis is usually carried out by an independent ISO17025 accredited laboratory by classical 'Screen Fire Assay' technique that involves sieving a 900-1,000 gram sample to 200 mesh (~75microns). The entire oversize and duplicate undersize fractions are fire assayed and the weighted average gold grade calculated. This is one of the most appropriate methods for determining gold content if there is a 'coarse gold' component to the mineralisation.
"grade cap, also called top cut"	The maximum value assigned to individual informing sample composites to reduce bias in the resource estimate. They are capped to prevent over estimation of the total resource as they exert an undue statistical weight. Capped samples may represent "outliers" or a small high-grade portion that is volumetrically too small to be separately domained.
"inverse distance estimation"	It asserts that samples closer to the point of estimation are more likely to be similar to the sample at the estimation point than samples further away. Samples closer to the point of estimation are collected and weighted according to the inverse of their separation from the point of estimation, so samples closer to the point of estimation receive a higher weight than samples further away. The inverse distance weights can also be raised to a power, generally 2 (also called inverse distance squared). The higher the power, the more weight is assigned to the closer value. A power of 2 was used in the estimate used for comparison with the OK estimates.
"Inferred Resource"	That part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes which may be limited or of uncertain quality and reliability.

"Indicated Resource"	That part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.
"Measured Resource"	That part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.
"kriging neighbourhood analysis, or KNA"	The methodology for quantitatively assessing the suitability of a kriging neighbourhood involves some simple tests. It has been argued that KNA is a mandatory step in setting up any kriging estimate. Kriging is commonly described as a "minimum variance estimator" but this is only true when the block size and neighbourhood are properly defined. The objective of KNA is to determine the combination of search neighbourhood and block size that will result in conditional unbiasedness.
"lb"	Avoirdupois pound (= 453.59237 grams). Mlb = million avoirdupois pounds
"Ma"	Million years
"micron (µ)"	Unit of length (= one thousandth of a millimetre or one millionth of a metre).
"Mineral Resource"	A concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories when reporting under JORC.
"Mo"	Chemical symbol for molybdenum
"nearest neighbour estimation" "Inferred"	Nearest Neighbour assigns values to blocks in the model by assigning the values from the nearest sample point to the block attribute of interest. that part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes which may be limited or of uncertain quality and reliability.
"Ordinary Kriging""OK"	Kriging is a distance weighting technique where weights are selected via the variogram according to the samples distance and direction from the point of estimation. The weights are not only derived from the distance between samples and the block to be estimated, but also the distance between the samples themselves. This tends to give much lower weights to individual samples in an area where the samples are clustered. OK is known as the "best linear unbiased estimator. The kriging estimates are controlled by the variogram parameters. The variogram model parameters are interpreted from the data while the search parameters are optimised during kriging neighbourhood analysis.
"oz"	Troy ounce (= 31.103477 grams). Moz = million troy ounces
"QA/QC"	Quality Assurance/Quality Control. The procedures for sample collection, analysis and storage. Drill samples are despatched to 'certified' independent analytical laboratories for analyses. Blanks, Duplicates and Certified Reference Material samples are included with each batch of drill samples as part of the Company's QA/QC programme. Mining Associates, as part of database management, monitors the results on a batch-by-batch basis.
"RC drilling"	Reverse Circulation drilling. A method of rotary drilling in which the sample is returned to the surface, using compressed air, inside the inner-tube of the drill-rod. A face-sampling hammer is used to penetrate the rock and provide crushed and pulverised sample to the surface without contamination. 1 metre samples are collected in a plastic bag from the bottom discharge chute of a cyclone. Sub-sample splits are collected in calico bags using a 'jones-type' riffle splitter to obtain a 3-4kg subsample for submission to the laboratories for analyses. RC is carried out using a face-sampling hammer with a bit diameter of 5¼" (ø 135mm).

