PERSEUS MINING LIMITED
TECHNICAL REPORT

EDIKAN GOLD MINE - GHANA

Qualified Persons

Paul Thompson	FAusIMM	Perseus Mining Ltd
Gary Brabham	FAusIMM, MAIG	Perseus Mining Ltd
Peter Lock	FAusIMM	Mining Plus Pty Ltd

Effective Date: 31 December 2021

Issue Date: 6 April 2022

DATE AND SIGNATURE PAGE

The Qualified Persons for the purposes of this report:

Technical Report, Edikan Gold Mine – Ghana
with effective date 31 December 2021

are

Name	Affiliation	Signature	Date
Paul Thompson	Perseus Mining Limited	(signed) *"Paul Thompson"*	6 April 2022
Gary Brabham	Perseus Mining Limited	(signed) *"Gary Brabham"*	6 April 2022
Peter Lock	Mining Plus Pty Ltd	(signed) *"Peter Lock"*	6 April 2022

CERTIFICATE of QUALIFIED PERSON

I, Paul William Thompson, FAusIMM, as an author of the report entitled "Technical Report, Edikan Gold Mine - Ghana" (the "Report") prepared for Perseus Mining Limited and with effective date 31 December 2021, do hereby state:

a) I am employed as Group General Manager - Business Growth by Perseus Mining Limited of Level 2, 437 Roberts Road, Subiaco, Western Australia.

b) I graduated with a Bachelor of Science from the University of Liverpool, UK and a Master of Science from the University of Leeds, UK.

c) I am a registered Fellow of the Australasian Institute of Mining and Metallurgy (#209231). I have worked as a geotechnical engineer, mine planning engineer, technical services manager, study manager and general manager in the mining industry for a total of 37 years since my graduation. My relevant experience for the purpose of the Report is review and report as a consultant for due diligence requirements; Study Manager on a number of feasibility studies in the mining industry in Africa, Australia, Europe and Asia; and operational and corporate roles to the level of General Manager for a number of mining companies in Africa and Australia.

d) I have read the definition of "qualified person" set out in National Instrument 43-101 (Standards of Disclosure for Mineral Projects) (the "Instrument") and certify that by reason of my education, affiliation with a professional association (as defined in the Instrument) and past relevant work experience, I fulfil the requirements to be a "Qualified Person" for the purposes of the Instrument.

e) I have visited Edikan Gold Mine site on numerous occasions, the first being in January 2015 and the latest being March 2022. The purpose of the visits were to provide support to operations and to carry out Feasibility Studies for the site in my role as General Manager for Technical Services and for Business Growth.

f) I am responsible for Sections 13 and 15 to 21 of the Report.

g) I am not independent of Perseus pursuant to Section 1.5 of the Instrument.

h) I have read the Instrument and the sections of the Report for which I am responsible and which have been prepared in compliance with the Instrument.

i) My involvement with the Edikan Gold Mine is limited to my work as an employee of Perseus Mining Limited, commencing January 2015.

j) At the effective date of the Report, to the best of my knowledge, information and belief, the sections of the report I am responsible for contain all scientific and technical information that is required to be disclosed to make the report not misleading.

Dated this 6th day of April 2022 at Perth, Western Australia.

(signed) "*Paul Thompson*"

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Paul Thompson, B.Sc., M. Sc., FAusIMM

CERTIFICATE of QUALIFIED PERSON

I, Gary Robert Brabham, MAIG, FAusIMM, as an author of the report entitled "NI 43-101 Technical Report: Edikan Gold Mine, Ghana" (the "Report") prepared for Perseus Mining Limited and with effective date 31 December 2021, do hereby state:

a) I am employed as Group Geologist – Business Development by Perseus Mining Limited of Level 2, 437 Roberts Road, Subiaco, Western Australia.

b) I am a practising Geologist, registered Member of the Australian Institute of Geoscientists (#1385) and a registered Fellow of the Australasian Institute of Mining and Metallurgy (#105665).

c) I graduated with a Bachelor of Applied Science in Applied Geology from the Royal Melbourne Institute of Technology in 1980, a Master of Science (Ore Deposit Geology & Evaluation) from The University of Western Australia in 1998, and a Post-Graduate Certificate in Geostatistics from Edith Cowan University in 2003. I have worked professionally as a geologist for a total of 42 years since my first graduation. My experience includes exploration and mine geology and resource estimation for a range of commodities and mineralisation styles. I have been involved in preparation and reporting of resource estimates in accordance with JORC guidelines for approximately 25 years, and NI43-101 guidelines for approximately 10 years.

d) I have read the definition of "qualified person" set out in National Instrument 43-101 (Standards of Disclosure for Mineral Projects) (the "Instrument") and certify that by reason of my education, affiliation with a professional association (as defined in the Instrument) and past relevant work experience, I fulfil the requirements to be a "Qualified Person" for the purposes of the Instrument.

e) I have visited Edikan Gold Mine site on nine occasions, the first being in April 2016 and the latest being March 2020. The purpose of the visits was to direct drilling and sampling practices, audit grade control and reconciliation procedures and outcomes, and to train and mentor the project geological team.

f) I am responsible for Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 23, 24, 25, 26 and 27 of the Report.

g) I am not independent of Perseus pursuant to Section 1.5 of the Instrument.

h) I have read the Instrument and the sections of the Report for which I am responsible and which have been prepared in compliance with the Instrument.

i) My involvement with the Edikan Gold Mine is limited to my work as an employee of Perseus Mining Limited, commencing April 2016.

j) At the effective date of the Report, to the best of my knowledge, information and belief, the sections of the report I am responsible for contain all scientific and technical information that is required to be disclosed to make the report not misleading.

Dated this 6th day of April 2022 at Perth, Western Australia.

(signed) "*Gary Brabham*"

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Gary Robert Brabham, BAppSc, MSc, PG Cert

CERTIFICATE of QUALIFIED PERSON

I, Peter Lock, Bachelor of Engineering, FAusIMM , as an author of the report entitled "Technical Report, Edikan Gold Mine – Ghana" (the "Report") prepared for Perseus Mining Limited and with effective date 31 December, 2021, do hereby state:

k) I am employed as an Executive Director by Mining Plus Pty Ltd of Bravo Building, 1 George Wiencke Dr, Perth Airport WA 6105.

l) I am a practising Mining Engineer and registered Fellow of the Australasian Institute of Mining and Metallurgy.

m) I graduated with Bachelor of Engineering (Mining) from Curtin University I have worked as a Mining Engineer for a total of 25 years since my graduation from university. I have been involved in preparation and reporting of resource estimates in accordance with JORC guidelines for 16 years and NI 43-101 guidelines for 1 year.

n) I have read the definition of "qualified person" set out in National Instrument 43-101 (Standards of Disclosure for Mineral Projects) (the "Instrument") and certify that by reason of my education, affiliation with a professional association (as defined in the Instrument) and past relevant work experience, I fulfil the requirements to be a "Qualified Person" for the purposes of the Instrument.

o) I have not visited Edikan Gold Mine site, however a site visit was carried out by a Member of Australasian Institute of Mining and Metallurgy and are the CP of the JORC 2012 reserves in March 2020.

p) I am responsible for Sections: 1.11 (reserves – Underground part only), 1.12 (Underground part only), 1.14 (Underground Mine related only), 1.17 (Underground Mine related only), 15.2 (Underground part only), 15.3.2, 15.4.2, 15.5.2, 15.6.2, 16.2, 18.9, 21.1 (Underground Mine related only), 21.2 (Underground Mine related only), 25.6, 26.1 of the Report.

q) I am independent of Perseus pursuant to Section 1.5 of the Instrument. I do not have nor do I expect to receive a direct or indirect interest in Perseus, and I do not beneficially own, directly or indirectly, any securities of Perseus or any associate or affiliate of such company.

r) I have read the Instrument and the sections of the Report for which I am responsible and which have been prepared in compliance with the Instrument.

s) My involvement with the Edikan Gold Mine is limited to the underground mine design and schedule since September 2019.

t) At the effective date of the Report, to the best of my knowledge, information and belief, the sections of the report I am responsible for contain all scientific and technical information that is required to be disclosed to make the report not misleading.

Dated this 6 day of April 2022 at Perth, Western Australia.

(signed) "*Peter Lock*"

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Peter Lock, Bachelor of Engineering, FAusIMM

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1 Summary

1.1 Introduction, Location and Ownership

This technical report is prepared for and by Perseus Mining Limited, a Producing Issuer.

The report complies with the requirements of the Canadian Securities Administrators' National Instrument 43-101, "Standards of Disclosure for Mineral Projects" (NI 43-101) for reports filed under Canadian jurisdiction.

This report was prepared for the purposes of updating the existing Central Ashanti Gold Project (now Edikan Gold Mine) Technical Report (Runge Limited, 2011) to align with Perseus Mining Limited's continuous disclosure of Exploration Results, Mineral Resources and Mineral Reserves in accordance with the 2012 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). The effective date of this technical report is 31 December, 2021.

The Edikan Gold Mine is located in Ghana, West Africa, approximately 40km to the SW of the regional town of Obuasi and 195km west-northwest of the capital Accra.

The Property tenements straddle the Central and Western Regions of Southern Ghana, on the western flank of the highly prospective Ashanti Belt. They are located between 1°50'00" west and 2°00'00'' west and 5°48'49'' north and 6°00'00" north.

The Edikan Gold Mine comprises a group of two Mining Licenses and four Prospecting Leases covering a total area of 338.63km^2. These include the Ayanfuri and Nanankaw MLs and the Nsuaem, Agyakusu AM, Agyakusu DML and Domenase PLs. The former three are held by Perseus Mining (Ghana) Limited (PMGL) directly whilst the latter three are held under various option agreements with the underlying permit holders. The two key MLs are valid to 30 December 2024 and are renewable.

1.2 History

The Ayanfuri district has a mining history dating back to the early 20th Century, with recorded production extending from 1898 to the late1930's. Cluff Resources PLC (Cluff) conducted open-pit, heap-leach mining between 1994 and 1996.

Ashanti Goldfields Corporation (AGC) acquired Cluff and continued mining activity from 1996 until early 2001 when operations ceased due to depletion of oxide material.

In April 2006 PMGL entered into an agreement to acquire the then named Ayanfuri Project licenses from AGC.

In May 2006, the then owners of PMGL granted an option to Kojina Resources Ltd (KRL) to acquire the shares of PMGL. KRL, a wholly owned subsidiary of Perseus, subsequently exercised the option in 2007 and acquired PMGL with final settlement taking place in February 2009. Central Ashanti Gold Limited was renamed Perseus Mining (Ghana) Limited in July 2011, with the current mining operations commencing in late 2011.

1.3 Geological Setting and Mineralisation

The Edikan Gold Mine is located in the Man Shield (also referred to as the Leo Shield) of the Precambrian West African Craton. In Ghana, the Man Shield consists of seven mostly northeast striking Paleoproterozoic greenstone belts of the Birimian Supergroup, emplaced during 2250 – 2170 Ma, separated by flyshoid basin sediments deposited during 2150 – 2100 Ma. The Man Shield was affected by the Eburnean Orogeny resulting from convergence of the West African craton and the São Luis Craton of South America, occurring during 2130 – 1980 Ma. The early stages of this collision event resulted in thrust tectonism and crustal thickening. Uplift developed foreland basins in several of the greenstone belts in Ghana, particularly in the Ashanti Belt, which were subsequently filled with molassic sediments of the Tarkwaian Group. Progressive tectonism evolved into a transpressional regime with thrusts developing into transcurrent faults and syntectonic plutonism plus metamorphism affecting both the Birimian and Tarkwaian stratigraphy.

Most of the gold in Ghana was emplaced relatively late in the Eburnean Orogeny principally in deformation zones in Birimian metasediments and metavolcanics (shear-hosted deposits), as paleoplacer deposits in the Tarkwaian, and to a lesser extent within pre- and syn-tectonic granitoids intruded into the greenstone belts and basin sediments along regional structures.

The Edikan property lies near the western flank of the Ashanti Greenstone Belt along the Obuasi-Akropong gold corridor, 6-16 km west of the Ashanti belt margin. It is underlain principally by Paleoproterozoic Birimian metasediments of the Kumasi Basin comprising flysch type metasediments composed of dacitic volcaniclastics, greywackes plus argillaceous sediments. These have been intensely folded, faulted and metamorphosed to upper greenschist facies. Bedding and cleavage follow the regional trend of the Akropong structure(s) striking ~050° with steep to sub vertical dips to the southeast and northwest.

Numerous small granitoids have intruded the sediments along several regional structures. These intrusives range in size from 200 m long by several tens of metres wide, up to more than 2 km long and 150 m wide. The intrusive shapes vary from nearly equant ovoid plugs to long, relatively narrow sills or dykes, with long axes parallel to the regional structures.

1.4 Deposit Types

The Edikan gold deposits are structurally controlled, orogenic style gold deposits.

Gold occurs both in classic Ashanti-style sediment hosted shear zones, and within granitic plugs and sills or dykes situated along several regional shear structures.

Most of the known gold Mineral Resources at the Edikan Gold Mine are hosted by the granite plugs and sills or dykes, which occur along the same structural corridors that contain the sediment shear hosted gold occurrences. Gold mineralisation within the granites occurs in two to three generations of quartz veins and stockworks with individual veins millimetres to centimetres in thickness and rarely more than a metre thick. Gold is associated with pyrite, lesser arsenopyrite, and traces of sphalerite, chalcopyrite, galena and rutile. Mineralised quartz veining is nearly pervasive throughout the granite host bodies, rarely extending into the adjacent sediments,

The sediment-hosted shear zone deposits consist either of pinch and swell quartz reefs in relatively tight shears or quartz +/- carbonate stockwork veining in broader shear zones. Coarser grained wacke to sandstone sediments are often preferentially mineralised due to their more competent and brittle nature. Pervasive iron carbonate and more localised sericite and silica alteration has affected the host sediments, and fine-grained pyrite with lesser arsenopyrite occurs as disseminations in the host sediments and to a lesser degree in the quartz veins. Most of the gold occurs in veins as disseminations and as free gold along sulphide grain boundaries.

1.5 Exploration

Exploration by PMGL has included a combination of surface geochemical sampling (soil sampling), limited shallow auger sampling, and both surface and airborne geophysics.

Soil sampling by PMGL and its predecessor companies prior to 2016 involved the collection of over 25,000 samples, assayed for gold by a variety of methods including Aqua Regia, 50gm Fire Assay and 1kg BLEG. A total of 5,828 of these samples were also analysed for a suite of elements by ICP. Most of the gold-in-soil anomalies identified by these programs have subsequently been followed up by drilling.

Post-2016, PMGL has conducted BLEG soil sampling programs on the Agyakusu AM and Agyakusu DML properties. Sampling on the northwestern arm of the Agyakusu AM permit revealed an exceptionally strong gold anomaly over the Nkosuo prospect which is currently the subject of an intensive drilling program. On the Agyakusu DML permit sampling revealed a number of anomalous trends extending southwest from Nkosuo and broadly coincident with mineralised granitic dykes that have been worked by artisanal miners. To date, only the main anomaly over the Nkosuo prospect has been followed up by drilling.

PMGL has also conducted various programs of ground and airborne geophysics, including extensive gradient array IP, AEM, magnetics and radiometrics. The data from these surveys has been used to map the bedrock geology in this poorly exposed terrane and formed the basis for several targeting exercises focused on the identification of poorly exposed or blind intrusives.

1.6 Drilling

Drill hole information available to assist exploration targeting and resource estimates includes 1,270 m of diamond core and 46,118 m of RC drilling in 850 holes drilled by AGC between 1996 and 2000. Hole collar locations are believed to be reliable but down-hole surveys were not routinely undertaken by AGC for either RC or diamond drilling. Holes have been assumed to be straight. AGC holes average 60 m in depth and with mining having progressed to considerably greater depths at AF Gap, Fetish and Esuajah North, very few AGC data inform the remaining portions of those resources. Assays from AGC RC drill holes at Esuajah South were excluded from data that inform the Mineral Resource estimate for that deposit.

No drilling was conducted at Edikan from 2001 until Perseus Mining Limited commenced drilling on August 12, 2006. In May 2007, Perseus undertook its first drilling outside the known deposits resulting in the early discovery of a granite hosted deposit referred to as AF Gap, which was the first new deposit to be discovered at Edikan for 10 years. Exploration activity steadily increased until late 2009 to convert the most prospective deposits into Mineral Resources.

Between mid-2010 and early 2012, Perseus continued to test deeper portions of the identified Mineral Resources. The deepest holes at Fetish and AF Gap exceeded 600 m. Drilling activity peaked in 2011 when more than 1,700 holes for some 210,000 m were completed to improve the conversion from Mineral Resources to Mineral Reserves.

From 2012 onwards, after commencement of mining activities at Edikan, the focus of exploration shifted towards satellite prospects that had previously received little attention (e.g., Mampong, Besem, Nkonya).

For the deposits that have current MRE's, excluding the heap leach pads, post-2012 drilling campaigns have included:

- 8 pre-collared core holes for 2,456 m in AF Gap deposit in 2013;
- 4 pre-collared core holes for 730 m in Bokitsi North lode (Fetish pit) in 2015;
- 9 RC holes for 1,122 m drilled from within the Fetish pit in 2021;
- 61 core holes for 5,886 m drilled at Esuajah South deposit in 2021, and

- the 133 holes drilled at Nkosuo between July and December 2021.

For Perseus drill programs, collars have been located in UTM WGS84 Zone 30N co-ordinates and transformed to local grids – one for the Abnabna - AF Gap - Fobinso area ("West Grid"), one for the "Eastern Pits" (Esuajah North, Esuajah South, Fetish, Bokitsi South, Chirawewa) and one for Nkosuo. Perseus drill hole collars have been surveyed by qualified surveyors using total station survey equipment and, more recently, DGPS.

Local elevations are adjusted by adding 1,000m to avoid negative values.

All holes are logged in entirety by qualified Perseus geologists, with logging manually entered into spreadsheets from which it is imported into a relational database. Prior to 2021, the data were maintained using Maxwell Geoservices Datashed platform; in 2020 the acQuire platform was adopted.

Holes are logged under six principal fields: weathering, lithology, alteration, structure, mineralogy and veining. The logging system is designed to be consistent between deposits.

RC samples are also logged qualitatively for recovery, moisture and contamination. Diamond core recoveries are measured per core run.

RC drill samples are routinely collected at one metre down-hole intervals and manually split through multi-tier riffle splitters. In holes drilled by Perseus between 2006 and 2012, sample splits were normally combined to form two metre composites. Holes drilled from 2013 onward were normally assayed in one metre intervals. In holes drilled from 2021 onward, the bulk recovered one metre samples are weighed to monitor sample recovery. RC holes are normally assayed in entirety.

Diamond core holes drilled by Perseus are normally drilled in HQ diameter to the top of fresh rock, and the core diameter then reduced to NQ. Diamond core is sawn in half, with half submitted for assay, normally in one metre intervals, and half retained in core trays for reference. Half-core representing more than 90% of core drilled at Edikan remains available in core storage at the mine site. Long intervals of obviously barren and unaltered metasediments in core holes are normally not sampled.

The Qualified Person is of the opinion that, after culling of certain data as described in Section 14.5.5 of the report, there are no drilling or sample recovery factors that materially impact the accuracy and reliability of the sample data used to inform estimates of Mineral Resources.

1.7 Sample Preparation, Analysis and Security

Sampling procedures and assay methods used by previous property owner AGC are undocumented, however it is known that many samples were analysed by cyanide leach.

With mining having progressed to considerably greater depths than AGC's drilling at AF Gap, Fetish and Esuajah North, very few AGC data inform the remaining portions of those resources. Assays from AGC RC drill holes at Esuajah South were excluded from data that inform the Mineral Resource estimate for that deposit. The Qualified Person considers that the lack of information and quality control data for AGC's drilling does not detract materially from the reliability of the MRE's reported herein.

Pre-2020 Perseus core samples were sent to Intertek Minerals Ltd laboratory in Tarkwa for preparation and analysis, while most RC samples were sent to ALS Minerals, Kumasi. A small number were assayed by SGS, Tarkwa.

Normal sample preparation for both core and RC samples is:

- dry at 110°C for 10-12 hours
- crush the entire sample to -2 mm
- split to approximately 1.5 kg
- pulverise, normally using LM2 disc pulverisers, to 90% passing 75 µm
- mat roll and dip approximately 200 g subsample into a kraft packet

RC and drill core samples are normally assayed only for gold.

RC samples from holes drilled up until 2008 were analysed using Bulk Leach Extractable Gold (BLEG) and 24- hour bottle roll followed by Atomic Absorption Spectrometry (AAS) analysis.

Post 2008 RC samples were analysed by 50 g fire assay (FA50).

Diamond core samples were analysed by a 50 g fire assay (FA50) and AAS analysis. A small number of diamond core samples (pre-2008) were analysed at SGS by the Leachwell™ method.

Over 90% of samples from within the areas with defined MRE's have been analysed by FA50 with a detection limit of 0.01 g/t Au.

Quality Control and Quality Assurance (QAQC) procedures, including insertion of certified reference materials (CRMs), blanks, field duplicates and umpire assaying, are a routine part of the sampling process for all drilling conducted by Perseus. Prior to mid-July 2008, CRMs were inserted at a ratio of 1 in 20 and blanks at 1 in 40. Since July 2008, CRMs and blanks have been inserted at a nominally 1 in 20 ratio. Field duplicates are nominally taken at 1 in 25. Regular field duplicates are only taken from RC drill samples. QAQC checks are carried in a timely manner during data import.

Review of the QAQC data associated with the sample data that inform the estimates of remaining MREs at Edikan suggest that the protocols have been implemented and adhered to, and that no significant quality issues have been left unaddressed.

The Qualified Person is of the opinion that the drill hole assay data are adequate and sufficiently reliable to be used to inform estimates of Mineral Resources at the deposits that are the subject of this report.

1.8 Data Verification

Routine data drill hole data validation procedures include:

- Checks that surveyed locations of drill holes collars are within tolerance of proposed locations and locations recorded on field logging sheets;
- Sense checks of down-hole surveys;
- Checks for missing sample intervals, overlapping sample intervals and duplicate sample numbers;
- Comparisons of gold assays to visually logged intervals of alteration and mineralisation;
- Targeted checks of laboratory assay reports against assays in the drill hole database;
- Visual comparisons, in cross-section and plan views, of gold grades and logged geology in neighbouring drill holes.

The Qualified Person has visited Edikan mine on nine occasions between April 2016 and February 2020. Verification of information informing the estimates of Mineral Resources has included:

- Spatial and temporal reconciliation between resource models, grade control sampling, mine claimed production and mill actual production over the entire period from mid-2016;
- Numerical comparisons of gold grades in nearest-neighbour resource and grade control drill samples;
- Comparison of laboratory assay reports with assays in the drill hole database and with drill cores and drill core photographs;
- Comparison of modelled granite boundaries and weathering horizons with mining exposures.

The Qualified Person is of the opinion that the drill hole data are adequate and sufficiently reliable to be used to inform estimates of Mineral Resources at the deposits that are the subject of this report.

1.9 Mineral Processing and Metallurgical Testing

Perseus Mining limited has conducted metallurgical testwork programs since 2009 to gain a good understanding of the expected performance characteristics of the ores to be treated at Edikan. The testwork has included: mineralogy (optical and scanning electron microscopy), JK drop weight, SAG mill comminution, unconfined compressive strength, bond abrasion, bond rod mill work index, bond ball mill work index, grind sensitivity, gravity/flotation/regrind/cyanidation tests.

The samples were selected to provide adequate representation of the ore types within each deposit, with sufficient sample density for effective forecasting purposes.

From the testwork the fresh / primary ore from the granite hosted ores bodies have the highest recovery due to a strong association of gold with sulphide particles (mainly pyrite and arsenopyrite) and high degree of liberation of gold particles at a moderately fine grind size which allows for high cyanidation leach extractions. Recovery on ores with partial or complete oxidation of sulphides is lower, as a result of reduced flotation performance.

Gold recovery of the shear zone hosted ores was lower than granite hosted ores due to a lesser association of gold with sulphide particles and the presence of carbonaceous material which had a preg-robbing effect. All shear zone hosted deposits have been mined to completion.

The Edikan Gold Mine has been in operation since 2011 and the metallurgical performance and cost structure is well understood. The overall LOM recovery forecast for the open cut and underground mine ores are 86.3% and 90% respectively and are based on testwork which is modified to reflect plant performance.

1.10 Mineral Resource Estimates

Mineral Resource estimates depleted to 30 June 2021 mining surfaces, where applicable, are listed below.

The open pit Mineral Resources are estimates of recoverable resources generated using Multiple Indicator Kriging with block support correction. The method has been demonstrated to provide reliable estimates of recoverable open pit resources in gold deposits of diverse geological styles. The Mineral Resources are constrained by pit shells generated using a gold price of $1,800/oz.

The Esuajah South underground resource was generated using Ordinary Kriging and a constraining wireframe representing the granite body that hosts mineralisation. Other than for the selection of a cut-off grade, the estimate does not consider mining constraints; estimation of ore reserves requires application of modifying factors.

The Heap Leach Mineral Resource estimate was generated using Ordinary Kriging. The estimate is stated at zero cut-off grade under the assumption that the material cannot be selectively mined.

Table 1-1: Edikan Gold Mine Measured and Indicated Mineral Resource estimates – 30 June 2021 [8,9,10]

Deposit	Deposit Type	Measured Resources			Indicated Resources			Measured + Indicated Resources		
		Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
AF Gap [1,2,3]	Open pit	9.7	0.99	310	21.6	0.90	628	31.3	0.93	938
Esuajah North [1,2,3,4]	Open pit	2.8	0.79	72	4.0	0.74	95	6.9	0.76	168
Fetish	Open pit	6.2	0.97	194	11.7	0.93	348	17.9	0.94	542
Sub Total		**19.8**	**0.95**	**577**	**37.3**	**0.89**	**1,071**	**56.1**	**0.91**	**1,648**
Esuajah South [6]	Underground	3.1	1.70	168	5.9	2.09	393	8.9	1.95	561
Heap Leach [2,7]	Stockpile	-	-	-	2.9	0.60	2.9	2.9	0.6	58
Stockpiles	Stockpile	2.9	0.63	59	-	-	2.9	2.9	0.63	59
TOTAL		**24.8**	**1.01**	**803**	**46.1**	**1.03**	**70.9**	**70.9**	**1.02**	**2.326**

Notes:

1. Based on March 2020 Mineral Resource model constrained to US$1,800/oz pit shell.
2. Depleted to 30 June 2021 mining surfaces.
3. 0.4g/t gold cut-off applied.
4. Based on June 2019 Mineral Resource model constrained to US$1,800/oz pit shell.
5. Based on January 2017 Mineral Resource model constrained to US$1,800 pit shell, includes Bokitsi North lode.
6. Based on November 2020 Mineral Resource model, 1g/t gold cut-off applied.
7. At zero cut-off grade.
8. All Mineral Resources are current as at 30 June 2021.
9. Measured and Indicated Mineral Resources are inclusive of Mineral Reserves.
10. Rounding of numbers to appropriate precisions may have resulted in apparent inconsistencies.

Table 1-2: Edikan Gold Mine Inferred Mineral Resource estimates – 30 June 2021 [7,8]

Deposit	Deposit Type	Inferred Resources		
		Tonnes (Mt)	Au (g/t)	Oz (koz)
AF Gap [1,2,3]	Open pit	0.2	0.9	7
Esuajah North [2,3,4]	Open pit	0.03	1.0	1
Fetish [2,3,5]	Open pit	0.6	0.9	18
Esuajah South [6,7]	Underground	4.8	1.8	270
TOTAL		**5.6**	**1.6**	**300**

Notes:

1. Based on March 2020 Mineral Resource model constrained to US$1,800/oz pit shell.
2. Depleted to 30 June 2021 mining surfaces.
3. 0.4g/t gold cut-off applied.
4. Based on June 2019 Mineral Resource model constrained to US$1,800/oz pit shell.
5. Based on January 2017 Mineral Resource model constrained to US$1,800 pit shell, includes Bokitsi North lode.
6. Based on November 2020 Mineral Resource model, 1g/t gold cut-off applied.
7. All Mineral Resources are current as at 30 June 2021.
8. Rounding of numbers to appropriate precisions may have resulted in apparent inconsistencies.

In the Qualified Person's opinion, the estimates of Measured and Indicated Mineral Resources are sufficiently reliable to support estimation of Mineral Reserves.

1.11 Mineral Reserve Estimates

Mineral Reserve estimates for Edikan comprise two existing open pits (Fetish and AF Gap) and one planned underground (Esuajah South). Mineral Reserves also include a historical existing heap leach and low-grade stockpiles. Fetish and AF Gap pits are currently in operation. Mineral Reserves for the planned Esuajah South (ESS) underground are supported by an updated Feasibility Study completed during January 2021. Edikan Mineral Reserves (open pit and underground) are planned to be mined concurrently, through the existing processing facility. No material expansion of operations is planned.

All Mineral Reserves are reported in accordance with the JORC (2012) Code and are reported by category, deposit and type, above variable cut-off grades. The classification categories of Proved and Probable Ore Reserves under the JORC (2012) Code are equivalent to Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Proven Mineral Reserves and Probable Mineral Reserves respectively.

For current Mineral Reserves, readers are referred to ASX release "Perseus Updates Mineral Resource and Ore Reserve Estimates" dated 24 August 2021 and the notes contained therein. Estimates of Mineral Reserves at AF Gap, Fetish, Stockpile and Heap Leach were supervised by Mr Paul Thompson. Mr Thompson is a Fellow of the Australasian Institute of Mining and Metallurgy and is an employee of Perseus Mining Limited. Mr Thompson has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the JORC (2012) Code and a Qualified Person(QP) as defined in NI43-101.

Mineral Reserves for the Esuajah South underground are supported by an updated Feasibility study completed in January 2021. The underground mining component of the Feasibility study was completed by Mining Plus Pty Ltd (Mining Plus). Mr Peter Lock (FAusIMM) of Mining Plus is the Qualified Person for the underground Mineral Reserves and has sufficient experience, that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC (2012) Code and a Qualified Person, as defined in NI 43-101. Mr Lock has no economic, financial or pecuniary interest in the company and is independent of the company.

Mineral Resources are reported inclusive of Mineral Reserves, (that is, Mineral Reserves are not additional to Mineral Resources). Mineral Reserves may be subdivided into Proven Mineral Reserves and Probable Mineral Reserves categories to reflect the confidence in the underlying

Mineral Resource data and modifying factors applied during mine planning. A Proven Mineral Reserve can only be derived from a Measured Mineral Resource while a Probable Mineral Reserve is typically derived from an Indicated Mineral Resource. Note that a Probable Mineral Reserve can also be made up of a Measured Mineral Resource should the Qualified Person have reason to downgrade the confidence of the estimation.

The Qualified Persons are of the opinion that Mineral Reserves were estimated using industry-accepted practices and conform to the 2014 CIM Definition Standards. Mineral Reserves are based on open pit and underground mining methods. The Mineral Reserves are acceptable to support mine planning. There are no other environmental, legal, title, taxation, socioeconomic, marketing, political or other relevant factors known to the Qualified Persons and not discussed in this report that would materially affect the estimation of Mineral Reserves.

The Mineral Reserves for the Edikan Gold Mine are listed in Table 1-3 and are based on the mining surfaces as of 30 June 2021.

Table 1-3: Edikan Gold Mine Proven and Probable Mineral Reserves – 30 June 2021[6]

Deposit	Deposit Type	Proven Reserves			Probable Reserves			Proven + Probable Reserves		
		Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
AF Gap [1,2,3]	Open pit	6.1	1.14	222	11.5	1.03	381	17.6	1.06	603
Fetish [1,2,3]	Open pit	3.1	1.14	113	5.1	1.11	183	8.2	1.12	296
Sub Total		**9.2**	**1.14**	**336**	**16.6**	**1.05**	**563**	**25.8**	**1.08**	**899**
Esuajah South [2,4]	Underground	1.9	1.37	85	2.8	2.40	217	4.8	1.98	302
Heap Leach [1,5]	Stockpile	-	-	-	2.9	0.62	58	2.9	0.62	58
ROM Stockpiles [5]	Stockpile	2.9	0.63	59	-	-	-	2.9	0.63	59
TOTAL		**14.1**	**1.06**	**480**	**22.3**	**1.17**	**837**	**36.4**	**1.13**	**1,318**

Notes:

1. Based on depletion to 30 June 2021 mining surfaces.
2. Based on Mineral Resource Estimates which were current at 30 June 2021.
3. Variable gold grade cut-off for each material type, ranging from 0.35 g/t to 0.70 g/t.
4. Inferred Mineral Resource is considered as waste.
5. Based on EOM June 2021 stockpile balance report.
6. Rounding of numbers to appropriate precisions may have resulted in apparent inconsistencies.

1.12 Mining Methods

Mineral Reserve estimates for Edikan include both open pit and underground Mineral Reserves. Edikan is an existing open pit operation, with a 10 year history of production. Open pit mining by conventional truck and excavator methods with a 180t and 100t class excavator fleet and 100t class haul truck fleet is a productive and cost-effective method of extracting near-surface Mineral Reserves. Open pit mining processes and costs are well understood at Edikan.

For planned underground Mineral Reserves, Feasibility level studies have been undertaken since 2016 (Mining Plus, 2016), culminating in the most recent Feasibility study update in January 2021. Feasibility studies for ESS underground mining are supported by appropriate studies (including Hydrology, Hydrogeology, and Geotechnical studies) to Feasibility level.

The most suitable mining method for the ESS deposit is determined to be sub-level mining underneath introduced rock fill (SURF). The SURF method forms the basis of underground Mineral Reserves for the following reasons:

- Orebody geometry – dimensions of up to 250 m × 100 m and dipping at around 70° are well suited to a transverse SURF layout.
- Mechanisation – mechanised mining is well understood and has been used in many locations worldwide, including Ghana.
- Production rate – SURF can deliver the required production rate at much lower costs than stoping methods.
- Surface influence – any surface subsidence or large open void could cause concerns in the vicinity of the Ayanfuri town. SURF will ensure the void on surface is backfilled as mining progresses and will minimise the potential for major surface subsidence.

1.13 Recovery Methods

The Edikan Gold Mine process plant has been in operation since 2011 and consists of the following unit processes:

- Primary crushing
- Single stage SAG milling and pebble crushing
- Gravity concentration/intensive cyanidation and electrowinning
- Flotation
- Concentrate thickening
- Concentrate re-grind and CIL cyanidation
- Split AARL elution
- Electrowinning and smelting.
- Bullion / doré shipment for sale

The unit operations and equipment selected are typical of the industry and the maintenance requirements and costs are well understood.

There is no planned change to the existing process flowsheet nor equipment list for the processing of any of the Mineral Reserves.

1.14 Project Infrastructure

The site has all required infrastructure to support the open cut mining and processing. This includes:

- Senior staff accommodation camp
- National grid connection

- Backup diesel fired power station
- Gas fired power station – contractor supplied due to be operational within the next quarter
- Processing facility
- Site administration buildings
- Warehousing facility and laydown yard
- Processing and maintenance offices, workshop and tool shed
- Assay laboratory
- Chophouse
- Helipad
- Tailings storage facilities
- Mine services area
- Various water storages
- Bores

The following infrastructure will be required for the Esuajah South underground mine:

- Overhead power supply
- Offices
- Changeroom
- Chop house
- Workshop and stores
- Diesel fuel storage
- Standby generator
- Water dams with desilting ponds
- Filtered potable water supply
- Internal roads and fencing

Infrastructure requirements for the ESS underground are supported by a Feasibility Study.

1.15 Market Studies and Contracts

Gold produced at Edikan has been (and is planned to continue to be) sold on the open market after refining.

Hedging and forward sales agreements are in place with Macquarie Bank and Nedbank.

Refining contracts are in place with MKS PAMP Group and the Perth Mint Refinery.

1.16 Environmental, Permitting, Social and Community Impact

All permits and licenses required to operate the Edikan Gold Mine are in place. Such licenses and permits are regularly renewed as required, and this process is well managed by the relevant departments on site at Edikan. Open pit Mineral Reserves can be recovered under this existing licensing regime. The licensing and permitting requirements for underground mining at Edikan are well understood and are not expected to impose any constraints with respect to the exploitation of underground Mineral Reserves.

1.17 Capital and Operating Costs

The capital costs for the remaining Mineral Reserves are estimated at $91.1 M and consist of:

- $37.5 M to develop the Esuajah South underground mine inclusive of the required infrastructure
- $51.0 M in site sustaining costs, including $7.4 M for TSF stage lifts and $33.4 M for all costs associated with site closure
- $2.6 M allowance for additional TSF stage lifts and closure costs associated with the Esuajah South underground mine

The average operating costs for the open cut mine material are estimated at:

- Mining = $12.39/t ore mined
- Processing = $8.94/t ore milled
- G&A = $2.60/t ore milled

The average operating costs for the Esuajah South underground mine are estimated to be:

- Mining = $43.6/t ore mined
- Processing = $9.75/t ore milled
- G&A = $3.38/t ore milled

Capital and operating costs are well supported for the existing operation at Edikan, and by Feasibility level studies for the ESS underground.

1.18 Economic Analysis

Perseus Mining Limited is a producing issuer as defined by Canadian Securities Administrators' National Instrument 43-101, "Standards of Disclosure for Mineral Projects" (NI 43-101). As a producing issuer, Perseus can exclude the information relating to economic analysis for technical reports on properties currently in production and where no material production expansion is planned. As discussed in Section 1.11, no material production expansion is planned for Edikan.

The Mineral Reserve declaration for Edikan is supported by a positive cash flow under the assumptions contained in the Technical Report.

2 Introduction and Terms of Reference

2.1 Terms of Reference

This technical report is prepared for and by Perseus Mining Limited.

The report complies with the requirements of the Canadian Securities Administrators' National Instrument 43-101, "Standards of Disclosure for Mineral Projects" (NI 43-101) for reports filed under Canadian jurisdiction, for the Effective Date of the Exploration Results, Mineral Resource and Mineral Reserve estimates.

This report was prepared to update the existing Central Ashanti Gold Project (now Edikan Gold Mine) Technical Report (Runge Limited, 2011) to align with Perseus Mining Limited's continuous disclosure of Exploration Results, Mineral Resources and Ore Reserves which is undertaken in accordance with the 2012 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code).

The classification categories of Measured, Indicated and Inferred under the JORC Code are equivalent to the CIM categories of the same names (CIM, 2014). Proved and Probable Ore Reserves under JORC are equivalent to Proven and Probable Mineral Reserve categories defined in CIM. For the avoidance of doubt, the term Mineral Reserves will be used for Ore Reserves and Mineral Reserves in this report.

The effective date of this technical report is 31 December 2021.

This report encompasses Exploration Results for the Nkosuo prospect, Mineral Resource Estimates (MRE) for AF Gap, Esuajah North, Fetish, Esuajah South, Heap Leach and Stockpiles and further studies including Mineral Reserves for AF Gap, Fetish, Esuajah South, Heap Leach and ROM Stockpiles.

2.2 Qualified Person Responsibilities and Site Visits

A summary of the Qualified Persons responsible for the information contained in this report is provided in Table 2-1. Perseus Mining Limited is a producing issuer according to the requirements of the Canadian Securities Administrators' National Instrument 43-101 and therefore an independence test for Qualified Persons is not required.

Table 2-1 Summary of Qualified Persons

	Report Section	Qualified Person	Company
1	Executive Summary	Gary Brabham	Perseus Mining Limited
2	Introduction	Gary Brabham	Perseus Mining Limited
3	Reliance on other experts	Gary Brabham	Perseus Mining Limited
4	Property Location and Description	Gary Brabham	Perseus Mining Limited
5	Accessibility, Climate, Local Resources, Infrastructure and Physiography etc	Gary Brabham	Perseus Mining Limited
6	History	Gary Brabham	Perseus Mining Limited
7	Geological Setting	Gary Brabham	Perseus Mining Limited

8	Deposit Types	Gary Brabham	Perseus Mining Limited
9	Exploration	Gary Brabham	Perseus Mining Limited
10	Drilling	Gary Brabham	Perseus Mining Limited
11	Sample Preparation, Analyses and Security	Gary Brabham	Perseus Mining Limited
12	Data Verification	Gary Brabham	Perseus Mining Limited
13	Mineral Processing and Metallurgical Testing	Paul Thompson	Perseus Mining Limited
14	Mineral Resource Estimates	Gary Brabham	Perseus Mining Limited
15	Mineral Reserve Estimates	Paul Thompson, Peter Lock	Perseus Mining Limited, Mining Plus Pty Ltd
16	Mining Methods	Paul Thompson, Peter Lock	Perseus Mining Limited, Mining Plus Pty Ltd
17	Recovery Methods	Paul Thompson	Perseus Mining Limited
18	Project Infrastructure	Paul Thompson	Perseus Mining Limited
19	Marketing Studies and Contracts	Paul Thompson	Perseus Mining Limited
20	Environmental, Permitting, Social and Community	Paul Thompson	Perseus Mining Limited
21	Capital and Operating Costs	Paul Thompson	Perseus Mining Limited
22	Economic Analysis	Paul Thompson	Perseus Mining Limited
23	Adjacent Properties	Gary Brabham	Perseus Mining Limited
24	Other Relevant Data and Information	Gary Brabham	Perseus Mining Limited
25	Interpretation and Conclusions	Gary Brabham	Perseus Mining Limited
26	Recommendations	Gary Brabham	Perseus Mining Limited
27	References	Gary Brabham	Perseus Mining Limited

Both Mr Gary Brabham and Mr Paul Thompson have visited the Property on numerous occasions as employees of Perseus Mining Limited. Mr Gary Brabham first visited the Property in April 2016, and most recently in February 2020. Mr Paul Thompson first visited the Property in January 2015 and most recently in March 2022.

The Qualified Person for the Esuajah South Underground Mineral Reserves, Mr Peter Lock has not visited site.

The estimate of the Esuajah South Underground Mineral Resource was undertaken by Mr Gary Brabham, FAusIMM, MAIG, who is an employee of Perseus. The information in this report that relates to Esuajah North Mineral Resources estimate was first reported by the Company in a market announcement released on 29 August 2018. The information in this report that relates to AF Gap

Mineral Resources and Mineral Reserve estimate was first reported by the Company in a market announcement released on 26 August 2020. The information in this report that relates to the Mineral Resource and Mineral Reserve estimates for the Fetish deposit and the Heap Leach was first reported by the Company in a market announcement released on 20 February 2020. Mineral Reserves for the Esuajah South underground were also first reported by the Company in the market announcement released on 20 February 2020. This report includes an update for mining depletion at Edikan as at 30 June 2021.

2.3 Currency and Units of Measure

All units of measurement in this study are in metric unless otherwise stated.

