Technical Report Summary

Sukari

A Life of Mine Summary Report

Effective date: 31 December 2024

Report prepared for:

AngloGold Ashanti plc

As required by § 229.601(b)(96) of Regulation S-K as an exhibit to AngloGold Ashanti's Annual Report on Form 20-F pursuant to Subpart 229.1300 of Regulation S-K - Disclosure by Registrants Engaged in Mining Operations (§ 229.1300 through § 229.1305).

Date and Signatures Page

This report is effective as at 31 December 2024.

Where the registrant (AngloGold Ashanti plc) has relied on more than one Qualified Person to prepare the information and documentation supporting its disclosure of Mineral Resource or Mineral Reserve, the section(s) prepared by each qualified person has been clearly delineated.

AngloGold Ashanti has recognised that in preparing this report, the Qualified Person(s) may have, when necessary, relied on information and input from others, including AngloGold Ashanti. As such, the table below lists the technical specialists who provided the relevant information and input, as necessary, to the Qualified Person to include in this Technical Report Summary. All information provided by AngloGold Ashanti has been identified in Section 25: Reliance on information provided by the registrant in this report.

The registrant confirms it has obtained the written consent of each Qualified Person to the use of the person's name, or any quotation from, or summarisation of, the Technical Report Summary in the relevant registration statement or report, and to the filing of the Technical Report Summary as an exhibit to the registration statement or report. The written consent only pertains to the particular section(s) of the Technical Report Summary prepared by each Qualified Person. The written consent has been filed together with the Technical Report Summary exhibit and will be retained for as long as AngloGold Ashanti relies on the Qualified Person’s information and supporting documentation for its current estimates regarding Mineral Resource or Mineral Reserve.

MINERAL RESOURCE QUALIFIED PERSON	**Craig Barker**
Sections prepared: 1 - 11, 20 - 25	/s/ Craig Barker
UNDERGROUND MINERAL RESERVE QUALIFIED PERSON	**Gavin Harris**
Sections prepared: 1, 12-19, 21 - 25	/s/ Gavin Harris
OPEN PIT MINERAL RESERVE QUALIFIED PERSON	**Andrew Murray**
Sections prepared: 1, 12-19, 21 - 25	/s/ Andrew Murray

Responsibility	**Technical Specialist**
Mineral Resource Estimation and classification	Rolly Wasonga and Doxel Mutunda
Evaluation quality assurance and quality control (QA/QC)	Ashraf Ayad and Shehata Mekawy
Exploration	Mohamed ElBehairy
Geological model	Rolly Wasonga, Doxel Mutunda, Eslam Sherif and Mohamed ElBehairy
Geology QA/QC	Ashraf Ayad and Shehata Mekawy
Geotechnical engineering and Hydrogeology	Gabriel Chilala
Environmental and permitting	Paul Cannon and Katy Relph
Metallurgy	Ali Fathallah and Mohamed Belal
Mine planning and Mineral Reserve classification	Mahmoud Abdelmonem

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1. Executive Summary

1.1. Property description including mineral rights

This Technical Report Summary for the Sukari Gold Mine (also referred to as Sukari or the Project, including the adjacent exploration licence Nugrus Block) located in Egypt was prepared for AngloGold Ashanti plc (AngloGold Ashanti) by Mr. Craig Barker, FAIG, Mr. Gavin Harris, CEng MIMMM QMR, and Mr. Andrew Murray, FAusIMM.

Sukari Gold Mine is jointly owned by Pharoah Gold Mines NL (Pharoah Gold) (a wholly-owned subsidiary of AngloGold Ashanti) and Egyptian Mineral Resource Authority (EMRA) through their respective 50 percent equity stake in Sukari Gold Mining Company which operates the Sukari Gold Mine. AngloGold Ashanti is a public company, with its ordinary shares listed on the Johannesburg Stock Exchange and the New York Stock Exchange. The Nugrus Block is operated by Eastern Desert Exploration (EDX), a wholly-owned subsidiary of AngloGold Ashanti.

The Sukari concession agreement was ratified by the Egyptian Parliament through the adoption of Law No. 222/1994 and came into effect on 13 June 1995. The Sukari exploitation lease covers an area of approximately 160km² surrounding the Sukari Gold Mine site within the Sukari concession. Under the terms of the Sukari concession agreement, the exploitation lease is valid for 30 years from the first date of commercial discovery and may be renewed for a further 30-year period, at the option of Pharoah Gold, with reasonable commercial justification and upon six months written notice to EMRA prior to the expiry of the initial 30-year period. The renewal of the exploitation lease will need to be ratified by the Egyptian Parliament.

The Nugrus Block comprises two exploration licences around the eastern, northern, and western boundaries of the mining lease. The exploration licence for the Nugrus block, covering an area of approximately 848km^2 located adjacent to the Sukari gold mine, is held by Centamin Central Mining S.A.E. It is currently in its second exploration phase which has a duration of two years and will expire on 25 May 2026, subject to renewal.

The Project is located in the Red Sea Governorate in the Eastern Desert of Egypt, approximately 25km southwest of the tourist town of Marsa Alam on the Red Sea, and approximately 750km southeast of Cairo. The Sukari operation includes: the open pit mine, underground mine, processing plant, on-site thermal power generation facilities, solar plant and associated facilities at the mine site, three pipelines and associated pumping stations to take seawater from the Red Sea to the Sukari site, and the access road from Marsa Alam. The Nugrus Block features a satellite camp at Little Sukari (located 27km east of Sukari Gold Mine), comprising accommodation, messing facilities, offices, a core yard with core cutting facilities, and a maintained gravel access road.

The geographic coordinates of the processing plant at Sukari are latitude 24°57’34”N and longitude 34°42’42”E (Universal Transverse Mercator (UTM) Zone 36R and UTM coordinates 672797E, 2761546N).

The mine can be easily accessed through a well-connected paved road network from Cairo to Hurghada to Marsa Alam on the Red Sea. Additionally, air transport is available from Cairo, with international flights landing in both Hurghada and Marsa Alam.

1.2. Ownership

Sukari Gold Mine is jointly owned by Pharoah Gold (a wholly-owned subsidiary of AngloGold Ashanti) and EMRA through their respective 50 percent equity stake in Sukari Gold Mining Company which operates the Sukari Gold Mine. The Nugrus Block is being explored by EDX, a wholly-owned subsidiary of AngloGold Ashanti. AngloGold Ashanti has the requisite surface rights and are sufficient to support the life of mine (LOM) plan presented in this report.

Under the mining concession agreement between the Egyptian government and AngloGold Ashanti, royalties are payable by Sukari to the Arab Republic of Egypt. The royalty is set at 3% of the total revenue from gold production at Sukari.

Pharaoh Gold, a wholly-owned subsidiary of AngloGold Ashanti, holds the necessary water rights for mining operations and associated activities at Sukari under the terms of its concession agreement (Law No. 222/1994) and in compliance with Egyptian water and environmental regulations.

1.3. Geology and mineralisation

The Project is located in the Neoproterozoic (900 to 650Ma) Arabian Nubian Shield, one of a number of areas of African continental crust that accreted and stabilised during the Pan-African Orogeny. At a district scale, the host sequence at Sukari comprises a north-northeast striking mélange, while the Nugrus Block hosts east-west and north-northeast striking melanges. These sequences predominantly consist of calc-alkaline igneous rocks and metasediments, which have undergone regional metamorphism to mid-upper greenschist facies.

The style gold mineralisation is classified as orogenic gold and comprises a broadly mineralised granodiorite dislocated by major shear/vein hosted higher grade mineralised zones. Gold mineralisation is hosted mainly by granodiorite and diorite at Little Sukari, with some mineralisation extending into the surrounding metasediments.

The Sukari granodiorite strikes north-northeast and typically dips between 50° and 75° to the east. The granodiorite has a strike length of approximately 2.3km, and ranges in thickness from approximately 100m in the south to 600m in the north. Gold mineralisation within is not homogenous and its deposition has been influenced by major long-lived structures that experienced continuous reactivation.

The Little Sukari deposit is characterised by a shear-bound, east-west trending intrusive mass comprising a composite sequence of diorites, quartz diorites, and granodiorites. The deposit exhibits a strong alteration overprint and hosts protracted syn- to late deformation gold mineralisation. The mineralised body measures approximately 50m wide by 300m long, plunging moderately east, and is geologically analogous to Sukari.

Bulk mineralisation is associated with a quartz-sericite-pyrite altered granodiorite that hosts extensive vein stockworks whereas narrower higher-grade zones in chlorite-pyrite altered diorite and quartz diorite are associated with zones of sulphidic veinletting.

Since 2021, an intensive relogging programme has been undertaken to review Sukari geology (lithologies, structure and alteration), produce a 3D geological model, and improve the geological and structural understanding of the deposit. The resulting geological history, structural interpretation and 3D model have been developed in collaboration with industry experts and are now continually refined on-site via drill hole logging, section interpretation and underground mapping. The resulting model provides a robust tool for exploration targeting and Mineral Resource modelling.

1.4. Status of exploration, development and operations

Sukari is in commercial production and exploration is dominated by drilling activities. Exploration is currently focused on defining targets close to existing infrastructure (within 10km) within the mining concession and Nugrus Block that can be quickly, and cost effectively brought into the mine planning process, while also continuing to test the depth and strike extensions that underpin the longer-term potential of the underground mine and the mine expansion plan.

The Horus zone sits at depth beneath the Amun zone and represents the long-term future of the Sukari underground operations. Horus Deeps remains open to the north, south and down dip.

In addition, surface exploration has identified multiple shallow open pit gold satellite targets within the mining concession and Nugrus Block which have the potential to supplement Sukari mill feed, in the medium to long term, improving operational flexibility.

1.5. Mining methods

1.5.1. Open pit

The Sukari open pit mine is operated as a conventional truck and shovel mine using face shovels and backhoe excavators to load ore and waste to CAT 785 haul trucks. All ore and waste material requires drilling and blasting. Ore is transported to a ROM pad adjacent to the processing plant and either stockpiled for blending purposes or direct tipped to the crusher. Waste is transported to waste rock dumps which are located around the perimeter of the pit. Working benches are of 10m height, whilst final benches are 10 to 20m in height, depending on geotechnical factors.

1.5.2. Underground

Underground operations at Sukari utilise a fully mechanised mining method for both development and stoping with access from surface via the Amun decline. The Ptah decline has been developed from the 710mRL to access the Ptah orebody to the north and Amun and Horus orebodies to the south.

Historically underground mining targeted high-grade zones which were followed by the open pit, but current and future underground operations are now planned to be deeper and below the final open pit shell. A minimum crown pillar of 40m is maintained between the pit and active underground workings.

The Sukari underground mine utilises two mining methods for ore production:

- Transverse long hole open stoping.
- Longitudinal long hole open stoping.

1.5.3. Cemented pastefill system

Following commissioning of a paste plant in Q1 2023, Sukari uses cemented pastefill for stability with the long hole open stoping mining method.

Paste is delivered to the designated stope by the underground delivery system and will discharge from the top drive to fill the stope. A barricade will retain the initial plug pour that will cure before filling the bulk of the stope.

Allowing the system to operate up to 7,000kPa provides operating flexibility and gives the paste plant operator the time to take corrective actions if the cemented pastefill yield stress increases.

1.5.4. Underground ventilation

The total ventilation air is approximately 485m^3/s with intake via the main decline portal, 920 and 850 portals, and via leakage through stoping that has caved at surface. Air is exhausted via two circuits, Ptah and Horus exhaust, and both exhaust to the open pit.

1.6. Mineral processing

The processing plant was commissioned in 2009 and has undergone several expansions and modifications to enhance gold recovery. The plant was initially designed to process 4Mtpa of oxide ore using a crushing, milling, and CIL circuit. Subsequent expansions increased the capacity to 5Mtpa with the addition of secondary crushing, flotation, flotation concentrate regrind, and a flotation concentrate CIL circuit. A major expansion in 2012 doubled throughput to 10Mtpa with the addition of a second crushing, milling, and flotation circuit. Further optimisations, including a second Zadra elution circuit and a second carbon regeneration kiln, have increased the nominal processing capacity to 12Mtpa.

The processing plant operates two parallel crushing and milling circuits (Line #1 and Line #2). Line #1 processes a higher-grade blend of underground and open pit ore, while Line #2 predominantly treats lower-grade open pit ore. Each line consists of a semi-autogenous grinding (SAG) mill, a ball mill, and a pebble crushing circuit. Crushed ore from the two stockpiles is reclaimed via apron feeders and fed into the milling circuits, where it is ground to a target P80 size of 150–200µm before being processed through flotation.

The flotation circuit is key to gold recovery at Sukari, producing a high-grade sulphide concentrate. The flotation process utilises potassium amyl xanthate as the collector, with copper sulphate as the activator. Sulphide recovery typically ranges from 88–89%, though gold recovery can remain stable even if sulphide recovery drops to 80%. The flotation concentrate is thickened before entering the CIL circuit for gold adsorption onto activated carbon.

Additional recovery methods at Sukari include dump leaching, which contributes a small amount of gold production and offsets mine waste transportation costs. There are two active dump leach operations, with a third under construction. Furthermore, gold is recovered from carbon fines and tailings dam return solution via an Ashing plant and a carbon-in-column circuit.

The Sukari process plant is designed for a LOM throughput of 12Mtpa with an average gold recovery of 88.4%. The plant receives power from on-site diesel generators. Water for processing is sourced from the Red Sea, while potable water is trucked to site from Marsa Alam. Continuous process optimisation, including automated sampling systems and ongoing metallurgical testwork, ensures maximum gold recovery and operational efficiency.

1.7. Mineral Resource and Mineral Reserve estimates

1.7.1. Mineral Resource estimates

Open pit mining exploits the Sukari granodiorite over a broad extent, whereas underground mining targets discrete higher-grade zones, where gold mineralisation is concentrated in through-going quartz vein arrays, breccias, and shears. Modelling and estimation techniques have been appropriately tailored to these distinct mining scenarios, resulting in two separate Mineral Resource models. Open pit Mineral Resources are estimates of recoverable tonnes and grade using multiple indicator kriging with indirect lognormal change of support, whilst underground Mineral Resources were estimated via ordinary kriging into block models of specific dimensions.

The Mineral Resource considered amenable to open pit mining was constrained within a US$2,000 pit shell, while underground Mineral Resources were constrained by optimised stope shapes generated using mine stope optimiser (MSO) software, assuming long-hole open stoping as the primary mining method. A gold price of US$2,000/oz, along with cost assumptions, was used to determine the appropriate cut-off grades. The cut-off grade applied was 0.3g/t Au for open pit and 1.0g/t Au for underground, ensuring reasonable prospects for economic extraction.

1.7.2. Mineral Resource statement

The Mineral Resource for mineralisation assumed to be amenable to open pit and underground mining methods is reported *in situ*. Mineralisation in stockpiles is reported as broken material, in stockpiles. The Mineral Resource is reported exclusive of the Mineral Resource converted to Mineral Reserve. Mineral Resource that is not Mineral Reserve does not have demonstrated economic viability.

The Mineral Resource has an effective date of 31 December 2024 and is summarised in Table 1.1 (100% basis) and Table 1.2 (50% attributable basis).

Table 1.1. Mineral Resource statement – 100% basis.

Area/Deposit	Category	Tonnes (Mt)	Grade (g/t Au)	Contained Gold	
				(t)	(Moz Au)
Total Sukari (underground, open pit and stockpiles)	Measured	78.87	1.03	81.39	2.62
	Indicated	56.24	0.86	48.63	1.56
	Total Measured & Indicated	135.11	0.96	130.01	4.18
	Inferred	41.94	0.80	33.76	1.09

Table 1.2. Mineral Resource statement – attributable basis (50%).

Area/Deposit	Category	Tonnes (Mt)	Grade (g/t Au)	Contained Gold	
				(t)	(Moz Au)
Total Sukari (underground, open pit and stockpiles)	Measured	39.43	1.03	40.69	1.31
	Indicated	28.12	0.86	24.31	0.78
	Total Measured & Indicated	***67.55***	***0.96***	***65.01***	***2.09***
	Inferred	20.97	0.80	16.88	0.54

Notes:

1. Rounding of numbers may result in computational discrepancies in the Mineral Resource tabulations. All figures are expressed on an attributable basis unless otherwise indicated. The Mineral Resource estimates with respect to our material properties have been prepared by the Qualified Persons (employed by AngloGold Ashanti unless stated otherwise). The Qualified Person for the estimate is Mr. Craig Barker, FAIG, an AngloGold Ashanti employee. To reflect that figures are not precise calculations and that there is uncertainty in their estimation, AngloGold Ashanti reports tonnage, grade and content for gold to two decimals. All ounces are Troy ounces. “Moz” refers to million ounces.
2. All disclosure of Mineral Resource is exclusive of Mineral Reserve. The Mineral Resource exclusive of Mineral Reserve is defined as the inclusive Mineral Resource less the Mineral Reserve before dilution and other factors are applied.
3. “Tonnes” refers to a metric tonne which is equivalent to 1,000 kilograms.
4. The Mineral Resource tonnages and grades are reported *in situ* and stockpiled material is reported as broken material.
5. Property currently in a production stage.
6. Based on a gold price of US$2,000/oz.
7. In 2024, a metallurgical recovery factor of 88.40% was applied to the open pit, stockpile and underground.
8. In 2024, a cut-off grade of 0.30g/t was applied to the open pit, a cut-off grade of 0.40g/t was applied to the stockpile and a cut-off grade of 1.00g/t was applied to the underground.

Factors that may affect the Mineral Resource estimates include: metal price and exchange rate assumptions; changes to the assumptions used to generate the gold grade cut-off grade; changes in local interpretations of mineralisation geometry and continuity of mineralised zones; changes to geological and mineralisation shape and geological and grade continuity assumptions; density and domain assignments; changes to geotechnical, mining and metallurgical recovery assumptions; changes to the input and design parameter assumptions that pertain to the conceptual stope designs constraining the underground estimates; and assumptions as to the continued ability to access the site, retain mineral and surface rights titles, maintain environment and other regulatory permits, and maintain the social license to operate.

1.7.3. Mineral Reserve estimates

Sukari consists of both an open pit and underground operation and undertakes annual updates of its Mineral Resource and Mineral Reserve estimates, which includes changes to various modifying factors such as gold price, process recoveries, geotechnical parameters, costs and estimates, dilution, ore loss, as well as additions and subtractions due to exploration and depletion.

General parameters and modifying factors, applicable to both the open pit and underground operations, includes the assumed gold price, sales costs, mineral royalty and diesel price.

Open pit and underground mine optimisation have been carried out using best industry practice techniques in order to delineate the Mineral Reserves.

The operating costs and process recoveries for optimisation have been provided based upon production actuals defined by the Sukari mining, metallurgical and processing department. Sukari is currently undertaking metallurgical testwork of samples to better understand the differences in recovery from the various ore sources.

Calculations of open pit dilution at Sukari have been based upon the regularisation of an original sub-celled Mineral Resource estimate block model to a SMU of 20m x 25m x 10m (XYZ). For the 2024 Mineral Reserve estimate, calculation of underground dilution and ore loss factors was based on stope reconciliation data and calculation of dilution percentages and grades using dilution shells within Deswik.SO.

A geotechnical review was carried out for the stage eight pit design confirming the design for Mineral Reserve estimation purposes.

The underground stope cut-off grade is calculated as 2.00g/t Au whilst the cut-off value for treating development material as ore is 1.00g/t Au. The stope cut-off is used for Deswik.SO stope optimisation and Mineral Reserves reporting.

Sukari has developed a detailed production schedule driven by ROM tonnages from the open pit and underground operations and augmented by stockpile feed where required in order to provide for a plant feed of 12.5Mtpa.

The mining schedule utilised to produce the Mineral Reserve estimate considers only Measured and Indicated Mineral Resource as ore (which are converted to Proven and Probable Reserves). A secondary LOM plan which considered Inferred and unclassified material is also produced by the mine for internal purposes and to guide long-term planning and exploration.

1.7.4. Mineral Reserve statement

The Mineral Reserves are reported at the point of delivery to the process plant. Mineralisation in stockpiles is reported as broken material.

The Mineral Reserve has an effective date of 31 December 2024 and is summarised in Table 1.3 (100% basis) and Table 1.4 (50% attributable basis).

Table 1.3. Mineral Reserve statement – 100% basis.

Area/Deposit	Category	Tonnes (Mt)	Grade (g/t Au)	Contained Gold	
				(t)	(Moz Au)
Total Sukari (underground, open pit and stockpiles)	Proven	99.64	1.18	117.12	3.77
	Probable	24.78	1.32	32.69	1.05
	Total Proven & Probable	**124.43**	**1.20**	**149.80**	**4.82**

Table 1.4. Mineral Reserve statement – attributable basis (50%).

Area/Deposit	Category	Tonnes (Mt)	Grade (g/t Au)	Contained Gold	
				(t)	(Moz Au)
Total Sukari (underground, open pit and stockpiles)	Proven	49.82	1.18	58.56	1.88
	Probable	12.39	1.32	16.34	0.53
	Total Proven & Probable	**62.21**	**1.20**	***74.90***	**2.41**

Notes:

1. Rounding of numbers may result in computational discrepancies in the Mineral Reserve tabulations. All figures are expressed on an attributable basis unless otherwise indicated. The Mineral Reserve estimates with respect to our material properties have been prepared by the Qualified Persons (employed by AngloGold Ashanti unless stated otherwise). The Qualified Person for the underground Mineral Reserve estimate is Mr. Gavin Harris, CEng MIMMM QMR, an AngloGold Ashanti employee. The Qualified Person for the open pit Mineral Reserve estimate is Mr. Andrew Murray, FAusIMM, an AngloGold Ashanti employee. To reflect that figures are not precise calculations and that there is uncertainty in their estimation, AngloGold Ashanti reports tonnage, grade and content for gold to two decimals. All ounces are Troy ounces. “Moz” refers to million ounces.
2. “Tonnes” refers to a metric tonne which is equivalent to 1,000 kilograms.
3. The Mineral Reserve tonnages and grades are estimated and reported as delivered to the plant (i.e., the point where material is delivered to the processing facility).
4. Property currently in a production stage.
5. Based on a gold price of US$1,450/oz.
6. In 2024, a metallurgical recovery factor of 88.40% was applied to the open pit, stockpile and underground.
7. In 2024, a cut-off grade of 0.44g/t was applied to the open pit and stockpile, and a cut-off grade of 2.34g/t was applied to the underground.

Factors that may affect the Mineral Reserve estimates include: long-term commodity price assumptions; long-term exchange rate assumptions; long-term consumables price assumptions; Mineral Resource input parameters for the Mineral Resource converted to Mineral Reserve; Mineral Reserves to grade control reconciliations; changes to input parameters used in the constraining stope and open pit designs; changes to cut-off grade assumptions; changes to mining method; changes to geotechnical (including seismicity) and hydrogeological factors and assumptions; underground void interaction with the open pit; open pit interaction with underground decline; changes to metallurgical and mining recovery assumptions; the ability to control unplanned dilution; changes to inputs to capital and operating cost estimates; ability to access the site, retain mineral and surface rights titles; and the ability to maintain environmental and other regulatory permits, and maintain the social license to operate.

1.8. Capital and operating cost estimates

1.8.1. Capital costs

Total capital expenditure for the 2024 LOM, Mineral Reserve-only case, has been estimated to total US$383M, with US$346M of the total estimated as the sustaining capital costs. A summary of the sustaining and non-sustaining capital cost estimates for the areas for 2024 LOM Mineral Reserve-only case is presented in Table 1.5.

Table 1.5. Capital budget in financial model.

Sustaining capital	LOM (2025-2034) (US$M)
Open pit fleet rebuilds	191
Open pit fleet replacements	75
Underground fleet replacements	31
Underground fleet rebuilds	17
Tailings dam lifts	100
Total	**414**

Non-sustaining capital	LOM (2025-2034) (US$M)
Grid connection	110
Other	3
Total	**113**

1.8.2. Operating costs

The key operating costs are categorised into four main components: open pit mining, underground mining; processing and general and administrative. These costs are based on the LOM plan (Mineral Reserve only).

The open pit mining cost model estimates use budget costs; equipment unit costs; equipment hours; equipment burn rates; and drill and blast contract rates applied to material quantities.

The estimated average LOM mining operating cost is US$1.81/t mined. The annual unit cost of mining per tonne increases over the LOM from US$1.39/t mined to US$2.71/t mined reflecting additional haulage costs for mining at depth.

Underground mining costs are based on an average of the last 21 months actual costs and average US$43.81/t mined.

1.9. Economic analysis

The following are material assumptions used for the Sukari 2024 Mineral Reserve business plan:

- Power rate: US$0.056/kwh.
- Diesel cost: US$0.75/l.
- Gold: US$1,450/oz as determined by the registrant (refer to Section 25).

Mineral Reserve declaration is supported by a positive cashflow.

1.10. Permitting requirements

The Sukari Gold Mine operates under robust environmental, permitting, and social frameworks that support its long-term viability. All necessary permits are current, with renewals systematically tracked, and the mine complies with Egypt's Environmental Law 4/1994.

Various permits and authorisations are required for the Sukari Mine. AngloGold Ashanti currently holds all permits required for operational and exploration activities. In terms of permitting requirements, there are no significant current or future encumbrances affecting the property.

1.11. Conclusions and recommendations

Sukari is well-placed to continue Mineral Resource extraction with a focus on efficiency and sustainability. The outlined risks and opportunities highlight areas for continued attention and improvement, which will help balance operational demands with the need for long-term viability and community alignment.

AngloGold Ashanti runs a comprehensive business planning process that is framed by the Company's Strategic Options process. This sets the mine budget requirements aligned to both the larger group and the necessities of the operation. The decisions that result from this process are ultimately approved by AngloGold Ashanti Executive Leadership, Business Unit Level management, and mine Senior management. While the Qualified Person is an intimate part of this process, they do not make recommendations for the operation without it being part of the described framework.

2. Introduction

2.1. Disclose registrant

This Technical Report Summary (the Report) for Sukari Gold Mine was prepared for AngloGold Ashanti plc by Mr. Craig Barker, FAIG, Mr. Gavin Harris, CEng MIMMM QMR, and Mr. Andrew Murray, FAusIMM.

AngloGold Ashanti has a 50% interest in the Project and is operator through its acquisition of Centamin plc (Centamin). The in-country operating subsidiary is Pharoah Gold Mines NL (Pharoah Gold). The remaining 50% of the Sukari Gold Mine is owned by the Egyptian Mineral Resource Authority.

2.2. Terms of reference

The terms of reference are based on public reporting requirements as per Subpart 229.1300 of Regulation S-K (Regulation S-K 1300 or 1300 Regulation S-K). The Technical Report Summary aims to reduce complexity and therefore does not include large amounts of technical or other project data, either in the report or as appendices to the report, as stipulated in Subpart § 229.1300 and § 229.1301, Disclosure by Registrants Engaged in Mining Operations and § 229.601 (Item 601) Exhibits, and General Instructions.

The Qualified Person has drafted the summary to conform, to the extent practicable, with the plain English principles set forth in § 230.421. Should more detail be required they will be furnished on request.

The following should be noted in respect of the Technical Report Summary:

- All figures are expressed on an attributable basis unless otherwise indicated.
- This report uses UK English.
- Unless otherwise stated, US$ or dollar refers to United States dollars.
- Mine, operation, business unit and property are used interchangeably.
- To reflect that figures are not precise calculations and that there is uncertainty in their estimation, AngloGold Ashanti reports tonnage and content for gold to two decimal places.
- Metric tonnes (t) are used throughout this report and all ounces are Troy ounces.
- Precious metal grades in grams per tonne (g/t) or parts per million (ppm).
- The reference coordinate system used for the location of properties as well as infrastructure and licenses maps/plans are latitude longitude geographic coordinates in various formats or relevant Universal Transverse Mercator (UTM) projection.
- The Mineral Resource estimates are supported by initial assessments.
- The Mineral Reserve estimates are supported by at minimum pre-feasibility level studies.

2.3. Purpose of this Report

This is the first-time reporting of the Technical Report Summary for Sukari Gold Mine, and there are no previously filed Technical Report Summaries for this Project. The purpose of this Technical Report Summary is to support public disclosure of Mineral Resource and Mineral Reserve estimates for the Sukari Gold Mine as at 31 December 2024.

2.4. Sources of information and data contained in the Report or used in its preparation

The AngloGold Ashanti employees listed in Table 2.1, contributed to various aspects of the report under the supervision of the Qualified Persons.

Table 2.1. AngloGold Ashanti employees contributing to the Report.

Responsibility	Technical specialist
Mineral Resource Estimation and classification	Rolly Wasonga and Doxel Mutunda
Evaluation quality assurance and quality control (QA/QC)	Ashraf Ayad and Shehata Mekawy
Exploration	Mohamed ElBehairy
Geological model	Rolly Wasonga, Doxel Mutunda, Eslam Sherif and Mohamed ElBehairy
Geology QA/QC	Ashraf Ayad and Shehata Mekawy
Geotechnical engineering and Hydrogeology	Gabriel Chilala
Environmental and permitting	Paul Cannon and Katy Relph
Metallurgy	Ali Fathallah and Mohamed Belal
Mine planning and Mineral Reserve classification	Mahmoud Abdelmonem

The reports and documents listed in Section 24 of this Report were used to support the preparation of the Report. Additional information was sought from AngloGold Ashanti personnel where required.

2.5. Qualified Person(s) site inspections

All Qualified Persons either work at Sukari or visit regularly on roster or on a quarterly basis.

2.5.1. Mr. Craig Barker

Mr. Craig Barker has visited the mine regularly since November 2020. This familiarity with the operations serves as his scope of personal inspection.

His scope of personal inspection covers a broad range of geological and operational elements, ensuring the quality and accuracy of Mineral Resource estimates:

- Exploration and geological oversight: overseeing all geological functions on-site and providing technical guidance to the geology department in data validation, open pit and underground mining requirements, modelling and estimation techniques, sampling QA/QC, drilling, logging and interpretation, target generation and management.
- Mineral Resource modelling and geological data verification: ensuring the accuracy of geological models by conducting regular reviews of geological interpretations, drilling plans, data reviews, logging practices, and validating mineralisation continuity.
- Staff development: working with site teams to review health and safety statistics relevant to geological operations, as well as overseeing the training and development of geology staff, ensuring safe and skilled personnel are engaged in exploration and Mineral Resource management.
- Long-term geological planning: collaborating on the strategic direction of future exploration initiatives, including regional geological studies and potential new Mineral Resource identification, which directly impacts Mineral Resource growth and mine longevity.

2.5.2. Mr. Gavin Harris

Mr. Gavin Harris has been based full-time at the mine site since September 2019. While onsite he has held the roles of Underground Manager, Operations Director and currently is the appointed General Manager for the mine site.

Since September 2019, Gavins' responsibilities included oversight of the underground and open pit mines. He has managed the operational and technical teams and has participated in operational production and cost reviews of the mine.

At site he has inspected the underground, open pit, ore and waste stockpiles, haul roads, and ancillary open pit mine infrastructure. He has toured the process plant, the maintenance shop, the tailings management area, the and the main surface infrastructure.

As the General Manager, Gavin has undertaken reviews of mine operations, mine planning, mill projects and production numbers, budgets and forecasts, human resource targets, and mobile and mill maintenance.

2.5.3. Mr. Andrew Murray

Mr. Andrew Murray has been based full-time at the mine site since August 2023. While onsite he has been actively involved with Sukari mine as Chief Open Pit Mining Engineer.

His responsibilities include:

- Mine planning oversight across short, medium and long term planning
- Checking the validity of inputs required for the Mineral Reserve: geological block model; geotechnical assumptions; processing inputs; mining, processing, general and administrative cost and commercial assumptions.
- Developing and maintaining pit and stage designs in line with pit optimisation updates and current geotechnical constraints.
- Maintaining staff development to provide competent engineers to carry out the mining engineering functions on site.
- Providing mining engineering technical input to tailings storage facilities (TSFs) and dump leach development.

The Qualified Persons' inspections are integral to maintaining the accuracy and compliance of Mineral Resource and Reserve estimations, with detailed reports provided to track and verify their findings across exploration, operations, infrastructure, and financial metrics.

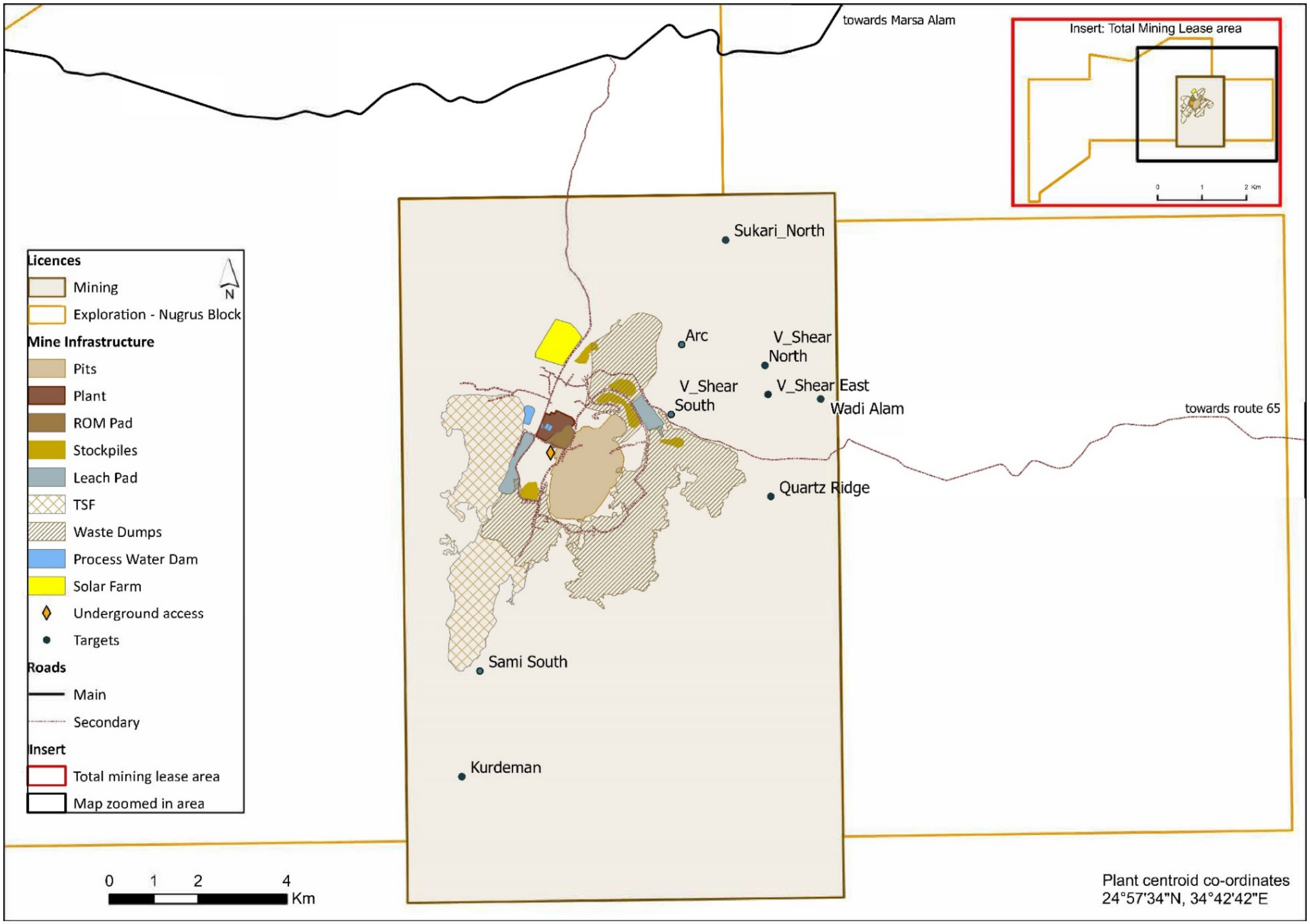
3. Property description

3.1. Location of the property

The Sukari Gold Mine and surrounding Nugrus exploration license is located in the Red Sea Governorate in the Eastern Desert of Egypt, approximately 25km southwest of the tourist town of Marsa Alam on the Red Sea, and approximately 750km southeast of Cairo. The Sukari Mine includes: the open pit mine, underground mine, processing plant and associated facilities at the mine site, three pipelines and associated pumping stations to take seawater from the Red Sea to the mine site and the access road from Marsa Alam.

The geographic coordinates of the processing plant at Sukari are latitude 24°57’34”N and longitude 34°42’42”E (UTM Zone 36R; UTM coordinates 672797E, 2761546N) and the location is shown in Figure 3.1.

Figure 3.1. Map showing the location, infrastructure and mining license area for Sukari Gold Mine.



Note: Figure prepared by AngloGold Ashanti, 2024. The mine coordinates, as represented by the plant, are depicted on the map and are in the geographic coordinate system. TSF: tailings storage facility.

3.2. Area of the property

The mining concession area currently operated by Sukari Gold Mine covers 160km², while the surrounding Nugrus Exploration Block, operated by EDX, spans 848km².

3.3. Legal aspects and permitting

3.3.1. Ownership

Sukari Gold Mine is jointly owned by Pharoah Gold and EMRA through their respective 50 percent equity stake in Sukari Gold Mining Company which operates the Sukari Gold Mine. EMRA is entitled to 50% of the operating profits from the Sukari Gold Mine, as per the terms of the concession agreement.

The Nugrus Block is being explored by EDX.

3.3.2. Legal aspects

Egypt is an Arabic-speaking country in North Africa, bordered by the Mediterranean Sea to the north and the Red Sea to the east. It shares land borders with Libya to the west, Sudan to the south, and Israel and the Gaza Strip to the northeast. Egypt has a population of approximately 113M people (Worldometer, 2023), making it the most populous country in the Arab world. Its capital, Cairo, is located near the Nile River and serves as the country's political, economic, and cultural hub. Other major cities include Alexandria, Giza, Sharm El-Sheikh, and Luxor.

Egypt has multiple seaports, with the largest being the Port of Alexandria, which handles the majority of the country's trade. Other key ports include Port Said at the northern entrance of the Suez Canal, Safaga on the Red Sea, and Damietta on the Mediterranean. The Suez Canal, one of the world's most significant waterways, connects the Mediterranean Sea to the Red Sea, facilitating global maritime trade. Egypt is divided into 27 governorates, with Marsa Alam and the Sukari Gold Mine located in the Red Sea Governorate.

Egypt is a presidential republic with a multi-party political system. Abdel Fattah el-Sisi has served as the country's president since 2014, following his re-election in 2018 and 2024. Egypt has a mixed economy driven by sectors such as tourism, agriculture, oil and gas, and mining. According to GlobalData, Egypt produced approximately 650,000 ounces of gold in 2022, ranking it among Africa's significant gold producers. The country's estimated gross domestic product (GDP) in 2023 was US$475B, with a per capita GDP of US$4,150. The Egyptian Pound (EGP) is the national currency, and as at December 2024, the exchange rate to the US dollar was approximately 50.8:1. Despite economic growth, Egypt faces challenges such as inflation, high public debt, and infrastructure constraints, particularly in energy and transportation.

The mineral resources of Egypt, including gold, are considered state-owned assets. The legal framework for mining is governed by the Mineral Resources Law No. 198/2014 and its amendments, which regulate exploration, extraction, and investment in the sector. EMRA oversees the issuance of mining licenses and agreements, with terms subject to approval by the government. Mining contracts in Egypt typically involve production-sharing agreements, with the state retaining a stake in key mining projects. Additionally, mining companies are subject to royalty payments, corporate taxes, and investment regulations. Upon the expiration of a mining license, all immovable assets revert to the state, while moveable property may be transferred at a negotiated value. Mining operations must adhere to environmental and land-use regulations set by the government.

The Sukari Gold Mine operates under Law No. 222/1994, which governs concession agreements for gold and associated minerals in Egypt. This law is distinct from the Mineral Resources Law No. 198/2014, which applies to other mining projects in Egypt.

Key provisions of Law 222/1994 (as applicable to the Sukari Gold Mine):

- Concession agreement and EMRA partnership:
  - The law grants a long-term mining concession to Pharaoh Gold (a wholly-owned subsidiary of AngloGold Ashanti) in partnership with EMRA.
  - The agreement follows a 50/50 profit-sharing model, with revenues split between Pharoah Gold and EMRA after cost recovery.
- Cost recovery mechanism:

    - Pharoah Gold (the operator) is entitled to recover operating and capital costs before splitting profits with EMRA.
    - There is a defined cost recovery period and cap, ensuring that a portion of revenues is allocated to the Egyptian government.
- Tax and royalty exemptions:
    - The Sukari Gold Mine is exempt from certain taxes and duties under the concession terms.
    - The tax exemption on all income generated in the Arab Republic of Egypt is renewed every 15 years, with the most recent renewal completed at the end of 2024.
    - Instead of traditional royalties, the profit-sharing mechanism ensures revenue for the government.
- State ownership and asset reversion:
    - Upon termination or expiry of the concession, all immovable assets (e.g., infrastructure, plant, and facilities) revert to state ownership.
    - Moveable assets (e.g., equipment) may be acquired by the state or removed by the operator.
- Operational and environmental obligations:
    - The mine must comply with Egyptian environmental laws and report to regulatory authorities on its activities.
    - Rehabilitation and closure obligations are outlined in the concession agreement.
- Renewal and duration:
    - The concession agreement is long-term, but renewals or modifications require government approval.
    - The law ensures stability for investors while maintaining sovereign control over resources.

Since the Sukari Gold Mine operates under Law 222, it has different contractual terms compared to newer mining projects regulated by Law 198/2014, which applies to most other mineral exploration and mining activities in Egypt.

A Model Mining Exploitation Agreement (MMEA), agreed in principle in 2023, serves as the investment framework for commercial discoveries within AngloGold Ashanti's EDX blocks, including the Nugrus Block. The MMEA will come into effect upon signing and following approval by the Egyptian parliament, with the approval date yet to be determined. Exploration activities by EDX are continuing in parallel with the approval process.

Under the MMEA, exploitation licences will be granted for a 30-year period, governed by a stabilised fiscal and legal regime. Key terms include:

- A 5% government net smelter royalty on revenue pending final approval from the Egyptian Parliament, subject to change.
- A 22.5% corporate tax rate.
- A 15% government financial net profit interest (applied to post-tax income).
- A 0.5% contribution towards community development.
- LOM commitments focused on local employment, training, and procurement.

This framework aims to provide long-term fiscal stability while ensuring benefits for local communities and stakeholders throughout the mine's operational life.

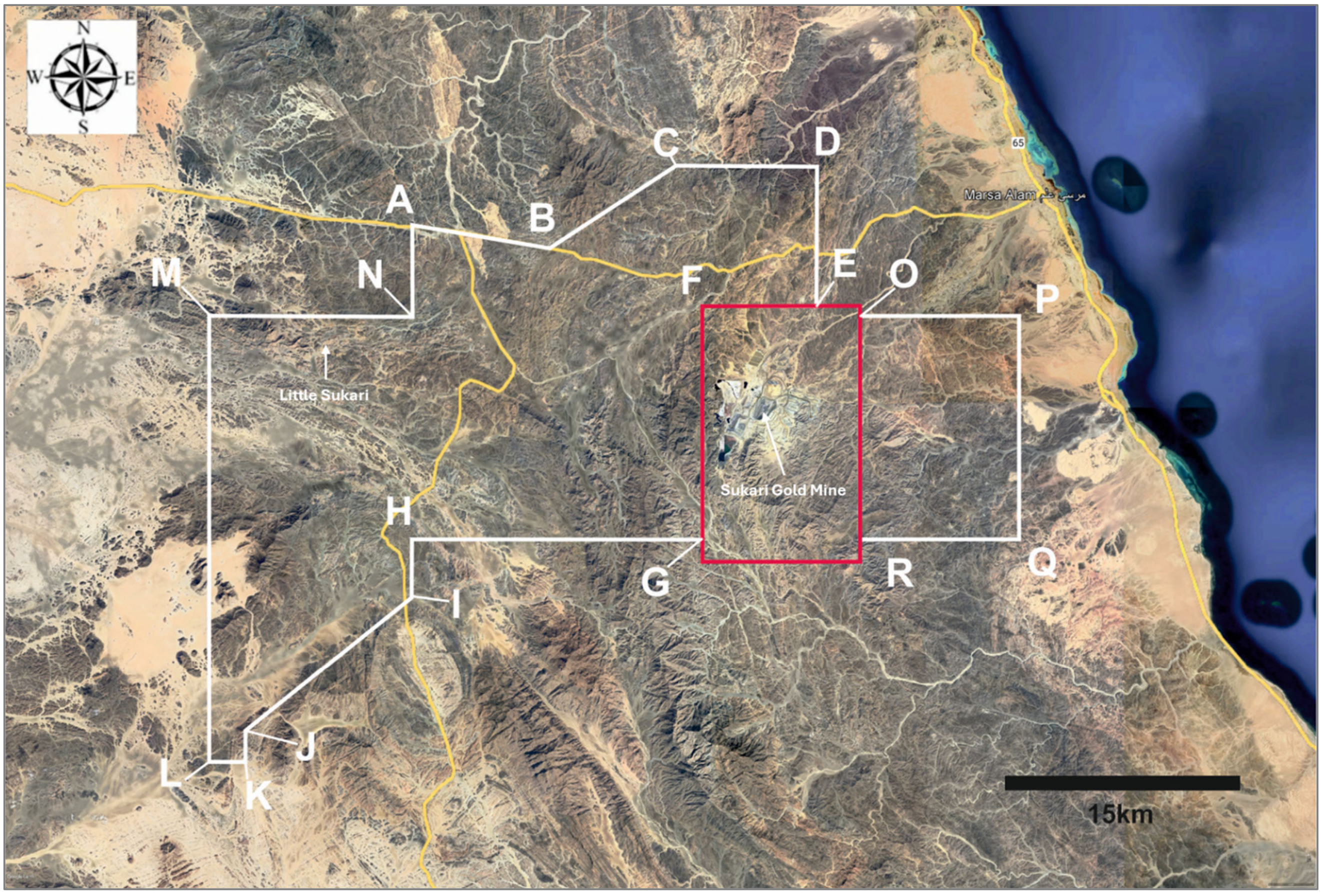
3.3.3. Permitting

Mining concession

The Sukari concession agreement was ratified by the Egyptian Parliament through the adoption of Law No. 222/1994 and came into effect on 13 June 1995. The Sukari exploitation lease covers an area of approximately 160km² surrounding the Sukari Gold Mine site within the Sukari concession. Under the terms of the Sukari concession agreement, the exploitation lease is valid for 30 years from the first date of commercial discovery and may be renewed for a further 30-year period, at the option of Pharoah Gold, with reasonable commercial justification and upon six months written notice to EMRA prior to the expiry of the initial 30-year period. The renewal of the exploitation lease will need to be ratified by the Egyptian Parliament.

The mining concession contains the Sukari Gold Mine and surrounding prospects, and its extents are shown in Figure 3.2 and Table 3.1.

Figure 3.2. Sukari mining concession and Nugrus Block showing location of Little Sukari.



Note: Figure sourced from Sukari Gold Mine, 2024. Red boundary Sukari mining concession; white boundary the Nugrus Block.

Table 3.1. Sukari mining concession coordinates.

Longitude	Latitude
34°30’0” E	25°3’4” N
34°35’6” E	25°2’17” N
34°39’47” E	25°5’3” N
34°45’0” E	25°5’2” N

At the effective date of this Report, the tenure of the Sukari mining lease was secure and all government/statutory requirements for its validity and enforceability had been met.

The Mineral Resource and Mineral Reserve estimates are constrained within the one mining lease.

Exploration concessions

Beyond the near-mine exploration opportunities within the Sukari mining concession, AngloGold Ashanti also holds a highly prospective terrain in the Eastern Desert comprising the Nugrus Block which surrounds the Sukari mining concession. The exploration licence for the Nugrus block, covering an area of approximately 848km^2 located adjacent to the Sukari gold mine, is held by Centamin Central Mining S.A.E. It is currently in its second exploration phase which has a duration of two years and will expire on 25 May 2026, subject to renewal.

The Nugrus Block exploration licence was issued on the 12 October 2021 (“Effective Date”).

Table 3.2 presents the exploration concession.

Table 3.2. Nugrus exploration concession coordinates.

Nugrus Block (East)		
Coordinate point	Longitude	Latitude
O	34°46’30” E	25°00’00” N
P	34°52’30” E	25°00’00” N
Q	34°52’30” E	24°52’30” N
R	34°46’30” E	24°52’30” N
Nugrus Block (West)		
Coordinate point	Longitude	Latitude
A	34°30'0" E	25°3'4" N
B	34°35'6" E	25°2'17" N
C	34°39'47" E	25°5'3" N
D	34°45'0" E	25°5'2" N
E	34°45'0" E	25°0'20" N
F	34°40'40" E	25°0'20" N
G	34°40'40" E	24°52'30" N
H	34°30'0" E	24°52'30" N
I	34°30'0" E	24°50'33" N
J	34°23'51" E	24°46'4" N
K	34°23'50" E	24°45'0" N
L	34°22'30" E	24°45'0" N
M	34°22'30" E	25°0'0" N
N	34°30'0" E	25°0'0" N

3.3.4. Surface rights

Pharaoh Gold holds the requisite surface rights for mining operations and related activities at the Sukari Gold Mine. Under Egyptian law, surface rights are granted as part of the mining concession and are distinct from mineral rights. The concession agreement allows Pharoah Gold to:

- Conduct mineral operations, including mining for the specified minerals covered under the concession.
- Erect equipment, processing plants, and infrastructure necessary for mining, transporting, crushing, processing, smelting, or refining minerals recovered during operations.
- Extract and remove minerals from the concession area and sell or export them in accordance with the approved marketing plan.
- Stack or store ore, waste, and tailings in designated areas as approved in the mine’s environmental impact assessment and operational permits.
- Carry out other ancillary or supporting activities necessary for efficient mining and processing operations.
- EMRA maintains oversight of the operation, ensuring compliance with the concession terms, environmental regulations, and profit-sharing mechanisms.

Sukari Gold Mining Company holds the rights to lease land for infrastructure beyond the mining concession, including easements for power lines, water pipelines, and the water intake structure on the Red Sea.

In relation to the Nugrus Block, Centamin Central Mining SAE holds surface rights over the Sukari Block Area under a tenure system based on two-year exploration cycles, with a maximum tenure of eight years through two standard renewals plus one exceptional renewal. Additional renewals may be granted if a "commercial discovery" is agreed upon with EMRA, potentially allowing further tenure for commercial satellite deposits.

Each renewal cycle requires a minimum relinquishment of 20% of the area, with renewal applications to be submitted six months before expiry and final renewal submissions two months before expiry.

The ground rent starts at 5,000 EGP/km², increasing by 5,000 EGP at each renewal. Due to EGP devaluation since 2020, costs have effectively reduced three times.

Expenditure commitments are enforced by the Egyptian Mineral Resource Authority, which treats stated budgets as obligations. A “Letter of Guarantee” equivalent to 10% of the committed expenditure is required to secure compliance.

At the time of compiling this report, there were no known impediments related to the security of tenure and the right to operate with respect to the current Mineral Resource and Mineral Reserve declaration.

3.3.5. Water rights

Pharaoh Gold holds the necessary water rights for mining operations and associated activities at Sukari Gold Mine under the terms of its concession agreement (Law No. 222/1994) and in compliance with Egyptian water and environmental regulations.

Water supply for Sukari Gold Mine is primarily sourced from:

- Seawater desalination: the mine operates a desalination plant near the Red Sea to produce freshwater for processing and operational use.
- Groundwater wells: limited volumes of groundwater may be utilised, subject to government approval and environmental impact assessments.
- Recycling and reuse: water management strategies prioritise recycling process water to minimise freshwater consumption.

Sukari’s water use is governed by agreements with:

- The Egyptian Environmental Affairs Agency: ensures compliance with environmental impact assessments a nd water management plans.
- The Ministry of Water Resources and Irrigation: regulates water abstraction, use, and discharge to protect national water resources.
- The Red Sea Governorate: oversees coastal water use and environmental protections related to desalination and wastewater management.

Water use permits must be obtained and periodically reviewed to ensure compliance with Egyptian environmental laws and best practice water conservation measures. The mine is required to monitor and report water consumption, discharge quality, and compliance with regulatory standards. Discharge of treated water or waste into the environment must meet Egyptian water quality and environmental protection regulations.

Effective water management is critical for the Sukari Gold Mine’s operations due to the arid climate of Egypt’s Eastern Desert. The mine continues to implement sustainable water strategies, including increased recycling, to reduce its environmental footprint.

3.3.6. Encumbrances

At Sukari Gold Mine, significant encumbrances include compliance with Egyptian mining regulations, government royalties, and environmental obligations. The mine operates under an exploitation lease granted by the Egyptian government, which requires adherence to strict permitting and reporting requirements.

Future permitting includes approvals for underground expansions, waste disposal, and tailings storage facility modifications, all subject to review by the Egyptian Environmental Affairs Agency and EMRA. The permitting timelines vary, with major approvals potentially taking several months to over a year. Permit conditions involve environmental monitoring, water management, and rehabilitation plans to mitigate ecological impact.

To date, there have been no major violations or fines reported that significantly impact operations, though ongoing compliance with evolving regulations remains a key operational focus.

3.3.7. Significant factors and risks that may affect access, title, or work programs

There are no known significant factors or risks that may affect access, title, or the right or ability to perform work at the Sukari Gold Mine. The mine and exploration units operate under a secure and legally recognised exploitation and exploration lease, with all necessary permits and regulatory approvals in place. Infrastructure, including roads, power, and water supply, supports uninterrupted operations, and there are no disputes or legal challenges impacting access or ownership. Additionally, the mine maintains strong relationships with local stakeholders and complies with all government regulations, ensuring continued stability in its operations. While regulatory requirements evolve, there are no foreseeable risks that would materially impact mining activities at Sukari.

3.4. Royalties

The royalty is set at 3% of the net sales revenue from the sale of gold at Sukari and is paid to the Government of Egypt each calendar half year.

4. Accessibility, climate, local resources, infrastructure and physiography

4.1. Physiography

The Sukari gold mine is located in the central part of the Eastern Desert of Egypt on the western slope of Sukari Hill with elevation of 630m above sea level. The mine area is located within a mountainous terrain characterised by the sharply incised Red Sea Hills and numerous wadis which drain towards the Red Sea which coast lies at the distance of 25km. Elevations range between approximately 300m and 585m. No seismic activity has been recorded in the region. The closest settlement is the coastal town of Marsa Alam, some 25km to the northeast.

The Sukari deposit is associated with a granodiorite outcrop, that, prior to operations, formed a topographic high rising to 350m above the local wadi level and extending for up to 2,500m along strike. The surrounding topography comprises wadi drainage plains that pass to the east and west of the outcrop and the sharply incised, green-brown, Red Sea Hills which surround these.

Vegetation in the Sukari deposit area is sparse due to the arid desert environment. The landscape is largely rugged rock outcrops and barren, with plant life limited by extreme water scarcity. However, sporadic trees and shrubs can be found along the main wadi drainage lines, including umbrella thorn acacia, spiny zilla, desert cotton and tumbleweed.

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4.3. Climate

The climate at the Sukari site, Nugrus block and the Marsa Alam region on the Red Sea, where critical mine infrastructure is located, is characteristic of a desert environment. Average temperatures during the winter months (October to March) range from 17-27°C and during the summer months (April to September) from

26-36°C with maximum temperatures frequently exceeding 40°C. Humidity is normally very low but has been known to exceed 80% at the seawater intake near the coast, especially during the winter months. Precipitation is almost non-existent with rainfall rarely exceeding 10mm per year.

A steady wind from the northwest helps to lower the temperature near the coast. The Khamaseen is a wind that blows from the south in Egypt, usually in spring or summer, bringing sand and dust, and sometimes raises the temperature in the desert to >38°C.

Mining and processing operations are conducted year-round.

4.4. Local resources and infrastructure

No permanent population is present in the immediate area. The nearest local town is Marsa Alam, which is a tourism-focused suburban town area with population estimated at approximately 10,000. The town offers hospital facilities, a police presence, and other municipal facilities associated with a tourist destination.

There are numerous resort complexes located along the coastline and within proximity of the town, which also offer similar public facilities such as ATMs, restaurants and shops.

AngloGold Ashanti rented the Moon Resort in Marsa Alam town under a three-year contract which acts as additional accommodation for the mine with staff bussed to and from the mine. A longer-term solution is under development.

Infrastructure to support mining operations is in place, and includes the mine site, onsite power generation facilities, as well as water pipelines and a water pumping station on the coast.

5. History

Gold was mined in Pharaonic and Roman times. Small-scale mining was re-established between 1912 and 1914. In 1936, a renewed effort by government authorities to re-establish Egypt's gold mining industry saw the Sukari mine selected as the first mine to be brought back into production. After preparatory work, production commenced in August 1937 and continued intermittently until February 1951. All mining activities terminated in 1958 due to political reasons.

The first systematic modern exploration in the Sukari area was carried out in the 1970s by the Egyptian Government with assistance from the former Union of Soviet Socialist Republics (USSR). While the USSR was assisting Egypt with major infrastructure projects such as the Aswan Dam, cooperative Mineral Resource exploration efforts were undertaken across the Eastern Desert. The Egyptian Geological Survey and Mining Authority, in collaboration with Soviet geologists, conducted systematic regional geological surveys, geochemical sampling, and detailed mapping at Sukari between 1971 and 1977. This included trenching over mineralised zones and the completion of five diamond drill holes, which confirmed the presence of gold mineralisation at depth (Cavaney, 2004). However, neither the USSR nor the Egyptian government operated the Sukari mine as a production site during this period. Their role remained focused on geological assessments rather than active mining.

From 1912 to 1920, the Sukari mine was operated under Mining Licence 15, granted initially to John Wells and later transferred to Sukkari Mines Ltd. During this period, records show that 522.5t of ore were treated, producing 8.324kg of gold at a recovered grade of 15.93g/t Au. Between 1936 and 1958, the mine was managed by the Egyptian Mining Department. The estimated production from 1937 to 1951 was approximately 476.8kg of gold from 27,800t of ore, equating to a recovered grade of 17.0g/t Au (Cavaney, 2004).

Additional historical production estimates suggest that ancient miners extracted around 30,000t of ore, producing between 300 and 400kg of gold at estimated grades ranging from 16 to 22g/t Au. Tailings studies indicate that 32,000 tonnes of tailings averaging 2.8g/t Au remained from earlier operations (Cavaney, 2004).

Exploration by Pharoah Gold commenced in 1995 with the establishment of a camp. Work completed consisted of a detailed literature search prior to gridding, traversing, mapping, geochemical sampling, trenching, channel sampling, heavy mineral sampling, augering, and surveying. Drilling commenced in April 1997.

In 1999, Centamin acquired Pharoah Gold. In November 2000, Pharoah Gold submitted a feasibility study, dated October 26, 2000 on the Sukari Gold Project, in accordance with the terms of the concession agreement. On November 4, 2001, Pharoah Gold was formally notified by EMRA that the feasibility study had been accepted and had demonstrated the existence of a “commercial discovery” at the Sukari Gold Project. Pharoah Gold and EMRA were required to establish an operating company to develop mining operations. Sukari Gold Mine was incorporated under the laws of Egypt on April 13, 2006, to conduct exploration, development, exploitation and marketing operations in accordance with the concession agreement. Centamin completed a feasibility study in 2007.

The first gold was poured in June 2009. The open pit was Owner-operated. Underground mining was initially performed by a contractor but is now Owner-operated.

A summary of the recorded production since modern mining operations commenced is shown in Table 5.1.

Table 5.1. Production summary for Sukari Mine (2009 to 2024).