"survey"	Comprehensive surveying of drillhole positions, topography, and other cadastral features is carried out by the Company's surveyors using 'total station' instruments and independently verified on a regular basis. Locations are stored in both local drill grid and UTM coordinates.
"t"	Tonne (= 1 million grams)
"variogram"	The Variogram (or more accurately the Semi-variogram) is a method of displaying and modelling the difference in grade between two samples separated by a distance h, called the "lag" distance. It provides the mathematical model of variation with distance upon which the Krige estimation method is based.
"wireframe"	This is created by using triangulation to produce an isometric projection of, for example, a rock type, mineralisation envelope or an underground stope. Volumes can be determined directly of each solid.

APPENDIX 1: SANGIHE PROJECT TENEMENT DOCUMENT

KEMENTERIAN ENERGI DAN SUMBER DAYA MINERAL
REPUBLIK INDONESIA

KEPUTUSAN MENTERI ENERGI DAN SUMBER DAYA MINERAL
Nomor: 514.K/30/DJB/2010
TENTANG

PENCIUTAN I WILAYAH KONTRAK KARYA DAN PERMULAAN TAHAP KEGIATAN EKSPLORASI PT. TAMBANG MAS SANGIHE

MENTERI ENERGI DAN SUMBER DAYA MINERAL,

Membaca : Surat PT Tambang Mas Sangihe Nomor 008/TMS/VI/2010 tanggal 19 Mei 2010.

Menimbang : bahwa setelah dilakukan penelitian yang seksama terhadap laporan teknis dan keuangan yang diajukan oleh PT. Tambang Mas Sangihe , terdapat cukup alasan bagi Pemerintah untuk memberikan persetujuan Penciutan I dan Permulaan Tahap Kegiatan Eksplorasi pada Kontrak Karyanya sesuai dengan Pasal 4 ayat (3) dan Pasal 5 ayat (6) Kontrak Karya antara Pemerintah Republik Indonesia dan PT Tambang Mas Sangihe tanggal 28 April 1997.

Mengingat :

1. Undang-Undang Nomor 4 Tahun 2009 (LN Tahun 2009 Nomor 4, TLN Nomor 4959);
2. Peraturan Pemerintah Nomor 22 Tahun 2010 (LN Tahun 2010 Nomor 28 TLN Nomor 5110);
3. Peraturan Pemerintah Nomor 23 Tahun 2010 (LN Tahun 2010 Nomor 29 TLN Nomor 5111);
4. Peraturan Pemerintah Nomor 55 Tahun 2010 (LN Tahun 2010 Nomor 85, TLN 5142);
5. Keputusan Presiden Nomor 69/M Tahun 2008 tanggal 24 Juni 2008;
6. Keputusan Menteri Energi dan Sumber Daya Mineral Nomor 812.K/40/MEM /2003 tanggal 23 Mei 2003;

M E M U T U S K A N :

MENETAPKAN : KEPUTUSAN MENTERI ENERGI DAN SUMBER DAYA MINERAL TENTANG PENCIUTAN I WILAYAH KONTRAK KARYA DAN PERMULAAN TAHAP KEGIATAN EKSPLORASI PT. TAMBANG MAS SANGIHE

KESATU : Penciutan I Wilayah Kontrak Karya seluas 41.770 Ha (33.72% dari luas wilayah Kontrak Karya semula) dan Permulaan Tahap Kegiatan Eksplorasi wilayah Kontrak Karya PT. Tambang Mas Sangihe untuk selama 36 (tiga puluh enam) bulan yang berlaku mulai tanggal 6 Juli 2010 sampai dengan tanggal 6 Juli 2013.

KEDUA : Dengan Penetapan Penciutan I Wilayah Kontrak Karya dan Permulaan Tahap Kegiatan Eksplorasi sebagaimana dimaksud pada Diktum Kesatu, maka :

a. Luas Wilayah Kontrak Karya adalah seluas 123.850 (luas wilayah semula) dikurangi seluas 41.770 Ha (luas wilayah Penciutan I) menjadi seluas 82.080 Ha (66,27% dari luas wilayah Kontrak Karya semula) sesuai dengan peta dan daftar koordinat yang diterbitkan oleh Seksi Informasi Mineral dan Batubara, d/h UPIWP dengan Kode Wilayah 10PK0189 sebagaimana tercantum dalam Lampiran Keputusan Menteri ini.

b. Luas Wilayah Kontrak Karya yang dipertahankan yaitu seluas 82.080 Ha atau sama dengan 66,27% dari luas Wilayah Kontrak Karya semula.