Monetary units are in US dollars (US$), unless otherwise stated.

2.4 Data Sources

A list of the sources of information and data contained in this report is provided in Section 27 of this report. Project-specific information relied upon in preparing this report has been provided by Perseus Mining Limited.

3 Reliance on Other Experts

The Qualified Persons contributing to this report have relied in good faith on information provided by other experts in relation to the aspects listed in Table 3-1.

The Qualified Persons have not independently investigated the Ownership and Title, Mineral Rights and Legal Obligations, Permitting and Approvals, Environment, Social and Community aspects of the Property. In relation to these sections of the report, the QP's have relied upon the subject matter expertise of Mr Martijn Bosboom, Legal Council and Company Secretary for Perseus Mining Limited, and Mr Phanuel Sackey, Health, Safety and Environment Manager of the Edikan Mine. Both Mr Bosboom and Mr Sackey are full time employees of Perseus Mining (or its subsidiaries).

Information concerning Ownership and Title, Mineral Rights and Legal Obligations provided by Mr Bosboom includes that contained in the section "Mineral Concession Interests at 13 September 2021" contained in (Perseus Mining Limited, 2021a). Mr Bosboom has confirmed to the Qualified Persons that no material changes have occurred to Edikan Gold Mine tenure ownership, mineral rights and legal obligations in the period to the effective date of this report.

Information provided by Mr Sackey has been incorporated directly into this report during drafting of the document.

Table 3-1: Other experts

Report section	Information	Source
4.3	Ownership and Title	Martijn Bosboom
4.4	Mineral Rights and Legal Obligations	Martijn Bosboom
4.6	Permits and Approvals	Martijn Bosboom and Phanuel Sackey
20	Environmental, Permitting, Social and Community	Phanuel Sackey
4.5	Environmental Obligations	Phanuel Sackey

4 Property Description and Location

4.1 Location

The Edikan Gold Mine is located in Ghana, West Africa, approximately 40 km to the southwest of the regional town of Obuasi and 195 km west-northwest of the capital Accra (Figure 4-1).

The Property tenements straddle the Central and Western Regions of Southern Ghana, on the western flank of the highly prospective Ashanti Belt. They are located between 1°50’00” west and 2°00’00’’ west and 5°48’49’’ north and 6°00’00” north.

Figure 4-1: General Location of the Edikan Gold Mine

The location of all known mineralized zones, Mineral Resources, Mineral Reserves and mine workings, existing tailing ponds, waste deposits and important natural features and improvements relative to the outside property boundaries are shown in Figure 4-2.

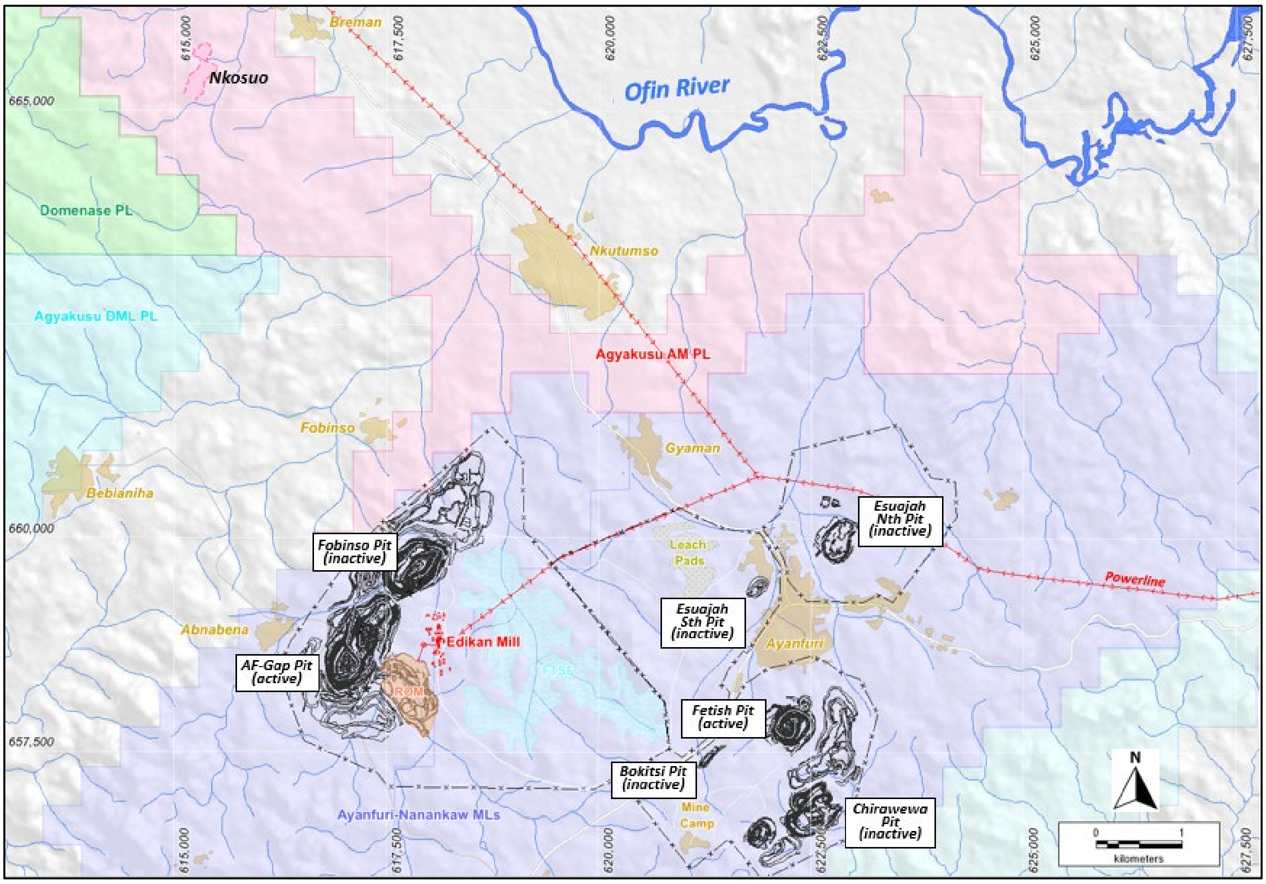

Figure 4-2: Edikan Gold Mine Layout

4.2 Description

The Edikan Gold Mine property comprises two granted mining leases and four prospecting licences, three of which are held under option agreements, covering a total area of 338.63 km² (Table 4-1; Figure 4-3).

Table 4-1: Edikan Gold Mine tenements

Name	Reference	Area sq km
Ayanfuri ML	ML 6/15	51.26
Nanankaw ML	ML 3/2	42.08
Nsuaem PL	PL 3/26	150.47
Agyakusu AM PL	PL 2/177	24.01
Agyakusu DML PL	PL 2/599	47.44
Domenase PL	PL 3/79	77.53

Tenement boundaries are described using units of degrees, minutes and seconds of longitude and latitude using the Clarke 1880 spheroid. All local exploration grids and tenement boundaries are referenced back to WGS 84 (Zone 30 North) metric grid spheroid and the survey conversions have been audited by high resolution satellite imagery. All known zones of mineralisation and Mineral Resources have been located accurately and there is no risk of any of the known Mineral Resources being outside the tenement boundaries due to survey errors.

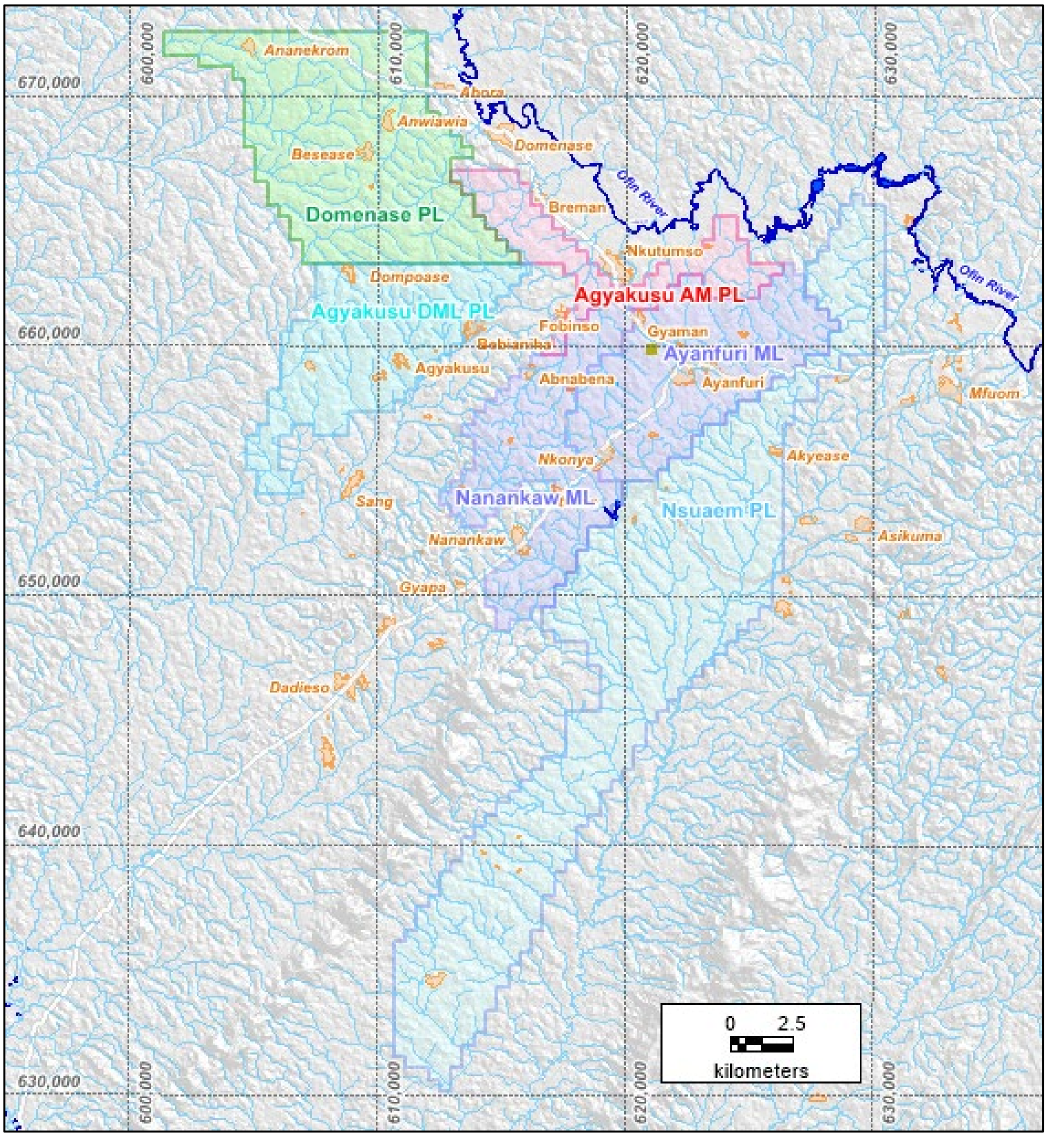

Figure 4-3: Edikan Property tenements

4.3 Ownership and Title

The Ayanfuri Mining Lease (ML 6/15) is registered in the name of Perseus Mining (Ghana) Limited ("PMGL"), formerly Central Ashanti Gold Limited ("CAGL") and was originally granted on 4 June 1994. The Lease was issued to PMGL/CAGL on 31 December 2009 for a period of 15 years, expiring 30 December 2024. The term of the lease may be extended.

The Nanankaw Mining Lease (ML 3/2) is registered in the name of PMGL/CAGL and was granted on 31 December 2009, expiring 30 December 2024. The term of the lease may be extended.

The Nsuaem Prospecting Licence (PL 3/26) was originally applied for under the name of PMGL on 25 November 2016. It was granted for a period of 3 years on 25 November 2017, expiring on 24 November 2020. Licence renewal was granted for a further three years on 23 December 2020, expiring 22 December 2023.

The Agyakusu AM Prospecting Licence (PL 2/177) is registered in the name of Adio-Mabas Ghana Limited and was renewed on 12 Feb 2020, expiring 11 Feb 2023. PMGL signed an option over the property on 31 October 2019, the option being valid for 3 years. PMGL has exercised the option in September 2021. A net smelter return royalty of 1.5% is payable to Adio-Mabas Ghana Limited on gold recovered from the property.

The Agyakusu DML Prospecting Licence (PL 2/599) is registered in the name of DML Investments Limited. It was granted on 18 March 2020 and expires 17 March 2023. PMGL signed an option over the property on 20 March 2020, the option being valid for 3 years. A net smelter return royalty of 1% is payable to DML Investments Limited on gold recovered from the property if the option is exercised.

The Domenase Prospecting Licence (PL3/79) is registered in the name of Union Minerals Prospecting Co Limited. It was originally granted on 28 June 2017 and expired 28 June 2021. A renewal application has been submitted to the Minister of Land and Resources. PMGL signed an option of the property on 28 October 2021, the option being valid for 4 years. A discovery bonus of US$1 per Reserve Ounce in excess of 500,000 ounces as included in a definitive feasibility study as well as a net smelter return royalty of 1.5% are payable to Union Minerals Prospecting Co Limited on gold recovered from the property if the option is exercised.

The Qualified Persons rely upon the opinion provided by Other Experts to the effect that all required annual payments have been made and that the titles are in good standing.

4.4 Mineral Rights and Legal Obligations

Mineral rights in Ghana are governed by the Minerals and Mining Act, 2006, which is administered by the Minerals Commission (MinCom) and the Ministry of Lands, Forestry and Mines. The Mining Act sets out the terms and conditions of maintaining a mining lease in good standing, these conditions include but are not limited to:

- Payment of rental land rates, royalties and government charges.
- Presentation of regular returns and annual returns.
- Utilisation of the mining rights through the exploitation of the minerals.
- Payment of bonds and maintenance of rehabilitation programs.

The Government of the Republic of Ghana is entitled to a 5% royalty on gold production from the Property. The Property is also subject to the following royalties:

- A 1.5% gross royalty to Franco-Nevada Corporation. This royalty was initially payable to AngloGold Ashanti Limited (“AGA”), the former holder of the Ayanfuri mining leases and prospecting licence who assigned its royalty rights to Franco-Nevada Corporation.
- A 0.25% gold royalty obligation in respect of the purchase of PMGL. This royalty was initially payable by wholly owned Perseus subsidiary and PMGL’s parent company Kojina Resources Ltd (“KRL”), in respect of the purchase of CAGL by KRL and has been assumed by PMGL. This royalty is payable in gold to Waratah Investments Limited.

- Refer to Paragraph 4.3 above for royalties that may be payable in the future on any gold mined from properties held under option.

The mining leases provide for the rights to exploit the mineral defined in the lease and to take surface materials required for the operations within the lease area.

The Government of the Republic of Ghana is entitled to a free carried 10% interest in any mining operation in the country and has no obligation to contribute to development or operating expenses. It holds that right as a 10% shareholding in PMGL.

4.5 Environmental Liabilities

Since PMGL commenced operations at Edikan, revegetation of the site has been progressive, with disturbed areas being rehabilitated as they become available. As at 31st December 2021 the disturbed area that has been rehabilitated totals 184.83 hectares.

The first public consultation was undertaken in 2014 to determine what the expectations of relevant stakeholders were following closure of the Edikan Gold Mine and these findings will be incorporated into the final Edikan Mine Closure & Decommissioning Plan due for submission by mid- 2024. A Closure Cost Estimate audit by an External Consultant (Digby Wells) is ongoing and findings will be factored into the final closure and decommissioning plan.

4.6 Permits and Approvals

PMGL prepared an Environmental Impact Assessment (EIA) and obtained an initial Environmental Permit (# EPA/EIA/306) on the 7 June 2010 from the EPA. Thereafter renewals to the Environmental certificates were done and granted by the EPA. Edikan now has an EPA Environmental Permit with (Certificate Number EPA/EMP/200) which was dated 14 March 2019 and valid for 3 years for the Property’s current Eastern side. A combined Environmental Management Plan (EMP) 2022-2025 of the Eastern and Western Pits have been submitted to the EPA for the renewal of the certificates as directed by the Agency. EPA is working on the renewal certificate.

PMGL secured Mining Permits 00002248/2021 for the Ayanfuri Mining Lease and 00002249/2022 for the Nanankwa Mining Lease from the Chief Inspector of Mines (Ghana). The Mining Plan for 2022 has been submitted to the Mineral Commission towards the grant of the Mining Operating permits for the year 2022.

Other permits required to conduct operations that the Edikan Gold Mine have obtained include:

- Department of Feeder Roads - Division of Nkonya-Abnabna Feeder Road (DFR/WR/WAEDA/CONST/10/09/3) issued on 20th November 2009.
- Ghana Water Resource Commission – Water Use (Groundwater Extraction) Permit (PMGLID251/19) issued on 1st January 2019 and Valid for 3 Years. Application for the renewal has been sent to WRC and awaiting permit.
- Ghana Water Resource Commission – Water Use (Pit Dewatering) Permit (PMGLID207/19) issued on 1st January 2019 and Valid for 3 Years. Application for the renewal has been sent to WRC and awaiting permit.
- Ghana Water Resource Commission – Water Use (Asuafa Stream Diversion) Permit (CAGL1D208/19) issued on 1st January 2019 and Valid for 3 Years. Application for the renewal has been sent to WRC and awaiting permit.

- A mining permit has yet to be submitted for the proposed Esuajah South underground mine when required. The environmental studies was completed and submitted to the EPA. The mining permit application requires an environmental permit and the submission of the Feasibility Study to MinCom.

The Qualified Persons are not aware of any other significant factors and risks that may affect access, title or the right or ability to perform work on the Property.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

The Property is located 16 km west of Dunkwa, near the village of Ayanfuri in the Central Region of Ghana. The Property lies along the sealed highway from Ghana's second largest city Kumasi, located 107 km by road to the north, and the port of Takoradi located 186 km by road to the south. Other cities located on the Takoradi to Kumasi Highway include the major mining centres of Obuasi (57 km by road to the north) and Tarkwa (95 km by road to the south).

The Dunkwa/Awaso railway line passes 2 km northeast of the Property. Dunkwa is the largest district centre, with a history of gold and diamond dredging activities.

The national capital Accra is located 195 km to the east southeast of the Property and a distance of 320 km by road via Obuasi.

5.2 Physiography

Relief around the Edikan Gold Mine area is largely gently undulating, ranging from 120 m to 240 m above sea level. On the eastern boundaries of the licences a range of more resistant hills striking northeast-southwest occurs comprised of upper Birimian volcanics.

The Property area straddles the headwaters of northerly draining tributaries of the Ofin River system and southerly draining tributaries of the Ankobra river system. There are large rivers on the licence areas.

Areas of lower relief are generally vegetated by open secondary forest and agricultural land, while remnant tropical forest is more prevalent in areas of higher relief outside the licence area. Agriculture in the area consists mainly of cocoa farms with lesser subsistence farming.

5.3 Climate

The Property area has a southwestern equatorial climate with seasons influenced by the moist southwest monsoon winds from the South Atlantic Ocean and the dry north east trade winds. The mean annual rainfall is approximately 1,500 mm with peaks of more than 170 mm per month in June and October. November to February are the drier months with 20 – 90 mm per month of rainfall. The mean annual temperature is approximately 25° with small daily temperature variations. Relative humidity varies from 61% in January to a maximum of 80% in August and September.

To ensure access and transport during the wet season, well-formed and drained roads have been constructed. Mining operates continuously throughout the year.

5.4 Infrastructure

In addition to sealed and unsealed access roads, the village of Ayanfuri is connected to the national electricity grid. Surface and sub-surface water resources are also abundant. The Ayanfuri village also has fixed and mobile telephone coverage, internet services and is centrally located to the principal mining and exploration contractors and suppliers in Ghana.

Water supply for the construction phase of the project was drawn from dewatering the flooded Abnabna and Fobinso pits. After the commencement of operations, the majority of process water has been returned from the tailings storage facilities and there have been groundwater bores drilled on site also to supply additional water if required. This has been supplemented by the pumping of water from other flooded pits as well as rainfall catchment.

Ghana has an excellent depth of personnel experienced at many levels in modern open pit and underground mining technology. This is due to the large number of mines operating and the two decades of modern mining undertaken in Ghana, which is the second largest gold producer in Africa. This has enabled PMGL to recruit extremely capable Ghanaians for senior management positions.

Land ownership (that is surface rights) is held by the central government of Ghana. The Chieftaincy administers the land usage and charges rent on behalf of the government. PMGL pays rent in accordance with the government gazetted rates and charges for land rent. Prior to taking possession of the land, land rent and crops were assessed and compensated for according to the schedules agreed annually with the local farmers collective and the agreed rates exceed the Land Valuation Board schedule of rates for compensation for crops. Surface rights have been secured for exploration and development activities. The active mining area of over 1,000 Ha has been defined and has been progressively developed throughout the mine life.

6 History

6.1 Ownership

Cluff Resources PLC (Cluff) commenced activity on the project in 1988 and continued until 1996. Cluff completed a Feasibility Study outlining a business plan for the exploitation of gold mineralisation using heap leach operating methods. Cluff was issued mining leases in 1994 and commenced mining operations in approximately November 1994.

Ashanti Goldfields Corporation (AGC) acquired Cluff's Ghanian interests in 1996 and continued mining activity until early 2001. Mining operations ceased in 2001 due to depletion of oxide Mineral Reserves. In addition, the very low prevailing gold price caused suspension of all exploration activity from 2001 until 2006.

In April 2006 PMGL (then named Stratsys Investments Ltd) entered into an agreement to acquire the then named Ayanfuri Project licenses from AGC.

In May 2006, the then owners of PMGL granted an option to Kojina Resources Ltd (KRL) to acquire the shares of PMGL. KRL, a wholly owned subsidiary of Perseus, subsequently exercised the option in 2007 and acquired PMGL with final settlement taking place in February 2009. Central Ashanti Gold Limited was renamed Perseus Mining (Ghana) Limited in July 2011.

6.2 Pre-Perseus Exploration

Considerable exploration and small-scale mining were undertaken in the 1898 to 1901 gold rush, mainly around Princiso and Atassi. The Atassi shear zone hosted gold deposit is located proximal to the Princiso village located 5 km southwest of the town of Ayanfuri. The Atassi Mine recorded production of over 13,000 oz of gold between 1906 and 1908.

Atta Gold Company Limited (Atta) undertook extensive underground development at the Bokitsi deposit in the 1930's. Bokitsi is located 1.5 km south of the town of Ayanfuri adjacent to the current Fetish Mineral Resource. Atta delineated a 'mineral resource' of 93,000 t at 9.5 g/t Au which was never mined, most likely due to the onset of World War II.

A cross-cut from the Bokitsi workings intersected the Fetish granite, where sampling averaged about 3.7 g/t Au over 28.34 m. The Ghana Geological Survey was able to archive the underground sampling plans and it was probably these records that first highlighted Ayanfuri as one of the priority targets for foreign owned companies after the investor friendly Mining Act of 1986 was implemented by the Republic of Ghana.

There were three principal phases of exploration undertaken at the Property from 1988. The first was initial discovery and pre-development drilling by Cluff. The second was the exploration of secondary targets to locate additional ore feed by AGC. The third phase was the post mine closure exploration by Perseus commencing in 2006.

Cluff commenced exploration in September 1988 with work centred on the old Bokitsi workings. Cluff initially undertook a major trenching programme over surface indications (areas of previous artisanal activity) resulting in discovery of the Fetish, Esuajah North and Esuajah South deposits. Photogeological interpretation (1:20,000 scale) together with regional soil sampling, on a 240 m × 40 m grid, outlined additional prospects including Chirawewa, Abnabna and Fobinso.

Drilling commenced in 1989 and by 1991 a total of 337 holes had been completed for 20,951 m, mostly on the five earliest discoveries. Limited drilling had also been completed on the Fobinso and Atassi prospects. A total of 16,749 soil samples were collected and assayed for gold and arsenic

(As) and exploration trenching totalling 32,572 m was completed. Cluff also completed substantial metallurgical sampling using diamond core and surface pitting to depths up to nine metres.

Between 1996 and 2000, AGC completed 580 hand dug trenches totalling approximately 40.7 km, and 776 drill holes totalling 58 km, most of which were reverse circulation (RC) drilling.

Information regarding exploration activities other than as described above is not available.

6.3 Perseus Exploration

Section 9.3 describes the exploration carried out by Perseus.

6.4 Historical Mineral Resource Estimates

Historic estimates of Mineral Resources and Mineral Reserves by Cluff (e.g., (IC Publications Ltd., 2022)) are no longer considered relevant.

6.5 Historical (Heap Leach) Production

The Ayanfuri heap leach project commenced production in November 1994 at an initial cash operating cost of US$145 per ounce. AGC acquired the mine in 1996 and annual production peaked at 58,095 ounces in 1997, falling to 36,316 ounces in 2000 as oxide Mineral Reserves were gradually depleted and operating costs increased to US$232 per ounce. AGC successfully added to reserves by defining several new oxide deposits. The mine was closed in early 2001, when the prevailing gold price was below US$270 per ounce.

Between 1994 and 2001, the Ayanfuri gold mine produced over 300,000 oz of gold from 23 shallow oxide open pits using heap leach processing. Most of the production was sourced from six granite hosted mineralised zones. The pits were mined typically to depths of 20 – 40 m below surface.

Total heap leach production at Ayanfuri was 8.15 Mt at 1.55 g/t Au for 406,000 ounces, from which 306,400 ounces of gold were recovered (Table 6-1).

High grade ore from Fetish Main and possibly other deposits was hauled to the Sansu CIL treatment plant at Obuasi. No records are available of the production through the CIL plant.

Table 6-1: Recorded gold production – Ayanfuri heap leach operation

Year	Ore treated (tonnes)	Head grade (Au g/t)	Contained Au (oz)	Recovered Au (oz)	Recovery (%)	Tail Grade (Au g/t)
1994-5	1,129,357	2.2	80,607	56,426	70	0.7
1996	1,319,000	1.8	75,060	53,338	71	0.5
1997	1,340,000	1.7	74,963	58,089	77	0.4
1998	1,519,000	1.4	65,930	46,290	70	0.4
1999	1,392,000	1.2	51,914	44,424	86	0.2
2000	1,121,000	1.2	43,610	36,316	83	0.2
2001	329,000	1.2	12,693	11,517	91	0.1
Total	**8,149,357**	**1.5**	**404,777**	**306,400**	**76**	**0.4**

* Excludes CIL treatment of high-grade ore

** Re-sampling of dumps suggests higher tails grade from 1999 – 2001

6.6 Recent Production

Mining operations recommenced at the Edikan Gold Mine in 2011, focussing on the western pits Abnabna, AF Gap and Fobinso. A summary of production to date is provided in Table 6-2.

Table 6-2: Recent gold production

Year	Ore treated (tonnes)	Head grade (Au g/t)	Contained Au (oz)	Recovered Au (oz)	Recovery (%)	Tail Grade (Au g/t)
2011	1,511,335	1.19	57,718	45,798	79.3	0.25
2012	4,818,951	1.46	226,020	195,199	86.4	0.20
2013	6,425,433	1.17	241,627	198,933	82.3	0.21
2014	6,578,264	1.03	216,988	186,296	85.9	0.15
2015	6,582,809	1.03	217,753	188,812	86.7	0.14
2016	6,350,380	0.91	185,561	153,208	82.6	0.16
2017	7,091,779	1.07	243,761	207,458	85.1	0.16
2018	7,223,613	1.17	271,217	217,219	80.1	0.23
2019	6,706,348	0.98	210,677	179,575	85.2	0.14
2020	6,787,946	1.01	219,967	158,089	71.9	0.28
2021	6,767,652	0.83	179,940	150,329	83.5	0.14
Total	66,844,510	1.06	2,271,228	1,880,917	82.8	0.18

The current facility has processed 66.8 Mt of ore @1.06 g/t since commissioning in 2011 to the end of December 21, yielding 1.88 Moz of gold @ 82.8% recovery.

7 Geological Setting and Mineralisation

7.1 Regional Geology

The Edikan Gold Mine is located in south-western Ghana in the Man Shield (also referred to as Leo Shield) of the Precambrian West African Craton. In Ghana, the Man Shield consists of seven mostly northeast striking Paleoproterozoic greenstone belts of the Birimian Supergroup, emplaced during 2250 – 2170 Ma, separated by flyshoid basin sediments deposited during 2150 – 2100 Ma (Feybesse, et al., 2006).

The Man Shield was affected by the Eburnean Orogeny resulting from convergence of the West African craton and the São Luis Craton of South America, occurring during 2130 – 1980 Ma (Feybesse, et al., 2006). The early stages of this collision event resulted in thrust tectonism and crustal thickening. Uplift developed foreland basins in several of the greenstone belts in Ghana, particularly in the Ashanti Belt, which were subsequently filled with molassic sediments of the Tarkwaian Group deposited between 2132 – 2097 Ma (Oberthur, Vetter, Davis, & Amanor, 1998).

Progressive tectonism evolved into a transpressional regime with thrusts developing into transcurrent faults and syntectonic plutonism plus metamorphism affecting both the Birimian and Tarkwaian stratigraphy.

Most of the gold in Ghana was emplaced relatively late in the Eburnean Orogeny ((Milesi, Ledru, Feybesse, Dommanget, & Marcoux, 1992); (Feybesse, et al., 2006) and (Allibone, et al., 2002)) principally in deformation zones in Birimian metasediments and metavolcanics, as paleoplacer (Witwatersrand-like) deposits in Tarkwaian braided fluvial quartz pebble conglomerates, and to a lesser extent within pre and syntectonic granitoid intrusive bodies within the greenstone belts and within basin sediments along regional structures. Metallogenically, the most important greenstone belt in Ghana is the Ashanti Belt.

A map of the regional geology is shown in Figure 7-1.

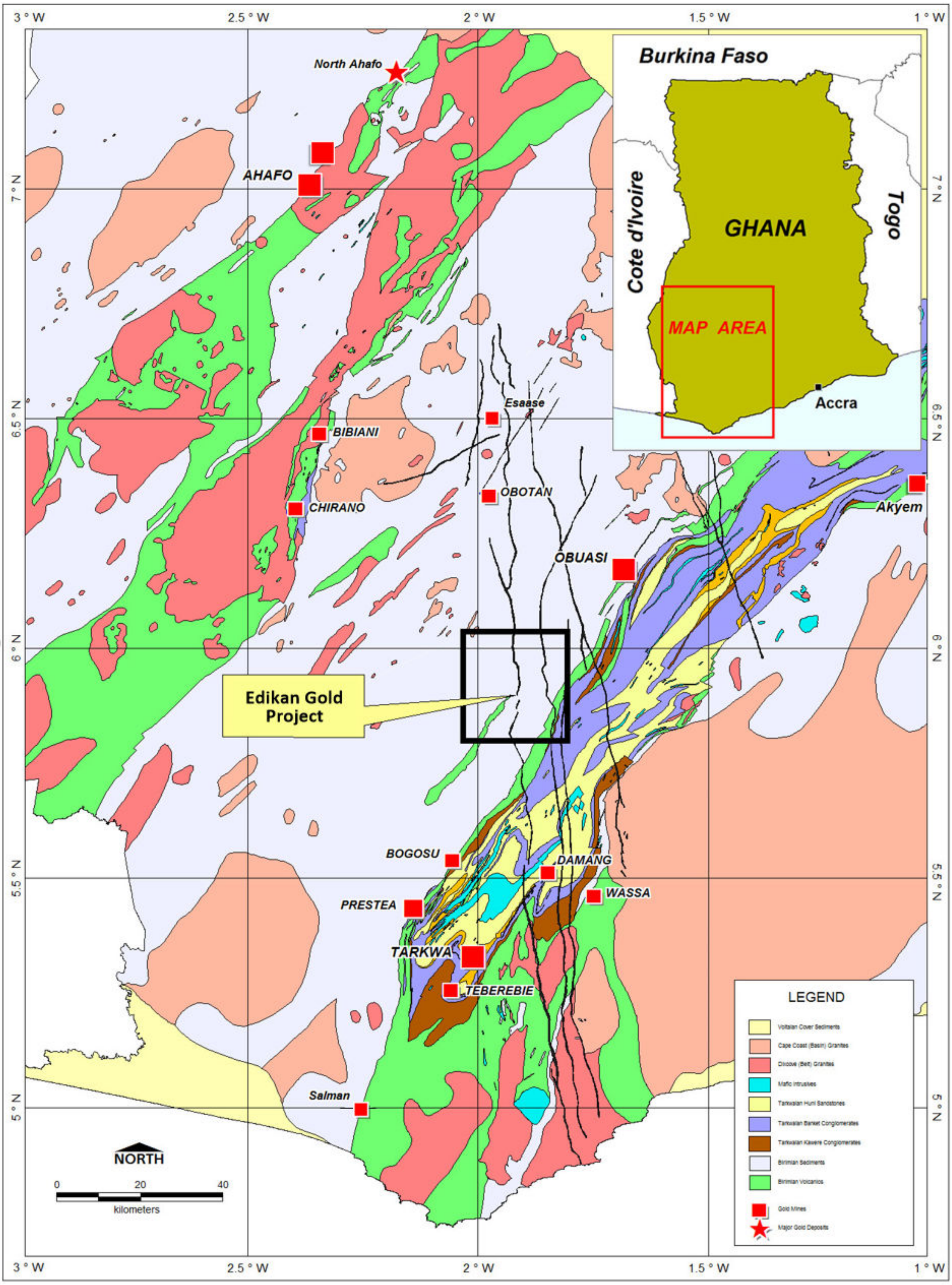

Figure 7-1: General geology of Ghana

7.2 Local Geology

The Edikan gold deposits occur near the western flank of the Ashanti Greenstone Belt along the Obuasi-Akropong gold corridor, situated 6 – 16 km west of the Ashanti volcanic belt margin in the Kumasi basin sediments (Figure 7-2).

The Obuasi-Akropong structure appears to represent a continuation of the main Obuasi Shear which has veered away from the volcanic belt margin into basin sediments (Griffis, Barning, Agezo, & Akosah, 2002). More likely it corresponds to a separate sub parallel, southwest verging thrust of sediments over sediments several kilometres further out in the basin, rotated nearly into the main Obuasi structure during transcurrent deformation and preferentially gold mineralised in comparison to the belt bounding structures south of Obuasi, which are generally weakly mineralised. Further south, (e.g., Bogosu through Prestea), the principal gold bearing structures are reactivated thrusts along the belt margin, as at Obuasi.

The Edikan property is underlain principally by Paleoproterozoic Birimian metasediments of the Kumasi-Afema basin, positioned between the Ashanti and Sefwi Greenstone Belts. The flysch type metasediments consist of dacitic volcaniclastics, greywackes plus argillaceous (phyllitic) sediments, intensely folded, faulted and metamorphosed to upper greenschist facies. Minor cherty and manganiferous exhalative sediments are locally present, and graphitic schists coincide with the principal shear (thrust) zones. Bedding and parallel to sub parallel cleavage follows the regional trend of the Akropong structure(s) striking 050° on average with steep to sub vertical dips to the southeast and southwest.

Numerous small Basin-type or Cape Coast-type granitoids have intruded the sediments along several regional structures. These intrusives range in size from 200 m long by several tens of metres wide, up to more than 2 km long (e.g., the Abnabna-Fobinso intrusive) and 150 m wide, generally with very sharp contacts with the country rocks and thin contact metamorphic aureoles. The intrusive shapes vary from nearly equant ovoid plugs to long, relatively narrow sills or dykes, with long axes parallel to the regional structures and dips conformable to the host sediments (i.e. sub vertical to steep).

The Basin granitoids throughout Ghana, which can be considered S-type granites, are typically granite to granodiorite in composition vs. granodiorite to gabbro for the Belt I-type granites (Yao & Guibal, 2000). The Belt granitoids were emplaced earlier as subvolcanic plutonism late in the development of the Birimian greenstone belts, during 2,179 – 2,136 Ma (Hirdes, Davis, & Eisenlohr, 1992). The Basin granitoids were emplaced mostly during the Eburnean Orogeny, between 2,116 – 2,088 Ma (Oberthur, Vetter, Davis, & Amanor, 1998). The Esuajah North granite has been determined to have a monazite U/Pb age of 2,105 Ma +/- 3 Ma (Oberthur, Vetter, Davis, & Amanor, 1998).

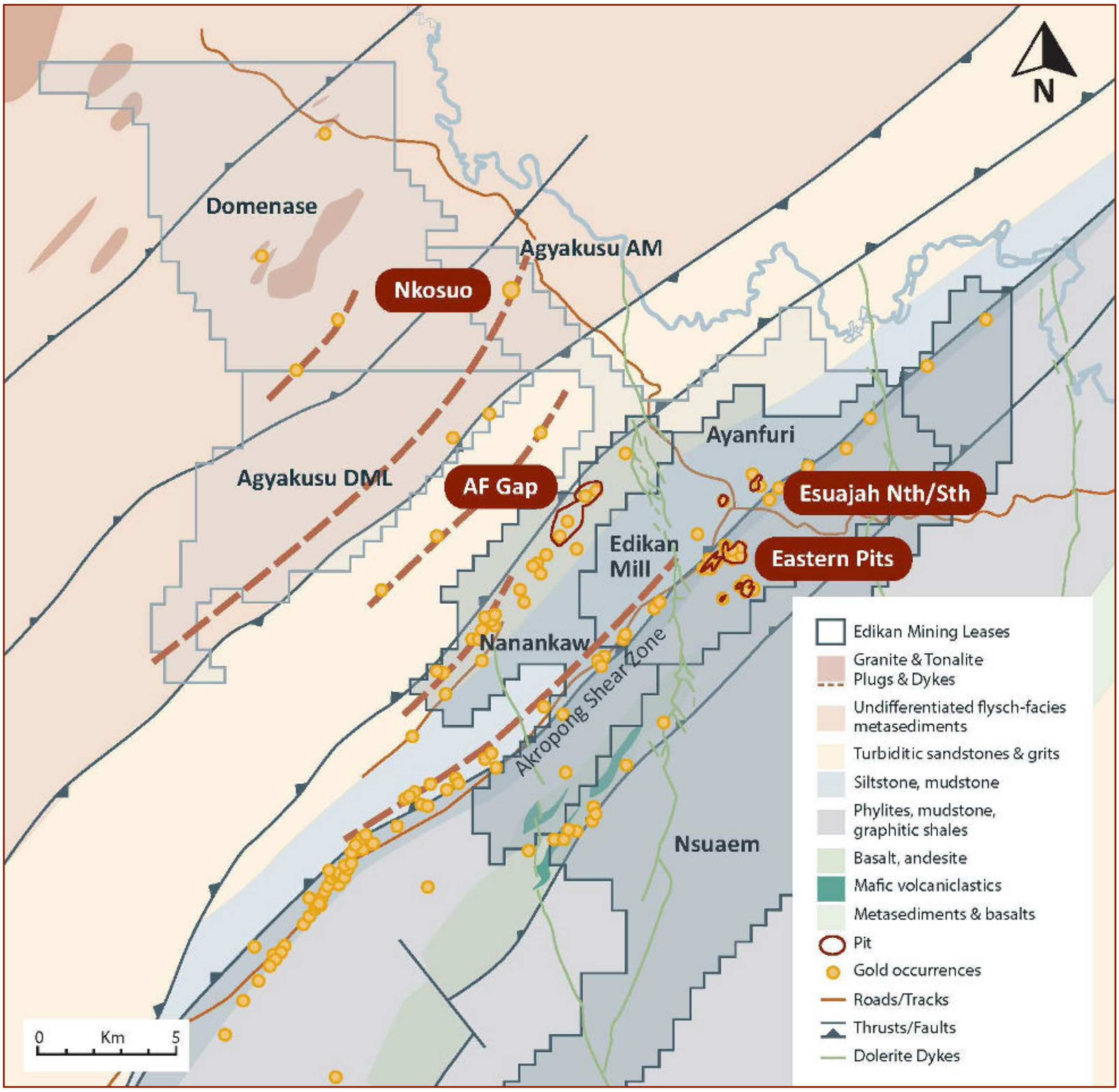

Figure 7-2: Geology of the Ashanti Belt

More than 20 Belt and Basin type granitoids in Ghana are known to contain gold mineralisation, with a number of significant deposits. Intrusive hosted gold deposits are a comparatively recently discovery and recognised subtype of orogenic gold deposits in Ghana, and accordingly intrusives have been considerably less explored than the supracrustal rocks. Belt-type intrusive hosted deposits include Newmont's large Subica deposit at Ahafo and Kinross's Chirano deposits in the Sefwi Belt, plus Golden Star's Hwini-Butre (Father Brown) deposit in the Southern Ashanti Belt.

Basin type granitoid hosted deposits include the Central Ashanti group of deposits, such as Nhyiaso and Ayankyerim deposits 4 – 6 km west to northwest of Obuasi, plus the smaller Abori and the Nkran deposits in the Manso Nkwanta district of the Asankrangwa Belt. All of these deposits were discovered within the past 30 years, while the more traditional lode deposits of the Ashanti, Prestea, Tarkwa and Bibiani districts were discovered in the late 1800's gold rushes.

The structural setting and style of mineralisation is more or less the same for Belt and Basin granitoid hosted deposits. Essentially, the intrusive hosts, situated within or near shear reactivated regional structures, have deformed in a brittle manner and gold bearing fluids have infiltrated the fractured rock to form gold bearing quartz veins and stockworks and pervasively altered zones where fracturing and/or fluid flow was more intense.

Mineralisation in both Belt and Basin granitoids likely took place during the main gold mineralising event which resulted in the more prevalent Birimian sediment and volcanic shear hosted deposits in Ghana, ca. 2,090 – 2,060 Ma according to most authors. Hydrothermal rutile from the Esuajah North granite has been Pb/Pb dated at 2,086 +/- 4 Ma (Oberthur, Vetter, Davis, & Amanor, 1998) consistent with this age range.

The Edikan Gold Mine deposits occur near the western flank of the Ashanti Greenstone Belt.

Numerous small Basin-type or Cape Coast-type granite bodies have intruded the sediments along several regional structures. The intrusive shapes vary from nearly ovoid plugs 200 – 400 m long by 40 – 150 m wide to relatively long (+2,000 m) narrow (50 – 100 m) sills or dykes.

7.3 Mineralisation

7.3.1 Introduction

Gold occurs at Edikan in two main deposit styles:

- Altered granite intrusive bodies ("granitoid") – occur in at least three clusters and are emplaced in structurally favourable locations within more extensive ductile shear zones.
- Typical Ashanti-style shear zones within metasedimentary rocks ("shear zone") - occur throughout the licence area. Mineralisation occurs within structurally favourable locations and is typically associated with or is proximal to quartz veining and widths are typically narrow (2 – 10 m).