Year	Tonnes milled (kt)	Grade (g/t Au)	Contained metal (oz Au)	Metallurgical recovery (% Au)
2009	3,612	1.37	67,101	87.0
2010	1,378	2.06	83,432	85.4
2011	3,612	1.90	202,699	85.3
2012	4,526	2.04	262,828	87.8
2013	5,684	2.12	356,943	88.5
2014	8,427	1.53	377,261	87.8
2015	10,575	1.40	439,072	88.8
2016	11,559	1.65	551,036	89.4
2017	12,032	1.57	544,658	88.1
2018	12,568	1.26	472,418	88.7
2019	12,859	1.28	480,528	88.1
2020	11,913	1.35	452,320	87.8
2021	11,916	1.18	415,370	87.6
2022	12,114	1.26	440,974	88.2
2023	12,019	1.26	488,928	88.7
2024	12,450	1.27	506,951	88.5
Total	***147,243***	***1.30***	***6,142,519***	***87.8***

6. Geological setting, mineralisation and deposit

6.1. Geological setting and mineralisation

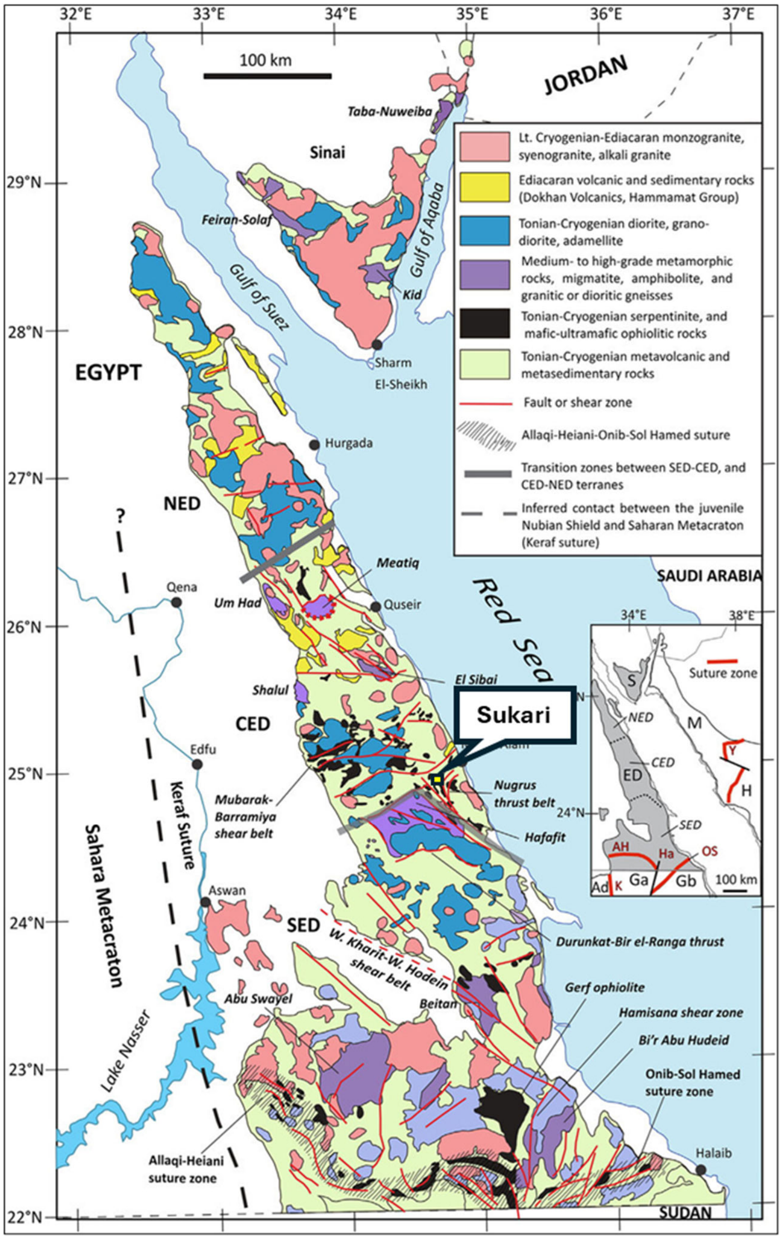
6.2. Regional and local geology

The Sukari deposit and exploration concessions are located in the Neoproterozoic (900-650Ma) Arabian Nubian Shield, one of a number of areas of African continental crust that accreted and stabilised during the Pan-African Orogeny.

Formation of the Arabian Nubian Shield took place during closure of the Mozambique Ocean between the East and West Gondwana continental blocks. Ocean closure led to amalgamation of numerous circa 870–625Ma juvenile arc and back-arc igneous and sedimentary rock sequences, with many resulting terrane sutures marked by mafic-ultramafic ophiolitic assemblages and fragments. The orogeny commenced at circa 650Ma, continued for approximately 100Ma, and included crustal shortening, lithospheric reworking, escape tectonics (i.e., the movement of rock layers to relieve pressure), and eventual orogenic collapse. Peak metamorphism was reached in different parts and depths of the orogen at different times between 620 and 585Ma. Magmatism was widespread during 650–580Ma, and rapid exhumation of the metamorphosed rocks and mid-crustal intrusions took place from circa 600 to 580Ma.

Regional fault sets that controlled much of the gold occurrences were related to initial transpression by oblique convergence between the arcs and associated with subsequent sinistral shearing reported as overlapping the exhumation. As existing geological data are not adequate to fully evaluate the overall terrane history, work by Zoheir *et al*. (2019) has subdivided the Eastern Desert into nine structural blocks, rather than arc terranes, commonly based on bounding shear zones and major faults (Figure 6.1).

Figure 6.1. Geological map of the Eastern Desert, Egypt.



Note: Figure sourced from Zoheir *et al*., 2019.

The greatest abundance of gold deposits is associated with the north-west-trending Najd Fault system that comprises many splays throughout the blocks in the central Eastern Desert, and underwent episodes of shearing at circa 640–570Ma. Significant deposits are also notably widespread along reactivated east-west thrust faults in the Allaqi-Sol Hamed block of the south Eastern Desert, with significant shearing at 610–580Ma.

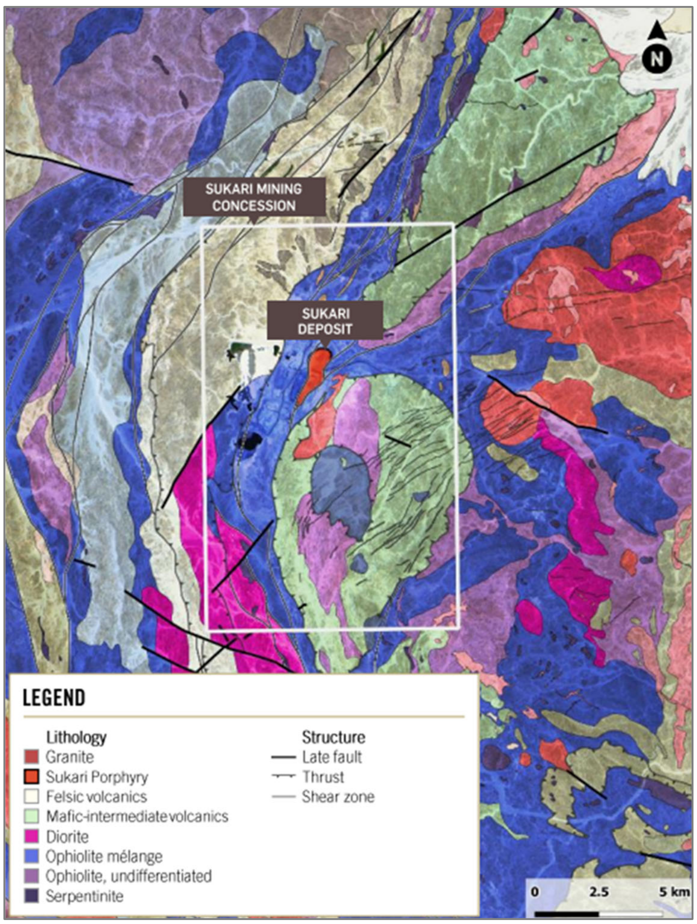
Sulphide mineralogy of the Eastern Desert gold-bearing veins is dominated by pyrite, arsenopyrite, and (or) pyrrhotite, in addition to subordinate chalcopyrite, sphalerite, galena and tetrahedrite. Alteration minerals include white mica, chlorite, and carbonate, and are typical of orogenic gold deposits. Many gold occurrences are located along sheared margins to granitic intrusions or along contacts between different lithologies; sheared silica- and carbonate-altered ultramafic rocks along many fault zones are particularly widely associated with many of the gold occurrences.

At a district scale, the host sequence of the Sukari deposit comprises a north-northeast striking mélange of predominantly calc-alkaline igneous rocks and metasedimentary units representing an accreted island arc or arcs. Several bodies of serpentinite, representing accreted slivers of highly deformed oceanic crustal rocks, occur in the hanging wall of the north-northeast striking, east-southeast verging, Sefein-Sukari thrust (Akaad, *et al*., 1993). This district-scale (circa 25km) structure is mapped as passing immediately to the east of the Sukari Gold Mine, where it separates rocks of the Um Khariga metapyroclastic unit (west of Sukari granitoid and enveloping serpentinite seen within the Nugrus Block) from the Sukari metavolcanic rocks (east of the Sukari Gold Mine). Vail (1983) assigns an age of 770-660Ma to rocks of the region. The entire sequence has undergone regional metamorphism to mid-upper greenschist facies.

6.2.1. Property geology

The Sukari granodiorite outcrop is located in an easterly-dipping sequence of andesite flows, serpentinites and associated volcanoclastic sediments, mainly tuffs and epiclastic rocks. It strikes for 2.3km and is 100m to 600m thick. Drilling to date indicates that the Sukari granodiorite dips toward the east at between 50° and 75°. The western and eastern contacts of the granodiorite are thus regarded as footwall and hanging wall contacts respectively. Granodiorite/wall rock contacts are, in places, vertical or overturned. The geology of the Sukari area is presented in Figure 6.2.

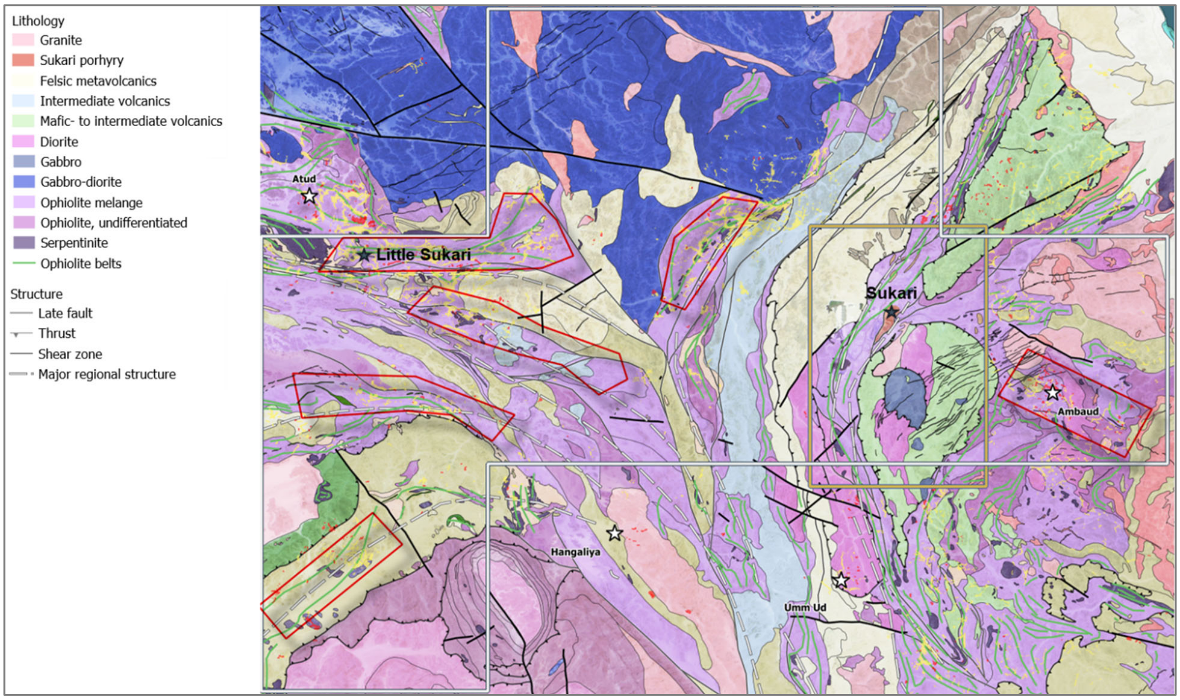
Figure 6.2. Geology of the Sukari area.



Note: Figure prepared by EDX, 2024.

The Nugrus Block, predominately located to the west of the Sukari mining concession hosts similar lithologies and has significant mineral potential. It is bordered by Atud to the north and the Hangaliya and Umm Ud deposits to the south, predominantly within ophiolitic sequences (Figure 6.3).

Figure 6.3. Geology of the Sukari and Nugrus Block area.



Note: Figure prepared by EDX, 2024.

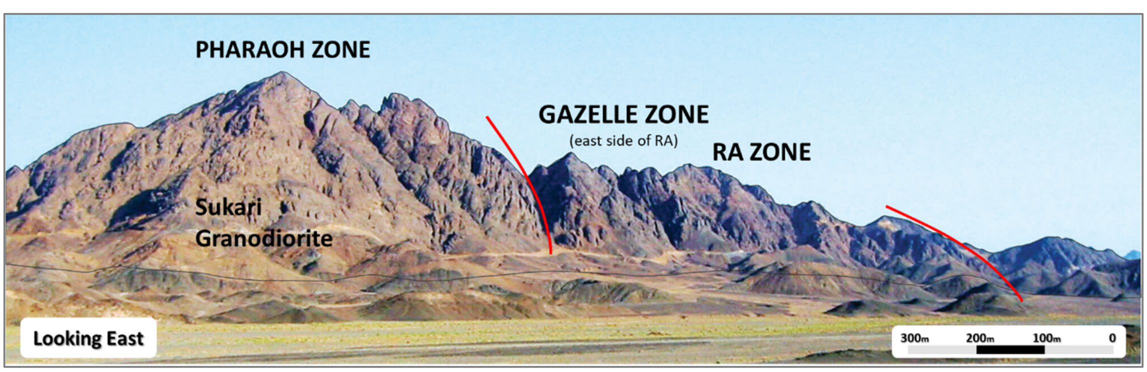
The northern part of the block is dominated by a Gabbro-Diorite complex, while the southern and eastern regions are characterised by granites. A large thrust outlier of mafic- to intermediate calc-alkaline volcanics, mostly andesites, occurs northeast of Sukari. The block also contains metasedimentary rocks, including volcano-siliciclastic and ultramafic units, along with felsic- to intermediate volcanics, which are observed on either side of the Nugrus shear zone and in the northwest-trending range of hills west of Sukari.

The geology of Nugrus includes granitoids and arc-related rocks, commonly hosted within ophiolite mélanges. Carbonate alteration is prevalent throughout the block, indicating significant hydrothermal activity.

Mineralisation within the Nugrus Block is primarily constrained to structural high-strain corridors trending east-west and north-south, highlighting the importance of deformation zones in localising gold and associated mineralisation.

The original Sukari area was designated by four geographical zones namely the Amun, Ra, Gazellittle, and Pharaoh Zones from south to north respectively (Khalil *et al.*, 2015), as shown in Figure 6.4.

Figure 6.4. Sukari Hill and geographical zones, viewed from the north-west.

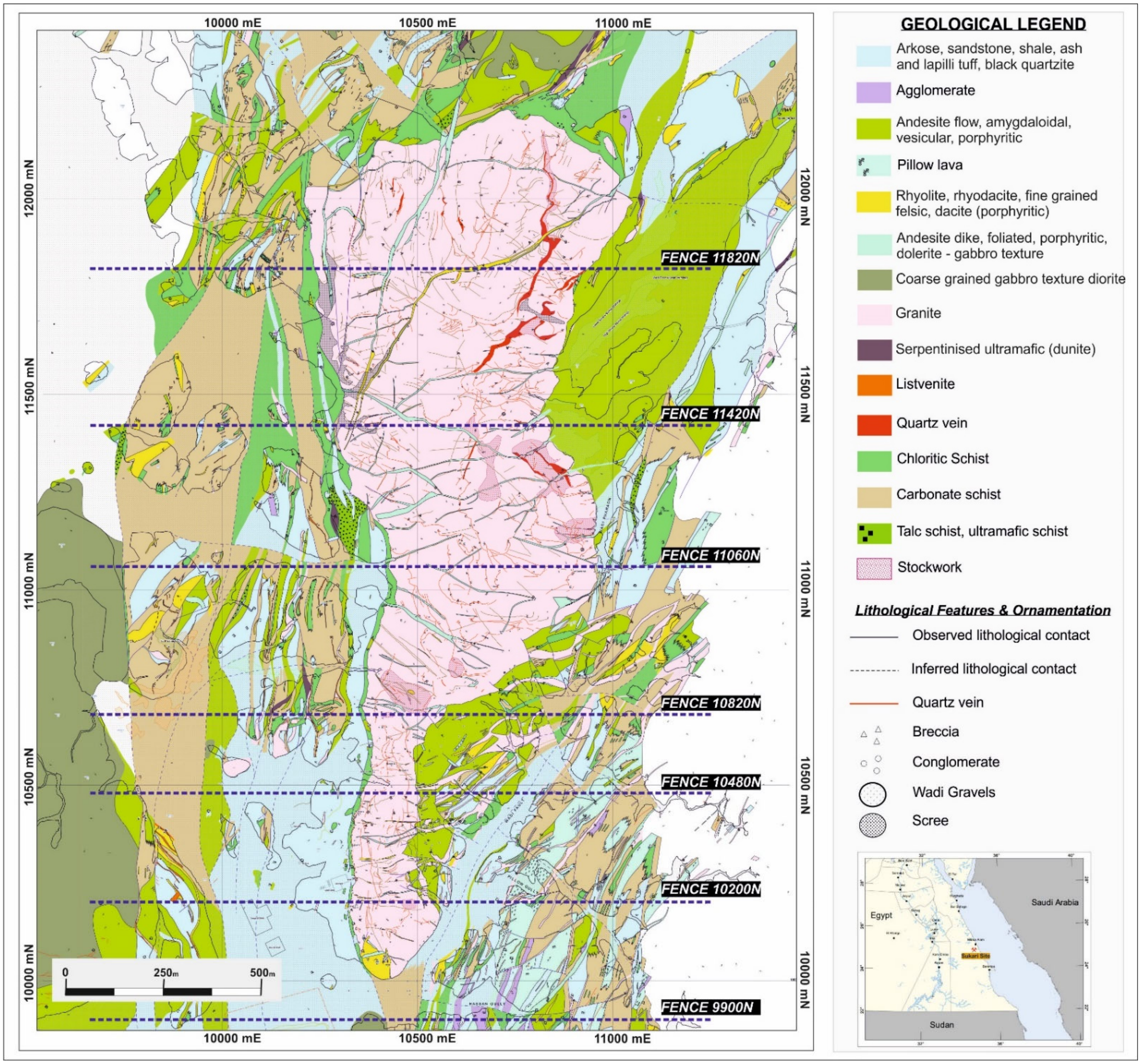


Note: Figure sourced from Khalil *et al.*, 2015. Red lines are fault planes.

The initial geological interpretation suggested that the hanging wall sequences comprised a mixture of serpentinite, meta-conglomerate, fine-grained metasediments, minor basalt and granodiorite dykes or sills. Drill hole logging clearly defined the hanging wall sequence as metasediments (i.e., lapilli and ash tuffs). Surface exposures indicated that these rocks were strongly deformed. It is reasonable to assume that the granodiorite dykes in the hanging wall sequence were genetically and temporally related to the main Sukari granodiorite. The footwall sequence was devoid of granodiorite dykes. This potentially indicated that the entire sequence was overturned as it would be reasonable to expect subsidiary or feeder dykes in the footwall of the main intrusion rather than the hanging wall.

From 2021, an intensive relogging programme commenced, covering the entire Sukari deposit on 25m sections. The programme started with seven typical sections (Figure 6.5) on 200–400m centres through the Sukari granodiorite system to obtain a basic framework.

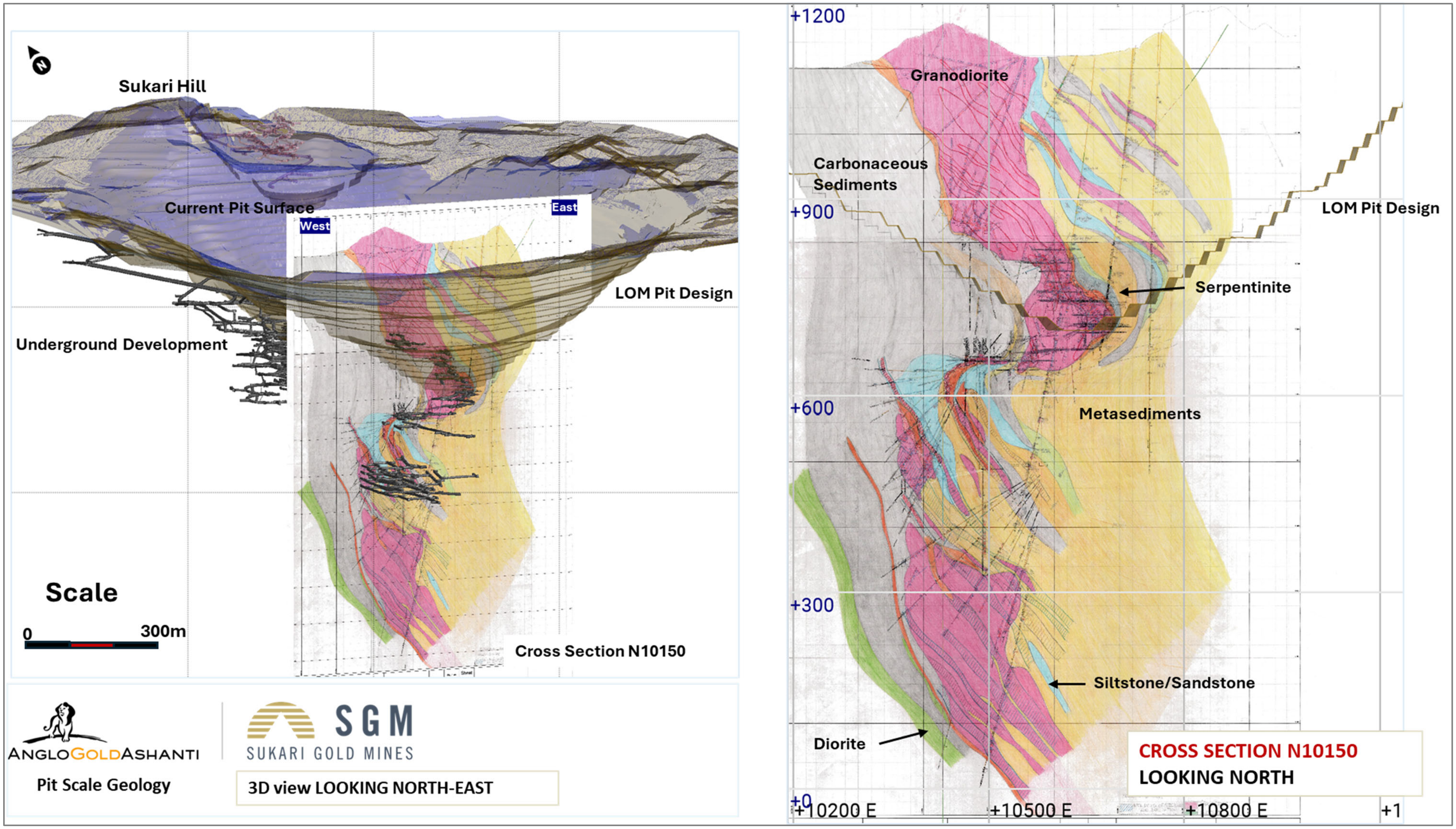
Figure 6.5. Map of Sukari geology and original relogging fences.



Note: Figure prepared by Sukari Gold Mine, 2021.

This was subsequently infilled over a 16 month period with 108 infill sections completed. An example of the results is illustrated by Horus-Section_33-10200N (see Figure 6.6), which was specifically aimed at defining the hanging wall and the footwall geological sequence with different intrusion events, determining the relative age of dykes, determining the geological control of mineralisation and defining potential mineralisation extensions.

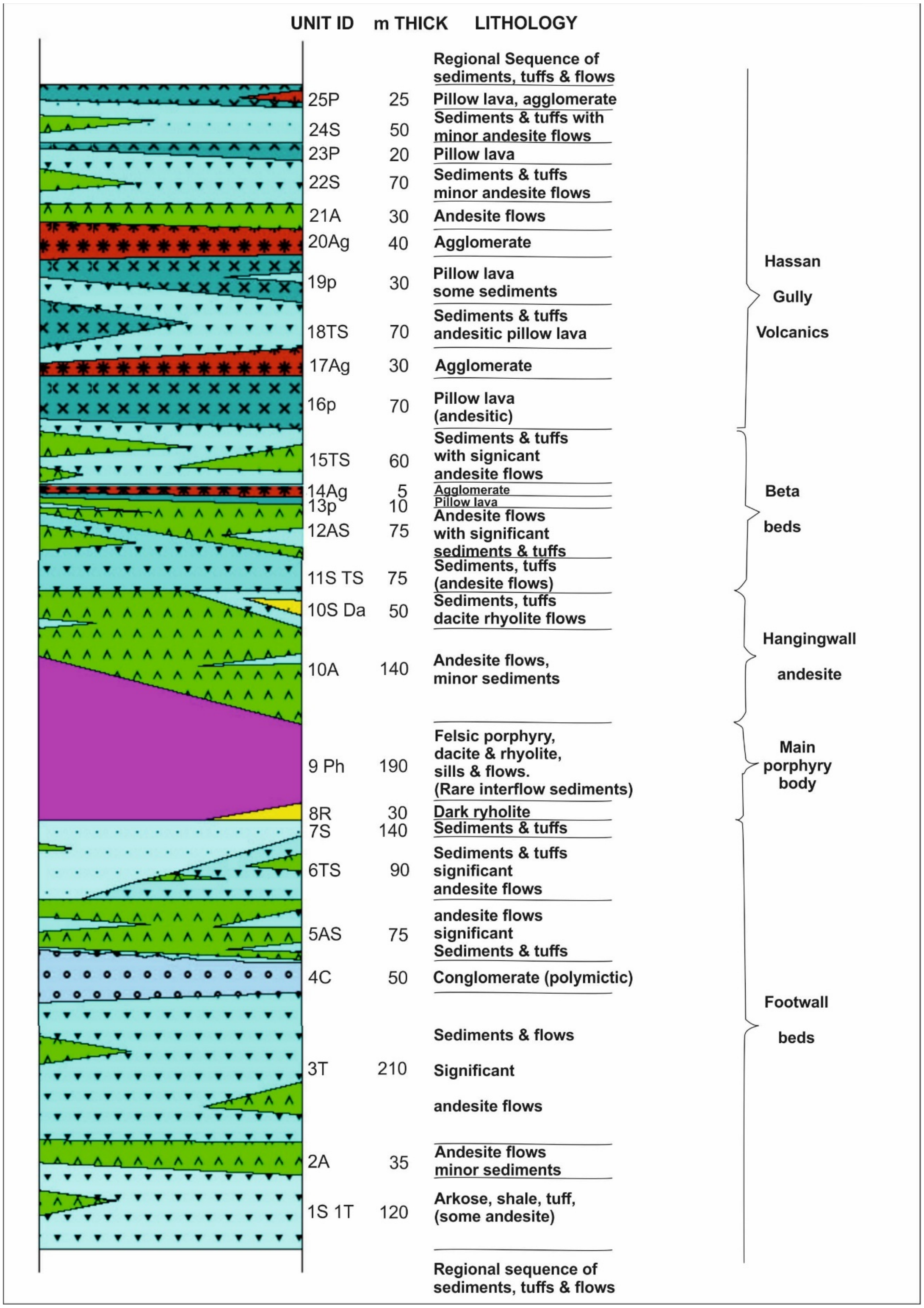
Figure 6.6. Geological cross-section - Horus Fence 33, 10200N.



Note: Figure prepared by Sukari Gold Mine, 2024. Section looks north.

Figure 6.7 illustrates the stratigraphic column across the Sukari mélange, while Table 6.1 presents a tabulated sequence, listing the youngest units at the top along with their thicknesses as mapped by Cavaney (2004). Although faulting complicates the geological setting, a general stratigraphic framework can still be established for the region. Similar lithological units are also observed at Nugrus.

Figure 6.7: Stratigraphic column for Sukari Gold Mine.



Note: Figure sourced from Cavaney, 2004.

Table 6.1. Stratigraphic interpretation for Sukari Gold Mine (Cavaney, 2004).

UNIT ID	LITHOLOGY Sediments, tuffs, andesite flows	THICKNESS metres MAX	AV	COMMENTS Regional sequence to east	GROUPING Av.thickness
25P	Pillow lava (andesitic), some agglomerate	40	25		Hassan Gully Beds 445m
24S	Sediments & tuffs, minor andesite flows	70	50		
23P	Pillow lava (andesitic)	30	20		
22S	Sediments & tuffs, minor andesite flows	100	70		
21A	Andesite flows	60	30	Pinches & swells	
20Ag	Agglomerate	70	40	Pinches out to north	
19P	Pillow lava (andesitic), some sediments (15m)	90	40	Pinches out to north	
18TS	Sediments, tuffs (andesite flows, pillows)	160	70	Thickens to north	
17Ag	Agglomerate	55	30		
16P	Pillow lava (andesitic)	75	70	Main pillow lava	
15TS	Sediments & tuffs, significant andesite flows	110	80	Thicker to north	Beta beds 240m
14Ag	Agglomerate	12	5	East of Amun	
13P	Pillow lava (andesitic)	15	10	East of Amun	
12AS	Andesite flows, significant sediments & tuffs	80	70		
11S 11TS	Sediments, tuffs, (andesite flows east of Amun)	200	75	Thinner to south	
10SDa	Sediments & tuffs with dacite flows	65	50	Pinches out to south on 10A	Hangingwall andesites
10A	Andesite flows, minor sediments	220	140		
9Ph	Porphyry sills & flows	450	190	(fault repetition)	Porphyry Sequence
8R	Dark rhyolite	50	30	Part 9Ph	
7S	Sediments & tuffs, minor andesite flows	200	140	Part encloses 6TS	Footwall beds 720m
6TS	Sediments & tuffs, significant andesite flows	130	90	Lens part equivalent to 7S	
5AS	Andesite flows, significant sediments & tuffs	120	75		
4C	Polymictic conglomerate (epiclastic)	130	50	Carbonatised, facies within 3T	
3T	Sediments & tuffs, significant andesite flows	270	210	Carbonatised	
2A	Andesite flows, minor sediments	90	35		
1S (1TS)	Arkose, shale, tuff, (some andesite)	180	120		
	(Sediments, tuffs, andesite flows)	-	-	Regional sequence to west	
	Cumulative thickness of Sukari units	3000	1800		1400m

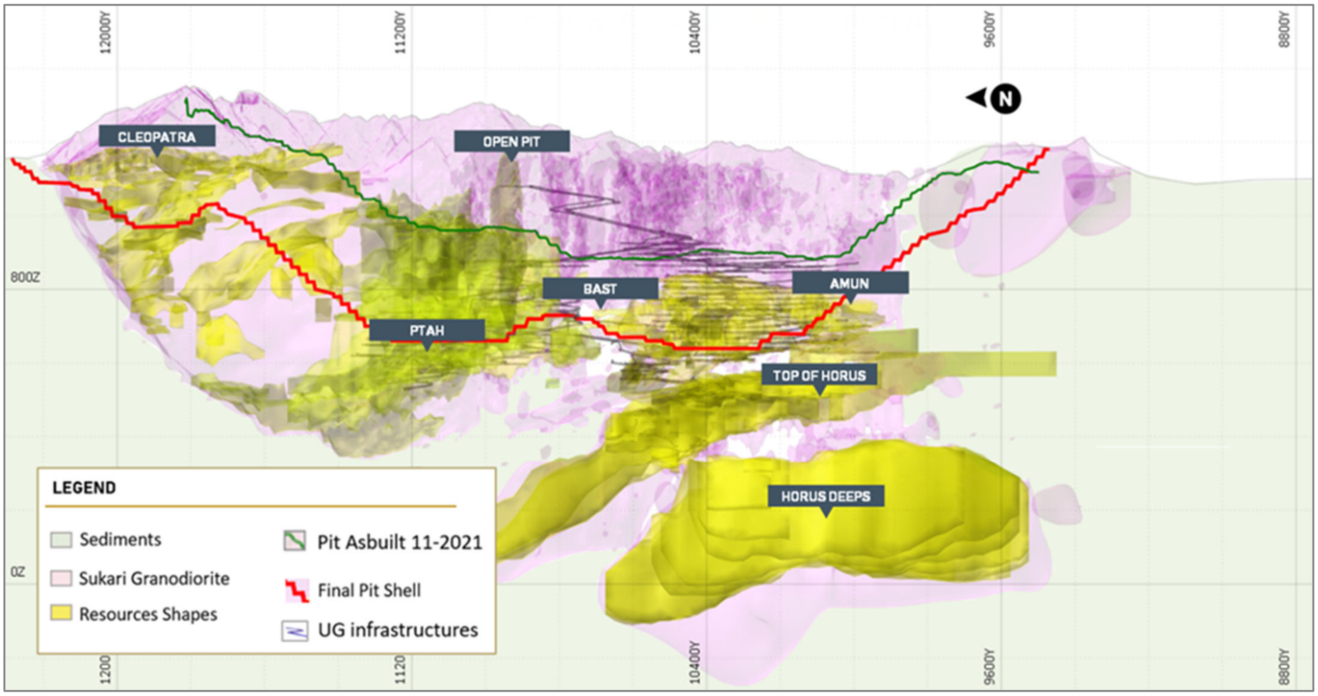
Note: ID: identity; Max: maximum; Av: average; m: metres.

6.3. Deposit descriptions

Geometry

The granodiorite host for the mineralisation has a strike length of approximately 2.3km, and ranges in thickness from 100m in the south to approximately 600m in the north. Gold mineralisation is not continuous. Gold deposition was influenced by major long-lived structures, the most important of which are tabular sheets of crackle breccia found on the east and west contacts of the granodiorite hosting >1g/t Au. The high-grade Main Reef and Hapi Reef (Amun Zone) are the major areas of brecciation. The lower grade material (<1g/t Au) found predominantly within the open pit is associated with disseminated sulphides throughout the southern, narrower portion of the granodiorite. The Cleopatra Zone to the north is made up of two extension quartz vein zones (30cm quartz veinlets hosted by granodiorite; 5-20m wide; 350-400m long) dipping shallowly (32°) to the northwest (dip direction: 316°) grading 1-1.5g/t Au with limited migration of gold into the country rock. Figure 6.8 illustrates the overall shape and size of the granodiorite host and the geometry of the different ore zones.

Figure 6.8. Long section showing the geometry of the granodiorite (pink) system and different ore zones (yellow).



Note: Figure prepared by Sukari Gold Mine, 2024. UG: underground.

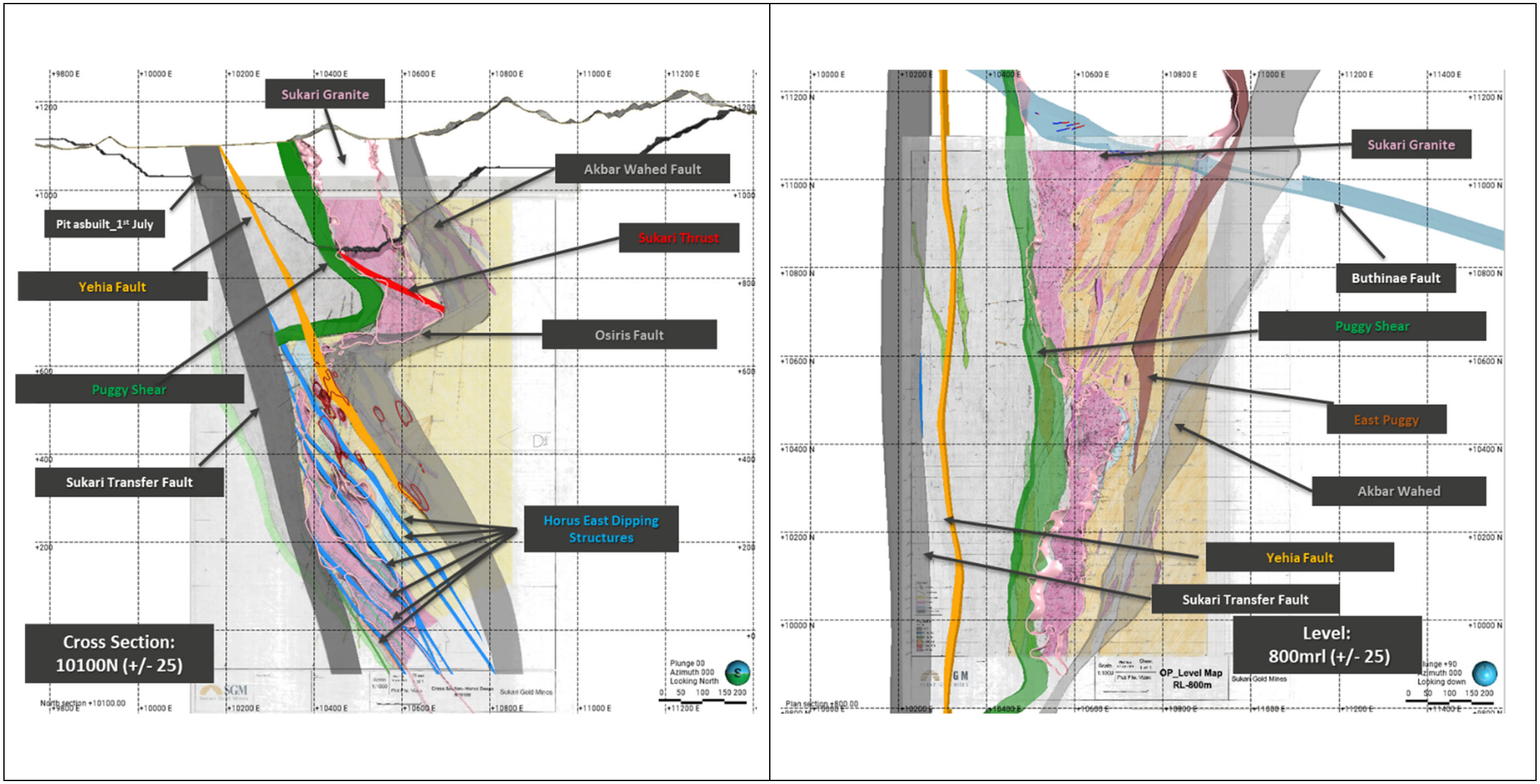
Structure

The Sukari deposit architecture and gold mineralisation are strongly influenced by two major deformation events (D1 and D2) and two principal periods of fluid flow. The D1 event, associated with subhorizontal east-west shortening, created a major permeability framework that later accommodated the deposition of multiple alteration and veining episodes, including the milky white veins hosting gold mineralisation.

The emplacement of the Sukari granodiorite along the contact of the melange and metavolcanoclastic rocks, occurred early during the D1 event. This intrusion resulted in strong strain partitioning and intense strain accumulation at the pluton margins. Following a tectonic hiatus, the D2 event involved subvertical shortening and reactivated the D1 permeability framework. This led to the emplacement of several vein stages, with the final stages of structural development involving a gold-sulphide overprint.

The geometries of low-dipping structures, such as the Osiris Fault, can be explained by D2 rotation of early-formed D1 structures (Figure 6.9).

Figure 6.9. Cross section 10100N (right) and level plan 800mRL (left) highlighting the deposit-scale structural architecture.



Note: Figure prepared by Sukari Gold Mine, 2024.

The primary structural features observed in the mine area and displayed in Figure 6.9 are characterised by complex shearing, faulting, folding and structural convergence, which significantly influence gold mineralisation and alteration patterns.

A key observation is the shearing along the western contact of the Sukari granodiorite. This shearing is associated with a dominant, north-south trending set of stacked shear zones that are both confined to and proximal to the granodiorite body. Notable structures within this shear set include the Sukari Transfer Fault, the Puggy Shear, and a series of east-dipping Yehia-parallel structures. These shears play a crucial role in controlling mineralisation by facilitating fluid flow and deformation within the host rock.

Another significant structural feature is the shallowly west dipping Osiris Fault, which converges with the Akbar Wahid Fault. The Akbar Wahid Fault encircles and displaces the base of the Sukari pluton, defining what is known as the Keel Zone. The interaction between these major fault systems is believed to be integral to the structural evolution of the deposit, influencing both the geometry and distribution of mineralised zones. Kinematic indicators from underground exposures show top block north with a 30° plunge to the north.

In addition to these primary structures, several east-west trending transverse faults are present across the mine area. These faults exhibit both north- and south-dipping orientations, show a history of reactivation and are interpreted as pre-mineralisation structures. They play a compartmentalising role by segmenting zones of gold mineralisation and alteration. These transverse faults are associated with D1 deformation events and exhibit north-south directional extension.

A distinctive characteristic of these transverse faults is their supergene enrichment and kaolinite-filled fault planes, which indicate post-mineralisation weathering processes. Examples include the Buthanie and KF Fault (Kaolinite Faults), as illustrated in Figure 6.8. These kaolinite-rich zones may also represent pathways for late-stage hydrothermal fluids, further influencing the mineralisation patterns observed at Sukari.

Mineralisation controls

Gold mineralisation is structurally controlled, with the southern end of the Sukari granodiorite containing the highest grades. The first-order structural control is steep shear zones found mainly on the contacts of the granodiorite. The second-order control is a shallow angle short shear, parallel to bedding. The third-order control is early east/west trending, north- and south-dipping transverse faults. Gold mineralisation is late and post-dates these structures. The structures were subsequently filled by andesitic dykes or altered to kaolinite.

Gold mineralisation is found within quartz veins, breccia, and shears, and hosted within disseminated sulphides and sulphide veinlets within stacked extensional veins.

Vein geometry

Quartz veins and veinlets are commonly found intruding the granodiorite and the metavolcano-sedimentary association and form a fissure-filling system. The quartz veinlet thicknesses vary between few millimetres up to 10-20m. Quartz veins are grouped into three sets of orientations:

- East-west (older).
- Northwest-southeast (younger).
- Northeast-southwest.

The Main Reef vein strikes 20–30° northeast and dips 25–50° southeast. It attains a thickness of 2.5m at the upper level, and is composed of massive, milky-white quartz with sulphides. In the northeast-southwest directions, the mineralised zones are located along shear fractures paralleling the contact between the metavolcano-sedimentary country rocks and granodiorite. It consists of the main northeast auriferous quartz veins, accompanied by a series of subparallel contiguous veinlets and offshoots forming a vein system.

The Sukari Main Reef and Hapi Reef are the most significant mineralised features in the high-grade Amun Zone. The Sukari Main Reef is a 0.2-2m thick quartz reef with massive, laminated, and breccia habit, while the Hapi Reef comprises a zone of stockwork quartz veins and stylolitic quartz, sulphide and sericite veins, as well as through-going laminated and massive quartz reefs.

The most conspicuous feature of the mineralised granodiorite is the intensive hydrothermal alteration of the country rocks on both sides of the mineralised veins. Brecciated veins consist of brecciated vein quartz and granodiorite rock fragments or granodiorite fragments in a matrix of vein quartz ±sulphides ±hematite. Shear veins appear to be rare, whilst extensional veins are distinguished by their short strike lengths and normally form stacked arrays between thin linking shears.

The orientation of the shear zones, not the extensional veins, indicates the large-scale direction of continuity of a stacked vein array that is commonly arranged *en-echelon*.

Sulphides

Gold mineralisation is intimately related with sulphides; pyrite is the most abundant sulphide, followed by arsenopyrite. Higher gold grades are associated with increased arsenopyrite concentration. The sulphides, occur as fine grained, subhedral disseminations in altered granodiorite and as blebby sub- to euhedral crystals and finer disseminations in quartz veins, fractures and breccias. Pyrite is found in all the mineralised zones.

Arsenopyrite is most common in the zones of higher-grade gold mineralisation, notably in the Main and Hapi Reefs, and breccias. Arsenopyrite is less abundant in the stacked extensional zones and minor quartz veins.

Pyrite and arsenopyrite exhibit deformation and even brecciation textures, whilst younger, native gold fills stringers and tiny holes in this deformed pyrite and arsenopyrite. Other sulphides such as galena, chalcopyrite, sphalerite, pyrrhotite have been noted. Sphalerite is sometimes a significant sulphide mineral. Abundant exsolved chalcopyrite bodies are randomly distributed in the sphalerite host. The sphalerite-chalcopyrite association seems to be filling and replacing the older pre-existing pyrite.

Gold

Visible gold occurs as anhedral grains in milky-white extensional and breccia quartz veins and as intergrowths with pyrite and arsenopyrite, commonly in narrow shear veins at quartz vein margins and margins to clasts in hydraulic quartz vein breccias.

High-purity gold commonly occurs free in quartz and anhydrite veining, on the margins of pyrite and arsenopyrite crystals, and as microfracture fillings. Gold is fine grained and ranges from 1μm to 40μm.

Alteration

The intrusion-hosting intermediate andesitic volcano-sedimentary rocks have generally been altered to a carbonate (ankerite, calcite)-silica-sericite-chlorite assemblage.

The granodiorite itself has undergone varying degrees of alteration, including silicification, sericitisation, carbonatisation, albitisation and more advanced kaolinisation. Sericite and silica are the most prevalent alteration products, closely associated with shears and stockworks. The extent of granodiorite alteration corresponds to the intensity of the extensional veins and their proximity to major shear structures This often manifests as a zonal alteration halo encircling breccia-quartz vein-shears, characterised by a central zone of intense kaolin-sulphide-sericite alteration, transitioning to a sericite-silica ± albite intermediate zone, and further outward to a weaker sericite-silica-carbonate environment.

Silica, sericite, and carbonate alterations are pre- to syn-mineralisation, with gold mineralisation spatially associated with phases of silica, kaolin, sericite, and sulphides.

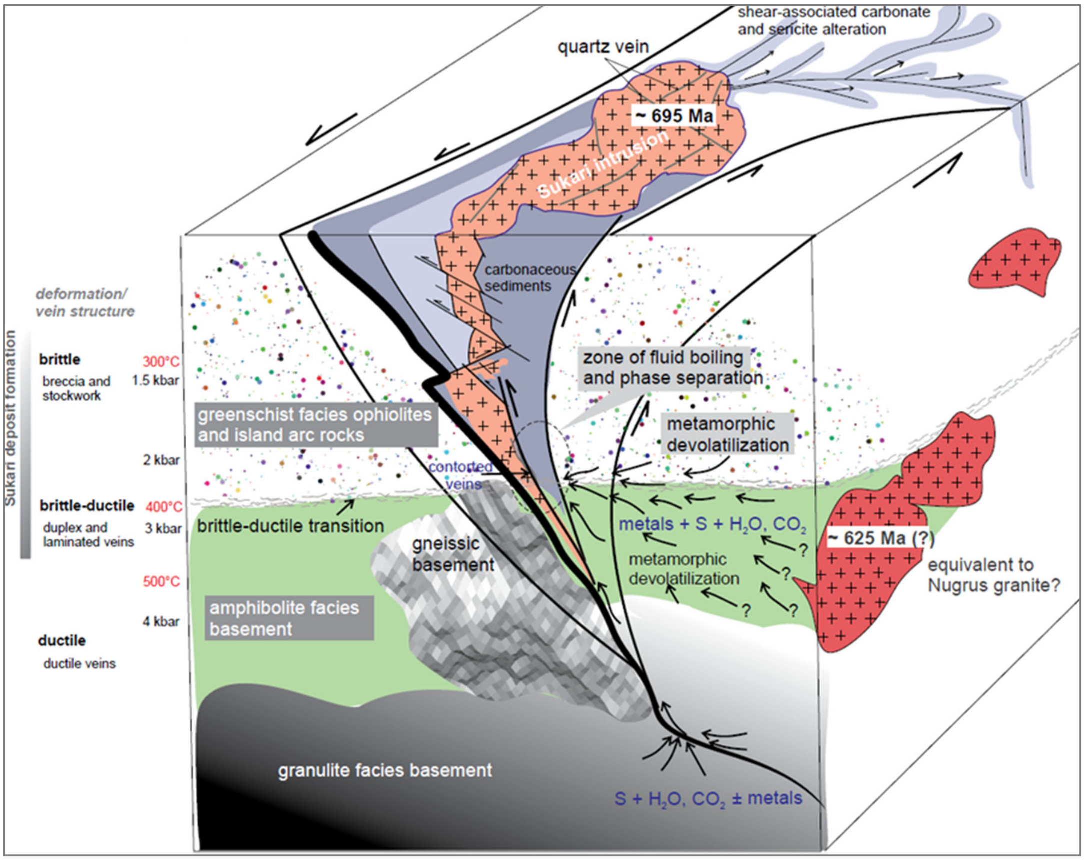
Sericite occurs in all granodiorites as well as in shears, as vein selvedge, veins, and blebby masses. Kaolinite alteration occurs along shear and fracture zones such as the Main Reef, but its occurrence is not consistent along these structures. The alteration is distinctly white, clayey to sandy (from resistant quartz grains in clay matrix), hosted in bleached rock, and is associated with strong fine-grained pyrite and elevated gold grades. Poor core recovery is common in these zones. Dissolution textures and vuggy cavities in the granodiorite where acidic fluids have dissolved minerals (mainly carbonates) are common. This indicates a late acidic fluid that has selectively penetrated shears and either deposited gold directly from the fluid, or perhaps remobilised it.

6.4. <u>Deposit types</u>

The mineralisation at Sukari exhibits characteristics of an orogenic gold deposit, which generally forms at crustal depths between 3 and 15km and is commonly associated with regional-scale fault zones or shear zones. These deposits originated from metamorphic fluids, derived either from metamorphism of intra-basinal rock sequences or de-volatilization of a subducted sediment wedge. Formation occurs during the transition from a compressional to transpressional stress regime, prior to orogenic collapse (Groves *et al*., 2018).

A conceptual genetic model of the formation of the Sukari gold deposit is shown in Figure 6.10.

Figure 6.10. Conceptual genetic model of the Sukari gold deposit.



Note: Figure sourced from Zoheir *et al*., 2023.

The geological concepts being applied, and forming the basis of the exploration programme, centres around the orogenic gold model and the shear-hosted nature of the deposit. The Qualified Person considers that an orogenic gold model is appropriate to guide exploration vectoring.

7. Exploration

7.1. Nature and extent of relevant exploration work

Sukari is a producing mine, and exploration is now dominated by drilling. Other exploration methods applied at the mine have included:

- Gridding and traversing carried out at 1:10,000 scale.
- Mapping at 1:500 scale (Amun Zone) and 1:1,000 scale.
- Trenching and channel sampling within cut trenches, undertaken mainly within zones of intense silicification and sulphidisation. Total length of trenching was 1,143m.
- Channel sampling from historical underground workings. A total of 982 samples were submitted for analysis.
- Auger sampling across two heaps of tailings on a 10m x 10m grid to a maximum depth of 1m. A total of 327 samples were taken for gold analysis.
- Rock chip sampling initially on 160m spaced lines with some supplementary infill lines. In addition, dykes, quartz veins and zones of hydrothermal alteration were grab-sampled. Later rock chip sampling was undertaken on 100m spaced lines and samples were approximately 1m to 2m in length.
- Regional sampling and prospecting comprising rock chip and channel sampling at various small mines in the vicinity.
- Heavy mineral sampling at various suitable sites in wadis.
- Airborne geophysical surveys.

Exploration work conducted at Nugrus included:

- An initial desktop prospectivity assessment to identify camp-scale targets by analysing historic gold occurrences, regional geology, and the Sukari structural model.
  - Lithostructural interpretation using Landsat and Sentinel-2 imagery defined ophiolitic-decorated sutures and high-strain mélanges with listvenite beds.
  - Machine learning successfully identified artisanal mining activity.
  - Satellite spectral mapping, focused on clay alteration intensity and potassic granitoid signatures, with the deposit which has been call Little Sukari appeared as key anomalies.
  - A gold source area map and geochemical orientation studies further refined exploration targets, with all findings undergoing ground-truthing.
  - Geological maps identified ophiolite sequences to the north at Atud and south at Hangaliya and Umm Ud. These were the same rock sequence seen at Sukari.
- A bulk leach extractable gold regional screening programme was conducted at a nominal density of 1 sample per 2 km² collected from shallow trenches across wadis. A total of 750 samples were collected with gold analysis performed via bulk leach extractable gold at Bureau Veritas Perth and multi-element analysis at ALS Loughrea, successfully identifying known areas exceeding 5 ppb Au.
- Following the bulk leach extractable gold results, soil sampling grids were implemented to fast-track early drill targets, primarily at artisanal mining sites, for potential ore trucking to the Sukari processing plant. Gold, behaving as detrital particles, was sampled in 200 x 50m grids, with 3–5 pits per location at 30cm depth to collect 1kg of -1mm regolith soil. Samples were wet sieved to 150g (-170µm) for Au and pXRF analysis, with fire assay at ALS Ireland. A total of 17,500 soil samples were collected. Geologists undertook line mapping and chip sampling, complemented by rock chip grids around artisanal mining areas, and prospect mapping to refine targets.
- In 2023, drill testing was conducted across eight targets in the Ambaud and Atud South areas, including Little Sukari, Umm Majal, Umm Shaw, and Wadi Marwah. The results were subsequently released to the market.
- Geological mapping and ground induced polarisation were conducted at Little Sukari, followed by follow-up drilling. Ongoing geological mapping continues over three prospects in the Atud South (north-west Nugrus Block) area. A detailed relogging and geological framework for Little Sukari have been established. Preparations for lab procurement and infrastructure are underway, alongside internal resource modelling and pit optimisation for Little Sukari.

7.1.1. Grids and surveys

The Sukari Mine employs two main grid systems, which are:

- Local mine grid system (Surpac): as a standard, the mine maintains and keeps all its open pit and underground plans in this local mine grid system.
- National Grid System (UTM WGS84 Zone 36N): the Sukari Gold Mine maintains all its surface plans in this grid system. For both underground and surface plans to be submitted to EMRA per statutory requirements, the mine submits them in the UTM WGS84 Zone 36N coordinate system.

With reference to figures displaying local grid coordinates the transformation calculation from UTM WGS84 Zone 36N to local grid is outlined in Table 7.1. The relative level remains the same.

Table 7.1. Coordinate transformation between UTM WGS84 Zone 36N and the Sukari Local Grid.

	UTM WGS84 Zone 36N	Sukari Local Grid
Northing	2759995.158	10000.000
Easting	672647.134	10000.000
Rotation	-	-21.757374769
Scale	-	1.00008715

For topographic surveys, the mine works in the National Grid System. The mine works within a vertical accuracy of 0.015m and 0.020m for global positioning system (GPS) instrument surveys. For engineering surveys, work is done within higher tolerable accuracies per engineering specification (≤4mm).

Activities conducted within the Nugrus Block (mapping, sampling and drilling) also use the national grid system - UTM WGS84 Zone 36N.

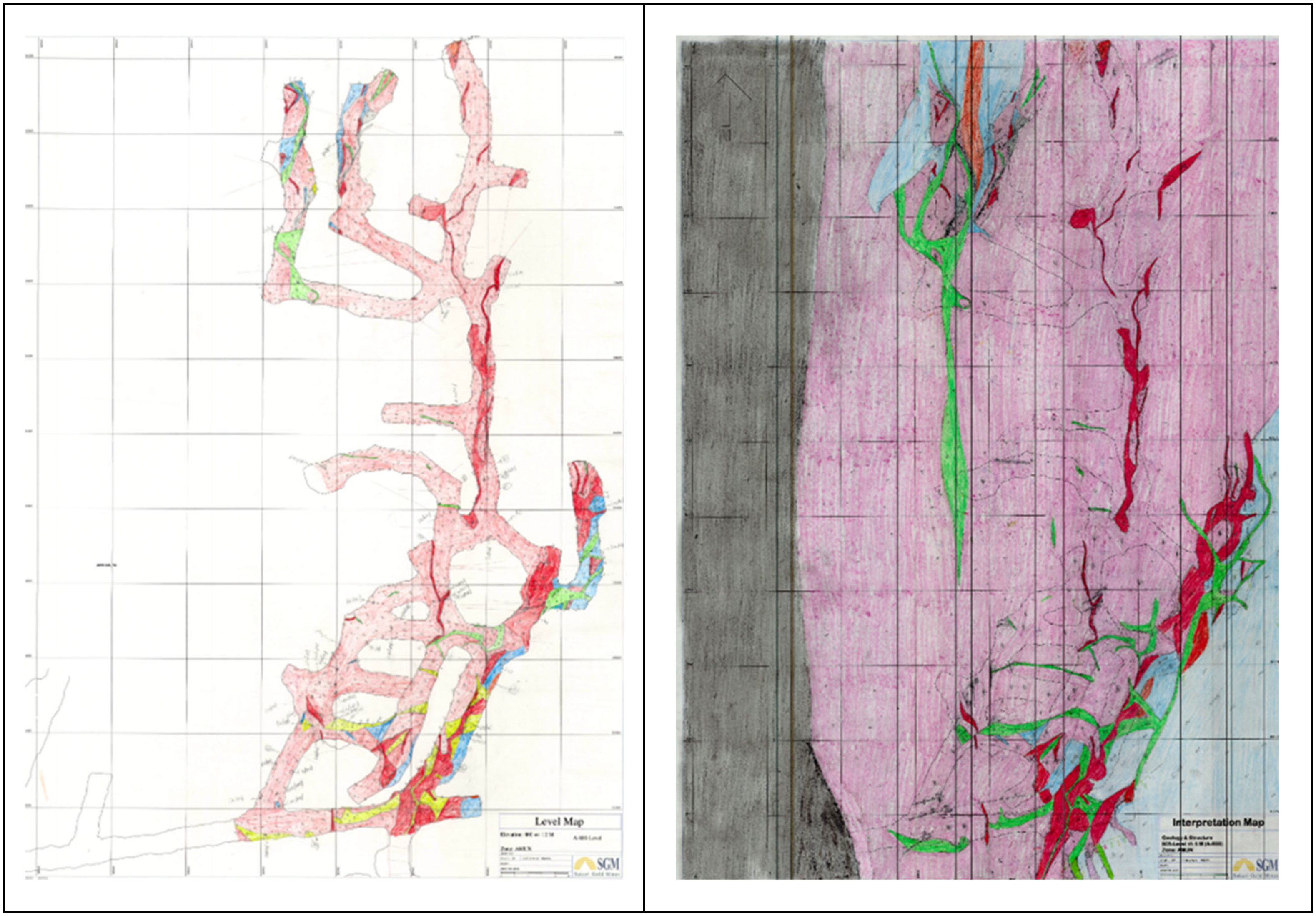
7.1.2. Geological mapping

The mapping programmes integrate regional-scale gridding and traversing at 1:10,000 with detailed geological studies to define structural and lithological controls on mineralisation. A focused mapping campaign on Sukari Main Hill and Little Sukari (Nugrus Block), conducted at 1:500 and 1:1,000 or 1:2000 scales, refined the geological framework of the orebodies, particularly investigating the granodiorite and its surrounding country rocks at a local scale. These country rocks include serpentinites, carbonaceous metasediments, volcaniclastic metasediments, and metasediments within both the hanging wall and footwall domains. Detailed surface mapping identified key features such as quartz veining patterns and alteration halos within the Sukari and Little Sukari granodiorite, linking them to fluid pathways and gold enrichment across the deposit surface.