KETIGA : PT Tambang Mas Sangihe wajib membayar iuran tetap Permulaan Tahap Kegiatan Eksplorasi sesuai ketentuan yang berlaku sejak Keputusan ini ditetapkan.

KEEMPAT : Keputusan Menteri ini mulai berlaku pada tanggal ditetapkan dan berlaku surut sejak tanggal 6 Juli 2010.

Ditetapkan di Jakarta
pada tanggal 10 Desember 2010

a.n. Menteri Energi dan Sumber Daya Mineral
Direktur Jenderal Mineral dan Batubara

Dr. Ir. Bambang Setiawan
NIP. 19510321 198003 1 002

Tembusan:
1. Menteri Energi dan Sumber Daya Mineral
2. Menteri Keuangan
3. Sekretaris Jenderal Kementerian Energi dan Sumber Daya Mineral
4. Inspektur Jenderal Kementerian Energi dan Sumber Daya Mineral
5. Direktur Jenderal Pajak, Kementerian Keuangan
6. Direktur Jenderal Administrasi Keuangan Daerah, Kementerian Dalam Negeri
7. Gubernur Sulawesi Utara
8. Bupati Kepuluan Talaud
9. Bupati Kepulauan Sangihe
10. Kepala Biro Hukum dan Humas/Kepala Biro Keuangan/Kepala Biro Perencanaan dan Kerjasama Luar Negeri Setjen Kementerian Energi dan Sumber Daya Mineral
11. Direktur Perbendaharaan Negara, Kementerian Keuangan
12. Sekretaris Direktorat Jenderal Mineral dan Batubara
13. Direktur Pembinaan Pengusahaan Mineral dan Batubara
14. Direktur Teknik dan Lingkungan Mineral dan Batubara
15. Direktur Pembinaan Program Mineral dan Batubara
16. Direktur Pajak Bumi dan Bangunan, Kementerian Keuangan
17. Kepala Dinas Pertambangan Provinsi Sulawesi Utara
18. Kepala Dinas Pertambangan Kab. Kepulauan Talaud dan Kepulauan Sangihe
19. Direksi PT. Tambang Mas Sangihe .

Lampiran I : KEPUTUSAN MENTERI ENERGI DAN SUMBER DAYA MINERAL
Nomor : 514.K/30/DJB/2010
Tanggal : 10 Desember 2010

LAMPIRAN DAFTAR KOORDINAT

Nama Perusahaan : PT. TAMBANG MAS SANGIHE
Lokasi
- Propinsi : SULAWESI UTARA
- Kabupaten : KEPULAUAN TALAUD & KEP. SANGIHE
- Bahan Galian : EMAS
- Kode Wilayah : 10PK0189
Luas : 82.080 HA

Halaman : 1/3

No. Titik	Garis Bujur (BT)			Garis Lintang			
	°	'	"	°	'	"	LU/LS
BLOK A LUAS WILAYAH 42.000 Ha							
1	125	28	27.80	3	33	30.00	LU
2	125	40	27.80	3	33	30.00	LU
3	125	40	27.80	3	22	30.00	LU
4	125	37	27.80	3	22	30.00	LU
5	125	37	27.80	3	21	0.00	LU
6	125	35	27.80	3	21	0.00	LU
7	125	35	27.80	3	22	30.00	LU
8	125	33	27.80	3	22	30.00	LU
9	125	33	27.80	3	25	0.00	LU
10	125	28	27.80	3	25	0.00	LU
BLOK B LUAS WILAYAH 40.080 Ha							
11	126	43	6.96	4	33	0.00	LU
12	126	46	53.69	4	33	0.00	LU
13	126	46	53.69	4	31	54.72	LU
14	126	49	17.52	4	31	54.72	LU
15	126	49	17.52	4	30	53.58	LU
16	126	50	6.50	4	30	53.58	LU
17	126	50	6.50	4	29	16.11	LU
18	126	51	57.80	4	29	16.11	LU
19	126	51	57.80	4	20	0.00	LU
20	126	54	57.80	4	20	0.00	LU
21	126	54	57.80	4	15	1.45	LU
22	126	52	9.71	4	15	1.45	LU
23	126	52	9.71	4	12	0.00	LU
24	126	46	13.66	4	12	0.00	LU
25	126	46	13.66	4	14	51.57	LU
26	126	44	57.80	4	14	51.57	LU
27	126	44	57.80	4	16	0.00	LU
28	126	42	10.70	4	16	0.00	LU
29	126	42	10.70	4	19	25.28	LU
30	126	40	57.80	4	19	25.28	LU