7.3.2 AF Gap

Gold mineralisation was identified in a single granitoid intrusive over 2 km strike between Abnabna and Fobinso. Most of the gold mineralisation is contained within five zones ranging from 30 – 140 m in width and plunging moderately to steeply NNE. The AF Gap deposit has been mined almost continuously in a series of cut-backs since commencement of milling operations by PMGL and is being mined at the date of this report. The pit is presently about 200 m deep and designed to extend to about 240 m.

7.3.3 Esuajah North

The Esuajah North deposit, located 2 km north of Fetish, occupied a ridge comprising a 400 m long granitoid intrusive which averages about 100 m in width. An open pit to approximately 210 m depth, completed in May 2020, has exploited mineralisation to what was deemed at the time to be the economic limit of open pit mining. The deposit remains open at depth and a cut-back of the open pit may be viable at sufficiently high gold prices.

7.3.4 Esuajah South

The Esuajah South gold deposit is located 1 km southwest of the village of Ayanfuri and is hosted by a 250 m long discrete granitic plug averaging 40 m in width and with a small surface expression.

Esuajah South is the highest grade of the granitoid deposits at Edikan with a zone of higher-grade mineralisation (>2 g/t Au) at a depth of 150 m to 250 m below surface. Oxide mineralisation has been completely mined out by AGC via an open pit.

The entire granitic intrusion is altered and mineralised, with minor sediment hosted mineralisation occurring along the margins of the granite and also in thin (1 – 3 m) felsic dykes and in fault zones in the metasediments. The intrusion strikes north-northeast, is sub-vertical and dips steeply to the west. The granite-hosted mineralisation remains open at depth.

No major geological differences are observed between the hanging wall and footwall sediments.

Mineralisation within the granite is associated with two to three generations of quartz veins and stockworks with individual veins millimetres to centimetres in thickness and rarely more than a metre thick. The granite is pervasively sericitized, with alteration intensity the highest immediately adjacent to the quartz veins.

Gold is generally associated with < 3% pyrite, lesser arsenopyrite and traces of sphalerite, chalcopyrite, galena and rutile. Native gold also occurs as very fine grains, commonly along sulphide grain boundaries and in fractures in sulphides, usually at or near vein margins. Coarse visible gold is occasionally observed in the quartz veins. Higher grade gold intersections often tend to be associated with very coarse arsenopyrite +/- sphalerite, chalcopyrite and galena.

Mineralised quartz veining is nearly pervasive throughout the host granite, stopping sharply at the sediment contacts, although narrow high-grade quartz veins are rarely observed in the hanging wall and footwall sediments.

Although gold grade is relatively uniform across the width of the intrusion at +/- 0.5 - 1.5 g/t Au, high grade (5 g/t Au to > 100 g/t Au) assays over widths of 1 -5 m appear to be associated with shallow dipping vein sets striking at various angles to the regional fabric. Exposures at Esuajah North pit indicate that such vein sets are almost certainly controlled by shallow to moderately-dipping reverse faults that developed late in the mineralising process.

In the wall-rock metasediments, mineralisation is accompanied by pervasive iron carbonate and more localised sericite and silica alteration, with fine grained pyrite and lesser arsenopyrite occurring as disseminations in the host sediments and to a lesser degree in quartz veins. Most of the gold occurs in veins as disseminations and as free gold along sulphide grain boundaries.

7.3.5 Fetish

The Fetish granitoid gold deposit, located east of the high grade Bokitsi North shear deposit, was discovered by sampling a cross-cut from the old Bokitiso Mine in the 1930's. An intercept of 28.34 m at 3.69 g/t Au was recorded from primary granite at a depth of 91 m.

Fetish comprises two pervasively auriferous intrusive granite bodies and associated host sediment gold mineralisation within an area 550 m long and 300 m wide. The large, low grade eastern granite intrusive is up to 170 m wide, while the western granitoid and host sediment mineralisation is approximately 40 m wide with grades averaging 1.6 g/t Au. The western portion of the open pit takes in the shear zone hosted Bokitsi North lode.

Cluff drilled a 500 m long and 30 – 40 m wide footwall zone of a fragmented granitoid intrusive and delineated an oxide "mineral resource" of 2.0 Mt at 1.8 g/t Au to a depth of 50 m. Significant sulphide mineralisation was also defined below the oxide zone.

Since PMGL commenced mining operations, Fetish open pit has been mined in a series of cut-backs. Mining has been paused at the completion of a cut-back in June 2021 with the pit at 175 m depth. Mining is scheduled to recommence at Fetish in mid-2022.

7.3.6 Bokitsi South

The relatively high grade Bokitsi South shear zone hosted deposit was partly mined by AGC and ore was hauled to Obuasi for treatment through the Sansu CIL plant. Based on processing history, the metallurgical recovery of the sulphide mineralisation at Bokitsi was lower than from the granite mineralisation.

The Bokitsi South oxide and sulphide mineralisation has been mined out and the pit is currently being backfilled with waste from Fetish .

7.3.7 Chirawewa

Gold mineralisation at Chirawewa, located 1 km south of Fetish, is contained within, or is associated with the margins of a granitoid intrusive. The main Chirawewa deposit extends for 300 m and ranges from 20 – 100 m in width. Oxide and sulphide mineralisation has been completely mined out at Chirawewa and the pits backfilled.

7.3.8 Mampong

Mampong is located 2 km south of the Abnabna deposit and forms a series of narrow zones hosted in a mix of granite dykes and shear hosted sediments. The majority of the Mampong deposit is low grade with only one zone having consistent grades greater than 1 g/t Au. There is no current MRE for this deposit, and it is unlikely to be mined in the future.

7.3.9 Nkosuo

Nkosuo gold deposit is a new discovery of granite-hosted gold mineralisation located approximately 7 km NNW of the Edikan process plant. Although known as a gold occurrence for several years, an increase in artisanal mining during 2021 revealed the nature of the mineralisation and indicated potential for an economically viable resource. Resource delineation drilling is ongoing at the time of this report.

Gold mineralisation at Nkosuo is hosted by a NNE-trending granitic plug extending at least 600 m in strike and ranging up to 200 m wide. The granite body dips at around 70° to the west in the northern part of the intrusion, steepening to near vertical towards the south. Drilling has defined its northern limit but it remains open to the south, though narrowing to around 100 m. Mineralisation within the granite consists of variably intense quartz stockwork veining with associated quartz-carbonate-sericite alteration. The veining and alteration are accompanied by 1-2% disseminated and selvage pyrite and arsenopyrite, with better gold grades generally associated with higher concentrations of arsenopyrite. The enclosing Birimian metasediments are devoid of mineralisation.

The discovery of Nkosuo indicates potential for significant gold mineralisation associated with structures further "outboard" in the Kumasi Basin.

8 Deposit Types

The Edikan gold deposits are structurally controlled, orogenic style gold deposits.

Gold occurs both in classic Ashanti-style sediment hosted shear zones, and within granitic plugs and sills or dykes situated along two or three regional shear structures. The shear hosted vein deposits of Atassi and Bokitsi North were discovered and briefly mined in the early 1900's, while the discovery of the comparatively low-grade granite hosted deposits came later in the 1990's. More than 24 known gold deposits are located within the Edikan Gold Mine area, with the granitic intrusives accounting for the majority of these and around 80% of the known gold Mineral Resources.

The sediment shear hosted occurrences consist either of pinch and swell quartz reefs in relatively tight shears or quartz +/- carbonate stockwork veining in broader shear zones. The host rocks are typically fine grained phyllitic sediments and volcaniclastics, with coarser grained wacke to sandstone interbeds which are often preferentially mineralised due to their more competent and brittle nature. Pervasive iron carbonate and more localised sericite and silica alteration has affected the host sediments, and fine-grained pyrite with lesser arsenopyrite occurs as disseminations in the host sediments and to a lesser degree in the quartz veins. Most of the gold occurs in veins as disseminations and as free gold along sulphide grain boundaries.

Most of the known gold Mineral Resources at the Edikan Gold Mine are hosted by the granite plugs and sills or dykes, which occur along the same structural corridors that contain the sediment shear hosted gold occurrences.

Gold mineralisation within the granites occurs in two to three generations of quartz veins and stockworks with individual veins millimetres to centimetres in thickness and rarely more than a metre thick. An example of the typical granite and quartz veins is shown in Figure 8-1 .

Figure 8-1: Mineralised granite and quartz in diamond core

Gold is generally associated with less than 3% pyrite, lesser arsenopyrite, and traces of sphalerite, chalcopyrite, galena and rutile. Native gold also occurs as very fine grains often along sulphide grain boundaries and in fractures in sulphides, usually at or near vein margins. Coarse visible gold is occasionally observed in the quartz veins. Higher grade gold intersections often tend to be associated with very coarse arsenopyrite +/- sphalerite, chalcopyrite and galena.

Mineralised quartz veining is nearly pervasive throughout the granite host bodies, stopping sharply at the sediment contacts, although narrow high grade quartz vein mineralisation is occasionally observed in the hangingwall and footwall sediments. Therefore, the dimensions of most of the gold deposits at Edikan are constrained by the size of the host granite intrusions, which vary from a short ovoid and near vertical cylinder in the case of Esuajah South, to a strike extensive, fairly wide, almost planar tabular and moderately west dipping sill for the Abnabna-Fobinso intrusive.

In some places within the granites, later narrow cross-cutting feldspar porphyry dykes are observed and tend to be mineralised similarly to the main granite bodies. The intrusive rocks generally exhibit a very weak penetrative foliation parallel to the regional fabric.

Although gold grade is relatively uniform across the width of the intrusives at +/- 0.5 – 1.5 g/t Au, frequent high grades (5 g/t Au to greater than 100 g/t Au) over widths of 1 – 5 m occur in all the granite hosted deposits. In oriented drill core, these high-grade zones are sometimes associated with shallow dipping vein sets striking at various angles to the regional fabric.

9 Exploration

9.1 Overview

Historically, there was a widely held assumption that the Edikan granite-hosted deposits had no significant sulphide potential due to weaker sulphide gold grades below the oxide Mineral Resources. Gold deposits in Ghana show both enriched (or mushroom) oxide and non-enriched styles of mineralisation.

Soon after taking control of the Property, Perseus undertook a statistical review of the oxide and limited sulphide drill data and concluded that the grade averages were in fact similar and that there were no notable horizons of oxide enrichment. Subsequent exploration was largely predicated on this observation and has focused primarily on the discovery of exposed or shallowly buried mineralised intrusives.

9.2 Coordinates, Survey Controls and Topographic Surveys

Prior to 2012, a local grid, including baseline, was established at Edikan by Cluff Mining plc using licensed surveyors. Holes drilled by AGC were surveyed on local grid by qualified mine surveyors. No details are available concerning the methods and equipment used.

For recent Perseus drill programs, collars have been located in UTM, WGS84, Zone 30N co-ordinates and transformed to local grids – one for the AAF-Fobinso area, one for the "Eastern Pits" (Fetish, Bokitsi South, Chirawewa) and one for Nkosuo. Perseus drill hole collars have been surveyed by qualified surveyors using total station survey equipment and, more recently, DGPS.

Local elevations are adjusted by adding 1,000m to avoid negative values.

Topographic surfaces are based on ground survey points of the natural surface (in areas not yet disturbed by mining), surveys of historic pits previously mined by AGC and surveys of the active open pit operations, all by qualified PRU mine surveyors.

9.3 Exploration Activity and Results

Exploration by PMGL has included a combination of surface geochemical sampling (soil sampling), limited shallow auger sampling, and both surface and airborne geophysics.

Soil sampling by PMGL and its predecessor companies prior to 2016 involved the collection of over 25,000 samples, assayed for gold by a variety of methods including Aqua Regia, 50gm Fire Assay and 1kg BLEG. A total of 5,828 of these samples were also analysed for a suite of elements by ICP. Several parameters were recorded at the sample sites, including soil type, interpreted regolith type, landscape/landuse description, and slope and slope direction. The percentage of pisolites/iron nodules, quartz, organic material and lithic fragments in the soil was also recorded for most sample sites.

Most sampling was carried out on a primary grid of 160m x 40m, closing up to 80m x 40m in areas of anomalism. Reconnaissance sampling on the remoter parts of the Nsuaem PL was conducted on 800m x 50m centres.

A study by Wilde (Wilde, 2016) identified various issues with the soil sampling data due to the numerous phases of sampling, variations in the soil fractions analysed, the various assay laboratories employed, and the different assay techniques employed. Levelling of the data from such diverse backgrounds proved difficult. Nevertheless, levelling of the gold values using ioGAS software and using the 99 percentile of the percentile-levelled data yielded 76 discrete gold-in-soil anomalies. The bulk of these have been tested by drilling, either prior to the study or subsequently.

Post-2016, PMGL has conducted additional soil sampling programs on the Agyakusu AM and Agyakusu DML properties. Both these programs involved the collection of -1mm soil fractions that were analysed for gold by 1kg BLEG at the ALS laboratory in Kumasi. Blanks, CRM standards and field duplicates were collected for both programs at a ratio of 1in 20.

Some 1704 soil samples were taken from the northwestern arm of the Agyakusu AM permit, with samples collected on a nominal 160m x 40m grid. Only areas of residual soil were sampled, drainages with transported regolith remaining unsampled. As expected, the survey revealed an exceptionally strong anomaly over the Nkosuo prospect, with isolated spot highs at several other sites (Figure 9-1).

Drill testing of the Nkosuo prospect commenced in July 2021 and to end of December drilling totalled:

- 1,716 m in 21 RC holes
- 1,403 m in 12 holes cored from surface; and
- 6,434 m of RC drilling and 9,428 m of core drilling in pre-collared diamond core holes.

That work has outlined a mineralised granite body extending over 600 m strike and up to 200m width, dipping at about 70° to the NW. Typical of Edikan granite-hosted mineralisation, gold is associated with sheeted and stockwork quartz veins in sericite altered granite containing disseminated pyrite and lesser arsenopyrite. The granite appears to have been closed off to the NE but remains open to the southwest and drilling is progressing in that direction. Enclosing metasedimentary rocks do not contain potentially economic gold grades.

Table 9-1: Significant drill intercepts at Nkosuo prospect

Hole ID	East (mE)	North (mN)	Drill Type	Azimuth (°)	Dip (°)	Depth (m)	No of samples	From (m)	To (m)	Width (m)	Grade (g/t)
NKS0001RC	10989.31	20081.22	RC	119	-55	160	*32*	23	55	32	2.61
NKS0002RD	11000.00	20000.00	RCDD	119	-55	318.2	*37*	12	49	37	1.1
NKS0002RD	11000.00	20000.00	RCDD	119	-55	318.2	*10*	126	136	10	1.17
NKS0002RD	11000.00	20000.00	RCDD	119	-55	318.2	*5*	229	234	5	21.22
NKS0004RD	10928.19	20082.94	RCDD	119	-55	165.3	*100*	50	150	100	1.82
NKS0005RD	10842.74	20159.46	RCDD	119	-55	245.20	*11*	82.00	93.00	11.00	1.59
NKS0005RD	10842.74	20159.46	RCDD	119	-55	245.20	*31*	117.00	148.00	31.00	1.15
NKS0005RD	10842.74	20159.46	RCDD	119	-55	245.20	*15*	152.00	167.00	15.00	1.48
NKS0006RD	10840.81	20081.21	RCDD	119	-55	264.2	*13*	66	79	13	1.54
NKS0006RD	10840.81	20081.21	RCDD	119	-55	264.20	*4*	107.00	111.00	4.00	3.27
NKS0006RD	10840.81	20081.21	RCDD	119	-55	264.20	*17*	236.90	253.00	16.10	1.09
NKS0007DD	11082.26	20001.36	DD	119	-55	183.70	*4*	0.00	5.00	5.00	2.13
NKS0007DD	11082.26	20001.36	DD	119	-55	183.70	*15*	10.20	31.70	21.50	1.32
NKS0007DD	11082.26	20001.36	DD	119	-55	183.70	*20*	43.20	63.20	20.00	0.83
NKS0007DD	11082.26	20001.36	DD	119	-55	183.70	*17*	75.10	91.80	16.70	1.17
NKS0007DD	11082.26	20001.36	DD	119	-55	183.70	*17*	111.00	130.00	19.00	1.29
NKS0008RD	10918.85	20158.70	RCDD	119	-55	126.20	*13*	23.00	36.00	13.00	1.10

Hole ID	East (mE)	North (mN)	Drill Type	Azimuth (°)	Dip (°)	Depth (m)	No of samples	From (m)	To (m)	Width (m)	Grade (g/t)
NKS0008RD	10918.85	20158.70	RCDD	119	-55	126.20	*75*	42.00	117.25	75.25	2.71
NKS0011RC	11000.88	20160.55	RC	119	-55	45.00	*12*	14.00	26.00	12.00	1.02
NKS0013RC	10958.20	20077.86	RC	119	-55	122.00	*43*	41.00	84.00	43.00	1.97
NKS0014RC	10956.73	20119.15	RC	119	-55	120.00	*13*	54.00	67.00	13.00	1.16
NKS0014RC	10956.73	20119.15	RC	119	-55	120.00	*17*	85.00	102.00	17.00	2.18
NKS0015RD	10916.53	20118.68	RCDD	119	-55	189.20	*17*	22.00	39.00	17.00	1.05
NKS0015RD	10916.53	20118.68	RCDD	119	-55	189.20	*59*	85.00	144.00	59.00	1.33
NKS0019RD	10882.05	20157.94	RCDD	119	-55	207.10	*15*	5.00	27.00	22.00	2.30
NKS0019RD	10882.05	20157.94	RCDD	119	-55	207.10	*18*	69.00	87.00	18.00	1.91
NKS0019RD	10882.05	20157.94	RCDD	119	-55	207.10	*4*	99.00	146.00	48.00	1.03
NKS0020RD	10834.45	20120.42	RCDD	119	-55	279.30	*7*	56.00	63.00	7.00	2.78
NKS0020RD	10834.45	20120.42	RCDD	119	-55	279.30	*10*	98.00	108.00	10.00	1.68
NKS0020RD	10834.45	20120.42	RCDD	119	-55	279.30	*7*	129.00	136.00	7.00	3.52
NKS0021RD	10997.72	19839.25	RCDD	119	-55	255.20	*12*	13.00	25.00	12.00	1.74
NKS0021RD	10997.72	19839.25	RCDD	119	-55	255.20	*14*	71.00	84.00	14.00	0.58
NKS0021RD	10997.72	19839.25	RCDD	119	-55	255.20	*13*	*114.00*	127.00	13.00	0.73
NKS0021RD	10997.72	19839.25	RCDD	119	-55	255.20	*24*	136.00	161.00	25.00	1.03
NKS0023DD	11075.62	19838.42	RCDD	119	-55	125.80	*14*	*0.00*	20.10	20.10	0.67
NKS0023DD	11075.62	19838.42	RCDD	119	-55	125.80	*16*	*44.60*	66.50	21.90	0.67
NKS0023DD	11075.62	19838.42	RCDD	119	-55	125.80	*6*	*71.00*	78.00	7.00	0.92
NKS0023DD	11075.62	19838.42	RCDD	119	-55	125.80	*8*	88.00	96.00	8.00	1.04
NKS0023DD	11075.62	19838.42	RCDD	119	-55	125.80	*7*	100.00	107.00	7.00	0.62
NKS0023DD	11075.62	19838.42	RCDD	119	-55	125.80	*5*	114.00	120.00	6.00	1.17
NKS0025RD	10921.06	19920.41	RCDD	119	-55	414.30	*8*	116.00	124.00	8.00	1.15
NKS0025RD	10921.06	19920.41	RCDD	119	-55	414.30	*6*	131.00	137.00	6.00	0.74
NKS0026RC	11111.23	19759.19	RCDD	119	-55	85.00	*7*	3.00	10.00	7.00	1.17
NKS0026RC	11111.23	19759.19	RCDD	119	-55	85.00	*32*	23.00	55.00	32.00	0.87

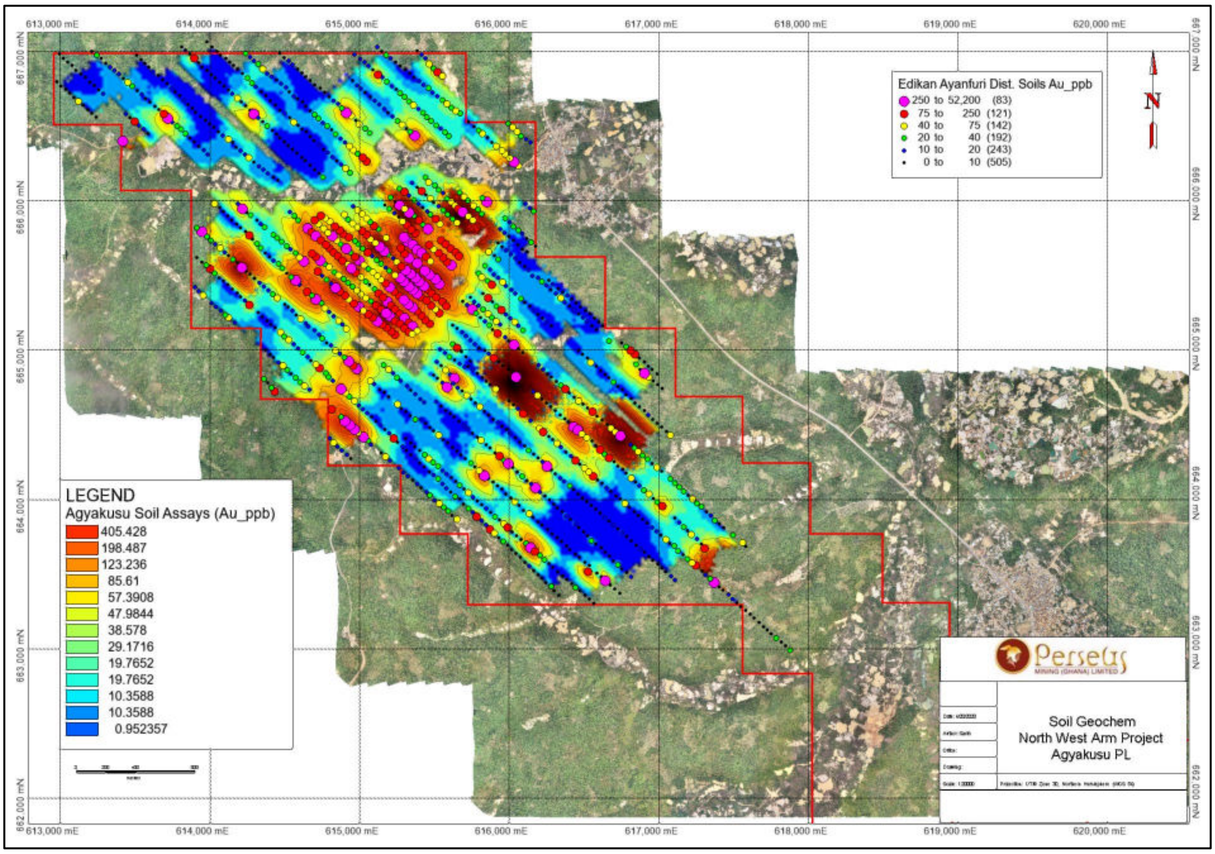

Figure 9-1: Gold-in-soil results, Agyakusu AM Permit.

On the Agyakusu DML permit 2950 samples were collected on an initial 160m x 40m grid that was locally infilled to 80m x 40m. The results revealed a number of NE-SW anomalous trends extending southwest from Nkosuo (Figure 9-2). These are broadly coincident with known granitic dykes that have been locally exploited by artisanal miners. Limited and poorly executed drilling was directed towards the known artisanal workings by previous explorers in the area, but the bulk of the soil anomalism remains untested. PMGL plans to refine the anomalism further by a planned augering program prior to deeper drill testing.

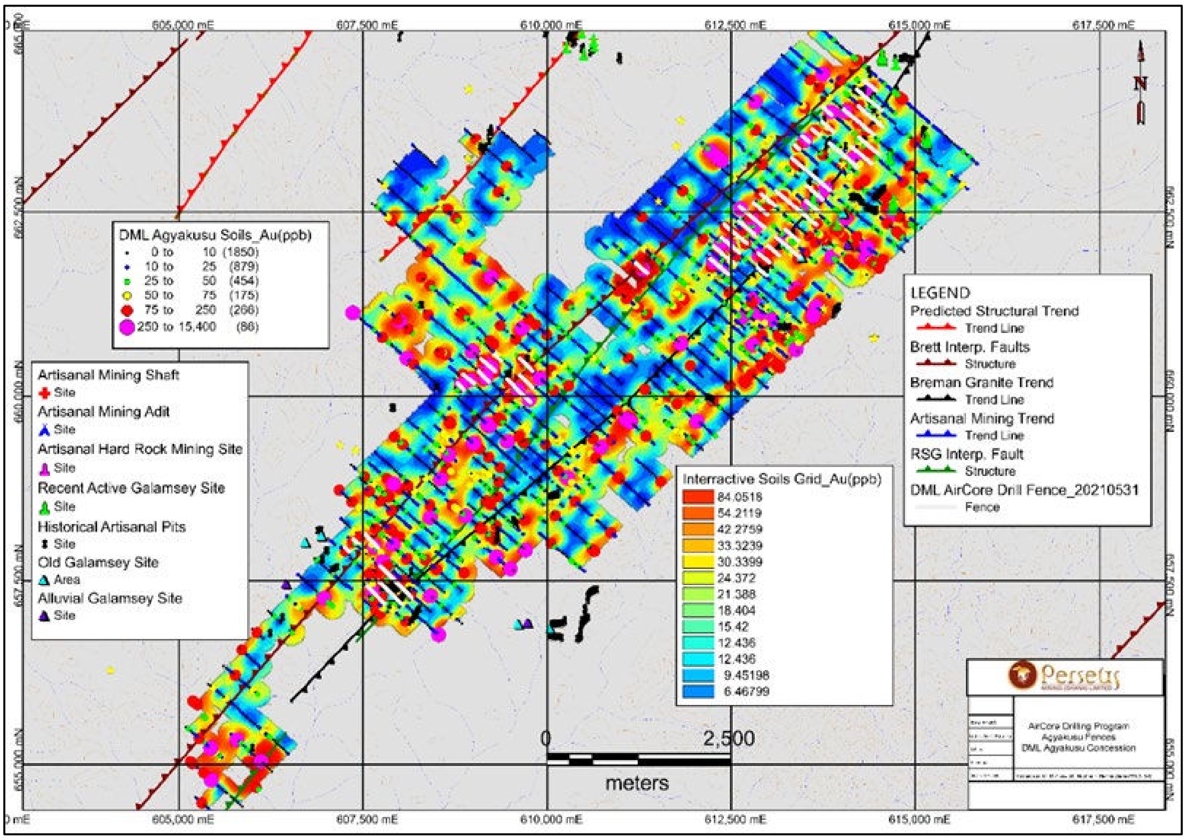

Figure 9-2: Gold-in-soil results, Agyakusu DML Permit.

Auger geochemical sampling of the deeper soil profile has been relatively limited to date. On the currently held permits the only augering conducted was on the Nanankaw ML where 113 holes were drilled at the Huntado prospect for a total meterage of 663m. The results were inconclusive, failing to define anomalism of higher tenor than that encountered in soil sampling.

PMGL has also conducted several phases of geophysical surveys involving both surface and airborne methods. In 2008 three blocks of gradient array IP covering a combined 15km x 3km area were surveyed along the Akropong Shear Zone in an attempt to map potentially mineralised graphitic shears. Further blocks were surveyed in 2012 over the Mampong, AF-Gap, Fobinso and Nkotumso areas. The IP Resistivity proved highly successful in defining the main Akropong shear corridor as a distinct resistivity and chargeability feature (Figure 9-3) but was less successful in identifying 'resistive' intrusive bodies (Buckingham et al. 2017).

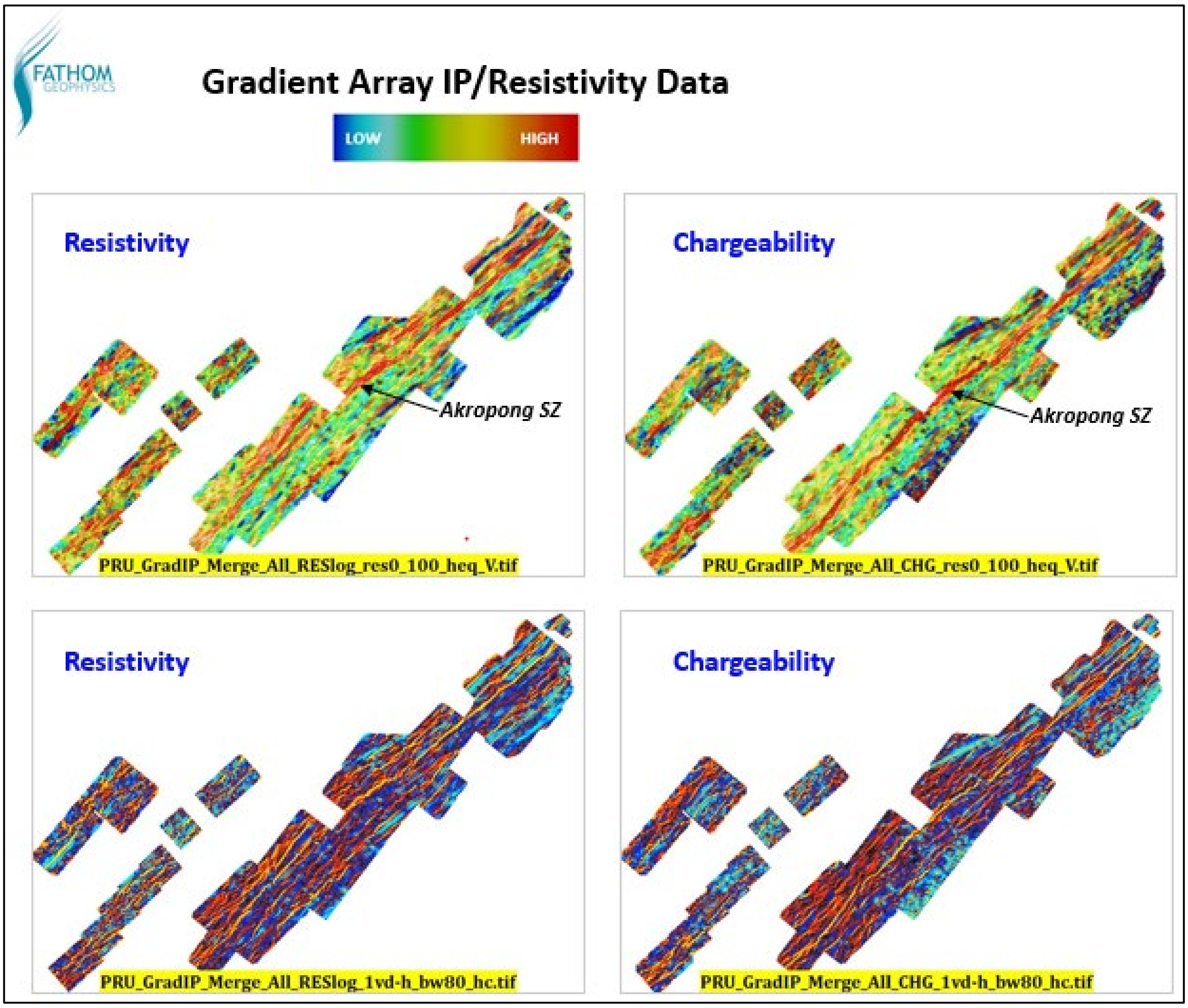

Figure 9-3: Gradient IP Resistivity & Chargeability, Edikan Gold Mine.(Fathom Geophysics).

Airborne geophysical surveys have been flown over the core Edikan Property area by Fugro in 2010 (DEM, aeromagnetics and radiometrics) and Geotech in 2016 (DEM, aeromagnetics, radiometrics and VTEM).

The 2010 Fugro survey covered an area of 133km^2 for a total of 3502 line-km. The survey was flown on 50m line spacings at a magnetometer sensor height of 20m, with tie lines at 500m. Flight lines were oriented at 130^o.

The 2016 Geotech survey covered an area of 243km2 for a total of 2674 line-km. The survey was flown on 100m line spacings at an EM sensor height of 35-45m, with tie lines at 1000m. Flight lines were oriented at 135^o.

The results of the combined data from both surveys were integrated, processed, and analysed in a comprehensive study by Fathom Geophysics (Buckingham et al., 2017). Fathom used the magnetic data, in combination with SRTM data, primarily to map structures. The VTEM data was primarily used to map resistivity in an attempt to identify granitic bodies that were expected to be relatively resistant compared to the surrounding more conductive metasediments. Initial evaluation of the resistivity data in particular appeared to confirm the VTEM resistivity was able to define larger granite bodies, with strong anomalies over the known AF-Gap and Fobinso granites and weaker anomalies over the smaller Esuajah North and South granites (Figure 9-4). The resistivity also revealed a series of NNE-trending 'formational' resistors that were interpreted to reflect favourable corridors for exploration, potentially reflecting intrusive emplacement and/or alteration along major structures. These zones were consequently targeted by follow up drilling in 2017-2018.

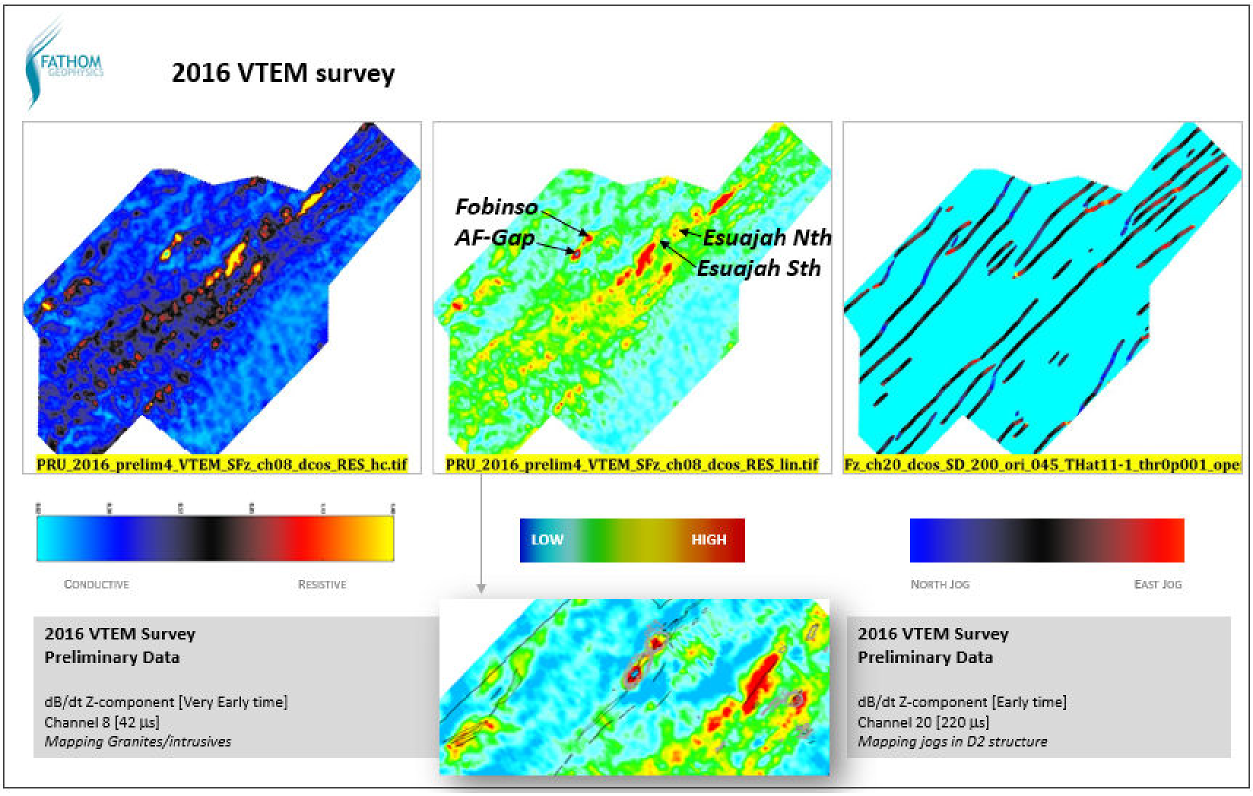

Figure 9-4: VTEM Resistivity, Edikan Gold Mine (Fathom Geophysics).

The Fathom study formed part of a broader targeting exercise conducted by CGSG (Corporate GeoScience Group) in early 2017 (Kreuzer, 2017). This study drove exploration activities at Edikan over the period 2017-19, with major drilling programs targeting the resistivity corridors defined by the VTEM. This resulted in the discovery of a previously unrecognised and essentially 'blind' mineralised intrusive at the Esuajah Gap prospect. The Esuajah Gap intrusive lies between the Esuajah North and South intrusives but is discrete from both. It projects almost to surface on the northern outskirts of Ayanfuri village. Although a small oxide deposit was subsequently defined, the proximity to Ayanfuri village effectively sterilises the potential for mining and no further work is planned.

An airborne geophysical survey was also flown over the optioned properties of Agyakusu AM, Agyakusu DML and Domenase. The combined AEM-magnetics-radiometrics-DEM survey was flown by NRG in 2020 using their Xcite EM system. The survey covered an area of 150km^2 for a total of 2034 line-km. The survey was flown on 100m line spacings at an EM sensor height of 30m, with tie lines at 1000m. Flight lines were oriented at 135°. The data was assessed as being of good quality although the EM and magnetic data were negatively impacted by a number of high-voltage power lines and urban areas. The geophysical data from the 2016 Geotech survey and the 2020 NRG survey are currently being integrated as a basis for geological interpretation and targeting.

10 Drilling

10.1 Drilling History

Drill hole information available to assist exploration targeting and resource estimates includes holes drilled by AGC between 1996 and 2000 (Table 10-1). Information from prior drilling by Cluff is not available.

Table 10-1: AGC Drilling 1996 - 2000

Prospect	No. of holes by drillhole type		Metres by drillhole type		Total holes	Total metres
	DD	RC	DD	RC		
Abnabna	-	46	-	2,420	46	2,420
Fobinso	-	112	-	5,785	112	5,785
Esuajah North	-	65	-	3,778	65	3,778
Esuajah South	2	34	268	2,050	36	2,318
Fetish	9	238	1,002	23,633	247	14,635
Chirawewa	-	112	-	6,584	112	5,584
Others	-	232	-	12,868	232	12,868
				Total	**850**	**47,388**

The number of drill holes and meters completed by Perseus until December 2021 are summarised in Table 10-2.

No drilling was conducted at Edikan from 2001 until Perseus Mining Ltd commenced drilling on August 12, 2006. In May 2007, Perseus Mining Ltd undertook its first drilling outside the known deposits resulting in the early discovery of a granite hosted deposit referred to as AF Gap, which was the first new deposit to be discovered at Edikan for 10 years. Exploration activity steadily increased until late 2009 to convert the most prospective deposits into Mineral Resources.

Between mid-2010 and early 2012, Perseus continued to test deeper portions of the identified Mineral Resources. The deepest holes at Fetish and AF Gap exceeded 600 m. Drilling activity peaked in 2011 when more than 1,700 holes for some 210,000 m were completed to improve the conversion from Mineral Resources to Mineral Reserves.

From 2012 onwards, after commencement of mining activities at Edikan, the focus of exploration shifted towards satellite prospects that had previously received little attention (e.g., Mampong, Besem, Nkonya).

Contract drilling crews have been used for all programs under the supervision of Perseus staff. Drilling companies used at the Property include; Eagle Drilling (UK), Burwash Contract Drilling (Canada), Geodrill Ghana Limited (Ghana), Minerex Drilling Contractors Limited (Ghana), Boart Longyear Limited (Ghana), Hall Core Drilling Africa Ltd (South Africa) and Orbit Garrant (Canada). The bulk of drilling over the MRE areas has been completed by Geodrill and Boart Longyear.

Drilling on the Heap Leach pads was carried out by Perseus between 2011 and 2015 during four campaigns and was completed by four different contractors. The breakdown of these drilling programs is shown in Table 10-3.

For the deposits that have current MRE's, excluding the heap leach pads, post-2012 drilling campaigns have included:

- 8 pre-collared core holes for 2,456 m in AF Gap deposit in 2013;
- 4 pre-collared core holes for 730 m in Bokitsi North lode (Fetish pit) in 2015;
- 9 RC holes for 1,122 m drilled from within the Fetish pit in 2021;
- 61 core holes for 5,886 m drilled at Esuajah South deposit in 2021, and
- the 133 holes drilled at Nkosuo between July and December 2021.

The above post-2012 holes and metres are included in the tallies in Table 10-2.

Collar locations of all drill holes are shown in Figure 10-1. Drill hole location plans and representative cross-sections at each of the deposits that comprise the Mineral Resources are presented in Section 14.