Current open pit mapping at Sukari follows a systematic approach, covering all exposed pit walls—north, east, south, and west—at scales of 1:500 and 1:250 in structurally-complex areas. This detailed mapping captures lithological contacts, fault geometries, alteration assemblages, and quartz vein networks. The 1:500 scale mapping enables precise documentation of vein density, orientation, and cross-cutting relationships, which are critical for understanding fluid overprinting and mineralisation timing. Additionally, it identifies alteration halos, including silicification, sericitization, and sulphidation proximal to veins.

Underground mapping (Figure 7.1.) is conducted at 1:500 scale to record in sufficient detail and frequency lithological contacts, fault/shear/brecciated zones, quartz veining, and mineralisation.

Figure 7.1. An example of a geological plan and interpretation showing lithological and structural domains at Sukari.



Note: Figure prepared by Sukari Gold Mine, 2021. Amun Level 800mRL mine grid scale – 1:500.

Real-time integration of pit-wall and underground data into 3D geological models enhances the accuracy of resource delineation, particularly in zones beyond the Sukari granodiorite, within both the hanging wall and footwall domains. This process also helps mitigate operational risks where geotechnical concerns exist. These mapping activities ensure continuous refinement of 3D geological and structural models, maintaining a robust understanding of the orebody.

Data recorded from mapping are then plotted on 1:500 scale geology plan and incorporated into the geological modelling process. A similar process is being conducted at Little Sukari within the Nugrus Block. Mapping activities are carried out by experienced and qualified geologists.

7.1.3. Geochemical sampling

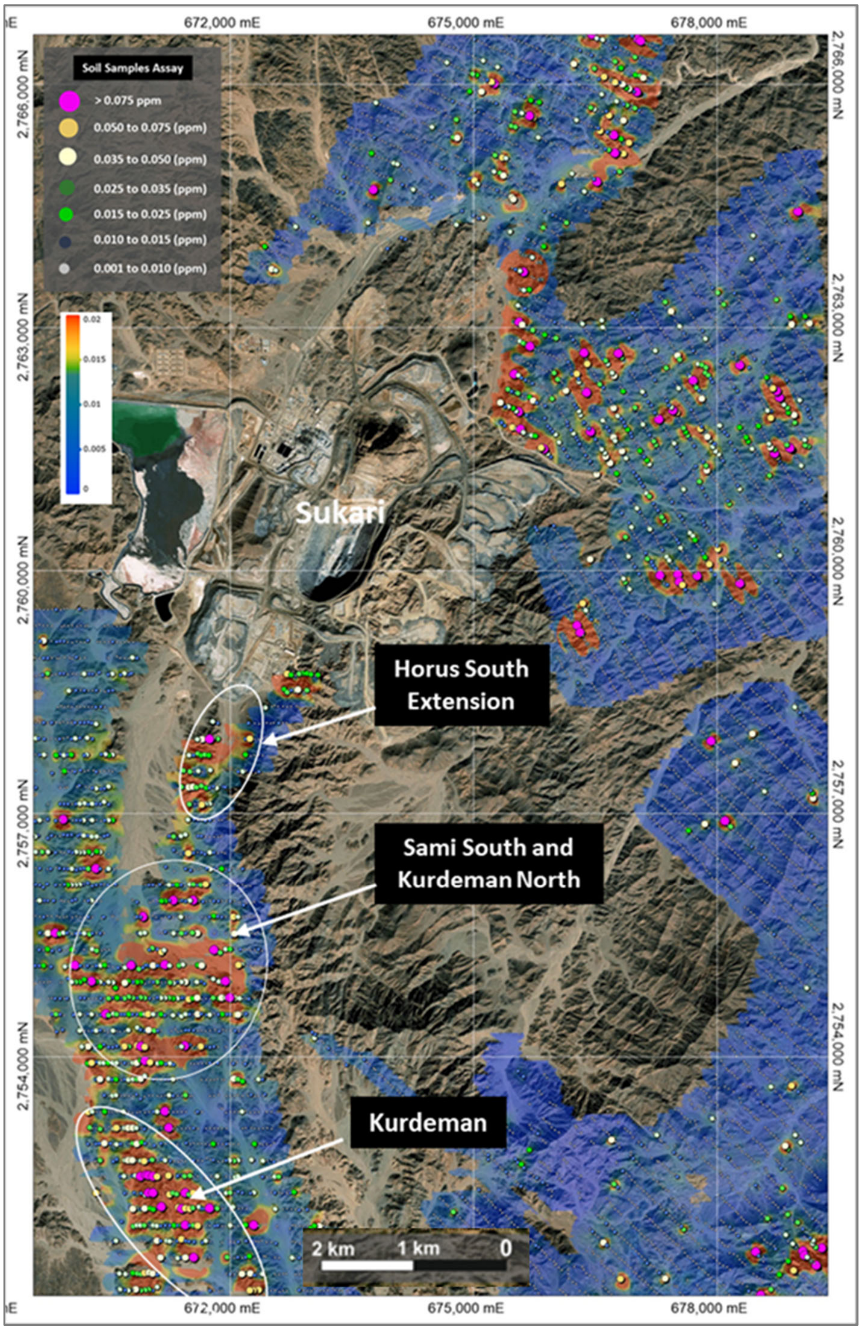
Extensive soil sampling programmes across Sukari and the Nugrus Block has been undertaken since acquiring the licenses. A bulk leach extractable gold wadi sediment survey was conducted in 2012, covering the 160km² concession with 226 samples at a density of 1.4 samples/km². The results highlighted known mineralised zones, including Sukari Gold deposit, Quartz Ridge, and Kurdeman, with no significant new anomalies.

Rock chip sampling was carried out in phases between 2008–2016, with 4,666 systematic samples (400 x 100m grid) and an additional 41,255 samples from targeted gold prospects. These confirmed known deposits and identified new exploration targets.

A soil geochemistry program between 2021–2023 collected 7,315 samples across 50% of the concession on a 200 x 50m grid, refining drill targets. The 80-mesh fraction proved the most effective for detecting low-level gold anomalies.

Combined, this work generated 32 prospects with 14 of these having a length of >400m. Figure 7.2 shows the results of the soil sampling work completed at Sukari.

Figure 7.2. Sukari licence, soil sampling results.



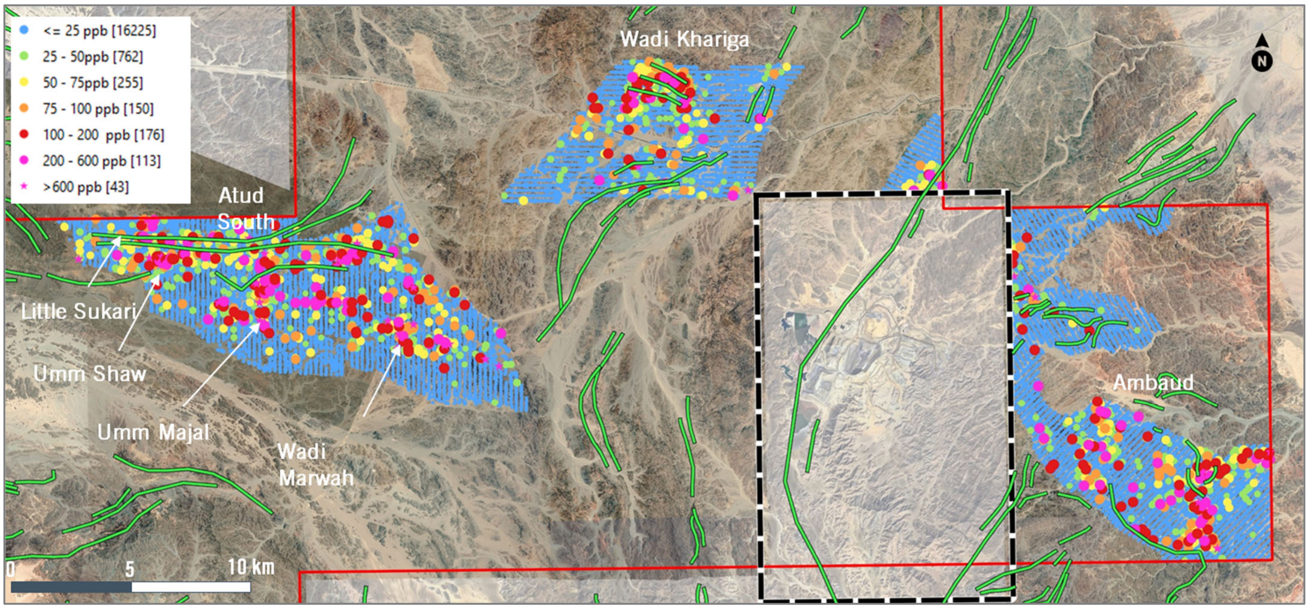
Note: Figure prepared by Sukari Gold Mine, 2022. ppm: parts per million.

Exploration activities at the Nugrus Block commenced in Q2 2022 with a bulk leach extractable gold regional screening program designed to rapidly distinguish between barren and mineralised zones. Sampling was conducted at a density of one sample per 2km². A total of 741 bulk leach extractable gold samples were collected from shallow trenches (30–40cm deep, 10–12m long) across wadi systems. The samples were wet sieved using a nylon mesh, and ultrafine material was separated and dried to produce a 150g fraction, which was then analysed for gold at Bureau Veritas, Perth and for multi-element geochemistry at ALS Loughrea, Ireland. Results from the bulk leach extractable gold programme successfully delineated key mineralised corridors, guiding the next phase of geochemical sampling.

Following the bulk leach extractable gold results, a systematic soil sampling programme was conducted on a 200m x 50m grid, targeting key bulk leach extractable gold anomalies and potential drill targets. A total of 18,257 soil samples were collected, focusing on weathered rock environments where gold behaves as detrital particles and accumulates at the base of slopes. Field sampling involved collecting 1kg of -1mm fraction material, with further wet sieving to obtain a 150g -170µm (80#) sample for gold analysis (fire assay at ALS, Ireland) and pXRF multi-element testing. This approach provided improved grade discrimination at lower gold concentrations.

In parallel, 3,066 rock chip samples were taken from artisanal workings and mapped prospects, further refining exploration models. This extensive geochemical programme identified eight high-priority drill targets, leading to the commencement of the maiden drill testing program in May 2023. The integration of bulk leach extractable gold and soil geochemistry with rock chip mapping successfully highlighted mineralised zones with gold concentrations exceeding 5ppb, supporting future drill targeting and Mineral Resource development (Figure 7.3).

Figure 7.3. Soil sampling programme at Nugrus Block with drill targets outlined.



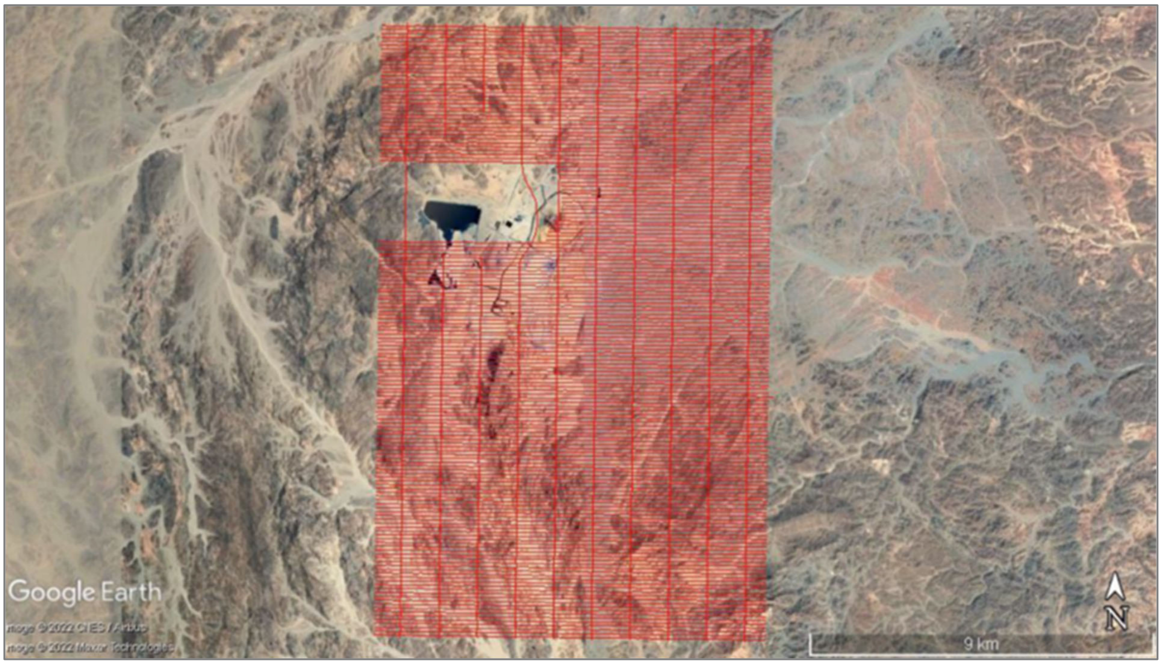
Note: Figure prepared by EDX, 2024. Green lines show highlight prospective ophiolite sequence; ppb: parts per billion.

7.1.4. Geophysical surveys

An airborne geophysical survey, covering the entire 160km^2 Sukari mining concession area, was completed during Q2 2022. The heliborne survey combined versatile time-domain electromagnetic, magnetic and radiometric techniques, flown at 100m line spacing. The programme was designed to further the understanding of the geological and structural setting of the Sukari mineralised system itself as well as the numerous gold prospects across the concession area.

Figure 7.4 shows the flight lines of the versatile time-domain electromagnetic survey which further defined the arcuate nature of the Sukari mineralised corridor, supporting the soil geochemistry results presented in Figure 7.2.

Figure 7.4. Airborne geophysics flight lines, Sukari licence.



Note: Figure prepared by Geotech, 2022.

In April 2024, a ground induced polarisation and magnetic survey was conducted along Little Sukari, covering an area of 1.3km x 1.2km. The primary objective of the induced polarisation survey was to delineate zones of high chargeability, potentially indicating the dissemination of sulphides associated with gold mineralisation.

The survey identified a significant chargeability anomaly to the southwest of Little Sukari, linked to extensive carbonate-silica alteration resulting from metasomatic processes. In the northern and northwestern parts of the survey area, a high resistivity anomaly was detected, attributed to intense silicification and carbonatisation.

The induced polarisation survey was conducted using a pole-dipole configuration at 50m x 50m spacing, achieving a depth of investigation between 200 and 250m. The ground magnetic survey, conducted over the same area, proved valuable in identifying key structural features, including faults, folds, and linear ligaments. These structures are significant as they provide important contrasts related to mineralisation within the Little Sukari area.

7.1.5. Petrology, mineralogy, and research studies

Several petrological, mineralogical, and research studies have been conducted on the Sukari Gold Mine and Nugrus Block. Between 2006 and 2008, Dr. A.I. Arslan and Dr. K.I. Khalil from Alexandria University carried out extensive petrological and mineralogical investigations. Earlier studies were conducted between 2000 and 2001 by J.E. Borner from Mintek Services. More recently, AMTEL Ltd. completed deportment studies in 2014, 2016, and 2020, further refining the understanding of Sukari's mineralogy and gold deportment.

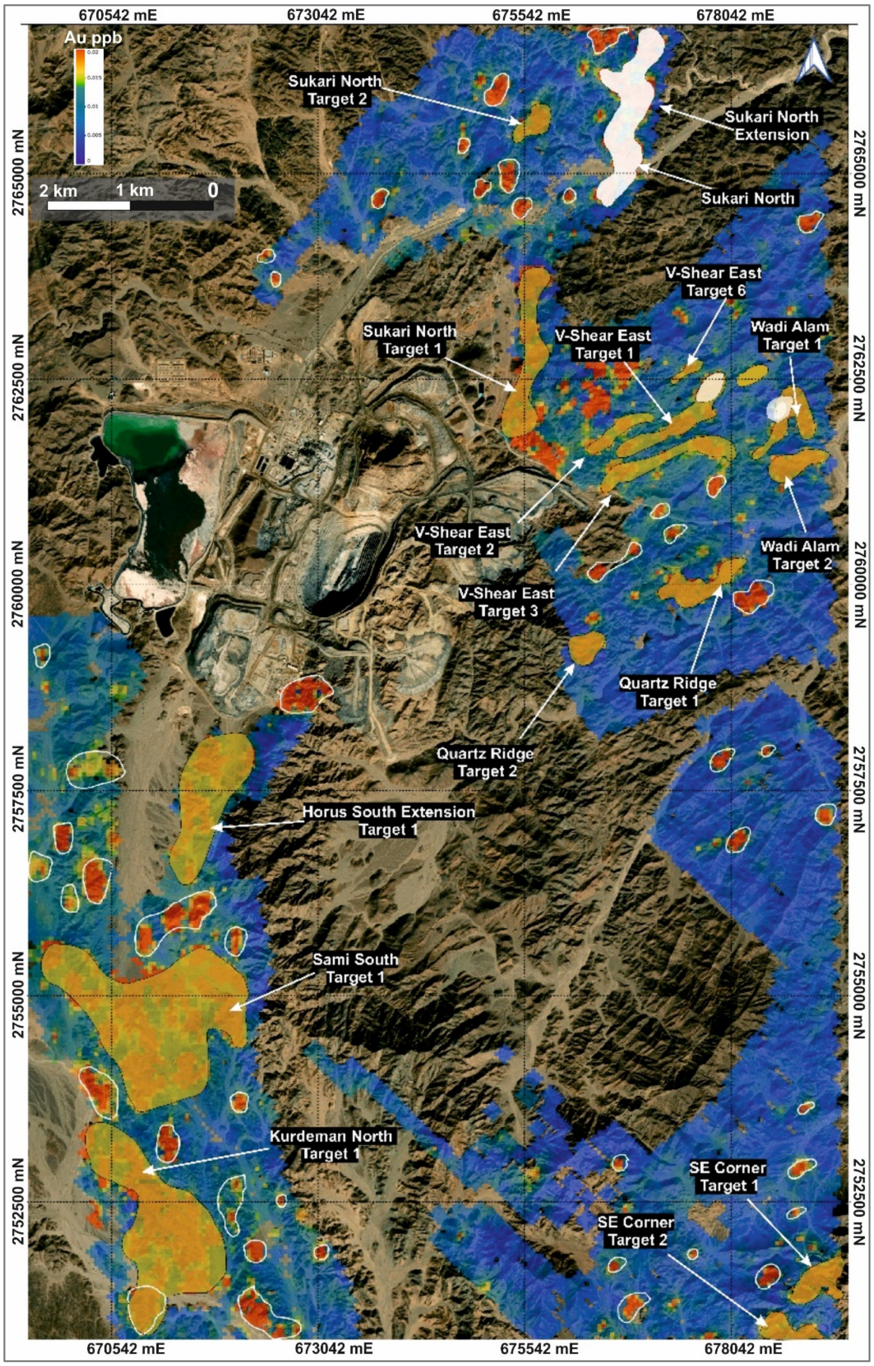
While significant research has been conducted by Egyptian universities, with findings published in recognised journals, a PhD study is currently underway at the University of Western Australia's Centre for Targeting. Supervised by Dr. Steffen Hagemann, this research aims to further advance the understanding of Sukari's geology and mineralisation, with completion expected in September 2027.

Petrographic studies were conducted on all formations defined at Little Sukari within the Nugrus Block to support lithological classification. Nineteen samples were collected from various lithologies, including diorites, granodiorites, mafic dykes, ultramafic serpentinites, and sheared meta-sediments. The study was carried out by EDX geologist Ahmed Yosief, with thin section preparation completed by the University of Cairo.

7.1.6. Exploration potential

Exploration at Sukari is currently focussed on defining targets close to existing infrastructure (within 10km), while also continuing to test the depth and strike extents of the known mineralisation (Figure 7.5).

Figure 7.5. Sukari licence target generation map.



Note: Figure prepared by Sukari Gold Mine, 2022.

Drilling within the mining concession is focused on identifying satellite deposits of approximately 50koz at 1.5g/t Au to enhance flexibility in the life of mine (LOM) plan. A total of 18 targets have been drill-tested across the concession, with 50% warranting follow-up drilling. Results from six prospects have been particularly encouraging, justifying further infill drilling and metallurgical testwork.

Internal Mineral Resource estimates have been completed for four prospects - Quartz Ridge, Kurdeman, V-Shear East, and V-Shear South - yielding a combined total of approximately 36Koz of Indicated Mineral Resources and 88Koz of Inferred Mineral Resources.

Metallurgical test results from Quartz Ridge, V-Shear East, and Kurdeman highlight the critical link between exploration and ore processing, providing valuable insights into gold recovery. Understanding the mineralogical and metallurgical characteristics of potential ores early in the evaluation process was essential in assessing processing viability.

Kurdeman: gold recovery ranges from 49.22% to 78.59%, with oxide samples exhibiting the highest recoveries and lowest sulphur content.

Quartz Ridge: testwork assessed comminution characteristics and gold recovery, with recoveries varying from 64% to 91%, depending on oxidation state.

V-Shear East: gold recoveries range from 11% to 85%, heavily influenced by carbon content. High-carbon samples exhibit significant preg-robbing, resulting in lower recoveries, with overall recovery rates being relatively poor due to the carbonaceous shale host rock.

At this stage, no further work was warranted due to the prospects not passing the set filters.

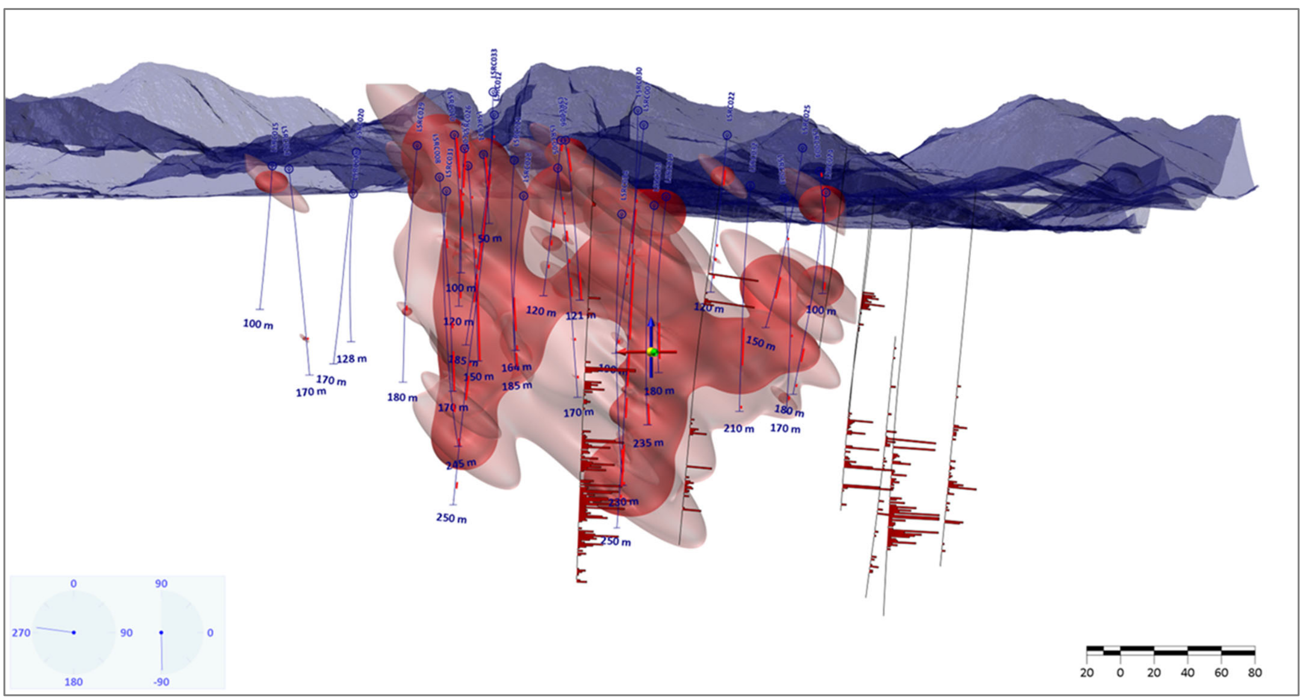
Systematic exploration across the Nugrus Block has revealed strong potential for gold mineralisation. Initial work, including satellite imagery interpretation, mineral mapping, mapping of artisanal mining sites, geological mapping, bulk leach extractable gold sampling, and soil geochemistry, collectively defined eight priority drill targets and further confirmed the high prospectivity of the Nugrus Block.

Given its proximity to the Sukari mining concession, Nugrus was prioritised for exploration in Q2 2022. The possibility of utilising Sukari's processing infrastructure - subject to agreement with the Egyptian Mineral Resource Authority - lowers the economic threshold for potential discoveries in the area.

Reverse circulation (RC) drilling commenced in May 2023, targeting the eight defined areas with drill fences spaced 50–150m apart and drill holes positioned at 50-100m intervals, depending on target size and accessibility. Follow-up RC and diamond drilling (DD) at Little Sukari was conducted in Q4 2024, following the completion of an in-house leapfrog modelling, Mineral Resource estimation and optimisation study to guide ongoing drilling activities.

Little Sukari emerged as a promising prospect, returning the most encouraging drilling results. The mineralisation zone, measuring 30-60m in width, extends over a 250m strike length and reaches a vertical depth of approximately 200m, with mineralisation remaining open at depth (Figure 7.6).

Figure 7.6. South-looking long section of Little Sukari.



Note: Figure prepared by EDX, 2024. Displaying exploration drill holes and grade plunges of 0.3 g/t Au (pink) and 0.9 g/t Au (red), trending west and modelled prior to the 2024 drilling.

This prospect derives its name from its geological and geochemical similarities to the Sukari deposit. The mineralisation is hosted within a geochemically distinct granodioritic intrusive, emplaced in a shear zone within an ophiolitic mélange sequence - akin to the broader Sukari host rocks. Little Sukari is situated roughly 28km west of the Sukari Gold Mine. Notable intercepts are summarised in Table 7.2.

Table 7.2. Notable drilling intercepts between 2023 and 2024.

Type of drilling	Year	Drill hole ID	Intercept
RC	2023	LSRC009	88m @ 1.72 g/t Au from 62m
		LSRC010	29m @ 2.71 g/t Au from 2m
		LSRC012	82m @ 1.74 g/t Au from 43m
		LSRC019	46m @ 2.14 g/t Au from 116m
		LSRC030	41m @ 3.71 g/t Au from 83m
DD	2024	LSDD001	111.95m @ 1.66 g/t Au from 99.05m
		LSDD002	105.98m @ 1.76 g/t Au from 57.02m
		LSDD019	77.96m @ 1.61 g/t Au from 0.02m
		LSDD021	21.72m @ 1.33 g/t Au from 99.28m
RC	2024	LSRD009	68m @ 1.52 g/t Au from 149m
		LSRC036	27m @ 2.41 g/t Au from 88m
		LSRC040	65m @ 1.20 g/t Au from 201m
		LSRC044	29m @ 2.72 g/t Au from 244m

Note: RC: reverse circulation; DD: diamond drilling. Significant gold intercepts are calculated using a 0.3g/t Au cut-off grade, with a minimum intercept length of 2m, allowing up to 3m of internal dilution provided it exceeds 0.5g/t Au, and reported as a weighted average length.

Located 5km southeast of Little Sukari, the Umm Majal prospect hosts gold mineralisation within an altered granitoid, distinct from the host rocks at Little Sukari but still occurring within a similar ophiolitic mélange sequence. Mineralisation extends over a 200–250m strike length, with mineralised zones up to 20m wide.

Initial shallow drilling confirmed gold mineralisation to depths of 30-40m below surface, with the mineralisation remaining open down dip. Deeper drilling is required to test continuity at greater depths. Notable RC drilling intercepts include:

- UMRC006 - 18m @ 2.33 g/t Au from 21m
- UMRC003 - 15m @ 1.46 g/t Au from 4m
- UMRC002 - 8m @ 2.67 g/t Au from 2m
- UMRC011 - 5m @ 16.20 g/t Au from 44m (including 1m @ 5.48g/t Au from 45m and 1m @ 80.9g/t Au from 48m)

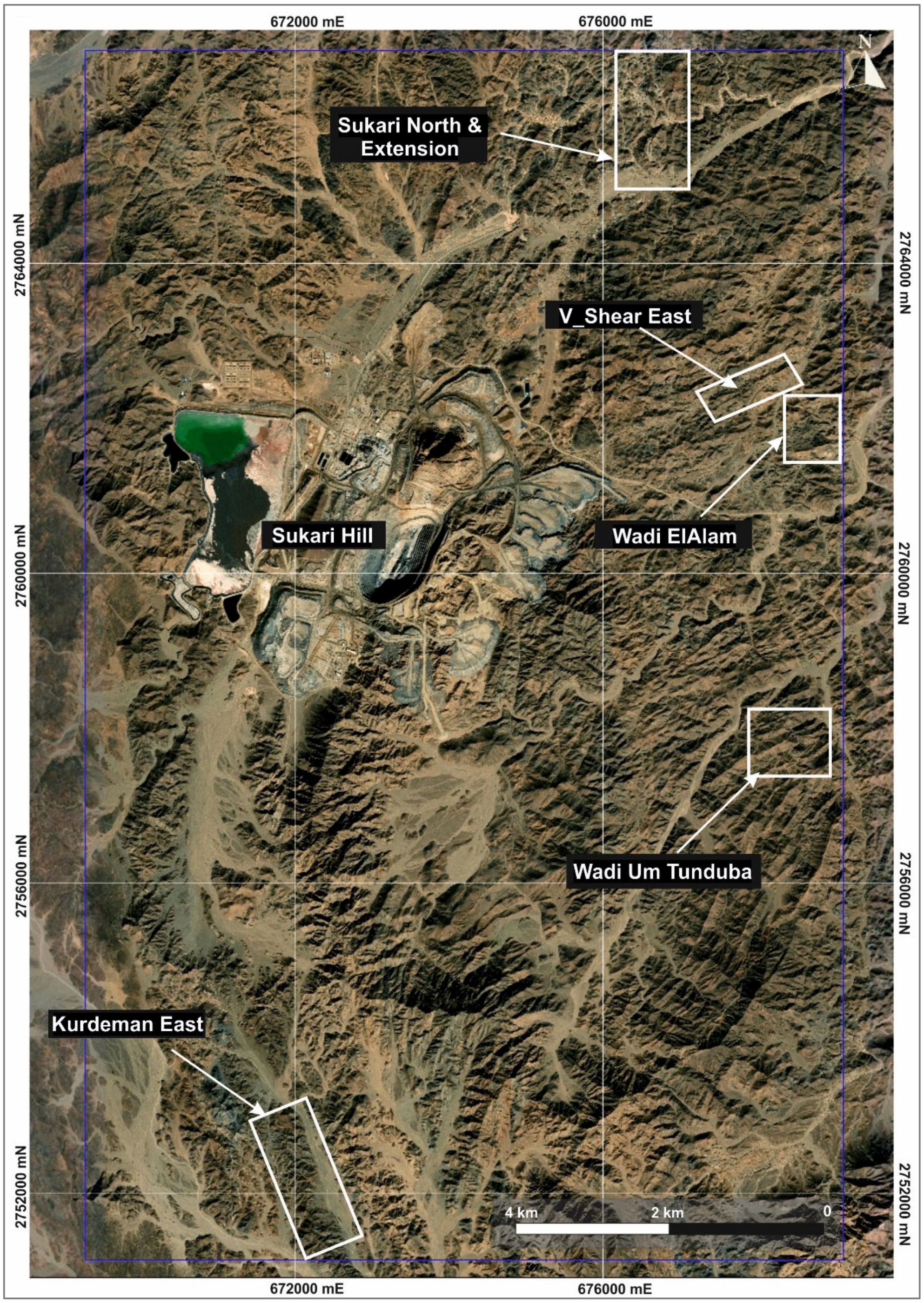
Five samples representing waste, low-grade, and high-grade material, along with a sample of Sukari mill processing water, were sent to Maelgwyn South Africa in Randburg for metallurgical and comminution testing. Results were received in late October 2024.

Testing revealed that 59% of the gold could be recovered through gravity separation when milled to 80% passing 75µm. An additional 84% of the gold remaining in the gravity tails was recovered via leaching over a 24-hour period. For run-of-mine (ROM) samples milled to 80% passing 150µm, gold recovery ranged from 72% to 96%. The average bond work index was determined to be 18.5kWh/t.

7.1.7. Near-mine surface exploration

A map showing the principal near-mine prospects at Sukari is shown in Figure 7.7.

Figure 7.7. Worked prospects within the Sukari concession.



Note: Figure prepared by Sukari Gold Mine, 2024.

7.2. Drilling

Sukari Gold Mine uses a combination of RC and DD. A summary of drilling by type and year for Sukari is provided in Table 7.3.

At Sukari, drilling commenced in April 1997 and is ongoing at the Report effective date. As at 31st December, 2024, the Sukari drill hole database comprised 97,562 drill holes for 4,505,772m of drilling. No historic drilling has been recorded prior to drilling undertaken by Sukari Gold Mine.

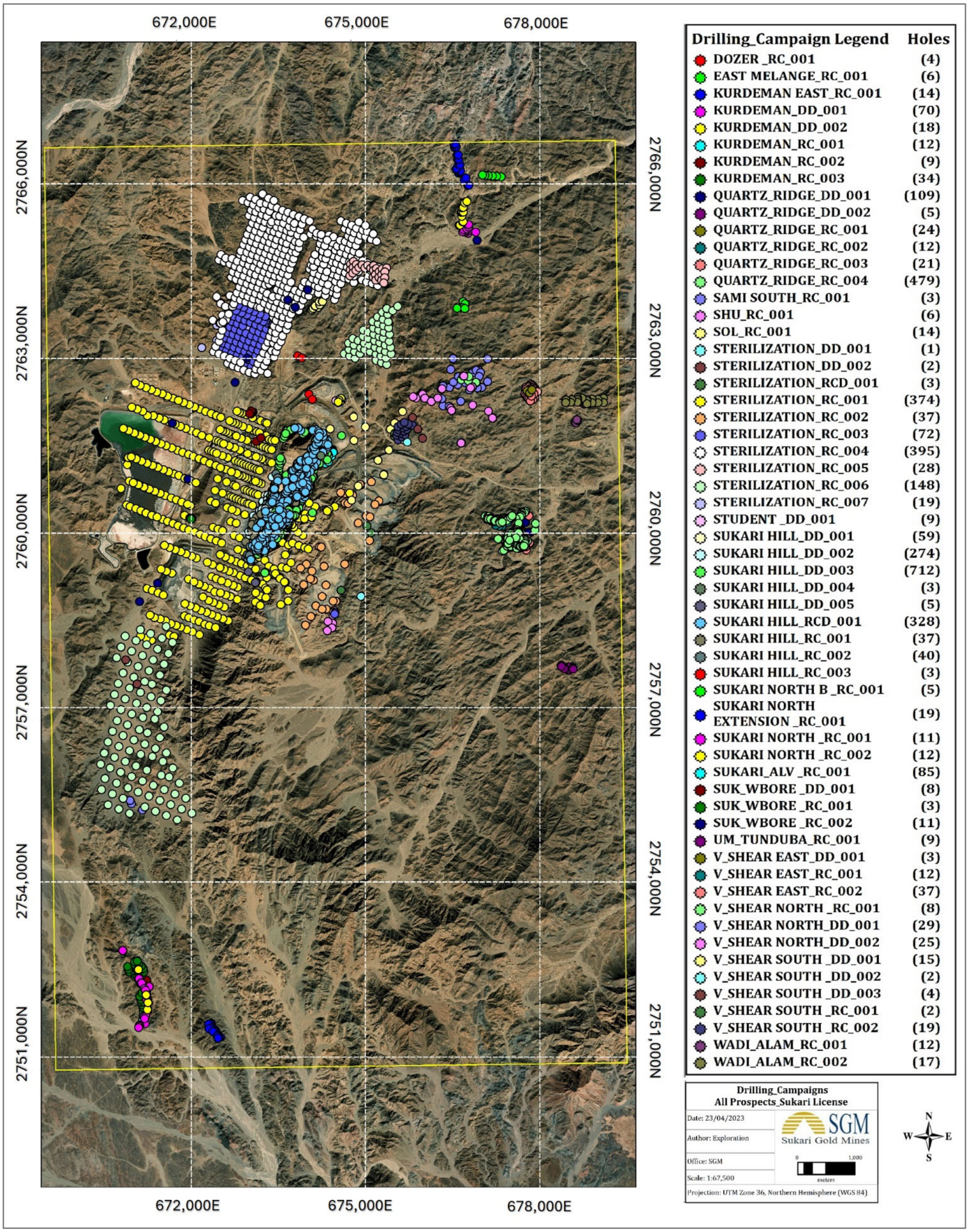
Table 7.3. Sukari drilling summary as at 31 December 2024.

Year	Diamond drill		Reverse circulation		RC Collar + DD Tail	
	Holes	Metres	Holes	Metres	Holes	Metres
1997	59	8,694	-	-	-	-
1998	56	7,675	-	-	-	-
1999	54	6,122	-	-	-	-
2000	31	4,340	-	-	-	-
2001	57	8,189	-	-	-	-
2002	54	12,586	21	2,380	10	3,396
2003	29	8,046	6,957	245,391	-	-
2004	395	9,778	6	185	-	-
2005	83	16,926	9	1,086	58	21,992
2006	74	13,656	60	6,729	214	74,463
2007	116	31,807	668	51,504	55	22,939
2008	133	52,766	712	16,104	9	4,283
2009	116	56,674	6,618	111,475	-	-
2010	137	67,051	6,940	145,269	-	-
2011	390	73,965	6,622	131,920	-	-
2012	363	74,406	4,806	122,477	-	-
2013	452	77,654	6,263	219,344	1	521
2014	618	77,273	3,109	130,506	-	-
2015	733	78,456	3,255	121,007	-	-
2016	619	76,290	2,611	121,259	-	-
2017	571	75,854	4,198	184,659	-	-
2018	513	74,939	5,779	222,541	-	-
2019	870	88,445	4,616	170,946	1	174
2020	327	79,056	4,702	162,044	-	-
2021	399	96,082	3,899	151,696	-	-
2022	372	70,123	3,919	150,758	1	155
2023	623	100,474	5,776	215,560	10	754
2024	706	102,203	6,707	242,725	-	-
Total	8,950	1,447,530	88,253	2,927,565	359	128,677

Note: RC: reverse circulation; DD: diamond drilling.

Figure 7.8 displays all the types of surface drilling that has been performed since 1997.

Figure 7.8. Sukari drill hole plan.



Note: Figure prepared by Sukari Gold Mine, 2024.

Drilling at Nugrus commenced in Q3 2023 with two phases completed.

A summary of drilling by type and year for the Nugrus Block is provided in Table 7.4.

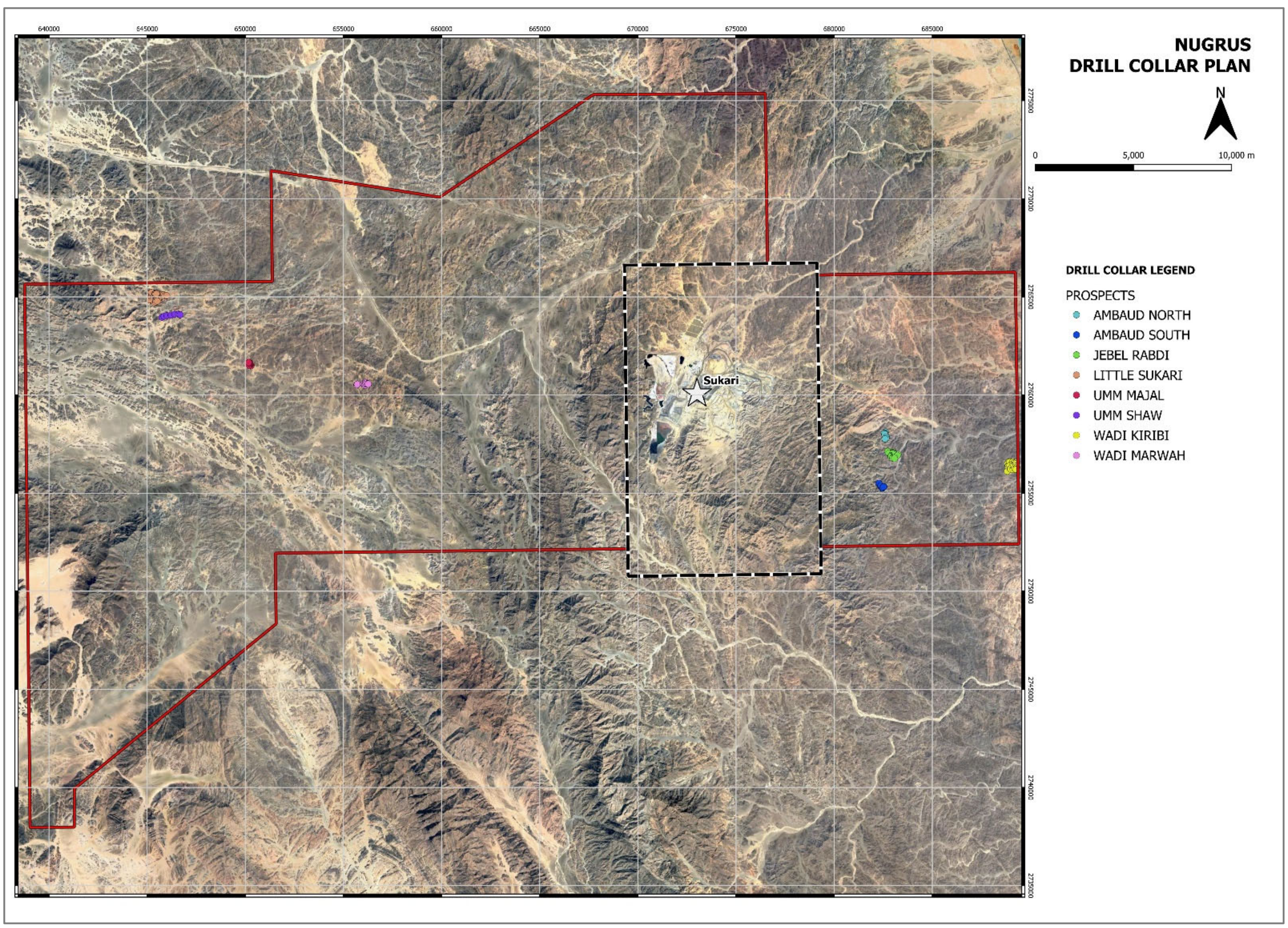
Table 7.4. Nugrus drilling summary as of 31st December 2024.

Year	Prospect	Diamond drill		Reverse circulation		RC Collar + DD Tail	
		Holes	Metres	Holes	Metres	Holes	Metres
2023	Wadi Kiribi	-	-	24	3,361	-	-
	Jebel Rabdi	-	-	16	1,943	-	-
	Ambaud South	-	-	9	1,380	-	-
	Ambaud North	-	-	8	1,137	-	-
	Little Sukari	-	-	29	4,793	-	-
	Umm Majal	-	-	12	870	-	-
	Wadi Marwah	-	-	13	1,710	-	-
	Umm Shaw	-	-	7	1,022	-	-
2024	Little Sukari	22	5,744	42	11,622	17	7,152
Total		***22***	***5,744***	***160***	***27,838***	***17***	***7,152***

Note: RC: reverse circulation; DD: diamond drilling.

The drill hole plan for Nugrus Block is shown in Figure 7.9.

Figure 7.9. Nugrus Block drill hole plan.



Note: Figure prepared by EDX, 2024.

7.2.1. Drilling techniques and spacing

Drill contractors up to the Report's effective date have included Barminco Australia, Capital Drilling, and Geodrill.

Drilling operations were completed by a range of DD, multi-purpose, and RC drill rigs. Programmes have mainly been executed using Atlas Copco (252, 262, CS14, CS3001, CS1000), Boart Longyear (LM90, LMP850), Epiroc (Explorac 235 and 100) and Newland Erubus (MCR) rigs.

Most of the underground core was NQ2 (47.6mm core diameter) size and orientated using a Reflex EZ-Trac digital core orientation tool. The diamond drill hole core size used for surface exploration is HQ (61.1mm core diameter) and NQ2.

Exploration RC holes were drilled using 114mm diameter rods with a 140mm (5.5") face-sampling bit and 146 casing bits. 2024 grade control RC holes were drilled using 131mm diameter rods with a 5.5-inch face-sampling bit.

A spacing of 48mE x 72mN is used for the open pit, and a spacing of 50mE x 100mN is used for the underground and surface exploration.

Drill coverage extends to approximately 1500m below surface at Sukari and 200m at satellite prospects. Drilling is orientated to ensure that drill intersections are as close to perpendicular with mineralisation as technically possible. In the open pit, drilling is oriented east-west perpendicular to mineralisation strike, whilst the drill hole dip is steep to sub-vertical (except at the edges of the pit).

The underground drilling is mostly fan drilling, with the majority orientated east to west and drilled over a broad range of hole dips.

7.2.2. Logging

DD core is geologically logged and includes weathering, veining, mineralisation, alteration, lithology, and structure onto paper logging templates. The paper logs are transcribed into the central database using a digital data entry template after verification. Tablets were introduced in 2022 for logging. The core is photographed both wet and dry before sampling.

RC chip samples are logged with the same lithological, weathering, veining, mineralogical, and alteration information as DD core.

7.2.3. Recovery

Drill sample recovery is captured for both DD and RC drilling. Core recovery (by length) is measured during logging, with core loss marked out clearly. RC sample recovery is measured by weighing the total weight of sample collected over the sample interval drilled and compared to the theoretical weight for each lithological unit and weathering type.

A 2015 review of all prior drilling of the Sukari deposit showed average core recovery of 94.7% and RC recovery of 86%. More recent checks of 2024 data found average core recovery of 98% and RC recovery of 89%.

Whilst there are intervals of low recovery, no correlation exists between gold grade and drill sample recovery for either drilling type. No drilling, sampling, or recovery factors have been applied to the Sukari drill hole data.

7.2.4. Collar surveys

Surface collar location is measured with high accuracy Trimble GPS with an accuracy of 10mm. Underground drill collars are surveyed using a Leica total station.

7.2.5. Downhole surveys

Downhole survey is carried out using both Reflex EZ-Trac and conventional gyroscopic instruments. The downhole survey is ranked in terms of priority where the gyroscopic results are the top priority, and the design directions are the bottom priority. Downhole survey equipment is checked weekly in a designated testing frame, calibrated annually, and checked every quarter by qualified technicians from the supplier. Coordinate system conversion is automated within the drill hole database.

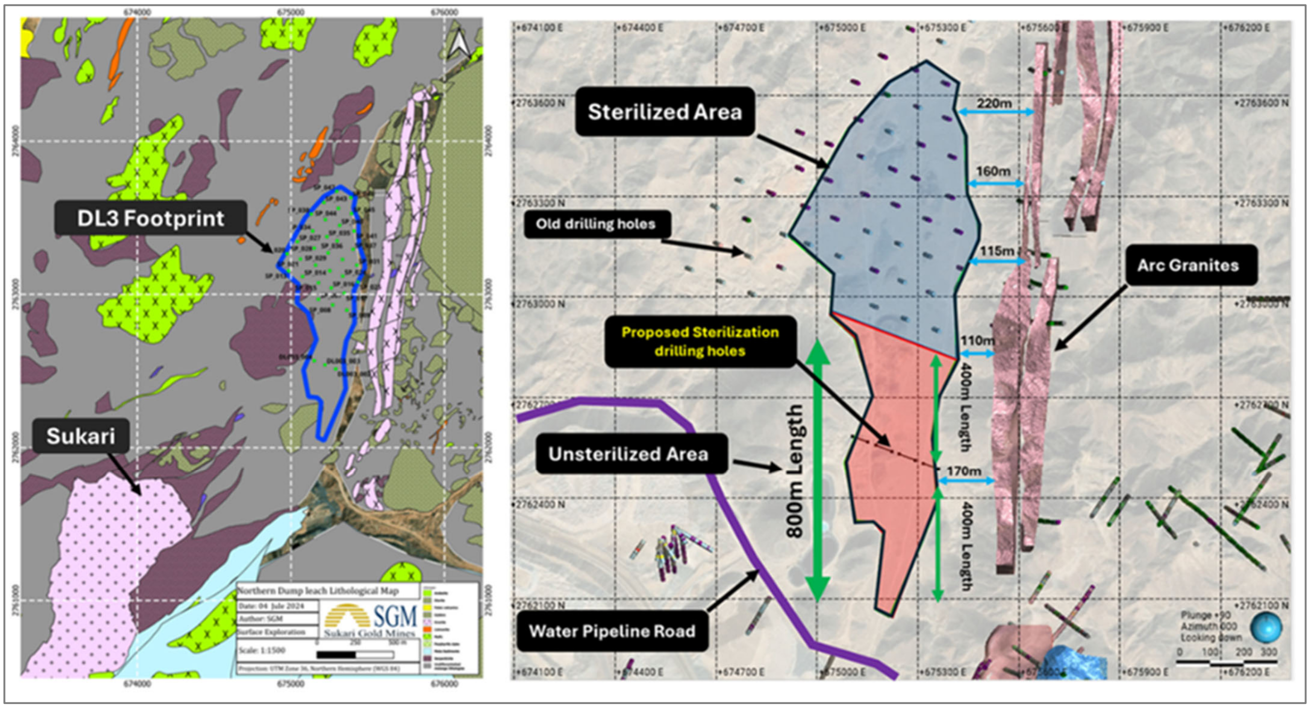
7.2.6. Condemnation, geotechnical and hydrogeological drilling

Detailed geotechnical logging is performed on holes drilled specifically for geotechnical assessment as required for projects, however the Mineral Resource DD holes still capture some geo-mechanical parameters such as rock quality designation and fracture frequency for each logged metre. Refer to Section 7.4. for more detail on geotechnical testing and analysis.

Hydrogeological drilling focuses on installing piezometers around the operation to monitor water and particle movement, as well as depressurization holes to control water accumulation behind the pit walls. Several regional structures influence the hydrogeological characteristics, leading to the compartmentalisation of groundwater within the wall rocks. Refer to Section 7.3. for more detail on hydrogeological sampling methods and results.

Sterilisation drilling is carried out within the operation to assess areas designated for infrastructure. This includes drilling in the processing and TSF areas before and during operations for TSF #2, the solar farm, and, more recently, the northern Dump Leach 3 area (Figure 7.10).

Figure 7.10. Sterilisation drill holes within the planned Dump Leach 3 area.



Note: Figure prepared by Sukari Gold Mine, 2024.

Sterilisation drilling at the Dump Leach 3 footprint area was conducted to assess the suitability of the site for infrastructure development. The area is situated in low-lying terrain between the eastern contact of the ophiolitic mélange and the ARC prospect to the east, with the northern dump located to the west. Lithological mapping indicates that the region is primarily composed of mélange-related graphite schists, which host isolated rootless boudins of gabbro and serpentinite, along with recent wadi deposits. Structurally, the dominant trends include north-northeast-trending transpressional shear zones, which reflect the flow of the mélange, as well as more recent extensional deformation features associated with the relaxation of the system.

Drilling activities were carried out in two phases. The first phase, conducted in 2018, focused on sterilising the solar panel option and involved the drilling of 32 RC boreholes, totalling 1,310m. These holes overlapped with the Dump Leach 3 footprint and encountered small boudins of mafic and serpentinite within a background of metasediments and graphite schists. The second phase, completed in 2024, included three RC boreholes with a total drilled depth of 300m. This phase encountered similar lithological units as the first phase, along with clasts of listwanites and granites likely derived from the proximal ARC prospect units. Both drilling phases confirmed the absence of economically significant mineralisation, confirming that the area is suitable for infrastructure development.

7.2.7. Metallurgical drilling

Annual geometallurgical testwork is conducted to mitigate risks associated with future optimal ore extraction over the LOM from stoping and end of period surfaces across the orebody, adopting a long-term predictive approach. A comprehensive geometallurgical testwork gap analysis is carried out over the LOM to identify key focus areas for the next 12 months, ensuring adequate spatial coverage of various geometallurgical variables, including recoveries, multi-element analysis, comminution test variables, and gold deportment studies.

As part of the annual geometallurgical test framework, at least 10 samples from both underground and open pit areas are analysed each month. The expansion of mills and increased throughput occasionally necessitate additional advanced tests, such as comminution testing, with the most recent conducted in 2024 in no-depletion areas. These tests, which include cores, chips, and stope samples, are spatially referenced, and their results are incorporated into the Mineral Resource model.

The process also includes short-term geometallurgical testwork on stockpiles to predict feed responses. Additionally, the metallurgical laboratory periodically conducts production metallurgical testwork on the most plausible blending scenarios over a defined feed period. Plant feed samples, collected after the mill circuit for better representation, are used alongside ROM stockpile samples provided by the geologists for plant simulation tests as part of an ongoing optimisation process.

7.2.8. Grade control drilling

Grade control drilling is used for final production definition and resource development. Drill spacing is designed to provide detailed geological and grade information to support resource estimation and mine planning. In the open pit, a spacing of 6mE x 8mN or 8mE x 12mN is used, while underground drilling is conducted at a spacing of 10mE x 20mN or 10mE x 25mN. For broader geological definition, drill spacing of 24mE x 36mN is applied in the open pit, and 25mE x 50mN is used underground.

7.2.9. Sample length/true thickness

The reported drill intercepts represent apparent thicknesses. The mineralisation exhibits varying dips and orientations but predominantly features a steep north-south strike. Drill holes are generally designed to intersect the mineralisation at 90° where possible. The relationship between sample length and true thickness is well-constrained to approximate, depending on drill site availability and mineralisation orientation. True thickness is estimated to range between 65% and 75% of the drilled length.

Drill hole planning considers the orebody geometry to maximise perpendicular intersections. However, underground drilling is often constrained by site availability, leading to a "fan" drilling approach that may not always achieve optimal intersections.

All drill holes are surveyed, ensuring intersection angles are known, and true widths can be estimated accordingly. The actual true width depends on the inclination and direction of the hole at the point of intersection with the mineralised zone.

7.2.10. Results

In the opinion of the Qualified Person, the quantity and quality of the logged geological and geotechnical data, collar and downhole survey data collected in the exploration and infill drill programmes on the mine are sufficient to support Mineral Resource and Mineral Reserve estimation and mine planning for the following reasons:

- Drilling procedures, core and RC logging meets industry standards for gold exploration.
- Collar surveys have been performed using industry standard instrumentation.
- Downhole surveys were collected at the time of the programmes using industry standard instrumentation.
- Recovery data from core and RC drill programmes are acceptable.
- Drill orientations are appropriate for the mineralisation style and are optimal for the orientation of the mineralisation for the bulk of the deposit area.
- Drilling intervals have been regularly spaced and considered adequate and representative of the deposits. Drilling was not specifically targeted to the high-grade portions of the deposits, rather a relatively consistent drill spacing was completed.
- No material factors were identified with the data collection from the drill programmes that could affect Mineral Resource or Mineral Reserve estimation.

7.3. Hydrogeology

7.4. Nature and quality of sampling methods

Hydrogeological drilling at the Sukari operation is designed to install piezometers for monitoring water and particle movement, as well as depressurization holes to control water accumulation behind pit walls. The drilling programme follows industry-standard hydrogeological techniques, ensuring representative sampling of groundwater conditions. Sampling is conducted at varying depths, with piezometers placed at strategic locations to track changes in water pressure and flow over time. The collected samples are analysed for water quality, hydrochemical properties, and potential contaminants, ensuring a comprehensive understanding of groundwater behaviour.

In addition, hydrogeological core samples are extracted and logged to evaluate lithological and structural controls on groundwater flow. The core samples are assessed for permeability, porosity, and fracture density, providing essential data for the mine's dewatering strategy. Field observations, including water strike levels and inflow rates, are systematically recorded to correlate with laboratory results and numerical models.

7.5. Type and appropriateness of laboratory techniques

A range of laboratory techniques are employed to analyse rock and groundwater properties, ensuring that data meets the required accuracy and precision for geotechnical and hydrogeological modelling. Key laboratory tests include:

- Hydraulic conductivity testing: conducted on selected core samples using permeameters to measure fluid movement through rock units, essential for assessing dewatering potential.
- Pore pressure monitoring: utilises vibrating wire piezometers to track pressure variations within pit walls and underground workings, allowing for real-time stability assessment.
- Geochemical analysis: water samples undergo laboratory testing for pH, total dissolved solids, major cations and anions, and trace elements, helping determine water-rock interaction and potential contamination.
- Rock strength testing: since 2006, extensive mechanical testing has been conducted, including:
  - 155 uniaxial compressive strength tests to determine rock integrity.
  - 252 tensile strength tests to assess material response to stress.
  - 89 modulus tests to evaluate rock elasticity and deformation behaviour.
  - 35 triaxial tests to establish shear strength parameters under varying confinement conditions.

These tests provide reliable input data for geotechnical stability analysis, supporting slope design and mine planning in accordance with the Read and Stacey guidelines.

7.6. Results

Hydrogeological studies confirm that the wall rocks exhibit low permeability, with groundwater compartmentalised by regional structural features such as the Sukari thrust, Puggy shear, and major fault zones. Groundwater recharge occurs episodically through wadi sediments, with minor seepage observed along faults and geological contacts. Despite the presence of underground workings beneath the open pit, no significant drawdown has been recorded in the pit walls due to the impermeable nature of the host rock.

The geotechnical analysis indicates that intact rock strength varies between 32MPa (graphite schist) and 85MPa (granodiorite), reflecting the diverse lithological units present. Numerical modelling, incorporating both static and dynamic conditions, confirms that pit slope stability remains within acceptable factors of safety. However, localised zones with high pore-water pressure, particularly in structural features like the Sukari thrust and Puggy shear zones, may require targeted depressurization using horizontal drill holes extending up to 150m behind the pit walls.

Groundwater inflows to the open pit and underground workings remain low, generally <5L/s and <2L/s respectively, as reported by SRK (2022). These inflows are effectively managed using sump collection and localised dewatering. The findings suggest that while the hydraulic gradient between bedrock groundwater and the pit base exists, connectivity remains limited due to structural compartmentalisation. Continued monitoring via installed piezometers will ensure that hydrogeological models remain updated, guiding future depressurization efforts and slope design modifications as mining progresses.

7.7. Qualified Person(s) interpretation

The hydrogeological investigations at Sukari confirm that groundwater flow is largely controlled by regional structural features, with limited permeability in the wall rocks leading to compartmentalisation of groundwater. Episodic recharge through wadi sediments contributes to localised inflows, but overall groundwater inflow rates remain low (<5L/s in the open pit and <2L/s in the underground workings).

Laboratory analyses of rock strength and permeability indicate that pit slope stability is within acceptable safety factors, though localised zones of elevated pore-water pressure, particularly within shear zones, may require targeted depressurization through horizontal drilling. The numerical modelling results align with field observations, supporting the continued use of dewatering infrastructure and piezometer monitoring to refine hydrogeological models.

Based on current data, no significant impact from underground workings on pit wall draw-down has been observed, and seepage inflows remain manageable within existing sump storage capacity. Ongoing monitoring will be essential to assess any changes as mining progresses, ensuring proactive adjustments to dewatering and slope stability management strategies.

7.8. Geotechnical testing and analysis

7.9. Nature and quality of sampling methods

The sampling methods for both underground and open pit mining at Sukari Gold Mine are comprehensive and adhere to industry best practices.

In the open pit, DD was conducted with 19 geotechnical holes totalling 4,400m from 2023 to 2024, with structural logging performed using Acoustic Televiewer (ATV) surveys. Rock mass classification follows the RMR89, GSI, and Q-prime systems, with core samples sent to a Cairo laboratory for uniaxial compressive strength, Poisson’s ratio, Young’s modulus, unit weight, and triaxial testing.