ke hal. 2

Halaman : 2/3

No. Ti-tik	Garis Bujur (BT)			Garis Lintang			
	°	'	"	°	'	"	LU/LS
31	126	40	57.80	4	24	4.22	LU
32	126	41	51.95	4	24	4.22	LU
33	126	41	51.95	4	27	27.23	LU
34	126	43	6.96	4	27	27.23	LU
35	126	46	48.00	4	29	49.20	LU
36	126	46	48.00	4	28	37.20	LU
37	126	45	46.80	4	28	37.20	LU
38	126	45	46.80	4	26	27.60	LU
39	126	44	24.00	4	26	27.60	LU
40	126	44	24.00	4	25	26.40	LU
41	126	43	48.00	4	25	26.40	LU
42	126	43	48.00	4	23	13.20	LU
43	126	43	12.00	4	23	13.20	LU
44	126	43	12.00	4	22	8.40	LU
45	126	43	37.20	4	22	8.40	LU
46	126	43	37.20	4	19	1.20	LU
47	126	44	16.80	4	19	1.20	LU
48	126	44	16.80	4	18	28.80	LU
49	126	44	42.00	4	18	28.80	LU
50	126	44	42.00	4	16	44.40	LU
51	126	45	32.40	4	16	44.40	LU
52	126	45	32.40	4	15	43.20	LU
53	126	50	20.40	4	15	43.20	LU
54	126	50	20.40	4	16	8.40	LU
55	126	50	52.80	4	16	8.40	LU
56	126	50	52.80	4	16	40.80	LU
57	126	52	58.80	4	16	40.80	LU
58	126	52	58.80	4	18	32.40	LU
59	126	51	46.80	4	18	32.40	LU
60	126	51	46.80	4	19	1.20	LU
61	126	50	34.80	4	19	1.20	LU
62	126	50	34.80	4	21	7.20	LU
63	126	49	33.60	4	21	7.20	LU
64	126	49	33.60	4	22	22.80	LU
65	126	48	50.40	4	22	22.80	LU
66	126	48	50.40	4	25	33.60	LU
67	126	49	58.80	4	25	33.60	LU
68	126	49	58.80	4	26	16.80	LU
69	126	50	24.00	4	26	16.80	LU