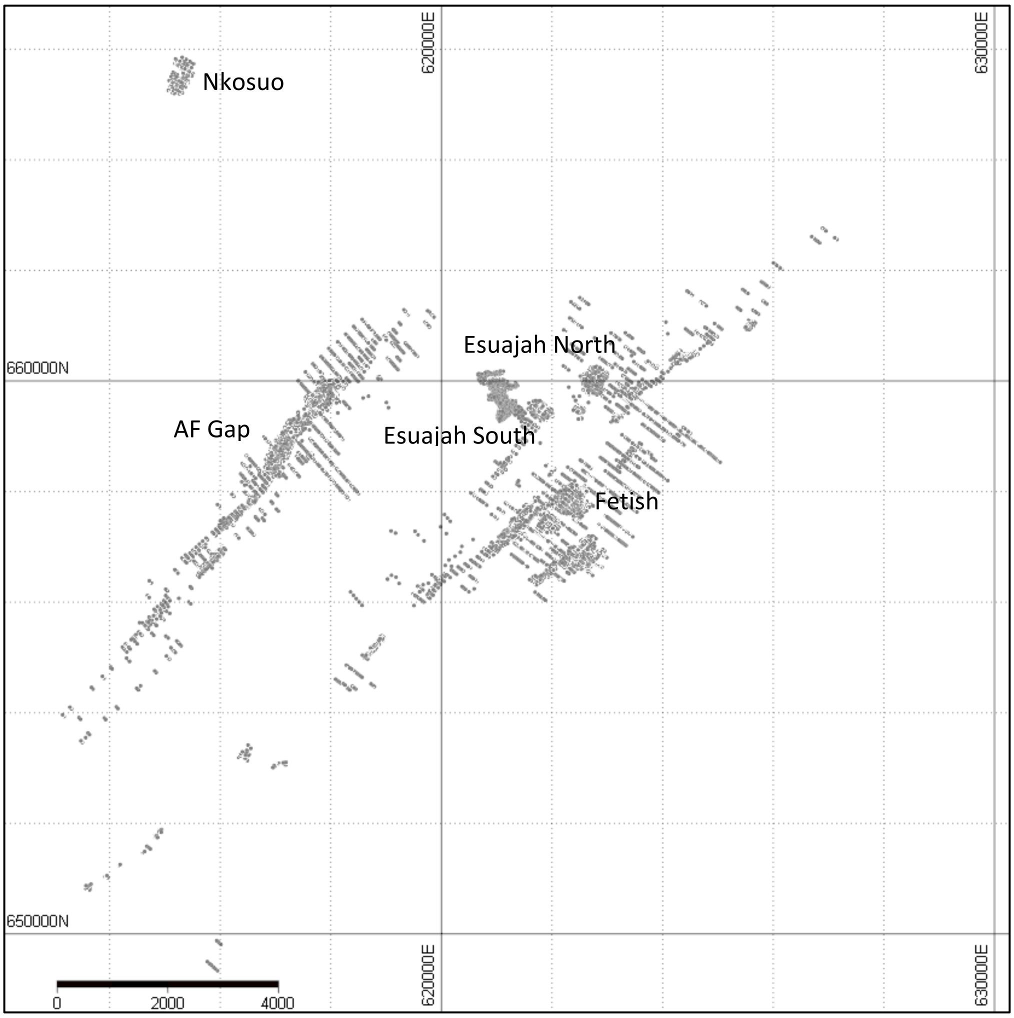

Figure 10-1: Edikan Gold Mine drill hole collar locations

Table 10-2: Edikan Property Summary of Perseus Drilling

Prospect	Date From	Date To	No. of holes by drillhole type			Metres by drillhole type				Total holes	Total metres
			DD	RC	RCDD	DD	RC	RCDD (RC)	RCDD (DD)		
Abnabna	14 Sep 2006	15 May 2013	53	75	102	9,105	6,780	9,254	15,586	230	40,725
AF Gap	03 Apr 2007	02 Jun 2016	179	214	169	39,234	15,662	15,743	28,239	562	98,878
Fobinso	15 Sep 2006	05 Jun 2013	142	310	50	32,089	26,112	4,862	7,438	502	70,501
Esuajah North	12 Aug 2006	16 Dec 2019	130	255	67	28,537	6,278	7,736	13,233	452	55,784
Esuajah South	29 Aug 2006	12 Oct 2020	164	79	26	35,811	3,341	3,098	6,605	269	48,855
Fetish	02 Sep 2006	16 Apr 2021	201	304	56	52,518	25,034	6,872	10,380	561	94,904
Heap Leach *	16 Jun 2011	25 Jul 2015		691	-	-	11,989	-	-	691	11,989
Bokitsi	26 Feb 2008	22 Oct 2019	11	222	58	1,574	16,052	5,274	3,239	291	26,139
Chirawewa	08 Sep 2006	01 Mar 2015	78	375	12	14,175	28,140	1,034	501	465	43,850
Nkosuo	02 Jul 2021	31 Dec 2021	13	48	72	1,527	4,102	7,721	11,076	133	24,426
Others	21 Nov 2007	31 Oct 2020	45	912	118	7,700	77,899	11,163	11,388	1,075	108,100
									Total	**5,231**	**624,051**

*Heap Leach RC includes 507 AC holes for 8,719 m

Table 10-3: Breakdown of drilling on Heap Leach pads

Drilling Company	Rig Type	Hole Type	No. of holes	No. of metres
Minerex Drilling Contactors Ltd	Track mounted MPD1000 multi-purpose	RC (5 ¼'')	27	643
Boart Longyear (Gh) Ltd	T130XD Schramm	AC (75 mm)	27	368
Geodrill (Gh) Ltd	UDR650 multi-purpose	AC (75 mm)	480	8,351
African Mining Services (Gh) Ltd	Track mounted RC grade control	RC (5 ¼'')	157	2,627
		Total	**691**	**11,989**

10.2 Hole Orientation

Most RC holes have inclinations of between 50° and 60° and holes cored from surface vary from 45° to vertical. With few exceptions, drill hole azimuths were planned to be orthogonal to the strike of mineralisation. In general, the true thickness of the mineralisation is 60% to 80% of the intersection lengths.

10.3 Collar Surveys

Prior to 2012, a local grid, including baseline, was established at Edikan by Cluff Mining plc using licensed surveyors. Holes drilled by AGC were surveyed on local grid by qualified mine surveyors. No details are available concerning the methods and equipment used.

For recent Perseus drill programs, collars have been located in UTM WGS84 Zone 30N co-ordinates and transformed to local grids – one for the Abnabna - AF Gap - Fobinso area ("West Grid"), one for the "Eastern Pits" (Esuajah North, Esuajah South, Fetish, Bokitsi South, Chirawewa) and one for Nkosuo. Perseus drill hole collars have been surveyed by qualified surveyors using total station survey equipment and, more recently, DGPS.

Local elevations are adjusted by adding 1,000m to avoid negative values.

10.4 Downhole Surveys

Down hole surveys were not routinely undertaken by AGC for either RC or diamond drilling. Holes have been assumed to be straight. AGC holes average 60 m in depth and with mining having progressed to considerably greater depths at AF Gap, Fetish and Esuajah North, very few AGC data inform the remaining portions of those resources. Assays from AGC RC drill holes at Esuajah South were excluded from data that inform the Mineral Resource estimate for that deposit.

At the commencement of diamond drilling by Perseus, only acid tube dip tests were taken so the 58 earliest diamond drill holes had no azimuth recordings. Subsequently, almost all Perseus drill holes have been down hole surveyed at 10 – 30 m intervals using either Reflex or Flexit multi-shot equipment. A non-magnetic chrome steel starter RC rod is used when RC drilling.

For the deposits that have current MRE's, excluding the heap leach pads, 12 diamond core holes and 77 RC holes do not have downhole surveys available. Vertical RC and air core holes in the heap leach pads were not down-hole surveyed.

10.5 Geological Logging

Geological logging by qualified Perseus geologists is completed for the entire length of each hole. All logging, including comments, is manually entered into spreadsheets, from which it is imported into a relational database. Prior to 2021, the data were maintained using Maxwell Geoservices Datashed platform; in 2020 the acQuire platform was adopted.

Holes are logged under six principal fields: weathering, lithology, alteration, structure, mineralogy and veining. The logging system is designed to be consistent between deposits. Up until 2012, sieved RC chips representative of each metre drilled were glued to "chip boards" From 2013 onward, plastic chip trays have been used.

RC samples are also logged qualitatively for recovery, moisture and contamination. Diamond core recoveries are measured per core run.

10.6 Sampling

RC drill samples were routinely collected at one metre down-hole intervals and manually split through multi-tier riffle splitters. In holes drilled by Perseus between 2006 and 2012, sample splits were normally combined to form two metre composites. Holes drilled from 2013 onward were normally assayed in one metre intervals. In holes drilled from 2021 onward, the bulk recovered one metre samples are weighed to monitor sample recovery. RC holes are normally assayed in entirety.

Diamond core holes drilled by Perseus were normally drilled in HQ diameter to the top of fresh rock, and the core diameter then reduced to NQ. Diamond core was sawn in half, with half submitted for assay, normally in one metre intervals, and half retained in core trays for reference. Half-core representing more than 90% of core drilled at Edikan remains available in core storage at the mine site. Long intervals of obviously barren and unaltered metasediments in core holes are normally not sampled.

10.7 Conclusions

The Qualified Person is of the opinion that, after culling of certain data as described in 14.5.5, below, there are no drilling or sample recovery factors that materially impact the accuracy and reliability of the sample data used to inform estimates of Mineral Resources.

11 Sample Preparation, Analysis and Security

11.1 Introduction

This chapter summarises:

- Sample preparation techniques used by Perseus and the previous operators
- Analytical techniques
- Quality control and quality assurance measures undertaken
- Methods of bulk density testing
- Sample security

Sampling procedures and assay methods used by previous property owner AGC are undocumented, however it is known that many samples were analysed by cyanide leach.

With mining having progressed to considerably greater depths than AGC's drilling at AF Gap, Fetish and Esuajah North, very few AGC data inform the remaining portions of those resources. Assays from AGC RC drill holes at Esuajah South were excluded from data that inform the Mineral Resource estimate for that deposit. The Qualified Person considers that the lack of information and quality control data for AGC's drilling does not detract materially from the reliability of the MRE's reported herein.

Over the time that Perseus has controlled the property, several assay laboratories have been utilised. The sample preparation methods are very similar across all the laboratories, however the analytical method varied through time. Pre-2008 samples were analysed by cyanide leach (BLEG or Leachwell™), while post-2008 analyses used 50 g Fire Assay (FA50). Over 90% of the samples used in the current MRE's have been analysed by FA50.

Quality Control and Quality Assurance (QAQC) procedures, including insertion of certified reference materials (CRMs), blanks, field duplicates and umpire assaying, are a routine part of the sampling process for all drilling conducted by Perseus.

11.2 Sample Preparation

Pre-2020 Perseus core samples were sent to Intertek Minerals Ltd laboratory in Tarkwa for preparation and analysis, while the majority of RC samples were sent to ALS Minerals, Kumasi. A small number were assayed by SGS, Tarkwa. Intertek Minerals were accredited under ISO 17025 by NATA in May 2011. SGS Ghana received ISO 17025 accreditation in July 2009.

Normal sample preparation for both core and RC samples is:

- dry at 110°C for 10-12 hours
- crush the entire sample to -2 mm
- split to approximately 1.5 kg
- pulverise, normally using LM2 disc pulverisers, to 90% passing 75 µm
- mat roll and dip approximately 200 g subsample into a kraft packet

11.3 Assay Methods

Samples from holes drilled by Perseus have been assayed using several methods:

- For RC samples up until 2008 were analysed using Bulk Leach Extractable Gold (BLEG) and 24- hour bottle roll followed by Atomic Absorption Spectrometry (AAS) analysis.
- Post 2008 RC samples were analysed by 50 g fire assay (FA50).
- Diamond core samples were analysed by a 50 g fire assay (FA50) and AAS analysis. A small number of diamond core samples (pre-2008) were analysed at SGS by the Leachwell™ method.

Over 90% of all samples from within the areas with defined MRE's have been analysed by FA50. Table 11-1 presents a summary of analytical methods used for samples from the MRE areas. Intertek at Tarkwa/Ghana (until early 2010 trading as Transworld Laboratories Ltd) and ALS in Kumasi/Ghana are the two principal laboratories used by Perseus. Those laboratories are independent of Perseus and provide analytical services on a commercial basis. The ALS Kumasi laboratory is certified in respect of ISO 17025:2005 for fire assaying for gold and silver by the South African National Accreditation System, certificate number T0747 issued 18 September 2018 and valid until 17 September 2023. The accreditation status of Intertek's Tarkwa mineral laboratory could not be determined.

Between September 2006 and October 2008, 10,683 samples from within the MRE areas were analysed by cyanide bottle roll. The residues of samples reporting above 0.5 g/t Au were analysed by FA50. On average, less than 2.5% of the total gold was not recovered by the bottle roll.

For the Heap Leach drilling, 513 samples from the first 54 holes were submitted to Intertek for bottle roll. All tails were assayed by FA50. On average, 16% of the gold remained in the residues, therefore the bottle roll method was deemed not appropriate for Heap Leach and subsequently all samples were assayed by FA50.

Drill samples collected from Fetish in 2021 were analysed by Perseus mine lab at Edikan (PLB).

Table 11-1: Summary of Analytical Methods used

Method	Total no. of samples	Laboratory			
		ALS	Intertek	Perseus Edikan (PLB)	SGS
FA50	213,143	13,665	196,700	748	2,030
1kg bottle roll	11,196	-	10,401	-	795
Leachwell	2,901	-	-	-	2,901
Total	**227,240**	**13,665**	**207,101**	**748**	**5,726**
% of Total		**6.0**	**91.1**	**0.3**	**2.5**

Table 11-2 summarises the assays methods for the various drill sample types from the various gold deposits.

Table 11-2: Summary of analytical methods by drill type and prospect

Prospect	Type	No. of samples	Laboratory			
			ALS	Intertek	Perseus Edikan (PLB)	SGS
AF Gap	DD	88,718	-	87,797	-	921
	RC	20,045	3,103	13,415	-	3,527
Esuajah North	DD	25,959	302	25,657	-	-
	RC	4,352	1,721	2,631	-	-
Esuajah North	DD	21,442	1,347	19,786	-	309
	RC	1,619	726	893	-	-
Fetish	DD	42,960	-	41,991	-	969
	RC	6,637	3,951	1,938	748	-
Heap Leach	AC	4,394	-	4,394	-	-
	RC	2,947	2,423	524	-	-

11.3.1 Fire Assay

A 50 g sub-sample is taken from the 200 g of pulverised material and is mixed with flux and is then fired at 1,100˚C. The prill is then dissolved in Aqua Regia solution and the resultant liquor is direct read by AAS with a detection limit of 0.01 g/t Au.

11.3.2 BLEG Bottle Roll

A 1 kg portion of pulverised material is placed into the BLEG bottle with 0.5% cyanide solution and water. The mix is then rolled for 24 hours with an additional 2 hours for settling. A 50 ml sub-sample of clear liquor is filtered into a flask and extracted into 5 ml of DIBK which is then direct read by AAS with a detection limit of 0.01 g/t Au.

Where applicable, the portion of gold that has not been dissolved during the leaching process and remained in the residue ('tails') has been analysed by FA50.

11.3.3 Leachwell™

Samples are dried, pulverised and weighed into jars or bottles. An equal or greater, known weight of solution containing cyanide (5%), Leachwell 60X (2%) and NaOH (0.7%) is added to the jar or bottle.

The bottle or jar is then rolled or tumbled for at least an hour then allowed to stand for approximately ten minutes until a layer of clear solution is available for sampling and reading by Atomic Absorption Spectrometry. The grade of the original solid is calculated from the solid/solution ratio and the AAS reading.

Between June and August 2007, 2,732 samples from 82 RC holes at AF Gap and 169 diamond core samples from one hole at Esuajah South were analysed with the Leachwell™ method by SGS in Obuasi/Ghana. Tails from samples >0.5 g/t Au (620 samples) were retrieved and assayed by FA50. On average, 3.7% of the total gold was not dissolved by the Leachwell™ method.

11.4 QAQC

11.4.1 Introduction

Perseus employees insert quality control (QAQC) samples on site prior to the collection of samples by laboratory employees. Perseus employees have no further involvement in the preparation or analysis of the samples.

Pre mid-July 2008, CRMs were inserted at a ratio of 1 in 20 and blanks at 1 in 40.

Since July 2008, CRMs and blanks have been inserted at a nominally 1 in 20 ratio. Field duplicates are nominally taken at 1 in 25. Regular field duplicates are only taken from RC drill samples.

In mid-2010 a comprehensive database audit identified about 10,000 samples that did not meet quality control criteria and hence these were re-assayed. The introduction of the DataShed platform in 2011, followed by the acQuire platform in 2020, has enabled QAQC checks to be carried in a timely manner during data import.

11.4.2 Certified Reference Material (CRM)

11.4.2.1 Introduction

Since October 2008, standard reference material (CRMs) has been sourced exclusively from Geostats Pty Ltd. They consist of the G-series of CRMs, which are in 60 g sachets.

The CRMs have been used to test the accuracy of the assays for both RC and diamond drilling. Between October 2008 and the latest drilling in 2021, a total of 48 different standards have been used to represent the different mineralisation types and grade ranges. The expected value of the standards ranged from 0.4 - 7.24 g/t Au. A summary of the standards used is detailed in Table 11-3.

Five different CRMs have been used for the bottle roll analysis. This type of analysis was only used for the Heap Leach drilling campaigns that were carried out in 2011 and 2012. CRM data for these programs is found in Table 11-4 .

Table 11-3: Summary of CRMs used by Perseus since October 2008

CRM	No.	Au (g/t)	SD	Date from	Date to	Deposit				
						AF Gap	Fetish	Esuajah North	Esuajah South	Heap Leach
G02	203	1.2	0.08	10 Nov 2009	23 Apr 2011	183	7	-	13	-
G300-7	210	1	0.04	17 Nov 2009	20 Jun 2011	162	20	8	20	-
G301-3	79	1.96	0.08	06 Apr 2013	27 Dec 2015	28	11	-	-	40
G302-3	198	2.33	0.12	21 Apr 2011	15 Jun 2012	21	75	95	7	-
G302-6	187	0.99	0.05	10 Nov 2009	24 Apr 2011	134	29	2	22	-
G302-7	275	2.14	0.09	02 May 2011	13 Jun 2012	70	116	88	1	-
G303-2	6	4.15	0.17	10 Apr 2013	09 Apr 2015	2	-	-	-	4
G305-3	225	0.72	0.03	08 Aug 2011	11 Oct 2020	44	53	74	48	6
G306-1	53	0.407	0.026	12 Nov 2008	20 Oct 2009	52	1	-	-	-
G300-7	210	1	0.04	17 Nov 2009	20 Jun 2011	162	20	8	20	-
G301-3	79	1.96	0.08	06 Apr 2013	27 Dec 2015	28	11	-	-	40
G302-3	198	2.33	0.12	21 Apr 2011	15 Jun 2012	21	75	95	7	-
G306-2	323	1.049	0.072	30 Oct 2008	24 May 2012	144	100	34	45	-
G306-7	156	4.5	0.2	01 Dec 2009	13 Jun 2011	108	28	8	12	-
G307-2	57	1.08	0.05	15 Jul 2010	13 May 2011	19	26	2	10	-
G307-5	60	4.87	0.172	06 Nov 2008	30 Oct 2009	37	12	5	6	-
G307-8	27	1.99	0.08	06 Jun 2012	27 Apr 2013	8	-	8	11	-
G308-8	6	2.45	0.12	27 Apr 2013	27 Apr 2013	6	-	-	-	-
G310-6	43	0.65	0.04	23 Apr 2013	08 Sep 2020	3	-	-	5	35
G311-5	15	1.32	0.06	21 May 2013	22 May 2013	0	-	-	-	15

CRM	No.	Au (g/t)	SD	Date from	Date to	Deposit				
G312-6	36	2.42	0.1	20 May 2013	29 Oct 2015	34	2	-	-	-
G315-2	6	0.98	0.04	09 Apr 2021	19 Apr 2021	0	6	-	-	-
G318-9	2	1.15	0.05	17 Apr 2021	19 Apr 2021	0	2	-	-	-
G396-8	94	4.82	0.29	26 Jul 2011	07 Oct 2020	21	29	36	8	-
G397-2	95	4.49	0.18	28 Nov 2011	25 Dec 2012	27	16	44	8	-
G398-4	232	0.66	0.05	12 Jul 2011	26 Jun 2013	68	83	60	6	15
G398-6	169	2.94	0.16	07 Dec 2009	19 Apr 2021	119	33	5	12	-
G900-7	107	3.222	0.159	26 Oct 2008	20 May 2013	80	4	5	-	18
G901-1	334	2.58	0.13	09 May 2011	11 May 2016	64	119	126	6	19
G901-9	301	0.69	0.04	20 Nov 2009	26 Apr 2012	166	70	45	20	-
G901-10	86	0.5	0.03	31 Oct 2008	30 Oct 2009	79	-	1	6	-
G901-13	101	1.181	0.054	28 Oct 2008	16 Oct 2009	76	9	10	6	-
G903-6	15	4.13	0.17	21 May 2013	22 May 2013	0	-	-	-	15
G904-8	183	5.53	0.18	18 Nov 2009	25 May 2011	148	20	5	10	-
G905-1	99	1.16	0.05	02 Jul 2013	27 Jul 2015	14	-	-	-	85
G905-5	179	0.52	0.03	02 Nov 2009	25 May 2011	138	23	1	17	-
G905-7	7	3.92	0.15	20 May 2013	20 May 2013	0	-	-	-	7
G906-1	9	1.67	0.09	20 May 2013	21 May 2013	0	-	-	-	9
G906-8	226	7.24	0.27	07 Dec 2008	23 May 2011	79	90	11	46	-
G907-2	290	0.89	0.06	10 Mar 2010	11 Jul 2011	93	93	42	62	-
G907-4	299	3.84	0.15	12 Feb 2010	15 Apr 213	102	107	33	48	9
G909-5	376	2.63	0.1	08 Aug 2011	03 Jun 2016	152	109	97	7	11
G909-6	258	0.57	0.03	08 Jul 2010	13 Jun 2011	86	111	15	46	-

CRM	No.	Au (g/t)	SD	Date from	Date to	Deposit				
G910-8	12	0.63	0.04	07 Apr 2013	25 Apr 2013	0	-	-	-	12
G910-10	12	0.97	0.04	26 Feb 2013	25 Apr 2013	4	-	-	-	8
G911-4	115	2.43	0.09	01 May 2013	04 Aug 2015	69	-	-	-	46
G911-10	13	1.3	0.05	07 Apr 2013	25 Apr 2013	0	-	-	-	13
G912-8	23	0.53	0.02	08 Sep 2020	11 Oct 2020	0	-	-	23	-
G998-1	173	2.95	0.12	17 Nov 2009	15 Apr 2013	126	19	13	8	7
G998-6	215	0.8	0.06	15 Aug 2011	28 Sep 2020	72	35	75	19	14
G999-2	579	0.63	0.06	02 Nov 2009	23 May 2011	307	172	34	66	-

Table 11-4: CRMs used for Heap Leach drilling

CRM	No.	Au (g/t)	SD	Date from	Date to
G302-7	2	2.14	0.13	14 May 2012	14 May 2012
G305-3	6	0.72	0.06	12 Jul 2011	12 Jul 2011
G398-4	8	0.66	0.07	12 Jul 2011	14 May 2012
G901-9	5	0.69	0.1	12 Jul 2011	14 May 2012
G998-6	2	0.8	0.07	12 Jul 2011	12 Jul 2011

Since July 2008, a total of 6,786 CRMs have been submitted to Intertek and ALS. During the 2021 drilling program for Fetish, 16 CRMs were submitted to the Edikan on-site laboratory.

The bulk of samples have been analysed by Intertek. Table 11-5 summarises that the number of CRMs submitted and their performance. Even though some mislabelled CRMs were identified and removed, a few outliers remained, as the resultant grade did not correspond with any other available CRM.

A submitted CRM has been classified as 'failed' when the reported grade has exceeded the acceptable thresholds, which is set at 3 × the standard deviation (3SD).

In all cases where there has been an outlier, missing assay or failed CRM, the sample sequence surrounding the failed CRM has been re-assayed.

Table 11-5: CRM performance summary

Laboratory	No.	No. swapped	% swapped	No. failures	% failures
ALS	523	23	4.3	27	5.1
Intertek	6,230	77	1.2	136	2.2
Edikan on-site	16	-	0	-	0

11.4.2.2 CRM Performance – Intertek

The Intertek laboratory facilities at Tarkwa have been owned and operated until early 2010 under the name of TWL Transworld Laboratories (GH) Ltd. Shortly before and around the takeover by Intertek in mid-2010, the laboratory had extended phases of sub-standard performance, resulting in significant bias and poor precision. In the second half of 2009, most CRMs reported high across all grade ranges (Figure 11-1). The resultant overcall during this period was over 6%. Poor precision was also occurring with only 75% of all CRMs falling within 2SD, while the accepted standard is 95%.

This bias was addressed later in 2010 and as a result a large number of samples during the problematic period were re-submitted. During late 2010 to early 2011, over 10,000 samples were re-assayed by Intertek, resulting in vastly improved performance. Figure 11-2 shows the results evenly and closely spaced around the expected value.

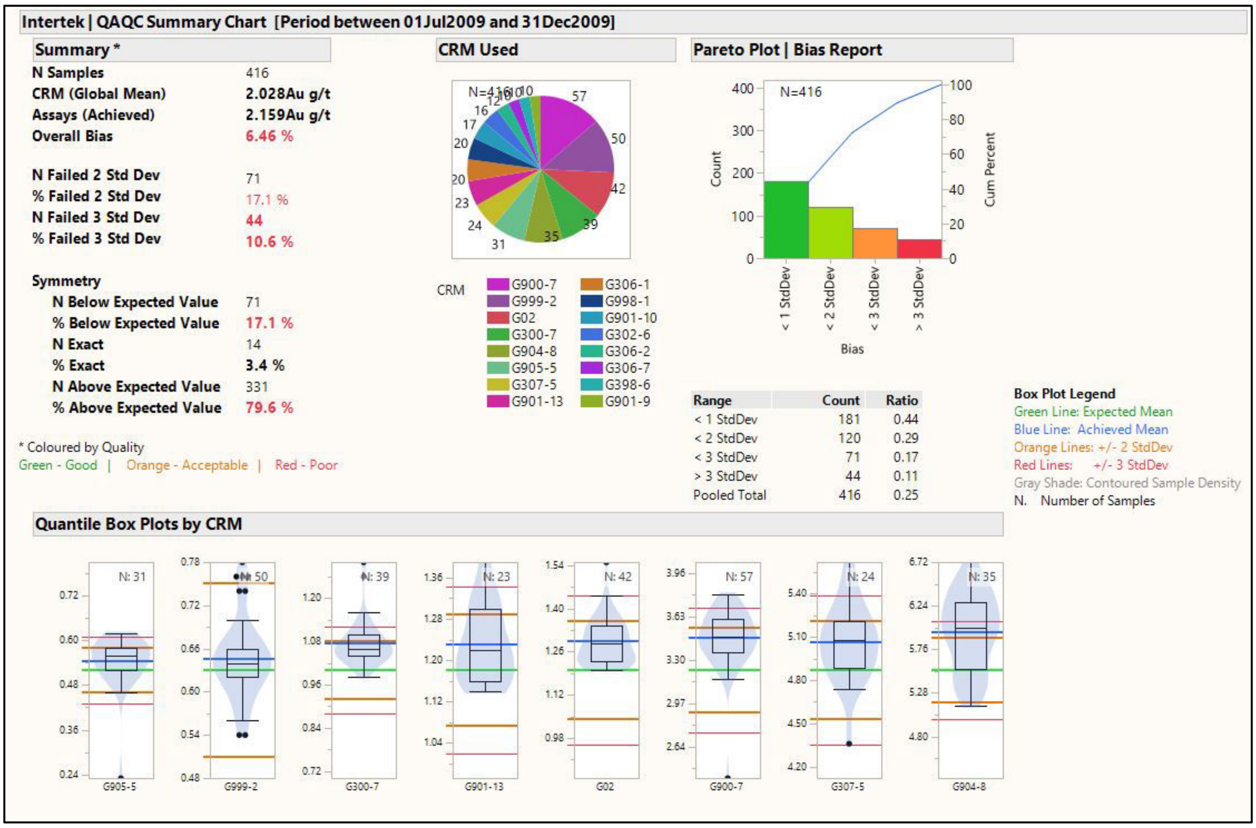

Figure 11-1: Intertek CRM Performance July – Dec 2009

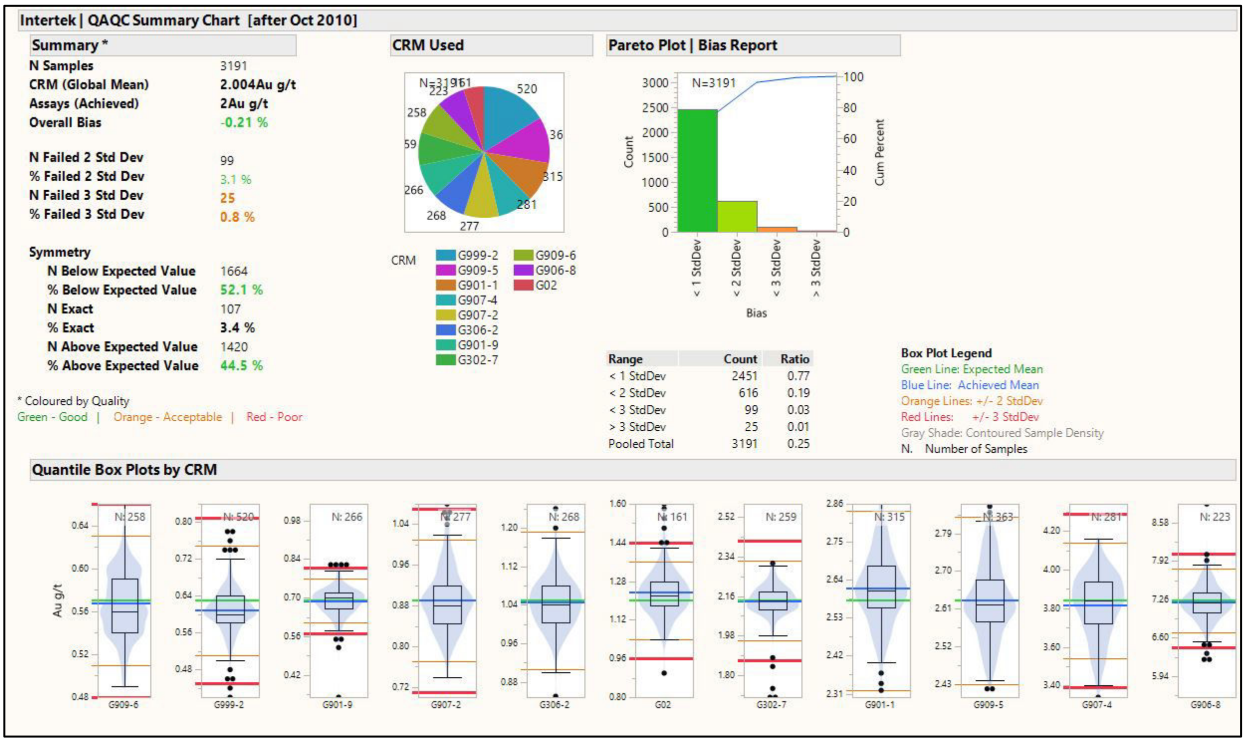

Figure 11-2: Intertek CRM Performance post-October 2010

Individual control charts showing the performance of the most commonly used CRMs (G999-2, G306-2, G909-5 and G907-4) are shown in Figure 11-3 through to Figure 11-6.

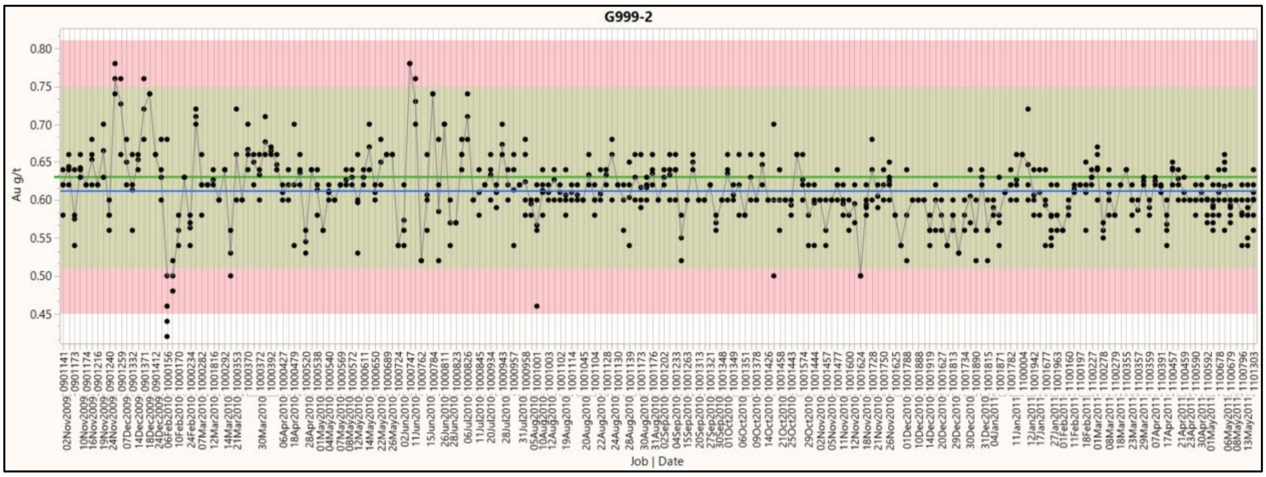

Figure 11-3: Control chart for CRM G999-2

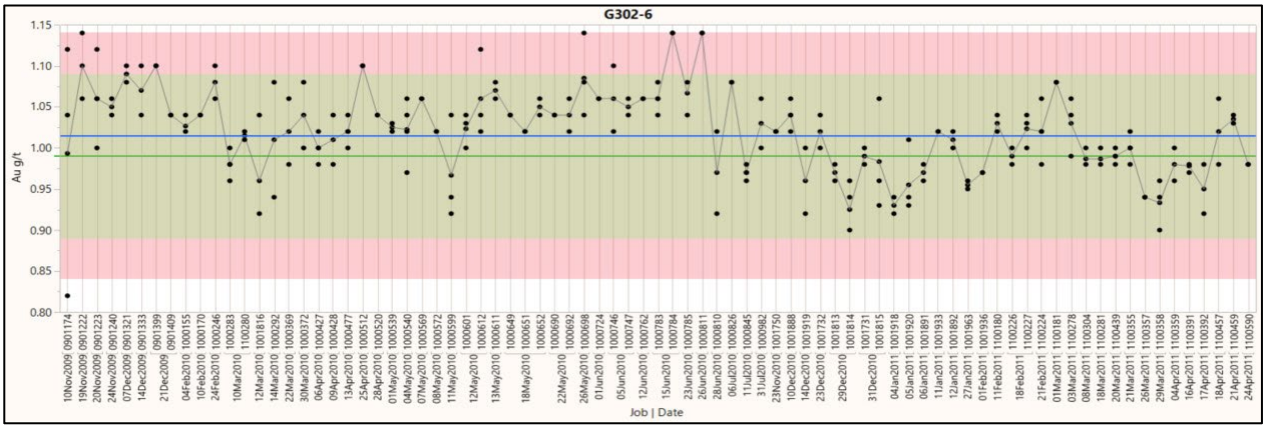

Figure 11-4: Control chart for CRM G302-6

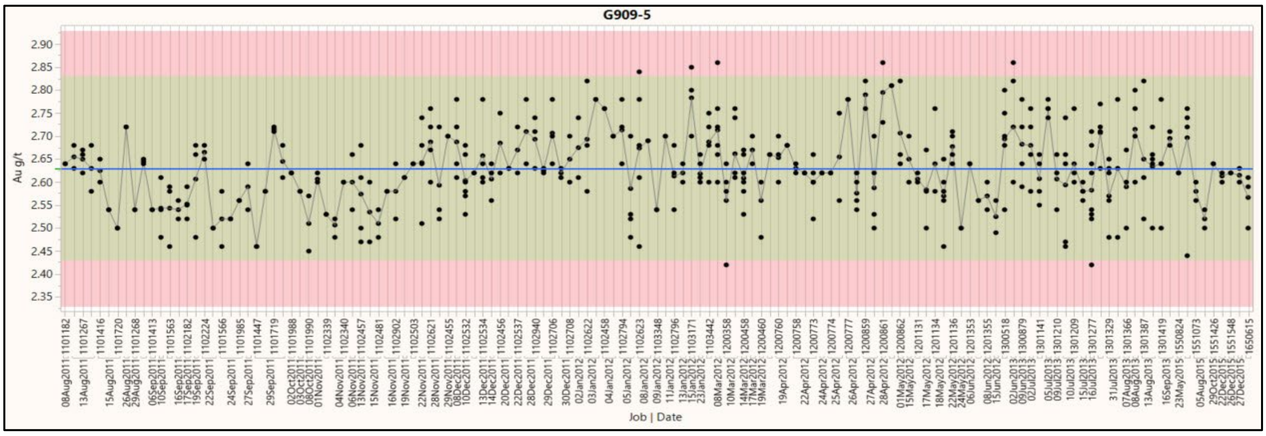

Figure 11-5: Control chart for CRM G909-5

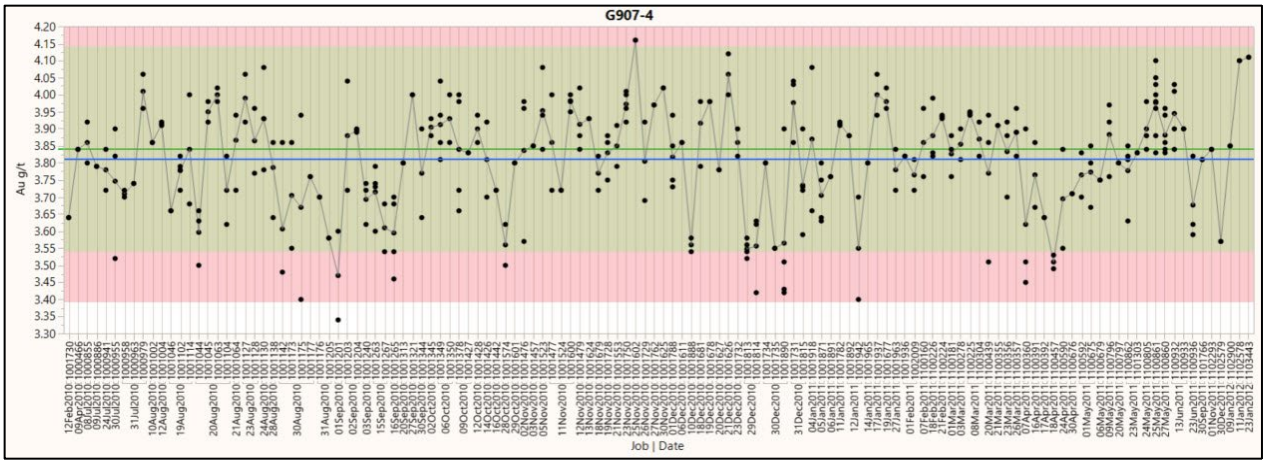

Figure 11-6: Control chart for CRM G907-4

11.4.2.3 CRM Performance – ALS

Since May 2010, ALS has been used for sample analysis, predominantly for RC drilling. Within the MRE areas RC drilling was mainly limited to pre-collars and hence almost exclusively within unmineralized country rock. The performance of these CRMs has not been assessed.

ALS was used for analysis of samples from the 2013 Heap Leach and 2020 Esuajah South drill programs. The number of CRMs submitted was 119 and 69 for the respective programs.

The overall performance of CRMs submitted to ALS indicate that ALS performs well on the low and high grade CRMs but tends to be slightly biased in the 2 – 4 g/t Au range.

The overall performance of CRMs submitted to ALS and the performance for just the 2013 Heap Leach programme is shown in Figure 11-7 and Figure 11-8 respectively.

Figure 11-7: ALS overall CRM performance

Figure 11-8: ALS CRM performance – Heap Leach drilling

11.4.3 Blanks

Prior to June 2008, blank samples made from coarse rejects from RC drilling that had a grade of <0.01 ppm. These were submitted at a rate of 1 in every 50 samples. These are not considered to be true 'blanks' as they have been collected from a mineralised area. An analysis of these data showed poor precisions and accuracy, confirming the unsuitability of this material to be used as a blank.

After June 2008, certified blank material was sourced from Geostats Pty Ltd. A total of ten different types have been used since 2008, with certified values between 0.003 – 0.03 g/t Au. Additionally, a low-grade CRM (GLG304-1) with certified value of 0.154 g/t Au has been included and treated as 'blank'. List of Certified blanks used since October 2008 is presented in Table 11-6.

Table 11-6: List of Certified blanks used since October 2008

CRM	No.	Au (g/t)	Source	Date from	Date to
GLG302-4	1,640	0.003	Geostats	26Oct2008	28Sep2020
GLG304-1	166	0.154	Geostats	08Jul2010	11Nov2010
GLG307-1	353	0.003	Geostats	15Aug2011	25Dec2012
GLG307-3	1,080	0.003	Geostats	02Nov2009	06Apr2013
GLG307-5	94	0.0269	Geostats	28Sep2020	19Apr2021
GLG316-5	15	0.0035	Geostats	04Sep2020	07Oct2020
GLG319-1	20	0.0256	Geostats	28Sep2020	11Oct2020
GLG907-1	277	0.0035	Geostats	28Oct2008	22Nov2009
GLG910-3	12	0.032	Geostats	30Nov2012	25Mar2013
GLG910-5	636	0.0025	Geostats	26Jul2011	11May2016
GLG911-3	433	0.004	Geostats	21Jul2012	03Jun2016

Figure 11-9 through to Figure 11-13 are a selection of control charts showing the performance of the Blanks. The shaded area in the figures represents the 3SD limits. The charts suggest that cross contamination during sample preparation is not considered an issue at the facilities, particularly after the takeover by Intertek in mid-2010.