Geotechnical monitoring involves prisms, Interferometric Synthetic Aperture Radar, mine survey radars, sloughmeters, and time-domain reflectometers to detect ground movement and void propagation. Hydrogeological assessments show low permeability rock with compartmentalised groundwater influenced by geological structures, with depressurization drilling in the southwest to manage seepage. Post-blast inspections ensure pit wall integrity, while 2D and 3D limit equilibrium stability analyses help in risk mitigation.

For the underground mine, the 2024 drilling program included 427 diamond drill holes, covering 91,817m, with 23 geotechnical drill holes specifically targeting structural zones such as Puggy Shear and Buthinae Fault. Rock mass characterisation follows rock mass rating of RMR89, geological strength index, and Q-prime systems, with extensive core logging and mapping. Ground control methods include a combination of friction bolts, Kinloc bolts, dynamic bolts, mesh, fibrecrete, and Osro straps, with additional spiling and shotcrete arch ribs in weak zones.

Numerical modelling using RS3 and Map3D software assesses stress distribution, with major principal stress analysis identifying areas of potential strain bursts. Hydrogeological monitoring includes vibrating wire piezometers and micro-seismic systems, and the paste backfill system helps mitigate void migration risks.

Overall, the sampling methods at Sukari are rigorous and data-driven, ensuring robust geotechnical design, stability assessments, and risk mitigation. The integration of advanced monitoring, laboratory testing, and numerical modelling supports both short-term operational safety and long-term mine planning.

7.10. Type and appropriateness of laboratory techniques

Laboratory testing for both open pit and underground geotechnical investigations at Sukari Gold Mine follows industry-standard methodologies to characterise rock mass properties. Core samples are collected from DD and sent to a Cairo-based laboratory for uniaxial compressive strength, Poisson’s ratio, Young’s modulus, unit weight, and triaxial strength testing. Uniaxial compressive strength testing provides direct strength measurements, while triaxial tests determine shear strength parameters under different confinement conditions, aiding in rock mass stability assessments. Point load tests are used as a rapid method to assess rock strength, particularly for weak zones such as shear-hosted mineralisation.

Additionally, ATV logging allows for high-resolution structural analysis, improving the accuracy of geotechnical domain modelling. These techniques are appropriate for assessing both competent and weak rock formations, with triaxial and uniaxial compressive strength tests particularly crucial for determining pit slope and underground pillar stability.

7.11. Results

The laboratory results confirm variable rock mass quality across both the open pit and underground operations. High-strength units, such as granodiorite and gabbro, show uniaxial compressive strength values exceeding 100MPa, with moderate deformation characteristics. In contrast, shear zones, serpentinite, and black shale units exhibit significantly lower uniaxial compressive strength values, often below 40MPa, with higher deformability and fracture persistence.

Young’s modulus values vary according to rock type, with competent units such as porphyry displaying higher stiffness, while weathered sediments and altered zones show lower modulus values indicative of weaker ground conditions. Hydrogeological assessments indicate low overall permeability, with some localised water ingress associated with faults and shear zones, particularly in the southwest pit wall and some underground stope abutments.

Numerical modelling results, incorporating laboratory test data, highlight localised zones of potential failure in faulted or highly altered rock domains, guiding ground support and depressurization strategies.

7.12. Qualified Person(s) interpretation

The geotechnical and geomechanical assessment indicates that the Sukari deposit consists of a mix of high-strength competent rock and structurally complex weaker zones, requiring a multi-faceted ground control strategy. The Qualified Person interprets the results as confirming the feasibility of current pit and underground designs, provided adequate ground support and depressurization measures are maintained.

The stronger rock units allow for steep inter-ramp and overall slope angles, but localised support measures are necessary in faulted or low-strength units. In the underground mine, stress modelling results indicate manageable stress conditions, but areas near major geological structures (e.g., Puggy Shear and Osiris Fault) require enhanced support, including cable bolting and reinforced shotcrete. The integration of laboratory test results, *in situ* monitoring, and numerical modelling provides a robust geotechnical framework, supporting safe and efficient mining while mitigating risks associated with slope instability, underground stress redistribution, and void migration.

8. Sample preparation, analyses and security

Diamond and RC drilling are the primary sampling methods that provide the data for the Sukari Mineral Resource estimate. Underground face sampling is also used for modelling of geological contacts and grade interpolation. Other samples such as surface grab, channel, and soil samples are collected in the early stages of exploration to assess prospectivity but are excluded from use in Mineral Resource estimation.

8.1. Sampling methods

8.1.1. Diamond drill core

Drill core is placed into core boxes marked with hole ID, sequence numbering and depth interval. The core is cut in half using an Almonte automatic coresaw. Half core samples are taken within geological units and are normally between 0.8m and 1.2m long. Half core is submitted for assay analysis whilst the other half is either submitted as a field duplicate (5% of samples) or stored for future reference.

8.1.2. RC chips

All RC samples are collected through a static cone splitter attached to the cyclone. Approximately 7% of the total sample interval is split into a calico bag. The remaining bulk sample is collected and stored in large plastic bags.

RC sample length varies between drill programmes including:

- Exploration RC drilling with 1m intervals.
- Grade control samples with 1m intervals.
- Grade control samples with 1.5m intervals.
- Grade control samples with 2.5m intervals.

All RC drilling was carried out using face sampling hammers and rigs with large air capacity and pressure, to effectively flush samples from the hole face through the rod string and hoses. Prior to drilling and sampling each metre, the driller is instructed to clean the sample system by lifting off the bottom of hole and blowing back through the rods and cyclone to clear all sample from the previous metre. This is undertaken to minimise any potential downhole contamination.

The same processes are used by Exploration Desert Exploration.

8.2. Density determinations

A total of 13,906 dry bulk density measurements have been conducted on-site using the Archimedes method. Approximately 25% of these measurements were collected between 1997 and 2013, while the remaining 75% were obtained between 2020 and 2024. The dataset provides good spatial coverage across the deposit and represents a variety of rock types.

Density samples are taken every 3m along the diamond core, with each sample tested three times to ensure accuracy, and the average value recorded. Fresh rock density measurements range from 2.00 to 3.31t/m³. Granodiorite, which hosts the majority of the gold mineralisation, has an average density of 2.76t/m³. These density values are then assigned to the block model for tonnage and ounce calculations.

The same process is used by EDX.

8.3. Sample retention

DD half-core samples are permanently retained for the LOM and securely stored in the core farm. RC chip trays and pulp reject samples from the onsite laboratory are kept in sea containers or on covered pallets in the core yard. These storage facilities are located adjacent to the maintenance workshop, within the operational grounds, which are under 24/7 security.

8.4. Laboratories

All samples (including mine concession exploration) are analysed by the Sukari laboratory based at Sukari Gold Mine. The onsite laboratory is accredited with ISO/IEC 17025:2017 for general requirements for the competence of testing and calibration laboratories. The onsite laboratory is planning to initiate an audit for accreditation to ISO 45001:2018 (occupational health and safety management systems) in 2025. The OMAC Laboratories Ltd, ALS Loughrea laboratory in Galway, Ireland is used as an umpire laboratory, with 5% of all samples sent to ALS on a quarterly basis for check analysis.

OMAC Laboratories Ltd ALS Loughrea is accredited by the Irish National Accreditation Board to undertake testing as detailed in the scope bearing the registration number 173T, in conformity with ISO/IEC 17025:2017. OMAC Laboratories Ltd ALS Loughrea is independent of AngloGold Ashanti.

Geostats Pty Ltd, based in O'Connor, Western Australia, is an independent laboratory specialising in the manufacture and sale of reference materials for the mining industry. The company is accredited with ISO 9001:2015 for quality management and ISO 45001:2018 for occupational health and safety, both certified by Intertek SAI Global. Additionally, the onsite Sukari laboratory participates in the quarterly round robin audits conducted by Geostats as part of its international laboratory survey, ensuring ongoing quality assurance through round robin checks.

EDX uses ALS Marsa Alam and Loughrea for all exploration samples.

8.5. Sample preparation

Samples are bagged, sealed, numbered, and delivered to the onsite laboratory from the company core storage facility in the case of DD samples and from the pit area in the case of RC grade control samples. A hard copy sample submission form is sent with the samples and a digital copy is emailed to the laboratory.

Upon receipt at the onsite laboratory, the submission is sorted and checked against the sample submission form and the core shed geologists and database specialist are notified of any missing and/or additional samples. Pulp reject samples are catalogued and stored in a dedicated container in the core yard area. These samples are retained for re-assay or umpire laboratory checks until a given area is mined out.

Umpire laboratory check samples are analysed outside the mine site. Sukari staff and security deliver the pulp samples to the ALS sample preparation laboratory at Marsa Alam. This facility then forwards the samples to OMAC Laboratories Ltd ALS Loughrea. A duplicate of the pulp sample is sent to EMRA and kept for reference. ALS organises approvals to dispatch the samples outside the country for analysis.

The sample preparation procedure conducted by the Sukari laboratory involves drying, crushing to 2mm (for DD and face samples only), splitting of a 1kg sub-sample, which is then pulverised to 90% passing 75µm.

8.6. Analytical methods

Various analytical methods have been employed, including those outlined in Table 8.1.

Table 8.1: Analytical methods used.

Technique	Laboratory	Analytical method	Comment
1. Soils	ALS - Ireland	Au-ICP22 Au 50g FA ICP-AES finish; ME using pXRF	Since 2021
2. Rock chip	SGM Site Lab	FA 30g; ME using pXRF	
3. Trenching, and	SGM Site Lab	FA 30g	
4. Exploration drilling at Sukari.	SGM Site Lab/ALS - Ireland	SGM Lab: FA 30g - ALS Lab: Au-ICP22 Au 50g FA ICP-AES finish; ME using pXRF	ALS Lab was utilised between 2021 and 2022 -H1. Otherwise, all the analysis was done at SGM Lab

Note: SGM: Sukari Gold Mine; Au: gold; FA: fire assay; ICP-AES: inductively coupled plasma-atomic emission spectrometry; ME: multi element; pXRF: portable x-ray fluorescence; ICP: inductively coupled plasma.

For ALS, all samples were typically delivered to their facility in Marsa Alam (e.g. EDX samples) before the pulp samples are shipped to ALS, Loughrea, Ireland for analysis.

8.6.1. Soil samples

No sample preparation was conducted at the Marsa Alam facility. Once shipped to Ireland, the soil samples underwent the ROL-21 Manual Sheet Rolling process before analysis using Au-ICP22: Au 50g FA ICP-AES finish.

8.6.2. RC drilling samples

Sample preparation for RC drilling was carried out at ALS Marsa Alam following this protocol:

- PREP-31B – Crushing, splitting, and pulverising a 1kg sample.
- PREP-31B Weight charge – reconfirmation of sample weight before further processing.
- SPLIT-Z – Splitting the pulp into two portions:
    - One for EMRA.
    - One for Sukari Gold Mine.
- SPLIT-Zd – Duplicate pulp split for additional send-out.
- After shipment to Ireland, the following steps were performed before analysis:
    - ROL-21 Manual Sheet Rolling.
    - Au-ICP22: Au 50g FA ICP-AES finish.

If visible gold nuggets were observed, ALS conducted further analysis using Au-GRA22: Au 50g FA-GRAV finish.

8.7. Database

Logging data are paper captured with the introduction of tablets in 2022 using comma-separated values (.csv) files that directly uploads into Datamine's Fusion database. Paper logs are then entered into excel and then uploaded into Fusion. Historically, prior to this transition, data were manually recorded on paper and later transferred into the database. The database is reviewed by Datamine and external consultants, as required, to address any inaccuracies in data by cross-referencing the digital records with original paper logs. This comprehensive process involved correcting transcription, survey grid, and input errors, establishing a more reliable foundation of historic data within the Fusion database.

The current data management system emphasises data accuracy, completeness, security, integrity, and robust validation mechanisms. These validation checks automatically flag anomalies or outliers, prompting an immediate review by the logging geologist. In addition to this, all data undergoes an additional verification layer by the Database Administrator on site, who conducts detailed data validation before the data are authorised for modelling and estimation.

To maintain data security, the Fusion database operates within Sukari's secured server infrastructure, employing stringent cybersecurity protocols to prevent unauthorised access. Access control measures with passwords are strictly enforced, with only authorised personnel at different levels able to modify and or extract data, preserving data integrity and security.

The entire database is backed up daily and stored on the company server, which is also backed up weekly, ensuring backup and recovery capabilities that protect against data loss in the event of system failures or other disruptions.

Data extraction from Fusion for modelling and estimation is enabled through open database connectivity (ODBC) connections, allowing seamless integration with geological modelling software. This direct data connection eliminates the need for manual data handling, thereby minimising errors and ensuring that the most up-to-date data is used in Mineral Resource modelling.

At Sukari Gold Mine, a robust system of validation, security, and integrity checks ensures that the geological database supports accurate Mineral Resource estimation, reliable decision-making, and optimal operational outcomes.

The ODBC connection is linked to structured query language (SQL) views, which function as virtual tables based on the result set of SQL queries. Unlike physical tables, views do not store data but dynamically retrieve it from underlying tables when queried. Views serve multiple purposes, including simplifying complex queries, enhancing data security, providing data abstraction, and ensuring consistency.

By using views, direct access to physical tables is restricted, safeguarding the database from unauthorised modifications and unintended errors. This approach aligns with our data security policies and helps maintain the integrity of the database.

Data collected by EDX is currently in excel format with the expectation to move to a database format in 2025.

8.8. Quality assurance and quality control

The QA/QC programme follows industry best practices for Mineral Resource estimation, ensuring the reliability of assay data and laboratory analyses. This programme includes the routine submission of certified reference materials (CRMs), pulp and coarse blanks and pulp and coarse duplicates at regular intervals for both DD and RC drilling to monitor assay accuracy, precision, and contamination.

The pulp CRMs used were sourced from ORE Research and Exploration Pty Ltd (OREAS). Multiple CRM samples were inserted into the sample batches to cover a wide range of gold grades (0.17g/t to 16.40g/t Au).

Each QC type is inserted at a rate of approximately one in 20 (5%) for both grade control and exploration samples. This level of insertion is considered adequate to comprehensively test for assay accuracy, precision, and contamination both in DD and RC drilling and is consistent with industry best practices.

The results are analysed by the database and QA/QC specialist as received and are compiled into a monthly report. Re-assay is requested for failed samples.

The accepted range for the CRMs is the expected value of ±2 standard deviations. The expected value and standard deviations are as per the product certificate. It is expected that, if the laboratory is performing well, <5% of submitted CRMs will be outside of the two standard deviation limits. For samples submitted from 2021 onwards, there was a 3.4% failure rate, which is well within acceptable limits and demonstrated good assay accuracy.

In-house coarse blanks are sourced from barren gabbro and serpentine aggregate from the Sukari concession (GBLANK). Pulp blanks from OREAS (OREAS 23b – STD011) was used. Expected gold values for all blanks are below the analytical detection limit (i.e. <0.01g/t Au). Fewer than 1% of blank failures were recorded since 2021, which indicates that there was minimal laboratory contamination.

Pulp and coarse duplicates were inserted and compared with the original assay to measure assay precision and bias. For pulps, 100% of the duplicate pairs measured an imprecision of <20% (as measured by a half absolute relative difference (HARD) analysis). For coarse duplicates, 100% of the pulp duplicate pairs measured an imprecision of <25% HARD. Both are within the limits set given the nature and style of mineralisation at the Sukari Gold Mine.

Overall, these results show that the onsite laboratory is achieving good accuracy and precision, and that no significant contamination is occurring.

This QA/QC programme is run in addition to the routine QC insertions and monitoring undertaken in-house by the laboratory. The results for the QA/QC samples are frequently analysed, with any discrepancies dealt with in conjunction with the laboratory prior to the analytical data being imported into the database. QA/QC records are available for samples collected since 2010.

Currently, ALS Ireland is being used as a referee laboratory for check assays where 5% of assays are sent to ALS for analysis. ALS is compliant with, and certified to, ISO/IEC 17025:2017 (general requirements for the competence of testing and calibration laboratories). Similar to the process followed for the onsite assay laboratory, CRMs, and blanks are inserted at regular intervals into the sample stream at a rate of about one in 20.

A general positive bias was observed with the CRMs but within acceptable limits of ±2 standard deviations of the respective standard deviations as stated in their product certificates. For the blanks, a general failure percentage below 1% confirms that contamination was well controlled at the laboratory. Umpire checks on the onsite laboratory shows a slight negative bias towards the umpire laboratory which is considered generally acceptable given the nature of mineralisation with the presence of coarse gold. Given these, the results are within acceptable thresholds and can be reliably used in Mineral Resource estimation.

EDX is following the same protocols. The Qualified Person has reviewed the available QC data and identified no issues of concern.

8.9. Sampling governance

Sample recovery is measured for all core and RC samples and is considered good (>95% for DD and 86% for RC) and is not considered to be a significant source of bias.

A comprehensive QA/QC process is in place. It includes internal QA/QC processes used by the laboratory as well as an independent, external process used by Sukari Gold Mine to independently verify QA/QC performance. Overall, the QA/QC results showed adequate accuracy and precision with no significant contamination. In addition, ongoing production data confirms the reliability of prior sampling and assaying.

Barcodes are currently being introduced at all stages of core and RC sample movement and sampling. Initially, the core samples will be transported by the drilling contractor in barcoded trays with the hand over point being the core yard where the core is checked and is electronically recorded as "received".

Samples taken for assay are also barcoded at the core yard before dispatch to the laboratory, with the individual sample's barcode being retained throughout its preparation and assay.

When logging and sampling are complete, the geologists deliver the samples to the onsite laboratory, and all parties sign a sample dispatch sheet. The dispatch of the samples is also electronically recorded as "dispatched".

The geology department completes quarterly audits of the laboratory processes and procedures to ensure that the delivered assays are of adequate quality and reliability and that expected conditions are being met. A more comprehensive audit by a specialist is instituted on an ad-hoc basis. Such an audit was completed in April 2022. Several continuous improvement items were identified, but no material risks.

A new core yard facility was built in 2020 offering improved conditions over the previous facility. This facility is basic and effective with no automated systems, but they can be added.

All existing core and pulp samples are stored at the core laydown area for easy archiving and data retrieval.

EDX follows Sukari QA/QC protocols for testing sample precision and accuracy, while adhering to ALS sample protocols for sample submission.

8.10. Qualified Person's opinion on the adequacy of sample preparation, security and analytical procedures

The Qualified Person considers that sample preparation, security and analytical procedures are acceptable.

Industry-standard practices are followed by the laboratory for sample preparation and analysis. The analytical procedures used represent conventional industry practice.

Rigorous QA/QC processes are applied (internal and external) to check for contamination and ensure that sample results are reliable and representative. QA/QC programme results do not indicate any problems with the analytical programmes. Laboratory audits are completed to identify any non-conformances and external check assaying is done every quarter.

The handover point of the samples is at the onsite laboratory by geology staff which is within the mine perimeter (<3km away from the core yard) and is also a secure facility.

Data are subject to validation, which includes checks on surveys, collar co-ordinates, lithology data, and assay data. The checks are appropriate, and consistent with industry standards. Data are acceptable to provide reliable gold data to support estimation of Mineral Resource and Mineral Reserve and can be used in mine planning.

The majority of the data are sufficiently reliable to support estimation without limitations on Mineral Resource confidence categories.

9. Data verification

9.1. Data verification procedures

Data entry, validation, storage and database maintenance is carried out using established procedures. Data used for the Mineral Resource estimates included diamond core and RC drilling. All data are stored in a central Fusion SQL database located at the Sukari site. The database has a series of automated validation tools during import and export for error identification and data that fails validation are rejected and stored for further verification.

Assay data are imported directly from laboratory assay certificates by assigned persons. A laboratory information management system has been installed, with a barcode system being implemented. The database validates every input and produces a report, detailed log and full quality control charts of duplicates and CRMs such that checks are completed during each batch import.

A full-time database administrator is employed at the Sukari site to manage the database.

9.2. Internal reviews

Sukari Gold Mine has developed and implemented a rigorous system of internal and external reviews aimed at providing assurance in respect of Mineral Resource and Mineral Reserve estimates. This structured system ensures the accuracy and validity of Mineral Resource and Mineral Reserve estimates. The approach involves a clear delegation of responsibilities, with individuals at various organisational levels assuming responsibility and reviewing the work they are directly involved in through an internal review and sign-off process. Mine-site technical specialists, who may be Qualified Persons, prepare and document the information supporting the Mineral Resource and Mineral Reserve estimates. Mineral Resource estimates are audited by external consultants during key stages of the estimate generation and reporting, followed by a final review conducted by corporate Qualified Persons with a global oversight role.

Feedback from the Sukari Gold Mine technical specialists listed in Table 2.1 was incorporated into the Report as required. The technical specialists were requested to cross-check, where applicable, numerical data, flag any data omissions or errors they identified, and review the manner in which the data were summarised and reported in the technical report.

Sukari has a number of internal processes in support of Mineral Resource and Mineral Reserve estimates. These include reconciliation, mineability and dilution evaluations, investigations of grade discrepancies, long-term/strategic plan reviews, and mining studies to meet internal financing criteria for project advancement.

9.3. Limitations on, or failure to conduct verification

There were no limitations with verifying the data that supports the Mineral Resource and Mineral Reserve estimate.

9.4. Qualified Person's opinion on data adequacy

9.4.1. Mr. Craig Barker

Craig Barker completed site visits (refer to Section 2.5).

Through completion of data verification procedures and activities listed in Section 9.1, Craig Barker has verified that:

- Appropriate procedures, checks, and validations for drilling, sampling, assaying, and geological logging are in place.
- Drilling, sampling, assaying, and logging activities are conducted and/or supervised by trained and competent personnel.
- Core and RC logging is conducted to a high standard and meets industry standards for gold exploration.
- Collar and downhole surveying have been performed using industry standard instrumentation, and suitable for determining 3D position of mineralised intercepts relied upon for interpreting mineralisation wireframes.
- Appropriate levels of QA/QC are performed routinely to confirm precision and accuracy.
- Density data is accurately measured, and adequate coverage of density data is available for tonnage estimation in Mineral Resource and Mineral Reserve estimates.
- Routine RC recovery checks are completed, demonstrating acceptable RC sample recoveries over time.
- Core recovery is measured, demonstrating acceptable DD core recoveries over time.
- Data integrity is verified for data in the drill hole database.

In summary, data are considered by the Qualified Person to be sufficiently reliable to support estimation without limitations on Mineral Resource confidence categories. The checks are appropriate, and consistent with industry standards. Data are acceptable to provide reliable data to inform estimation of Mineral Resource and Mineral Reserve, and for use in mine planning.

9.4.2. Mr. Gavin Harris

Gavin Harris completed site visits (refer to Section 2.5).

Gavin Harris focused on verifying the adequacy and accuracy of data specifically related to Mineral Reserve, covering the following aspects:

- Ensures that mine designs, including stope shapes, and layouts, are feasible and based on accurate data, such as geotechnical stability and access requirements. Mineral Reserve estimates must reflect practical, safe, and economically viable mining practices.
- Verifies that Mineral Reserve estimates are based on realistic and current economic assumptions, including commodity prices, recovery rates, mining costs, processing costs, and capital expenditures. This ensures the economic feasibility of Mineral Reserve under forecast market conditions.
- Reviews the cut-off grade calculations, ensuring they accurately reflect processing costs, metallurgical recoveries, and operational constraints. This cut-off grade supports which material qualifies as Mineral Reserve and thus directly impacts Mineral Reserve tonnage and grade estimates.
- Examines the adequacy of metallurgical testing and processing data, confirming that recovery factors, processing methods, and throughput rates align with Mineral Reserve estimates, and that metallurgical assumptions for ore processing are reliable and consistent with the expected mineralised material characteristics.
- Evaluates the adequacy of on-site and off-site infrastructure required to support Mineral Reserve extraction, such as transportation, water supply, tailings management, power, and waste disposal. For Mineral Reserve, the Qualified Person ensured that all infrastructure requirements are feasible and properly costed to support planned operations.
- Ensures the Mineral Reserve estimates account for any critical environmental constraints, including compliance with environmental regulations, water management plans, and reclamation requirements. The Qualified Person verified that long-term sustainability issues, such as TSFs, acid rock drainage, and habitat conservation, were factored into mine planning and cost estimates.
- Verifies that geotechnical data, are suitable for long-term mining operations and that Mineral Reserve estimates reflect necessary ground support or slope adjustments. Hydrological data are also reviewed

to ensure mine dewatering and groundwater control measures are feasible and accounted for in Mineral Reserve plans.

- Assesses whether the processing plant and TSFs have adequate capacity and design to support production. This includes verifying that infrastructure plans align with the scale of mining and processing required.
- Conducts risk and sensitivity analysis to assess the impact of potential changes in key factors such as metal prices, operating costs, and recovery rates on the Mineral Reserve estimates. This analysis provides insights into estimation robustness and highlights any potential need for contingency measures.
- The data, methods, and assumptions meet the requirements to the level of confidence required for classifying Mineral Reserve as Proven or Probable.

The Qualified Person's opinion on these aspects ensures that the data used to support Mineral Reserve estimates are comprehensive, compliant, and reliable, with appropriate consideration of economic, operational, environmental, and technical factors that are critical to the LOM mining and process plan.

9.4.3. Mr. Andrew Murray

Andrew Murray completed site visits (refer to Section 2.5).

Andrew Murray focused on verifying the adequacy and accuracy of data specifically related to Mineral Reserve, covering the following aspects:

- The mine, dump and stockpile designs, and access requirements are accurate and feasible. Representative economic assumptions, including commodity prices, recovery rates, mining costs, processing costs, general and administrative costs and capital expenditures were used. Cut-off grade calculations reflect processing costs, metallurgical recoveries, and operational constraints.
- The recovery factors are representative of the processing methods used.
- Adequate mine infrastructure is in place to support Mineral Reserve extraction.
- The geotechnical data, including slope stability and rock mass characteristics, are suitable for long-term mining operations.
- Suitable mine dewatering and groundwater control measures are in place.
- Processing plant throughput is accurate and reflects achievable rates.
- The TSF has adequate capacity to support production.
- Sensitivities conducted on key factors: metal prices, operating costs, recovery rates and overall slope angles, to assess the impact on the Mineral Reserve estimates.
- The data, methods, and assumptions meet the requirements to the level of confidence required for classifying Mineral Reserve as Proven or Probable.

The opinion of the Qualified Person's is that the data used is adequate, accurate and compliant to support the Mineral Reserve estimates.

10. Mineral processing and metallurgical testing

Metallurgical testwork was conducted at multiple laboratories to evaluate ore characteristics and optimise processing parameters. Early test programmes were carried out at ALS, and AMMTEC, focusing on comminution, gravity recovery, and flotation performance. Subsequent studies at Core Resources and SGS expanded on these findings, assessing leaching kinetics, reagent consumption, and variability across different ore domains. These comprehensive studies have provided critical data for process design and operational planning.

10.1. Mineral processing and metallurgical testing

Starting in 2000, numerous metallurgical and comminution testwork programmes have been conducted on samples from across the Sukari deposit, including the Amun, Ptah, Horus, Cleopatra and Bast zones.

10.1.1. Independent Metallurgical Laboratories 2005 testwork

Mineralogical investigation has shown that Sukari ore is a competent, siliceous rock consisting mainly of quartz, albite, and orthoclase, with minor sericite, kaolin, and hematite. Gold occurs in the ore as gold and argentian gold, as fine inclusions in pyrite or arsenopyrite, or enclosed in sulphides. Sulphide minerals are present in low proportion, with an average assay of 1% sulphur in the ore. Pyrite is the most common sulphide present.

Weathering of rock is predominant at and near the surface of the orebody. There is limited and localised weathering down surface fractures, and deeper along fractures associated with shear and brecciation. Sulphides have been oxidised to a varying extent in the weathered zones, with formation of mainly iron oxides.

Comminution testwork was performed on a composite sample taken from the underground workings, as well as on variability drill-core samples. Comminution test results show that the ore is competent, abrasive, and hard to grind to its final product size. The results were consistent and indicate an orebody with unusually low variation in its hardness and abrasivity.

10.1.2. AMMTEC 2006 testwork

The AMMTEC testwork programme consisted of flotation test, followed by cyanidation of flotation concentrates and tailing streams. The AMMTEC study included tests on samples of Set A – a bulk ore sample, Set C1 – oxide ore, and Set C2 – siliceous/sulphide ore material all sourced from the open pit. These samples had previously been tested at Independent Metallurgical Laboratories. Ausenco defined the mineralisation types, M1 to M5 (as per the table below), as follows:

- M1 – Fresh rock, only sulphide mineralisation present.
- M2 – Mixed sulphide and oxide, >75% of mineralisation is sulphide.
- M3 – Mixed sulphide and oxide, >25% but <75% of mineralisation is sulphide.
- M4 – Mixed sulphide and oxide, <25% of mineralisation is sulphide.
- M5 – Fully oxidised, only oxide mineralisation present.
- Type M6 was defined as neither oxide nor sulphide (non-mineralised) and no testwork was performed on such material.

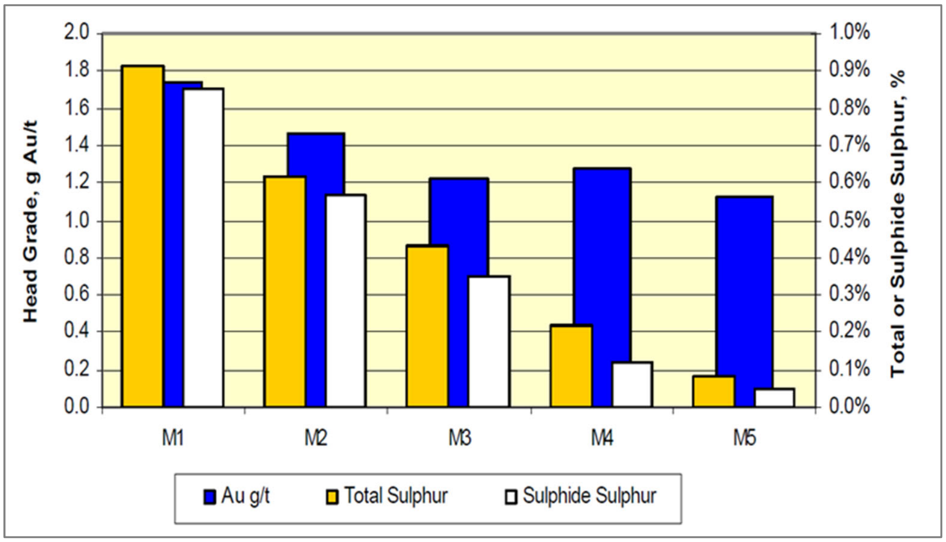
The samples used in the AMMREC testwork programme are listed in Table 10.1.

Table 10.1. Samples used in the AMMREC testwork programme.

Sample type	Description	No. of samples	Head grade (g/t Au)
Mineralisation Composite	M1	1	1.74
	M2	1	1.46
	M3	1	1.22
	M4	1	1.28
	M5	1	1.13
Mineralisation Variability	Sulphur grade	4	1.77
	Low grade gold	5	0.99
	High grade gold	6	5.85
	Primary hematite	1	1.87
	Hanging wall/granodiorite	1	1.67
	Kaolinite	2	3.36
	Mining stage one	11	1.39
	Mining stage two	7	1.60

The gold and sulphur head grades of the mineralisation composites are shown in Figure 10.1.

Figure 10.1. Mineralisation composite head assays

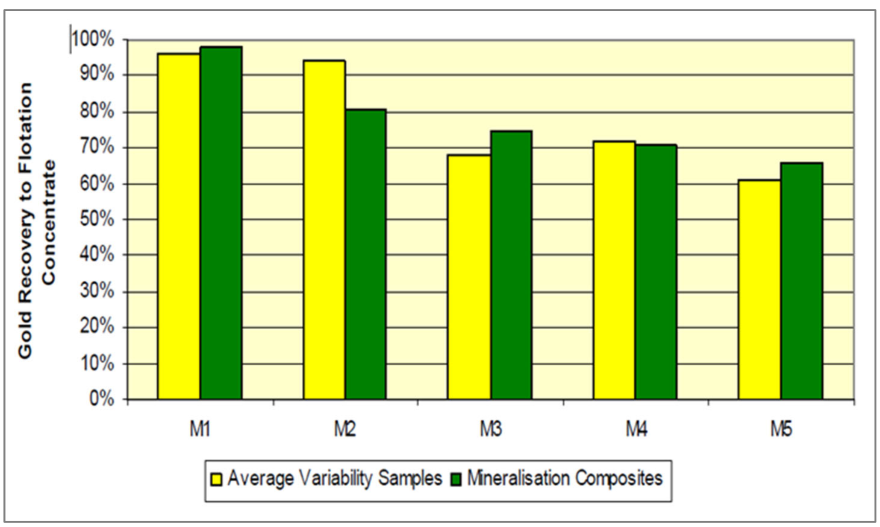


Note: Figure prepared by AMMTEC, 2006.

The sulphur grade decreases from M1 to M5, consistent with the increasing proportion of oxide mineralisation. The gold grade also decreases from M1 to M5, which reflects the general trend of lower-grade ore closer to surface.

Flotation tests on the mineralisation composites showed gold recovery ranging from 97.6% to 65.8%, with recovery decreasing from Type M1 to M5 proportional to the degree of oxidation of the sulphide mineralisation. Flotation recovery for the mineralisation composites is shown in Figure 10.2 together with the arithmetic average results for the mineralisation variability samples.

Figure 10.2. Flotation gold recovery.



Note: Figure prepared by AMMTEC, 2006.

Flotation of a 1:1 blend of M1 and M5 material gave 83% gold recovery. This is slightly greater than the arithmetic mean of the individual M1 and M5 recoveries, which shows that flotation is not affected by a high proportion of oxide (M5) material in the sample.

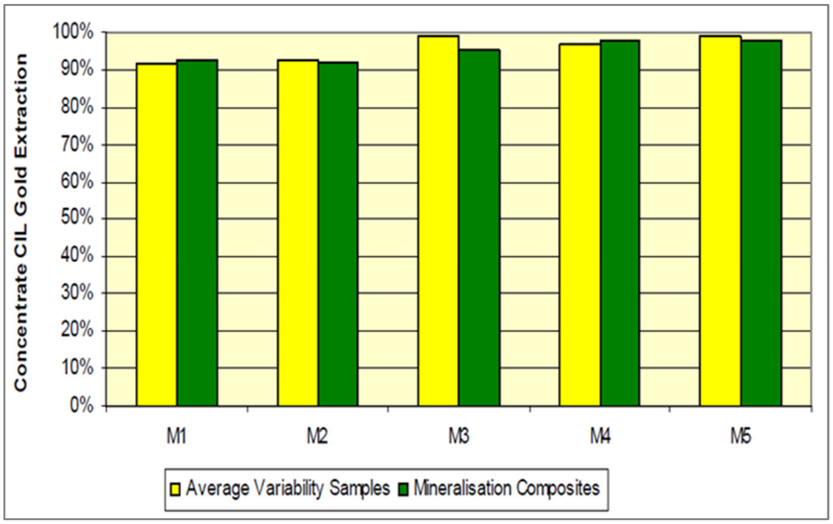
Flotation of the sulphur variability samples showed gold recovery of 88.8% for the low grade (0.53% sulphur) sample. A similar result of 91.7% was achieved on the low-grade gold (0.75g/t Au) sample. Flotation tests on the other sulphur and low-grade variability samples gave recoveries consistent with the results achieved on mineralisation composite M1.

Flotation tests on the high grade and mining variability samples gave recoveries ranging from 61.1% to 99.4%, consistent with the results achieved on the mineralisation composites.

Regrinding of the flotation concentrates to a nominal grind P80 of 10µm followed by cyanidation, gave gold extraction of 91.9% for type M1. Gold extraction increased for types M2 to M5 consistent with the degree of oxidation of the sulphide mineralisation. A maximum gold extraction of 98% was achieved on mineralisation composite M5. Subsequent checks of the actual grinds achieved on these samples showed the P80 size varied between 9 and 13µm, with an average of 11.2µm.

Flotation concentrate carbon-in-leach (CIL) gold extraction for the mineralisation composites is shown in Figure 10.3 together with the arithmetic average results for the mineralisation variability samples.

Figure 10.3. Flotation concentrate CIL gold extraction.



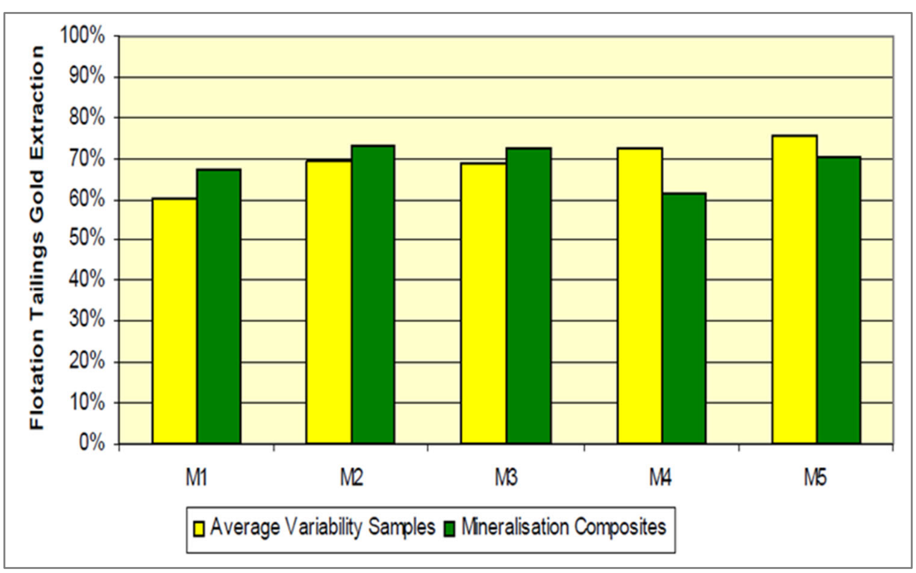
Note: Figure prepared by AMMTEC, 2006.

The agreement between mineralisation composite and average mineralisation variability sample results is good.

Cyanidation of the mineralisation composite flotation tailings gave gold extraction ranging from 67% to 72%. Cyanidation tests on the mineralisation variability sample flotation tailings gave gold extraction (by mineralisation type) ranging from 60.2% to 75.5%, which is consistent with the mineralisation composite results.

Figure 10.4 shows the flotation tailings cyanidation results for the mineralisation composites and the arithmetic average result for the mineralisation variability samples.

Figure 10.4. Flotation tailings cyanidation gold extraction.



Note: Figure prepared by AMMTEC, 2006.

Heap leach amenability cyanidation on set C1, using a 7 day bottle roll at a crush size of 3.35mm, gave a gold extraction of 88.6%. Tests on samples of M3 and M5, at the same conditions, gave gold extractions of 66.3% and 83.9% respectively.

10.1.3. AMMTEC 2011 testwork

In 2011 a programme of laboratory testwork was undertaken on five samples by AMMTEC. The samples were designated as follows:

- High sulphide open pit – Main Zone.
- High sulphide open pit – Main Reef.
- High grade underground.

The two high sulphide open pit samples were combined to produce a "Main Sulphide Ore" composite. The high-grade underground sample was re-designated as "Hapi Zone Ore".

A 25kg sub-sample of each composite was combined to produce an additional test composite, designated as "50/50 blend ore".

After head analysis of each composite, the gold grade of the main sulphide ore composite was considered to be too low, which prompted the dispatch of a replacement composite, designated as "New Main Sulphide Ore". Each of the test composites were treated individually throughout the test programme.

Head sample analysis

The head grades of the samples are shown in Table 10.2.

Table 10.2. ALS head sample analysis.

Analyte	Unit	Main Sulphide Ore Composite	Hapi Zone Ore Composite	50/50 Blend Ore Composite	New Main Sulphide Ore Composite
Au1	g/t	0.65	80.8	49	1.6
Au2	g/t	0.65	90.2	60.8	1.64
Ag	g/t	<0.3	7.5	3.1	<0.3
As	ppm	560	1030	830	1950
C_{TOT}	%	0.72	0.36	0.57	0.48
C_{ORG}	%	<0.03	<0.03	<0.03	<0.03
Cu	ppm	8	14	10	12
Fe	%	3.3	2.14	2.84	2.56
Ni	ppm	50	55	45	80
S_{TOT}	%	1	0.84	1.02	0.74
S_{SULPH}	%	0.8	0.76	0.94	0.7
Sb	ppm	1.6	1	1	1.1
SiO_2	%	67.4	80.8	66	68.4
Te	ppm	<0.2	<0.2	<0.2	<0.2
Zn	ppm	112	92	110	122

Note: C_{TOT}: total carbon; C_{ORG}: organic carbon; S_{TOT}: total sulphur; S_{SULPH}: sulphide.

Variability in gold grades indicated the presence of coarse-grained gold in the ore. Arsenic levels were moderate, increasing the possibility of gold locked in ultra-refractory mode in solid solution with minerals such as arsenopyrite. Organic carbon levels were below detection, limiting the possibility of preg-robbing occurring during cyanidation leaching. Base metal levels were relatively low, reducing the possibility of excess cyanide consumption through complexation with these minerals.

Flotation testing

The use of froth flotation was investigated as a means of upgrading the ore to maximise gold extraction. A series of sighter tests were carried out followed by bulk separation. The bulk flotation products were utilised for subsequent extraction testwork. The results are summarised in Table 10.3.

Table 10.3. Flotation test results.

Grind size (µm)	Concentrate Grades and Recoveries							Tails Grade		
	Wt. (%)	Au (ppm)	Au % Recovery	S (%)	S % Recovery	S^{2-} (%)	S^{2-} % Recovery	Au (ppm)	S (%)	S^{2-} (%)
New Main sulphide ore composite										
150	3.13	73.3	98.75	25.78	95.42	24.28	98.74	0.03	0.04	0.01
200	3.38	59	98.57	23.86	97.66	22.4	98.74	0.03	0.02	0.01
Hapi Zone composite										
150	3.77	1644	98.59	19.63	95.06	17.76	98.58	0.92	0.04	0.01
50/50 Blend composite										
150	3.41	1170	98.83	24.53	93.52	23.18	97.6	0.49	0.06	0.02

Excellent results were achieved in all of the tests, with >98% of the gold recovered in each case. Increasing the grind size from 80% passing 150 to 200µm significantly reduced concentrate gold grade at a similar recovery.

A sub-sample of the bulk flotation tailing produced for the Hapi Zone and 50/50 Blend composites were used for CIL cyanidation time leach testwork. The results are summarised in Table 10.4.

Table 10.4. Flotation tails CIL test results.

Composite Identity	Grind Size P80 (µm)	% Au Extraction @ Hours				Consumption (kg/t)	
		2	8	24	48	Lime	NaCN
Hapi Zone Flotation Tails	150	43.99	67.93	75.82	79.14	3.63	1.83
50/50 Blend Flotation Tails	150	25.32	41.39	59.60	78.57	3.99	1.04

For both composites, gold extraction was relatively high, suggesting that little gold would be lost to tailings in a full-scale operation. Relatively high lime consumption could most likely be attributed to the high level of dissolved salts in the sea water.

Sub-samples of the bulk flotation concentrate produced for each composite were used for CIL cyanidation time leach testwork at ultra-fine grind sizes to investigate the effect of grind size and oxygen on gold extraction levels. The results are summarised in Table 10.5.

Table 10.5. Flotation concentrate leach test results.

Composite Identity	Grind Size P80 (µm)	Sparge	% Au Extraction @ Hours				Consumption (kg/t)	
			2	8	24	48	Lime	NaCN
New Main Sulphide Ore Flotation Concentrate	20	Oxygen	74.6	78.33	80.79	81.75	8.16	10.18
	12	Oxygen	87.77	87.41	90.34	92.45	9.04	11.55
	12	Air	75.98	85.88	88.17	92.54	8.68	9.8
Hapi Zone Flotation concentrate	12	Oxygen	65.75	92.67	99.1	99.49	7.53	11.3
50/50 Blend Flotation concentrate	12	Oxygen	80.8	98.53	98.89	99.13	7.47	11.06

For the new main sulphide ore composite bulk flotation concentrate product, gold extraction was significantly improved at the finer grind size. The use of oxygen had no discernible effect on overall gold extraction, but it did appear to improve dissolution kinetics (however, note that the addition of oxygen for optimal gold recovery was demonstrated and applied in practice). For the Hapi Zone and 50/50 Blend ore composites, gold extraction levels were excellent, with >99% of the gold recovered in each case. This indicates that the majority of refractory gold in these ore types had reported to the flotation tailing.

Knelson gravity process route

The use of gravity separation via Knelson concentrator was investigated as a means of upgrading the ore to maximise gold extraction. A bulk separation was undertaken on each ore sample. The bulk gravity separation products were used for subsequent extraction testwork.

Gravity separation was conducted using a Knelson KC-MD3 gravity concentrator, with the following specifications:

- 0.12kW drive.
- 1500rpm.
- L/min fluidisation flow rate.

The results are given in Table 10.6.

Table 10.6. Knelson concentrator gravity results.

Grind size (µm)	Concentrate Grades and Recoveries							Tails Grade		
	Wt. (%)	Au (ppm)	Au % Recovery	S (%)	S % Recovery	S^{2-} (%)	S^{2-} % Recovery	Au (ppm)	S (%)	S^{2-} (%)
Main sulphide ore composite										
600	6.15	8.39 / 8.15	66.26 / 66.43	9.02	56.24	8.66	56.33	0.28/ 0.27	0.46	0.44
Hapi Zone composite										
600	6.15	528 / 498	61.35 / 54.27	4.9	41.11	4.92	42.29	21.8/ 27.5	0.46	0.44
50/50 Blend composite										
600	6.18	556 / 497	75.22 / 75.24	6.82	42.48	6.52	42.42	9.52/ 8.50	0.48	0.46
New Main sulphide ore composite										
600	4.24	18.4 / 17.2	46.98 / 44.25	9.7	43.42	9.62	45.05	0.92/ 0.96	0.56	0.52

The results indicate the relative inefficiency of gravity separation in comparison to flotation separation. The results suggest a close association between the gold in the ore and the heavy sulphide minerals.

Subsequent gravity work has been undertaken with summary findings from the testwork available in Section 13.2.4. - Additional gravity testwork.

A 4kg sub-sample of each of the bulk gravity tailings products (excluding the original main sulphide ore composite) was used for rougher flotation testwork to further concentrate the gold in the ore prior to cyanidation. The results are given in Table 10.7.

Table 10.7. Gravity tailings flotation test results.

Grind Size (µm)	Concentrate Grades and Recoveries							Tails Grade		
	Wt. (%)	Au (ppm)	Au % Recovery	S (%)	S % Recovery	S^{2-} (%)	S^{2-} % Recovery	Au (ppm)	S (%)	S^{2-} (%)
New Main sulphide ore composite bulk gravity tailing										
150	4.15	31.2	97.83	12.61	93.18	11.85	98.09	0.03	0.04	0.01
Hapi Zone composite bulk gravity tailing										
150	4.08	423	93.94	10.25	91.78	9.87	97.73	1.19	0.04	0.01
50/50 Blend composite bulk gravity tailing										
150	4.31	260	95.44	10.67	88.9	10.09	97.85	0.56	0.06	0.01

Excellent results were achieved in all of the tests, with >98% of the gold recovered in each case. Results again suggest a close association between the gold in the ore and the sulphide minerals.

A sub-sample of the gravity tailing flotation tailing produced for the three test composites were used for CIL cyanidation time leach testwork. The results are given in Table 10.8.

Table 10.8. Leach tests on gravity tailings flotation tailings products.

Composite Identity	Grind Size P80 (µm)	% Au Extraction @ Hours				Consumption (kg/t)	
		2	8	24	48	Lime	NaCN
New Main Sulphide Gravity/Flotation Tails	150	19.19	37.55	45.03	45.03	4.74	2.12
Hapi Zone Gravity/Flotation Tails	150	14.35	18.42	22.47	22.47	4.24	2.6
50/50 Blend Gravity/Flotation Tails	150	14.29	26.24	26.24	26.24	4.2	2.27

Gold extraction was relatively poor for each of the composites, indicating that gravity separation followed by flotation was relatively successful at isolating the highly refractory gold component of the ore.

10.1.4. ALS 2022 testwork

Testwork was completed by ALS in July 2022 on three composite samples from EMRA (transitional), Finger 13 (oxide and transitional), and Finger 17 (transitional and fresh material) stockpiles. The main objective of the testwork was to determine the suitability of dump/heap leaching as a means of extracting gold from the composites. Column leach tests were conducted at two different crush sizes – P100 100mm and P100 38mm - for a duration of 60 days. The results from a 38 and 100mm crush size using operational parameters saw a 30 – 65% gold recovery from material grades of 0.23 to 0.69g/t Au.

As part of a prefeasibility study, a trial was conducted on transition and fresh ore from Finger 17, as well as Stage 5 fresh subgrade ore, to assess the economic viability of constructing a third dump leach pad. This trial was carried out in collaboration with ALS Metallurgy.

The dump leach trials yielded recoveries ranging from 21% to 33% from two composite samples grading 0.30 to 0.42 g/t Au. These results were generally consistent with ALS testwork, except for sample BK15849, which achieved a 65% recovery - notably the highest among all samples - while also having the highest grade at 0.69g/t Au.

10.1.5. ALS 2023 testwork

A defined programme of metallurgical testwork was conducted on seven “future ore” composites from across the Sukari deposit as shown below in Table 10.9.

Table 10.9. Samples used in ALS testwork programme.

Composite no.	Composite description	Mass (kg)
1	Open pit area	540.5
2	Open pit area 2	483.5
3	Open pit area 3	652.7
4	Underground - east contact samples of Ptah	160.5
5	Underground - west stock work of Ptah	100.4
6	Underground - quartz vein along Ptah western contact	91.5
7	Underground - along Amun western contact	152.7

The key results and outcomes from the testwork programme are summarised below.

Comminution testwork

The results in Table 10.10 highlight the comminution characteristics of rock composites from Sukari, based on SMC testwork, Bond abrasion index (Ai), Bond crushing work index (CWi), and Bond ball mill work index (BWi). The SMC testwork shows that the underground - along Amun western contact sample is the hardest to break (DWi: 8.0 kWh/m³), while the underground - quartz vein along Ptah western contact is the easiest (DWi: 5.6 kWh/m³). The Bond abrasion index indicates that the Amun western contact sample is the most abrasive (Ai: 8.0), leading to higher wear rates, whereas the quartz vein sample is the least abrasive (Ai: 5.6).

The Bond crushing work index reveals that the east contact of Ptah requires the most energy for crushing (CWi: 81.0 kWh/t), while the west stock work of Ptah requires the least (CWi: 64.1 kWh/t). Similarly, the Bond ball mill work index shows that grinding the Amun western contact sample demands the highest energy (BWi: 19.20 kWh/t), compared to the open pit area 2 sample (BWi: 17.00 kWh/t). Overall, open pit materials are less abrasive and easier to process, resulting in lower energy and operational costs, while underground materials, particularly from the Amun western contact, are harder and more abrasive, requiring higher energy input and increasing processing costs (Table 10.10).

Table 10.10. Results summary of the various comminution tests.

Composite no.	Composite description	SMC testwork			Bond abrasion index	Bond work index (kWh/t)	
		DWi (kWh/m^3)	A	B		Crushing	Ball mill
1	Open pit area	7.1	76.0	0.5	0.4322	6.78	17.50
2	Open pit area 2	6.3	68.5	0.6	0.3427	6.06	17.00
3	Open pit area 3	6.4	73.4	0.6	0.3666	5.94	17.20
4	Underground - east contact samples of Ptah	7.0	81.0	0.5	0.5277	12.50	17.40
5	Underground - west stock work of Ptah	5.9	64.1	0.7	0.2589	6.56	17.20
6	Underground - quartz vein along Ptah western contact	5.6	66.2	0.7	0.4213	6.97	17.60
7	Underground - along Amun western contact	8.0	77.2	0.4	0.5138	8.80	19.20

Note: DWi: drop weight index.

Head assays, mineralogy, and gravity recoverable gold

The disparity between the duplicate gold head assays indicates the composites are likely to contain coarse gold, particularly composite #2 and the underground composites (#4 to #7). This is confirmed by the high gravity recoverable gold content determined for these composites – particularly composites #4 and #6 (Table 10.11)

Table 10.11. Key head assay data and total gravity recoverable gold content.

Analyte	Unit	Composite no.						
		1	2	3	4	5	6	7
Au 1	g/t	1.75	1.88	1.71	4.86	5.52	14.60	5.77
Au 2	g/t	1.65	2.73	1.57	3.96	4.11	16.90	6.35
Au average	g/t	1.70	2.31	1.64	4.41	4.82	15.80	6.06
As	ppm	2,230	1,150	2,080	60	150	230	2,680
S^{2-}	%	0.42	0.30	0.22	0.70	1.32	0.36	0.96
Gravity recoverable gold	%	24.7	34.2	24.4	75.6	35.3	91.0	43.2

Note: Au: gold; As: arsenic; S2-: sulphide; ppm: parts per million.

For the open pit composites, the total gravity recoverable gold was moderate, ranging from ~25% to ~34%.

For the underground ore composites, the total gravity recoverable gold ranged from moderate (~35% for composite #5) to very high (~91% for composite #6).

Elevated arsenic in composites #1, #2, #3 and #7 indicates these samples contain arsenopyrite, which may contain refractory gold. The mineralogical analysis confirmed these composites contained gold in arsenopyrite (as well as pyrite), as shown in Table 10.12.

Table 10.12. Sample mineralogy.

Composite no.	No. of gold grains detected	Grain size (µm)	Dominant gold-hosting minerals	Liberated gold detected
1	63	2-15	Pyrite/arsenopyrite	No
2	37	2-20	Pyrite/arsenopyrite	No
3	44	2-53	Pyrite > Fe-arsenate/arsenopyrite	Yes
4	23	2-10	Pyrite	No
5	114	2-27	Pyrite	No
6	29	2-210	Pyrite	Yes
7	36	2-38	Pyrite/arsenopyrite	No

Note: µm: micron; Fe: iron.

Pyrite and arsenopyrite were the main sulphide minerals detected in the samples, whilst the bulk of the samples was comprised of feldspars and quartz.

Extractive testwork

Sub-samples of each composite were ground to P80 212µm and submitted for extractive testwork. The testwork investigated two different processing options:

Flotation followed by ultrafine grinding (to P80 7µm) and cyanide leaching of the flotation concentrate. The flotation tail was also cyanide leached (separate to the concentrate) at the ‘as-received’ size.

As above, but with gravity gold recovery ahead of flotation.

All flotation and leaching testwork was conducted in site process water. The overall extraction results are summarised in Table 10.13.

Table 10.13. Extractive leach results summary.

Composite no.	Process route	Au head grade (g/t)	Au extraction (%)						Au tail grade (g/t)	Reagents (kg/t)	
			Grav	2-hr	4-hr	8-hr	24-hr	48-hr		NaCN	Lime
1	Route 1	2.40	-	38.8	58.6	72.4	85.2	86.2	0.33	0.71	3.39
	Route 2	1.88	7.5	31.6	55.0	78.6	79.1	79.7	0.38	0.71	4.91
2	Route 1	1.95	-	51.6	63.6	77.6	85.3	85.5	0.28	0.74	5.85
	Route 2	2.10	20.7	67.4	79.2	82.0	82.1	84.0	0.34	0.65	5.52
3	Route 1	1.68	-	49.7	63.5	79.2	86.5	86.7	0.22	0.75	5.49
	Route 2	1.69	10.8	44.1	59.7	83.1	84.3	86.9	0.22	0.68	5.29
4	Route 1	7.79	-	19.0	26.6	52.8	91.6	94.7	0.41	0.76	2.57
	Route 2	6.47	55.9	63.3	69.3	91.7	95.4	95.7	0.28	0.73	3.70
5	Route 1	3.92	-	35.2	53.5	75.7	85.5	86.0	0.55	0.80	3.72
	Route 2	3.66	16.7	31.0	50.5	88.3	88.9	91.2	0.32	0.78	4.03
6	Route 1	14.50	-	19.2	29.1	56.7	89.7	93.7	0.91	0.79	2.79
	Route 2	19.20	83.4	86.1	87.4	90.8	92.5	93.9	1.17	0.72	3.61
7	Route 1	7.30	-	27.4	36.6	52.8	85.9	89.1	0.80	0.79	3.01
	Route 2	5.32	26.3	38.0	43.1	52.4	78.3	90.0	0.56	0.77	3.89

Note: Au: gold; Grav: gravity; hr: hour; NaCN: sodium cyanide.

Flotation concentrates leach extractions after fine grinding to P80 7µm, however, were quite high (>90%) for all but one of the samples. Similarly, cyanidation of the flotation tail was moderate to high, ranging from 53% to 92%.

Somewhat surprisingly, gravity gold recovery/removal prior to flotation provided very marginal or no benefit at all to overall gold extraction for all samples.

10.1.6. Maelgwyn 2023 testwork

Sukari Gold Mine requested testwork on samples from two new deposits:

- Horus Deeps (Project 22-159)
- Bast (Project 22-170)

The testwork for both zones was focused on the simulation and evaluation of the current processing flowsheet. The exact scope of work per sample was as follows:

Samples head assay

The sample head assay results are shown in Table 10.14 and Table 10.15.

Table 10.14. Gold assay results.

	Unit	Horus domain 1	Horus domain 2	Bast domain 1	Bast domain 2
Gold	g/t	8.95	1.72	9.25	2.66
Gold duplicate	g/t	8.04	1.97	8.97	2.55
Gold triplicate	g/t	6.96	1.75	8.96	2.00
Gold average	g/t	7.98	1.81	9.06	2.40

Table 10.15. Sulphur speciation results.

	Unit	Horus domain 1	Horus domain 2	Bast domain 1	Bast domain 2
Sulphur total	%	0.76	0.55	0.81	0.43
Sulphide	%	0.59	0.36	0.59	0.14
Sulphate	%	0.168	0.187	0.218	0.293

Bond ball work index

The bond ball work index results are shown in Table 13.16.

Table 10.16. Bond ball work index results.

Sample	BWi (kW/t)	Classification
Horus domain 1	20.8	Very hard
Horus domain 2	22.6	Very hard
Bast domain 1	19.5	Hard
Bast domain 2	19.8	Hard

Note: BWi: bond ball work index.

Extended gravity recoverable gold

Horus domain 1 sample had an overall gravity recoverable gold content of 65.8%. A gravity recoverable gold recovery of 35.2% was achieved after stage 1 at 850µm. Further liberation at 212µm yielded another 21.1% recovery, while an additional 9.5% was achieved at 75µm. Based on the AMIRA scale, the gravity recoverable gold recovered is very coarse. Around 7.23% of the gravity recoverable gold particles were finer than 38µm, the recovery of which is more difficult for traditional gravity devices.

Horus domain 2 sample had an overall gravity recoverable gold content of 46.8%. A gravity recoverable gold recovery of 7.4% was achieved after stage 1 at 850µm. Further liberation at 212µm yielded another 20.3% recovery, while an additional 19.1% was achieved at 75µm. Based on the AMIRA scale, the gravity recoverable gold recovered is coarse to very coarse. Around 4.92% of the gravity recoverable gold particles were finer than 38µm, the recovery of which is more difficult for traditional gravity devices.

Bast domain 1 sample had an overall gravity recoverable gold content of 57.6%. A gravity recoverable gold recovery of 21.2% was achieved after stage 1 at 850µm. Further liberation at 212µm yielded another 18.0% recovery, while an additional 18.3% was achieved at 75µm. Based on the AMIRA scale, the gravity recoverable gold recovered is coarse. Around 7.64% of the gravity recoverable gold particles were finer than 38µm, the recovery of which is more difficult for traditional gravity devices.