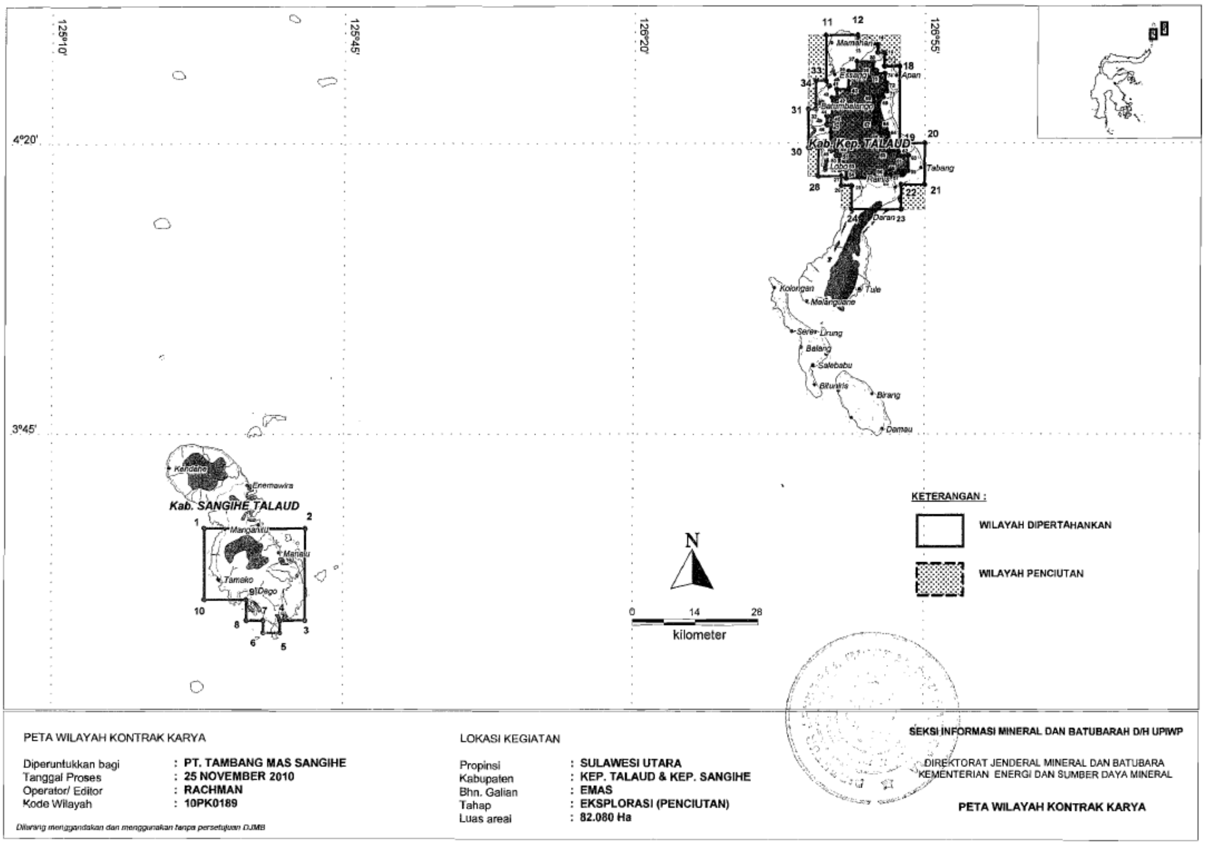
ke hal. 3

Halaman : 3/3

No. Ti-tik	Garis Bujur (BT)			Garis Lintang			
	°	'	"	°	'	"	LU/LS
70	126	50	24.00	4	27	10.80	LU
71	126	50	9.60	4	27	10.80	LU
72	126	50	9.60	4	28	22.80	LU
73	126	49	8.40	4	28	22.80	LU
74	126	49	8.40	4	28	48.00	LU
75	126	48	46.80	4	28	48.00	LU
76	126	48	46.80	4	29	49.20	LU

A.n. Menteri Energi dan Sumber Daya Mineral
Direktur Jenderal Mineral dan Batubara

Dr. Ir. Bambang Setiawan
Nip. 19510321 198003 1 002


125°10'
125°45'
126°20'
126°55'
4°20'
3°45'
Kab. Kep. TALAUD
Kab. SANGIHE TALAUD
Kendahe
Enemawira
Manganitu
Manalu
Tamako
Dago
Kolongan
Tule
Melonguane
Beo
Lirung
Salebabu
Birang
Damau
Tabang
Daran
Apan
Mamahan
Lobo
Rainis
N
0
14
28
kilometer
KETERANGAN :
WILAYAH DIPERTAHANKAN
WILAYAH PENCIUTAN
PETA WILAYAH KONTRAK KARYA
Diperuntukkan bagi : PT. TAMBANG MAS SANGIHE
Tanggal Proses : 25 NOVEMBER 2010
Operator/ Editor : RACHMAN
Kode Wilayah : 10PK0189
LOKASI KEGIATAN
Propinsi : SULAWESI UTARA
Kabupaten : KEP. TALAUD & KEP. SANGIHE
Bhn. Galian : EMAS
Tahap : EKSPLORASI (PENCIUTAN)
Luas areal : 82.080 Ha
SEKSI INFORMASI MINERAL DAN BATUBARAH D/H UPIWP
DIREKTORAT JENDERAL MINERAL DAN BATUBARA
KEMENTERIAN ENERGI DAN SUMBER DAYA MINERAL
PETA WILAYAH KONTRAK KARYA