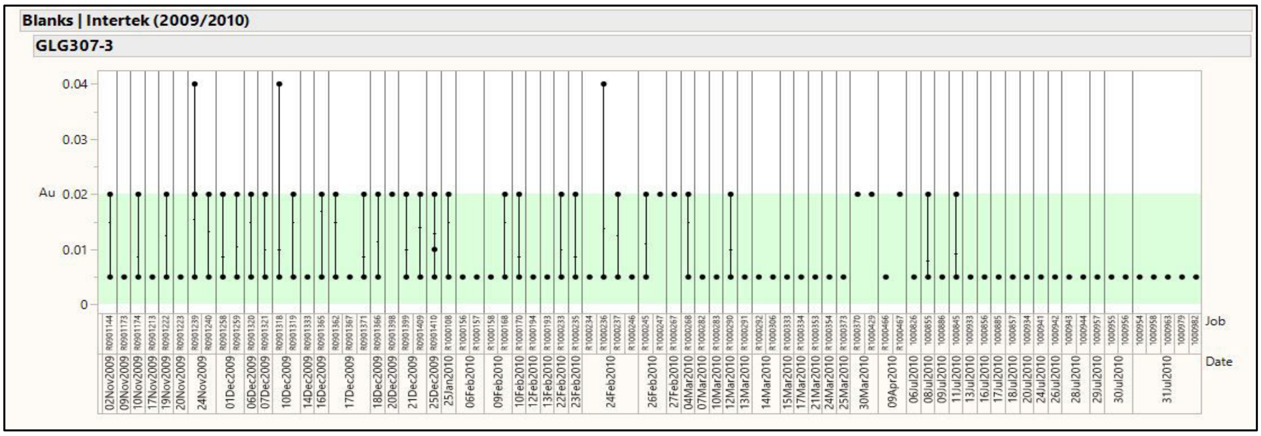

Figure 11-9: Control chart for Blank GLG307-3 – Intertek 2009-2010

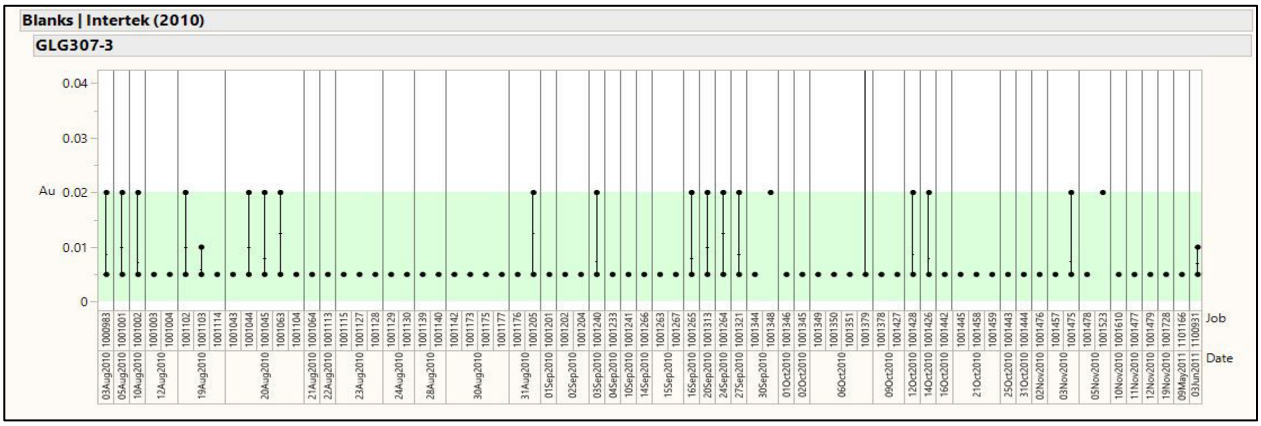

Figure 11-10: Control chart for Blank GLG307-3 – Intertek 2010

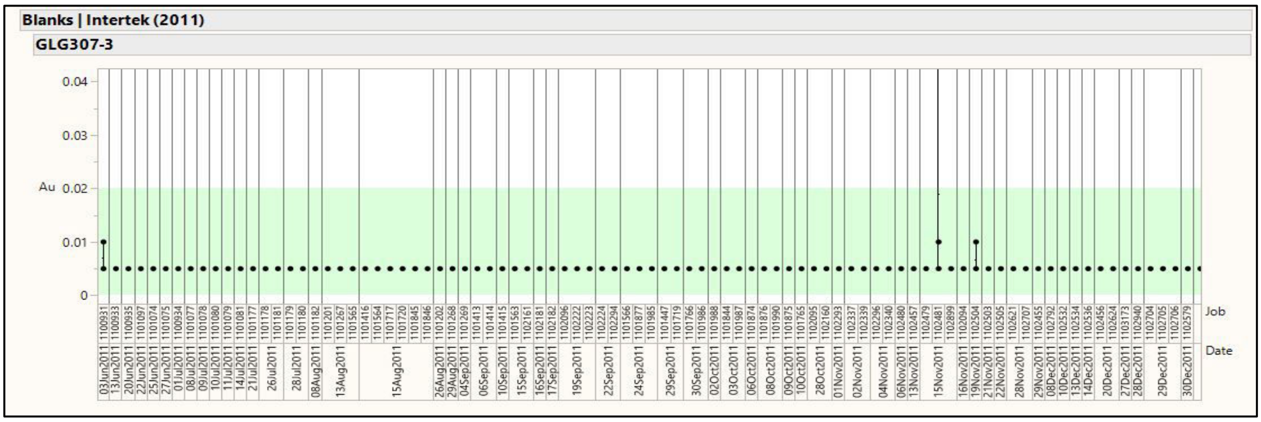

Figure 11-11: Control chart for Blank GLG307-3 – Intertek 2011

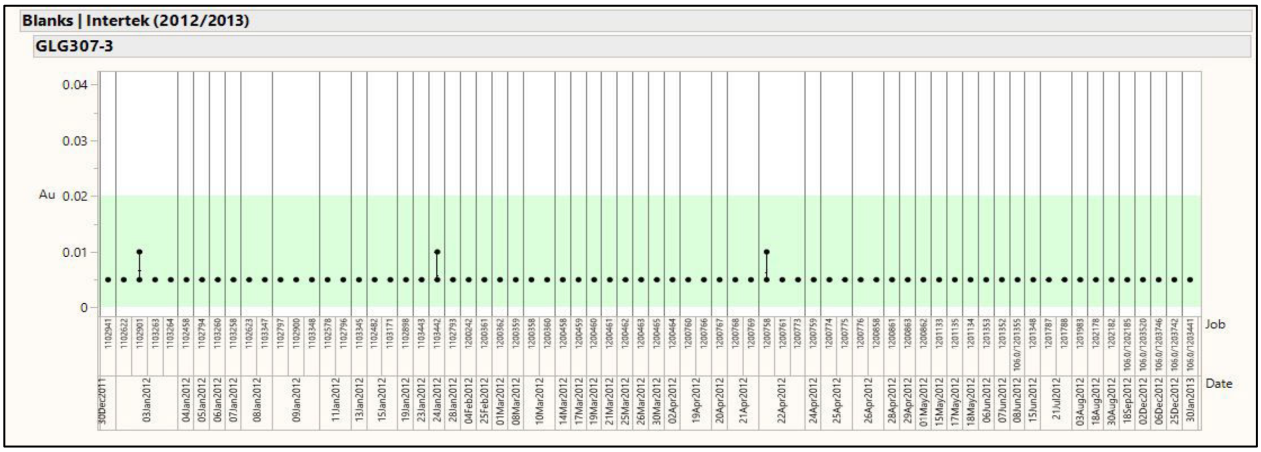

Figure 11-12: Control chart for Blank GLG307-3 – Intertek 2012-2013

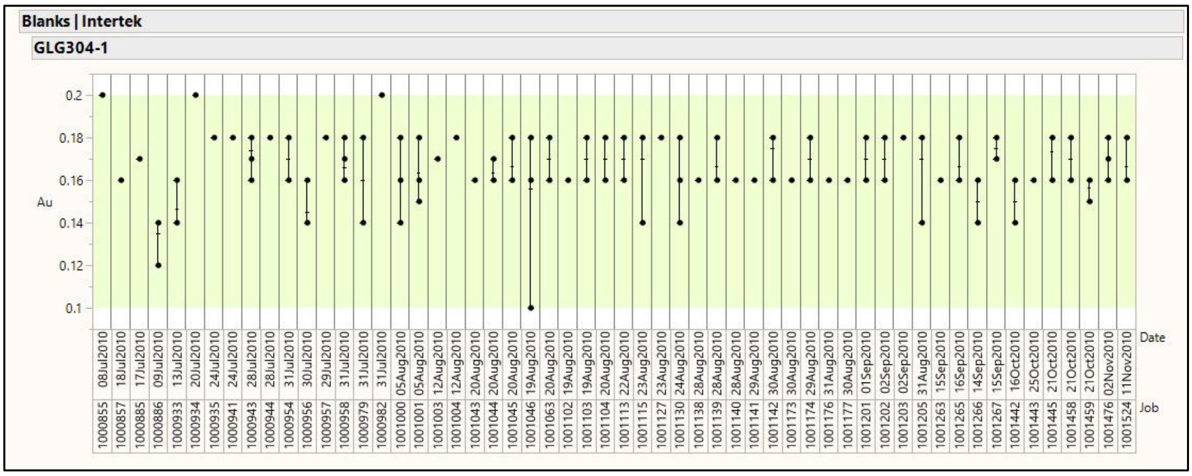

Figure 11-13: Control chart for Blank GLG304-1 – Intertek

11.4.4 Field Duplicates

Field duplicates have been routinely taken at a nominal ratio of 1:25 from all RC drilling, where the duplicate was collected by re-splitting the original sample obtained at the cyclone. A total of 1,267 field duplicates have been taken from RC drilling over prospects with current MRE's. As previously mentioned, RC drilling is mainly limited to pre-collars in unmineralised country rock.

True diamond core duplicates (i.e., the remaining ½ core) were not collected as Perseus decided that a record of mineralised core needs to be kept. Therefore, ¼ core samples were collected from the remaining ½ core. This is not considered a true duplicate due to different sample support, however only about 1.5% of diamond core samples has been "duplicated" this way. Regardless of the small number, duplicates of diamond core have little relevance in terms of QAQC, unlike RC duplicates which in part check representativity of the split.

A total of 4,387 field duplicates (¼ core) were taken from diamond core.

Duplicates were also taken from the AC drilling on the Heap Leach pads. A total of 477 duplicates were collected.

Table 11-7 details the field duplicates submitted from within the Mineral Resource area.

Table 11-7: Number of field duplicates taken by prospect and drill type

Prospect	Sample Type	No. samples	Laboratory				% of total samples
			ALS	Intertek	SGS	PLB	
AF Gap	DD	2,658	0	2,616	42	0	2.8
	RC	648	110	524	14	0	3.2
Esuajah North	DD	400	0	400	0	0	1.5
	RC	177	61	116	0	0	4.1
Esuajah South	DD	634	0	628	6	0	2.9
	RC	68	26	42	0	0	4.2
Fetish	DD	695	0	649	46	0	1.6
	RC	208	91	76	0	41	3.1
Heap Leach	AC	477	0	477	0	0	10.9
	RC	166	141	25	0	0	5.6

Quantile-quantile plots (Q-Q plots) and HARD (Half Absolute Relative Difference) plots have been generated to assess quality and representativity of the duplicates.

HARD values are generated by calculating |x1-x2|/(x1+x2) expressed as a percentage and sorted from smallest to largest. Pairs that are identical will give a value of 0% and values completely different (i.e., 0 and 1) will give a value of 100%. As a rule of thumb, 80% of field duplicate pairs should have less than 20% difference in grade (green lines in the HARD plot).

Since very low values close to detection limit can give artificially poor precision and consequently a high HARD value, irrelevant sample pairs with average grade <0.1g/t Au (e.g., 10 × below detection limit) have been excluded.

The HARD plots for all sample types show fairly flat curves, resulting from relative large differences between primary and duplicate sample (Figure 11-14). About 50% of all duplicates differ by more than 20% from the primary sample. This suggests that mineralisation is not homogeneous and overall sampling precision is somewhat compromised.

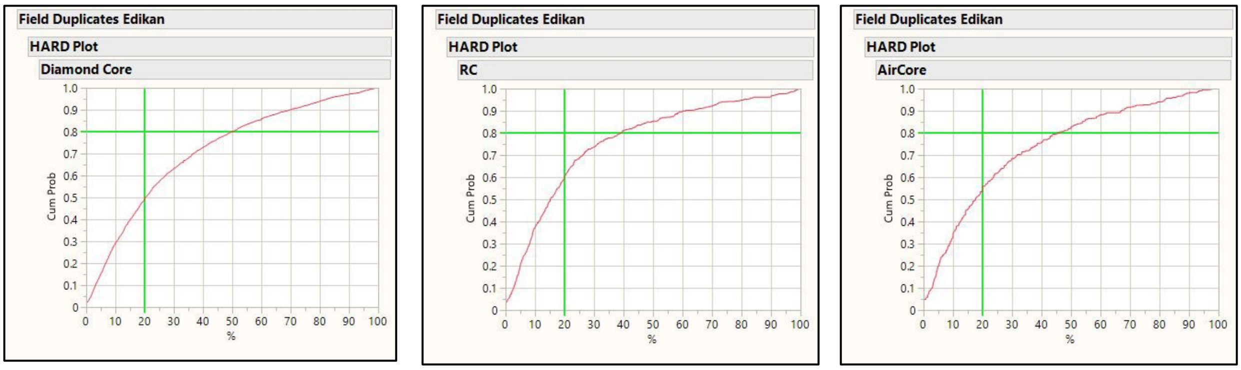

Figure 11-14: HARD plots for DD, RC and AC field duplicates

The Q-Q plots (Figure 11-15), display reasonably straight lines, suggesting that both gold distributions (primary and duplicate samples) are similar and that the sample size reduction (e.g., at the riffle splitter) did not introduce any significant bias. Furthermore, ½ and ¼ core yielded the same grade distribution and means property-wide. This suggests that sampling is representative on a prospect scale.

Therefore, it can be concluded from the field duplicates that:

- Mineralisation is not homogeneous and sample size, in some instances, is insufficient to capture small scale variance. A certain degree of inaccuracy of estimated versus true grade are to be expected on local/block scale
- Sampling is unbiased and representative on prospect/panel scale.
- Sample type, sample size and sample quality at Edikan is considered adequate for the underlying style of mineralisation and suitable for the purpose of an MRE.

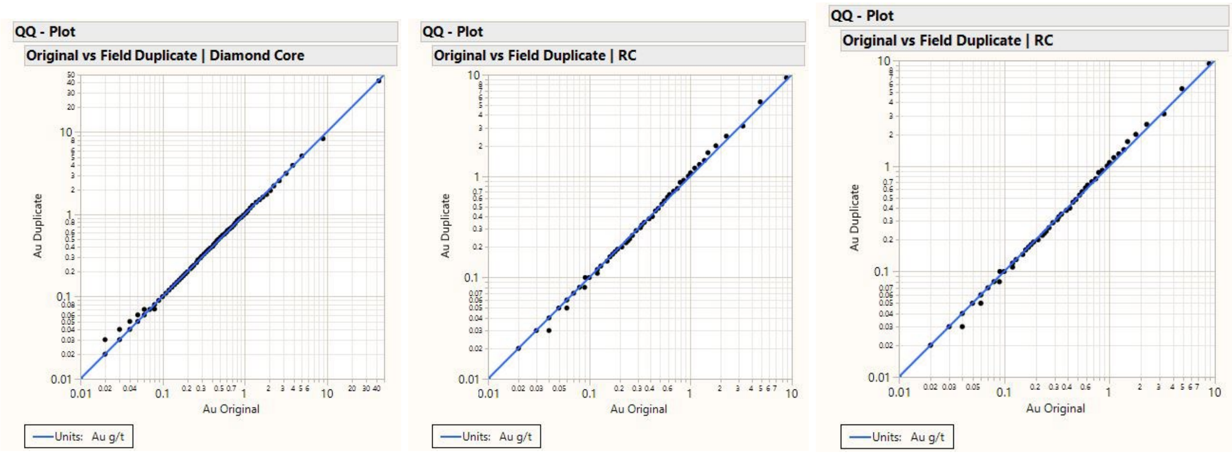

Figure 11-15: Q-Q plots for DD, RC and AC field duplicates

11.4.5 Internal Laboratory Quality Control

TWL (Intertek) has several control procedures to monitor the precision and accuracy of results. These are listed below:

- Internal Standards (1 in 20).
- Internal Duplicates (1 in 20).
- Internal Repeats (1 in 20).
- Reagent and sample blanks (1 in 20).
- Inter-laboratory cross checks
- Sizing tests on pulverised material
- Blank tests on jaw crushers, roll mills and pulverising mills
- Fire Assay copper maps and loss-lead maps
- Repeat assays on unusual outliers (upon visual check of results)

11.4.5.1 Intertek Internal Duplicates

HARD plots and Q-Q plots have been generated from Intertek's internal laboratory duplicates (Figure 11-16). For samples within the current MREs, Intertek collected 8,963 duplicates after crushing and 6,276 duplicates after pulverisation. Excluding irrelevant sample/duplicate pairs with mean values <0.1 g/t Au, both HARD and Q-Q plot show very good repeatability and appreciably low variances. The graphs demonstrate that sample size reduction after crusher and pulverisation stage did not introduce any bias and delivered representative sub-samples.

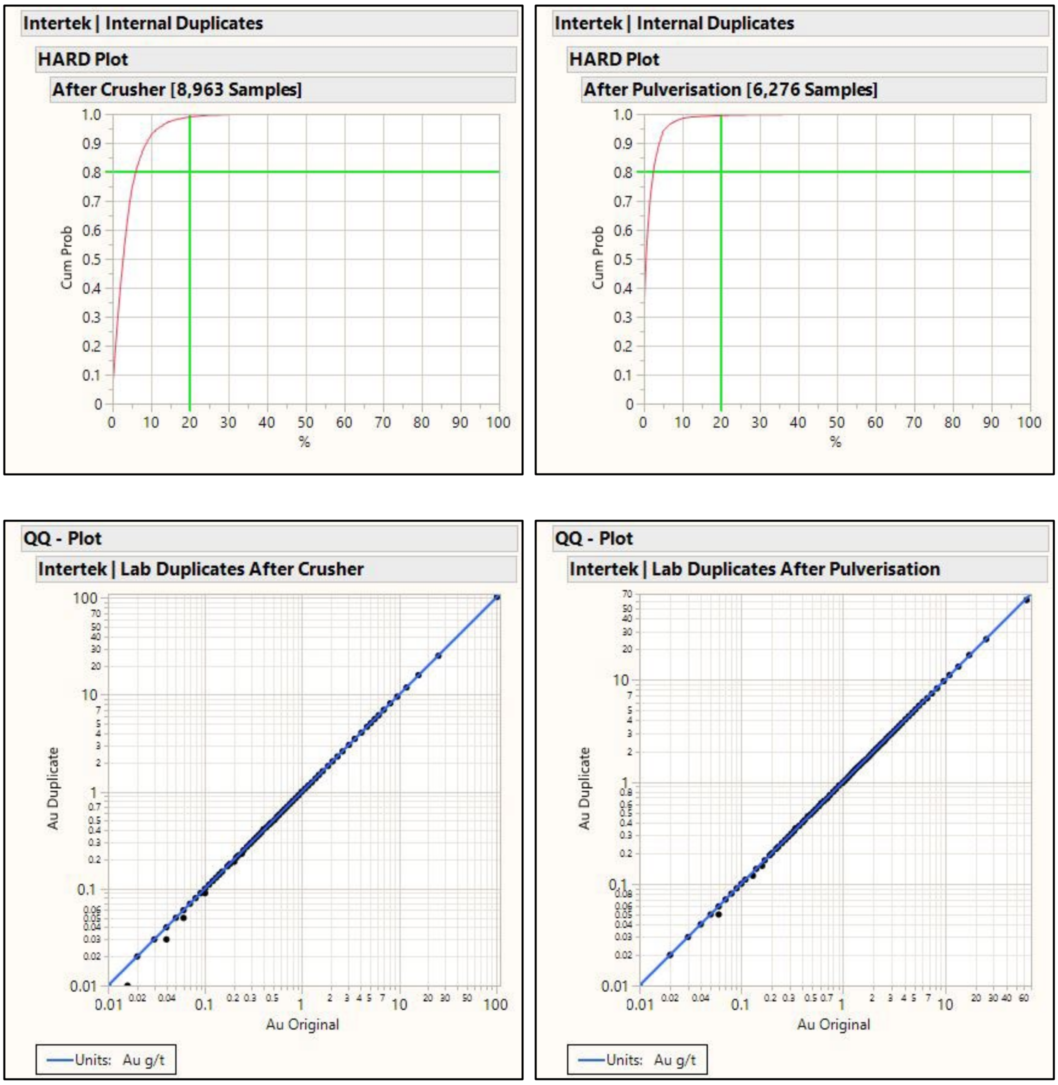

Figure 11-16: HARD (top) and Q-Q (bottom) plots for Intertek internal duplicates

11.4.5.2 Intertek Internal CRMs

Intertek uses a large variety of CRMs manufactured by Gannett Holdings (ST series), covering a grade range of 0.2 – 10 g/t Au. Figure 11-17 shows details of the CRMs used and Intertek's performance, while Figure 11-18 shows the performance of Perseus submitted CRMs. Intertek's internal CRMs performance is better than Perseus submitted CRMs, certainly in terms of precision. This is not unusual as it is assumed that the laboratory would repeat outliers of its internal and well-known CRM. This suggests that the control mechanisms in place are effective, and any issues have been immediately identified and addressed.

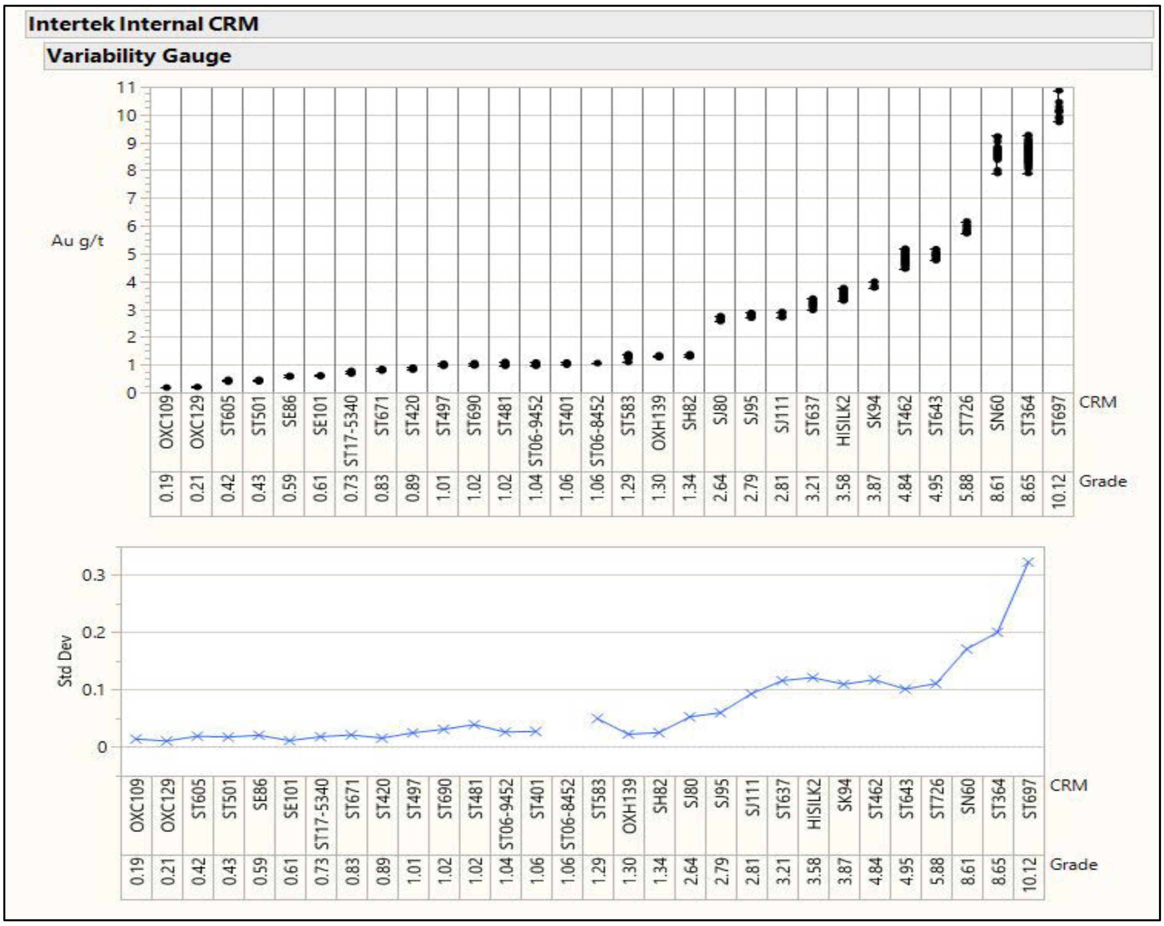

Figure 11-17: Variability Gauges for Intertek Internal CRMs

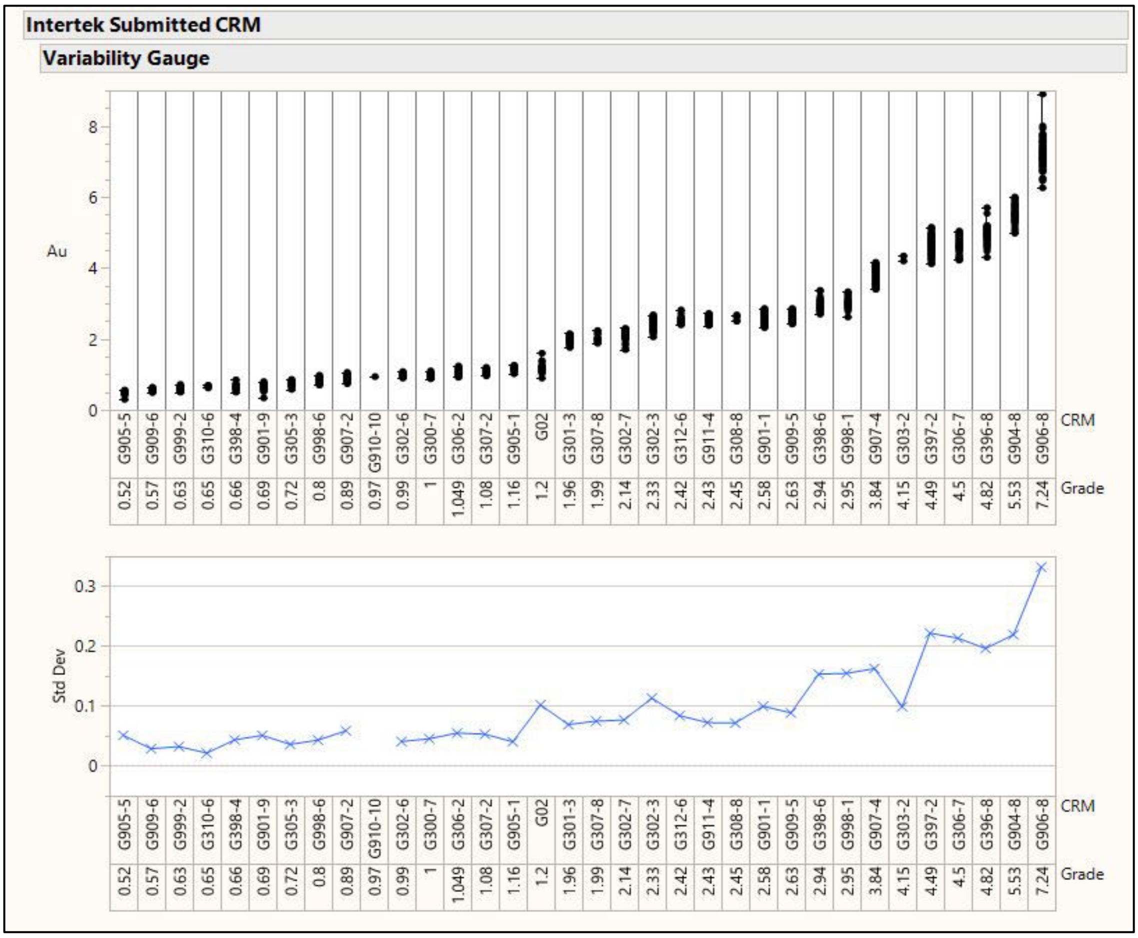

Figure 11-18: Variability Gauges for Perseus submitted CRMs

11.4.5.3 Intertek Internal Blanks

Figure 11-19 shows a time-based control chart Intertek's performance on internal blanks. No issues have been identified.

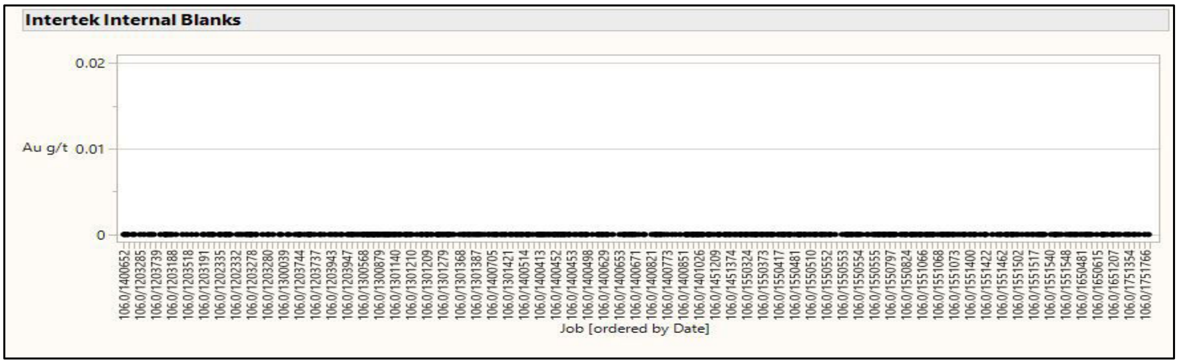

Figure 11-19: Control chart for Intertek internal blanks

11.4.6 Internal Laboratory Quality Control – ALS

ALS has the following protocols in place for quality assurance and quality control:

- Preparation
- Samples are crushed to >70% passing 2 mm and pulverized to better than 85% passing 75 um.
- Screen tests are done on 5% of all samples to ensure that this is achieved.
- A duplicate prep sample is taken after every 50th sample, prepared and subject to analyses.
- Analytical
- Work in batches of 24, consisting of 20 client samples, a CRM, blank and two repeat samples are included.
- Participate in monthly round robins tests organised by ALS-Vancouver.
- Participate on a six-monthly basis in independent round robin analyses organized by Geostats Pty Ltd-Australia.

11.4.6.1 ALS Internal Duplicates

ALS has completed a total of 252 internal repeat assays from 2,423 samples submitted from the Heap Leach drilling program. Of the 252 samples, 138 were re-splits after the crushing phase, and 114 re-splits after the pulverising stage. The respective HARD plots are shown in Figure 11-20.

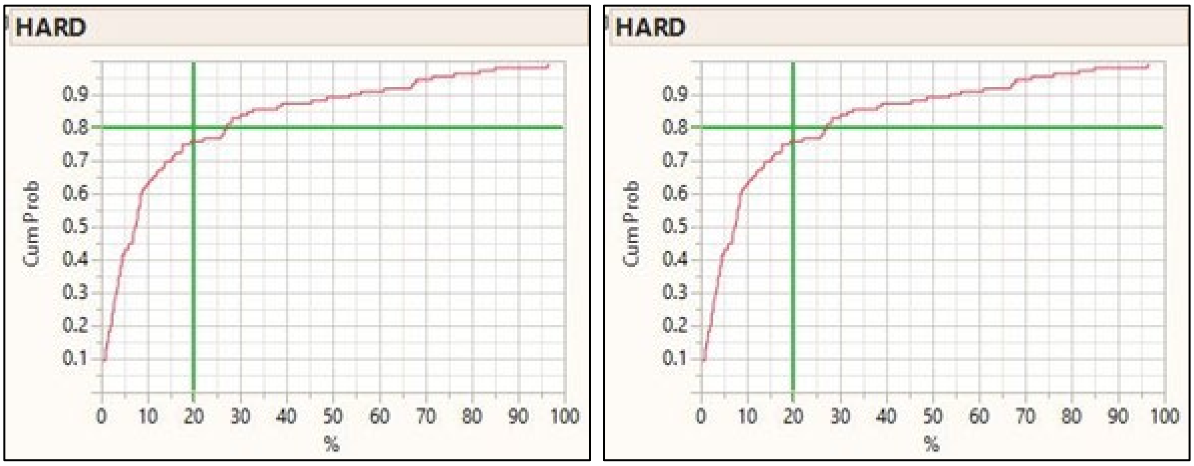

Figure 11-20: ALS internal duplicates(LHS – from coarse crush, RHS – from pulps)

11.4.6.2 ALS Internal CRMs

ALS uses CRMs manufactured by Rocklabs, that cover a grade range of 0.1 – 15 g/t Au. Similar to Intertek, ALS performs better in terms of precision on its internal CRMs than on Perseus submitted provided CRMs (

Figure 11-21 and Figure 11-22 respectively). From this data it can be determined that ALS adheres to their QAQC protocols.

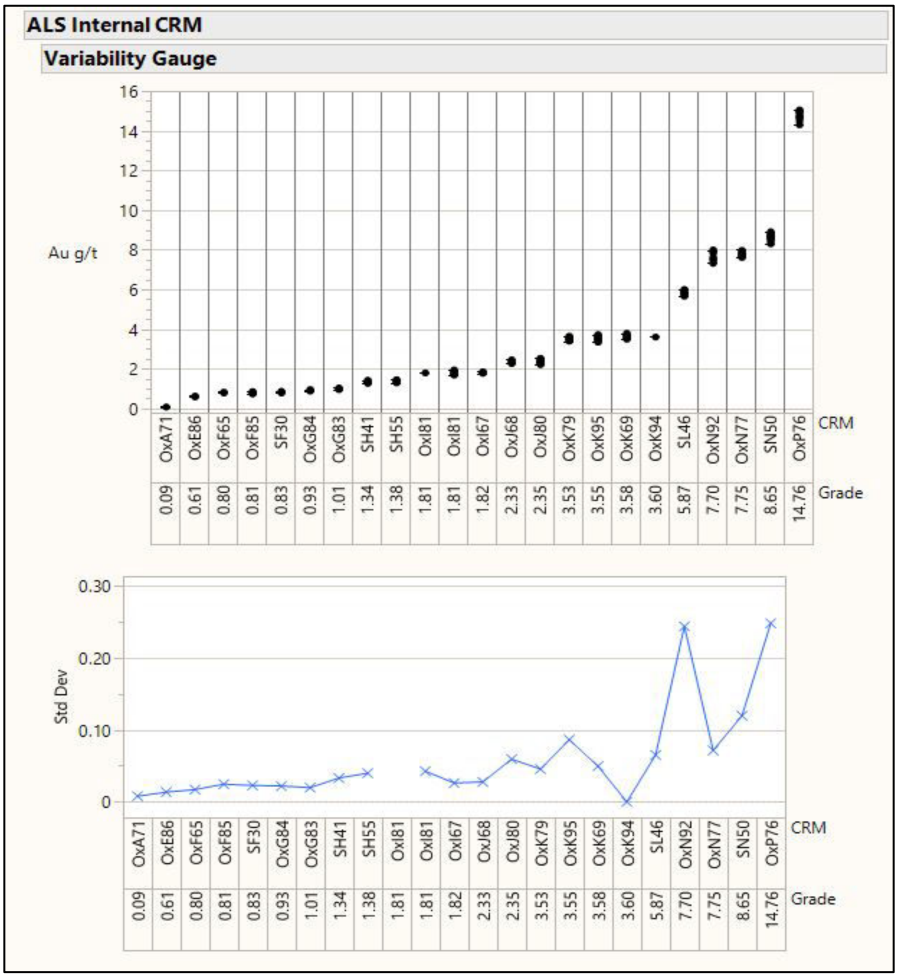

Figure 11-21: Variability Gauges for ALS Internal CRMs

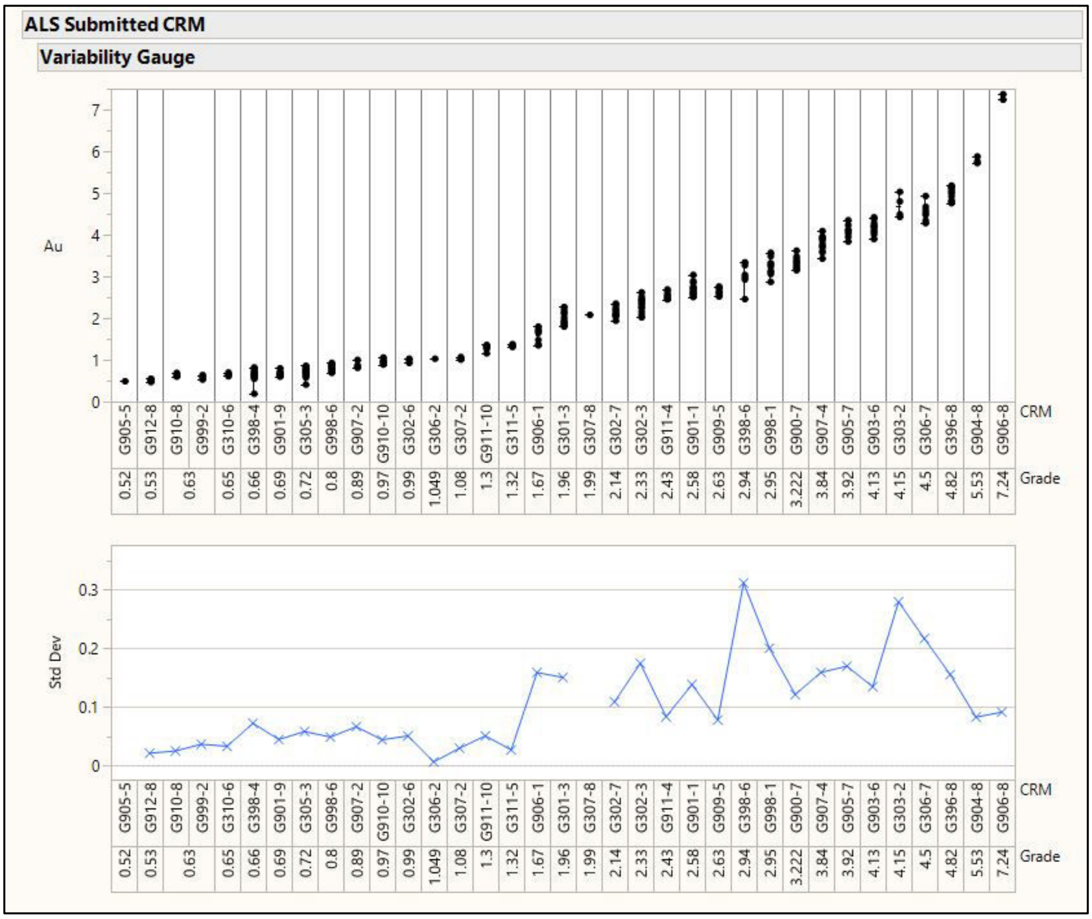

Figure 11-22: Variability Gauges for Perseus submitted CRMs

11.4.6.3 ALS Internal Blanks

Figure 11-23 shows a time based control chart of Intertek's performance on internal blanks. No issues are observed.

Figure 11-23: Control chart for ALS internal blanks

11.4.7 Size Fraction Analysis

As part of the internal laboratory checks the percentage of the sample passing 75 µm is recorded.

No size analysis was provided by the laboratories. The good repeatability of duplicates suggests that the sizing variation does not result in poor assay quality.

11.4.8 Umpire Assays

Independent re-assaying of pulps was conducted in 2010 and 2011. There were 1,182 Intertek pulp samples collected and these were then sent to either to ALS Kumasi (Ghana) or Genalysis Laboratory Services Pty Ltd in (Perth-Australia).

Figure 11-24 through to Figure 11-26 show HARD, Q-Q, and scatterplots of the umpire results. While scatter and HARD plots suggest that the umpire duplicates repeat reasonably well and are unbiased, the Q-Q plot indicates that the umpire assays returned generally slightly lower grades than the primary assay across all grade ranges. The reasons for this are unknown.

Umpire assaying was discontinued in July 2011, mainly due the long time periods between the receival of primary and umpire assays, especially for those samples analysed by Genalysis.

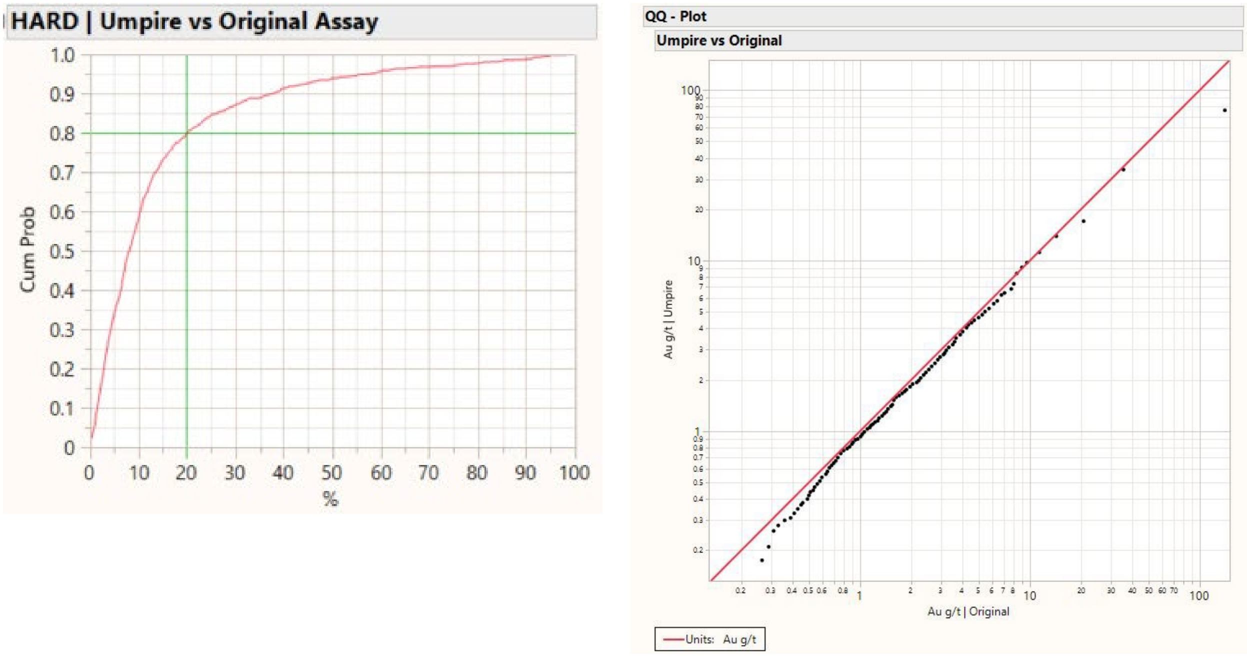

Figure 11-24: HARD (LHS) and Q-Q (RHS) plots of umpire assays

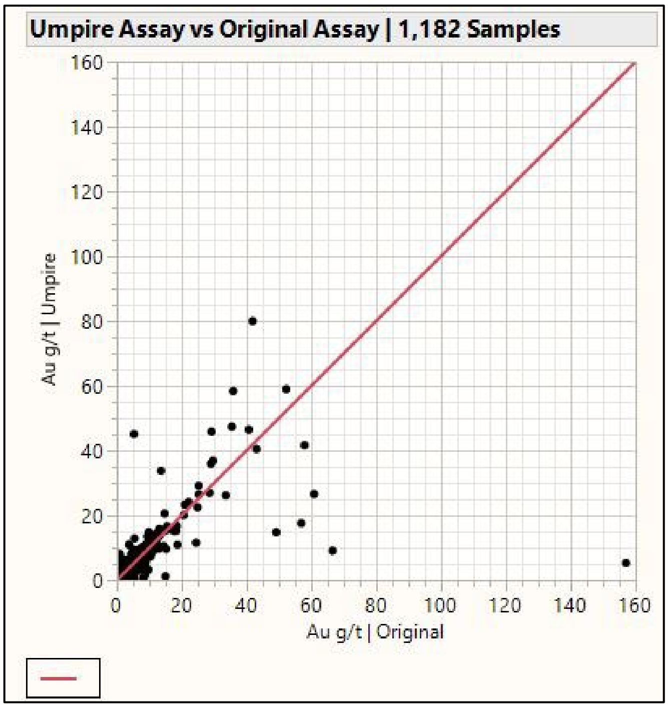

Figure 11-25: Scatter plot of umpire assays (all assays)

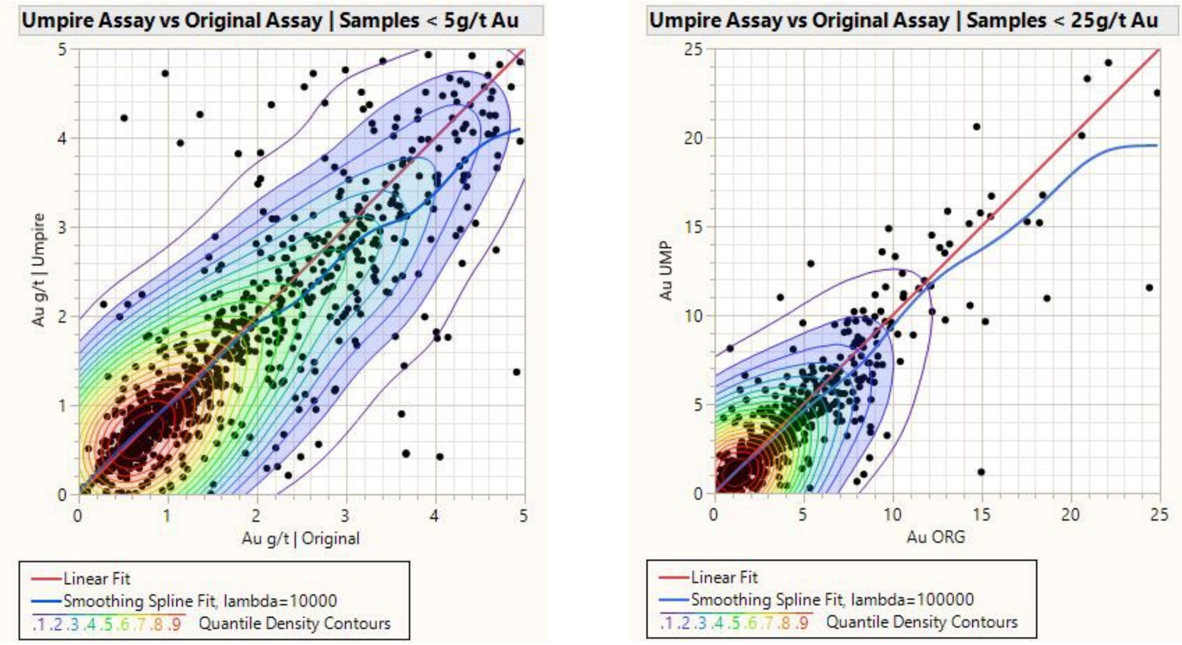

Figure 11-26: Scatter plot of umpire assays (LHS - < 5.0 g/t Au; RHS - < 25.0 g/t Au)

11.5 QAQC Conclusions

In the Qualified Person's opinion, Perseus Mining Limited, as well as the principal laboratories that have been used for analytical services (Interek Tarkwa and ALS Kumasi) have well established QAQC protocols along the entire sampling and assaying chain. The protocols are considered in line with standard industry practices.