The Bast domain 2 sample had an overall gravity recoverable gold content of 50.8%. A gravity recoverable gold recovery of 28.6% was achieved after stage 1 at 850µm. Further liberation at 212µm yielded another 13.6% recovery, while an additional 8.7% was achieved at 75µm. Based on the AMIRA scale, the gravity recoverable gold recovered is very coarse. Around 5.89% of the gravity recoverable gold particles were finer than 38µm, the recovery of which is more difficult for gravity devices.

Diagnostic leach

Horus domain 1 sample yielded a 93.2% CIL recovery with 1.68% preg-robbing. 1.43% of the gold was locked in the HCl digestible minerals, such as pyrrhotite, calcite and galena. An additional 4.34% of the gold was associated with the HNO_3 digestible minerals such as pyrite and arsenopyrite. Only 0.24% of the gold was locked in the carbonaceous material, liberated through the roasting process, while the remainder of the gold was associated with the silica/gangue material.

Horus domain 2 sample yielded an 80.14% CIL recovery with 7.06% preg-robbing. 0.95% of the gold was locked in the HCl digestible minerals, such as pyrrhotite, calcite and galena. An additional 15.76% of the gold was associated with the HNO_3 digestible minerals such as pyrite and arsenopyrite. Only 1.58% of the gold was locked in the carbonaceous material, liberated through the roasting process, while the remainder of the gold was associated with the silica/gangue material

Bast domain 1 sample yielded a 96.47% CIL recovery with 3.44% preg-robbing. 0.86% of the gold was locked in the HCl digestible minerals, such as pyrrhotite, calcite and galena. An additional 1.00% of the gold was associated with the HNO_3 digestible minerals such as pyrite and arsenopyrite. None of the gold was locked in the carbonaceous material, liberated through the roasting process, while the remainder of the gold was associated with the silica/gangue material.

Bast domain 2 sample yielded an 87.82% CIL recovery with negligible preg-robbing. 4.62% of the gold was locked in the HCl digestible minerals, such as pyrrhotite, calcite and galena. An additional 6.81% of the gold was associated with the HNO_3 digestible minerals such as pyrite and arsenopyrite. None of the gold was locked in the carbonaceous material, liberated through the roasting process, while the remainder of the gold was associated with the silica/gangue material.

Bulk flotation

The Horus domain 1 bulk flotation results are shown in Table 10.17.

Table 10.17. Horus domain 1 bulk flotation.

Horus domain 1			% Cumulative mass	Assays Au (g/t)	Cumulative assays Au (g/t)	% Distribution Au	% Cumulative distribution Au
Product	**Mass (g)**	**Mass (%)**					
Rougher concentrate	3.63	7.69	7.69	96.27	96.27	94.68	94.68
Final tails	43.60	92.31	100.00	0.45	7.81	5.32	100.00
Calculated head	47.23	100.00	-	7.81	-	100.00	-
Measured head	-	-	-	7.98	-	-	-

Horus domain 1			% Cumulative mass	Assays S (%)	Cumulative assays S (%)	% Distribution S	% Cumulative distribution S
Product	**Mass (g)**	**Mass (%)**					
Rougher concentrate	3.63	7.69	7.69	10.90	10.90	94.88	94.88
Final tails	43.60	92.31	100.00	0.05	0.88	5.12	100.00
Calculated head	47.23	100.00	-	0.88	-	100.00	-
Measured head	-	-	-	0.86	-	-	-

The Horus domain 2 bulk flotation results are shown in Table 10.18.

Table 10.18. Horus domain 2 bulk flotation.

Horus domain 2			% Cumulative mass	Assays Au (g/t)	Cumulative assays Au (g/t)	% Distribution Au	% Cumulative distribution Au
Product	**Mass (g)**	**Mass (%)**					
Rougher concentrate	4.10	8.63	8.63	21.27	21.27	83.40	83.40
Final tails	43.35	91.37	100.00	0.40	2.20	16.60	100.00
Calculated head	47.44	100.00	-	2.20	-	100.00	-
Measured head	-	-	-	1.81	-	-	-

Horus domain 2			% Cumulative mass	Assays S (%)	Cumulative assays S (%)	% Distribution S	% Cumulative distribution S
Product	**Mass (g)**	**Mass (%)**					
Rougher concentrate	4.10	8.63	8.63	10.10	10.10	95.50	95.50
Final tails	43.35	91.37	100.00	0.05	0.91	4.50	100.00
Calculated head	47.44	100.00	-	0.91	-	100.00	-
Measured head	-	-	-	1.03	-	-	-

The Bast domain 1 bulk flotation results are shown in Table 10.19.

Table 10.19. Bast domain 1 bulk flotation.

Bast domain 1			% Cumulative mass	Assays Au (g/t)	Cumulative assays Au (g/t)	% Distribution Au	% Cumulative distribution Au
Product	**Mass (g)**	**Mass (%)**					
Rougher concentrate	4.05	8.55	8.55	70.63	70.63	75.53	75.53
Final tails	43.30	91.45	100.00	2.14	8.00	24.47	100.00
Calculated head	47.35	100.00	-	8.00	-	100.00	-
Measured head	-	-	-	9.06	-	-	-

Bast domain 1			% Cumulative mass	Assays S (%)	Cumulative assays S (%)	% Distribution S	% Cumulative distribution S
Product	**Mass (g)**	**Mass (%)**					
Rougher concentrate	4.05	8.55	8.55	6.59	6.59	92.08	92.08
Final tails	43.30	91.45	100.00	0.05	0.61	7.92	100.00
Calculated head	47.35	100.00	-	0.61	-	100.00	-
Measured head	-	-	-	0.70	-	-	-

The Bast domain 2 bulk flotation results are shown in Table 10.20.

Table 10.20. Bast domain 2 bulk flotation.

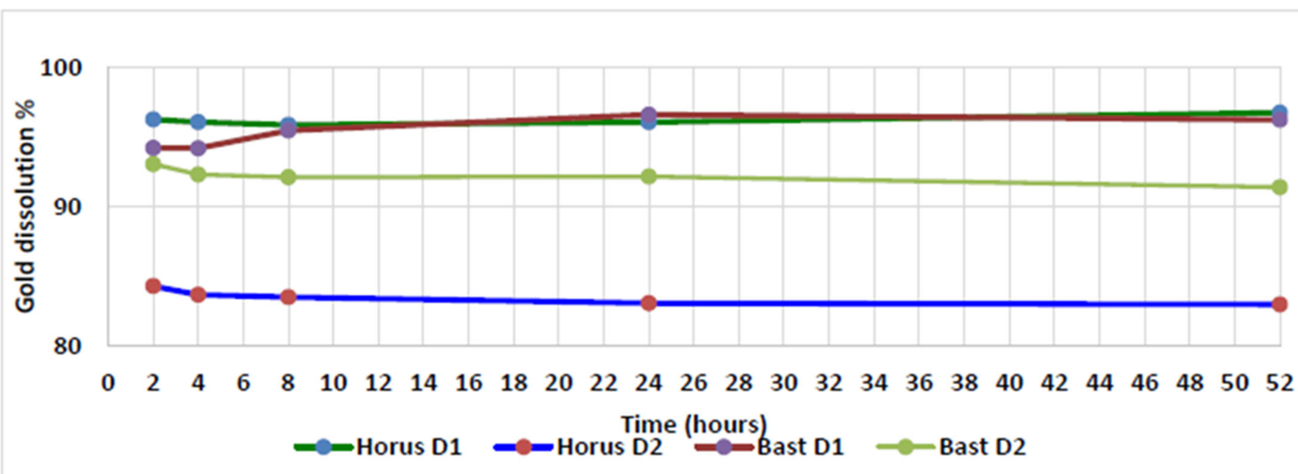
Bast domain 2			% Cumulative mass	Assays Au (g/t)	Cumulative assays Au (g/t)	% Distribution Au	% Cumulative distribution Au
Product	**Mass (g)**	**Mass (%)**					
Rougher concentrate	3.28	6.78	6.78	27.57	27.57	88.13	88.13
Final tails	45.16	93.22	100.00	0.27	2.12	11.87	100.00
Calculated head	48.45	100.00	-	2.12	-	100.00	-
Measured head	-	-	-	2.66	-	-	-

Bast domain 2			% Cumulative mass	Assays S (%)	Cumulative assays S (%)	% Distribution S	% Cumulative distribution S
Product	**Mass (g)**	**Mass (%)**					
Rougher concentrate	3.28	6.78	6.78	13.70	13.70	95.59	95.59
Final tails	45.16	93.22	100.00	0.05	0.97	4.41	100.00
Calculated head	48.45	100.00	-	0.97	-	100.00	-
Measured head	-	-	-	1.01	-	-	-

Concentrate leach

The Horus domain 2 sample had the lowest final Au recovery of ~82%, while the other three samples all achieved Au recoveries of >90%. The calculated head grades differ greatly from that of the assayed head grades, this is suspected to be a result of the 'nugget effect' caused by gravity gold. The extended gravity recoverable gold test results confirmed that the samples all had significant gravity recoverable gold values, the removal of this gold before leaching would theoretically result in a better correlation between the assayed and calculated head grades, without compromising the recoveries (Figure 10.5).

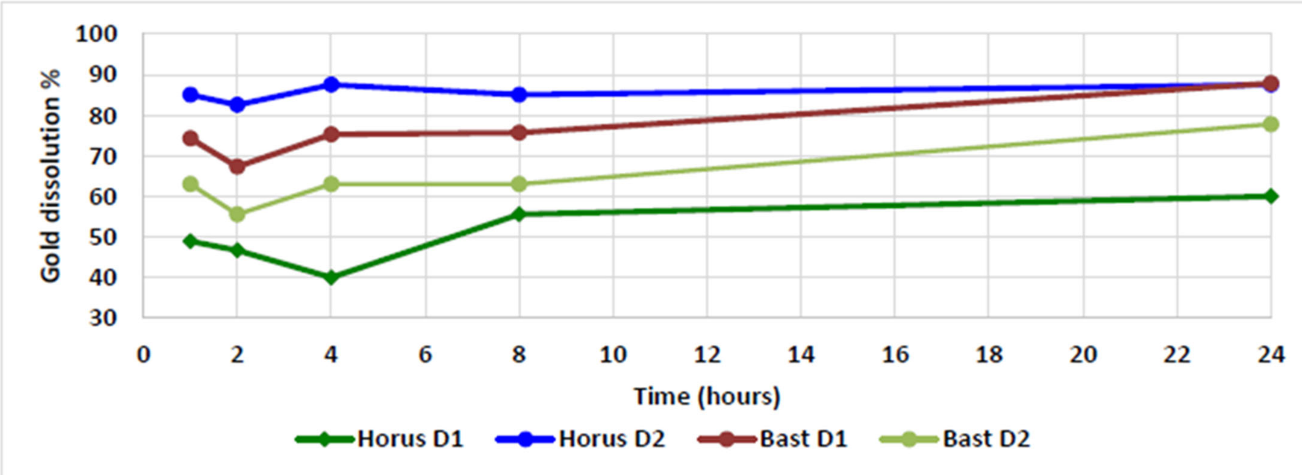
Figure 10.5. Flotation concentrates cyanidation gold extraction.



Tailing leach

The Horus domain 1 sample had the lowest Au recovery of ~60%, followed by Bast domain 2 with an Au recovery of ~77%, while the other two samples both achieved Au recoveries of ~87%. The calculated head grades differ slightly from that of the assayed head grades, again, this is suspected to be a result of the 'nugget effect' caused by gravity gold, only to a lesser extent. This would suggest that the majority of the gravity gold reports to the concentrate during flotation (Figure 10.6).

Figure 10.6. Flotation tail cyanidation gold extraction.



10.1.7. Additional gravity testwork

Consep gravity testwork and modelling report

Consep issued a report on gravity testwork and modelling in March 2019. Samples tested from Line #1 included semi-autogenous grinding (SAG) mill feed, cyclone overflow and flotation tailings. The test data from the SAG mill feed sample were used for gravity circuit modelling.

Overall, the ore was very high in gravity-recoverable gold at 78.5 - 81.7%. Very high gravity-recoverable gold values in the cyclone overflow and flotation tails samples were directly related to the lack of a gravity circuit. Consep recommended a gravity circuit consisting of four KC-QS48 Knelson concentrators and a Consep CS4000 Acacia intensive leach reactor. Modelling indicated that, at a flotation grind size P80 of 150µm, gravity gold recovery was 37.6%.

The circuit, conceptually to be installed as a dedicated "gravity tower" due to lack of space, was based on treating a portion of the cyclone feed stream.

Maelgwyn South Africa pilot plant gravity recovery testwork

Maelgwyn South Africa (Maelgwyn) completed pilot plant testwork on a Knelson KC-CD10 unit.

A Knelson KC-CD10 unit was initially installed on Line #1 treating the cyclone feed and then cyclone underflow streams. Finally, the unit was moved to Line #2 treating the cyclone underflow stream. A 1mm screen was used to feed the unit. Each concentrate sample was also intensively leached. Varying unit cycle times was investigated, and multiple tests conducted for each cycle time. A sampling valve and flowmeter was installed on the tailings line, and the tailings density was measured at set intervals. The concentrate grade was determined from intensive leaching and the head grade was determined from the shift composite sample assay results for the cyclone underflow samples but actual sample grades for the cyclone feed samples.

For the Line #1 cyclone underflow stream, the best gravity gold recovery of 40.9% was achieved at the lowest cycle time of 20 minutes to a concentrate grading 1.5kg/t on average and from an average head grade of 10.1g/t.

For the Line #1 cyclone feed stream, the best gravity gold recovery of 21.4% was achieved at the highest cycle time of 120 minutes to a concentrate grading 7.7kg/t on average and from an average head grade of 25.4g/t.

For the Line #2 cyclone underflow stream, the best gravity gold recovery of 45.4% was achieved at the lowest cycle time of 20 minutes to a concentrate grading 1.8kg/t on average and from an average head grade of 10.7g/t.

Intensive leaching recovered from 89-96.9% of the gold in the concentrates.

Throughout the testwork campaign, visible coarse gold particles were seen.

It was concluded that the trials were successful and showed that the ore sources tested were highly amenable to gravity recovery, with the Line #1 and Line #2 Cyclone underflow stream being most amenable to a gravity circuit.

Gekko testwork 2023

Laboratory gravity three-stage gravity recoverable gold testwork was conducted on two samples from conveyor belt CV-02 and CV-403, representing Line #1 and Line #2 respectively. The entirety of the Knelson test concentrates were sent to the Gekko Assay Laboratory (Gekko) in Ballarat, Australia, for sizing and assay.

The average head assay for CV-02 was 1.30g/t Au (average of assayed and recalculated head grades). The average head grade for CV-403 was 0.78g/t Au.

After the conventional third stage of gravity recoverable gold testing, a gold recovery of 59.1% was obtained for the CV-02 sample and 55.4% for the CV-403 sample.

Gekko provided information on three-stage gravity recoverable gold testwork results. Gekko used the AMIRA P420 BCC gravity model to simulate the change of gravity recovery with feed rate for three gravity circuit feed scenarios: mill discharge, cyclone underflow, and cyclone feed.

For both Plant #1 and Plant #2, the mill discharge-fed gravity circuit configuration resulted in the highest gold recoveries at all feed rates.

For Plant #1, based on mill discharge, the gravity recovery increased with increasing feed rate and no distinct plateau in the curve was observed. The steepest part of the curve was below 375tph and a recommended minimum throughput of 425tph was advised. The gravity recovery at this rate was approximately 27%, increasing to about 33% at 750tph.

For Plant #2, based on mill discharge, the gravity recovery also increased with increasing feed rate and no distinct plateau in the curve was observed. The steepest part of the curve was below 425tph and a recommended minimum throughput of 475tph was advised. The gravity recovery at this rate was approximately 25%, increasing to about 27% at 750tph, so a slightly flatter curve than for Plant #1.

For both plants, the installation of a gravity circuit fed from a split of the mill discharge stream was recommended. The limiting factor for the optimal throughput to maximise gold recovery is dependent on the overall water balance (including the screen spray and concentrator fluidisation water flows) and its effect on the mill density and grinding efficiency.

10.2. Recovery forecast

No change in recovery has been identified or flagged as the open pit and underground operations progress deeper, as all zones, except Horus Deeps, have been mined previously. Metallurgical samples from Horus Deeps indicate a consistent recovery rate of 88–89%. As a result, this recovery rate has been projected until the end of the LOM.

10.3. Metallurgical variability

Metallurgical variability exists at Sukari, particularly where carbonaceous sediments come into contact with the ore - most notably at the footwall contact. While these sediments contain little to no mineralisation, when mineralisation does occur, recoveries tend to decrease. However, the proportion of carbonaceous sediments is minimal and has a negligible impact on overall plant recoveries.

Bast is a lode where carbonaceous sediments are present in both the footwall and hanging wall. However, since these sediments are associated with only small tonnages (hundreds of tonnes at high grade) compared to the tens of thousands of tonnes processed daily, the overall recovery remains unaffected.

10.4. Deleterious elements

The primary deleterious elements affecting processing are kaolinite and talc, which are associated with the supergene enrichment of transverse faults trending east-west across the open pit and the deposit. These clay minerals pose challenges in the flotation process, as they interfere with the hydrophobic properties of gold-bearing particles, preventing them from floating efficiently. This displacement reduces flotation recovery, which is a key step in the gold extraction process.

To mitigate this impact, material containing kaolinite and talc is stockpiled separately and blended into the mill feed in low proportions to minimise any adverse effects on processing performance. This controlled blending ensures that the overall recovery rates remain stable while maintaining efficient throughput.

Beyond kaolinite and talc, no other deleterious elements have been identified at Sukari that could significantly impact gold recovery or processing efficiency.

10.5. Qualified Person's opinion on data adequacy

It is the opinion of the Qualified Person that the supporting technical information is with industry standards and adequate for this Technical Report Summary.

11. Mineral Resource estimates

11.1. Mineral Resource potentially amenable to open pit mining methods

The 2024 multiple indicator kriging Mineral Resource model was constructed in-house in 2024 using a database cut-off of 30 June 2024 and Vulcan software. Trench and face samples were excluded from estimation support. Selected underground drill holes were also excluded if the drill holes were <10m long, or <25m long with high grade samples at each end.

11.1.1. Multiple indicator kriging for Mineral Resource estimation

The basic unit of a multiple indicator kriging block model is a panel that typically has the dimensions of the average drill hole spacing in the horizontal plane. The average drill hole spacing is 20m in the grid east direction and 25m in the grid north direction. The panel should be large enough to contain a reasonable number of blocks, or selective mining units (SMUs) (about 15). The dimensions of this block are assumed to be in the order of 5mE x 8mN x 10mRL which coincides with the grade control drill spacing.

The following steps were performed:

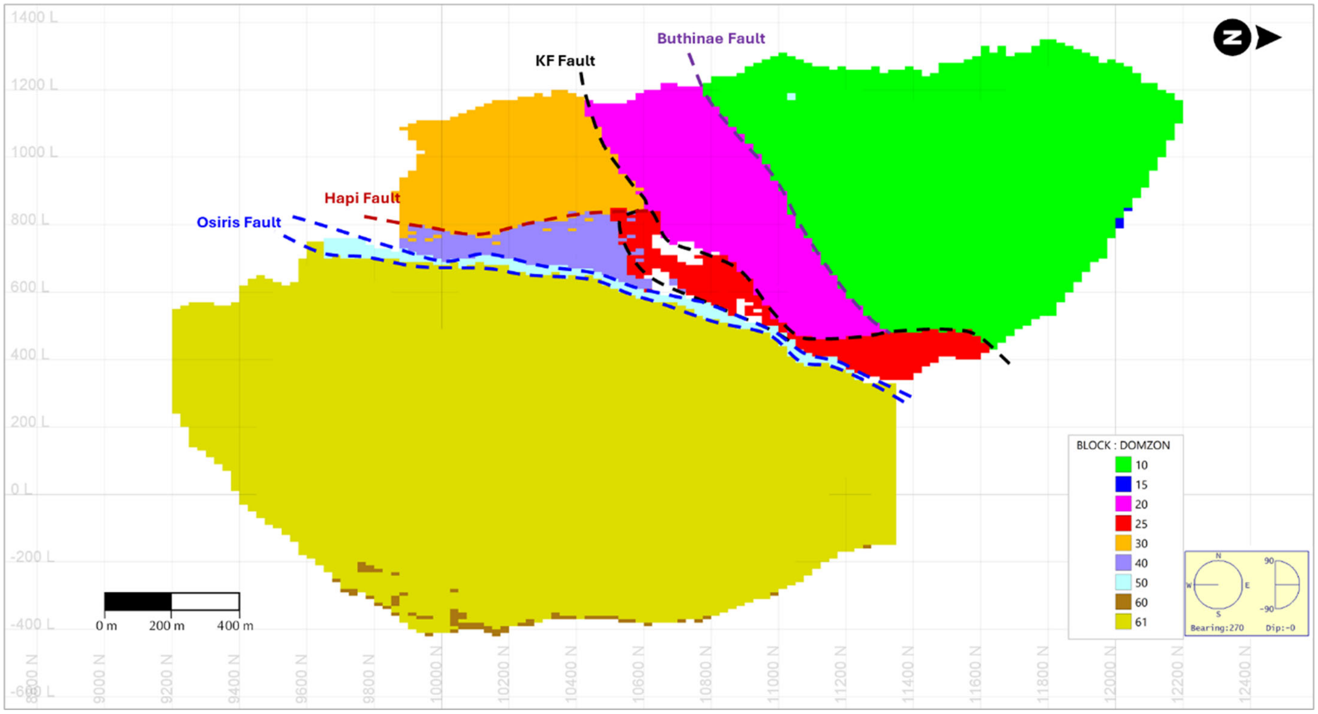
1. Estimate the proportion of each domain within each panel. Wireframes were used for the assigning of domain proportions into panels for the Mineral Resource model.
2. Estimate the histogram of grades of sample-sized units within each domain within each panel using multiple indicator kriging.
3. For each domain, and for each panel that receives an estimated grade >0.0g/t Au, implement a block support correction (variance adjustment) using indirect lognormal correction and using zero variance reduction on the estimated histogram of sample grades to achieve a histogram of grades for SMU-sized blocks.
4. Calculate the proportion of each panel estimated to exceed a set of selected cut-off grades, and the grades of those proportions.
5. Apply to each panel, or portion of a panel below surface, a bulk density value based on the lithology and weathering profile to achieve estimates of recoverable tonnages and grades for each panel.
6. For the recoverable multiple indicator kriging resource model, an indirect lognormal correction was applied without a variance reduction factor. The corrected multiple indicator kriging model assumes larger SMUs, equivalent to panel-sized units, to account for the limited selectivity resulting from the bulk mining practices at Sukari.

Apart from considerations of Mineral Resource classification (Section 11.3.2), step five was the final step in construction of the Mineral Resource model.

11.1.2. Mineralisation modelling

The geological interpretation and mineralisation domaining were based on lithological and structural wireframe models (Figure 11.1). Structural measurements collected in the open pit and underground, were used to assist with modelling the mineralised zones.

Figure 11.1. 3D long section of major mineralisation domains (looking west).



Note: Figure prepared by Sukari Gold Mine, 2024. Colours are representative of the mineralised domains.

There are three main blocks – the upper Main zone (Domains 10 – 40), the middle Amun zone (Domain 50) and the lower Horus zone (Domain 60) as shown in Figure 14.1. The Hapi fault separates the Main and Amun zones, while the Osiris fault separates the Amun and Horus zones. There is also some sub-horizontal granodiorite and gold mineralisation within the Osiris fault zone that constitutes the Osiris domain.

The upper Main zone was sub-divided into four domains by the Buthinae and Kaolin 1 faults, including the northern domain which was split into eastern and western following a barren dyke boundary. The Main zone north of the Buthinae fault is generally weakly mineralised with a number of sub-parallel northwest-dipping lodes (Cleopatra, Anthony, Julious).

The central Main zone between the Buthinae and Kaolin 1 faults is strongly mineralised and appears to plunge to the north. Part of the Main Reef mineralisation occurs in the Central Main domain.

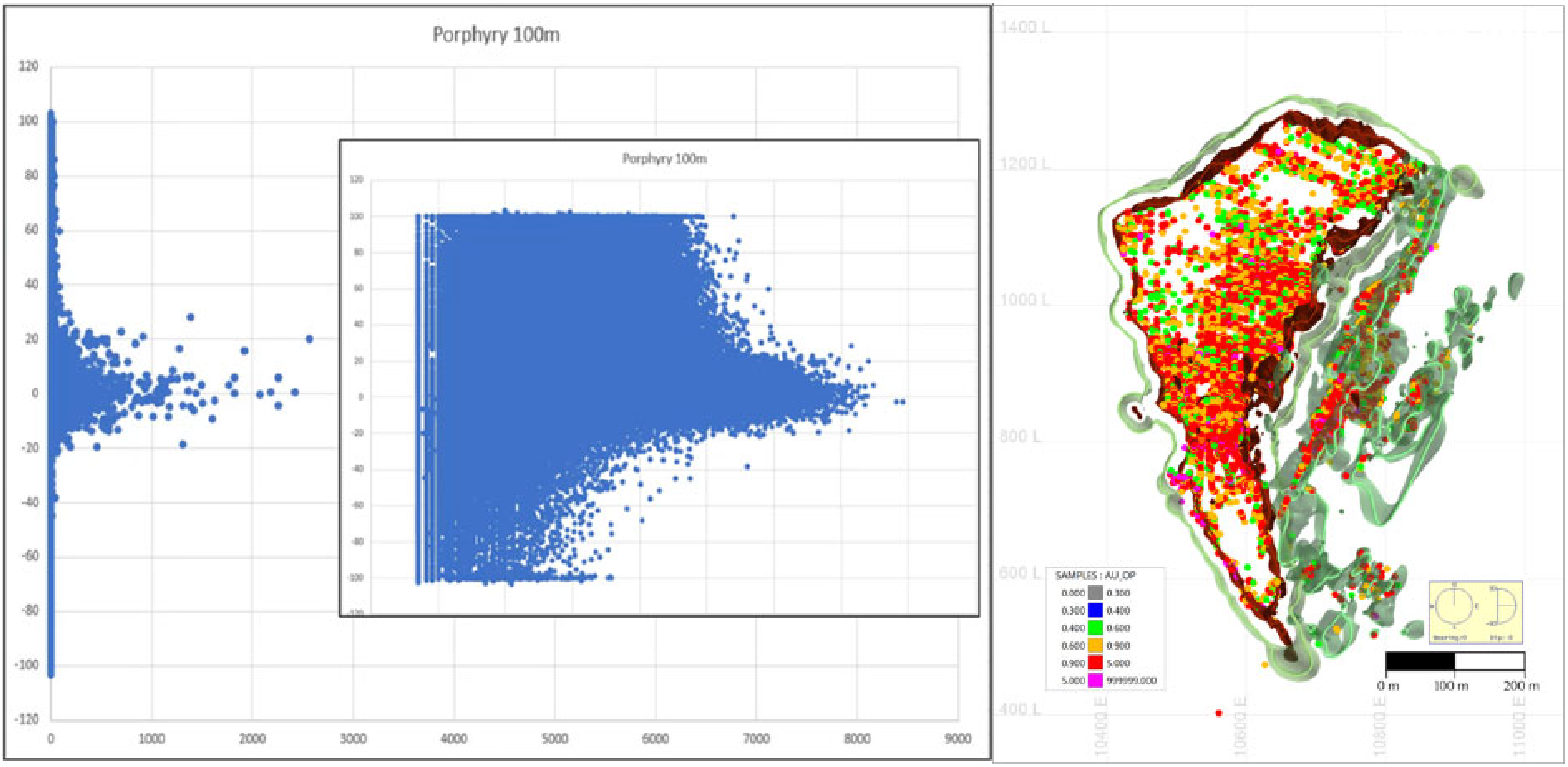
The Main zone south of the Kaolin 1 faults is also strongly mineralised, has a horizontal plunge and includes the other half of the Main Reef. The bottom part of the Central zone is more strongly mineralised around the keel of the granodiorite, so this material was divided into a separate Keel domain.

A number of subsidiary granodiorite bodies occur to the east of the Main zone to the south of the Buthinae faults and generally west of the Akbar Wahed fault. These hanging wall granodiorites are sometimes mineralised, so this area was treated as another domain for estimation.

The footwall and hanging wall of the Upper Main zone are generally unmineralised, although there are occasional narrow high-grade veins.

The main footwall contact domain was split into an immediate domain that is 20m off the granodiorite contact to avoid grade smearing from the high-grade contact samples into the dominantly non-mineralised domain (Figure 11.2).

Figure 11.2. Boundary analysis and development of western contact domain - section 10940N.



Note: Figure prepared by Sukari Gold Mine, 2024. The figure on the right shows Au grade in g/t.

The footwall and hanging wall of the Sukari granodiorite are considered to be two continuous domains undulating around the main mineralised body and were treated using a dynamic anisotropy approach at the estimation stage.

The fault and lithology wireframes were generated onsite. Minor modifications were applied to the lithological and structural interpretations to provide consistent domains when assigned in the estimation block model.

Mineralisation domains were a result of cutting the main mineralised granodiorite by major structures. However, mineralisation domains were expanded vertically above topography to overcome samples snapped outside the surface.

Mineralisation within domains was checked for its continuity directions based on the geological understanding, structural trends, and visual trends based on multiple cut-off grades.

Table 11.1 shows the domain codes and dip/dip directions of mineralisation for each domain. The Main North Wall (Domain 83) is a waste domain defined parallel to the north wall of the Main granodiorite to minimise smearing of isolated high-grade samples in this area.

Table 11.1. Domain codes and orientations.

Bound	Description	Dip>Direction
10	Main North East	45>320
15	Main North West	85>105
20	Main Central	55>077
25	Central Keel	8>000
30	Main South	38>094
40	Amun	51>090
50	Osiris	25>315
60	Horus	67>092
61	Horus HW	60>095
70	HW GD	81>326
80	FW Contact Mineralisation	65>090
81	Main FW	65>090
82	Main HW	75>290
83	Main North Wall	53>180

Note: HW: hanging wall; GD: granodiorite; FW: footwall.

The major barren andesite dykes were modelled across the host rock, and dip moderately to steeply towards azimuths between 090° and 180° (east to south). Only major dykes were defined, and it was assumed that the estimation process would adequately account for the numerous minor dykes. The major dykes were incorporated into the estimation process because they would not otherwise be adequately accounted for, based on their oblique orientation to mineralisation and the relatively wide data spacing. The dyke model was split into footwall and hanging wall dykes around the Buthinae fault zone with no major offset. The northern dyke was incorporated in the northern Granodiorite main domain where it decreased the grade continuity and was used as a domain contact. The interpretation of these dykes could be improved to ensure that high-grade samples are excluded, and all relevant low-grade intersections are captured. Currently, 5.4% of drill hole samples inside dyke wireframes have grades >0.2g/t Au.

Oxidation surfaces (base of complete and base of partial oxidation) were updated by site geologist. Oxidation has little impact on gold grades so was not used in estimation domain definition.

11.1.3. Data analysis

The Sukari database includes columns for three different gold assay methods, with one or other of these selected as the preferred assay in a separate column named AUPPM. The preferred gold assay was selected based on the following criteria:

- If the hole is an open pit grade control hole then the order is:
    - Au_ppm_FA
    - AuPGM_ppm_FA
    - Au_ppm_AR
- If NOT an open pit grade control hole then the order is:
    - AuPGM_ppm_FA
    - Au_ppm_FA
    - Au_ppm_AR

11.1.4. Negative values treatment

Three negative codes were assigned to the Vulcan dhd.isis database to help in the mineralisation modelling stage. The three codes were:

- -9999.0: not assayed (negative value driven from the database based on the database calculation of the assay sample type code i.e., insufficient sample etc.).
- -999.0: outstanding assay (default value during import into Vulcan).
- -99.0: not sampled (calculation after import based on sample type “NS”).

During the compositing stage, the Vulcan compositing form permits the exclusion of only two types of negatives. The value of -9999.0 was revised to -99.0 using field calculations, ensuring this value was disregarded in the compositing process.

11.1.5. Sample compositing

The dominant sample length is 1m. However, considering the length-weighted interval, a 2.5m length prevails as the dominant metreage between sampling intervals and was selected as the composite length. Another rationale for opting for 2.5m is the alignment with the SMU and mining selectivity when using a larger composite. Samples <0.5m long were excluded from estimation.

Drill hole composites were flagged by the domain, lithology and oxidation wireframes for analysis and estimation.

Barren dyke samples were removed from the composite file after flagging with the dyke wireframes, because the dykes were estimated separately from the mineralisation. Only barren dyke samples < 0.2g/t Au were removed, to avoid excluding incorrectly flagged mineralised samples. Barren dyke samples outside the wireframes were retained.

Most domains have skewed grade distributions with relatively high coefficients of variation (CV; where CV = standard deviation/mean), indicating that a non-linear estimation method such as recoverable multiple indicator kriging would be more appropriate than ordinary kriging. The mineralised domains tended to have lower CVs than the nominal waste domains, because the waste domains are dominated by low grades with only occasional high-grade samples. Mineralised domain 20 includes a single very high-grade grade control Removing this sample resulted in a CV <5, which was a similar CV to the rest of the mineralisation domains.

11.1.6. Top capping

No capping of high-grade outlier values was applied to the composite file for grade estimation, as multiple indicator kriging inherently accounts for outliers through its transformation process. Multiple indicator kriging effectively manages extreme values by modelling grade distributions using indicator thresholds, thereby mitigating the impact of high-grade outliers without the need for explicit capping. This approach ensures a more accurate representation of the grade variability while preserving the integrity of the dataset for resource estimation.

11.1.7. Variography

Variogram maps were generated and examined to help determine the principal directions of gold grade continuity within each domain. In some cases, gold mineralisation is parallel to the granodiorite boundaries, while in other cases the mineralisation is oblique to the granodiorites.

Variograms were generated for gold grade and a set of indicator variograms for each domain.

An indicator variable is either zero or one, depending on whether the original sample variable, in this case gold grade, is above (1) or below (0) the indicator grade threshold.

Indicator thresholds were applied to each domain, based on a consistent set of grade percentiles (cumulative proportion) as shown in the example in Table 11.2 for Domain 10.

Table 11.2. Indicator statistics for Domain 10.

Grade Threshold	Cumulative Proportion	Class Mean	Class Median	No. Data
0.00	0.00	0.34	0.09	527,912
0.01	0.10	0.34	0.09	519,328
0.01	0.20	0.42	0.15	422,539
0.03	0.30	0.47	0.19	375,462
0.05	0.40	0.53	0.24	325,146
0.09	0.50	0.64	0.32	265,113
0.15	0.60	0.77	0.42	212,405
0.25	0.70	0.96	0.57	159,214
0.32	0.75	1.11	0.68	132,039
0.43	0.80	1.29	0.82	105,613
0.58	0.85	1.55	1.02	79,278
0.82	0.90	1.98	1.35	52,807
1.35	0.95	2.92	2.01	26,450
1.82	0.97	3.82	2.61	15,930
3.17	0.99	6.83	4.36	5,297

11.1.8. Dry bulk density

The database contains 13,906 dry bulk density measurements performed on site using the Archimedes (water displacement) method. Approximately 25% of the measurements were collected between 1997 and 2013, while the remaining 75% were collected between 2020 and 2024. These samples give good spatial coverage around the deposit and represent a range of rock types.

A geology block model was generated using lithology and oxidation wireframes. Density was then assigned to this model using the average values, shown in Table 11.3. Finally, the combined geology and density model was added to the multiple indicator kriging grade model.

Table 11.3. Average density values by lithology and oxidation zone

Lith-Code	Lith-Group	Fresh (g/cm^3)	Transition (g/cm^3)	Oxide (g/cm^3)
100	Sediments	2.78	2.75	2.68
200	Volcanic Tuff	2.80	2.75	2.76
300	Carbonaceous Sediment	2.76	2.70	2.66
500	Granodiorite	2.67	2.64	2.62
600	Andesitic Intermediate Volcanics	2.74	2.72	2.68
700	Serpentine	2.80	2.68	2.58
750	Quartz vein	2.67	2.66	2.63
800	Dykes	2.79	2.76	2.75
900	Gabbro	2.75	2.72	2.67

11.1.9. Estimation

Soft boundaries were applied between mineralised domains and waste domains keeping the mineralisation/waste domains as hard boundaries. In soft boundaries, block estimation was informed by composites from another domain, using variogram and search parameters specific to each domain. When samples from neighbouring domains were used, the boundary was classified based on the main domain parameters being estimated. This estimation methodology is appropriate given that:

- Around open pit cut-off grades the deposit has relatively diffuse grade architecture.
- Mixed distributions are present within domains, which may not be effectively partitioned by further domaining.
- Domain statistics show extreme positive skew (CVs ranging from ~5 to 30).
- It is useful to estimate within a large block (panel), to better forecast grade control model/production results at SMU scale.

The multiple indicator kriging estimates were depleted using pit topography and underground voids as of end of December 2024. Blocks were constrained within a US$2,000/oz Au reporting pit shell.

The input parameters for multiple indicator kriging include:

- Indicator variogram models describing the spatial continuity of indicator variables within each domain at each indicator threshold.
- Variograms describing the spatial continuity of gold grades within each domain.
- Mean gold grades of each of the indicator classes within each domain.

Details of block model dimensions for the multiple indicator kriging estimates are provided in Table 11.4.

Table 11.4. Open pit Mineral Resource model dimensions.

Parameter	X	Y	Z
Origin	9690	9312.5	-300.0
Offset	2020	3200	1700
Block Size	20	25	10
Number of blocks	101	128	170

Pass 1 represents the minimum radii required to ensure that the block is entirely enclosed by the search ellipsoid regardless of the rotations. The ellipsoids for each domain were tested so that the geological directions stated in Table 11.5 are replicated in the software.

Table 11.5. Multiple indicator kriging estimation search strategy.

Estimation Pass	Search Radii			Samples		Octants
	X	Y	Z	Min	Max	Min
1	30	30	15	16	48	4
2	45	45	22.5	16	48	4
3	60	60	30	8	32	4
4	75	75	37.5	4	32	4

Discretisation was set at 5 x 5 x 5 points per block to generate block rather than point estimates. Multiple indicator kriging was first used to estimate a panel cumulative distribution function, used to calculate a panel E-type grade. Change of support was then implemented using the indirect log-normal method with a variance reduction of zero so the correction only applied the mean and variance of the distribution.

The boundary treatment was by restricting the soft boundaries between the mineralised zones and the waste zones to prevent grade smearing both ways. The footwall mineralisation domain “80” was in the mineralised zones side. A matrix showing the relation between domains is provided in Table 11.6 where 1 is a soft and 0 is a hard boundary.

Table 11.6. Soft (1) and hard (0) boundaries.

Bound	Description		10	15	20	25	30	40	50	60	61	70	80	81	82	83
10	Main North East	**10**	1	1	1	1	1	1	1	1	0	0	1	0	0	0
15	Main North West	**15**	1	1	1	1	1	1	1	1	0	0	1	0	0	0
20	Main Central	**20**	1	1	1	1	1	1	1	1	0	0	1	0	0	0
25	Central Keel	**25**	1	1	1	1	1	1	1	1	0	0	1	0	0	0
30	Main South	**30**	1	1	1	1	1	1	1	1	0	0	1	0	0	0
40	Amun	**40**	1	1	1	1	1	1	1	1	0	0	1	0	0	0
50	Osiris	**50**	1	1	1	1	1	1	1	1	0	0	1	0	0	0
60	Horus	**60**	1	1	1	1	1	1	1	1	0	0	1	0	0	0
61	Horus HW	**61**	0	0	0	0	0	0	0	0	1	1	0	1	1	1
70	HW GD	**70**	0	0	0	0	0	0	0	0	1	1	0	1	1	1
80	FW Contact Mineralisation	**80**	1	1	1	1	1	1	1	1	0	0	1	0	0	0
81	Main FW	**81**	0	0	0	0	0	0	0	0	1	1	0	1	1	1
82	Main HW	**82**	0	0	0	0	0	0	0	0	1	1	0	1	1	1
83	Main North Wall	**83**	0	0	0	0	0	0	0	0	1	1	0	1	1	1

Note: HW: hanging wall; FW: footwall; GD: granodiorite.

Based on the experience gained from the reconciliation of estimates against mine production, the following scheme was developed. The preferred value in mineralised domains was the average of the mean and median grades for the top indicator class, while the more conservative median grade was used for the waste domains, to limit smearing of isolated high-grade samples in these nominally low-grade domains. Table 11.7 shows the top indicator statistics for all domains, with the values used for the preferred model indicated by shading.

Table 11.7. Top indicator class statistics (preferred values indicated by shading).

Description	Bound	Gold threshold ppm	Count	Mean	Median	Mn+Md/2
Main North East	10	3.17	5,297	6.83	4.37	5.60
Main North West	15	0.46	98	0.89	0.69	0.79
Main Central	20	7.256	1,981	32.75	11.23	21.99
Central Keel	25	14.913	94	49.07	23.92	36.49
Main South	30	8.173	2,022	24.80	12.80	18.80
Amun	40	30.7	293	90.00	56.00	73.00
Osiris	50	8.058	286	38.95	16.77	27.86
Horus	60	7.1	516	28.95	13.73	21.34
Horus HW	61	0.406	373	1.70	0.72	1.21
HWGD	70	2.629	2,672	8.69	3.71	6.20
FW Contact Mineralisation	80	7.985	542	62.32	24.56	43.44
Main FW	81	0.284	203	13.62	0.84	7.23
Main HW	82	1.82	149	12.48	4.82	8.65
Main North Wall	83	0.129	28	4.95	0.41	2.68

Note: HW: hanging wall; FW: footwall; GD: granodiorite.

11.1.10. Validation

The 2024 Mineral Resource model was validated in a number of ways, including visual comparison of block and drill hole grades, statistical analysis (summary statistics, swath plot), examination of grade-tonnage data, and comparison with grade control and the previous resource model.

Visual comparison of block and drill hole grades shows reasonable agreement in all areas examined and no obvious evidence of excessive smearing of high-grade assays.

A comparison of average sample composite and model block grades by domain was completed. The composite statistics were not declustered and length weighted, while the block grades were volume weighted. The block averages by domain were consistently less than the samples, this was due to the clustering of the high-grade samples. Overall, the average block grades are lower than the sample grades because the sample grades tend to be clustered in high grade areas, particularly the underground grade controlled areas.

Swath plots of gold grades demonstrated that the composite and block grades show similar spatial trends and average values were comparable, allowing for smoothing in the model, clustering in the drill hole data and the generally larger volume represented by the model. Two sets of swath plots were generated, one using all holes and the other using only Mineral Resource holes. The grade profiles for the Mineral Resource holes only are closer to the block model grades than those using all holes, which is due to the underground grade control holes being clustered in high grade areas. The impact and location of the underground grade control holes was most apparent in the swath plots by elevation.

The visual validation between the block model and sample data demonstrates a reasonably strong alignment, indicating that the block model accurately represents the spatial distribution of grade values observed in the samples. This consistency reflects the reliability of the interpolation methods used and validates the integrity of the geological and grade modelling processes.

A grade-tonnage curve showed a smooth gradation in both tonnage and grade over the range of cut-off grades examined, and no obvious kinks or bumps suggestive of estimation issues.

Validation of the 2024 Mineral Resource model shows that estimates are reasonable compared to all drilling, grade control data and the previous model.

11.2. Mineral Resource potentially amenable to underground mining methods

The Mineral Resource estimate potentially amenable to underground mining methods was informed by drilling up to 30 June 2024.

11.2.1. Mineral Resource data set

The mineralisation interpretation included all validated open pit RC grade control holes 60m above the 30 June 2024 hard pit shell in Amun and 150m above in the Ptah Zone. All open pit RC grade control holes below the hard pit shell and the advanced grade control drill holes from surface were retained. The remainder of the open pit RC grade control holes were excluded. All underground grade control and face samples were used in estimation. Underground grade control was nominally drilled on a 25 x 25m spacing and face samples were taken across each exposed development face, determined by lithology and structural orientation. Holes without assays were excluded from estimation support.

11.2.2. Geological modelling

Geological paper cross sections and level plans were generated on 25m intervals or on drill hole (oblique) section and georeferenced in Maptek Vulcan and Leapfrog software for 3D explicit and implicit modelling, respectively. Lithological, weathering, and redox wireframes were modelled and subsequently flagged into the database and block model. Geological sections are updated daily while the geological models are updated quarterly, and interpretations are regularly cross checked with drill core, RC chips, and underground mapping to ensure the model is representative of the geology on the local scale.

11.2.3. Mineralisation modelling

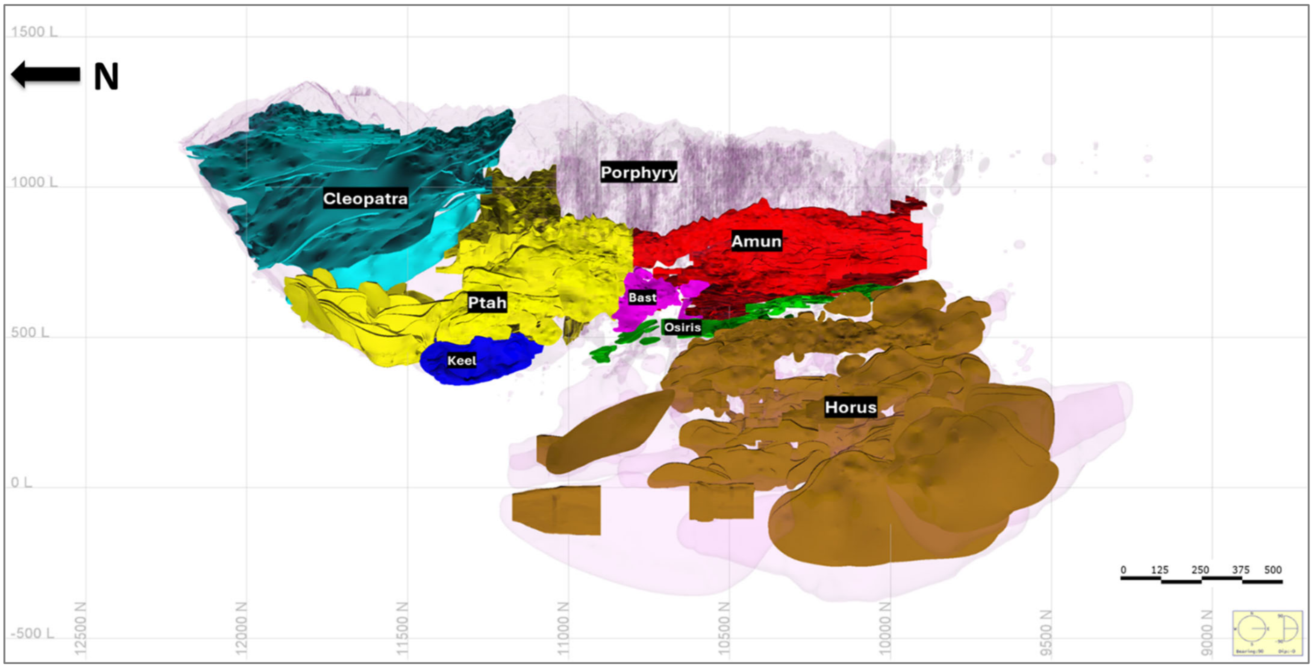
Mineralisation domains were built based on a combination of grade, lithology, alteration and structural data from drill core, open pit and underground mapping.

Statistical and visual analysis showed that a suitable geologically related boundary cut-off grade was approximately 0.5g/t Au for the underground. The resulting low-grade mineralised envelopes incorporated minor amounts of internal sub-grade material to preserve continuity. Where grades >2g/t were observed with geological continuity, a high-grade domain was generated that capture internal rod-like ore shoots. Boundary analysis was completed to confirm if there was a sharp change in grade profile across domain boundaries.

Mineralisation models were generated from geo-referenced paper cross-sections into Vulcan. Interval selection method using LeapFrog was completed on vertical sections in a north-south direction across the mineralisation extent.

Wireframes were snapped, where possible, to the drill hole sample intervals to create a precise boundary. The resulting interpretation produced consistent geometry and geological continuity for the plunging mineralised lodes (Figure 11.3).

Figure 11.3. 3D View of Sukari mineralisation lodes looking east.



Note: Figure prepared by Sukari Gold Mine, 2024.

The mineralisation domains were categorised into eight main groups of lodes, comprising a total of 308 individual domains (Table 11.8).

Table 11.8. Categorisation and number of mineralised domains.

Lode	Domains	LG Domains (<1.6g/t Au)	MG Domains (1.6g/t – 2.2g.t Au)	HG Domains (2.2g/t – 8g/t Au)	VHG Domains (>8g/t Au)
Granodiorite	1000	4	0	0	0
Amun	2000	18	13	33	3
Osiris	3000	6	4	13	3
Horus	4000	48	17	25	10
Ptah	5000	38	8	8	7
Cleopatra	6000	21	0	0	0
Bast	7000	11	1	3	5
Keel	8000	4	2	3	0

Note: LG: low grade; MG: marginal grade; HG: high grade; VHG: very high grade.

The 1000 lode refers to the main granodiorite intrusion, excluding mineralisation above 0.5g/t Au. The 2000 lodes comprise the Amun domains, situated in the southern portion of the deposit. The 3000 lodes represent the Osiris domains, located beneath Amun. The 4000 lodes represent the Top of Horus and Horus Deeps domains. The 5000 lodes represent the Ptah domains, found in the central portion of the deposit. The 6000 lodes represent the Cleopatra domains, situated in the north of the deposit. The 7000 lodes represent the Bast domains, situated between the Amun and Ptah zones. The 8000 lodes represent the Keel domains beneath the Ptah domains. Amun, Ptah, and Cleopatra are mined from both open pit and underground, whereas Horus is mined exclusively from underground.

Thin, continuous, barren, mafic dyke units are interspersed within the metasedimentary units in the footwall and within the main granodiorite in the northern zone. These barren units were modelled independently and flagged as code 800 for both the composites and block model.

11.2.4. Sample compositing

Drill samples were composited down hole on a 1m length for underground samples. The minimum composite length was 0.2m. Compositing was completed in Maptek Vulcan software using the merge option for small composites, which adds the last composite, to the previous interval. A tolerance length of 0.2m was used. Compositing honoured the estimation domains by terminating on the domain boundary.

11.2.5. Top capping

Top capping was applied to reduce the effect of high-grade outliers during resource estimation. A multi-variate analysis method was used to select the top cap, including analysing a combination of histograms, probability plots, and their disintegration trends. The top capping occurred within the top percentile ranges, between the 95th and 99.9th percentiles within the individual mineralised lodes. Mine to mill reconciliation data in active areas of the mine were also used when assessing the final top cut grade.

Occasionally, where there were many other notable disintegration points in a grade population for a given domain, high yield limits were also used. In these instances, the distance in which elevated values could be used during interpolation were restricted (limited range of influence), minimising the potential for grade smearing.

Top cut ranges applied to each domain included:

- Amun: 57 – 167g/t.
- Osiris: 10 – 187g/t.
- Horus: 4 – 283g/t.
- Ptah: 3 – 340g/t.
- Cleopatra: 16 – 98g/t.
- Bast: 8 – 470g/t.
- Keel: 11 – 29g/t.

11.2.6. Variography

Variography was conducted using Snowden Supervisor v9 software. Individual domains with sufficient data to support modelling were generated for variography based on spatial continuity, directional grade variability and orientation. A normal scores transform was applied to declustered composites to help resolve spatial structures. Gaussian variogram models were back transformed to derive model inputs for estimation.

Where an individual domain had insufficient samples to undertake variography, the variogram model parameters from a comparative domain with a similar trend were used, and the orientation adjusted to match the domain with insufficient data.

11.2.7. Dry bulk density

Density was assigned in the block model using the approach described for the Mineral Resources considered potentially amenable to open pit mining methods.

11.2.8. Block model setup

The block model parent block size was tailored to the local data spacing. The maximum parent block size was 40m x 50m x 20m in waste areas and the minimum was 5m x 12.5m x 5m. The minimum sub cell size was 1.25m x 1.25m x 1.25m, which effectively resolves domain boundaries. The block model was not rotated, and was flagged by weathering, lithology and mineralisation domain. Table 11.9 summaries the block extents.

Table 11.9. Block model extents.

Block extents	Easting (X)	Northing (Y)	Elevation (Z)
Origin	9,600	9,200	-500
Minimum Offset	0	0	0
Maximum Offset	2,000	3,300	1,900

Block extents	Easting (X)	Northing (Y)	Elevation (Z)
Parent Block Size (m)	40	50	20
Sub Cell Size (m)	1.25	1.25	1.25
Rotation (°)	90	0	0

11.2.9. Estimation

Mineral Resources potentially amenable to underground mining methods were estimated using ordinary kriging in Vulcan software. All domains used hard boundaries to ensure that separate grade populations did not influence the estimate. Dynamic anisotropy was implemented to align variogram and search orientations to local domain orientation.

Each estimation domain was attributed its own estimation parameters defined via quantitative kriging neighbourhood analysis (QKNA). QKNA was used to optimise the search ranges, sample numbers, and for discretisation. Optimisations looked at kriging efficiency slope of regression and negative kriging weights. The QKNA was completed for each variogram domain with the first estimation pass. Each estimation domain was sub-domained by data density such that smaller blocks and more localised searches could be applied to the estimation of grade control-drilled areas, relative to the wider-spaced exploration drilling.

Sulphur was also estimated for geometallurgical purposes.

11.2.10. Validation

Model validation used volume comparison, swath plots, grade comparisons with nearest neighbour, and visual validation techniques to ensure no significant errors occurred during the estimation process.

Validation checks showed good agreement between drill hole composite values and model block values. The hard boundaries between wireframes constrained grades to their respective estimation domains. Top capping and high-grade restraining succeeded in minimising grade smearing in regions of sparse data.

11.3. Combined Mineral Resource

11.3.1. Mineral Resource classification and uncertainty

Classification for the open pit estimate was based on estimation passes. Pass 1 (30 x 30 x 15) could support measured, pass 2 (45 x 45 x 22.5) could support indicated, pass 3 (60 x 60 x 30) could support Inferred and an additional pass 4 (75 x 75 x 37.5) was unclassified. The Mineral Resource classification was not smoothed because the use of octant constraints minimised the “spotted dog” problem and areas of Measured and Indicated Mineral Resource confidence classifications are generally quite coherent. This classification included consideration of deposit type, continuity of geology and grade, sampling and assaying methods, and analysis of QA/QC data.

This strategy was considered by the Qualified Person to be defensible, given consistent data quality across the deposit and precise lithological modelling, with changes primarily driven by search parameters/distances.

An additional step was taken to reclassify Inferred material within the host rock. Inferred blocks that were located within a conservatively defined drilling solid and supported by at least 16 samples from two or more drill holes, were upgraded to Indicated status.

Mineral Resources potentially amenable to underground mining methods were classified as Measured, Indicated, and Inferred Mineral Resources based on data quality, drilling density, geological continuity, the variogram range, number of passes and the slope of regression. The main classification parameters applied are presented in Table 11.10.

Table 11.10. Mineral Resource classification parameters.

Parameter	Measured	Indicated	Inferred
Kriging efficiency and slope of regression	>0.7	0.5 - 0.7	0.3 - 0.5
Number of samples	>12	12 – 8	8 - 4
Minimum drill hole samples	8	6	4
Minimum consecutive sections	4	good geological continuity	-

Parameter		Measured	Indicated	Inferred
Grade continuity		very good	good	moderate to poor
Infrastructure		existing underground development	No existing underground development	no existing underground development
Maximum drilling density	Underground	20m by 10m or 25m by 10m	20m by 25m	50m by 50m

For Indicated Mineral Resource, there was some allowances for areas where drilling density was lower, but where successive drilling campaigns had shown grade and geological continuity. To ensure that the classification was continuous, classification wireframes were generated from the classification criteria and used to flag the block models.

11.3.2. Depletion and sterilisation

Active mining areas are scanned using cavity monitoring laser scanners on a monthly basis for underground and detailed drone photometry scans are completed weekly for open pit. Depletion pit surveys and underground cavity monitoring scans were updated at the end of December 2024 and used to flag the block models in the mined-out field. The block models were not sub-celled on depletion boundaries and reporting used a partial block depletion percentage.

For the open pit, grade estimates were generated with barren dyke samples excluded. Barren dyke depletion used the following process. Blocks were flagged with their proportion of barren dyke, which was treated as dilution if <20% but was assumed to potentially be selectively mineable if >20%. Therefore, if the proportion of dyke was <20%, then the block proportions and grades above each cut-off were diluted by the proportion of dyke at a grade of 0.02g/t Au. However, if the proportion of dyke was >20%, then the block proportions above each cut-off were reduced by the proportion of dyke, but grades above cut-off were unchanged. In both cases, the average block grade was re-calculated. The 20% threshold between dilution and mineability was selected based on the current mining selectivity.

The open pit Mineral Resource model was also depleted using existing (as at end of December 2024) underground development and stopes, as well as an additional set of voids, referred to as open pit voids, which includes previously unsurveyed voids encountered during open pit and underground mining. These were treated in the same way as stopes for the purpose of model depletion.

Stopes were depleted from the open pit Mineral Resource model by preferentially removing the highest-grade material in each block, if stopes targeted the highest available grades. Development was depleted at average gold grades, assuming that no specific material was targeted by this type of mining. While this approach is simplistic, it is more realistic than applying a single methodology to all underground voids.

For the underground model, regions considered sterilised by existing stoping or capital infrastructure were flagged and excluded from Mineral Resource reporting.

11.3.3. Block model to mill reconciliation

Several metrics are used for reconciliation of open pit and underground estimated tonnages and grade versus actual values on a weekly, monthly, quarterly and annual basis.

In 2024, the grade control model consistently overperformed in tonnes by 4% but underperformed in grade and ounces by 9% and 5% respectively compared to the multiple indicator kriging model. Variation in tonnes, grade and ounces, ranges between +55% and -27% on a monthly basis. This issue was resolved in the latest Mineral Resource model by using additional drill hole data, improved geological constraints, top cuts, and high yields in the estimation process. Overall, the ounce linear trend line showed a +5% reduction in ounces compared to the Mineral Resource model.

Advanced grade control drilling on a 24 x 24m grid is planned to be continued until the open pit has been drilled out to that spacing.

Initiatives are underway to address the disparity between actuals versus resource model forecasts in the underground mining operation. These include use of RC drilling, and conditional simulation, adjustment of top cut values, ongoing geological interpretation refinements, and defining the true shape, orientation and grade continuity of the deposit.

The introduction of underground RC drill rigs in Q1 2025 is planned to increase the sample size and decrease the grade variability seen in core samples. Drilling rates will also be higher, meaning that a tighter-spaced drill pattern can be achieved.

11.3.4. Stockpiles

A total of seven stockpiles containing substantial tonnages of low-grade material (>0.2g/t Au), along with ROM material that is blended and fed into the processing plant, was closed off and reported as at 31 December 2024. This material primarily originates from the open pit and has been classified based on grade control drilling.

The stockpile tonnages are determined through monthly survey control and loose density testwork, while grades are assigned based on drilling results. All stockpiled mineralised material is planned for processing through the mill or placement under irrigation on the dump leach.

Underground ore, which is higher grade than the open pit material, is hauled to the surface immediately after mining. It is then stockpiled on the ROM pad before being fed in batches into the processing plant.

11.3.5. Reasonable basis for establishing the prospects of economic extraction

Open pit

Mineral Resources potentially amenable to open pit mining methods were reported within a US$2,000/oz Au pit shell and above a 0.3g/t Au cut-off grade. The input parameters are listed in Table 11.11.

Table 11.11. Input parameters, conceptual constraining pit shell for Mineral Resources.