Review of the QAQC data associated with the sample data that inform the estimates of remaining MREs at Edikan suggest that the protocols have been implemented and adhered to, and that no significant quality issues have been left unaddressed. This includes the major re-assaying exercise in 2010, after a QAQC audit revealed significant issues in the performance of the TWL lab in Tarkwa, shortly before and during its takeover by Intertek.

In the Qualified Person's opinion, the drill hole assay data are adequate and sufficiently reliable to be used to inform estimates of Mineral Resources at the deposits that are the subject of this report.

11.6 Bulk Density

Since 2006, bulk densities have been measured for approximately 2,900 drill samples from Edikan gold deposits (Table 11-8).

In-house density measurements were completed on full core using the immersion method, with core was wrapped in foil to avoid intrusion of water. Samples sent to commercial laboratories for density measurements comprised coarse rejects of previously crushed core.

Of those, 1,483 derive from granite-hosted mineralisation representing the Mineral Resources that are the subject of this report (Table 11-9).

There is no significant difference between bulk densities in mineralised and barren material.

Table 11-8: Numbers and sources of bulk density measurements

Prospect	Undocumented	In-house	ALS	Intertek	SGS
Granite saprolite	1	18	29	-	-
Sediment saprolite	19	28	49	5	-
Granite lower saprolite	1	10	10	1	1
Sediment lower saprolite	18	33	22	12	2
Fresh granite	66	554	680	417	37
Fresh sediment	67	268268	427	122	16

Table 11-9: Bulk densities (t/m³) for fresh granite

Prospect	No. of samples	In-house	ALS	Intertek	SGS
AF Gap	649	2.94	2.70	2.67	2.70
Esuajah North	178	2.83	2.73	2.70	2.69
Esuahah South	220	2.80	2.74	2.71	2.65
Fetish	436	2.77	2.71	2.71	2.75

The loose density of material comprising the Mineral Resource in the Africa portion of the spent heap leach was investigated by test pitting in 2015. Thirty pits were excavated to depths ranging from 2 m to 3.8 m. In the floor of each pit a test volume of about 100 mm square x 200 mm deep was excavated and the material weighed before and after drying. The hole was filled with graded sand, with the volume of sand measured. The resulting dry loose densities ranged from 1.2 to 1.7 t/cu m, with a trimmed mean of 1.32 t/cu m.

Bulk densities applied to the estimates of Mineral Resources are listed in Table 11-10. In addition to the drill sample densities described above, the densities applied are supported by long-term volume and tonnage reconciliations between mining and processing operations at Edikan.

Table 11-10: Bulk densities applied to Mineral Resource estimates

Deposit	Material		
	Oxide (t/m³)	**Transitional (t/m³)**	**Fresh (t/m³)**
AF Gap	1.80	2.10	2.70
Esuajah North	1.80	2.10	2.70
Esuajah South	1.80	2.10	2.70
Fetish	1.80	2.10	2.70
Heap Leach ("Africa" portion)	1.32	-	-

The bulk density of the mineralisation has been determined with a high degree of confidence from extensive sampling and measurements. No further sampling of the current Mineral Resource areas is warranted.

11.7 Chain of Custody and Security

No chain of custody procedures are known for historic drilling at the Property.

The chain-of-custody for Perseus samples collected and being shipped from site is as follows:

- The RC samples are combined in the field to 2 m composite samples. The 2 m samples are packed into large bags in the field and the numbers recorded. The batches are stored in the site compound prior to shipment.
- Core is transported to the Edikan exploration office and compound either by the Perseus geologists, technicians or alternatively by the drill contractors.
- Core samples are placed in the core logging area of the Perseus owned fenced compound where the sample intervals are rechecked, recoveries are noted and core is photographed. Sampling takes place in the compound using a diamond saw.
- Half core samples are placed in plastic sample bags with a sample tag; the tops of the bags are folded over several times and stapled shut. Bags are then combined in numerical sequence in large bags.
- A sample submission form accompanies each shipment, which is transported to the assay laboratory in trucks operated by laboratory employees or contractors. Perseus notifies the laboratory prior to each shipment going out.
- Assay reports are sent electronically by the laboratory to a pre-set list of recipients with final paper and electronic certificates sent to the Edikan exploration office.

Considering that the tenor of mineralisation at each deposit has been confirmed by detailed grade control sampling and by mining, the Qualified Person is satisfied that sample security is not a significant risk to the reliability of the Mineral Resource estimates.

12 Data Verification

Routine data drill hole data validation procedures include:

- Checks that surveyed locations of drill hole collars are within tolerance of proposed locations and locations recorded on field logging sheets;
- Sense checks of down-hole surveys;
- Checks for missing sample intervals, overlapping sample intervals and duplicate sample numbers;
- Comparisons of gold assays to visually logged intervals of alteration and mineralisation;
- Targeted checks of laboratory assay reports against assays in the drill hole database;
- Visual comparisons, in cross-section and plan views, of gold grades and logged geology in neighbouring drill holes.

The Qualified Person has visited Edikan mine on nine occasions between April 2016 and February 2020. Verification of information informing the estimates of Mineral Resources has included:

- Spatial and temporal reconciliation between resource models, grade control sampling, mine claimed production and mill actual production over the entire period from mid-2016;
- Numerical comparisons of gold grades in nearest-neighbour resource and grade control drill samples;
- Comparison of laboratory assay reports with assays in the drill hole database and with drill cores and drill core photographs;
- Comparison of modelled granite boundaries and weathering horizons with mining exposures.

The Qualified Person is of the opinion that the drill hole data are adequate and sufficiently reliable to be used to inform estimates of Mineral Resources at the deposits that are the subject of this report.

13 Mineral Processing and Metallurgical Testing

The Edikan Plant has been in operation since 2011 and is currently treating ore from AF Gap, Fetish, low-grade stockpile and the historical heap leach stockpiles.

Metallurgical testwork programs have been conducted on Edikan ores since the early 1990's with initial focus on conventional direct cyanidation. In 2009 a two-stage metallurgical testwork program was completed to support the project definitive feasibility study (DFS). After evaluating the flotation response of the ore, the DFS flowsheet was changed to gravity / flotation / regrind / intensive cyanidation (GFIL).

In 2011 construction of the Edikan plant was completed. While it had a nameplate capacity of 5.6Mt/y primary crusher and SAG mill sizing was conservative with a view to production rates well in excess of nameplate.

Production centred on the western pits (Abnabna, AF Gap and Fobinso) for the first four years of operation before switching to the eastern pits Esuajah North, Fetish, Chirawewa, Biokitsi and historical heap leach stockpiles in 2015. The final cutback of the consolidated Abnabna / AF Gap deposits now called AG, began in 2021 and this is providing some mill feed as of December 2021.

Fobinso, Esuajah North, Chirawewa and Bokisti are considered to have been mined to completion.

13.1 Mineralogy

Gold occurs at the Edikan Gold Mine both in classic Ashanti-style sediment hosted shear zones, and within granitic plugs and sills or dykes situated along two or three regional shear structures.

The sediment shear hosted occurrences consist either of pinch and swell quartz reefs or intense sericite/chlorite alteration within a shear zone. Fine grained pyrite with lesser arsenopyrite occurs as disseminations in quartz veins and the host sediments. Most of the gold occurs in veins as disseminations and as free gold along sulphide grain boundaries.

Most of the known gold Mineral Resource at Edikan Gold Mine is hosted by granite. The granite host rocks are mostly altered equi-granular, medium grained (2-5mm) monzogranites. Gold mineralisation occurs in two to three generations of quartz veins and stock-works with individual veins millimetres to centimetres in thickness and rarely more than a metre thick. The gold is associated with less than 3% pyrite, lesser arsenopyrite and traces of sphalerite, chalcopyrite, galena and rutile. Gold occurs as very fine grains often along sulphide grain boundaries and in fractures in sulphides, usually at or near vein margins and coarse visible gold is occasionally observed in the quartz. Higher grade gold intercepts often tend to be associated with very coarse arsenopyrite +/- sphalerite, chalcopyrite and galena.

13.2 2009 Definitive Feasibility Study Testwork

The 2009 Definitive Feasibility Study (DFS) testwork program was conducted on composite and variability samples representing primary western pit ores (Abnabna, AF Gap and Fobinso), primary eastern pit ores (Esuajah North, Esuajah South and Fetish) and global oxide/transitional mineralisation types.

The testwork program included:

- Ore characterisation: Unconfined Compressive Strength (UCS), abrasion index, bond rod/ball mill work index, SMC test sand KK drop weight tests
- Mineralogy

- Whole of ore cyanidation with gravity stage tests
- Flotation, concentrate regrind and cyanidation tests
- Gravity, flotation, concentrate regrind and cyanidation tests
- Diagnostics leach tests
- Ancillary testwork: oxygen uptake, loaded carbon equilibrium, viscosity and thickener tests

The results will not be repeated here and can be found in the historical NI43-101 document[1] lodged in 2011.

The expected gold recovery by deposit based on the DFS testwork varies by ore type as shown in Table 13-1

Table 13-1: Expected Gold Recovery by Ore Type – 2009 DFS

Ore Type	Oxide	Transition	Oxide/Transition	Primary West[2]	Esuajah North	Fetish
Recovery, %	66	81	79	91	93	93

13.3 Post DFS Testwork

13.3.1 Introduction

A number of testwork programmes have been completed since the DFS focussing ores from the "eastern" pits (Fetish, Chirawewa, Bokitsi, Esuajah North and Esuajah South) and Mampong. The purpose of which was to gain additional understanding of the metallurgical behaviour prior to processing.

The testwork programmes were completed between 2011 and 2015 at ALS AMMTEC in Perth Western Australian and included:

- Ore characterisation tests; Bond rod mill work index (RWI), bond ball mill work index (BWI), abrasion index (Ai) and SMC test
- Gravity/flotation/regrind/cyanidation (GFIL) tests to emulate the Edikan flowsheet

13.3.2 Fetish

13.3.2.1 Ore Characterisation

Six samples (three granite and three sediment) were selected from drill core to give a spatial representation of the ore body for comminution testwork. The results are summarised in Table 13-2.

[1] Form 43-101 Technical Report Central Ashanti Gold Project, Ghana, Perseus mining Limited, 30 May 2011 https://www.sedar.com/GetFile.do?lang=EN&docClass=24&issuerNo=00029380&issuerType=03&projectNo=01755218&docId=2905486

[2] Primary West refers to Abnabna, AF Gap and Fobinso

Table 13-2: Fetish comminution characteristics

Sample	Lithology	AI	RWI	BWI	A × b
F-13	Sediment	0.20	18.0	15.4	44.2
F-15	Sediment	0.20	18.9	17.1	35.4
F-16	Sediment	0.45	18.8	15.8	28.0
F-14	Granite	0.43	16.7	15.5	34.4
F-17	Granite	0.34	19.1	14.6	32.7
F-18	Granite	0.32	16.8	14.6	38.8

The results show that:

- Abrasion index (Ai) range between 0.20 and 0.45. The average is 0.32 which is accord with the previous DFS data
- Rod mill work index range between 16.7 kWh/t and 19.1kWh/t. The average is 18.0 kWh/t which is higher than the DFS data by 3 kWh/t
- Ball mill work index range between 14.6 kWh/t and 17.1 kWh/t. The average is 15.5 kWh/t, which is generally in accord with the DFS data
- The SMC test parameter, Axb, range between 44.2 and 28.0 describing the ore as competent to extremely competent.

In combination the comminution data indicate the processing of Fetish primary ore will require more energy than the western primary ore. Subsequently the mill feed rate when processing Fetish will be lower than western ores.

13.3.2.2 Gravity/flotation/regrind/cyanidation

Twelve variability composite samples were selected from drill core to give a spatial representation of the ore body and subjected to the "standard" Edikan flowsheet (GFIL) test. The results are summarised in Table 13-3. Note CIL recovery specified for 34 hour leach time.

Table 13-3: Fetish gold recovery

Sample	Calc. Head Grade (g/t)	Gravity Rec. (%)	Float Rec. (%)	CIL Rec. (%)	Total Recovery (%)
F-1	3.42	31.9	90.8	90.0[3]	87.6
F-2	9.42	15.0	46.5	85.2[4]	48.7
F-3	3.46	37.8	91.3	91.9	90.0
F-4	3.63	17.1	98.2	95.4	94.8
F-5	1.42	41.0	97.7	91.6	93.8
F-6	4.16	39.8	89.2	89.6	87.9
F-7	1.12	26.8	92.5	94.1	90.5
F-8	1.70	53.2	89.2	89.6	90.6
F-9	1.15	63.6	74.8	93.2	89.0
F-10	1.19	28.2	98.9	89.8	91.9
F-11	1.36	25.8	90.8	91.1	87.2
F-12	1.88	26.8	92.6	94.3	90.7

The F-1 and F-2 samples contain a significant quantity of organic carbon (0.5% and 1.0%, respectively) and located on the western edge of the deposit adjacent to the Bokitsi shear deposit (which is known to contain organic carbon). The organic carbon caused mild preg-robbing in sample F-1 and severe pre-robbing in sample F-2. Addition of activated carbon to the leach solution has been shown to mitigate against its presence and acceptable leach extractions were recorded. The high organic carbon level in F-2 appears to have also affected flotation performance and is thought to have resulted from "consumption" of collector.

[3] The result is for repeat intensive cyanidation test with activated carbon added to reduce the preg robbing effect of organic carbon present in the sample. The first test recorded 76.7% leach recovery.

[4] The result is for repeat intensive cyanidation test with activated carbon added to reduce the preg robbing effect of organic carbon present in the sample. The first test recorded 5.9% leach recovery

13.3.3 Esuajah South

Twenty-four variability composites were selected in 2011 and subjected to the “standard” Edikan flowsheet (GFIL) test. The tests were completed in two phases. The results are summarised in Table 13-4. Note CIL recovery specified for 34 h leach time.

Table 13-4: Esuajah South gold recovery

Sample	Calc. Head Grade (%)	Gravity Rec. (%)	Float Rec. (%)	CIL Rec. (%)	Total Recovery (%)
ES-1	2.28	16.1	97.2	95.9	94.3
ES-2	1.91	18.2	97.5	97.3	95.8
ES-3	1.70	25.9	89.4	97.3	90.4
ES-4	3.21	37.0	95.9	97.6	96.0
ES-5	0.58	63.1	90.8	97.6	95.8
ES-6	1.14	14.1	96.1	92.8	90.7
ES-7	1.52	27.2	97.8	97.4	96.5
ES-8	1.27	21.0	99.0	94.0	94.5
ES-9	2.09	23.7	99.1	97.8	97.7
ES-10	2.00	18.1	97.3	97.4	95.7
ES-12	3.50	24.3	98.4	97.1	96.6
ES-13	2.08	22.8	97.3	96.9	95.5
ES-14	2.94	29.0	97.9	97.8	97.0
ES-15	3.20	15.5	98.4	97.7	96.7
ES-16	2.76	15.1	97.5	96.2	94.7
ES-17	3.31	2.7	99.7	96.4	96.2
ES-18	14.36	70.5	99.1	95.7	98.5
ES-19	2.10	39.7	92.5	94.1	92.2
ES-20	1.39	23.1	95.9	96.9	94.5
ES-21	3.27	18.3	99.3	95.5	95.8
ES-22	1.73	21.7	97.8	97.5	96.3
ES-23	3.26	11.1	99.0	98.0	97.4
ES-24	1.85	7.5	99.4	98.1	97.7
ES-25	0.75	25.5	93.5	90.2	88.4

The results show that the Esuajah South ore responds very well to the Edikan process flowsheet. Gravity recovery is variable with no clear relationship with head grade evident. Flotation and cyanidation recoveries are consistently high ranging between 89.4% to 99.7%, and 90.2% to 98.1%.

13.3.4 Heap Leach

In 2015 a total of six composite and 14 variability samples were generated representing the three historical heap leach stockpiles. The samples were used to assess how these stockpiles would perform when processed through the Edikan plant.

The results are presented in Table 13-5.

Table 13-5: Heap Leach test results

Sample	Calc. Head Grade (g/t)	Gravity Rec. (%)	Float Rec. (%)	CIL Rec. (%)	Total Recovery (%)
Heap 1 LG	0.79	33.1	69.2	97	78.0
Heap 1 HG	0.91	33.9	69.0	97	78.1
Heap 1 Variability 1	0.49	19.0	55.1	97	62.3
Heap 1 Variability 2	0.62	16.8	45.7	97	53.7
Heap 1 Variability 3	0.76	17.3	46.9	97	54.9
Heap 1 Variability 4	1.46	37.9	56.7	97	72.1
Heap 1 Variability 5	0.96	27.2	61.1	97	70.3
Heap 1 Variability 6	1.93	55.2	56.6	97	79.8
Average - Heap 1	**0.99**	**30.1**	**57.5**	**97**	**68.7**
Heap 2 LG	1.05	40.2	59.0	97	74.4
Heap 2 HG	2.38	60.7	49.9	97	79.7
Heap 2 Variability 1	0.55	37.9	51.6	97	69.0
Heap 2 Variability 2	0.96	44.8	49.8	97	71.5
Heap 2 Variability 3	0.97	48.0	55.4	97	75.9
Heap 2 Variability 4	1.60	23.9	57.1	97	66.0
Heap 2 Variability 5	1.67	50.5	57.5	97	78.1
Average – Heap 2	**1.31**	**43.7**	**54.3**	**97**	**73.5**
Heap 3 LG	0.54	27.5	54.1	97	65.5
Heap 3 HG	2.79	21.2	75.5	97	78.9
Heap 3 Variability 1	0.69	47.0	48.0	97	71.7
Heap 3 Variability 2	0.67	47.9	48.7	97	72.5
Heap 3 Variability 3	0.81	25.3	59.0	97	68.1
Heap 3 LG	0.54	27.5	54.1	97	65.5
Average – Heap 3	**1.10**	**33.8**	**57.1**	**97**	**71.3**

A grade related recovery relationship was developed.

Gold recovery = 9.14 x LN (Gold Head Grade) + 71.1

13.4 Recent Plant Performance

The Edikan Gold Mine processing plant's costs from commissioning in 2011 to December 2021 are shown in Table 13-6.

Table 13-6: Edikan Gold Mine processing costs

Cost item	Unit	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	PTD
Labour	$/t	1.00	1.14	1.13	1.04	0.90	1.12	1.18	1.15	1.40	1.36	1.56	1.08
Power	$/t	3.18	3.00	3.49	3.26	3.26	3.28	3.04	2.70	2.91	2.52	2.73	3.23
Maintenance	$/t	0.20	1.36	1.30	1.24	1.54	1.28	1.08	1.03	1.02	1.21	0.87	1.25
Reagents.& consumables	$/t	1.25	2.29	3.27	3.77	2.87	2.65	2.87	2.77	2.83	2.62	2.71	2.92
Contractors	$/t	0.11	0.45	0.90	0.98	0.55	0.51	0.42	0.21	0.35	0.36	0.31	0.62
Miscellaneous	$/t	0.50	1.16	1.68	0.53	0.75	1.08	1.29	1.26	1.15	0.99	0.88	1.05
Total	$/t	6.25	9.41	11.78	10.82	9.86	9.92	9.89	9.13	9.67	9.07	9.06	10.16

The key production metrics of the Edikan Gold Mine processing plant from commissioning in 2011 to December 2021 are shown in Table 13-7.

Table 13-7: Edikan Gold Mine plant key performance indicators

Cost item	Unit	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	PTD
Tonnes milled	Mt	1.51	4.82	6.43	6.58	6.58	6.35	7.10	7.22	6.71	6.79	6.77	66.8
Mill feed rate	t/h	606	740	893	891	945	899	907	908	856	863	838	866
Mill run time	%	67.9	74.1	82.1	84.2	79.5	80.4	89.2	90.8	89.5	89.5	92.2	84.5
Head grade	g/t	1.19	1.46	1.17	1.03	1.03	0.91	1.07	1.17	0.98	1.01	0.83	1.06
Gold recovery	%	79.3	86.4	82.3	85.9	86.7	82.6	85.1	80.1	85.2	71.9	83.5	82.8

Generally speaking, recoveries have been in the low to mid 80's with the exception of 2018 and 2020. These periods featured ore production from Chirawewa, Bokisti and Fetish (west) which contained some problematic ores for Edikan plant, most notably the carbonaceous material in Bokisti and the western domain of Fetish, which affected both flotation and CIL.

The performance of the Edikan plant is more stable/predictable on the granite hosted ores.

13.5 Expected Gold Recovery

The forecast gold recovery factors for the remaining Edikan ore types are as shown in Table 13-8. The table includes the projected recoveries for the ores types from the 2009 DFS.

Table 13-8: Forecast Gold Recovery Matrix

Deposit	Ore Type	Unit	2009 DFS Recovery	Forecast Recovery
AG	Fresh	%	91	88.0
Fetish	Fresh - Sediment	%	93	90.0
Fetish	Fresh – Granite	%	93	89.0
Esuajah South	Fresh - Granite	%	n/a	90.0
All Deposits	Oxide	%	66	61.0
All Deposits	Transition	%	81	73.4
Heap Leach	Oxide	%	n/a	67.0
Stockpile – ROM pad	Oxide	%	n/a	61.0
Stockpile – ROM pad	Transition	%	n/a	73.4
Stockpile – ROM pad	Fresh	%	n/a	72.0
Low Grade Stockpile – Esuajah North	Low Grade	%	n/a	77.0
		%		

The figures are based on testwork then discounted to match actual plant production. Recovery data for Bokitsi, Chirawewa, Esuajah North and Fobinso pits are not shown as these deposits have exhausted and will not contribute to future planned mine production.

Oxide ores, including the Heap Leach stockpiles are blended with fresh ores, typically at 10% of total blend, so as to have minimal impact on the flotation recovery of the fresh ores.

13.6 Deleterious Elements

With the exception of carbonaceous material from the Bokitsi deposit, the western domain of Fetish pit and to a lesser extent Chirawewa, no deleterious elements/material have been encountered in the 11 years of production to date.

No formal deleterious element assessment has been undertaken on Edikan ores.

14 Mineral Resource Estimates

14.1 Overview

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

The Mineral Resources quoted herein are inclusive of Mineral Reserves, i.e., they are not additional to estimates of Mineral Reserves.

Mineral Resources are reported in accordance with the JORC (2012) Code and are reported by category, deposit and type. The classification categories of Measured, Indicated and Inferred Mineral Resources under the JORC (2012) Code are equivalent to Canadian Institute of Mining, Metallurgy and Petroleum (CIM, 2014) categories of Measured, Indicated and Inferred Mineral Resources, respectively.

The Mineral Resources at AF Gap, Fetish and Esuajah North lie beneath open pits previously mined, or currently being mined, by Perseus. The heap leach Mineral Resource is also located in an active mining area. The exploitation of these deposits is not likely to be materially affected by any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors.

Exploitation of the Esuajah South Mineral Resource requires permits relating to environmental impact, mining operations and water usage as discussed in . There is presently no indication that permitting requirements will prevent mine development at Esuajah South.

The reported Mineral Resources for the Edikan Gold Mine have been prepared under the supervision of Mr Gary Brabham (Perseus Group Geologist – Business Development). Mr Brabham is considered to have sufficient experience, that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken, to qualify as a Competent Person (CP) as defined in the JORC Code 2012 and a Qualified Person (QP) as defined in NI 43-101. The dates of each model from which the Mineral Resource Estimates (MRE) derive are summarised in Table 14-1.

Table 14-1: MRE source model dates

Deposit	Date
AF Gap	March 2020
Esuajah North	June 2019
Esuajah South	November 2020
Fetish	January 2017
Heap Leach (Africa)	November 2015
Stockpiles	June 2021

At AF Gap, Esuajah North and Fetish deposits, recoverable resources were estimated using Multiple Indicator Kriging (MIK) with block support adjustment. Estimates into panels of 20 mE × 20 mN × 5 mZ were used as this was considered appropriate given the spacing of data available to inform the estimates and the mining bench height presently used at Edikan. MIK of gold grades used indicator variography based on the 2 metre resource composite sample grades. Gold grade continuity was characterised by indicator variograms at 14 indicator thresholds spanning the global range of grades in each of the mineralised domains.

The effect of extreme gold grades on the conditional statistics of data informing each of the estimation domains was considered. The effect of extreme grades on estimates was modified by composites being ignored during the generation of the indicator statistics, and by selection of the median instead of the mean for the highest indicator threshold.

Block support adjustments were derived from the variograms of gold grades in each of the mineralised domains. The selective mining unit was assumed to be in the general range 6 mE by 10 mN by 2.5 mRL, reflecting the scale of open pit mining presently employed at Edikan. Additional adjustments for the "Information Effect" have been applied, based on high quality grade control sampling at 8 mE x 8 mN x 1 m consistent with current practices at Edikan, to arrive at the final Mineral Resource estimates.

The Mineral Resource estimates can be reasonably expected to provide appropriately reliable estimates of potential mining outcomes at the assumed selectivity without application of additional mining dilution or mining recovery factors.

The Mineral Resource for the Esuajah South deposit has been estimated using Ordinary Kriging into parent blocks measuring 10 mE x 10 mN x 10 mZ, approximately half the average drill hole spacing. Parent blocks were sub-blocked to minimum 2.5mE x 2.5mN x 2.5mRL against the granite wireframes and triangulated surfaces representing topography, base of complete weathering and top of fresh rock to reliably estimate volumes of oxide, transition and fresh rock mineralisation. A top cut of 20g/t Au was applied to limit the spatial influence of extreme grades, removing 3.6% of metal from the model.

The Mineral Resource for the spent heap leach material in the "Africa" heap was estimated using Ordinary Kriging into Parent blocks measuring 20 mE x 20 mN x 5 mZ. The parent blocks were sub-blocked to a minimum 10 mE x 10 mN x 2.5 mZ against topography and a surface representing the base of the heap, derived from logging of drill intercepts of the base HDPE liner.

Volumes of Edikan stockpiled ore and mineralised waste are routinely determined by ground survey at the end of each calendar month. In situ bulk densities of the materials comprising each stockpile are combined with swell factors to derive estimates of loose bulk densities and thus stockpile tonnages. Grades are estimated by carrying running weighted average of additions to, and depletions from, each stockpile. From time-to-time, adjustments of stockpile volumes and/ore grades may be undertaken by mine personnel to reflect ore tonnes and grades deriving from processing of stockpiled material. Volumes and estimated grades of stockpiles are incorporated into the min-to-mill reconciliation processes at Edikan. The Qualified Person considers it unlikely that the estimated tonnage or grade for any given stockpile, or the Edikan stockpiles in aggregate, is in error by more than ten per cent.

In the Qualified Person's opinion, the estimates of Measured and Indicated Mineral Resources are sufficiently reliable to support estimation of Mineral Reserves.

14.2 Prior Mineral Resource Estimates

14.2.1 AF Gap

The most recent prior MRE for AF Gap was completed in January 2017 by MPR Geological Consultants Pty Ltd ((MPR, 2017a). For AF Gap and Fobinso deposits combined, MPR estimated Mineral Resources remaining below the December 2016 mining surface to be 33.1 Mt @ 0.92 g.t Au for 977,000 ounces in Measured and Indicated categories plus 0.4 Mt @ 0.96 g/t Au for 13,000 ounces in Inferred category. The resource was constrained to a pit shell generated using $1,800/oz gold price and a 0.4g/t Au cut-off grade applied.

Prior to that, a MRE for AF Gap and Fobinso deposits combined was completed in June 2015 by RungePincockMinarco (RPM; reported in January 2016). The block model upon which the estimate was based was originally created in 2013. RPM estimated the combined Mineral Resources at AF Gap and Fobinso (now mined out) to be 52.2 Mt @ 1.0 g/t Au for 1,649,000 ounces for the combined Measured and Indicated resources and an additional 28.5 Mt @ 0.8 g/t Au for 730,000 ounces of Inferred (RungePincockMinarco, 2016a), applying 0.4 g/t Au cut-off grade.

14.2.2 Esuajah North

A prior MRE for Esuajah North was completed in June 2015 by RPM and reported in January 2016 (RungePincockMinarco, 2016b). The block model upon which the estimate was based was originally created in 2013. The estimate included 35.3 Mt @ 0.9 g/t Au for 986,200 ounces for the combined Measured and Indicated resources and an additional 3.6 Mt @ 0.9 g/t Au for 105,000 ounces of Inferred. The resource model extended to 470 m depth below surface and a 0.4 g/t cut-off grade was applied.

14.2.3 Esuajah South

Mineral Resource estimates have previously been undertaken by Runge Limited in 2009 and 2010 and by Runge Pincock Minarco (RPM) in May 2013. Documentation of the 2013 resource estimate was updated in 2015 to comply with the requirements of the Australasian Code for Reporting of Mineral Resources and Mineral Reserves 2012 edition. Subsequently, in February 2017, RPM produced an updated estimate, also based on the 2013 model, at a revised cut-off grade (RungePincockMinarco, 2017)

14.2.4 Fetish

The most recent previous MRE for Fetish was completed in January 2017 by MPR Geological Consultants Pty Ltd ((MPR, Resource Estimation, Fetish and Bokitsi North and South, Edikan Gold Mine, Ghana, 2017b)). MPR estimated Mineral Resources remaining at Fetish below the December 2016 mining surface, including Bokitsi North lode, to be 24.3 Mt @ 0.97 g.t Au for 761,000 ounces in Measured and Indicated categories plus 0.92 Mt @ 0.96 g/t Au for 28,000 ounces in Inferred category. The resource was constrained to a pit shell generated using $1,800/oz gold price and a 0.4 g/t Au cut-off grade applied.

Prior to that, a MRE was completed by RPM in June 2015, reported in January 2016 (RungePincockMinarco, Fetish Gold Deposit Mineral Resource Estimate, 2016c). The block model upon which the estimate was based was originally created in 2013. RPM estimated the Mineral Resources at Fetish, including the Bokitsi North lode, to be 30.8 Mt @ 1.1 g/t Au for 1,042,800 ounces for the combined Measured and Indicated resources and an additional 9.8 Mt @ 1.1 g/t Au for 345,600 ounces of Inferred. The resource model extended to 595 m depth below surface and a 0.4 g/t cut-off grade was applied.

Table 14-2: Prior Mineral Resource Estimates - Fetish

Completed by	Year	Measured and Indicated			Inferred		
		Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
RPM[1]	2016	30.80	1.10	1,043	9.80	1.11	346
MPR[1,2]	2017	24.30	0.97	761	0.92	0.96	13

Completed by	Year	Measured and Indicated	Inferred

1. Includes Bokitsi North

2. Reported at 0.4 g/t Au cut-off, below 31 December 2016 surface and within US$1,800 pit shell

14.2.5 Heap Leach

The maiden Mineral Resource for the spent heap leach material was declared in February 2017.

14.2.6 Geology and Mineral Resource Interpretation

For all deposits, the granite/metasediment contact was modelled due to the preferential development of gold mineralisation within the granite bodies. Where geological contacts were not clearly controlling the distribution of mineralisation, a grade cut-off of 0.2 g/t Au was used to construct Mineral Resource boundaries and to provide overall geometry to mineralised zones. Selection of 0.2 g/t Au as the mineralised threshold for defining the wireframes was based on visual review of the grade distribution and was supported by boundary analysis of raw sample data.

The interpreted geology and grade boundaries were manually triangulated to form wireframes. To form ends to the wireframes, the end section strings were copied to a position midway to the next section and adjusted to match the dip, strike and plunge of the zone.

The wireframes were used to select the sample data to be used for grade estimation, and to constrain the block model for estimation purposes. For MIK estimates, the mineralisation wireframes were treated as soft boundaries for estimation purposes. For the Ordinary Kriged estimate at Esuajah South the granite contact was treated as a hard boundary, i.e., only assays from within the wireframe were used to estimate resources.

14.3 AF Gap

14.3.1 Summary

The Mineral Resource Estimate (MRE) for Abnabna - AF Gap (herein referred to AF Gap) was completed in March 2020 by MPR Geological Consultants Pty Ltd (MPR). The majority of the estimation work was completed by MPR in 2017 (MPR, 2017a) but an update was completed in March 2020 which involved re-flagging the domain codes of a small number of samples. The 2017 MRE also included the adjacent Fobinso deposit, since mined out in November 2018.

The MRE was based on 20 - 40 m north spaced (local grid) sections and 20 - 40 m hole spacings. A total of 66,718 two-metre composite samples were used in the estimate, of these 20,318 samples were flagged within mineralised domains.

Four east-west striking, steeply north dipping mineralised domains were interpreted by MPR using 2 m downhole composites. The domains extend for around 1,200 m along strike and vary in width from 100 - 150 m.

Estimates of recoverable resources were derived using Multiple Indicator Kriging (MIK) with block support adjustment. The method is expected to produce reliable estimates of mining outcomes without the application of additional mining dilution and ore loss.

The resource was classified according to drill spacing – 20 m × 20 m Measured, 40 m × 40 m Indicated and >40 m × 40 m Inferred.

The MRE is based on a US$1,800 pit shell and is reported below the 30 June 2021 pit surface (Table 14-3).

Table 14-3: AF Gap Mineral Resources

Deposit	Deposit Type	Measured Resources			Indicated Resources			Measured + Indicated Resources		
		Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
AF Gap 1,2,3,4	Open pit	9.7	0.99	310	21.6	0.90	628	31.3	0.93	938

Notes:

1. Based on March 2020 Mineral Resource model constrained to US$1,800/oz pit shell.
2. Depleted to 30 June 2021 mining surfaces.
3. 0.4g/t gold cut-off applied.
4. Rounding of numbers to appropriate precisions may have resulted in apparent inconsistencies.

14.3.2 Drilling database

The drillhole database was supplied to MPR in MS Access format and was dated 11 November 2016. It is understood that the data were essentially unchanged from the previous MRE completed by RPM in 2013 (Section 14.2.1).

The database consisted of holes drilled by Ashanti Goldfields Corporation (AGC) from 1996 to 2000 and by Perseus (post-2006).

The data were used as a 'on received' basis with QAQC on the sampling and assaying techniques undertaken by Perseus.

14.3.3 Local Grid Conversion

All data used were based on the Edikan West Grid. Two-point transformation parameters to convert from UTM are listed in Table 14-4.

Table 14-4: UTM to West Grid two-point transform

	Grid A	Grid B
Name	West Grid	UTM
Easting (1)	25630.721	619100.8432
Northing (1)	10131.913	655654.4552
Easting (2)	25261.753	615900.0514
Northing (2)	14536.401	658700.4854
Z		

14.3.4 Data Used In Estimate

A breakdown of the holes used in the AF Gap MRE is shown in Table 14-5. Plan and long section views of the drilling against the interpreted domains are show in Figure 14-1 and Figure 14-2 respectively.

Intervals that were not assayed because they were visually logged as being barren were assigned a grade of 0.00 g/t Au. After trimming of large areas of waste not relevant to the study the final resource dataset contained 66,718 2 m composites.

Table 14-5: Breakdown of drilling used in MRE

Hole Type	No. of holes	Metres	Comments
RC	165	14,088	
Undefined	70	3,531	Historical holes - suspected to be RC
DDH	500	116,265.4	Includes 45 RC pre-collar holes for 24,695.5 m
TOTAL	**735**	**133,884.2**	

14.3.5 Modelling Domains

The mineralised domains used for this estimate were interpreted by MPR on the basis of two metre down-hole composited gold grades and effectively capture the zones of continuous mineralisation with composite grades of greater than nominally 0.10 g/t.

Strings representing the limits of continuous mineralisation above approximately 0.10 g/t were digitised on cross sections aligned with the drilling traverses. The sectional strings were triangulated to form closed solids which extend to below the base of drilling.

The four interpreted domains extend east-west (local grid) over a strike length of 1,200 m and dip steeply to the north. Horizontal domain widths range commonly from around 100 - 150 m and for a vertical depth 580 m. The mineralised domains are generally regular in shape and consistent between drilling traverses. Alternative interpretations were not considered. The geometry and overall continuity of mineralisation has been confirmed exposures in the open pit.

The mineralised domains are designated domains 2 to 5, while domain 1 generally represents un-mineralised areas not captured by the mineralised domains. Plan and long section views of the domains and associated drilling are shown in Figure 14-1 and Figure 14-2 respectively.

Perseus provided MPR with interpreted surfaces representing the base of weathered material and base of transitional material (top of fresh rock). The interpretations are based on a combination of exploration drill hole logs, grade control drilling and open pit exposures. An example cross section showing weathering domains can be seen in Figure 14-3.

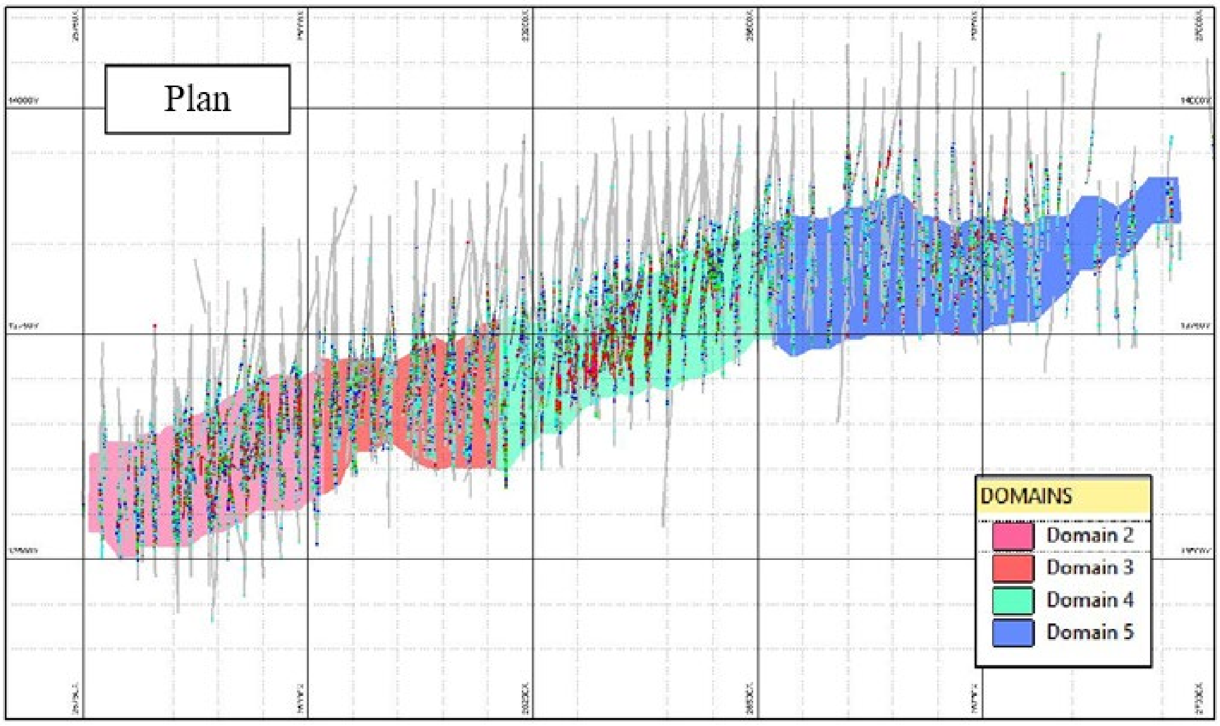

Figure 14-1: Plan view showing drillhole locations

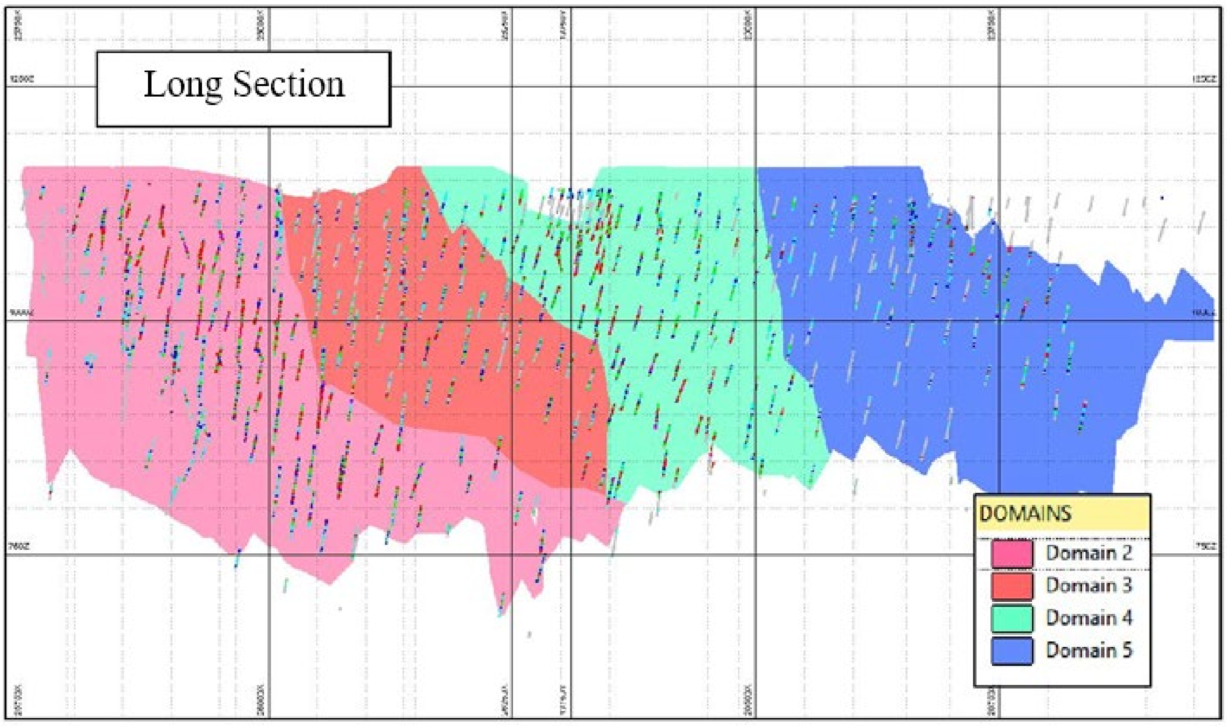

Figure 14-2: Long section view of drillhole locations

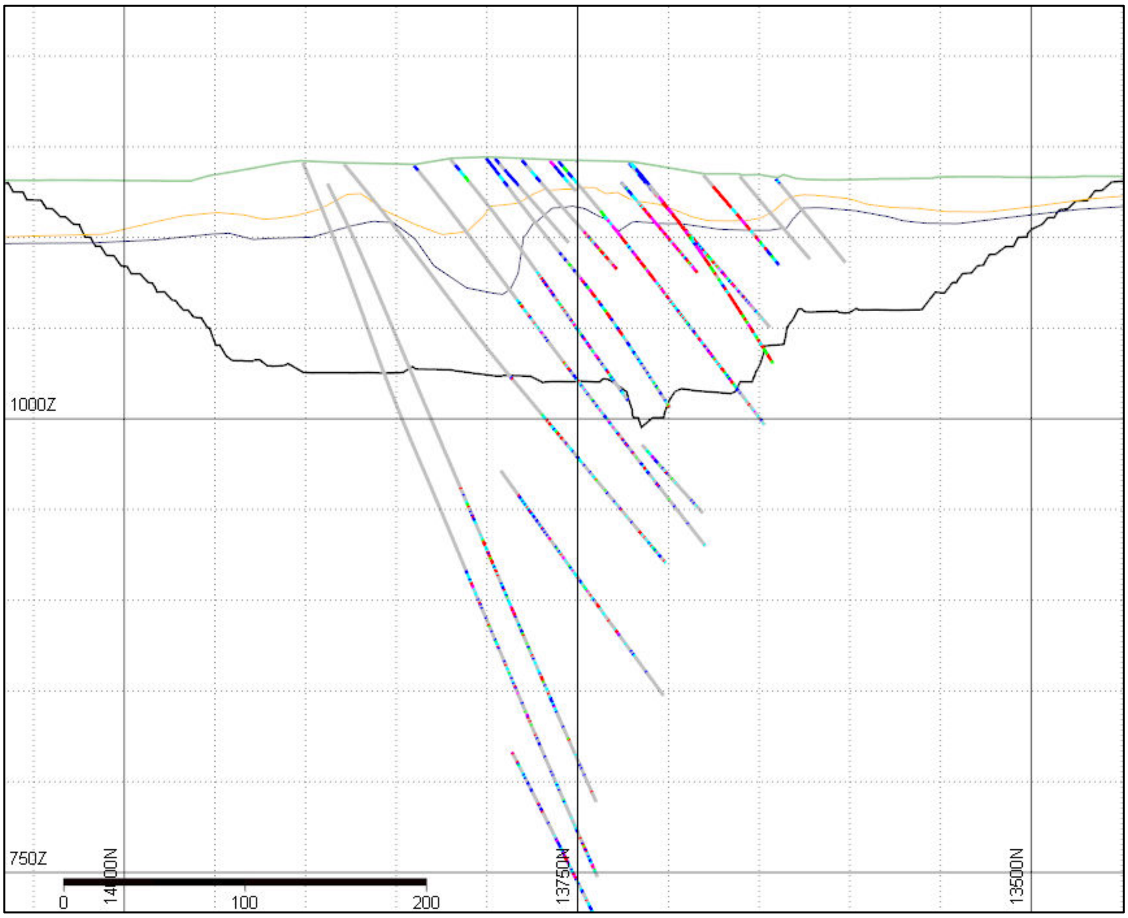

Figure 14-3: Cross section showing weathering surfaces and 30 June 2021 pit surface (26,280E +/- 10m)

14.3.6 Univariate Statistics

Observations noted in a geostatistical analysis include:

- Gold grade distributions in the mineralised domains are highly skewed and have characteristically high coefficients of variation reflecting the highly variable nature of the gold grades at both deposits.
- The domaining has effectively isolated the mineralised composites from the essentially barren footwall and hanging wall composites as shown by the mean grade of waste domain 1.

The relevant summary composite statistics for each of the domains are shown in Table 14-6.

Table 14-6: Estimation dataset statistics

Domain	Weath.	Statistics								
		No.	Mean	Variance	Coeff. of Var.	Min.	1st Quart.	Median	3rd Quart.	Max.
1	Ox	6,532	0.065	0.164	6.191	0	0	0	0.03	25.792
	Tx	3,149	0.013	0.004	4.65	0	0	0	0.01	1.562
	Fr	17,464	0.022	0.049	10.051	0	0	0.001	0.01	20.92
	TOTAL	27,145	0.032	0.072	8.436	0	0.001	0.001	0.01	25.792
2	Ox	1,222	0.601	1.28	1.884	0	0.063	0.245	0.649	16.44
	Tr	526	0.641	1.298	1.778	0	0.085	0.275	0.689	12.02
	Fr	11,901	0.901	4.935	2.466	0	0.135	0.405	0.940	92.22
	TOTAL	13,649	0.864	4.477	2.449	0	0.12	0.385	0.915	92.22
3	Ox	744	0.366	1.417	3.251	0	0.040	0.150	0.390	20.300
	Tr	255	0.448	1.534	2.768	0	0.045	0.145	0.338	14.545
	Fr	6,286	0.484	2.368	3.182	0	0.035	0.160	0.485	74.385
	TOTAL	7,285	0.470	2.243	3.184	0	0.040	0.160	0.465	74.385
4	Ox	1,684	0.729	1.968	1.925	0	0.08	0.340	0.78	23.956
	Tr	637	1.171	19.467	3.767	0	0.05	0.370	1.24	103.000
	Fr	7,579	1.163	14.604	3.285	0	0.15	0.500	1.22	237.545
	TOTAL	9,900	1.090	12.795	3.282	0	0.13	0.455	1.15	237.545
5	Ox	1,899	0.392	1.011	2.566	0	0.030	0.115	0.36	16.054
	Tr	435	0.375	0.545	1.971	0	0.027	0.090	0.37	5.320
	Fr	6,405	0.405	1.034	2.512	0	0.020	0.105	0.40	29.235
	TOTAL	8,739	0.400	1.004	2.503	0	0.025	0.105	0.39	29.235

The indicator statistic tables used in the MIK model for each domain are shown in 14.3.8. In cases where the numbers of resource composites coded to a particular primary and weathering combination were small, it was necessary to combine the weathering sub-domain data to generate robust conditional statistics for the affected domains.

Based on the observations of the domain summary statistics and viewing of cumulative histograms there may be support for excluding, in some cases, high grades prior to generating the conditional statistics or alternatively using the median as the average grade of the highest indicator bin, rather than the mean. Both strategies are commonly used in MIK models to prevent a few extreme grades within a population having a disproportionate influence on the estimate. For this estimate both strategies have been used and selected on a domain-by-domain basis.

14.3.7 Block Model

Block model architecture was based on sample spacing and the origin was selected to yield panel centroids consistent with drilling traverses.

Table 14-7: Block model architecture

	X	Y	Z
Origin	27,010	13,770	732.50
Extents (m)	1,560	480	450
Panel size (m)	20	20	5
Number of panels	39	24	90

14.3.8 Grade Interpolation

14.3.8.1 Indicator Thresholds and Class Grades

Table 14-8 through Table 14-12 present the grade thresholds and class mean gold grades used for MIK modelling.

All class grades used for estimation of the mineralised domains were derived from the class mean grades except the upper bin grades which were selected for the most part from the bin median, with or without exclusion of a few high composite grades. This approach reduces the impact of small numbers of high-grade outlier composites.

Table 14-8: Domain 1 – indicator thresholds and class grades

Percentile	Oxide		Transitional		Fresh	
	Threshold	Mean	Threshold	Mean	Threshold	Mean
10%	0.000	0.000	0.000	0.000	0.000	0.000
20%	0.000	0.000	0.000	0.000	0.000	0.000
30%	0.000	0.000	0.000	0.000	0.001	0.000
40%	0.000	0.000	0.000	0.000	0.001	0.001
50%	0.000	0.000	0.000	0.000	0.001	0.001
60%	0.010	0.003	0.000	0.000	0.001	0.001
70%	0.020	0.013	0.005	0.000	0.001	0.001
75%	0.029	0.021	0.010	0.009	0.010	0.007
80%	0.040	0.032	0.015	0.010	0.010	0.010
85%	0.060	0.047	0.020	0.019	0.020	0.016
90%	0.130	0.088	0.030	0.023	0.030	0.024
95%	0.320	0.209	0.050	0.039	0.060	0.040
97%	0.450	0.376	0.080	0.064	0.090	0.073
99%	0.830	0.582	0.170	0.099	0.375	0.182
100%	3.880	1.897	1.562	0.360	20.920	0.660

Table 14-9: Domain 2 – indicator thresholds and class grades

Percentile	Oxide		Transitional		Fresh	
	Threshold	Mean	Threshold	Mean	Threshold	Mean
10%	0.010	0.001	0.030	0.008	0.030	0.008
20%	0.045	0.027	0.090	0.058	0.090	0.058
30%	0.085	0.065	0.175	0.131	0.175	0.131
40%	0.152	0.114	0.275	0.225	0.275	0.225
50%	0.245	0.194	0.400	0.334	0.400	0.334
60%	0.370	0.305	0.555	0.472	0.555	0.472
70%	0.540	0.450	0.775	0.662	0.775	0.662
75%	0.649	0.582	0.930	0.851	0.930	0.851
80%	0.830	0.743	1.145	1.036	1.145	1.036
85%	1.105	0.962	1.430	1.276	1.430	1.276
90%	1.510	1.270	1.945	1.666	1.945	1.666
95%	2.350	1.850	3.005	2.386	3.005	2.386
97%	3.015	2.669	4.215	3.482	4.215	3.482
99%	4.905	3.847	7.670	5.398	7.670	5.398
100%	16.440	6.400	28.635	12.030	28.635	12.030

Table 14-10: Domain 3 – indicator thresholds and class grades

Percentile	Oxide		Transitional and fresh	
	Threshold	Mean	Threshold	Mean
10%	0.000	0.000	0.005	0.000
20%	0.030	0.015	0.025	0.014
30%	0.065	0.043	0.055	0.038
40%	0.100	0.085	0.100	0.075
50%	0.150	0.125	0.160	0.129
60%	0.218	0.186	0.250	0.200
70%	0.310	0.263	0.385	0.313
75%	0.390	0.351	0.480	0.430
80%	0.450	0.419	0.620	0.543
85%	0.574	0.508	0.785	0.695
90%	0.720	0.650	1.080	0.921
95%	0.990	0.862	1.664	1.342
97%	1.265	1.104	2.310	1.963
99%	2.645	1.874	4.680	3.159
100%	20.300	6.365	74.385	7.723

Table 14-11: Domain 4 – indicator thresholds and class grades

Percentile	Oxide		Transitional and fresh	
	Threshold	Mean	Threshold	Mean
10%	0.000	0.000	0.030	0.008
20%	0.045	0.022	0.095	0.059
30%	0.120	0.080	0.195	0.143
40%	0.220	0.175	0.320	0.256
50%	0.340	0.276	0.490	0.404
60%	0.460	0.391	0.705	0.592
70%	0.630	0.532	1.010	0.844
75%	0.780	0.706	1.215	1.111
80%	0.990	0.898	1.510	1.362
85%	1.293	1.132	1.905	1.697
90%	1.715	1.478	2.530	2.184
95%	2.670	2.150	3.960	3.108
97%	3.750	3.153	5.050	4.496
99%	6.130	4.895	8.640	6.418
100%	23.956	7.890	26.335	13.070

Table 14-12: Domain 5 – indicator thresholds and class grades

Percentile	Oxide		Transitional and fresh	
	Threshold	Mean	Threshold	Mean
10%	0.000	0.000	0.000	0.000
20%	0.020	0.008	0.015	0.006
30%	0.040	0.028	0.030	0.022
40%	0.070	0.054	0.060	0.044
50%	0.115	0.090	0.100	0.077
60%	0.180	0.144	0.180	0.138
70%	0.290	0.229	0.310	0.240
75%	0.360	0.319	0.400	0.350
80%	0.450	0.403	0.520	0.459
85%	0.636	0.540	0.710	0.607
90%	0.970	0.790	1.020	0.860
95%	1.425	1.168	1.660	1.302
97%	1.932	1.707	2.300	1.931
99%	4.230	2.959	4.015	2.927
100%	16.054	7.310	29.235	5.500

14.3.8.2 Variogram Models

The estimates utilised indicator variograms modelled from the combined (oxide, transitional and primary) datasets for each domain. The indictor variograms were modelled for domains 2, 3, 4 and 5 combined datasets. Domain 2 variograms were used to model the gold in waste domain 1.

Table 14-13 through Table 14-16 list indicator and gold variogram model parameters for each domain. Each indicator variogram model comprises a nugget (C0) and one, two or three shape structures with their individual sill values and ranges as well as three spatial rotation axes and angles. The 3D rotations are implemented in the order Z->Y->X.

Table 14-13: Variogram models – domain 2

Percentile			Range (1st structure - Exp)				Range (2nd structure - sph)				Range (3rd structure - sph)			Rotation		
	CO	C1	X	Y	Z	C2	X	Y	Z	C3	X	Y	Z	Z	Y	X
10%	0.20	0.41	36.5	24	4.5	0.30	39.0	25.0	97.0	0.09	40	286	171	-18	-18	-16
20%	0.26	0.35	31	25	4.5	0.30	50	26	101	0.09	259	1282	1101	-18	-18	-16
30%	0.30	0.35	34	19.5	4.5	0.25	44	28	225	0.10	261	2041	1247	-18	-18	-16
40%	0.37	0.31	4	4	4.5	0.27	78	65	211	0.05	842	2049	687	-18	-18	-16
50%	0.40	0.31	5.5	4.5	5.5	0.27	76	82	291	0.02	598	665	370	-18	-18	-16
60%	0.42	0.40	7.0	36.5	8.0	0.18	132	93	746					-18	-18	-16
70%	0.42	0.40	13	4	5	0.18	86	84	674					-18	-18	-16
75%	0.42	0.42	7.0	4.5	4.5	0.16	63	76	505					-18	-18	-16
80%	0.44	0.42	4.0	4.0	4.0	0.11	35	65	114	0.03	923	925	115	-18	-18	-16
85%	0.46	0.47	6.5	8.0	5.0	0.63	130	96	767	0.01	864	996	2327	-18	-18	-16
90%	0.49	0.44	4.0	4.0	4.0	0.01	732	1400	1296					-18	-18	-16
95%	0.54	0.45	5.5	11.0	4.0	0.01	448	204	1242					-18	-18	-16
97%	0.54	0.45	29.0	4.0	4.0	0.01	409	2736	1705					-18	-18	-16
99%	0.64	0.37	10.5	20..5	4.0	0.01	609	3419	2484					-18	-18	-16
Au g/t	0.46	0.45	4.0	4.0	4.0	0.09	226	72	577	0.09				-18	-18	-16

Table 14-14: Variogram models – domain 3

Percentile			Range (1st structure - Exp)				Range range (2nd structure - sph)				Range (3rd structure - sph)			Rotation		
	CO	C1	X	Y	Z	C2	X	Y	Z	C3	X	Y	Z	Z	Y	X
10%	0.24	0.43	5.5	5.5	8	0.20	71	13	22	0.13	81	56	98	79	-63	-38
20%	0.26	0.43	4	9.5	6.5	0.09	49	12	16	0.22	58	85	65	79	-63	-38
30%	0.26	0.43	4	4	8.5	0.09	46	78	14	0.22	47	87	64	79	-63	-38
40%	0.30	0.43	4	4	11.5	0.09	71	93	12	0.18	73	156	86	79	-63	-38
50%	0.30	0.43	4	4	10.5	0.06	20	22	19	0.21	61	182	69	79	-63	-38
60%	0.30	0.43	4	4	10.6	0.06	11	5	32	0.21	63	131	69	79	-63	-38
70%	0.32	0.49	4	5	31.5	0.03	38	8	50	0.16	73	475	87	79	-63	-38
75%	0.34	0.49	4	5	32.5	0.03	29	18	75	0.14	67	536	76	79	-63	-38
80%	0.36	0.49	4	4	32.6	0.03	20	10	43	0.12	62	497	71	79	-63	-38
85%	0.39	0.51	4	4	7.5	0.03	41	59	18	0.07	133	819	102	79	-63	-38
90%	0.46	0.46	4	4	8	0.05	281	134	159	0.01	293	1500	191	79	-63	-38
95%	0.54	0.44	4	32.5	11	0.01	173	777	298	0.01	2225	2288	381	79	-63	-38
97%	0.54	0.44	4	28	5.5	0.01	554	537	69	0.01	1838	2865	441	79	-63	-38
99%	0.54	0.40	4	32	32.5	0.01	28	217	65	0.01	1039	1128	154	79	-63	-38
Au g/t	0.39	0.51	4	4	8	0.03	5	24	9	0.07	30	242	41	79	-63	-38

Table 14-15: Variogram models – domain 4

Percentile			Range (1st structure - Exp)				Range range (2nd structure - sph)				Range (3rd structure - sph)			Rotation		
	CO	C1	X	Y	Z	C2	X	Y	Z	C3	X	Y	Z	Z	Y	X
10%	0.18	0.36	16	9.5	4	0.25	33	10	36	0.21	90	272	37	10	-12	-47
20%	0.24	0.36	8.5	36	4.5	0.25	97	247	42	0.15	96	525	75	10	-12	-47
30%	0.24	0.36	20	13.5	5.5	0.25	111	150	59	0.15	112	362	60	10	-12	-47
40%	0.24	0.36	39.5	7.5	5	0.17	144	75	62	0.23	146	455	72	10	-12	-47
50%	0.24	0.36	28.5	23.5	4	0.17	137	107	69	0.23	296	112	84	10	-12	-47
60%	0.24	0.36	32.5	14.5	4	0.20	165	354	63	0.20	211	452	64	10	-12	-47
70%	0.24	0.39	4	4	4	0.21	291	506	63	0.16	314	517	65	10	-12	-47
75%	0.26	0.39	4	4	4	0.29	219	313	55	0.06	288	470	59	10	-12	-47
80%	0.31	0.42	40.5	40.5	5	0.27	799	111	107					10	-12	-47
85%	0.31	0.47	18.5	10.5	4	0.15	481	95	87	0.07	755	683	103	10	-12	-47
90%	0.34	0.54	35	34.5	4.5	0.04	549	69	176	0.08	1391	648	177	10	-12	-47
95%	0.37	0.57	24.5	20.5	4	0.06	272	97	424					10	-12	-47
97%	0.40	0.58	25.5	20.5	4	0.01	349	201	249	0.01	572	1618	268	10	-12	-47
99%	0.52	0.46	4	4	4	0.01	352	791	689	0.01	826	3497	868	10	-12	-47
Au g/t	0.28	0.54	19	29.5	4	0.10	551	72	150	0.08	865	116	161	10	-12	-47

Table 14-16: Variogram models – domain 5

Percentile			Range (1st structure - Exp)				Range (2nd structure - sph)				Range (3rd structure - sph)			rotation		
	CO	C1	X	Y	Z	C2	X	Y	Z	C3	X	Y	Z	Z	Y	X
10%	0.41	0.39	4	4	4	0.02	7	27	5	0.18	87	84	673	25	-27	-9
20%	0.35	0.36	4	4	4	0.02	49	12	7	0.27	87	28	224	25	-27	-9
30%	0.35	0.31	4	4	4	0.05	35	17	7	0.30	240	35	63	25	-27	-9
40%	0.35	0.29	4	4.5	4	0.05	5	11	36	0.31	232	29	54	25	-27	-9
50%	0.35	0.32	5.5	20.5	4.5	0.02	6	38	42	0.28	232	29	54	25	-27	-9
60%	0.35	0.33	4	6.5	4	0.05	24	24	6	0.27	305	39	61	25	-27	-9
70%	0.35	0.39	4	18	4	0.03	5	28	5	0.23	149	63	81	25	-27	-9
75%	0.35	0.39	4	4	4	0.03	5	5	5	0.23	132	58	74	25	-27	-9
80%	0.42	0.42	4	4	4	0.03	32	21	5	0.19	126	68	367	25	-27	-9
85%	0.45	0.45	4	4	4	0.03	6	30	29	0.16	99	62	499	25	-27	-9
90%	0.45	0.45	4	4	4	0.03	27	9	9	0.14	130	73	543	25	-27	-9
95%	0.51	0.51	5.5	6.5	4	0.07	141	94	749	0.01	387	127	1018	25	-27	-9
97%	0.51	0.51	4.5	5.5	4.5	0.01	1366	256	1486	0.01	2339	410	1988	25	-27	-9
99%	0.42	0.42	4	7	4	0.01	379	336	1865	0.01	652	1294	1890	25	-27	-9
Au g/t	0.51	0.51	4	4	4	0.03	5	5	5	0.10	125	39	313	25	-27	-9

14.3.8.3 Search Criteria

Three progressively more relaxed search and sample selection criteria have been used (Table 14-17). No rotation was applied to the search axes.

Table 14-17: Estimation search passes

Search Pass	Radii			Minimum Data	Minimum Octants	Maximum Data
	X	**Y**	**Z**			
1	20	20	10	16	4	48
2	40	40	20	16	4	48
3	40	40	20	8	2	48

14.3.8.4 Variance Adjustment

Variance adjustments were applied to yield estimates of recoverable resources at a series of gold cut off grades. These variance adjustments (Table 14-18) were applied using the direct lognormal method. The variance adjustment factors reflect comparatively large-scale open pit mining consistent with Edikan's current mining practices.

The variance adjustment factors were estimated from the variogram model for gold grades assuming mining selectivity of approximately 6 m × 10 m × 2.5 m (across strike, strike, vertical) with high quality grade control sampling on an 8 m × 8 m × 1 m staggered pattern.

After application of the variance adjustments, the estimates can be reasonably expected to provide reliable estimates of potential mining outcomes at the assumed mining selectivity without the application of additional mining dilution or mining recovery factors.

Table 14-18: Variance adjustment parameters

Domain	Total Adjustment
1,2	0.008
3	0.003
4	0.082
5	0.010

14.3.9 Densities

Densities were assigned to the block model using weathering surfaces and density values provided by Perseus (Table 14-19). MPR did not review available density data.

Table 14-19: Assigned densities – AF Gap

Material Type	Density (t/m^3)
Oxide	1.8
Transitional	2.1
Fresh	2.7

14.3.10 Mineral Resource Classification

A classification scheme was applied to produce a resource confidence code based on the number and location of informing sample composites used to estimate proportions and gold grade of each block. This is based on the principle that larger numbers of composites, which are more evenly distributed within the search neighbourhood, will provide a more reliable estimate. The search parameters used to decide on the classification are as follows:

- Minimum number of composites found in the search neighbourhood - for the Category 1 and 2, this parameter is set to 16. For Category 3, a minimum of eight composites is required.
- Minimum number of spatial octants informed - the space surrounding the centre of the block being estimated is divided into eight octants by the axial planes of the data search ellipsoid. This parameter ensures that the informing composites are relatively evenly spread around the block and do not all come from one drill hole. For the Category 1 and 2, at least four of these octants must contain at least one composite. For the Category 3, this parameter is set to two.
- Length of the radii of the search ellipsoid - the search radii define how far the kriging program may look in any direction to find composites to include in the resource estimation for a block. Block dimensions usually influence the lengths of these radii, the sampling density in any direction and the parameters of the variogram model. It is essential that the search radii be kept as short as possible while achieving the degree of resolution required in the modelling. Category 1 estimates have the easting, northing and vertical search radii set to 20 m, 20 m and 10 m respectively. For the Category 2 and Category 3 estimates, these radii are expanded by 100 per cent.

The number of samples and the particular geographic configurations that may qualify the block as Measured rather than Indicated or Inferred may be a somewhat subjective decision. The Qualified Person is satisfied that the strategy adopted in this estimate results in a geologically sensible classification whereby Category 1 and 2 are surrounded by data in close proximity and can properly be considered Measured and Indicated, respectively. Category 3 blocks may occur on the peripheries of drilling but are still related to drill hole data within reasonable distances and are included in the Mineral Resource as Inferred.

Downgrading of these confidence categories may result from a consideration of other factors such as QA/QC, drill hole density and inadequate RC samples. After considering these additional criteria along with the reconciliation between the resource model and mining outcomes, the Qualified Person considers that the modelled categories 1, 2 and 3 can be reported as Measured, Indicated and Inferred Mineral Resources.

14.3.11 Model Reporting

Estimated recoverable resources for AF Gap are constrained by a US$1,800 pit shell and below the 30 June 2021 pit surface (Table 14-20).

Table 14-20: AF Gap Mineral Resources

Deposit	Deposit Type	Measured Resources			Indicated Resources			Measured + Indicated Resources		
		Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
AF Gap 1,2,3,4	Open pit	9.7	0.99	310	21.6	0.90	628	31.3	0.93	938

Notes:

1. Based on March 2020 Mineral Resource model constrained to US$1,800/oz pit shell.
2. Depleted to 30 June 2021 mining surfaces.
3. 0.4g/t gold cut-off applied.
4. Rounding of numbers to appropriate precisions may have resulted in apparent inconsistencies.

14.3.12 Model Validation

Validation of the estimate included visual comparisons of model proportions and grades versus informing sample grades in plan and cross-section views.

Table 14-21 compares mine production to the Mineral Resource estimate for the volume mined during the 12 months ending 30 June 2021.

Table 14-21: AF Gap reconciliation for 12 months to 30 June 2021

	Unit	3 months	6 months	12 months
Mined from resource model				
Tonnes	tonnes	385,774	673,020	939,024
Grade	g/t	1.09	1.08	1.07
Contained gold	oz	13,533	23,310	32,405
Mine Claim				
Tonnes	tonnes	393,892	689,616	924,478
Grade	g/t	0.90	0.92	0.91
Contained gold	oz	11,350	20,389	27,170
Mine Claim/Resource model				
Tonnes		1.02	1.02	0.98
Grade		0.82	0.85	0.85
Contained gold		0.84	0.87	0.84

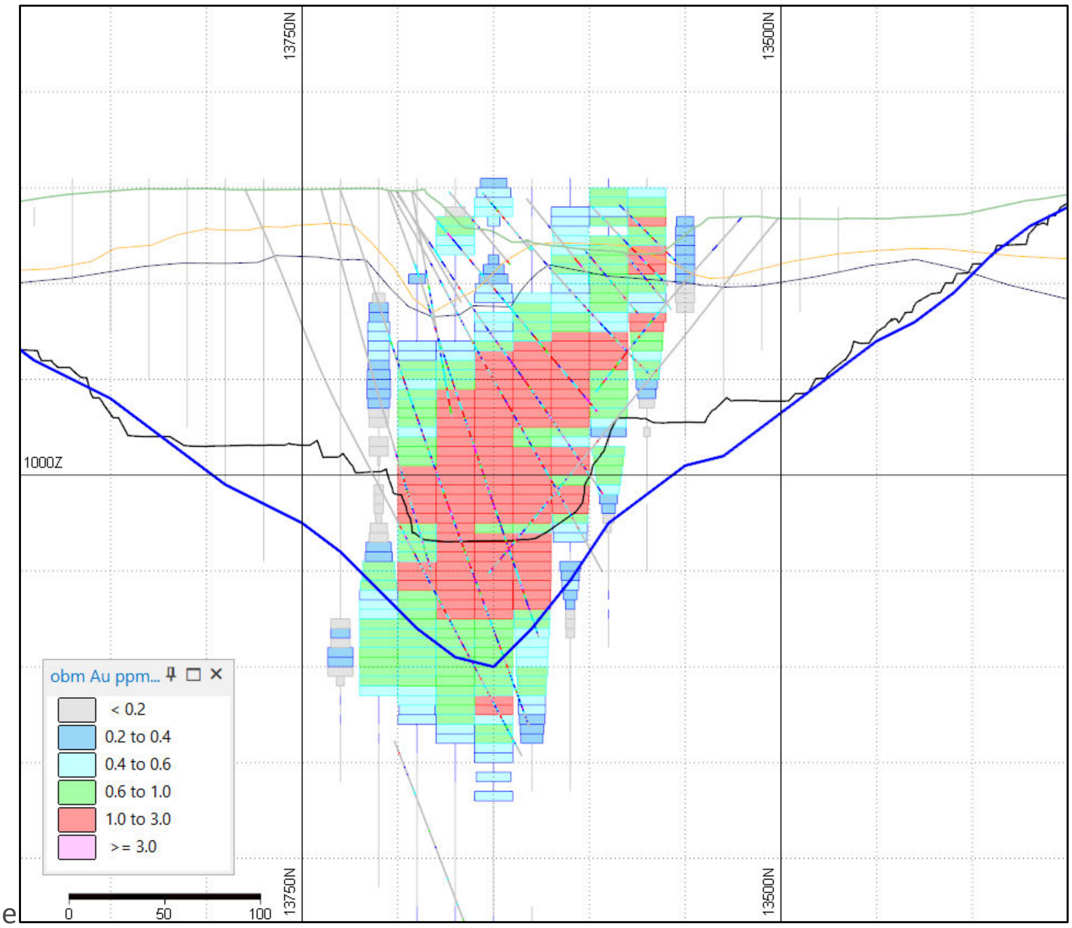

Figure 14-4: Cross section 25,970E showing MIK panels scaled by recoverable proportion at 0.4g/t cut-off, coloured by estimated average panel gold grade, 30 June 2021 pit, weathering surfaces, US$1,800 pit shell and drillhole composites

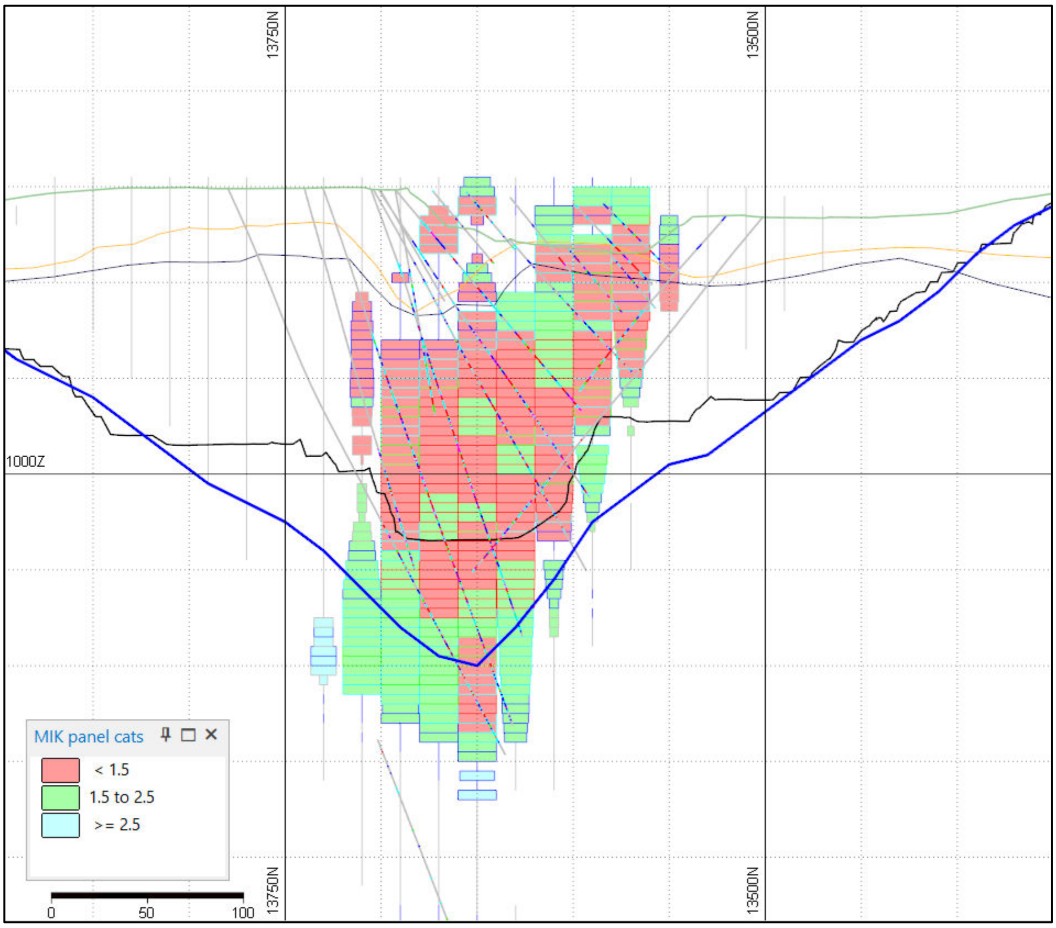

Figure 14-5: Cross section 25,970E showing MIK panels scaled by recoverable proportion at 0.4g/t cut-off, coloured by panel confidence category, 30 June 2021 pit, weathering surfaces, US$1,800 pit shell and drillhole composites

14.4 Esuajah North

14.4.1 Summary

The MRE for Esuajah North was completed in June 2019 by MPR Geological Consultants Pty Ltd (MPR). This estimation was an update of one completed in February 2017, also by MPR. The same drillhole data were used for both estimates, however the estimation parameters differed.

Drilling used for the MRE included 324 RC and diamond holes drilled by Perseus and previous explorers. The MRE is informed by 20 – 40 m spaced holes on 40 m spaced east-west sections. The holes are generally inclined at 60° to either grid east or grid west.

The granite hosted single mineralised domain was interpreted by MPR on the basis of two metre downhole composites. The domain strikes mine grid north for approximately 500 m, dips steeply to the west and extends over widths of 100 - 150 m.

MPR estimated recoverable resources for Esuajah North using Multiple Indicator Kriging (MIK) with block support adjustment, a method that has been demonstrated to provide reliable estimates of recoverable open pit resources in gold deposits of diverse geological styles.

MPR's resource estimates include a variance adjustment to give estimates of recoverable resources at gold cut offs for mining selectivity of approximately 8 m × 8 m × 2.5 m (across strike, strike, vertical) with high quality grade control sampling on an 8 m × 8 m × 1 m staggered pattern. The recoverable resource estimates can be reasonably expected to provide appropriately reliable estimates of potential mining outcomes at the assumed selectivity without application of additional mining dilution, or mining recovery factors.

The Esuajah North mineralisation is characterised by long intervals of elevated gold grades. At low cut-off grades, the mineralisation is reasonably well defined by the current drill spacing.

The MRE classification was based on drill spacing with areas with drilling spaced at 20 m × 20 m classified as Measured and 40 m × 40 m as Indicated. Estimates for broader and irregularly sampled mineralisation at depth and at the peripheries were assigned Inferred and extrapolated to a maximum of around 40 m from drilling.

Table 14-22: Esuajah North Mineral Resources

Deposit	Deposit Type	Measured Resources			Indicated Resources			Measured + Indicated Resources		
		Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
Esuajah North 1,2,3,4	Open pit	2.8	0.79	72	4.0	0.74	95	6.9	0.76	168

Notes:

1. Based on June 2019 Mineral Resource model constrained to US$1,800/oz pit shell.

2. Depleted to 30 June 2021 mining surfaces.

3. 0.4g/t gold cut-off applied.

4. Rounding of numbers to appropriate precisions may have resulted in apparent inconsistencies.

14.4.2 Drilling Database

Drill hole data for the Eastern deposits were supplied to MPR by Perseus as a MS Access database dated 11 November 2016. It is understood that the supplied data was essentially unchanged from data used in the 2013 MRE completed by RPM (Section 14.2.2). MPR extracted the data relevant to Esuajah North and imported the data into Micromine for domain wireframing and creation of composites.

The data were used as a 'on received' basis with QAQC on the sampling and assaying techniques undertaken by Perseus.

14.4.3 Local Grid Conversion

All data used were based on the Edikan East Grid. Two-point transformation parameters to convert from UTM are listed in Table 14-23. East Grid is oriented 37.8° east of UTM north.

Table 14-23: UTM to East Grid two-point transform

Grid A		←	Grid B	
Name	East Grid		Name	UTM
Easting (1)	2399.808		Easting (1)	622668.861
Northing (1)	6999.803		Northing (1)	659762.271
Easting (2)	2200.171		Easting (2)	622804.558
Northing (2)	7479.980		Northing (2)	660264.060
Z			Z	

14.4.4 Data Used in Estimate

The database used in the MRE consisted of 117 and 193 RC and diamond holes respectively. There is also 14 holes of unknown type, but these are suspected to be RC. The number of holes and metreage for each drill type is tabulated in Table 14-24: Breakdown of drilling used in MRE Table 14-24.

The estimate is based on 2 m down-hole composites from RC and diamond drilling coded by mineralisation and weathering domains. Un-assayed composites were assigned a grade of 0.00 g/t Au for portions of holes not sampled because they were visually unaltered and unmineralised. After some trimming of large areas of barren grade intercepts not relevant to the study the final resource dataset contains 21,656 composites.

Table 14-24: Breakdown of drilling used in MRE

Hole Type	No. of holes	Metres		
		RC	Diamond	Total
RC	117	9,299.7	-	9,299.7
Diamond (from surface)	129	-	28,554.4	28,554.4
RC pre-collar diamond	64	7,295.7	12,245.7	19,541.4
Undefined	14			756.0
TOTAL	**324**	**16595.4**	**40800.1**	**58151.5**

14.4.5 Modelling Domains

Esuajah South is hosted within a north trending (local grid) granite. Gold mineralisation is associated with disseminated sulphides in quartz veins and within alteration selvages at the margins of the veins. The local tenor of the gold mineralisation within the granite body is dependent on the intensity of quartz veining and sericite-pyrite-arsenopyrite alteration.

Based on a wireframe of the host granite provided by Perseus, MPR created a single mineralised domain containing sample composites > 0.1 g/t Au. A cross sectional string interpretation based on the drilling sections was completed and then wireframed to create the closed domain. The resulting domain is north trending, extends for around 500 m, dips 70° to the west and has widths ranging from 100 – 140 m. A plan view and a type cross section of the domain and drilling are shown in Figure 14-6 and Figure 14-7 respectively.

Weathering surfaces were also created that represented the base of complete weathering and top of fresh. This effectively created oxide, transitional and primary weathering domains. Geological logging from the resource dataset and grade control drilling were used to define these surfaces.