Parameter	Unit	Value
Gold price	US$/oz	2,000
Refining and selling cost	US$/oz	2.20
Mineral royalty	%	3.0
Diesel price	US$/L	0.75
Base open pit mining cost (mined)	US$/t/mined	1.83
Depth cost	US$/t/mined	±US$0.02 (per 10m vertical uphill haul) ±US$0.02 (per 10m vertical downhill haul)
Mining recovery fraction	%	100
Mining dilution fraction	%	7
Rock types used	#	Measured, Indicated and Inferred
Processing stream	#	CIL (Fresh / Transition @ 0.4g/t cut-off grade) CIL (Oxide @ 0.9g/t cut-off grade) DL (Oxide @ 0.2g/t cut-off grade)
Process recovery CIL fixed	%	90
Process recovery dump leach fixed	%	60
Processing cost CIL (processed)	US$/t/processed	12.68
Processing cost dump leach (processed)	US$/t/processed	2.41
Optimisation method	#	Lerchs-Grossman
Discount rate	%	7

Note: CIL: carbon-in-leach; DL: dump leach.

Underground

Mineral Resources potentially amenable to underground mining methods were reported above 1g/t Au cut-off grade below the US$2,000 pit shell.

The estimate was constrained by optimised stope shapes using mine stope optimiser (MSO) software, and an assumption of long-hole open stoping as the mining method. The shape optimiser creates and evaluates 3D envelopes of material based on the cut-off grade and other relevant factors such as minimum size, shape, dilution, and orientation of mining units. The reported Mineral Resource is confined within these mining shapes, and all material within these shapes is included in the estimate. This means that the cut-off grade is considered during the creation of these shapes, and no additional cut-off grade is applied when reporting from them.

The parameters used are summarised in Table 11.12. A gold price of US$2,000/oz was used in conjunction with cost assumptions to calculate the appropriate cut-off grades for the Mineral Resource considered amenable to underground mining methods. The cut-off grade used for reporting was 1g/t Au.

Table 11.12. Parameters used for generating the Mineral Resource considered amenable to underground mining methods.

Inputs	**Sukari underground**		
Gold price			
Gold price (US$/oz)	1,450	2,000	2,850
Costs			
Mining cost – mined (US$/t)	43.81	43.81	43.81
Processing cost – processed only (US$/t)	14.65	14.65	14.65
General and administrative – processed (US$/t)	3.19	3.19	3.19
Royalty (%)	3%	3%	3%
Metallurgical Recovery			
Metallurgical Recovery (%)	88.4	88.4	88.4
Cut-off grades			
MSO optimising cut-off grade (g/t)	2.0	1.5	1.0
Mineral Resource cut-off grade (g/t)			
Other MSO parameters			
Dynamic dip and strike control	Used (mineralisation wireframes for stope dip and strike control)		
Sub-stope definition method	Not applicable		
Stope sections (m)	Slice interval 2.0m		
Stope levels	Aligned with development levels or proposed development levels		
Stope width (m)	Apparent width method (min 2m, max 20m)		
Stope dilution (m)	Applied (ELOS dilution; near/far method; single values of 0.5m for near and far)		
Stope dip angle (°)	Min 42, max 135, and max change 45		
Stope strike angle (°)	Min -30, max 30, and max change 60		

Note: ELOS: equivalent linear overbreak slough; MSO: mine stope optimiser.

11.4. Mineral Resource statement

The Mineral Resource for mineralisation assumed to be amenable to open pit and underground mining methods is reported *in situ*. Mineralisation in stockpiles is reported as broken material, in stockpiles. The Mineral Resource is reported exclusive of the Mineral Resource converted to Mineral Reserve. Mineral Resource that is not Mineral Reserve does not have demonstrated economic viability.

The Mineral Resource has an effective date of 31 December 2024 and is summarised in Table 11.13 (100% basis) and Table 11.14 (50% attributable basis).

Table 11.13. Mineral Resource statement – 100% basis.

Deposit/Area	**Category**	**Tonnes (Mt)**	**Grade (g/t Au)**	**Contained Gold**	
				(t)	**(Moz Au)**
Open pit	Measured	74.22	1.00	74.56	2.40
	Indicated	48.76	0.65	31.83	1.02
	Sub-total Measured & Indicated	122.98	0.87	106.39	3.42

Deposit/Area	Category	Tonnes (Mt)	Grade (g/t Au)	Contained Gold (t)	Contained Gold (Moz Au)
	Inferred	28.18	0.68	19.16	0.62
Underground	Measured	2.73	2.24	6.13	0.20
	Indicated	7.47	2.25	16.80	0.54
	Sub-total Measured & Indicated	10.21	2.25	22.93	0.74
	Inferred	4.80	2.18	10.46	0.34
Stockpiles	Measured	1.92	0.36	0.69	0.02
	Indicated	-	-	-	-
	Sub-total Measured & Indicated	1.92	0.36	0.69	0.02
	Inferred	8.96	0.46	4.14	0.13
Total Sukari (open pit, underground and stockpiles)	**Measured**	**78.87**	**1.03**	**81.39**	**2.62**
	Indicated	**56.24**	**0.86**	**48.63**	**1.56**
	Total Measured & Indicated	**135.11**	**0.96**	**130.01**	**4.18**
	Inferred	**41.94**	**0.80**	**33.76**	**1.09**

Table 11.14. Mineral Resource statement – attributable basis (50%).

Deposit/Area	Category	Tonnes (Mt)	Grade (g/t Au)	Contained Gold (t)	Contained Gold (Moz Au)
Open pit	Measured	37.11	1.00	37.28	1.20
	Indicated	24.38	0.65	15.92	0.51
	Sub-total Measured & Indicated	*61.49*	*0.87*	*53.20*	*1.71*
	Inferred	14.09	0.68	9.58	0.31
Underground	Measured	1.37	2.24	3.07	0.10
	Indicated	3.74	2.25	8.40	0.27
	Sub-total Measured & Indicated	*5.10*	*2.25*	*11.46*	*0.37*
	Inferred	2.40	2.18	5.23	0.17
Stockpiles	Measured	0.96	0.36	0.35	0.01
	Indicated	-	-	-	-
	Sub-total Measured & Indicated	*0.96*	*0.36*	*0.35*	*0.01*
	Inferred	4.48	0.46	2.07	0.07
Total Sukari (open pit, underground and stockpiles)	**Measured**	**39.43**	**1.03**	**40.69**	**1.31**
	Indicated	**28.12**	**0.86**	**24.31**	**0.78**
	Total Measured & Indicated	***67.55***	***0.96***	***65.01***	***2.09***
	Inferred	**20.97**	**0.80**	**16.88**	**0.54**

Notes:

1. Rounding of numbers may result in computational discrepancies in the Mineral Resource tabulations. All figures are expressed on an attributable basis unless otherwise indicated. The Mineral Resource estimates with respect to our material properties have been prepared by the Qualified Persons (employed by AngloGold Ashanti unless stated otherwise). The Qualified Person for the estimate is Mr. Craig Barker, FAIG, an AngloGold Ashanti employee. To reflect that figures are not precise calculations and that there is uncertainty in their estimation, AngloGold Ashanti reports tonnage, grade and content for gold to two decimals. All ounces are Troy ounces. “Moz” refers to million ounces.
2. All disclosure of Mineral Resource is exclusive of Mineral Reserve. The Mineral Resource exclusive of Mineral Reserve is defined as the inclusive Mineral Resource less the Mineral Reserve before dilution and other factors are applied.
3. “Tonnes” refers to a metric tonne which is equivalent to 1,000 kilograms.
4. The Mineral Resource tonnages and grades are reported *in situ* and stockpiled material is reported as broken material.
5. Property currently in a production stage.
6. Based on a gold price of US$2,000/oz.
7. In 2024, a metallurgical recovery factor of 88.40% was applied to the open pit, stockpile and underground.
8. In 2024, a cut-off grade of 0.30g/t was applied to the open pit, a cut-off grade of 0.40g/t was applied to the stockpile and a cut-off grade of 1.00g/t was applied to the underground.

Factors that may affect the Mineral Resource estimates include:

- Metal price and exchange rate assumptions.

- Changes to the assumptions used to generate the gold grade cut-off grade
- Changes in local interpretations of mineralisation geometry and continuity of mineralised zones.
- Changes to geological and mineralisation shape and geological and grade continuity assumptions.
- Density and domain assignments.
- Changes to geotechnical, mining and metallurgical recovery assumptions.
- Changes to the input and design parameter assumptions that pertain to the conceptual stope designs constraining the underground estimates.
- Assumptions as to the continued ability to access the site, retain mineral and surface rights titles, maintain environment and other regulatory permits, and maintain the social license to operate.

11.5. Qualified Person's opinion

There is upside potential for the estimates if mineralisation that is currently classified as Inferred Mineral Resource can be upgraded to higher-confidence Mineral Resource categories.

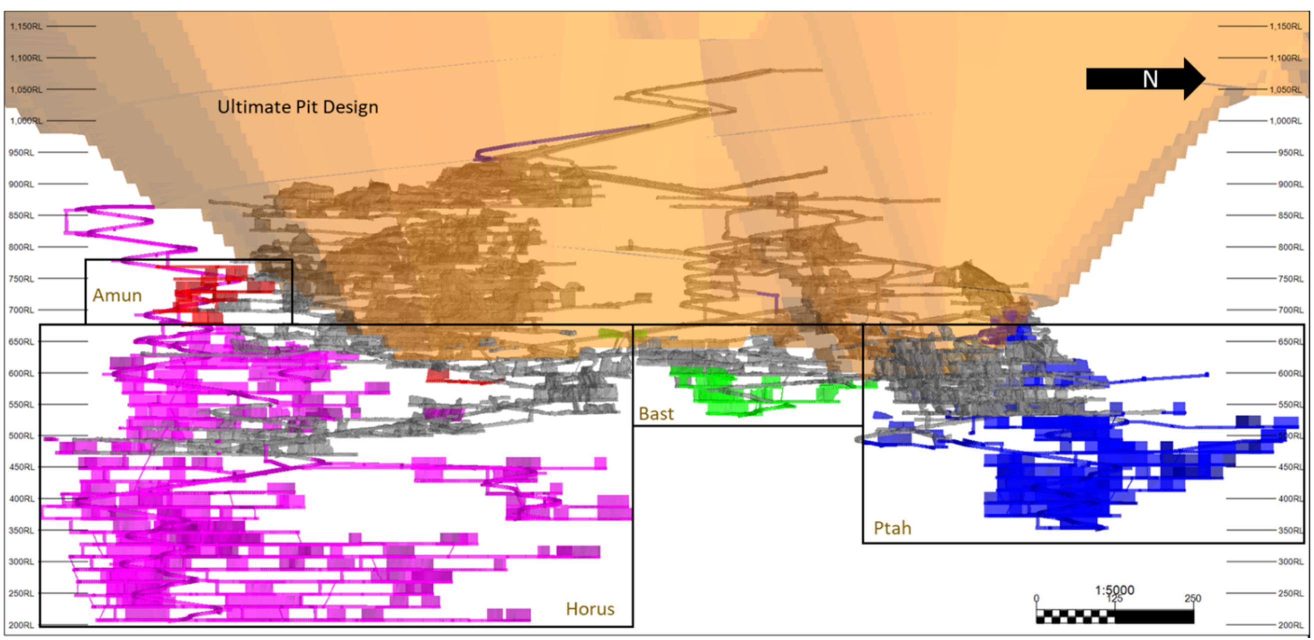
The Qualified Person's opinion is that all relevant technical and economic factors likely to influence the prospect of economic extraction can be resolved with further work. Additional drilling and ongoing modelling will help refine the Mineral Resource estimate, improve geological confidence, and support the assessment of economic viability. These efforts will contribute to a more comprehensive understanding of the deposit, addressing any outstanding uncertainties related to grade distribution, geological continuity, and mining considerations.

There are no other environmental, legal, title, taxation, socioeconomic, marketing, political or other relevant factors known to the Qualified Person that would materially affect the estimation of Mineral Resource that are not discussed in this Report.

12. Mineral Reserve estimates

The open pit is designed with eight phases, four of which remain to be completed, and four underground mining zones: Amun, Ptah, Horus and Bast, as shown in Figure 12.1.

Figure 12.1. Sukari mine layout.



Note: Figure prepared by Sukari Gold Mine, 2024.

Mineral Reserves were converted from Measured and Indicated Mineral Resources. Inferred Mineral Resources are treated as waste in the mine schedule.

12.1. Open pit Mineral Reserve

12.1.1. Open pit optimisation

Input parameters

General parameters and modifying factors, applicable to both the open pit and underground operations, include the forecast gold price, sales costs, mineral royalty and diesel price. For the 2024 Mineral Reserve estimation, the general parameters in Table 12.1 were used.

Table 12.1. General input factors.

Parameter	Unit	2024 Mineral Reserves	Notes
Gold price	US$/oz	1,450	Consistent with 2023 Mineral Reserves
Refining and selling costs	US$/oz	2.20	
Mineral royalty	%	3.00	Apply to sales revenue
Diesel price	US$/L	0.75	

The pit optimisation parameters are given in Table 12.2.

Table 12.2. Pit optimisation parameters.

Parameter	Units	Value	Notes
Final bench height	m	10	
Overall slope angle	North wall ° North-east wall° East wall° South-east wall° South-west wall° West wall°	45 43 42 42 34 32	
Base mining cost	US$/t mined	1.82	±US$0.02/10m (datum at 1090mRL) Including sustaining capex
CIL processing cost	US$/t processed	11.75	Including sustaining capex
Dump leaching cost	US$/t processed	1.25	
General and administrative cost	US$/t processed	3.56	Applied to processing cost
CIL process recovery	%	88.4	
Dump leach recovery	%	36.4 25.5	Dump leach oxide Dump leach sub-grade
Mining dilution	%	7	Additional to dilution accounted for via model reblocking to 20m x 25m x 10m (XYZ)
Ore losses	%	Nil	

Note: CIL: carbon-in-leach.

Values are based on 2024 actual annualised costs and assume a connection to grid power in 2027.

Geotechnical parameters

A geotechnical review was completed for the stage eight pit design.

Revised pit design walls have typical inter-ramp angles and overall slope angles as per Table 12.3.

Table 12.3. Pit slope angles.

Wall	Inter-ramp		Overall slope	
	IRA (°)	Slope height (m)	OSA (°)	Slope Height (m)
East	46°	190	42°	550
West	36°	450	32°	500
North	49°	295	42°	570
South	44°	180	38.5°	520

Note IRA: inter-ramp angles; OSA: overall slope angles.

Process recoveries

The process recoveries for optimisation were based upon production actuals.

The recovery values used for pit optimisation and cut-off grade calculation are in line with the production actuals described.

Dilution and losses

Dilution calculations were based on regularisation of the sub-celled block model to a SMU of 20m x 25m x 10m (XYZ). The re-blocking process accounted for any mineralisation below cut-off grade in the evaluation process.

A 7% dilution was applied in the optimisation process to account for unplanned dilution during mining.

Operating costs

Operating cost assumptions were based on actual mine data combined with production estimates, including haulage fleet and maintenance-related improvements.

The average elevation of the base mining cost of US$1.83/t mined is 1090mRL, with an assumption of incremental depth variation of ±US$0.02/t mined per 10m bench (with increased cost as depth increases).

12.1.2. Open pit cut-off grades

Table 12.4 provides the assumptions used in the calculation of cut-off grade to be applied to the material contained within the optimised pit and final designed pits, and Table 12.5 summarises the resulting cut-off grades.

Table 12.4. Open pit cut-off grade parameters and costs.

Description	Unit	CIL process	Dump leach OX	Dump leach SG
Parameters				
Gold price	US$/oz US$/g	1,450 46.62	1,450 46.62	1,450 46.62
Revenue and selling cost	US$/g	0.07	0.07	0.07
Mineral royalty	%	3.00	3.00	3.00
Mining dilution/loss	%	-	-	-
Process recovery	%	88.4	36.4	25.5
Costs				
Total mining cost	US$/t ore	2.13	2.13	-
Total processing	US$/t ore	11.75	1.25	2.60
Power	US$/t ore	2.02	0.20	0.21
General and administrative	US$/t ore	3.56	0.13	0.89

Table 12.5. Cut-off grades.

Cut-off grade	Unit	CIL Process	Dump Leach OX	Dump Leach SG
Calculated	g/t	0.44	0.21	0.24
Marginal	g/t	0.38	0.08	0.24
In situ	g/t	0.47	0.23	0.25
In situ marginal	g/t	0.41	0.09	0.25

Calculated cut-off grade refers to a breakeven grade which covers all the operating costs of mining and processing a tonne of ore. Marginal cut-off grade is the breakeven grade at a reduced cost after mining and typically represents stockpiled material. A 7% mining dilution is applied to the calculated and marginal values to provide the *in situ* cut-off grades.

The parameters quoted result in a theoretical (calculated) ore cut-off grade for material sent to the CIL process plant of 0.44g/t Au. Operationally, a mill cut-off of 0.50g/t Au and an ore cut-off grade of 0.40g/t Au is used; with material in the 0.40-0.50g/t Au range stockpiled as low grade, and material of >0.50g/t Au sent to the ROM stockpile. Operationally, material grade bins can be summarised as follows:

- High-grade fresh and transitional ore portion: transitional and fresh ore, ≥0.90g/t Au, sent to the ROM pad.
- Medium-grade fresh and transitional ore portion: transitional and fresh ore, 0.50-0.90g/t Au, sent to the ROM pad.
- Low-grade fresh and transitional ore portion: transitional and fresh ore, 0.40–0.50g/t Au, sent to the low grade stockpile.
- High-grade oxide ore portion: oxide ore, ≥0.90 g/t Au, sent to the ROM pad.
- Low-grade oxide ore portion for dump leach: oxide ore, 0.20–0.90g/t Au, sent to the to dump leach.
- Sub-grade material: transitional and fresh material, 0.25-0.4g/t Au, sent to the sub-grade stockpile.
- Waste: oxide material where Au <0.20g/t and fresh or transitional material where Au <0.25 g/t.

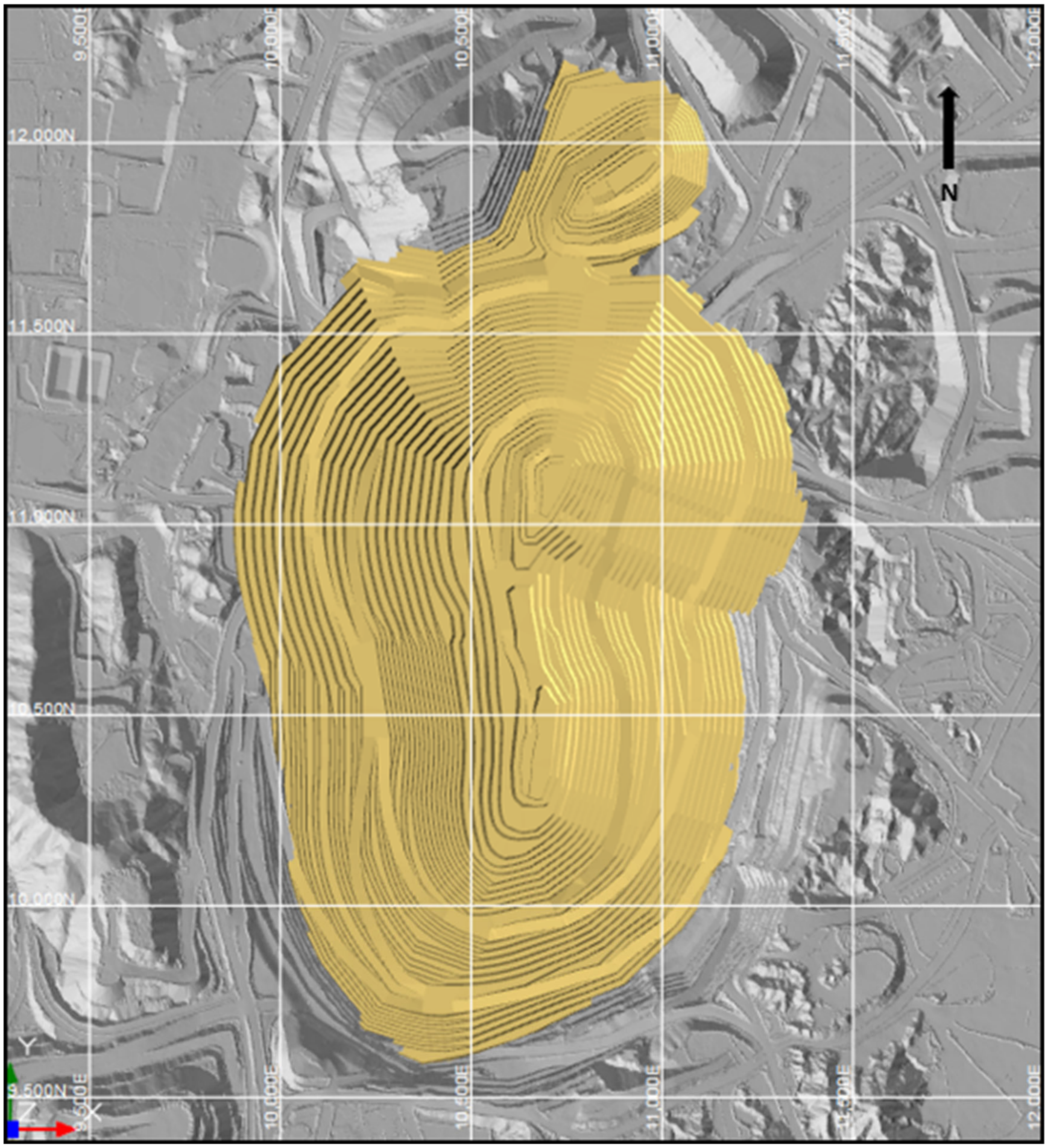
12.1.3. Pit design

No material changes were made to the pit design during 2024. Minor operational changes based on updated localised geotechnical information have been completed.

The final pit was used to generate the LOM schedule and generate the Mineral Reserve estimate.

Figure 12.2 presents the final pit design.

Figure 12.2. LOM design.



Note: Figure prepared by Sukari Gold Mine, 2024.

Operational design parameters for the open pit include:

- Dual-lane haul ramp of 32m width at a gradient of 1 in 10.
- Underground void intersections in final pit walls have been considered by adopting void fill parameters within the numerical modelling.
- Mining capacity:
  - 107Mtpa production rate, which deceases steadily from 2030 as stages are completed.
- Geotechnical observations:
  - Industry-accepted methods have been used to assess slope stability (2D and 3D limit equilibrium) and industry-accepted design acceptance criteria (adopted from Read and Stacey 2009) have been applied. The failure mechanisms are well-known from back-analysis of previous and existing slope performance. An acceleration of 0.04g was also applied to the analyses. Slopes were assessed using a detailed model of the geology including large-scale structures.
  - Investigations into the properties of Sukari thrust 2 indicated that the fault conditions are better than previously assumed. Similarly, the conditions in the Cross fault were also found to be improved. The Cross fault will potentially affect wall stability in stage seven and the Sukari thrust 2 will potentially affect wall stability in stage eight.

  - The analysis results indicate that for the majority of areas, the design acceptance criteria are exceeded. Minor areas where marginal factor of safety values is obtained from the assessments, additional mitigation measures are undertaken, for example, reinforcing and buttressing the slope.
- Mine scheduling:
  - Mining to be completed in four remaining stages (five, six, seven and eight).
  - Allowances for rill material in the mine schedule.
  - 10m benches for scheduling purposes.
  - Maximum vertical rate advance of 120m per year per stage.

12.2. Underground Mineral Reserve

12.2.1. Optimisation input parameters

General parameters and modifying factors, applicable to both the open pit and underground operations, includes the assumed gold price, sales costs, mineral royalty and diesel price. For the 2024 Mineral Reserve estimation, the general parameters and assumptions are shown in Table 12.6.

Table 12.6. Underground cut-off grade parameters and costs.

Description	Unit	2023	2024
Gold price	US$/oz	1,450	1,450
Gold price	US$/g	46.62	46.62
Process recovery	%	88.4%	88.4%
Modifying factors			
Unplanned average stope dilution	%	20%	20%
Unplanned average dev dilution	%	20%	20%
Stope unplanned ore loss	%	10%	10%
Development unplanned ore loss	%	2%	2%
Costs			
Ore development	US$/t	14.82	8.40
Stoping	US$/t	37.19	33.15
Underground mining (ore + waste)[1]	US$/t	49.81	43.81
Processing	US$/t	15.79	14.65
Haulage	US$/t	4.64	5.58
Power	US$/t	3.3	2.56
General and administrative	US$/t	3.03	3.19
Total cost[2]	US$/t	76.5	69.79
Calculated cut-off grades			
Full economic	g/t	2.57	2.34
Stope[3]	g/t	2.15	1.99
Development	g/t	1.28	1.06
Processing	g/t	0.56	0.51
Haulage	g/t	0.83	0.80
Underground operational stope	**g/t**	**2.20**	**2.00**
Underground operational development	**g/t**	**0.99**	**1.00**

Note: [1] Includes operating and sustaining capital development costs; [2] All costs, inclusive of development and sustaining capital; [3] Stope or incremental cut-off grade considers that the development cost is already sunk.

12.2.2. Underground cut-off grade

The assumptions used in the calculation of cut-off grades for the underground mine design and Mineral Reserve are presented in Table 12.6.

Mining costs are based on an average of the last 21 months of actual underground mining costs. The underground stope cut-off grade is calculated as 2.00g/t Au whilst the cut-off value for treating development material as ore is 1.00g/t Au. The stope cut-off is used for Deswik.SO stope optimisation and Mineral Reserves reporting.

12.2.3. Underground mine design

Design basis

Mineral Reserve estimation was carried out based on the 2024 Mineral Resources geological block model and the grade control block model. This model was depleted from the current Mineral Reserve open pit design, generating stope shapes using Deswik.SO. Manual stope designs were completed for some of the areas where grade control drilling was completed. The stopes were limited to a maximum hydraulic radius of 5m (area/perimeter) in the effective unsupported spans for backs, hanging wall, footwall and side walls. Cable bolting at a maximum spacing of 2.0m (and up to 2.5m on strike) using 6.0m cables in the backs and 8.0m cables in the walls was typically used to reduce the effective unsupported spans.

Development

The LOM development design was completed using the design criteria set out in Table 12.7 with the purpose of optimising layouts for the mining methods employed per section.

Table 12.7. Development design standards.

Type	Item	Guideline
Development	Decline minimum radius	20 m
	Vertical height between horizontal development	2.5:1
	Pillar between vertical and horizontal development	2.0-2.5:1
	Vertical development offset from declines	≥10 m
	Pillar between horizontal development and pit	30 m
	Ore pillars and horizontal development	2:1
	Decline standoff from major structure (if parallel)	20 m
	Decline standoff from orebody	50 m
	Return air raise standoff from orebody	30 m
	4-way intersections	Avoid, otherwise use Jn x 3
	Development drive parallel to major structure	Support as per geotechnical recommendations
	Major/mine scale geological structures	Avoid development drives and intersections along structures or support as per geotechnical recommendations
Stopes	Longitudinal and transverse stope height	20 m (floor to floor)
	Longitudinal stope width	5–20 m (subject to ground conditions)
	Longitudinal stope strike length	Variable not exceeding 20 m[1]
	Transverse stope strike length	Variable not exceeding 20 m[1]
	Transverse stope width	Variable not exceeding 20 m[1]

Within Horus, development has been laid out in such a way that either longitudinal or transverse mining methods can be employed should the mineralised zone lend itself to bulk mining.

Inter-level spacing is governed by the geotechnical requirement that the middling (pillar) between vertical and horizontal development be at least three times the width of the controlling drive. In case of ore drives, the standard width of 5m therefore dictates a “floor to floor” spacing minimum of 20m apart from sill pillars where access to the top is required for filling purposes. These drives are closely monitored, and local amendments may be made as required to the standard support patterns.

Stoping

Stope dimensions are limited to 20m heights because of interlevel spacing. For transverse stopes, the "T-drive" required for establishing the slot raise and opening a void suitable to blast the remainder of the stope, is also limited to 20m (Table 12.8).

Table 12.8. Standard stope sizes.

Item	Guideline
Longitudinal and transverse stope height	20m floor to floor
Longitudinal stope width	≤7m
Longitudinal stope strike length	Variable not exceeding 20m
Transverse stope strike length	20m
Transverse stope width	Variable not exceeding 20m

With changing ground conditions, controlling overall stope stability is addressed by limiting the stope width in transverse stopes, and stope length in longitudinal stopes. Geotechnical stope stability assessments are completed for every stope, and guidelines as to stope detailing are communicated before stope drilling commences.

12.2.4. Underground dilution and recovery

Calculation of dilution and ore loss factors used two methods:

- Unplanned dilution based on stope reconciliation data.
- Planned dilution using dilution shells within Deswik.SO.

Dilution and recovery/ore loss are tracked and reported on a monthly basis. This performance is considered in the LOM planning process and in Mineral Reserve estimation.

Planned dilution of 0.5m on both hanging wall and footwall was coded into stope optimiser parameters. The final drill and blast design shapes were reconciled against the original optimised shapes.

As the planned dilution was added within the optimised shapes during creation, the amount of unplanned dilution (added manually from within the long-term scheduler) was reduced.

Dilution and ore loss assumptions used are provided in Table 12.9.

Table 12.9. Dilution and recovery (ore loss) assumptions used in Mineral Reserve estimates.

<table>
<tr><th colspan="3" rowspan="2">Modifying factors verification</th><th colspan="2">Dilution</th><th colspan="2">Ore loss</th></tr>
<tr><th>Tonnes (%)</th><th>g/t Au</th><th>Tonnes (%)</th><th>Grade (%)</th></tr>
<tr><td>Development</td><td colspan="2">Development</td><td>20</td><td>0</td><td>2</td><td>100</td></tr>
<tr><td rowspan="3">Stopes</td><td rowspan="2">Bulk</td><td>Primary</td><td>20</td><td>0.75</td><td>10</td><td>100</td></tr>
<tr><td>Secondary</td><td>20</td><td>0</td><td>10</td><td>100</td></tr>
<tr><td>Narrow</td><td></td><td>20</td><td>0</td><td>10</td><td>100</td></tr>
</table>

12.3. Mineral Reserve statement

The Mineral Reserves are reported at the point of delivery to the process plant. Mineralisation in stockpiles is reported as broken material, in stockpiles.

The Mineral Reserve has an effective date of 31 December 2024 and is summarised in Table 12.10 (100% basis) and Table 12.11 (50% attributable basis).

Table 12.10. Mineral Reserve statement – 100% basis.

Deposit/Area	Category	Tonnes (Mt)	Grade (g/t Au)	Contained Gold	
				(t)	(Moz Au)
Open pit	Proven	75.06	1.23	92.67	2.98
	Probable	20.65	0.81	16.75	0.54
	Sub-total Proven & Probable	95.71	1.14	109.42	3.52
Underground	Proven	4.36	3.41	14.87	0.48
	Probable	4.13	3.86	15.94	0.51
	Sub-total Proven & Probable	8.49	3.63	30.80	0.99
Stockpiles	Proven	20.23	0.47	9.58	0.31
	Probable	-	-	-	-
	Sub-total Proven & Probable	20.23	0.47	9.58	0.31
Total Sukari (open pit, underground and stockpiles)	**Proven**	**99.64**	**1.18**	**117.12**	**3.77**
	Probable	**24.78**	**1.32**	**32.69**	**1.05**
	Total Proven & Probable	**124.43**	**1.20**	**149.80**	**4.82**

Table 12.11. Mineral Reserve statement – attributable basis (50%).

Deposit/Area	Category	Tonnes (Mt)	Grade (g/t Au)	Contained Gold	
				(t)	(Moz Au)
Open pit	Proven	37.53	1.23	46.33	1.49
	Probable	10.33	0.81	8.37	0.27
	Sub-total Proven & Probable	*47.86*	*1.14*	*54.71*	*1.76*
Underground	Proven	2.18	3.41	7.43	0.24
	Probable	2.07	3.86	7.97	0.26
	Sub-total Proven & Probable	*4.24*	*3.63*	*15.40*	*0.50*
Stockpiles	Proven	10.11	0.47	4.79	0.15
	Probable	-	-	-	-
	Sub-total Proven & Probable	*10.11*	*0.47*	*4.79*	*0.15*
Total Sukari (open pit, underground and stockpiles)	**Proven**	**49.82**	**1.18**	**58.56**	**1.88**
	Probable	**12.39**	**1.32**	**16.34**	**0.53**
	Total Proven & Probable	***62.21***	***1.20***	***74.90***	***2.41***

Notes:

1. Rounding of numbers may result in computational discrepancies in the Mineral Reserve tabulations. All figures are expressed on an attributable basis unless otherwise indicated. The Mineral Reserve estimates with respect to our material properties have been prepared by the Qualified Persons (employed by AngloGold Ashanti unless stated otherwise). The Qualified Person for the underground Mineral Reserve estimate is Mr. Gavin Harris, CEng MIMMM QMR, an AngloGold Ashanti employee. The Qualified Person for the open pit Mineral Reserve estimate is Mr. Andrew Murray, FAusIMM, an AngloGold Ashanti employee. To reflect that figures are not precise calculations and that there is uncertainty in their estimation, AngloGold Ashanti reports tonnage, grade and content for gold to two decimals. All ounces are Troy ounces. “Moz” refers to million ounces.
2. “Tonnes” refers to a metric tonne which is equivalent to 1,000 kilograms.
3. The Mineral Reserve tonnages and grades are estimated and reported as delivered to the plant (i.e., the point where material is delivered to the processing facility).
4. Property currently in a production stage.
5. Based on a gold price of US$1,450/oz.
6. In 2024, a metallurgical recovery factor of 88.40% was applied to the open pit, stockpile and underground.
7. In 2024, a cut-off grade of 0.44g/t was applied to the open pit and stockpile, and a cut-off grade of 2.34g/t was applied to the underground.

Factors that may affect the Mineral Reserve estimates include:

- Long-term commodity price assumptions.
- Long-term exchange rate assumptions.
- Long-term consumables price assumptions.

Other factors that can affect the estimates include changes to:

- Mineral Resource input parameters for the Mineral Resource converted to Mineral Reserve.
- Mineral Reserve to grade control reconciliation.
- Input parameters used in the constraining stope designs.
- Cut-off grade assumptions.
- Changes to geotechnical (including seismicity) and hydrogeological factors and assumptions.
- Changes to metallurgical and mining recovery assumptions.
- Assumptions as to the ability to control unplanned dilution.
- Changes to mining method.
- Underground void interaction with the open pit.
- Open pit interaction with the main underground decline.
- Inputs to capital and operating cost estimates.
- Assumptions as to the ability to access the site, retain mineral and surface rights titles.
- Assumptions as to the ability to maintain environmental and other regulatory permits and maintain the social license to operate.

12.4. Qualified Persons' opinion

There are no other mining, metallurgical, infrastructure, permitting, and other relevant factors known to the Qualified Persons that would materially affect the estimation of Mineral Reserve that are not discussed in this Report.

The Qualified Persons consider that the relevant modifying factors used are reasonably estimated within industry standards. As such, there is a reasonable expectation that the modifying factors will not change materially to adversely affect the Mineral Reserve estimates.

13. Mining methods

13.1. Open pit operations

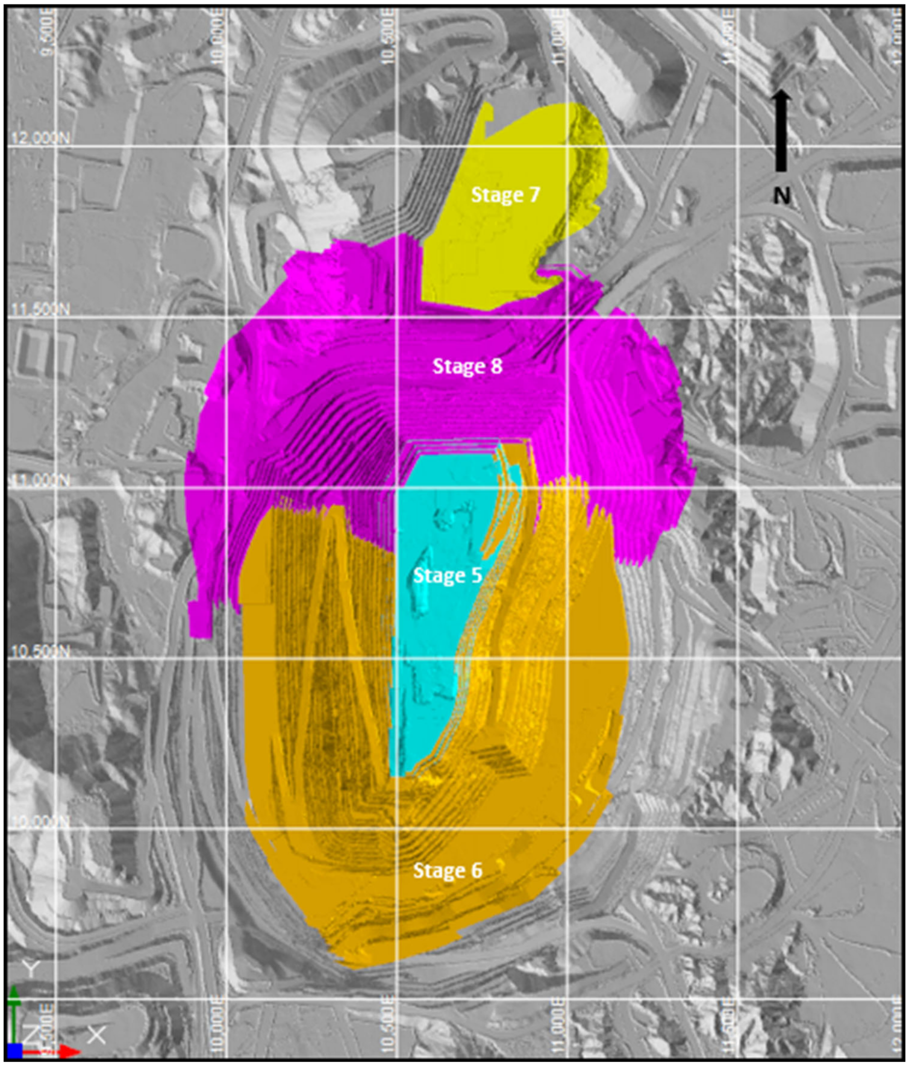
The Sukari open pit mine is operated as a conventional truck and shovel operation using a combination of 400t class face shovels and backhoe excavators to load ore and waste into 150t class haul trucks. All ore and waste material requires drilling and blasting. Ore is classified into three categories: mill feed, low grade and dump leach. Mill feed ore is transported to a ROM pad adjacent to the processing plant and either stockpiled for blending purposes or direct tipped to the crusher. Low grade ore is stockpiled for processing towards the end of the operation or to supplement mill feed as required, and dump leach ore consists of economic low grade oxide material. Sub–grade material below the economic cut-off grade is stockpiled separately and waste is transported to waste rock dumps which are located around the perimeter of the pit. Working benches are of 10m height, whilst final benches are 10 to 20m in height, depending on geotechnical factors.

The mine is currently operating at rate of 107Mtpa for total rock movement. Mining will be completed in four stages over the remaining LOM, stages five, six, seven, and eight. Mining is Owner-operated.

13.1.1. Open pit development

The final pit dimensions will be 2,650m (north-south), 1,550m (east-west) and the pit will have a maximum depth of 490m. Figure 13.1 shows the final pit phases.

Figure 13.1. Remaining open pit stages at Sukari open pit.



Note: Figure prepared by Sukari Gold Mine, 2024.

13.1.2. Load and haul

All ore and waste from the open pit is mined as Owner-operator using a conventional open pit truck and shovel method, across two, 12-hour shifts, with three crews.

Thirty-two metre dual lane pit ramps provide an operating width of 25m and are designed at a gradient of one in 10. Switchbacks are designed on the flat to accommodate the required turning radius of the trucks. Mining occurs in two flitches over a 10m bench.

The operation is selective in terms of separating ore and waste, with the degree of selectivity is appropriate for the scale of mining equipment and the nature of the mineralisation.

Water used for dust suppression is sourced from the Red Sea at Marsa Alam and transported to site via a pipeline. All other water used in mining is brought to site via tanker.

13.1.3. Drill and blast

All *in situ* ore and waste requires blasting with no free dig material. Production drilling is conducted at 10m benches while pre-split drilling is generally over 20m bench heights, hole diameters are 165mm holes and 140mm respectively. There are variations to pattern size, hole diameter, and powder factor, depending on rock type, oxidation state, and structure, to ensure optimal fragmentation of the rock mass for mining operations. General pattern sizes by key material type are provided in Table 13.1 but can be modified as required based on local material characteristics.

Table 13.1. General production blast pattern.

Description	Granodiorite	Sediments	Black Shale
Hole diameter (mm)	165	165	165
Burden (m)	4.5	4.6	4.7
Spacing (m)	5.2	5.3	5.4
Bench height (m)	10.0	10.0	10.0
Powder factor (kg/m^3)	0.77	0.70	0.65

All production drilling is done by a contractor and currently uses 14 drill rigs. The drill fleet consists of:

- Four Sandvik 410 Platform rigs
- Ten Epiroc D65 rigs (also used for short geotechnical probe holes)

All stemming is sourced from a local supplier and delivered to site.

Explosives used in the open pit consist of an emulsion, which is produced and supplied by a contractor on site. The mine personnel provide the technical designs, tie-ups, and perform blasting services.

Blasting typically occurs daily at the end of dayshift.

13.1.4. Mining equipment

The mine currently operates a fleet of six loaders (four CAT 6040 face-shovels and two CAT 6040 backhoe excavators) with fifty-three CAT785C haul trucks to carry out the ore and waste movement. The CAT785C trucks were fitted with lightweight trays with a capacity of 153t, increasing the original capacity by some 15t per load. Four loaders operate in waste and one in ore, with one on planned maintenance.

Two of the existing open pit shovels are reaching the end-of-life phase, with replacement of the units expected to start in 2026. An additional CAT 6030 backhoe provides backup to the fleet but will be retired at the end of 2025.

The mining fleet includes the requisite ancillary equipment (track and wheel dozers, motor graders, front-end wheel loaders, service trucks, and water trucks). These are used to maintain the pit haul roads, loading and tipping areas, for ROM pad operations. There is also a projects fleet for pioneering work and TSF construction. A list of the primary production and key ancillary equipment which satisfies the LOM plan is provided in Table 13.2.

Table 13.2. Sukari open pit equipment.

Equipment	Type	Peak LOM equipment requirements
Face shovel	CAT 6040	4
Excavator	CAT 6040	2
Dump truck	CAT 785C	53
Track dozer	CAT D10T	5
Track dozer	CAT D11T	2
Wheel dozer	CAT 884H	4
Grader	CAT 16M	5
Water cart	CAT 740	1
Water cart	CAT 775G	5
Wheel loader	CAT 990H	1
Wheel loader	CAT 993K	2

Portable lighting towers, and trailer-mounted diesel generator sets with banks of halogen floodlights mounted on an easily erected towers are used to illuminate the working areas in the open pit at night. Typically, lighting towers are used at the excavating face, dumping face and other locations around the pit perimeter to give overall illumination of working areas, and ramp intersections. Lighting towers are also required for night shift drilling crews. Permanent lighting for nighttime operation is installed at fixed locations close to mains power, such as the ROM pad.

13.1.5. Ore and waste selection

Ore and waste are visually distinct in certain areas of the pit; however, this is not always the case and ore and waste segregation is generally based upon RC drilling, sampling, and assays for definition of ore blocks. RC drilling is done by a drilling contractor, using three rigs (two dedicated to grade control and one with grade control and production capability). Grade control drilling is generally completed in a grid of 12m(N), 8m (E) over a depth of 40m, with samples every 2.5m

Plant feed (ore ≥0.5g/t Au) is hauled to the ROM pad adjacent to the primary crusher. A portion of ore is direct-tipped into the crusher, with provision for ore to be stockpiled for reclaim by a front-end-loader operated as part of the crushing and processing operation. Low-grade ore (0.4-0.5g/t Au) is hauled to stockpiles for reclaiming towards the end of the mine life or to supplement mill feed to keep the plant at the required 12.4Mt throughput. Oxide ore with a grade between 0.2-0.9g/t Au is transported to the dump leach facilities adjacent to stage seven in the north, with oxide ore ≥0.9g/t Au sent to the ROM pad as part of mill feed.

Mineralised waste classified as sub-grade material (0.25-0.4g/t Au) is stockpiled.

Waste is used for construction of roads and Zone C areas at the TSF or is hauled to the mine waste dumps, located to the north, east and south of the pit.

13.1.6. Waste dumps

The total remaining LOM waste is estimated at 630Mt. Waste rock will be hauled to and placed in the south, east or north waste dumps, as well as being used to construct the TSF stages (lifts). The dump design capacities are sufficient to contain the planned mining waste volume. A swell factor of 42% was used for material placed on waste dumps.

Waste dumps were developed in accordance with the parameters provided in Table 13.3 and progressively battered down to their final profiles during construction.

Table 13.3. Waste dump design parameters.

Waste Type	Lift height (m)	Berm width (m)	Overall slope angle (°)	Corresponding Max dump height (m)
Black shale	20	10	28.7	100
Sediments	20	10	28.7	100
Granodiorite	40	10	32.4	160

A ring road was constructed on the east side of the pit that links the east dump to the northeast and southeast pit ramps, providing haul-route options to optimise the waste haulage cycles.

In addition to the waste dumps adjacent to the open pit, a series of ore stockpiles (sub-grade, low-grade, and ROM feed grade) are designed as close as practicable to the plant site.

13.2. Underground operations

Underground operations use a fully mechanised mining method for both development and stoping with access from surface via the Amun decline. The Ptah decline was developed from the 710mRL to access the Ptah orebody to the north and Amun and Horus orebodies to the south.

A minimum crown pillar of 40m is maintained between the open pit and active underground workings.

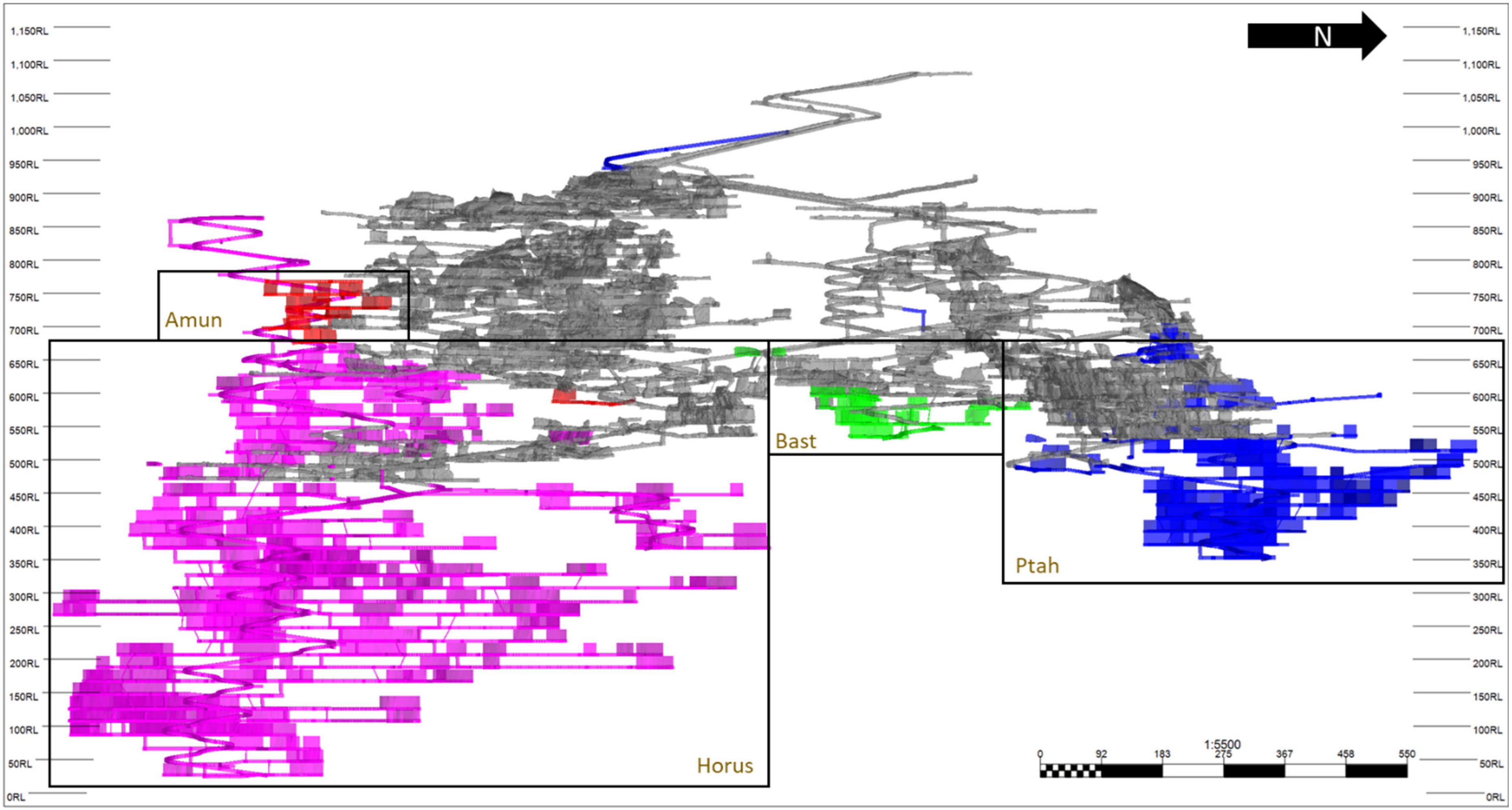
The underground mine uses the following mining methods:

- Transverse long hole open stoping.
- Longitudinal long hole open stoping.

13.3. Underground development

Figure 13.2 shows the final underground mine outline for Sukari Gold Mine.

Figure 13.2. Map of the final underground mine outline.



Note: Figure prepared by Sukari Gold Mine, 2024. Development and stoping zones: purple/pink: Horus; red: Amun; green: Bast; blue: Ptah.

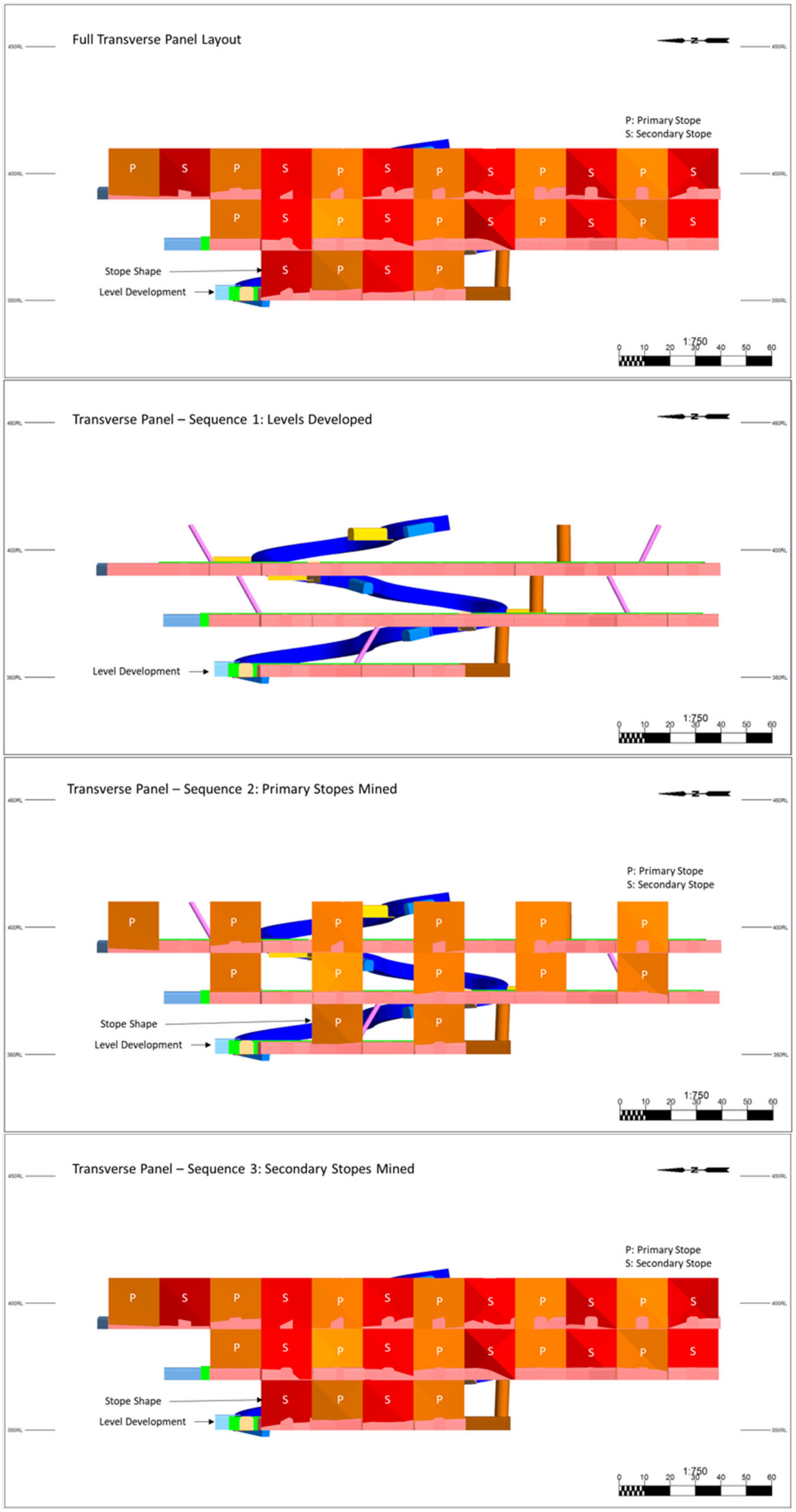
13.3.1. Transverse long hole stoping

The transverse mining method is used for bulk stoping areas, allowing for multiple stopes to be in production along strike simultaneously on any given sublevel. Stopes along strike are split into primary and secondary stopes, allowing a pillar to be maintained between the primaries during excavation to improve overall stability.

Once primary stopes have been excavated, backfilled and cured, a secondary stope between pairs of primaries is excavated and subsequently filled with either lower-strength fill, waste rock or a combination of the two. Mining then progresses bottom-up.

The transverse method is predominantly employed in the Ptah East, West and Keel zones. Figure 13.3 shows an example of the progression of the transverse stoping method within the Ptah Keel Zone.

Figure 13.3 Schematic transverse long-hole stoping progression.



Note: Figure prepared by Sukari Gold Mine, 2024; P: primary; S: secondary.

13.3.2. Longitudinal long hole stoping

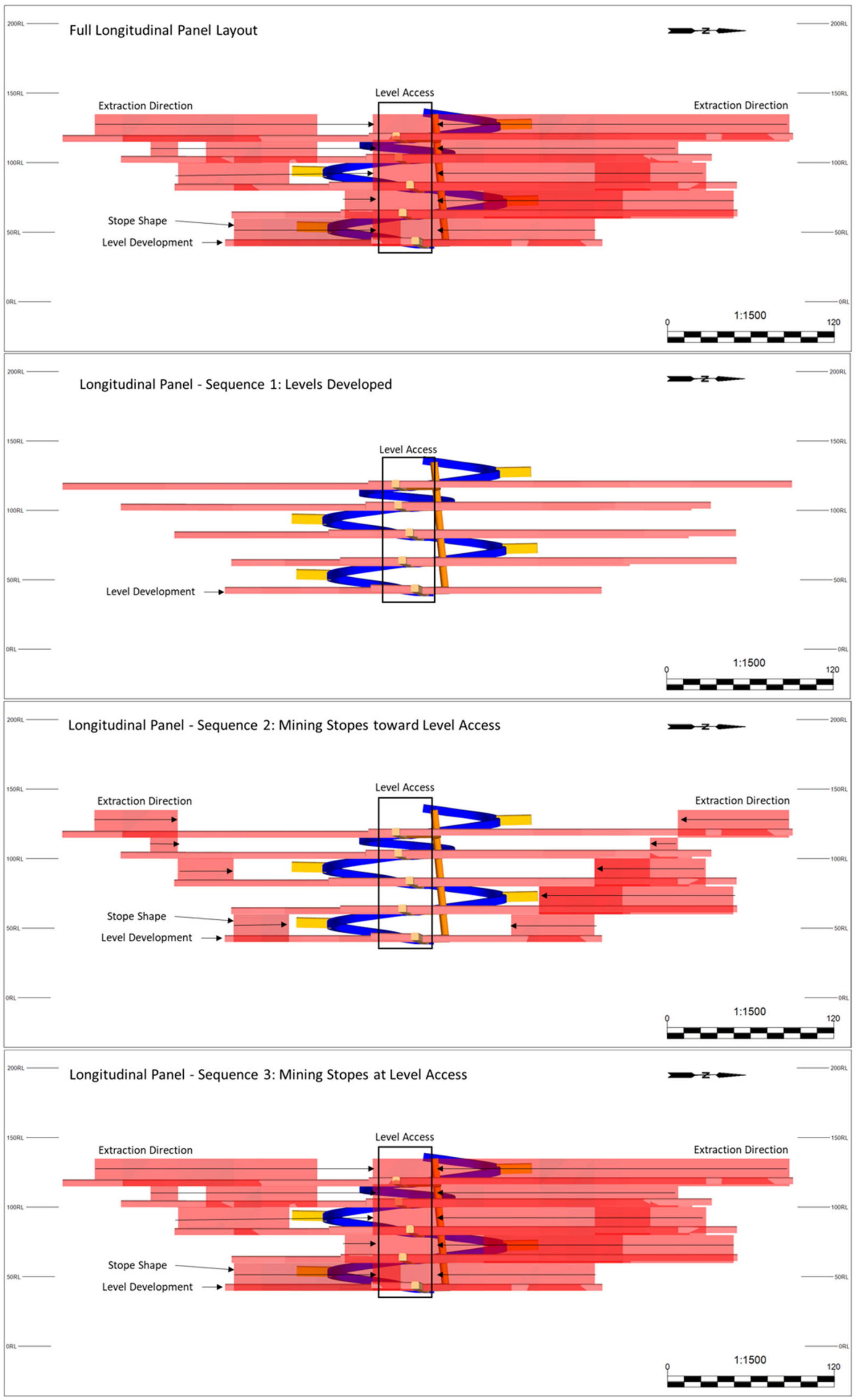
A longitudinal long-hole method is used for narrower vein stoping. This method consists of driving horizontal drifts along the strike of the vein and then blasting the ore vertically between the upper and lower drifts.

The current methodology mines a block of three, 20m high levels in an overhand lift sequence using cemented rock fill to fill the completed stopes and later be used as a platform for the next sub-level.

Development waste is currently used for fill purposes either on its own or as the primary component of cemented rock fill. The use of cemented rock fill has now been predominantly replaced by cemented paste backfill following the commissioning of the pastefill plant in 2022.

The transverse methodology is predominantly employed in the Amun, Bast and Horus (Horus and Deep) zones. Figure 13.4 shows a schematic for the longitudinal stoping method.

Figure 13.4. Schematic longitudinal long-hole stoping progression.



Note: Figure prepared by Sukari Gold Mine, 2024.

13.3.3. Mining equipment

The underground operation uses a conventional fleet of underground trucks and loaders for material movement, in addition to jumbo drill rigs and auxiliary equipment. Table 13.4 presents the requirement for LOM fleet.

Table 13.4. Sukari underground LOM equipment fleet.

Plant description	Make and model	Number
Forklift CAT DP30NT	Underground workshop	1
Jumbo development drill	Sandvik DD421	5
Long hole drill	Sandvik DL431	1
	Sandvik DL421	1
Surface top hammer drill	Commando DC300Ri T3	1
Tele handler MANITOU MHT 860L	Underground maintenance	1
Underground agitator	ULTIMEC LF600	3
Underground concrete spraying	Spraymec SF050D	2
Underground explosives charging equipment	CHARMEC 1614B	3
Underground integrated tool carrier	Volvo L120F	6
Underground maintenance graders	CAT 12M	2
Underground truck	CAT AD45	2
	CAT AD63	7
Underground water truck	CAT AD30	1
Underground wheel loader	CAT R1700	3
	CAT R2900G	5

There is a potential production risk due to the current long lead times for new equipment purchases. The strategy to mitigate production disruptions is as follows:

- Purchase new equipment where available.
- Rebuild existing equipment where sufficient value can be extracted.

13.3.4. Cemented pastefill system

Following commissioning of a paste plant in Q1 2023, cemented pastefill is used for stability with the long hole open stoping and cut and fill mining methods.

Tailings from the process plant are sent to the paste plant and stored in a buffer tank. If needed, a cyclone cluster installed on the buffer tank allows for the de-sliming of the tailings feed. The buffer tank feeds a horizontal belt filter that discharges to a transfer conveyor that feeds into the paste mixer.

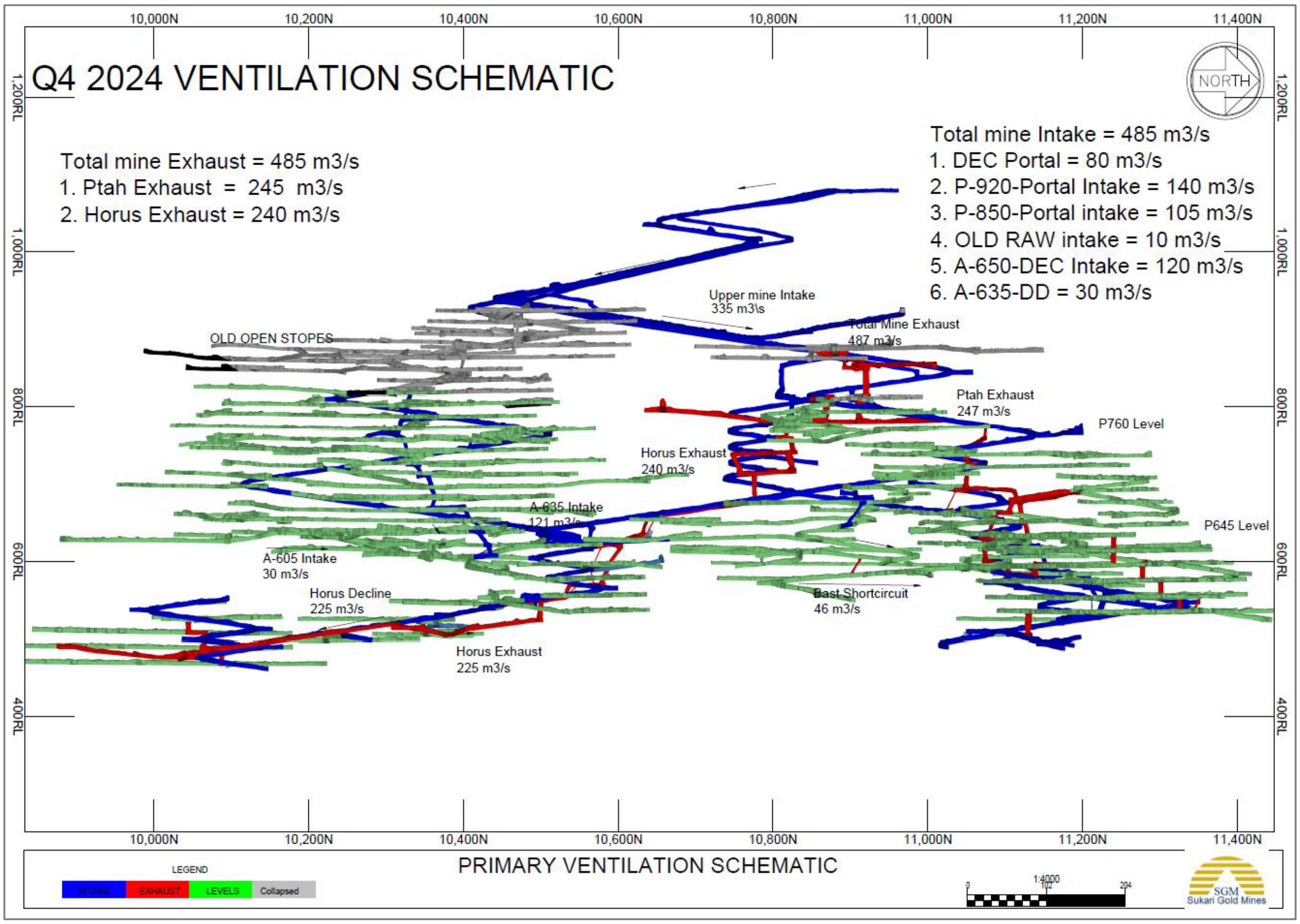
Binder and trim slurry are added to the paste mixer to achieve the desired backfill concentrations. A hopper feeds the pastefill to a positive displacement piston pump. The pump sends the pastefill to an underground distribution system. The paste is transferred from the paste hopper via a paste pipeline to the underground mine stopes using a duty paste pump.

Paste is delivered to the designated stope by the underground distribution system and discharges from the top drive to fill the stope. A barricade retains the initial plug pour and allows for the mix to cure before the bulk of the stope is filled.

13.3.5. Ventilation

The total ventilation air movement is approximately 485m^3/s with intake via the main decline portal, 920 and 850 portals, and via leakage through stoping that has caved at surface. Air is exhausted via two circuits, Ptah and Horus exhaust, and both exhaust to the open pit. The ventilation system (Figure 13.5) has approximately 10% leakage from the intake straight to the exhaust. Around 33% of the Horus intake air is used air coming from the Ptah area.

Figure 13.5. Sukari primary ventilation schematic.



Note: Figure prepared by Sukari Gold Mine, 2024.

13.3.6. Refuge and emergency egress

The mine has a number of mobile refuge chambers for between four and 20 persons. Fixed permanent fresh air bases are also in place or planned. An emergency set of services runs through the exhaust system, providing an independent source of compressed air and fire-fighting water. Radio communications are available throughout the mine, and a backup conventional telephone system is also in place.

13.4. Mining schedule

The detailed production schedule is based on ROM tonnages from the open pit and underground operation and augmented by stockpile feed where required to provide plant feed at a throughput rate of 12Mtpa.

Table 13.5 presents the LOM schedule.

Table 13.5. Open pit and underground mining schedule for Mineral Reserve estimation – 100% basis.

Production schedule	**Units**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**Total**
Open pit												
Total ex-pit rock	kt	102,885	99,354	99,199	106,996	96,734	80,764	72,823	43,980	24,871		727,60
Total waste	kt	91,769	91,648	92,341	98,576	86,822	70,358	60,041	28,442	11,894		631,893
Total ore	kt	11,116	7,705	6,857	8,419	9,912	10,406	12,781	15,537	12,977		95,712
Mined ore grade	g/t	1.04	1.21	1.38	1.64	1.35	1.16	0.81	1.06	1.00		1.14
Total mined metal	koz	372	300	305	445	431	389	333	527	416		3,518
Strip ratio	tw:to	8.26	11.89	13.47	11.71	8.76	6.76	4.70	1.83	0.92		6.60
Underground mine												
Total rock mined	kt	1,888	1,892	2,291	2,259	2,200	1,764	386			12,679	12,679
Total waste	kt	864	650	910	893	833	41	0			4,1919	4,1919
Total ore	kt	1,024	1,242	1,381	1,366	1,367	1.722	386			8,489	8,489
Mined ore grade	g/t	3.58	3.60	3.85	3.24	3.44	3.64	5.06			3.63	3.63
Total mined metal	koz	118	144	171	142	151	201	63			990	990
Process plant and dump leach feed												
Total milling feed	kt	12,200	11,900	12,500	12,500	12,500	12,500	12,500	12,500	12,500	10,835	122,435
Mill feed head grade	g/t	1.26	1.28	1.35	1.56	1.49	1.48	0.96	1.19	1.01	0.49	1.22
Total mill feed metal	koz	495	489	542	629	600	596	386	478	406	169	4,791
Total milling recovery	%	88.5%	88.7%	88.6%	88.4%	88.4%	88.6%	88.4%	88.1%	88.1%	88.4%	88.4%
Dump leach feed	kt	1,648	289	55								1,992
Dump leach grade	g/t	0.41	0.36	0.27								0.40
Dump leach metal	koz	22	3	0								26
Dump leach recovery	%	36%	36%	36%								36%
Total recovered metal	koz	446	435	480	556	531	528	341	421	358	150	4,246

13.5. Geotechnical considerations

13.5.1. Open pit

The slope design is based on the Read and Stacey geotechnical guidelines, which incorporate rock mass data, representative geological structures, and geometry. These guidelines also account for weathering conditions and include a numerical modelling study to determine the factors of safety for various design sectors of the ultimate pit. Additionally, the analysis considers acceleration due to gravity, with results reflecting both static and dynamic conditions. The outcomes are evaluated against a design acceptance criteria to ensure stability and safety. For modelling the LOM stage pit, a substantial amount of rock strength test data has been collected since 2006. This includes 155 uniaxial compressive strength tests, 252 tensile strength tests, 89 modulus tests, and 35 triaxial tests. These tests have been utilised to accurately define the shear strengths of various rock units and major structures. The intact rock strength ranges from 32MPa (graphite schist) to 85MPa (granodiorite).

Mine hydrogeology

Hydrogeological studies show that the wall rocks consist of low permeability rocks. Several regional structures influence the hydrogeological character with compartmentalisation of groundwater within the wall rocks.

Recharge to bedrock occurs during sporadic rainfall events, mostly through the wadi sediments. The wadi is dry in the local area for most of the year but can become saturated and flow during episodic rainfall events.

Minor seepage from the walls has been recorded as associated with some faults and thrusts and the areas in between. Minor seepage from the Puggy shear zone has been observed in the underground. Minor water seepages occur along some geological contacts and fracture zones.

Although there are significant underground developments under the open pit area, they have not influenced groundwater drawdown in the pit walls. Due to the low permeability of the wall rocks, dewatering of the pit walls from out-pit bores is not possible.

An advanced depressurization programme (extending the current programme) is planned using horizontal drill holes in targeted areas. The horizontal drill holes will extend up to 150m behind the pit walls. Piezometers will be installed to monitor the performance of the horizontal drill holes programme.

Open pit geotechnical risk mitigation

Four significant potential geotechnical risk factors pertaining to the stage six, seven, and eight LOM designs. These risks are being addressed through a risk management matrix for the mine as explained below:

The following programmes are planned for implementation:

- Uncertainties in orebody knowledge, including:
    - Continuous update of the geological and structural knowledge. As the pit is developed in a series of cutbacks there is opportunity to improve on the geology and structural models.
    - Monitoring of the performance of horizontal drainage drilling to evaluate hydrogeological assumptions.
- Influence from underground voids, including:
    - Implementation of the open pit Ground Control Management Plan and Void Management Plan.
    - Undertake filling of any unfilled underground excavations and stopes proximal to the pit walls.
    - Implement radar monitoring for areas of concern.
- Assumption of fully depressurized slopes, including a comprehensive evaluation of depressurization performance.
- Adversely oriented structures, including:
    - Further evaluation of the presence of major structures.
    - Geology model updates.

- Influence of groundwater if full depressurization cannot be achieved.

Open pit stability modelling

For slope designs, design acceptance criteria were adopted that require a factor of safety target of 1.2 for most slopes except where a factor of safety of 1.3 is required due to the presence of permanent haulage ramps or other infrastructure.

The design acceptance criteria specify a factor of safety ≥1.0 to 1.1 for pseudo-static stability assessments.

The kinematic stability assessments were conducted using the Mohr-Coulomb strength model and the inter-ramp and overall slope stability analysis of fresh rock domains using the generalized Hoek-Brown strength criterion. Two-dimensional and three-dimensional limit equilibrium analyses were completed using Rocscience software Slide2 and Slide3, and finite element analysis using RS2, which uses the strength reduction method. The anisotropic analysis was carried out using RS2. These are industry-accepted methodologies.

13.5.2. Underground

Underground geotechnical conditions

Geotechnical domains were developed for each of the principal ore zones, based on a combination of lithological and structural models. Geotechnical conditions were assessed using industry-standard rock mass classification systems. The Underground Ground Control Management Plan is based on industry-standard methods and documentation for geotechnical risk mitigation controls, design methods and operational QA/QC procedures.

Laboratory testing for rock material properties has been conducted at a commercial laboratory in Italy and at the University of Cairo with reasonable agreement in the results for the main rock types at the project.

Typical rock mass quality for the planned stoping blocks ranges from “poor” to “fair” in the granodiorite units, to “extremely poor” to “very poor” in shear zones specifically in the Bast mining zone.

An assessment of the *in situ* stress conditions was undertaken based on borehole breakout data and structural considerations. Numerical modelling was conducted using the more conservatively interpreted stress field interpretation.

The current mining depth is <500m below surface. Underground observations suggest that the current stress environment is low to moderate stress. Recognising that mining is planned to extend to depths exceeding 1,000m, preparations are in hand to conduct overcoring stress measurements.

Underground development

Standard ground support designs were developed to cover drive function, profile, dimensions, and prevailing ground conditions using the Q system and local experience. The designs typically comprise a combination of friction bolts, mechanical point anchor dynamic bolts, with either mesh or fibrecrete for surface control. Osro straps are used for strapping pillars and fibrecreted to minimise equipment damage.

Spiling and short development rounds are used for development in “extremely poor” to “very poor” ground categories associated with the shear zones. In addition, shotcrete arch ribs are installed to mitigate potentially converging/squeezing ground conditions. Intersections are routinely supported with patterns of cable bolts.

Void management

Interactions between previously mined stopes and other excavations including the Sukari open pit are managed with a formal Void Management Plan. This is based on a review of global void management practices and includes probe drilling from underground and open pit platforms, inspection of breakthroughs into voids using borehole cameras, a cavity auto-scanning laser system and barricading to prevent access into hazardous locations.

Underground monitoring

A range of procedures, tools, and equipment are used to monitor the rock mass response to excavation and to provide assurance of the effectiveness of ground support in accessible development. This includes a Maptek scanner for development mapping and convergence monitoring, laser-based stope surveys, extensometers, and an Institute of Mine Seismology seismic system that was commissioned in November

2022. Geotechnical instruments from Yield Point Inc. are used including (but not limited) to multi-point borehole extensometers and smart cables, for which data are uploaded and processed through cloud-based Vantage Point software.

Data are collected, analysed, and reported monthly or at shorter intervals when required.

13.6. Hydrogeological considerations

13.6.1. Open pit

The anticipated total depth of the open pit is 560mRL, circa 500m below the initial water strike recordings. Although a degree of connection between the wadi groundwater and bedrock groundwater is likely (promoting bedrock recharge), it is not clear what the degree of hydraulic continuum is between units. The relative elevations of the water strike / water table recorded, and the pit base means there is potential for a hydraulic gradient between surrounding saturated bedrock and discharge points in the pit faces and pit base.

SRK (2023) has reported that regional structural features, namely the Sukari thrust, Puggy shear, and the Golden Boy and Akbar Wahed fault zones play a key role in controlling seepages to the pit and underground mine. The Sukari thrust dominates the groundwater flow to the western wall and the intersection between the Puggy shear and the Sukari thrust dominates the groundwater inflow observed in the south-western corner of the pit.

Despite the potentially high hydraulic gradient, there are low inflows to both the underground and open pit mine which are typically <5L/s (SRK Consulting (UK), 2022). Given the aridity and scale of the pits with significant capacity for sump storage, these inflows rarely require pumping out.

There is potential for significantly elevated 'pore-water pressure' in the pit faces. Fracture connectivity in many of the massive blocks of the pit walls will be limited and corresponding pore-water pressures may be low to moderate because the blocks are essentially isolated. In structural zones such as the thrust and puggy shear units, the material may have more porous, or equivalent porous properties and be hydraulically connected over larger vertical distances. Inflows from seepages are collected in a sump within the open pit and each zone of the underground mine and dewatered from there.

13.6.2. Underground

Inflows to the underground mine are generally <2L/s and short-lived, typically dropping to <1L/s after a few days. Inflows are typically associated with the same geological structures which are also associated with seepages in the open pit, for example the Puggy shear, Golden Boy fault and the Sukari thrust. Groundwater inflows to the underground mine cannot be discerned from service water, the latter of which constitutes the majority of dewatering requirements.

14. Processing and recovery methods

The processing plant was commissioned in 2009 and has since undergone several expansions. The initial crushing, milling and CIL circuits (purchased second-hand) were designed to process oxide ore at a rate of 4Mtpa. The circuit was expanded to process a 5Mtpa blend of oxide and sulphide ores with the addition of secondary crushers, a flotation circuit, flotation concentrate regrind circuit, flotation concentrate CIL circuit and expansion of the essential support services. The processing plant was further expanded to process 10Mtpa in 2012 by the addition of a second crushing, milling and flotation circuit. Several other smaller circuit modifications to debottleneck the process plant were made including the addition of a second Zadra elution circuit and a second carbon regeneration kiln which allows the circuit to operate at a nominal throughput rate of 12Mtpa.

In addition, there are two dump leach operations, with a third under construction. The south dump leach has effectively been operating since the start of operations, though it contributes only a small amount of the total gold production. The primary focus is to cover mine waste transportation costs.

A small amount of gold is produced from processing the CIL carbon fines and tailings dam return solution through the Ashing plant and a carbon-in-column plant.

The current LOM is 10 years with an average plant feed head grade of 1.22g/t Au, sourced from both the open pit and underground mining operations. The underground ore has a higher average head grade of circa 3.63g/t Au and will primarily be processed through the Line #1 processing circuit, with appropriate blending from open pit ore. The underground ore will supply on average about 10% of the tonnes and 20% of the gold production.

The average LOM plan requires a process plant throughput of 12.5Mtpa and a gold recovery of 88.4%.

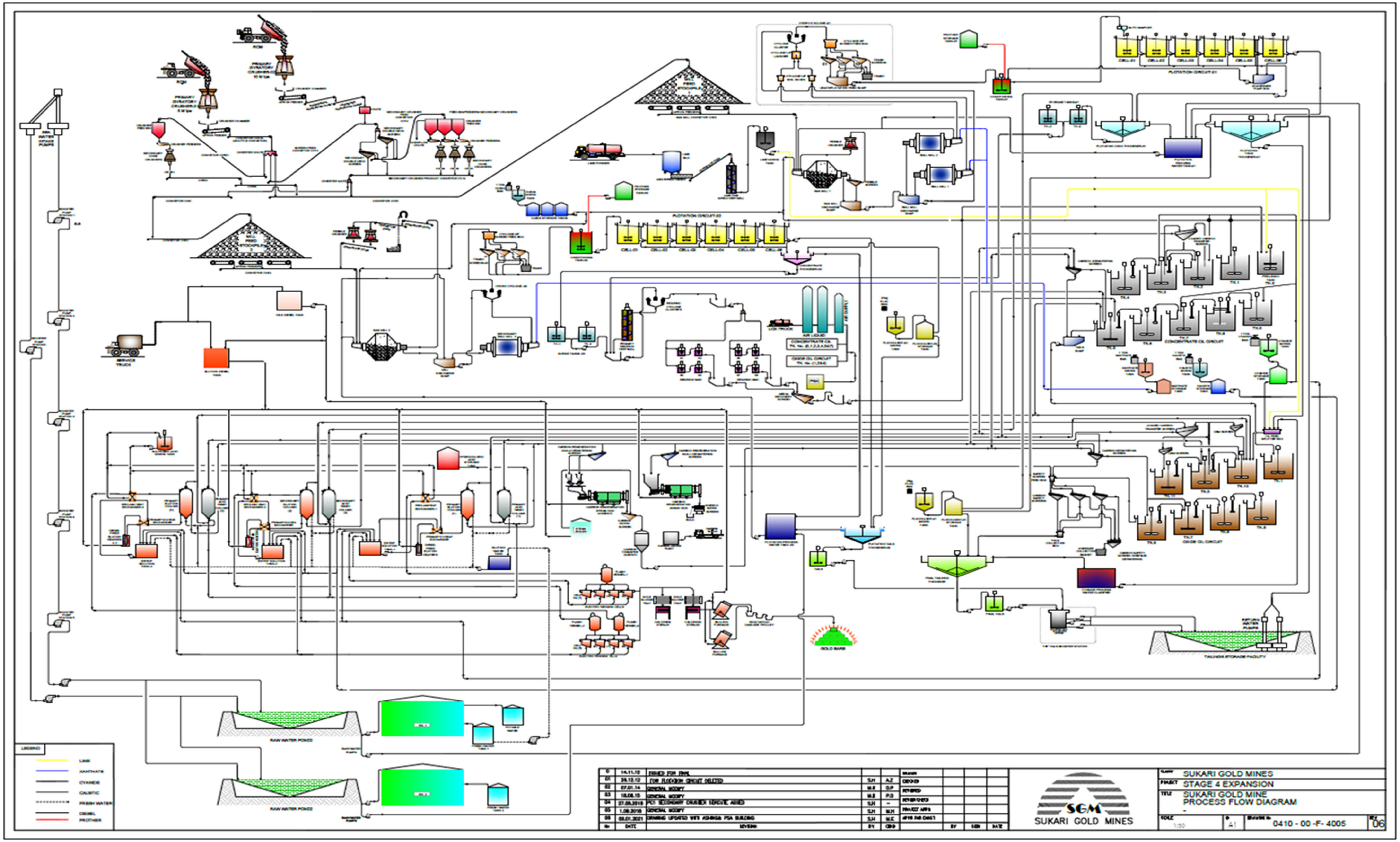
14.1. Process description

14.1.1. Crushing and ore storage

Two crushing circuits are operating. The Line #1 circuit consists of a 1,372mm x 1,880mm primary gyratory and an open circuit Sandvik CH870 secondary cone crusher. The circuit receives a higher-grade blend of underground and open pit ROM material. The crushed product is fed onto Stockpile #1 with a live capacity of 15,000t. Line #2 consists of a 1,397mm x 2,108mm primary gyratory crusher, two vibrating scalping screens on the primary crusher product and three Sandvik CH870 secondary cone crushers to crush the screen oversize. This circuit receives mainly lower-grade open pit ROM material and feeds crushed product onto Stockpile #2 with a live capacity of 15,000t. A portion of the product may also supplement the feed to Stockpile #1 if required.

The flowsheet is shown as Figure 14.1.

Figure 14.1. Sukari process plant flowsheet.



Note: Figure prepared by Sukari Gold Mine, 2024.

Crushed ore is reclaimed from the two stockpiles via apron feeders and discharged onto conveyors that feed the two separate milling circuits. Each stockpile is fitted with three apron feeders. The design capacity of the feeders is such that only two feeders are required to operate at any time with the third being a standby. However, due to the conical shape of the stockpile and natural segregation occurring when crushed ore is discharged onto the stockpile, all three feeders are operated per stockpile.

The crushing circuits are designed to crush a total of 15Mtpa of ROM material to a product P_{80} size of 40mm. The crushing circuits have a combined availability of approximately 87% per annum. The capacities of the installed equipment are significantly more than the required design throughput, resulting in an estimated crusher circuit operating utilisation of 68% per annum. Trials were conducted to see if it was possible to operate only the larger crushing circuit and shut down the smaller one as a cost-saving exercise, but throughput was adversely affected and so both crushing circuits remain in operation.

14.1.2. Milling

Two SAG mills, ball mill, and pebble crushing milling circuits are operating at Sukari for the two process lines. The first circuit, Line #1, consists of a SAG mill (8.32m diameter by 3.81m - effective grinding length (EGL), 5,593kW fixed speed drive) and two ball mills (4.85m diameter by 9.14m EGL, 4,100kW fixed speed drive each).

Pebbles from the SAG mill product are removed using a combination of a trommel screen and a vibrating screen. The pebbles are crushed using a single Metso HP500 short head cone crusher. Crushed pebbles are returned to the SAG mill feed conveyor. Trommel and pebble screen undersize material is pumped to the combined ball mill discharge pump box.

The combined SAG mill and ball mill products are pumped to a cyclone cluster where the cyclone underflow is returned equally to the two ball mills, and the cyclone overflow is discharged onto one new and larger (originally three smaller) vibrating trash screen. Trash screen underflow is pumped to the Line #1 flotation conditioning tank. Trash screen overflow is currently dumped to the milling area floor and pumped back into the SAG or ball mill discharge hoppers via the spillage pumps.

The second milling circuit, Line #2, consists of a SAG mill (8.54m diameter by 4.65m EGL, 7,000kW variable speed drive) and a ball mill (6.10m diameter by 9.62m EGL, 7,000kW fixed speed drive). Pebbles from the SAG mill discharge are removed using a trommel screen. The pebbles are crushed using two FLSmidth Raptor XL300 short head cone crushers. Crushed pebbles are returned to the SAG mill feed conveyor. Trommel screen undersize material discharges into a combined mill discharge pump box.

The combined SAG mill and ball mill products are pumped to a cyclone cluster where the cyclone underflow is returned to the ball mill, and the cyclone overflow is discharged onto three linear vibrating trash screens. Trash screen underflow gravitates into the Line #2 flotation conditioning tank. Trash screen overflow is currently dumped to the milling area floor and pumped back into the combined mill discharge hopper via the spillage pumps.

The milling circuits are currently producing a combined flotation feed of approximately 12Mtpa at a P_{80} grind size of 150µm for Line #1 and 200µm for Line #2 compared to the original design of 10Mtpa at a grind P_{80} size of 150 µm. Line #1 typically receives a blend of higher-grade underground ore and lower grade open pit ore. Line #2 receives mainly lower grade open pit ore.

The grinding media make-up sizes are 80mm and 60mm for the ball mills and 125mm for the SAG mills.

14.1.3. Flotation

Two rougher flotation circuits (Lines #1 and #2) receive the underflow from the corresponding circuit's trash screens. The Line #1 flotation circuit consists of four 100m^3 rougher flotation cells and two 100m^3 rougher scavenger flotation cells. The concentrate from the rougher flotation cells is pumped to the Line #1 concentrate thickener, and the concentrate from the rougher scavenger cells is recycled back to the rougher feed conditioning tank.

The Line #2 flotation circuit consists of six 130m^3 rougher flotation cells. There are no scavenger flotation cells in Line #2. The combined concentrate from the six cells is pumped to the Line #2 concentrate thickener. The tailings from the two flotation circuits are pumped to their respective tailings thickeners. The thickened underflow from Line #1 tailings thickener reports to the float tail CIL circuit to recover additional non-floatable gold particles from the higher-grade input from underground ore (up to 5g/t Au). Line #2 flotation produces a low-grade tailings stream that is pumped directly to the TSF.

Both circuits produce a high-grade gold-enriched sulphide (pyrite) concentrate. Various quantities and types of gangue minerals in the ore, e.g., talc, kaolinite clays, carbonaceous material and shales cause flotation difficulties. The carbonaceous/graphitic ore present in the pit can potentially preg-rob some of the gold in the leach circuit if included in the plant feed, although this is generally waste material.

Although some arsenic sulphides are present, arsenic is not a significant issue.

The pyrite flotation circuits are the core processes for gold recovery to the downstream circuits. Automatic control systems developed by Metso Outotec are employed and include sulphide measurements of the flotation head and tails streams, froth depth and air flowrates. Flotation is conducted at the natural pH of circa 8.0. Potassium amyl xanthate is used as the collector with copper sulphate as the activator. The addition of the secondary collector, sodium di-isobutyl dithiophosphate, alongside the primary collector, potassium amyl xanthate, for the selective froth flotation of sulphide ores - using copper sulphate as an activator - has significantly improved flotation recovery across both flotation circuits.

The sulphide recovery is generally circa 88-89% but can vary, although there is not always a direct correlation between sulphide and gold recovery. For example, sulphide recovery can fall to about 80% without impacting the gold recovery.

Fully automatic samplers are installed, incorporating primary and secondary sampling systems.

14.1.4. Thickeners

There are four thickeners installed. Two float concentrate thickeners (14m and 15m diameter), dewatering the flotation concentrate from the two lines, and two flotation tailings thickeners (23m and 25m diameter) dewatering the flotation tails from the two lines respectively. The overflow from the concentrate and tails thickeners reports to the respective process water tanks in each line.

14.1.5. Regrind

The underflow from the concentrate thickeners is pumped to surge tanks ahead of the regrind circuit to ensure that a stable and constant feed is provided to the regrind mills. Particle size analysis of the regrind circuit feed indicates that the average feed size to the circuit is 25µm. The regrind circuit originally consisted of a single Metso VTM1250 Vertimill operating as the primary mill with four secondary Metso SMD355 stirred media detritors and four tertiary Metso SMD355 stirred media detritors. These mills operate in series in four pairs. The Vertimill is no longer in operation but is retained on standby for emergency use only. The final grind P_{80} size from the stirred media detritors averages 10µm, with a P_{50} of circa 5µm.

The concentrate (thickened underflow) reports to a pump box and is pumped to the (now) first-stage stirred media detritor regrind mill splitter box where the slurry is split equally between the number of operating first-stage regrind mills (four). The product then reports to the second stage stirred media detritors (four) operating in series and in pairs. The final product is pumped to a stirred media detritor media recovery screen where misplaced ceramic media is removed and recovered before it is pumped to the float concentrate CIL circuit.

The regrind circuit was initially designed to produce a float concentrate CIL circuit feed with a grind P_{80} size of 12µm. Site and laboratory testwork indicated that additional gold could be recovered by reducing the CIL circuit feed P_{80} size to 7µm, but this target size has subsequently been increased to 10µm.

All eight of the stirred media detritors are in operation.

14.1.6. Leach and carbon-in-leach circuits

The process plant contains two leach and CIL circuits, a pyrite flotation concentrate leach and CIL circuit, and the Line #1 flotation tails leach and CIL circuit.

Float concentrate leach and CIL circuit

The combined flotation concentrate from the two flotation circuits (Lines #1 and #2) reports to the float concentrate leach and CIL circuit, after it has been reground to the P80 size of 10µm. Slaked lime is added to increase the pulp pH to 10.2. Oxygen is also added to increase the dissolved oxygen concentration in the solution to circa 15-20ppm. Ten tanks of 288m^3 volume and two tanks of 3,000m^3 volume are used of which the first five small tanks are used for pre-oxidation only. Cyanide is added to the sixth small tank (CIL) with the remaining CIL tanks containing activated carbon and the associated inter-stage screens. All the tanks are agitated, and oxygen is sparged into each tank (three spargers per tank). The oxygen pressure and flowrate are regulated to each tank. The overflow pulp from each tank gravitates through the tanks via launders from the inter-stage screens. Carbon is pumped through the carbon adsorption tanks counter-currently to the flow of pulp.

Oxygen is supplied on site from two sources: the first is from a dedicated cryogenic oxygen plant, the second is through the supply of liquid oxygen which is trucked to site.

The first two tanks of the flotation tails leach and CIL circuit have been converted to pyrite flotation concentrate leach tanks to increase the residence time of the pyrite concentrate leach circuit, circa 36 hours, for increased gold recovery.

Carbon recovered from the float tail CIL circuit is pumped to the last CIL tank and then pumped counter-current to the slurry stream, using airlift vertical slurry pumps, to adsorb the gold in solution. Gold-loaded carbon is recovered in batches from the first CIL tank via the carbon recovery pump and a vibrating screen.

The loaded carbon overflows the loaded carbon screen and discharges into a three-tonne carbon transfer column. The carbon recovery pump is stopped when the transfer column is full. The transfer column is pressurised using freshwater, and the carbon is transferred to either one of the acid wash columns.

The pulp pH is monitored, and slaked lime and cyanide can be stage-added as required to the pre-oxidation and CIL tanks. The slurry temperature in the float concentrate leach circuit is too high for dissolved oxygen probes to function correctly. Therefore, oxygen is continuously metered into all the tanks based on pre-determined flow set points. For the first two tanks, oxygen is added via a multimixer oxygen sparging system with hyper spargers for the other tanks.

A project to replace the three small pre-oxidation tanks with a single large tank from the float tail CIL circuit was successfully completed, with TK10, a 3,000m³ capacity tank, converted for pre-oxidation, and the Aachen shear reactor successfully commissioned which will result in improving the leaching kinetics as well as reduce cyanide consumption.

Float tail leach and CIL circuit

The Line #1 flotation tailings is thickened and then pumped to the float tail leach and CIL circuit, which consists of six 3,000m^3 volume CIL tanks (originally the old oxide CIL circuit containing eight tanks, but the second and fourth tanks are currently used for the flotation concentrate leach and CIL circuit).

Slaked lime is added to the first tank to maintain a pH of 9.9. Cyanide is also added to start the gold leach process. Oxygen is metered into all the tanks via side sparging. The tailings slurry from the last pyrite float concentrate CIL tank is also added to the third tank. The slurry gravitates through the six tanks via the intertank screens and launders. The tailings from the last CIL tank gravitates over three carbon safety screens before being pumped to the TSF without thickening.

Regenerated carbon, fresh carbon and loaded carbon from the north and south heap leach dumps are added directly to the acid wash column then to the elution column. Carbon is pumped counter-current to the slurry from the last and through to the first tank using an airlift pumping system. Loaded carbon is recovered from the first tank using the carbon recovery pump and a Dutch State Mines (DSM) screen. Recovered carbon discharges into the last pyrite float concentrate CIL tank, and the slurry returns back to the first float tail CIL tank.

The carbon recovered using the DSM screen and carbon recovery pump is not sufficient to maintain a constant carbon concentration throughout the float tail CIL tanks and the pyrite float concentrate CIL tanks. Therefore, carbon is also recovered from the first float tail CIL tank using the carbon recovery pump and the old, loaded vibrating carbon recovery screen. Carbon recovered from this screen discharges into either of the two acid wash columns and is then transferred to the penultimate float concentrate CIL tank using pressurised freshwater.

14.1.7. Elution, carbon regeneration and gold room

Gold is recovered from the loaded carbon using two parallel 9t Zadra elution circuits, each processing two batches of carbon per day. This requires a daily carbon movement of 36t. The average loaded carbon value is circa 1kg/t Au. Two regeneration kilns are operating with a smaller 3t column which is used, when required, to reduce gold in circuit.

Carbon transfer

Loaded carbon is recovered from the first pyrite float concentrate CIL tank via the loaded carbon recovery screen and discharged into a 3t transfer column. The transfer column is pressurised when full using freshwater and the carbon is then transferred in batches to one of the two 9t acid wash columns. Three batches of carbon are required to fill one acid wash column.

Acid wash

The two 9t acid wash columns operate independently from the elution circuit, i.e., any one of the acid wash columns can feed any one of the elution columns. During acid washing, concentrated hydrochloric acid is metered into the bottom of the column where it is diluted with freshwater to achieve a 2.6% w/w concentration. The acid solution in the column is circulated through the acid wash column by the acid circulation pump for 60 minutes at a flow rate of 0.9 bed volumes per hour. The acid wash circulation pump is shared between the two acid wash columns. Therefore, only one acid wash column can conduct the soaking cycle at any one time.

The loaded carbon is then rinsed with 6.8 bed volumes of freshwater. The rinse water displaces any residual acid from the loaded carbon. Dilute acid and rinse water is discharged into the float tail CIL tail pump box. Once the rinse is complete, the water is drained into the bund. The carbon is then hydraulically transferred using freshwater to either of the two elution columns which are ready to receive the next batch of loaded carbon.

Elution

There are three Zadra elution circuits: two with 9t elution columns and one with a 3t elution column. Each circuit includes an elution column, strip solution heaters, heat exchangers, and four electrowinning cells, each containing 12 cathodes.

A stripping solution containing 1% cyanide and 3% caustic soda is prepared before elution begins. More solution is added before the second elution to replace losses from the first. After every two elutions, the entire solution is replaced to prevent contamination.

The solution is continuously pumped through the elution column and heat exchangers while being heated. Once it reaches 85°C for 10 minutes, it is sent through a flash vessel, where the pressure drops to atmospheric, then into the electrowinning cells at 124°C. In these cells, an electric current causes the gold to deposit onto stainless-steel cathodes. The remaining solution flows back to the strip solution tank and recirculates through the system nine times.

Once this cycle is complete, the heaters are turned off, and the solution continues to circulate until it cools below 95°C. Finally, fresh cold water is pumped in to remove any remaining solution and cool the carbon.

Carbon regeneration

After the carbon in the elution column is cooled down, the barren carbon is hydraulically transferred using freshwater to the carbon dewatering screen ahead of the carbon regeneration kiln. Two kilns are available, one of which is new to replace one of the older kilns that was previously used for drying the carbon only due to low temperatures.

The throughput for both regeneration kilns is 1.5tph.

Ashing plant

Fine carbon is generated during the long process of carbon transfer in the CIL tanks, which can negatively impact gold recovery. To prevent this, fine carbon is removed from the circuit, leading to the accumulation of a large amount of barren fine carbon over time.

The ashing plant is designed to recover gold traces from this fine barren carbon using a combustion system.

A new Holman shaking table has been installed to separate grit from the fine carbon, improving the efficiency of the ashing process.

Gold room

After elution and electrowinning, the cathodes are washed in a designated washing bay using a high-pressure water machine. The washed gold-bearing material, or calcine, is collected in a hopper.

Water from the hopper is drained through a vacuum filter to separate the sludge. The filtered water is transferred to another vacuum filtrate tank, where any remaining particles settle for collection. The gold sludge is then placed in oven trays and dried at 500°C for 12 hours.

Once dried, the sludge is mixed by hand with fluxes (borax, soda ash, and silica) and fed into one of two diesel-fired smelting furnaces. The molten gold is poured into moulds to form bars, which are stamped with an identification number and weighed for shipment.

Crystallised slag from the smelting process is crushed and passed through a mineral cone. Heavy particles are recovered and reprocessed with the gold sludge, while lighter slag particles are sent to the ball mill.

Gold bars are packed inside the gold room, sealed, and prepared for shipment.

14.2. Energy, water, process materials and personnel requirements

14.2.1. Reagents

The following reagents are used in the process:

- Lime.
- Sodium cyanide.
- Caustic.
- Hydrochloric acid.
- Flocculant.
- Collector.
- Frother.
- Copper sulphate and ferrous sulphate.
- CMC dispersant.
- Oxygen.

A new reagent preparation area has been installed and commissioned for copper sulphate, ferrous sulphate, flocculant, and carboxymethyl cellulose.

14.2.2. Water services

Water management and effluents

There are no surface water resources in the mine area. Groundwater resources originate from occasional rainfall, that partially infiltrate through the more permeable wadi deposits and accumulate in basement depressions or is trapped by faults and buried dykes. Based on the numerous faults and shear zones intersecting the Sukari open pit and underground mine, it is reasonable to deduce that seepage is minimal and structurally controlled. Groundwater is characterised as brackish with high total dissolved solids levels and is not suitable for drinking.

The combined capacity of 1,700m^3/h is sufficient to meet the process plant and mining water requirements at Sukari. The seawater pipelines report to the raw water ponds located within the process plant area. Reverse osmosis water treatment plants draw a portion of the seawater for potable and fresh water supplies. Brine solution produced at the desalination plant is recycled to the raw water ponds.

A back-up bore field is installed close to the coastline were seawater freely infiltrates into the groundwater. It has not been required to support operations to the Report effective date.

Total water consumption in 2023 was 8,141ML including 7,201ML of seawater, 322ML of freshwater from Marsa Alam, 262ML of precipitation, and 356ML from entrained water.

The water balance for the TSF is strongly negative due to the low rainfall and high evaporation that characterises the region’s climate, thus 60-70% of total process water requirements needs to be extracted from the Red Sea. Above 50% of water is reused.

A closed-circuit system is in place and the mine does not discharge water to the environment.

Process water

Process water is stored and reticulated through the process plant from three storage tanks. Two of the process water tanks, one in each flotation circuit, receive the overflow from the flotation concentrate and tailings thickeners of each circuit and decant return water from the TSF. Raw water is used as make-up water to maintain the tank level if required. The process water is then reticulated to the respective milling and flotation circuits for dilution and spray water. The process water tank in Line #1 also provides process water to the float concentrate CIL and the float tail CIL circuits. Process water to the concentrate regrind circuit is provided from the Line #2 process water tank.

Raw water

Raw water from the Red Sea is supplied from two seawater harvesting systems containing intake pumps, buffer tanks and booster pumps. Harvested seawater is discharged into a concrete tank located at the process plant that feeds the freshwater supply system. The concrete tank overflows into two raw water storage ponds. Raw water pumps reticulate raw water through the process plant from the storage ponds.

Gland water

Raw water is used as gland water for the slurry pumps. Gland water is stored in several surge tanks throughout the process plant and reticulated to the slurry pumps via ring main systems. Dedicated gland water and gland water booster pumps provide gland water to the two-stage tailings pumps.

Freshwater

Freshwater to the process plant, offices and camp is supplied by two reverse osmosis plants with a combined capacity of 3,000m^3 per day and stored in two freshwater tanks. Freshwater in the process plant is used for reagent make-up, carbon transfer and strip solution in the elution process. Freshwater is also reticulated to the camp, offices and the mining areas.

Potable water

Potable water is delivered to site in a bulk tanker from Marsa Alam and stored in the potable water tank. Potable water is reticulated to the safety showers in the process plant and for domestic use in the camp and office buildings.

Firewater

A firewater reserve of approximately 1,800m^3 is maintained in the two freshwater tanks. Firewater is reticulated through the plant using an electrical and diesel motor driven pump. Pressure in the firewater system is maintained with an electrical jockey pump.

14.2.3. Power

Power generation is from both a dedicated solar power station and from diesel-fuelled generators in two power stations. Additional detail on power generation and consumption is provided in Section 15.

14.3. Personnel

The Sukari processing plant currently employs a total workforce of 274 personnel, covering all operational, maintenance, and technical support functions necessary for efficient plant performance. The staffing levels are structured to ensure optimal throughput, equipment reliability, and adherence to safety and environmental regulations. Given the stability of operations and the absence of any significant expansions or process modifications, no changes to the current workforce are anticipated in the foreseeable future. The existing personnel structure is considered sufficient to maintain production targets while supporting continuous improvement initiatives.

14.4. Laboratory

The on-site laboratory is Owner-operated and can treat up to 1,200 samples per day from the plant, exploration and grade control departments.

The laboratory also includes an extensive metallurgical test laboratory, enabling all areas of the process plant to be tested at a laboratory scale.

14.5. Dump leaching

Dump leaching of low-grade mine waste has essentially been operating since the mine commenced and is an effective way of paying for the mine waste transportation costs, with any additional gold recovery a bonus.

There are two dump leach areas, South and North, with a third under construction to minimise stockpiling lower grade material.

The South dump leach is basically completed with no new stacking of material, although leaching continues. This contains approximately 16Mt of material. The North dump leach operation was extended through 2024 to process extra 8.3Mt of fresh ore. The reticulation of the cells being extended, pumps have been upgraded and the carbon-in-column was increased from 8 to 26 and the reticulation rates were increased from approximately 200m^3/hr to nearly 600m^3/hr to recover gold from the solutions off the pads.

The dump leach operations treat ore with grades of typically 0.25-0.50g/t Au. The North dump leach is currently irrigated with 15-30ppm cyanide. The current LOM plan indicates an average grade of 0.38g/t Au and is based on leaching the mined oxide Mineral Reserves only. However, it is currently planned to also leach sub-grade transitional material and also rehandled stockpiles which are not in the Mineral Reserves.

Gold recovery is typically 30-40% for oxide material and 20-30% for both the sub-grade transitional and potential fresh material. Gold production in 2024 for both South and North dump leach operation was 5,604oz and 27,653, respectively

A carbon-in-column plant is used to recover gold from the dam return water prior to being pumped to the process water tanks. Gold production in 2024 from carbon-in-column plant was 98oz.

14.6. Process plant improvements

In 2024, a series of key process optimisations were implemented to enhance plant performance, with a particular focus on improving reagent dosage strategies for higher gold recovery. These improvements were driven by continuous research, metallurgical testwork, and operational refinements.

The optimisation initiatives included the introduction of multi-stage potassium amyl xanthate dosing, a new detoxification system, the addition of a secondary collector, and the successful commissioning of the Aachen reactor. Additionally, the North dump leach expansion significantly increased ore processing capacity, further contributing to recovery improvements.

15. Infrastructure

15.1. On-site infrastructure

The existing infrastructure in the mine is sufficient to support the LOM plan. Refer to Figure 3.1. for a detailed infrastructure map for the Sukari Gold Mine.

The key onsite infrastructure facilities include:

- Open pit: open pit excavation, haul roads and adjacent areas on the crest of the open pit.
- Waste rock dumps: North, East and South dumps.
- Low grade ore stockpile.
- ROM pads.
- TSF #1: tailings surface, process pond, evaporation ponds, TSF embankment, perimeter access road and adjacent areas.
- TSF #2: Tailings surface, TSF embankment, perimeter access road and adjacent areas.
- Process plant area: process plant, reagent and supply chain warehouses, power stations, offices, fuel station and storage, laydown area, workshops, roads and adjacent areas.
- Camp site area: accommodation camp including mosque, sports fields, recreation building, mess and kitchen, administration office, sewage treatment plant, driver training area, site entrance and security.
- Salvage/scrap yard.
- Water supply infrastructure: Red Sea water intake, water pipeline, booster pump stations, and back-up groundwater bore field.
- Underground mine area: underground portal, ventilation shafts and facilities, offices and workshop, waste rock dump, roads and parking area.
- Dump leach facilities: dump leach, ponds and process area.

- Emulsion plants.
- Explosive magazines.
- Main access road.
- Solar power farm.
- New site entrance and security.

Power supply for processing stages one to three and infrastructure is generated using five MAK and six Cummins generators capable of supplying 6.5MW (de-rated) and 1.2MW (de-rated) respectively. Processing stage four receives power generated from five Wartsila generator sets capable of supplying 7.8MW (de-rated). A diesel fuel storage facility is present on site with a combined capacity of 5,207m^3.

A 36MW$_{DC}$ solar farm was commissioned which produces a significant proportion of the mine's power. AngloGold Ashanti is also continuing to work towards a full national grid connection. This, combined with the solar farm, will displace the diesel generator sets which will then be retained in case of a loss of supply from the grid.

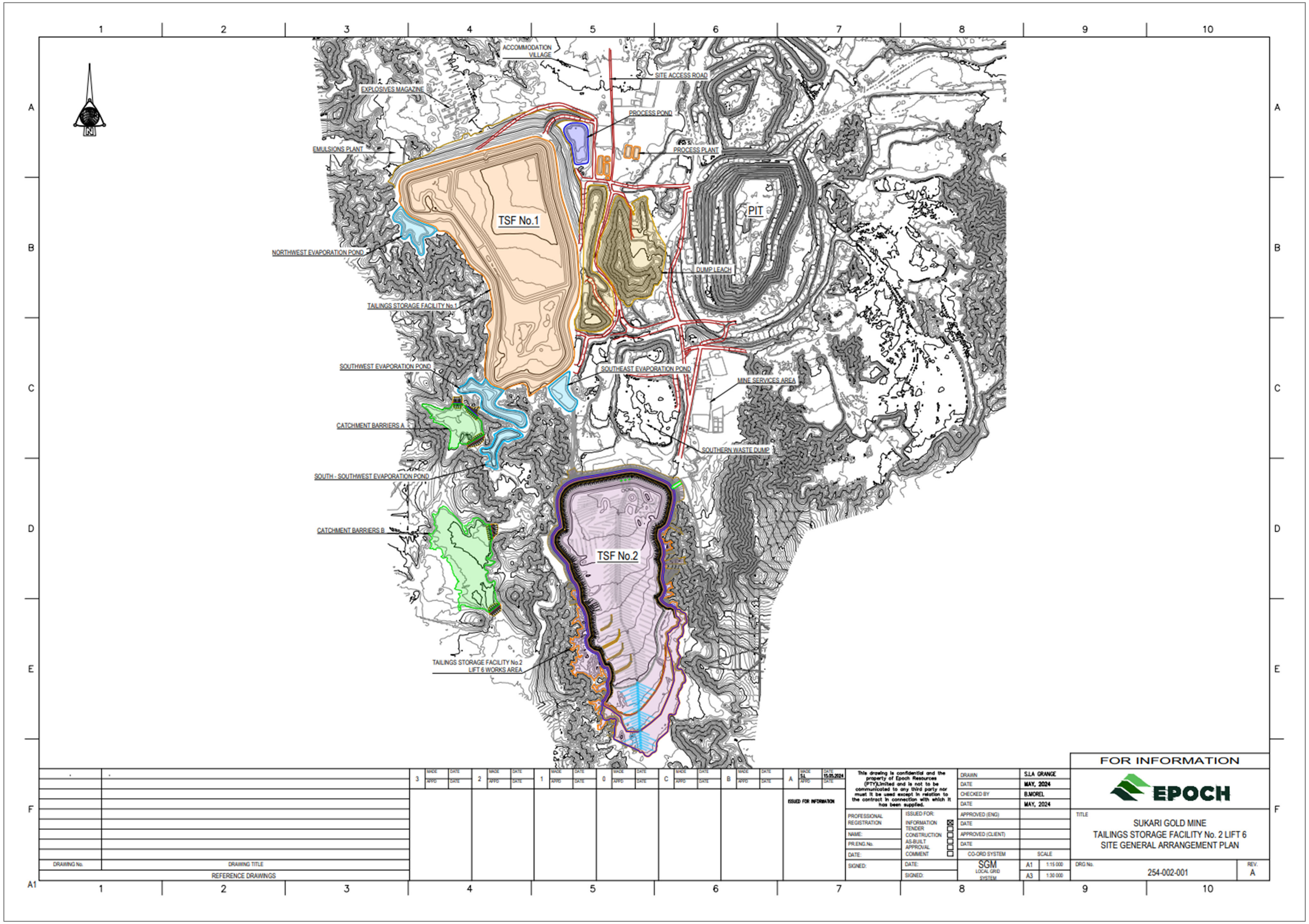
A communications network using satellite and fibre-optic cable is in place. The fibre-optic cabling extends into the underground operations, following the main decline. A "trunked" repeater system enables the system of hand-held and mobile radio sets to communicate around the site.

A 125m^3/hour pastefill plant was commissioned in 2023.

15.2. Tailings storage facilities

The Sukari Gold Mine has two TSFs, TSF #1 and TSF #2 located to the west and south of the main mine area respectively, as shown in Figure 15.1.

Figure 15.1. TSF site layout plan of the existing TSF #1 and proposed TSF #2.



Note: Figure prepared by Sukari Gold Mine, 2024.

TSF #1 was commissioned in 2009 and has been in continuous operation since but is now near full capacity and provides emergency contingency storage only.

The starter embankment (stage one) of TSF #2 was constructed in 2020 and commissioned in January 2021 under the supervision of Knight Piésold. The next raise construction (stage three) has recently been constructed providing 36Mt of capacity for a production rate of 12Mtpa at a 50% solids by weight slurry. Construction of stages' four and five started in 2023 under the supervision of newly appointed engineer of record Epoch, with stage six due to be completed in the first half of 2025 increasing the capacity to 82Mt.

The TSFs meet host country legislative requirements and are managed through a robust framework of principles, standards and guidelines to ensure structural stability, human safety and environment protection, whilst maintaining efficient and responsible production. The facilities are designed in accordance with the Australian National Committee on Large Dams (ANCOLD) guidelines. The embankments were constructed using the downstream method and facilities comprise a high-density polyethylene (HDPE) geomembrane line to provide additional seepage reduction. Both facilities have a hazard consequence classification of 'High A' under the ANCOLD guidelines.

Each TSF has an operating manual covering the operation, monitoring, maintenance, construction, closure and rehabilitation guidelines for the facility; clear definition of responsibility for key personnel; and a trigger action response plan to effectively assess deviations from standard operating practice and required actions, including what to do in the event of an incident or emergency.

The TSFs are monitored through a layered assurance system by a team of internal specialists, an external engineer of record, and independent technical reviewer and with oversight maintain by the AngloGold Ashanti corporate office. The engineer of record conducts dam safety inspections on a quarterly basis.

AngloGold Ashanti is committed to the Global Industry Standard on Tailings Management. In 2023, an assessment against Sukari's conformance against the Global Industry Standard on Tailings Management was undertaken and a roadmap to address corrective actions was put into place. In addition, a failure modes and effects analysis was completed for each TSF in 2023, including the identification of measures to reduce the risk of failure to as low as reasonably practicable.

15.2.1. TSF #1

TSF #1 is a single-cell paddock storage facility containing approximately 70Mm^3 of tailings with containment provided by downstream engineered earthfill embankments and the natural strata and is fully lined with 1.5mm HDPE liner. The embankments were formed from waste rock fill, wadi gravels and a sand and gypsum blended soil liner, with a maximum embankment height of 60m. The HDPE liner is bedded on a sand and gypsum blended soil layer.

The tailings were deposited by sub-aerial spigots and the supernatant water decanted via a floating barge. The preliminary closure design includes developing a closure beach profile, removal of the tailings delivery pipelines, minimisation of the supernatant pond by decant and evaporation, commission the underdrainage system which is currently not operational, limited reshaping of the final embankments, installation of a closure spillway, cover of the tailings body once all water is removed with 2m of waste rock and installation of monitoring points around the TSF embankments. Closure would be completed one to two years post final deposition of tailings, with detailed closure design and assessment being prepared by the engineer of record.

Tailings deposition has ceased at TSF #1 and the supernatant pond continues to be reduced with the tailings beach area desiccating. The facility currently has 2m-3m freeboard available for use as emergency storage.

15.2.2. TSF #2

TSF #2 is a single-cell containment facility provided by zoned earth and rock fill embankment and the natural strata. The main embankment is to the north side of the facility extending to the west and eastern sides, a smaller embankment forms the southern end of stage one. The natural strata form the remainder of the containment on the western and eastern sides.

15.3. Power supply

The mine site provides all the power services to support its operations. There are two power stations (MAK and Wärtsilä) generating energy for the mine site and containing several generator sets. The generators are operated using diesel fuel. In 2024 stationary fuel combustion at the Project was approximately 70ML whilst mobile fuel combustion in the same year was reported to be around 90ML.

The Sukari Gold Mine is committed to reducing its carbon footprint and increasing energy efficiency at its sites through corporate-level efficiency initiatives. The 36MW_{DC} (30MW_{AC}) solar plant and 7MW battery energy storage system was commissioned in 2022, providing a secondary energy source and increasing the renewable make-up of site power generation to 20%. This solar plant saves approximately 70,000L/d of diesel; equivalent to an annual reduction of 59,000tCO_2.

AngloGold Ashanti has developed a Decarbonisation Roadmap for the Sukari Gold Mine, with an interim target of a 30% reduction in operational scope one and two greenhouse gases emissions by 2030. The carbon abatement projects that underpin this interim target are a 15-20MW_{AC} extension to the existing solar plant, a 60MW_{AC} connection to the national electricity grid, including increased levels of renewable energy sourced through the national electricity grid compared to 2021 base-year.

The solar farm provides around 22% of the mine’s annual power generation requirements

AngloGold Ashanti is also considering further expanding this facility by some 15MW.

15.4. Off-site infrastructure

The mine receives a supply of seawater via three pipelines, two sets of intake pumps and coastal wells, and booster pumping stations. The pipeline was constructed at a depth of 1m below ground level.

Power is carried along an overhead 34.5kV cable from the site power plant, mentioned above, which feeds the five booster stations and the intake pumps.

16. Market studies and contracts

16.1. Market studies

No market studies are currently relevant as the Sukari Gold Mine is an operating mine producing a readily saleable commodity in the form of doré.

The accepted framework governing the sale or purchase of gold, is conformance with the Loco London standard.

Only gold that meets the London Bullion Market Association’s (LMBA) Good Delivery standard is acceptable in the settlement of a Loco London contract. In the Loco London market, gold is traded directly between two parties without the involvement of an exchange, and so the system relies on strict specifications for fine ounce weight, purity and physical appearance.

For a bar to meet the LMBA’s Good Delivery standard, the following specifications must be met as a minimum:

- Weight: 350 fine troy ounces (min) to 430 fine troy ounces (max).
- Purity/fineness: minimum fineness of 995.0 parts per thousand fine gold.
- Appearance: bars must be of good appearance not displaying any defects, irregularities such as cavities, holes or blisters.

Only bullion produced by refiners whose practices and bars meet the stringent standards of the LMBA’s Good Delivery List can be traded on the London market. Such a refiner is then a LMBA Accredited Refiner and must continue to meet and uphold these standards in order for its bars to be traded in the London market.

Provided the bullion meets the LMBA’s Good Delivery standard, it is accepted by all market participants and thus provides a ready market for the sale or purchase of bullion.

16.2. Commodity price forecasts

AngloGold Ashanti management determined the gold prices used for estimating Mineral Resources and Mineral Reserves. These prices were provided in local currencies and were calculated using the historical relationships between the US dollar gold price and the local currency gold price.

The determination of the Mineral Resource and Mineral Reserve prices are not based on a fixed average, but rather an informed decision made by looking at the trends in gold price. The Mineral Reserve price forecast of US$1,450/oz Au provided was the base price used for mine planning. AngloGold Ashanti selects a conservative Mineral Reserve price relative to its peers to fit into a corporate strategy to include a margin in the mine planning process. AngloGold Ashanti uses a set of economic parameters to value its assets and business plans these economic parameters are set on a more regular basis and reflect the industry consensus for the next five years. These are generally higher than the Mineral Reserve price and enable more accurate short-term financial planning. Finally, AngloGold Ashanti uses a fixed price to evaluate its project and set its hurdle rate. This price and the hurdle rate are set by the Board and are changed when required if there has been significant changes in the gold price.

The Mineral Resource price forecast of US$2,000/oz reflects AngloGold Ashanti's upside view of the gold price and at the same time ensures that the Mineral Resource estimate will meet the reasonable prospects for eventual economic extraction requirement. Typically, the price is set closer to spot than the Mineral Reserve price and is designed to highlight any Mineral Resource that is likely to be mined should the gold price move above its current range. A margin is maintained between the Mineral Resource and ruling spot price, and this implies that Mineral Resource is potentially economic at current prices but that it does not contribute sufficient margin to be in the current LOM plan.

16.3. Contracts

Numerous contracts are in place with local and international companies relating to the operation of the mining and processing operations.

The following key contracts are in place:

- The open pit drilling operations is contracted to Capital Ltd.
- Mantrac Egypt provide labour and parts for the caterpillar mining equipment used in the open pit and underground mines.
- Exploration and grade control drilling are undertaken by two third party contractors, Capital Ltd for the open pit and Silverback Egypt (a subsidiary of Geodrill) in the underground mine.
- Bulk explosive manufacturing and accessories are supplied by Maxam Egypt (a subsidiary of Maxam).
- Mining equipment is purchased from Caterpillar, Sandvik, Normet and Volvo.
- Construction Technology Contractors Egypt provides critical labour hire for ad-hoc activities for the mine.
- Cyplus are contracted to supply cyanide for gold recovery.
- Lubricants, oils and grease are supplied by Shell Corporation.
- Heavy earthmoving equipment tyres are supplied by Michelin.
- Oxygen used in gold processing is supplied by Air Liquide Egypt.
- Gold refining services are contracted to MKS Pamp, Switzerland.
- Internation freight forwarding services are contracted to Gulf Agency Company.
- Engineer of record for the TSFs is contracted to Epoch Pty, South Africa.

Capital Drilling (Egypt) LLC was engaged by Sukari to undertake an open pit waste mining services contract for the East wall. This contract was completed in September 2024.

17. Environmental studies, permitting plans, negotiations, or agreements with local individuals or groups

Generally, there are no significant flaws pertaining to environmental, socio-economic or occupational health and safety aspects that might affect the viability of the Sukari operation.

The Sukari Gold Mine maintains a robust licence to operate through its focus on legal compliance, commitment to establishing trusting partnerships with stakeholders, good governance, ethical conduct and general conformance with good industry practice.

All required permits are in place and renewed when required, environmental and social risks are routinely reviewed, management plans are reviewed and updated on a regular basis, and any cases of non-conformance and incidents are subject to root cause analysis. The effective communication and engagement with local stakeholders are successful in ensuring a mutually beneficial project.

The following recommendations can be made to ensure continuous improvement of environmental and social management at Sukari:

- Continuous update of operational management systems and plans to ensure they are relevant and proportionate to risks, including alignment with ISO standards.
- Ongoing collaboration with contractors and suppliers to strengthen their conformance to good industry practice.
- Achievement of full conformance of the Sukari tailings management system to the requirements of the Global Industry Standard on Tailings Management.
- Ongoing reduction of greenhouse gases emissions through the execution of projects identified under the Sukari 2030 decarbonisation roadmap, including the investigation of additional opportunities.
- Routinely monitor the development of domestic and international policy on carbon pricing and the anticipated impact on the carrying values of Sukari.
- Develop a standalone mine closure plan aligned with the LOM plan.

17.1. Socio-economic considerations

17.1.1. Land use

There are few forms of active land use within the Sukari mining licence area due to the rugged terrain, remoteness, absence of surface water and low flora coverage. There are no communities living within the licence area, nor is it judged to be of importance to indigenous peoples. The operations have not resulted in the physical resettlement of communities nor economic displacement and there are no reported grievances or disputes between Sukari Gold Mine and local communities related to land use rights.

Small-scale mechanised mining is widespread in the Eastern Desert, including areas within the Sukari licence area, but generally at remote sites where it neither disturbs nor presents a risk to mine operation. It is an unauthorised, clandestine activity that employs a relatively small number of people.

The Eastern Desert is notable for its geological history, with a variety of ancient Egyptian and Romanic mining settlements of varying archaeological value. At Sukari, one site of archaeological value comprising the rock ruins of mine worker houses was identified during the environmental and social impact assessment and was protected from mine disturbance on the recommendation of the Supreme Council of Antiquities (GM, 2007). At the request of Sukari in 2022, the Supreme Council of Antiquities performed an operation to salvage and relocate the ruins to allow for the progressive expansion of the mine. Excavations of the ruins have revealed features typical of the Ptolemaic and Roman empires, including artefacts dating back to the Modern Pharaonic State. These findings are of surprising richness in the context of ancient gold mining and investigations are ongoing including academic research led by the Supreme Council of Antiquities. A small museum has been established at the Sukari Gold Mine to display these findings.

17.1.2. Communities and livelihoods

There are a small number of Bedouin families who live outside but adjacent to the mine licence area with whom the company retains good relations. The nearest Bedouin camp is 9km away which is occupied intermittently by one family. The nearest town is Marsa Alam, located approximately 25km to the east of Sukari located on the Red Sea coast, with a population of approximately 10,000.

The population of Marsa Alam comprises a mix of Bedouin people and economic migrants from elsewhere in Egypt, attracted by opportunities in the tourism sector and the presence of the mine.

The opening of an international airport in Marsa Alam in 2003, led to a rapid increase in coastal development associated with the tourism sector. This development was substantially curtailed following the Egyptian revolution in 2011 and coronavirus pandemic in 2021/22.

The Sukari Gold Mine is the largest industrial operator in the region and provides a significant contribution to the economy of Marsa Alam through the procurement of goods and services.

17.1.3. Stakeholder engagement

Sukari Gold Mine has in place various tools and processes to guide local stakeholder engagement. This includes stakeholder mapping, social risks and opportunities register, stakeholder engagement register, commitments register and community grievance mechanism.

At the level of Marsa Alam, the Community Consultation Committee, comprising Bedouin elders and community leaders, is in place to provide a formal channel for informed consultation and participation on matters relating to the Sukari mine. Committee meetings are held monthly, supplemented by regular meetings with government authorities, public service providers, community-based organisations and vulnerable groups.

Since 2021, Sukari Gold Mine has conducted an annual community perceptions survey to assess the strength of its relations with the township of Marsa Alam, the effectiveness of its engagement practices and community investment initiatives. The overwhelming majority of survey respondents support the Sukari operation.

Owing to the relative remoteness of Sukari Gold Mine from community areas, the number of community incidents and grievances reported is minimal. Zero community incidents were recorded in 2024.

17.2. Permitting and approvals

The concession agreement signed with the government of Egypt in 1995, defines the legal, administrative, financial and fiscal conditions of the mine and activities within the Sukari licence area. More broadly, Sukari is subject to the laws, regulations, guidelines, and standards of the Arab Republic of Egypt.

Issues of environmental protection in Egypt are governed by Environmental Law 4/1994 (amended in 2009 and 2015) that outlines regulations pertaining to land, air, and water pollution and creates the Environmental Affairs Agency, endowing it with the powers to enforce these requirements. As per the requirements of Law 4/1994 and its executive regulations, new projects are to prepare and submit an environmental impact assessment (EIA) study according to the EIA guidelines as part of the project approval process.

An environmental and social impact assessment was carried out in 2007 by Environics and approved by the Egyptian Environmental Affairs Agency. Various elements of mine infrastructure have been the subject of an environmental impact assessment addenda subsequent to the original environmental and social impact assessment, including the extension of the power plant (2008); water intake from the Red Sea and borefield (2009); oily sludge incinerator (2009); the second tailings storage facility (2016); the solar farm project (2021) and solar expansion (2023); and the third dump leach facility (2024).

Sukari Gold Mine maintains various other operational permits, including:

- Approval from the Egyptian Armed Forces for development of new facilities within the licence area.
- Approval from the Industrial Development Authority for the establishment and operation of the process plant and hazardous chemical storage areas.
- Approvals from EMRA and the Red Sea Governorate for the lease of land for facilities located outside the Sukari licence area i.e. water offtake and pipeline.
- Approvals from the Supreme Council of Antiquities for the excavation of archaeological ruins.

Sukari Gold Mine has a tracking system to ensure timely renewal and/or extension of regulatory permits. As of December 2024, all permits were reported as current, with two permits under renewal:

- Importation and use of explosives.
- Use of ammonium nitrate.

17.3. Requirements and plans for waste tailings disposal, site monitoring and water management

17.3.1. Air emissions

Sukari is located 25km from Marsa Alam, to which it is connected by a bitumen road, and 13km from the northern extent of the Wadi El Gamal National Park. The operation negligible impact on the airshed of these sensitive receptors and no community incidents related to air quality have been reported.

The priority issues regarding air quality are the impact on work conditions and potential impact on occupational health, rather than fugitive emissions. Occupational health risks are assessed in each work area and the necessary controls implemented to ensure compliance with relevant exposure limits.

The primary sources of air pollutant emissions including drilling, blasting, haulage, crushing, power generation and transportation. Associated air emissions include particulate matter and thermal combustion gases.

In recent years, Sukari Gold Mine has paid particular attention to underground air quality including upgrade of the underground ventilation system and investigating the opportunities of replacing the underground equipment with more environmentally friendly options. The introduction of new primary fans underground in 2024 increased ventilation capacity to 450m^3/s from 270m^3/s in 2021 (160m^3/s in 2019). The mine also sources low sulphur diesel for use by an underground mobile plant, subject to availability.

The principal dust suppression and control measures deployed at Sukari include road maintenance and watering, strict control on vehicle speed limits, waste dump/ROM pads management, enclosures and screens within the rock crushing circuit, environmentally controlled operator booths and personal protective equipment.

Stack emissions from thermal electricity generators are sampled monthly for SO_2, CO and NO_X. Mine workers are regularly fitted with personal dust monitors to measure their occupational exposure to dust and gases during their workday. Twice a year, the air quality monitoring programme is externally audited including independent sampling and analysis.

There are occasional exceedance of NO/NO_X levels in stack emissions, other parameters were typically in compliance with the permissible limits, established by Egyptian Environmental Law 4/1994.

17.3.2. Waste management

Mineral waste – rock

A detailed waste management plan is in place to ensure all hazardous and non-hazardous waste generated is managed in a manner that minimises environmental risks and reduces closure and reclamation liabilities.

The largest waste product by volume is waste rock generated from the extraction of ore. A total of 636Mt of waste rock will be mined, based on the LOM plan. The bulk of this material is stored onsite in designated waste rock dumps to the south, east and north of the pit, that are engineered for geotechnical stability. Quantities of waste rock are used for construction of TSF stages, haul roads maintenance and backfilling of underground voids.

Geochemical testwork (Knight Piésold, 2006) on waste rock and low-grade ore samples showed that the materials were non-acid forming with low sulphide contents and variable acid neutralising capacities. The acid neutralising capacity was predominantly from contained carbonate minerals. Owing to extremely low rainfall, the risk of mobilisation of environmentally significant elements is considered low. Further geochemical testwork was completed by Digby Wells in 2023 which verified these results.

Mineral wastes – tailings

Refer to Section 15.2 for more information on tailings.

Non-mineral wastes

Non-hazardous waste includes scrap metal, wood waste, tyres, cardboard, plastic, rubber, and food waste. Non-hazardous waste materials of beneficial value for reuse or recycling are segregated and stockpiled for periodic collection and transfer off-site by licensed third-party waste contractors appointed by EMRA. Food waste is donated as animal feed to local herders.

Non-mineral wastes that are classified as hazardous include sewerage effluent, used oils and lubricants, residual hazardous chemicals and their packaging, batteries and some medical waste. Various procedures are in place to ensure the secure management of these wastes including off-site transfer and treatment, incineration or permanent containment and disposal.

17.4. Security

Plant infrastructure is surrounded by 2.4m-high mesh fencing, and all persons entering controlled areas must enter through security gatehouses which are staffed 24hr/d.

17.5. Environmental management

17.5.1. Environmental monitoring, compliance and reporting

An Environmental Management System (EMS) is in place, which covers waste management, material, water and energy management, management of hazardous substances and chemicals and biodiversity management, among other factors. The operations are pursuing certification to ISO 14001 Environmental management system.

The EMS aims to monitor Project performance through methods such as visual inspection, auditing, data collection and inventories, measurements and as well as systematic observations. Environmental monitoring will encompass the following aspects:

- Water quality, tailing storage facility water quality, groundwater quality and sewage.
- Air quality, air emissions and dust.
- Work environment parameters including dust, noise, illumination.
- Waste management practices.
- Potential impacts on biodiversity.
- Potential impacts on cultural heritage.

The Sukari Gold Mine has a groundwater monitoring network with boreholes distributed upstream and downstream of the TSFs, around the pit, water ponds and other facilities. Groundwater quality is monitored for a defined set of parameters, including total dissolved solids, pH, CN^-, weak acid dissociable CN^-, sulphate, chloride, Cu, As.

Water quality results are summarised in a weekly monitoring report and are routinely reported on a monthly basis to the regulator. There is general compliance of the majority of monitored components concentration/value with permissible limits.

Stack emissions from thermal electricity generators are sampled monthly for SO_2, CO and NO_X. Mine workers have personal dust monitors to measure their occupational exposure to dust during their workday. Twice a year, the air quality monitoring programme is externally audited including independent sampling and analysis.

There are occasional exceedance of NO/NO_X levels in stack emissions, other parameters were typically in compliance with the permissible limits, established by Egyptian Environmental Law 4/1994.

17.5.2. Social initiatives and community development

Sukari Gold Mine allocates an annual budget for community investments and donations. The Marsa Alam Community Consultative Committee supports the governance of the community investment programme, ensuring that community needs are effectively identified and prioritised.

Key areas of investment priority in 2024 included:

- Upgrade of community infrastructure and social services, notably in areas of education, health and the welfare of vulnerable persons.
- Advancement and inclusion of women in economic activities.

Through partnership with a registered training organisation and the Ministry of Education, Sukari is continuing to advance the establishment of a technical school in Marsa Alam that will provide specialised vocational training in heavy equipment maintenance.

17.6. Health and safety considerations

17.6.1. Occupational health and safety management system

Sukari Gold Mine is certified to ISO 45001:2018 occupational health and safety management system. Sukari Gold Mine has a structured approach to the identification, control and review of occupational health and safety related risks and impacts.

Critical risk standards have been developed to mitigate and control risks that can cause grave damage to mine operation or result in worker fatality. These standards are in place for: fitness for work; light vehicle operations; mobile vehicle, plant, equipment and operation; hazardous energy; lifting; explosives and blasting; hazardous work; hazardous materials; geotechnical and ground control; confined space; working at heights; and management of TSFs.

Each operational department has in place a risk register that identifies material risks which is reviewed at leadership level on a quarterly basis. Leading and lagging indicators, and progress against safety targets are reviewed.

All workers are trained in hazard recognition, avoidance and reporting. All hazards are entered into a hazard register including the corrective and preventative actions.

A training matrix identifies the occupational health and safety training requirements relevant to the work activities of each role. It is mandatory for all employees and contractors to attend the safety training relevant to their role.

The Sukari Gold Mine tracks and reports on fatality, lost time injuries, total recordable injury, and all injuries frequency rates. Sukari submits a monthly report to the Egyptian regulator which details occupational health and safety performance against key indicators and monitoring results.

17.6.2. Emergency preparedness and response

A comprehensive site-specific crisis management plan was developed. The plan, which is regularly updated, includes site description and risk assessment, guidance for its activation and application in a step-by-step manner, and sections featuring contact details of key staff member, crisis communications information, duties, and responsibilities.

It is supported by a series of standard operating procedures, open pit and surface operations emergency management plan and underground mining emergency duty cards. The standard operating procedures outline the requirements for everyone who might be involved in a specific emergency. Duty cards provide detailed instructions to people involved in emergency response activities. The emergency and crisis management plan as well as its all supporting documentation are reviewed on a regular basis.

There is an emergency response team on site, which is trained and equipped to manage emergency situations, including potential incidents related to tailings management or hazardous chemical spills.

17.7. Mine closure and reclamation

At the end of 2024, land disturbed within the footprint of the Sukari operation totalled 28.6km^2. While Sukari is being operated to align with closure objectives, all components of the mine remained active in 2024, and no substantive reclamation activities had been undertaken.

To comply with reporting and financial assurance obligations, AngloGold Ashanti is required to disclose the cost liability, or asset retirement obligation, for the closure and decommissioning of the Sukari Gold Mine and rehabilitation of the affected area. The asset retirement obligation is routinely reviewed and updated on an annual basis. The estimated cost liability as of 31 December 2024, based on the then present state of the mining operation was US$50.6M.

The asset retirement obligation defines preliminary, site-specific objectives for closure based on the following general principles:

- Salvage plant, equipment and materials for local socio-economic benefit, including the retention or repurposing of select site facilities and infrastructure in accordance with agreed closure objectives.
- Remove project infrastructure and rehabilitated affected areas to sustain post-mining land use, in accordance with agreed closure objectives and success criteria.
- Stabilise physical, chemical, ecological and social conditions within a reasonable time scale to prevent any ongoing or long-term degradation or pollution.
- Final landform design shall be geotechnically stable and, to the extent possible, uniform with surrounding landscape to not impair visual amenity.
- Stormwater management systems shall be established to restore natural drainage or retained where these protect the geotechnical integrity of the final landform.
- The closed facility should not require any ongoing maintenance and expenditure other than normally required for similar land use.
- The closed facility should not pose a risk to the health and safety of humans, livestock and wildlife, by reducing hazards to levels equal to or below those naturally existing within the surrounding environment.
- Facilitate social transition and reduce the negative impacts of social change for the workforce and communities connected to the mine.
- Meet regulatory and permitting obligations and all other liability for closure of the mine.

The main activities of the planned closure process range from dismantling infrastructure, winning-hauling-dumping-spreading of waste rock, ripping compacted surfaces and grading the area to topographically blend with the surroundings. Since the Sukari Gold Mine site is located within an arid desert, no topsoil conservation or revegetation is required as part of mine closure.

Sukari is continuing to develop a comprehensive closure plan for the full LOM of the Sukari operation. This LOM closure plan will define detailed closure objectives and success criteria for each component of the mine, including surveyed quantities for accurate cost estimate.

17.8. Qualified Person's opinion on adequacy of current plans

Sukari Gold Mine currently holds valid permits to operate and ensures compliance with all requirements of the permits. The closure plans have been catered for in the mine plan. Future permits can be reasonably expected to be obtained. The social-economic, local, and general community issues are acceptably managed, and the Qualified Person considers these plans to be adequate.

17.9. Commitments to ensure local procurement and hiring

At Sukari, AngloGold Ashanti is committed to prioritising the employment of local, regional, and national candidates in that order. The Company has set a target of achieving a national employment rate of over 90% across the operation, in alignment with the Egyptian Ministry of Manpower’s directive that expatriates should not exceed 10% of the total workforce. Additionally, AngloGold Ashanti aims to progressively increase the proportion of leadership positions held by national employees at Sukari.

Under the Sukari concession agreement, Sukari Gold Mines implements stringent procedures to maximise local procurement opportunities. International sourcing is only considered when local suppliers are unable to meet quality and performance standards or if the international price is at least 10% lower than that offered by local suppliers.

As per the exploration agreement, AngloGold Ashanti prioritises local contractors, provided their performance meets international standards and their service costs do not exceed those of other contractors by more than 10%.

Exploration also favours locally manufactured goods, provided their quality and delivery timelines are comparable to those available internationally.

Additionally, AngloGold Ashanti is committed to hiring skilled and semi-skilled Egyptian candidates, particularly those residing in the Governorate where the project is located. To support workforce development, AngloGold Ashanti will implement training programmes designed to enhance employee skills and practical experience.

18. Capital and operating cost estimates

Capital and operating expenditures were estimated based on the 10 year (2025-2034) LOM, mining and processing schedule. Costs were estimated based on the LOM mining schedule and are within an accuracy of ±10%. These are updated on an annual basis.

The open pit and underground capital costs have been calculated by the site maintenance team using current equipment hours, maintenance plans and life of asset planning to maximise the life of the equipment. Capital for TSF lifts is based on the current LOM design capacity.

Open pit operating costs were estimated by applying existing and budgeted fixed costs and unit rates to the: estimated equipment hours; volumes drilled, blasted and mined; required grade control for ore mined and areas for geotechnical control. Underground mining costs are based on an average of the last 21 months actual costs.

A gold price of US$1,450/oz and diesel price of US$0.75/L were used.

18.1. Capital costs

Total capital expenditure for the 2024 LOM, Mineral Reserve-only case, was estimated to total US$383M, with US$346M of the total estimated as sustaining capital costs. A summary of the sustaining and non-sustaining capital cost estimates for the areas for 2024 LOM Mineral Reserve-only case is presented in Table 21.1.

Table 18.1. Capital budget in financial model.

Sustaining capital	LOM (2025-2034) (US$M)
Open pit fleet rebuilds	191
Open pit fleet replacements	75
Underground fleet replacements	31
Underground fleet rebuilds	17
Tailings dam lifts	100
Total	**414**

Non-sustaining capital	LOM (2025-2034) (US$M)
Grid connection	110
Other	3
Total	**113**

18.2. Operating costs

The key operating costs are categorised into four main components: open pit mining (Table 18.2), underground mining (Table 18.3); processing (Table 18.4) and general and administrative (Table 18.5). These costs are based on the LOM plan (Mineral Reserve only).

Table 18.2. Key operational costs for open pit mining.

Open pit mining costs	LOM (2025-2034) (US$M)
Mining overheads	99
Open pit drilling	222
Open pit blasting	247
Open pit loading	109
Open pit hauling	482
Pit ancillary works	60
Geology and geotechnical	86
Total open pit mining costs	**1,305**

Table 18.3. Key operational costs for underground mining.

Underground mining costs	LOM (2025-2034) (US$M)
Underground development	191
Underground stoping	261
Underground load and haul	71
Underground power	32
Total underground mining costs	**555**

Table 18.4. Key operational costs for processing.

Processing costs	LOM (2024-2034) (US$M)
Administration	62
Mobile equipment	27
Processing	314
Reagents	623

Processing costs	LOM (2024-2034) (US$M)
Gold room	23
Support and services	35
Power and maintenance	189
Rehandle costs	35
Dump leach	17
Total processing costs	**1,325**

Table 18.5. Key operational costs for administration costs.

General and administration costs	LOM (2025-2034) (US$M)
Administration – site	29
Supply	123
Information technology	50
Human resources	34
Mine site messing and accommodation	142
Heath, safety and environment	30
Security department	22
Administration - Alexandria	22
Total general and administration costs	**442**

The open pit mining cost model estimates use budget costs; equipment unit costs; equipment hours; equipment burn rates; and drill and blast contract rates applied to material quantities.

The estimated average LOM mining operating cost is US$1.81/t mined. The annual unit cost of mining per tonne increases over the LOM from US$1.39/t mined to US$2.71/t mined reflecting additional haulage costs for mining at depth.

Processing costs are estimated using budget costs for the CIL and dump leach processes. ROM rehandle costs reflect that 70% of mill tonnes are being rehandled and 30% direct tip. A reduction in power costs is reflects the plan to develop a grid connection in 2026.

18.3. Risk assessment

Specific risks associated with the specific engineering estimation methods used to arrive at the estimates include the following:

18.3.1. Carbon tax

The introduction of carbon pricing on Sukari's Scope 1 and 2 greenhouse gas emissions in Egypt could have a material impact on operating costs over medium and long-term time horizons (with the effect of reducing Mineral Resource and Reserve estimates). However, Egypt does not currently have a carbon mechanism in place and there is no indication of when one may be implemented. Consequently, carbon pricing is not expected to have a material impact on the carrying values of Sukari in the short term and not until such mechanisms are introduced.

Through the 2030 Decarbonisation Roadmap, Sukari mitigates the potential financial impact of carbon pricing.

18.3.2. Voids impact

The Amun east contact zone contains underground voids totalling approximately 1Mm³, which are and will be intersected by the life-of-mine pit shell. These voids have the potential to propagate along major structures, potentially impacting the overall stability and progression of mining activities. Consequently, this may lead to the deferral of stage five ore extraction into stage six, impacting the planned ore extraction schedule.

18.3.3. Productivity targets

The LOM uses productivity targets of circa 2,750tph from the main digging units. This is an increase with historical rates, but consistent rates of >3,000tph have been achieved with blasting quality and good planning practices. Areas of slower digging, such as through void areas, have been derated in the schedule to 2,000tph.

18.3.4. Fleet replacement plan

Sukari has an aging fleet, and the risk associated with achieving required availabilities and utilisation increases. This is being mitigated with scheduled maintenance a fleet replacement and management strategy which begins with the planned replacement of two open pit shovels in 2026.

18.3.5. Operational risks

- Mine interaction between working stages (stage five and six). This risk is mitigated with the reduction of equipment in stage five, which is reduced to one fleet for the remainder of its development. Interaction between any of the stages is managed through the mine planning and day to day operational management.
- Open pit-underground interaction continues to play a major part in the development of the open pit, in particular the voids both inside and outside the LOM pit footprint. This is managed through probe drilling and strict management practices. Dig rates have also been derated in line with the slower mining through these areas.
- Blasting close to underground main decline. Vibration monitoring continues to be done from the interaction with stage six. This includes reviewing blasting practices to identify any improvement opportunities by the drill and blast team and site geotechnical team and to reduce potential risk to the decline. This will continue to be monitored as stage six develops on the west wall.

19. Economic analysis

19.1. Key assumptions, parameters and methods

Refer to Chapter 12 for the key assumptions, parameters and methods used to demonstrate economic viability.

The following are material assumptions used for the Sukari 2024 Mineral Reserve business plan:

- Power rate: US$0.056/kwh.
- Diesel cost: US$0.75/l.
- Gold: US$1,450/oz as determined by the registrant (refer to Section 25).

Sukari Gold Mine is exempt from certain taxes and duties under the concession terms. The tax exemption on all income generated in the Arab Republic of Egypt is renewed every 15 years, with the most recent renewal submission at the end of 2024.

19.2. Results of economic analysis

Mineral Reserve declaration is supported by a positive cashflow (Table 19.1). The attributable interest for Sukari is 50 percent.

Table 19.1. Sukari cash flow analysis (Mineral Reserve material only) – 100% basis.

Item	Unit	Total LOM	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Production												
Gold	oz ('000)	4,246	446	435	480	556	531	528	341	421	358	150
Revenue												
Gross revenue	**US$M**	**6,156**	**646**	**631**	**696**	**806**	**770**	**766**	**495**	**611**	**519**	**217**
Royalties	US$M	185	19.4	18.9	20.9	24.2	23.1	23.0	14.8	18.3	15.6	6.5
Operating costs												
Mining costs	US$M	1,860	247	247	267	266	262	236	168	100	67	0
Processing costs	US$M	1,325	182	126	128	128	129	129	129	129	128	116
General and administrative costs	US$M	442	49	49	49	49	49	49	49	37	37	25
Other operating costs[1]	US$M	9	1.0	1.0	1.1	1.2	1.2	1.2	0.8	0.9	0.8	0.3
Total operating costs	**US$M**	**3,636**	**479**	**423**	**445**	**444**	**442**	**416**	**347**	**266**	**233**	**141**
Sustaining capital	US$M	347	58	74	57	56	54	18	15	13	2	0
Non-GAAP metrics and cash flow												
Total all-in sustaining costs	US$M	3 983	537	497	502	500	496	434	362	279	235	141
Total all-in sustaining costs	**US$/oz[2]**	**938**	**1 206**	**1 142**	**1 046**	**900**	**934**	**822**	**1 061**	**662**	**655**	**945**
Other capital (non-sustaining)	US$M	37	31	6	0	0	0	0	0	0	0	0
Total all-in costs	US$M	4 020	568	503	502	500	496	434	362	279	235	141
Total all-in costs	**US$/oz[2]**	**947**	**1,274**	**1,156**	**1,046**	**900**	**934**	**822**	**1,061**	**662**	**655**	**945**
Closure costs	US$M	17	2	2	2	2	2	2	2	2	2	2
Tax	US$M	0	0	0	0	0	0	0	0	0	0	0
Free cash flow	**US$M**	**1 935**	**57.2**	**107.4**	**171.6**	**279.6**	**249.2**	**307.2**	**116.1**	**312.2**	**267.4**	**67.3**

Key metrics		
NPV_0	US$M	1 935
NPV_5	US$M	1 498
NPV_{10}	US$M	1 189
NPV_{15}	US$M	964
Cash flow margin	%	53%

Note: [1] Includes refining charges, shipping and transport of ounces; [2] ounces of gold; LOM: life of mine; GAAP: generally accepted accounting principles; NPV: net present value.

19.3. Sensitivity analysis

A sensitivity analysis on NPV_0 model for key value drivers (gold price, capital cost, operating cost, and processed grade) was completed on the Mineral Reserve financial model. A 20% change in either gold price or processed grade resulted in the NPV_0 changes of 62%, with a 20% change in operating and capital costs resulted in 38% and 4% changes to the NPV_0, respectively.

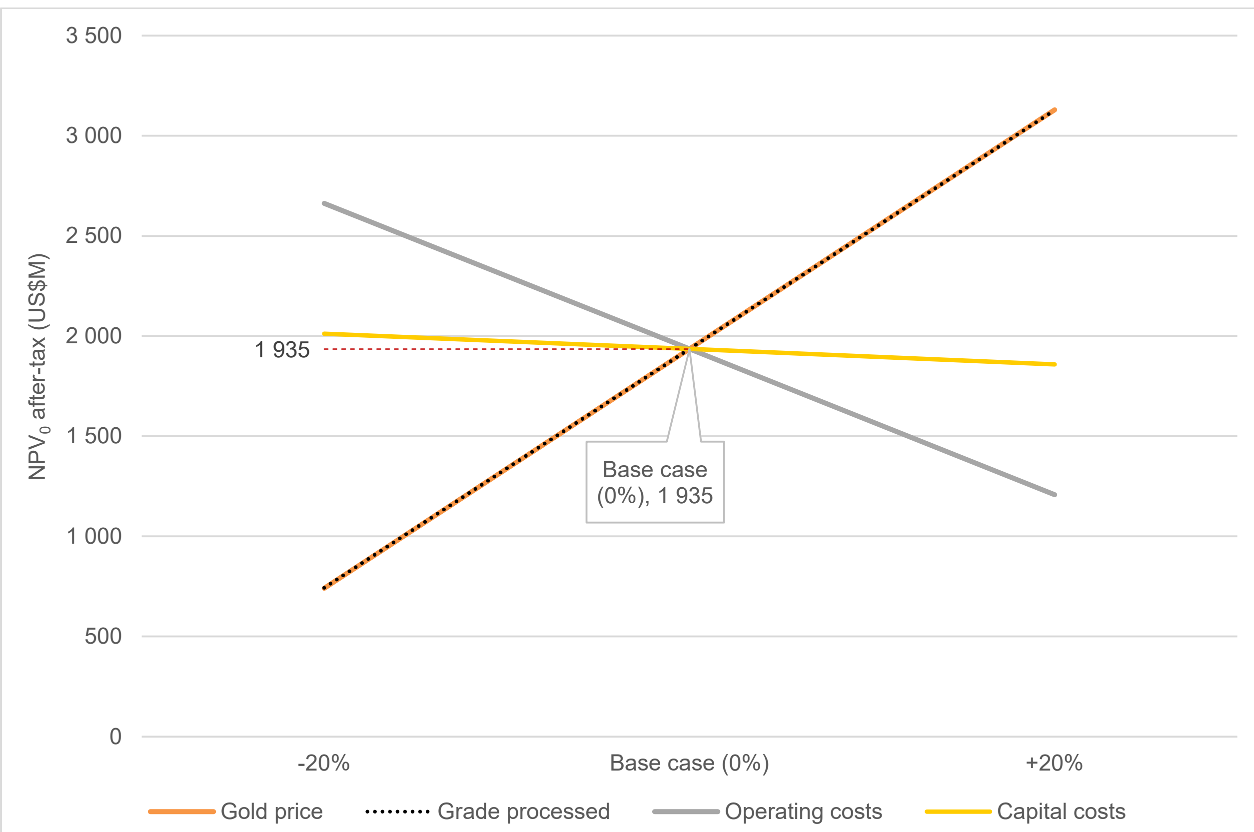
As shown in Table 19.2 and Figure 19.1, the Mineral Reserve is most sensitive to gold price and processed grade changes. Capital and operating costs have less impact compared to price and feed grade.

Table 19.2. Sukari Mineral Reserve (100% basis) sensitivity analysis (±20%) for key value drivers (numbers as after-tax NPV_0, in US$M).

Parameter [1]	Unit	-20%	Base case	+20%	% Change NPV_0	
					-20%	+20%
Gold price	US$/oz	741	1 935	3 130	-62%	62%
Grade processed	g/t	743	1 935	3 128	-62%	62%
Operating costs	US$M	2 662	1 935	1 208	38%	-38%
Capital costs	US$M	2 012	1 935	1 859	4%	-4%

Note: [1] Sensitivities estimated based on given current mine plan for the base case; NPV: net present value.

Figure 19.1. Sukari Mineral Reserve (100% basis) sensitivity analysis (±20%) for key value drivers (numbers as after-tax NPV_0, in US$M).



20. Adjacent properties

This section is not relevant to this Report.

21. Other relevant data and information

21.1. Additional data and information

This section is not relevant to this Report.

21.2. Certificate of Qualified Person(s)

21.2.1. Craig Barker certificate of competency

As the author of the report entitled Sukari, A Life of Mine Summary Report, I hereby state:

1. My name is Craig Barker. I am the Qualified Person for the Mineral Resource.
2. My job title at the time of compiling the Technical Report Summary is Group Mineral Resource Manager.
3. I am a Fellow of the Australasian Institute of Geoscientists with registration number 3141. I have a BSc (Geology) degree and a Post Graduate Diploma in Geology.
4. I have 29 years of relevant experience.
5. I am a 'Qualified Person' as defined in Regulation S-K 1300.
6. I am not aware of any material fact or material change with respect to the subject matter of the report that is not reflected in the report, the omission of which would make the report misleading.
7. I declare that this report appropriately reflects my view.
8. I am not independent of AngloGold Ashanti plc.
9. I have read and understood Regulation S-K 1300 for Modernisation of Property Disclosures for Mining Registrants. I am clearly satisfied that I can face my peers and demonstrate competence for the deposit.
10. I am an employee in respect of the registrant AngloGold Ashanti plc for Sukari Gold Mine for the 2024 Final Mineral Resource.

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

21.2.2. Gavin Harris certificate of competency

As the author of the report entitled Sukari, A Life of Mine Summary Report, I hereby state:

1. My name is Gavin Harris. I am the Qualified Person for the underground Mineral Reserve.
2. My job title is General Manager (for Sukari Gold Mine).
3. I am a Chartered Engineer Member of the Institute of Materials, Minerals and Mining, Qualified for Minerals Reporting (CEng MIMMM QMR) with registration number 0460702. I have a BEng Hons (Mining Engineering) degree.
4. I have 20+ years of relevant experience.
5. I am a 'Qualified Person' as defined in Regulation S-K 1300.
6. I am not aware of any material fact or material change with respect to the subject matter of the report that is not reflected in the report, the omission of which would make the report misleading.
7. I declare that this report appropriately reflects my view.
8. I am not independent of AngloGold Ashanti plc.
9. I have read and understood Regulation S-K 1300 for Modernisation of Property Disclosures for Mining Registrants. I am clearly satisfied that I can face my peers and demonstrate competence for the deposit.
10. I am an employee in respect of the registrant AngloGold Ashanti plc for Sukari Gold Mine for the 2024 Final underground Mineral Reserve.

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

21.2.3. Andrew Murray certificate of competency

As the author of the report entitled Sukari, A Life of Mine Summary Report, I hereby state:

1. My name is Andrew Murray. I am the Qualified Person for the surface Mineral Reserve.
2. My job title is Chief Open Pit Mining Engineer (for Sukari Gold Mine).
3. I am a Fellow of the Australasian Institute of Mining and Metallurgy with registration number 208304. I have a BSc (Minerals Estate Management) degree.
4. I have 36 years of relevant experience.
5. I am a 'Qualified Person' as defined in Regulation S-K 1300.
6. I am not aware of any material fact or material change with respect to the subject matter of the report that is not reflected in the report, the omission of which would make the report misleading.
7. I declare that this report appropriately reflects my view.
8. I am not independent of AngloGold Ashanti plc.
9. I have read and understood Regulation S-K 1300 for Modernisation of Property Disclosures for Mining Registrants. I am clearly satisfied that I can face my peers and demonstrate competence for the deposit.
10. I am an employee in respect of the registrant AngloGold Ashanti plc for Sukari Gold Mine for the 2024 Final surface Mineral Reserve.

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

22. Interpretation and conclusions

The Sukari Gold Mine is well-placed to continue Mineral Resource extraction with a focus on efficiency and sustainability. The outlined risks and opportunities highlight areas for continued attention and improvement, which will help balance operational demands with the need for long-term viability and community alignment.

An economic analysis was performed in support of the estimation of the Mineral Reserve; this indicated a positive cash flow using the assumptions detailed in this Report.

23. Recommendations

AngloGold Ashanti runs a comprehensive business planning process that is framed by the Company's Strategic Options process. This sets the mine budget requirements aligned to both the larger group and the necessities of the operation. The decisions that result from this process are ultimately approved by AngloGold Ashanti Executive Leadership, Business Unit Level management, and mine Senior management. While the Qualified Person is an intimate part of this process, they do not make recommendations for the operation without it being part of the described framework.

The following recommendations can be made to ensure continuous improvement:

23.1. Exploration

Continued exploration at Sukari is paramount to extend the LOM and increase optionality. This includes testing strike and depth extensions to the underground mine (e.g. Horus South and North; Ptah and Cleopatra), alongside development of potential satellite deposits including Little Sukari which is part of the EDX portfolio of targets to define a maiden Mineral Resource and Mineral Reserve for inclusion into the LOM plan.

23.2. Drilling, sampling and analysis

The fractured nature of the Sukari host rocks makes it challenging to collect oriented drill core. To obtain reliable oriented planar structural data during exploration diamond drilling, the use of televiewers or other downhole tools should be considered.

The onsite laboratory is currently managed and operated by Sukari employees. To enhance compliance, it should be independently managed and operated by an internationally reputable laboratory services company.

23.3. Mineral Resource estimation

Moving both the open pit and underground models to recoverable local estimates (i.e., local multiple indicator kriging and/or local uniform conditioning). Testwork was conducted in 2024 on the open pit Mineral Resource estimate, with the implementation of local multiple indicator kriging planned for 2025.

Ongoing initiatives to improve model reconciliation include on-site model ownership, alignment of Mineral Resource and grade control model domain architecture, the introduction of underground RC drilling, and the expansion of the grade control inventory to cover one year ahead of underground and open pit production. Further improvements to underground Mineral Resource model reconciliation could involve calibrating top-caps and high-yield limits based on domain grade-tonnage curve comparisons with the grade control model. Additionally, underground reconciliation results would provide a more accurate representation of model performance if calculated over a common volume encompassing both the LOM stope and design stope extents.

23.4. Recovery methods

To enhance Sukari's processing efficiency and gold recovery, ongoing optimisation of flotation and CIL circuits is recommended. Further testing of alternative collector reagents and refining reagent dosages could improve the recovery of gold-enriched pyrite concentrates. Automation and artificial intelligence-driven process control could also be explored to enhance milling efficiency and reagent consumption. Additionally, energy audits could identify cost-saving opportunities in regrinding and seawater desalination, potentially reducing operational expenses while improving overall process performance.

Water management remains a critical aspect of Sukari's operations, given its reliance on seawater and limited freshwater sources. Increasing the current 38% water reuse rate through enhanced recycling strategies could significantly reduce seawater extraction requirements. Expanding reverse osmosis capacity would also improve freshwater availability while minimising dependency on external water sources. To address high evaporation losses at the TSF, strategies such as improved water covers, or evaporation suppression technologies could be considered. Additionally, continuous monitoring of groundwater infiltration and regional hydrology is essential to ensure long-term water sustainability.

From an environmental and operational standpoint, Sukari should explore integrating more renewable energy sources, such as solar or hybrid solutions, to reduce reliance on fuel-based power generation. Maintaining strict compliance with environmental regulations, particularly in tailings and water management, will ensure sustainable operations. Regular assessments of tailings storage and disposal strategies should align with best practices to minimise environmental impact. By implementing these measures, Sukari can improve efficiency, reduce costs, and ensure the long-term sustainability of its mining operations.

To reduce further future operating costs, decommissioning the old/oxide CIL circuit would be beneficial; however, this depends on the successful implementation of the current project to install a gravity circuit. Testwork and simulation studies conducted to date clearly demonstrate the metallurgical benefits of installing a gravity circuit, given the high gravity gold content, which would enhance overall gold recovery.

23.5. Environmental and social management

- Continuous update of operational management systems and plans to ensure they are relevant and proportionate to risks, including alignment with ISO standards.
- Ongoing collaboration with contractors and suppliers to strengthen their conformance to good industry practice.
- Achievement of full conformance of the Sukari tailings management system to the requirements of the Global Industry Standard on Tailings Management.
- Ongoing reduction of greenhouse gases emissions through the execution of projects identified under the 2030 decarbonisation roadmap, including the investigation of additional opportunities.
- Routinely monitor the development of domestic and international policy on carbon pricing and the anticipated impact on the carrying values of Sukari.
- Develop a standalone mine closure plan aligned with the LOM plan.

24. References

24.1. References

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24.2. Glossary of mining terms

By-products: Any potentially economic or saleable products that emanate from the core process of producing gold or copper, including silver, molybdenum and sulphuric acid.

Carbon-in-leach (CIL): Gold is leached from a slurry of ore where cyanide and carbon granules are added to the same agitated tanks. The gold loaded carbon granules are separated from the slurry and treated in an elution circuit to remove the gold.

Carbon-in-pulp (CIP): Gold is leached conventionally from a slurry of ore with cyanide in agitated tanks. The leached slurry then passes into the CIP circuit where activated carbon granules are mixed with the slurry and gold is adsorbed on to the activated carbon. The gold-loaded carbon is separated from the slurry and treated in an elution circuit to remove the gold.

Comminution: Comminution is the crushing and grinding of ore to make gold available for physical or chemical separation (see also "Milling").

Contained gold or Contained copper: The total gold or copper content (tonnes multiplied by grade) of the material being described.

Cut-off grade: Cut-off grade is the grade (i.e., the concentration of metal or mineral in rock) that determines the destination of the material during mining. For purposes of establishing "prospects of economic extraction," the cut-off grade is the grade that distinguishes material deemed to have no economic value (it will not be mined in underground mining or if mined in surface mining, its destination will be the waste dump) from material deemed to have economic value (its ultimate destination during mining will be a processing facility). Other terms used in similar fashion as cut-off grade include net smelter return, pay limit, and break-even stripping ratio.

Depletion: The decrease in the quantity of ore in a deposit or property resulting from extraction or production.

Development: The process of accessing an orebody through shafts and/or tunneling in underground mining operations.

Development stage property: A development stage property is a property that has Mineral Reserve disclosed, but no material extraction.

Diamond drilling (DD): A form of core drilling which uses a rotary drill with a diamond drill bit attached in order to create precisely measured drill holes.

Diorite: An igneous rock formed by the solidification of molten material (magma).

Doré: Impure alloy of gold and silver produced at a mine to be refined to a higher purity.

Economically viable: Economically viable, when used in the context of Mineral Reserve determination, means that the Qualified Person has determined, using a discounted cash flow analysis, or has otherwise analytically determined, that extraction of the Mineral Reserve is economically viable under reasonable investment and market assumptions.

Electrowinning: A process of recovering gold from solution by means of electrolytic chemical reaction into a form that can be smelted easily into gold bars.

Elution: Recovery of the gold from the activated carbon into solution before zinc precipitation or electrowinning.

Exploration results: Exploration results are data and information generated by mineral exploration programs (i.e., programs consisting of sampling, drilling, trenching, analytical testing, assaying, and other similar activities undertaken to locate, investigate, define or delineate a mineral prospect or mineral deposit) that are not part of a disclosure of Mineral Resource or Mineral Reserve. A registrant must not use exploration results alone to derive estimates of tonnage, grade, and production rates, or in an assessment of economic viability.

Exploration stage property: An exploration stage property is a property that has no Mineral Reserve disclosed.

Exploration target: An exploration target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnage and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource.

Feasibility study: A feasibility study is a comprehensive technical and economic study of the selected development option for a mineral project, which includes detailed assessments of all applicable modifying factors, as defined by this section, together with any other relevant operational factors, and detailed financial analyses that are necessary to demonstrate, at the time of reporting, that extraction is economically viable. The results of the study may serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. A feasibility study is more comprehensive, and with a higher degree of accuracy, than a pre-feasibility study. It must contain mining, infrastructure, and process designs completed with sufficient rigour to serve as the basis for an investment decision or to support project financing. The confidence level in the results of a feasibility study is higher than the confidence level in the results of a pre-feasibility study. Terms such as full, final, comprehensive, bankable, or definitive feasibility study are equivalent to a feasibility study.

Flotation: Concentration of gold and gold-hosting minerals into a small mass by various techniques (e.g. collectors, frothers, agitation, air-flow) that collectively enhance the buoyancy of the target minerals, relative to unwanted gangue, for recovery into an over-flowing froth phase.

Gold Produced or Gold production: Refined gold in a saleable form derived from the mining process.

Grade: The quantity of ore contained within a unit weight of mineralised material generally expressed in grams per metric tonne (g/t) or ounce per short ton for gold bearing material or Percentage copper (%Cu) for copper bearing material.

Greenschist: A schistose metamorphic rock whose green colour is due to the presence of chlorite, epidote or actinolite.

Indicated Mineral Resource: An Indicated Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. The level of geological certainty associated with an Indicated Mineral Resource is sufficient to allow a Qualified Person to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Because an Indicated Mineral Resource has a lower level of confidence than the level of confidence of a Measured Mineral Resource, an Indicated Mineral Resource may only be converted to a Probable Mineral Reserve.

Inferred Mineral Resource: An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. The level of geological uncertainty associated with an Inferred Mineral Resource is too high to apply relevant technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability. Because an Inferred Mineral Resource has the lowest level of geological confidence of all Mineral Resource, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability, an Inferred Mineral Resource may not be considered when assessing the economic viability of a mining project, and may not be converted to a Mineral Reserve.

Initial assessment (also known as concept study, scoping study, conceptual study and preliminary economic assessment): An initial assessment is a preliminary technical and economic study of the economic potential of all or parts of mineralisation to support the disclosure of Mineral Resource. The initial assessment must be prepared by a Qualified Person and must include appropriate assessments of reasonably assumed technical and economic factors, together with any other relevant operational factors, that are necessary to demonstrate at the time of reporting that there are reasonable prospects for economic extraction. An initial assessment is required for disclosure of Mineral Resource but cannot be used as the basis for disclosure of Mineral Reserve.

Leaching: Dissolution of gold from crushed or milled material, including reclaimed slime, prior to adsorption on to activated carbon or direct zinc precipitation.

Life of mine (LOM): Number of years for which an operation is planning to mine and treat ore, and is taken from the current mine plan.

Long hole open stoping (LHOS): A form of sub-level open stoping which involves excavating ore in a series of horizontal or sub-horizontal levels, known as stopes. This method is used in both hard rock and soft rock mining operations and is ideal for mining steeply dipping ore bodies, where it is more challenging to drill parallel drifts and cross cuts.

Measured Mineral Resource: A Measured Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. The level of geological certainty associated with a Measured Mineral Resource is sufficient to allow a qualified person to apply modifying factors, as defined in this section, in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit. Because a Measured Mineral Resource has a higher level of confidence than the level of confidence of either an Indicated Mineral Resource or an Inferred Mineral Resource, a Measured Mineral Resource may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

Metallurgical plant: A processing plant constructed to treat ore and extract gold or copper in the case of Quebradona (and, in some cases, often valuable by-products).

Metallurgical recovery factor (MetRF): A measure of the efficiency in extracting gold, silver or copper from the ore.

Milling: A process of reducing broken ore to a size at which concentrating or leaching can be undertaken (see also “Comminution”).

Mine call factor (MCF): The ratio, expressed as a percentage, of the total quantity of recovered and unrecovered mineral product after processing with the amount estimated in the ore based on sampling. The ratio of contained gold delivered to the metallurgical plant divided by the estimated contained gold of ore mined based on sampling.

Mineable shape optimiser (MSO): A widely recognised industry-standard software tool used to generate the optimal size, shape and location of stopes for underground mine design.

Mineralisation: *The process or processes by which a mineral or minerals are introduced into rock, resulting in a potentially valuable deposit.*

Mineral deposit: A mineral deposit is a concentration (or occurrence) of material of possible economic interest in or on the earth's crust.

Mineral Reserve: A Mineral Reserve is an estimate of tonnage and grade or quality of Indicated and Measured Mineral Resource that, in the opinion of the Qualified Person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a Measured or Indicated Mineral Resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted. Mineral Reserve is subdivided in order of increasing confidence into Probable Mineral Reserve and Proven Mineral Reserve. Mineral Reserve is aggregated from the Proven and Probable Mineral Reserve categories. A Measured Mineral Resource may be converted to either a Proven Mineral Reserve or a Probable Mineral Reserve depending on uncertainties associated with modifying factors that are taken into account in the conversion from Mineral Resource to Mineral Reserve. The Mineral Reserve tonnages and grades are estimated and reported as delivered to plant (i.e., the point where material is delivered to the processing facility).

Mineral Resource: A Mineral Resource is a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A Mineral Resource is a reasonable estimate of mineralisation, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralisation drilled or sampled. Mineral Resource is subdivided and must be so reported, in order of increasing confidence in respect of geoscientific evidence, into Inferred, Indicated or Measured categories. The Mineral Resource tonnages and grades are reported *in situ* and stockpiled material is reported as broken material.

Mining recovery factor (MRF): This factor reflects a mining efficiency factor relating the recovery of material during the mining process and is the variance between the tonnes called for in the mining design and what the plant receives. It is expressed in both a grade and tonnage number.

Modifying Factors: Modifying factors are the factors that a Qualified Person must apply to Indicated and Measured Mineral Resource and then evaluate in order to establish the economic viability of Mineral Reserve. A Qualified Person must apply and evaluate modifying factors to convert Measured and Indicated Mineral Resource to Proven and Probable Mineral Reserve. These factors include but are not restricted to: Mining; processing; metallurgical; infrastructure; economic; marketing; legal; environmental compliance; plans, negotiations, or agreements with local individuals or groups; and governmental factors. The number, type and specific characteristics of the modifying factors applied will necessarily be a function of and depend upon the mineral, mine, property, or project.

Open pit mining: An excavation made at the surface of the ground for the purpose of extracting minerals, inorganic and organic, from their natural deposits, which excavation is open to the surface.

Ounce (oz) (troy): Used in imperial statistics. A kilogram is equal to 32.1507 ounces. A troy ounce is equal to 31.1035 grams.

Pay limit: The grade of a unit of ore at which the revenue from the recovered mineral content of the ore is equal to the sum of total cash costs, closure costs, Mineral Reserve development and stay-in-business capital. This grade is expressed as an in-situ value in grams per tonne or ounces per short ton (before dilution and mineral losses).

Precipitate: The solid product formed when a change in solution chemical conditions results in conversion of some pre-dissolved ions into solid state.

Preliminary feasibility study (pre-feasibility study): is a comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a Qualified Person has determined (in the case of underground mining) a preferred mining method, or (in the case of surface mining) a pit configuration, and in all cases has determined an effective method of mineral processing and an effective plan to sell the product. A pre-feasibility study includes a financial analysis based on reasonable assumptions, based on appropriate testing, about the modifying factors and the evaluation of any other relevant factors that are sufficient for a Qualified Person to determine if all or part of the Indicated and Measured Mineral Resource may be converted to Mineral Reserve at the time of reporting. The financial analysis must have the level of detail necessary to demonstrate, at the time of reporting, that extraction is economically viable. A pre-feasibility study is less comprehensive and results in a lower confidence level than a feasibility study. A pre-feasibility study is more comprehensive and results in a higher confidence level than an initial assessment.

Probable Mineral Reserve: A Probable Mineral Reserve is the economically mineable part of an Indicated and, in some cases, a Measured Mineral Resource.

Production stage property: A production stage property is a property with material extraction of Mineral Reserve.

Productivity: An expression of labour productivity based on the ratio of ounces of gold produced per month to the total number of employees in mining operations.

Proven Mineral Reserve: A Proven Mineral Reserve is the economically mineable part of a Measured Mineral Resource and can only result from conversion of a Measured Mineral Resource.

Qualified Person: A Qualified Person is an individual who is (1) A mineral industry professional with at least five years of relevant experience in the type of mineralisation and type of deposit under consideration and in the specific type of activity that person is undertaking on behalf of the registrant; and (2) An eligible member or licensee in good standing of a recognised professional organisation at the time the technical report is prepared. Section 229.1300 of Regulation S-K 1300 details further recognised professional organisations and also relevant experience.

Quartz: A hard mineral consisting of silica dioxide found widely in all rocks.

Recovered grade: The recovered mineral content per unit of ore treated.

Reef: A gold-bearing horizon, sometimes a conglomerate band, that may contain economic levels of gold. Reef can also be any significant or thick gold bearing quartz vein.

Refining: The final purification process of a metal or mineral.

Regulation S-K 1300: Subpart 1300 of Regulation S-K (17 CFR § 229.1300) which contains the SEC's mining property disclosure requirements for mining registrants.

Rehabilitation: The process of reclaiming land disturbed by mining to allow an appropriate post-mining use. Rehabilitation standards are defined by country-specific laws, including but not limited to the South African Department of Mineral Resources, the US Bureau of Land Management, the US Forest Service, and the relevant Australian mining authorities, and address among other issues, ground and surface water, topsoil, final slope gradient, waste handling and re-vegetation issues.

Resource modification factor (RMF): This factor is applied when there is an historic reconciliation discrepancy in the Mineral Resource model. For example, between the Mineral Resource model tonnage and the grade control model tonnage.
It is expressed in both a grade and tonnage number.

Reverse circulation (RC) drilling: A form of percussion drilling that uses compressed air to flush material cuttings out of the drill hole.

Run-of-mine (ROM): The unprocessed mined material which consists of the soil and rock of overburden, minerals, middlings, contamination and impurities.

Scats: Within the metallurgical plants, scats is a term used to describe ejected ore or other uncrushable / grinding media arising from the milling process. This, typically oversize material (ore), is ejected from the mill and stockpiled or re-crushed via a scats retreatment circuit. Retreatment of scats is aimed at fracturing the material such that it can be returned to the mills and processed as with the other ores to recover the gold locked up within this oversize material.

Seismic event: A sudden inelastic deformation within a given volume of rock that radiates detectable seismic energy.

Selective mining unit (SMU): This concept comes out of geostatistical estimation and relates to the smallest unit that can be mined selectively. This will vary with the style of the mineralisation, the mining method and equipment size. The concept is to select the smallest regular cell size that can be practically mined by appropriately sized mining equipment.

Shaft: A vertical or subvertical excavation used for accessing an underground mine; for transporting personnel, equipment and supplies; for hoisting ore and waste; for ventilation and utilities; and/or as an auxiliary exit.

Smelting: A pyro-metallurgical operation in which gold precipitate from electro-winning or zinc precipitation is further separated from impurities.

Stoping: The process of excavating ore underground.

Stripping ratio: The ratio of waste tonnes to ore tonnes mined calculated as total tonnes mined less ore tonnes mined divided by ore tonnes mined.

Tailings: Finely ground rock of low residual value from which valuable minerals have been extracted.

Tailings storage facility: Facility designed to store discarded tailings.

Tonnage: Quantity of material measured in tonnes.

Tonne: Used in metric statistics. Equal to 1,000 kilograms.

Tonnes treated: This is the volume of gold-bearing ore processed and treated at our on-site gold plants to extract the gold and silver. Tonnes treated are often used to calculate efficiency or intensity of use data such as GHG emissions and water used per tonne treated.

Underground mining: The extraction of rocks, minerals and industrial materials, other than coal, oil and gas, from the Earth by developing entries or shafts from the surface to the seam or deposit before recovering the product by underground extraction methods.

Uniform conditioning (UC): The uniform conditioning method estimates a tonnage and grade of mineralisation that can be recovered using the selective mining unit at the chosen cut-off value.

Waste: Material that contains insufficient mineralisation for consideration for future treatment and, as such, is discarded.

Yield: The amount of valuable mineral or metal recovered from each unit mass of ore expressed as ounces per short ton or grams per metric tonne.

Zinc precipitation: Zinc precipitation is the chemical reaction using zinc dust that converts gold in solution to a solid form for smelting into unrefined gold bars.

24.3. Abbreviations and acronyms

°	Degree(s)
>	Greater than
≥	Greater than or equal to
<	Less than
≤	Less than or equal to
%	Percentage
µm	Micron(s)
3D	Three dimensional
ANCOLD	Australian National Committee on Large Dams
ATM	Automated teller machine
Au	Gold
B	Billion
BWi	Bond ball work index
C	Celsius
CEng MIMMM QMR	Chartered Engineer Member of the Institute of Materials, Minerals and Mining and Qualified for Minerals Reporting
CIM	Canadian Institute of Mining and Metallurgy
CO	Carbon monoxide
CORG	Organic carbon
CRM	Certified reference material
csv	Comma-separated values
C_{TOT}	Total carbon
CV	Coefficient of variation
DD	Diamond drilling
DSM	Dutch State Mines
DWi	Drop weight index
EDX	Eastern Desert Exploration
EGL	Effective grinding length
EGP	Egyptian Pound
EMRA	Egyptian Mineral Resource Authority
EMS	Environmental Management System
FA	Fire assay
FAIG	Fellow of the Australian Institute of Geoscientists
FAusIMM	Fellow of the Australasian Institute of Mining and Metallurgy
Fe	Iron
FW	Footwall
g	Gram(s)
g/cm^3	Gram(s) per cubic centimetre
g/t	Gram(s) per tonne
GAAP	Generally accepted accounting principles
GD	Granodiorite
GDP	Gross domestic product

GPS	Global positioning system
HARD	Half absolute relative difference
HCl	Hydrochloric Acid
HDPE	High-density polyethylene
HNO_3	Nitric acid
hr/d	Hours per day
HW	Hanging wall
ICP	Inductively coupled plasma
ICP-AES	Inductively coupled plasma-atomic emission spectrometry
IRA	Inter-ramp angles
kg	Kilogram(s)
km	Kilometre(s)
km^2	Square kilometre(s)
koz	Kilo (thousand) ounces
kPa	Kilopascal
kW	Kilowatt
kWh/t	Kilowatt hour(s) per tonne
L/d	Litre(s) per day
L/s	Litre(s) per second
LMBA	London Bullion Market Association
m	Metre(s)
M	Million
m^3	Cubic metre(s)
m^3/hour	Cubic metre(s) per hour
m^3/s	Cubic metre(s) per second
Ma	Million annum
ME	Multi element
ML	Million litre(s)
mm	Millimetre(s)
MMEA	Model Mining Exploitation Agreement
MPa	Megapascal(s)
mRL	Metres relative
MSO	Mine stope optimiser
Mtpa	Million tonne(s) per annum
MW	Megawatt(s)
MWAC	Megawatt(s) alternating current
MWDC	Megawatt(s) direct current
NaCN	Sodium cyanide
NOx	Nitric oxide
NSR	Net smelter return
ODBC	Open database connectivity
OREAS	ORE Research and Exploration Pty Ltd
OSA	Overall slope angles
Pharoah Gold	Pharoah Gold Mines NL
ppb	Parts per billion
ppm	Parts per million
pXRF	Portable x-ray fluorescence
QA/QC	Quality assurance and quality control
QKNA	Quantitative kriging neighbourhood analysis

RC	Reverse circulation
ROM	Run-of-mine
SAG	Semi-autogenous grinding
SMU	Selective mining unit
SO2	Sulphur dioxide
SQL	Structured query language
S_{SULPH}	Sulphide
S_{TOT}	Total sulphur
tCO_2	Total carbon dioxide
tph	Tonnes per hour
TSF	Tailings storage facility
US$	US dollar(s)
US$/L	US dollar(s) per litre
US$/oz	US dollar(s) per ounce
US$/t	US dollar(s) per tonne
USSR	Union of Soviet Socialist Republics
UTM	Universal transverse mercator

25. Reliance on information provided by the registrant

AngloGold Ashanti management determined the gold prices used for estimating Mineral Resources and Mineral Reserves. These prices are in US dollars and were calculated using the historical US dollar gold price.

The determination of the Mineral Resource and Mineral Reserve prices are not based on a fixed average, but rather an informed decision made by looking at the trends in gold price. The Mineral Reserve price forecast of US$1,450/oz Au provided was the base price used for mine planning. AngloGold Ashanti selects a conservative Mineral Reserve price relative to its peers to fit into a corporate strategy to include a margin in the mine planning process. AngloGold Ashanti uses a set of economic parameters to value its assets and business plans these economic parameters are set on a more regular basis and reflect the industry consensus for the next five years. These are generally higher than the Mineral Reserve price and enable more accurate short-term financial planning. Finally, AngloGold Ashanti uses a fixed price to evaluate its project and set its hurdle rate. This price and the hurdle rate are set by the Board and are changed when required if there have been significant changes in the gold price.

The Mineral Resource price forecast of US$2,000/oz reflects AngloGold Ashanti’s upside view of the gold price and at the same time ensures that the Mineral Resource estimate will meet the reasonable prospects for eventual economic extraction requirement. Typically, the price is set closer to spot than the Mineral Reserve price and is designed to highlight any Mineral Resource that is likely to be mined should the gold price move above its current range. A margin is maintained between the Mineral Resource and ruling spot price, and this implies that Mineral Resource is potentially economic at current prices but that it does not contribute sufficient margin to be in the current LOM plan.