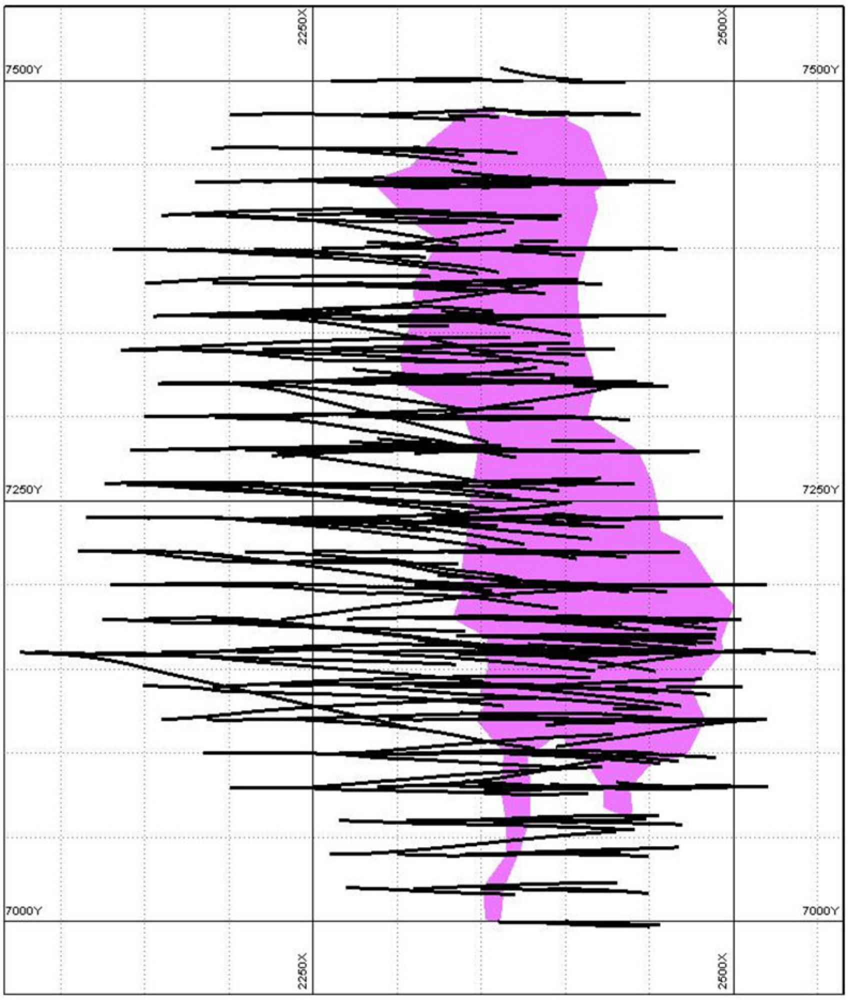

Figure 14-6: Plan view of mineralised domain and drill hole traces

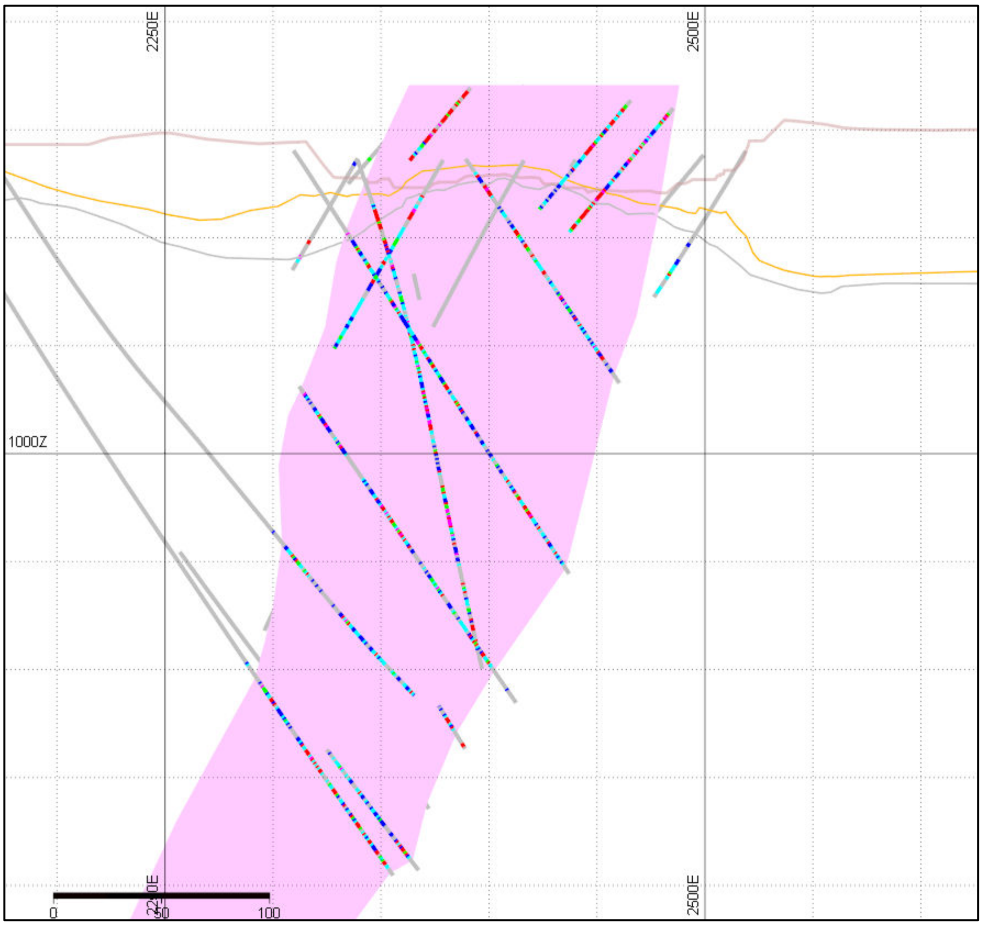

Figure 14-7: Cross section showing mineralised domain, weathering surfaces and drillhole grades (7,200N)

14.4.6 Univariate Statistics

Once large areas of barren grade intercepts were removed, 21,656 composites were used in the estimate. Table 14-25 shows the estimation dataset statistics. Due to the small numbers of samples in the oxide and transitional domains and the similar tenor of mineralisation in each of the weathering domains, it was decided that the domains would not be estimated separately.

Table 14-25: Estimation dataset statistics

	Metasediments (domain 1)				Mineralised granite (domain 2)			
	Oxide	**Trans**	**Fresh**	**Total\ Weighted average**	**Oxide**	**Trans**	**Fresh**	**Total\ Weighted average**
Number	838	880	5,682	7,400	96	430	13,730	14,256
Mean	0.043	0.072	0.07	0.068	0.753	1.023	0.877	0.88
Variance	0.034	0.209	0.074	0.086	2.752	6.8	4.569	4.625
Coef. Var.	4.305	6.376	3.865	4.336	2.202	2.548	2.438	2.443
Minimum	0	0	0	0	0	0	0	0
1st quartile	0	0	0	0	0.2	0.19	0.245	0.245
Median	0	0	0	0	0.435	0.48	0.5	0.5
3rd quartile	0.015	0.023	0.025	0.02	0.88	1.083	0.88	0.885
Maximum	2.59	8.47	7.57	8.47	15.953	44.7	86	86

14.4.7 Block Model

Table 14-26 shows the dimensions and panel sizes of the block model created for the MRE. Plan view panel dimensions were selected on the basis of sample spacing. The model origin was selected to yield panel centroids consistent with drilling traverses.

Table 14-26: Block model architecture

	X	Y	Z
Origin	2,230	6,700	612.5
Extents (m)	320	520	620
Panel size (m)	20	20	5
Number of panels	17	27	32

14.4.8 Grade Interpolation

14.4.8.1 Indicator Thresholds and Class Grades

Table 14-27 presents the grade thresholds and class mean gold grades used for MIK modelling. Indicator thresholds and class mean grades used for estimation of the mineralised domain were derived from a combined dataset of mineralised domain composites. This approach reflects the lack of marked variability in grade tenor with weathering style and the comparatively small numbers of weathered and transitional mineralised domain composites.

All class grades used for estimation of the mineralised domain were derived from the class mean grades with the exception of the upper bin grade. Reconciliation of mine production to the February 2017 MIK model, which used the upper bin median grade (16.09 g/t), indicated that mining was not recovering the predicted grade. For the June 2019 model update, the grade for the uppermost bin was reduced to 5 g/t Au. All other estimation parameters were left unchanged from those applied in the February 2017 model.

Indicator thresholds assigned to the metasediment domain (domain 1) have all been set to 0.0 g/t Au to prevent estimation of any resource outside the mineralised granite domain. The rare mineralised intercepts in drilling outside the mineralised domain lack continuity and are generally low grade. The excluding of this mineralisation from the resource recognises the low possibility of recovering this material as ore either through mine selectivity issues or simply that grade control drilling will not extend outside the granite domain.

Table 14-27: Indicator threshold and class grades

Percentile	Metasediment (domain 1)		Mineralised granite (domain 2)	
	Threshold	Mean	Threshold	Mean
10%	0.000	0.000	0.100	0.044
20%	0.000	0.000	0.195	0.148
30%	0.000	0.000	0.290	0.245
40%	0.000	0.000	0.390	0.341
50%	0.000	0.000	0.500	0.444
60%	0.000	0.000	0.615	0.555
70%	0.010	0.000	0.775	0.691
75%	0.020	0.000	0.885	0.828
80%	0.040	0.000	1.020	0.947
85%	0.080	0.000	1.225	1.114
90%	0.145	0.000	1.585	1.384
95%	0.315	0.000	2.540	1.990
97%	0.495	0.000	3.630	3.031
99%	1.145	0.000	7.205	4.920
100%	8.470	0.000	86.000	5.000

14.4.8.2 Variogram Models

The estimate utilised one set of indicator variograms modelled from the combined composite dataset of the mineralised granite domain (domain 2). The variogram models are displayed in Table 14-28.

Table 14-28: Variogram models – domain 2

Percentile			Range (1st structure - Exp)				Range (2nd structure - sph)				Range (3rd structure - sph)			Rotation		
	CO	C1	X	Y	Z	C2	X	Y	Z	C3	X	Y	Z	Z	Y	X
10%	0.16	0.66	6	4	14	0.10	67	61	15	0.08	88	105	58	34	60	35
20%	0.16	0.66	4.5	4	4	0.03	11	31	5	0.15	29	37	106	34	60	35
30%	0.17	0.65	4	5	8	0.03	16	6	21	0.15	18	12	96	34	60	35
40%	0.17	0.65	4	4	4	0.03	5	5	39	0.15	16	26	131	34	60	35
50%	0.17	0.67	4	4	4	0.03	5	5	41	0.13	16	30	130	34	60	35
60%	0.20	0.69	4	4.5	25	0.03	6	16	35	0.08	39	241	228	34	60	35
70%	0.23	0.69	4	4	20	0.03	8	26	65	0.05	72	107	548	34	60	35
75%	0.26	0.69	4	4	22.5	0.03	24	32	193	0.02	162	123	988	34	60	35
80%	0.29	0.69	4	11.5	25.5	0.02	193	90	722					34	60	35
85%	0.32	0.66	4	4	24	0.02	167	181	877					34	60	35
90%	0.37	0.62	4	4	21	0.01	543	712	2029					34	60	35
95%	0.42	0.58	4	6	22.5									34	60	35
97%	0.51	0.49	4	4	17									34	60	35
99%	0.51	0.49	4	4	20									34	60	35
Au g/t	0.25	0.73	4	4	30	0.02								34	60	35

14.4.8.3 Search Criteria

Three progressively more relaxed search and sample selection criteria are used for the estimate to produce three confidence categories. These parameters are presented in Table 14-29. No rotation was applied to the search axes.

Table 14-29: Estimation search passes

Search Pass	Radii			Minimum Data	Minimum Octants	Maximum Data
	X	Y	Z			
1	20	20	10	16	4	48
2	40	40	20	16	4	48
3	40	40	20	8	2	48

14.4.8.4 Variance Adjustment

MPR included a variance adjustment to yield estimates of recoverable resources at different gold cut off grades. The variance adjustment was applied using the direct lognormal method and the adjustment factor is listed in Table 14-30. The variance adjustment factors reflect comparatively large-scale open pit mining consistent with Edikan's current mining practices.

The variance adjustment factors were estimated from the variogram model for gold grades assuming mining selectivity of 8 m × 8 m × 2.5 m (across strike, strike, vertical) with high quality grade control sampling on a 8 m × 8 m × 1 m staggered pattern.

Experience indicates that the variance adjustments applied to the current estimates can be reasonably expected to provide reliable estimates of potential mining outcomes at the assumed mining selectivity without the application of additional mining dilution, or mining recovery factors.

Table 14-30: Variance adjustment parameters

Domain	Total Adjustment
1, 2	0.076

14.4.9 Density

Densities were assigned to the block model using weathering surfaces and density values provided by Perseus (Table 14-31). MPR did not review available density data.

Table 14-31: Assigned densities – Esuajah North

Material Type	Density (t/m^3)
Oxide	1.8
Transitional	2.1
Fresh	2.7

14.4.10 Mineral Resource Classification

Resource confidence categories were allocated based on the number and location of gold composites used to estimate proportions and gold grade of each block. This is based on the principle that larger numbers of composites, which are more evenly distributed within the search neighbourhood, will provide a more reliable estimate. The search parameters used to decide on the classification of the initial three categories of a block resource for Esuajah North are summarised below:

- Minimum number of composites found in the search neighbourhood - for the Category 1 and 2, this parameter is set to 16. For Category 3, a minimum of eight composites is required.
- Minimum number of spatial octants informed - the space surrounding the centre of the block being estimated is divided into 8 octants by the axial planes of the data search ellipsoid. This parameter ensures that the informing composites are relatively evenly spread around the block and do not all come from one drill hole. For the Category 1 and 2, at least 4 of these octants must contain at least one composite. For the Category 3, this parameter is set to 2.
- Length of the radii of the search ellipsoid - the search radii defines how far the kriging program may look in any direction to find composites to include in the resource estimation for a block. Block dimensions usually influence the lengths of these radii, the sampling density in any direction and the parameters of the variogram model. It is essential that the search radii be kept as short as possible while achieving the degree of resolution required in the modelling. For the Esuajah model the Category 1 estimates have the easting, northing and vertical search radii set to 20 metres, 20 metres and 10 metres respectively. For the Category 2 and Category 3 estimates, these radii are expanded by 100 per cent.

The number of samples and their geographic configurations that may qualify the block as Measured rather than Indicated or Inferred may be a somewhat subjective decision. The Qualified Person is satisfied that the strategy adopted in this estimate results in a geologically sensible classification whereby Category 1 and 2 are surrounded by data in close proximity and can properly be considered Measured and Indicated, respectively. Category 3 blocks may occur on the peripheries of drilling but are still related to drill hole data within reasonable distances and are included in the Mineral Resource as Inferred.

Downgrading of these confidence categories may result from a consideration of other factors such as QA/QC, drill hole density and inadequate RC samples. After considering these additional criteria along with the reconciliation between the resource model and mining outcomes, the Qualified Person considers that the modelled categories 1, 2 and 3 can be reported as Measured, Indicated and Inferred Mineral Resources.

14.4.11 Model Reporting

Estimated recoverable resources for Esuajah North are constrained by a US$1,800 pit shell, below the 30 June 2021 pit surface and reported using a 0.4 g/t Au cut-off. Table 14-32 shows the current Mineral Resources as of 30 June 2021.

Table 14-32: Esuajah North Mineral Resources

Deposit	Deposit Type	Measured Resources			Indicated Resources			Measured + Indicated Resources		
		Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
Esuajah North 1,2,3,4	Open pit	2.8	0.79	72	4.0	0.74	95	6.9	0.76	168

Notes:

1. Based on June 2019 Mineral Resource model constrained to US$1,800/oz pit shell.
2. Depleted to 30 June 2021 mining surfaces.
3. 0.4g/t gold cut-off applied.
4. Rounding of numbers to appropriate precisions may have resulted in apparent inconsistencies.

14.4.12 Model Validation

Validation of the estimate included visual comparisons of model proportions and grades versus informing sample grades in plan and cross-section views.

Table 14-33 compares mine production to the Mineral Resource estimate for the volume mined during the 12 months ending 31 May 2020 when the most recent phase of mining at Esuajah North ceased.

Table 14-33: Esuajah North reconciliation for 12 months to 31 May 2020

	Unit	3 months	6 months	12 months
Mined from resource model				
Tonnes	tonnes	276,079	1,178,200	3,367,755
Grade	g/t	0.91	0.96	0.96
Contained gold	Oz	8,063	36,310	104,440
Mine Claim				
Tonnes	tonnes	318,227	1,286,302	3,761,394
Grade	g/t	0.94	0.91	0.95
Contained gold	oz	9,575	37,739	115,154
Mine Claim/Resource model				
Tonnes		1.15	1.09	1.12
Grade		1.03	0.95	0.99
Contained gold		1.19	1.04	1.10

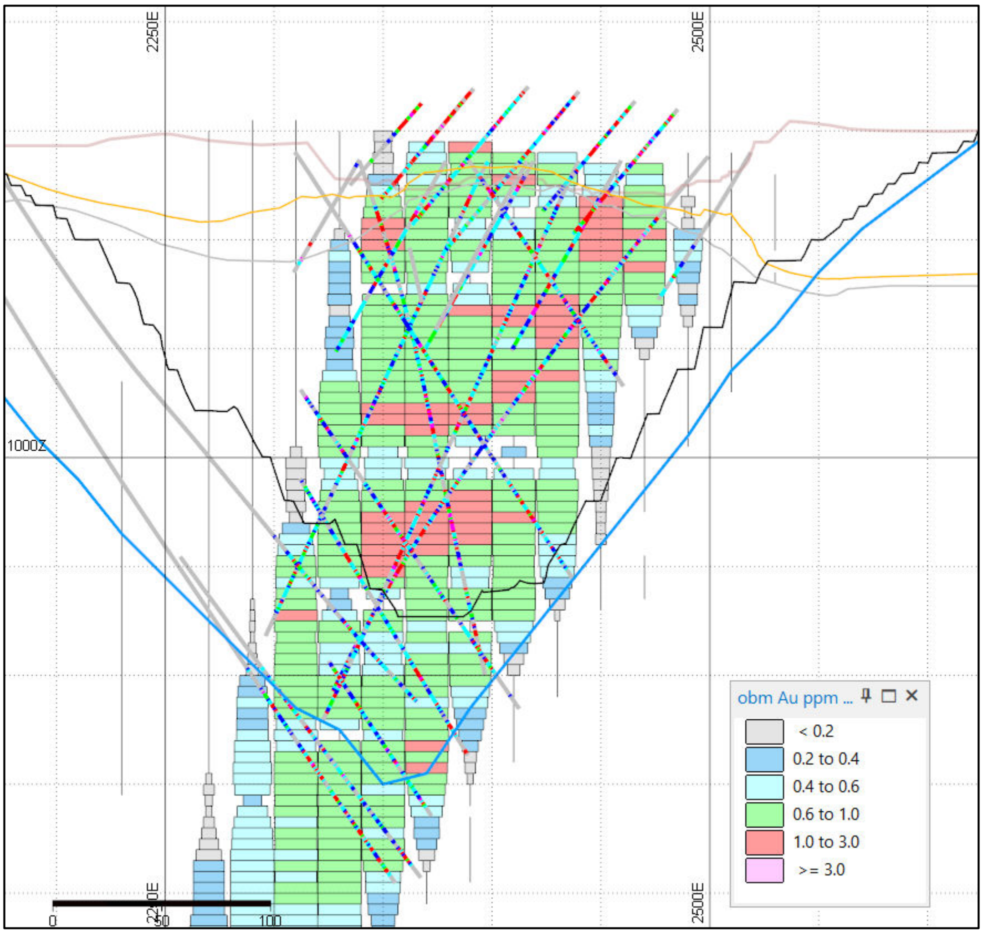

Figure 14-8: Cross section 7,200N showing MIK panels scaled by recoverable proportion at 0.4g/t cut-off, coloured by estimated average panel gold grade, 31 May 2020 pit, weathering surfaces, US$1,800 pit shell and drillhole composites

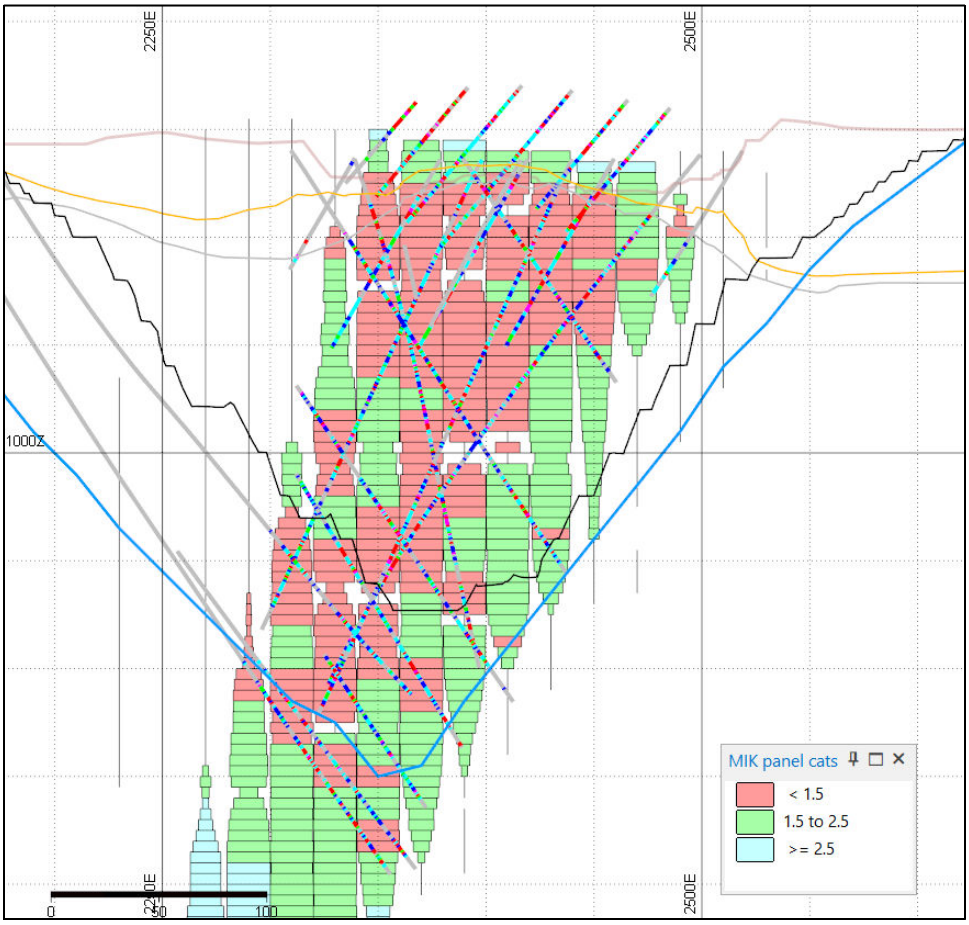

Figure 14-9: Cross section 7,200N showing MIK panels scaled by recoverable proportion at 0.4g/t cut-off, coloured by panel confidence category, 31 May 2020 pit, weathering surfaces, US$1,800 pit shell and drillhole composites

14.5 Esuajah South

14.5.1 Summary

The current MRE for Esuajah South was completed by Perseus in November 2020 (Table 14-34) and is based on a 1g/t gold cut-off and below the current pit surface. Previous estimates were completed by Runge Limited in 2009 and 2010 and by Runge Pincock Minarco (RPM) in May 2013. Documentation of the 2013 MRE was updated in 2015 to comply with the requirements of the Australasian Code for Reporting of Mineral Resource and Mineral Reserves 2012 edition (JORC 2012).

The MRE is based on two diamond core holes drilled by AGC (pre-2006), 131 DD holes drilled by Perseus between 2006 – 2011 and a further 61 DD holes drilled in August-October 2020.

The Esuajah South deposit comprises mineralisation hosted by a single northeast striking granitoid body measuring 250 m along strike, typically 60 – 80 m horizontal width and dipping approximately 75° towards the northwest.

The deposit was drilled on an approximately 20 m × 20 m spacing and sections were digitised to produce a mineralised solid.

Sample intervals were composited to 2 m, a top cut of 20 g/t Au applied and a three pass Ordinary Kriging (OK) estimation was completed. Resource classification wireframes were constructed to code blocks as Measured if the drilling spacing was 20 m × 20 m or less and if generally the blocks were estimated in the first pass. Similarly, Indicated was assigned if the drill spacing was less than 40 m × 40 m and greater than 20 m × 20 m and the block were populated by the second pass. Inferred was assigned to blocks populated in the third pass.

Table 14-34: Esuajah South Mineral Resources

Deposit	Deposit Type	Measured Resources			Indicated Resources			Measured + Indicated Resources		
		Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
Esuajah South 1,2,3,4	Underground	3.1	1.70	168	5.9	2.09	393	8.9	1.95	561

Notes:

1. Based on November 2020 Mineral Resource model.
2. Depleted to previously mined surface.
3. 1g/t gold cut-off applied.
4. Rounding of numbers to appropriate precisions may have resulted in apparent inconsistencies.

14.5.2 Drilling Database

Drill hole data informing the Esuajah South MRE are listed in Table 14-35. The diameter of the RC and DD holes drilled by AGC are unknown. Perseus diamond core holes collared at the surface started as HQ (63.5 mm diameter) and then changed to NQ (47.6 mm diameter) at the fresh rock interface. Core in pre-collared holes and holes drilled from the pit base was all NQ diameter. All RC holes were 5 ¼ inch diameter.

Table 14-35: Breakdown of drilling used in MRE

Year	Operator	Drill Type	No. of holes	Metres	Comments
Pre-2000	AGC	RC	34	2,050	Dates uncertain
Pre-2000	AGC	DD	2	268	Dates uncertain
2006 - 2007	Perseus	RC	6	808	
2006 - 2008	Perseus	DD	55	14,099	Drilled from surface
2010	Perseus	RC/DD	27	6,881	RC pre-collared DD holes
2010 - 2011	Perseus	DD	43	13,420	Drilled from surface
2020	Perseus	DD	61	5,886	Drilled from base of pit
TOTAL				**43,412**	

14.5.3 Local Grid Conversion

All data used were based on the Edikan East Grid (0, above). EGM96 elevations have been adjusted by adding 1,000m to avoid negative values.

14.5.4 Deposit Statistics

The Esuajah South deposit comprises mineralisation hosted by a single northeast striking granitoid body measuring 250 m along strike, typically 60 – 80 m horizontal width and dipping approximately 75° towards the northwest. Drilling has confirmed that the body is continuous to at least 500 m vertical depth below surface.

Samples were composited to 2 m (using the best fit method) and used in the estimate. Residual sample lengths < 1 m were excluded and any assays below the detection limit was re-set to half the detection limit.

14.5.5 Data Used in Estimate

All RC holes drilled by AGC were excluded from the estimate as the AGC RC holes have wider intercepts and higher grades than later DD holes, indicating down-hole sample contamination has occurred in wet RC drilling.

There are four RC holes drilled pre-2008 for which sample condition logs are not available. Mineralisation widths and grades in those holes appear reliable when compared to intercepts in nearby diamond core holes and they were included in data that inform the resource model. Data from those holes make up less than 2% of the data used in the estimate.

A total of 7,837composites were used to inform the estimate

Table 14-36: Sources of 2m sample composites in mineralised domain

Company	Sample type	Number of composites in mineralised domain
AGC	DD	68
Perseus pre-2020	RC	112
Perseus pre-2020	DD	5,145
Perseus 2020	DD	2,512
TOTAL		**7,837**

14.5.6 Modelling Domains

Strings were digitised on 20 m spaced cross-sections and wireframed into a single solid. Based on similar granite hosted deposits at Edikan and an examination of the drill data, the entire granitoid body was considered the mineralised domain. There are a small number of mineralised intercepts in the surrounding metasediments, but these were not considered relevant to the estimate.

Plan, cross sectional and long sectional view of the composites within the mineralised domain are shown in Figure 14-10, Figure 14-11 and Figure 14-12 respectively.

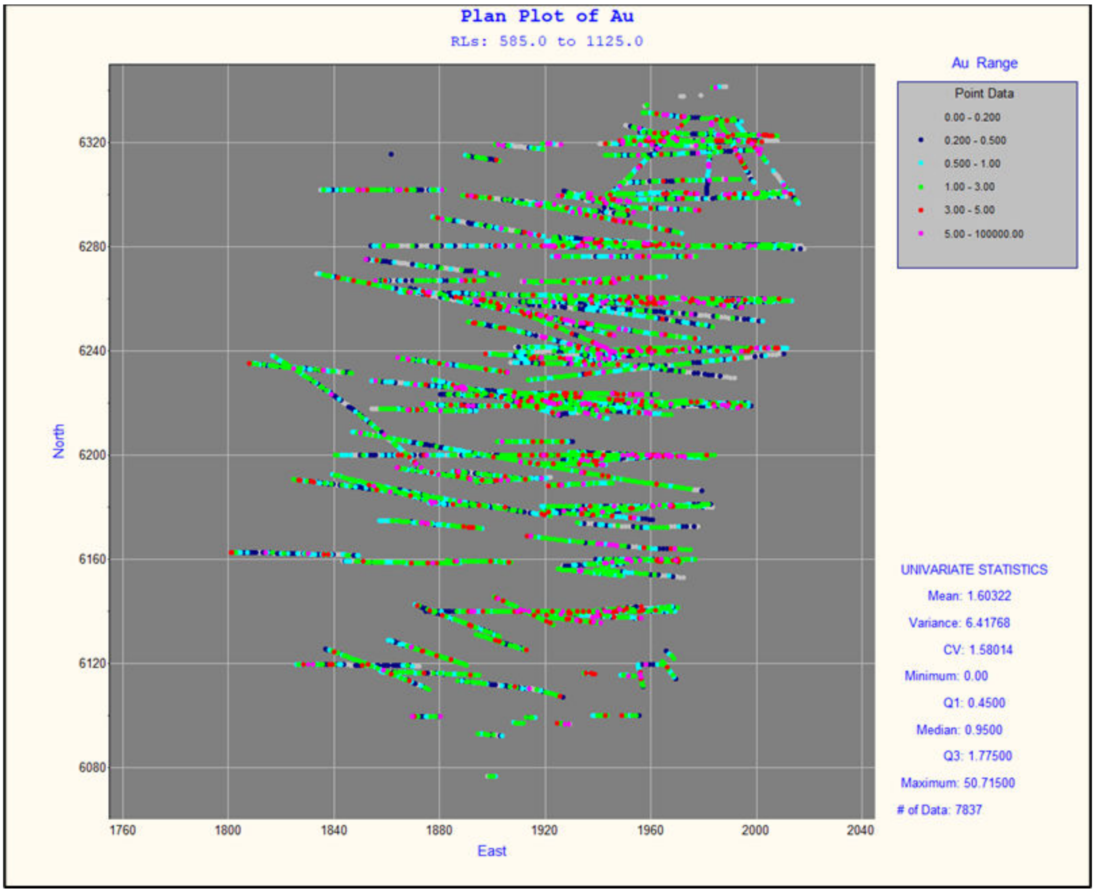

Figure 14-10: Plan view of 2 m composites contained within mineralised domain

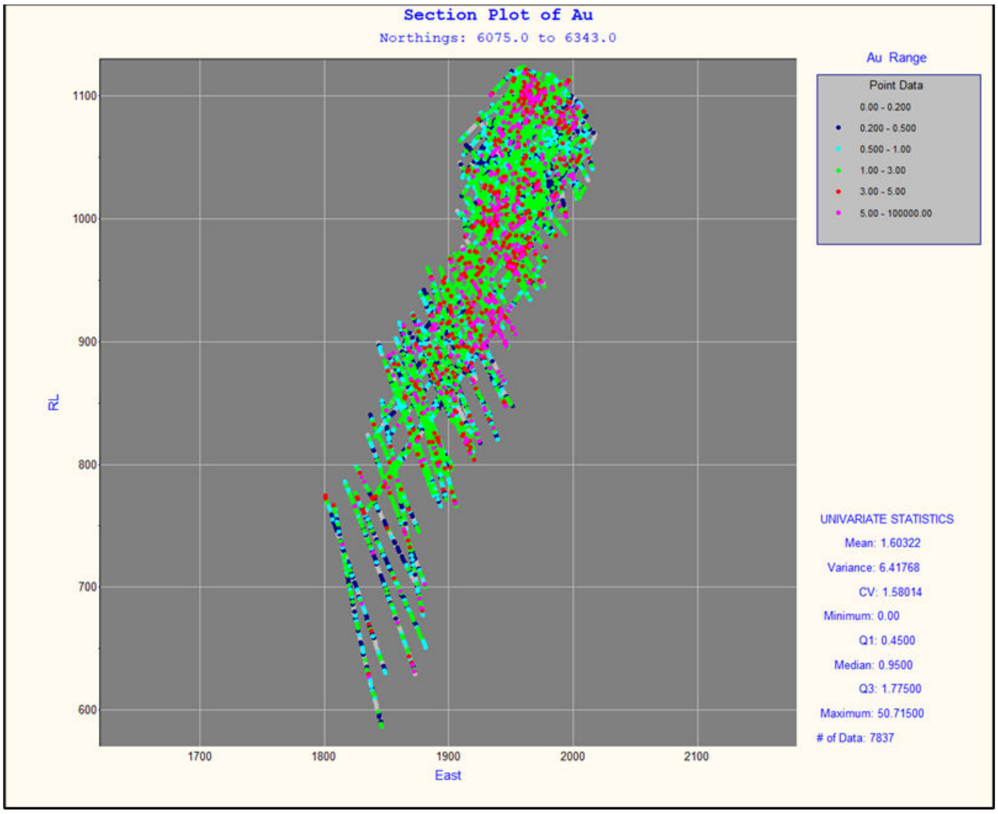

Figure 14-11: Cross section view of 2 m composites within mineralised domain

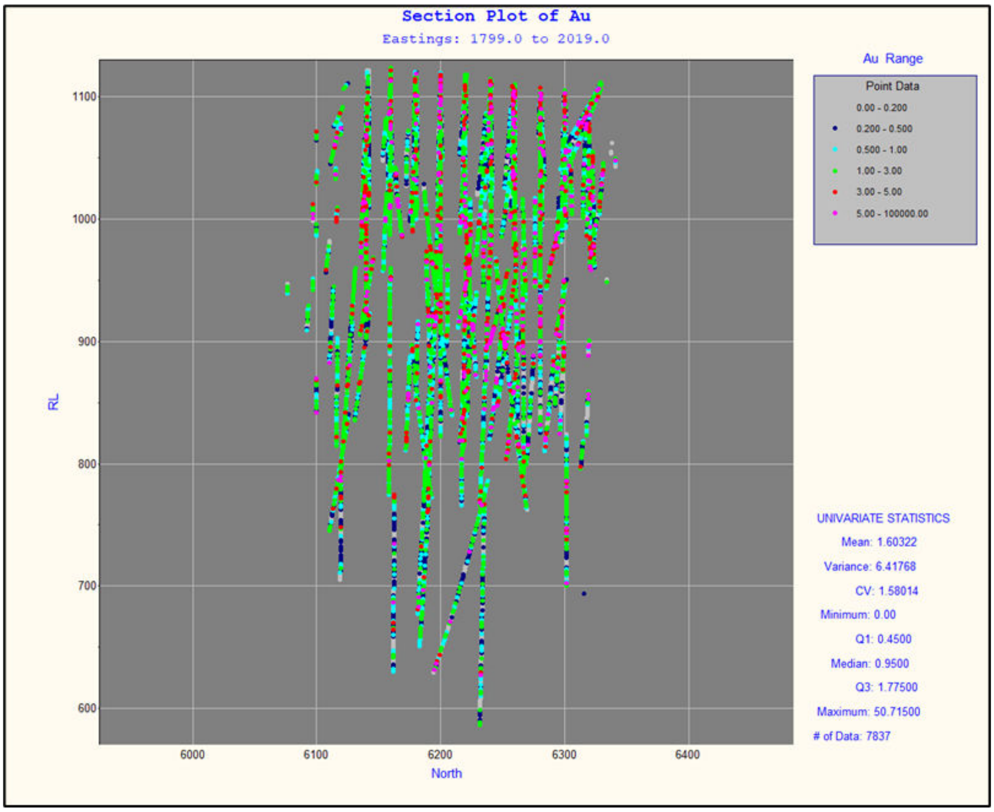

Figure 14-12: Long section view showing 2 m composites within mineralised domain

14.5.7 Univariate Statistics

Figure 14-13 shows the cumulative histogram of gold grades in the 2 m sample composites contained within the granite wireframe. There is a fairly continuous distribution up to about 30 g/t Au, with three outliers exceeding that grade. The coefficient of variation of 1.58, is relatively low for a gold deposit.

Table 14-37 lists the conditional statistics of gold grades in the 2 m sample composites. The 98th percentile occurs at 8.58 g/t Au and the 99th percentile at 12.92 g/t Au. Top cutting of extreme grades to around the 98th percentile is common practice when applying linear methods for estimates.

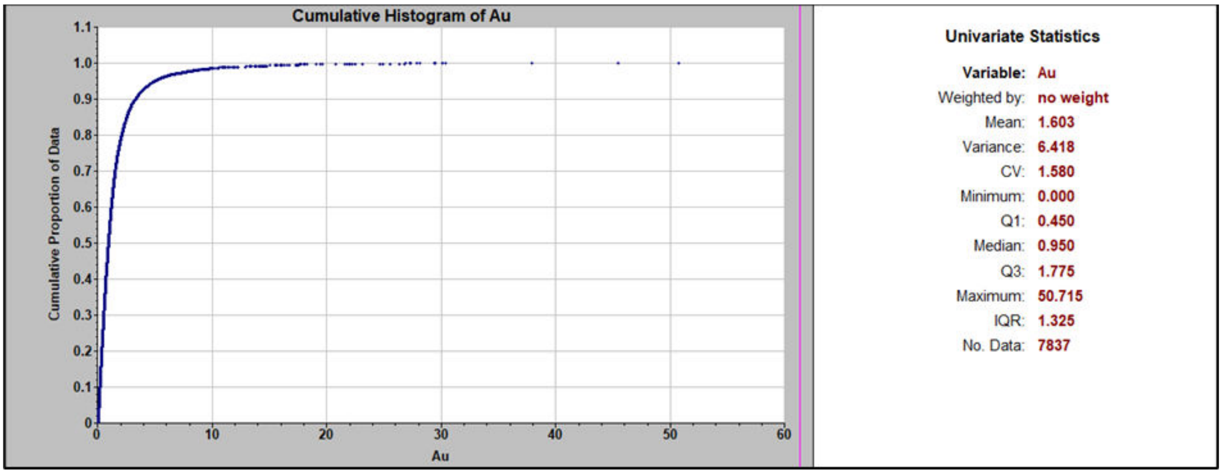

Figure 14-13: Cumulative histogram of 2 m mineralised composites

14.5.8 Compositing and High Grade Cuts

Two-metre downhole composites were created and only those within the interpreted granite domain were used in the MRE.

Initially four different top cut scenarios were applied and an estimate run on each version. The top cuts applied and the results of these were:

- No topcuts
- Topcut of 30 g/t Au, which was approximately the 99.9th percentile of sample grades. This resulted in five samples being cut.
- Topcut of 20 g/t Au, which was approximately the 99.5th percentile of sample grades. This resulted in 26 samples being cut.
- Topcut of 10 g/t Au, which was approximately the 98.5th percentile of sample grades. This resulted in 118 sample being cut.

Compared to the model informed by no topcuts and at block grades > 1 g/t Au, the 30 g/t Au topcut removes 1.4% of the metal, the 20 g/t Au topcut removes 3.6% of the metal and the 10 g/t Au topcut removes 8.7% of the metal from the model. After comparisons to independent check models (14.9.3 below), the 20 g/t Au topcut was adopted.

Table 14-37: Conditional statistics of 2 m mineralised composites

Grade Threshold	Cumulative Proportion	Inv. Cumulative Proportion	Class Mean	Class Median	Mean Above	Class Data
0.200	0.10	0.90	0.116	0.120	1.768	783
0.360	0.20	0.80	0.281	0.280	1.954	784
0.537	0.30	0.70	0.447	0.450	2.170	784
0.725	0.40	0.60	0.631	0.630	2.426	783
0.950	0.50	0.50	0.834	0.835	2.744	784
1.190	0.60	0.40	1.067	1.070	3.164	784
1.533	0.70	0.30	1.353	1.345	3.766	783
2.096	0.80	0.20	1.785	1.776	4.757	784
2.550	0.85	0.15	2.313	2.305	5.571	392
3.330	0.90	0.10	2.869	2.835	6.923	392
4.990	0.95	0.05	4.016	3.965	9.829	392
6.780	0.97	0.03	5.730	5.655	12.539	156
8.580	0.98	0.02	7.700	7.865	14.974	79
12.920	0.99	0.01	10.174	10.003	19.713	78
50.715	1.00		19.713	17.290		79

14.5.9 Block Model

A parent block size of 10 mE x 10 mN x 10 mRL was selected for estimation, representing approximately half drill hole spacing in the more densely drilled portion of the deposit. Block model limits and discretisation are listed in Table 14-38.

Table 14-38: Block model architecture – Esuajah South

	X	Y	Z
Origin (centroid)	1705	6055	555
Maximum (centroid)	2015	6335	1125
Parent cell size (m)	10	10	10
Discretisation (points)	5	5	5
Sub cell size* (m)	2.5	2.5	2.5

*Minimum size

14.5.10 Grade Interpolation

14.5.10.1 Variogram Models

Variogram maps were generated for each of three regions: <890 mRL, 890 – 990 mRL and >990 mRL to check that directional controls on mineralisation are similar throughout the deposit. Figure 14-14, Figure 14-15 and Figure 14-16 show XY, XZ and YZ variogram maps respectively. These maps show that directional trends of gold grades in each of the depth regions are very similar.

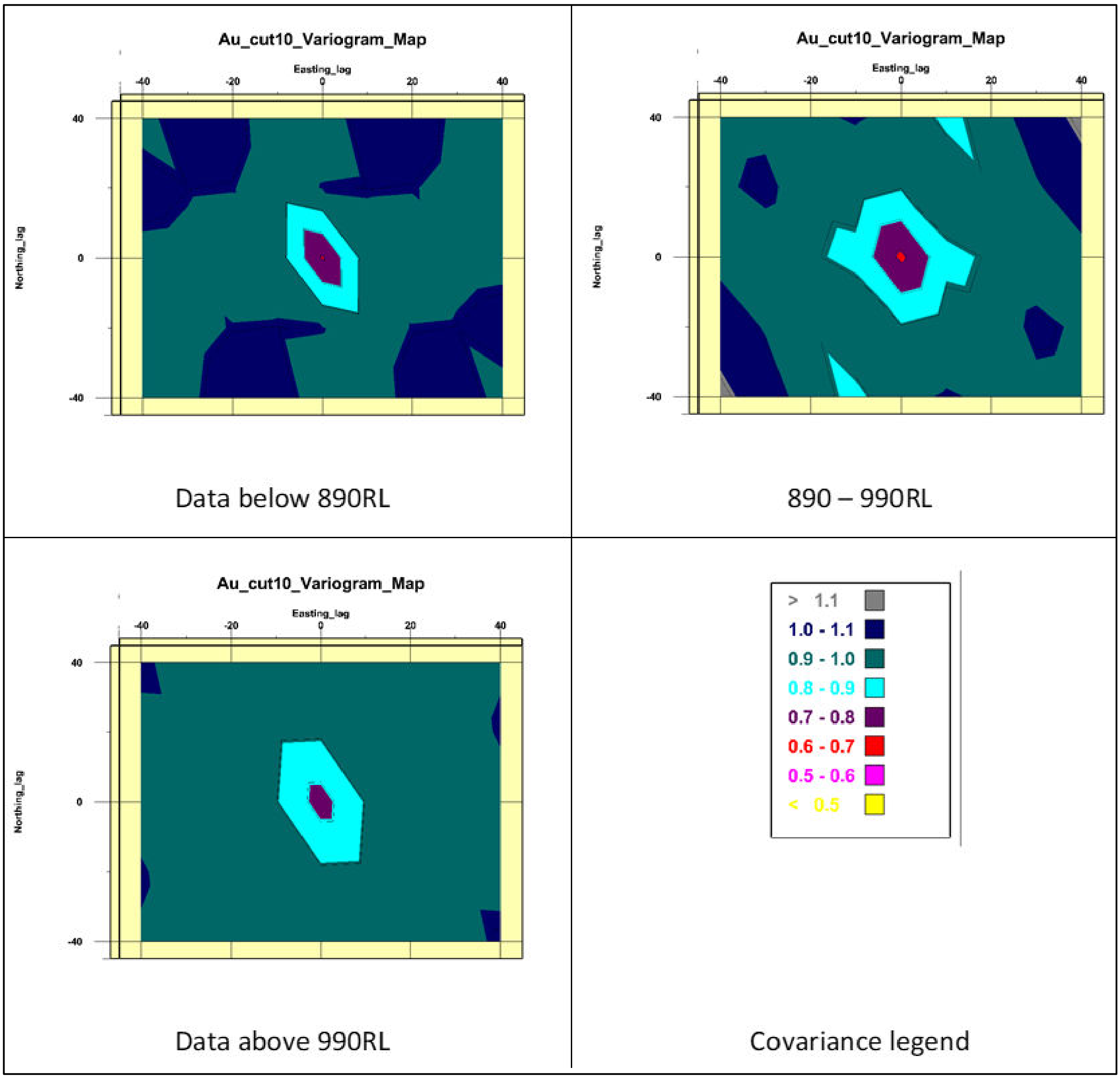

Figure 14-14: XY variogram maps for three depth regions

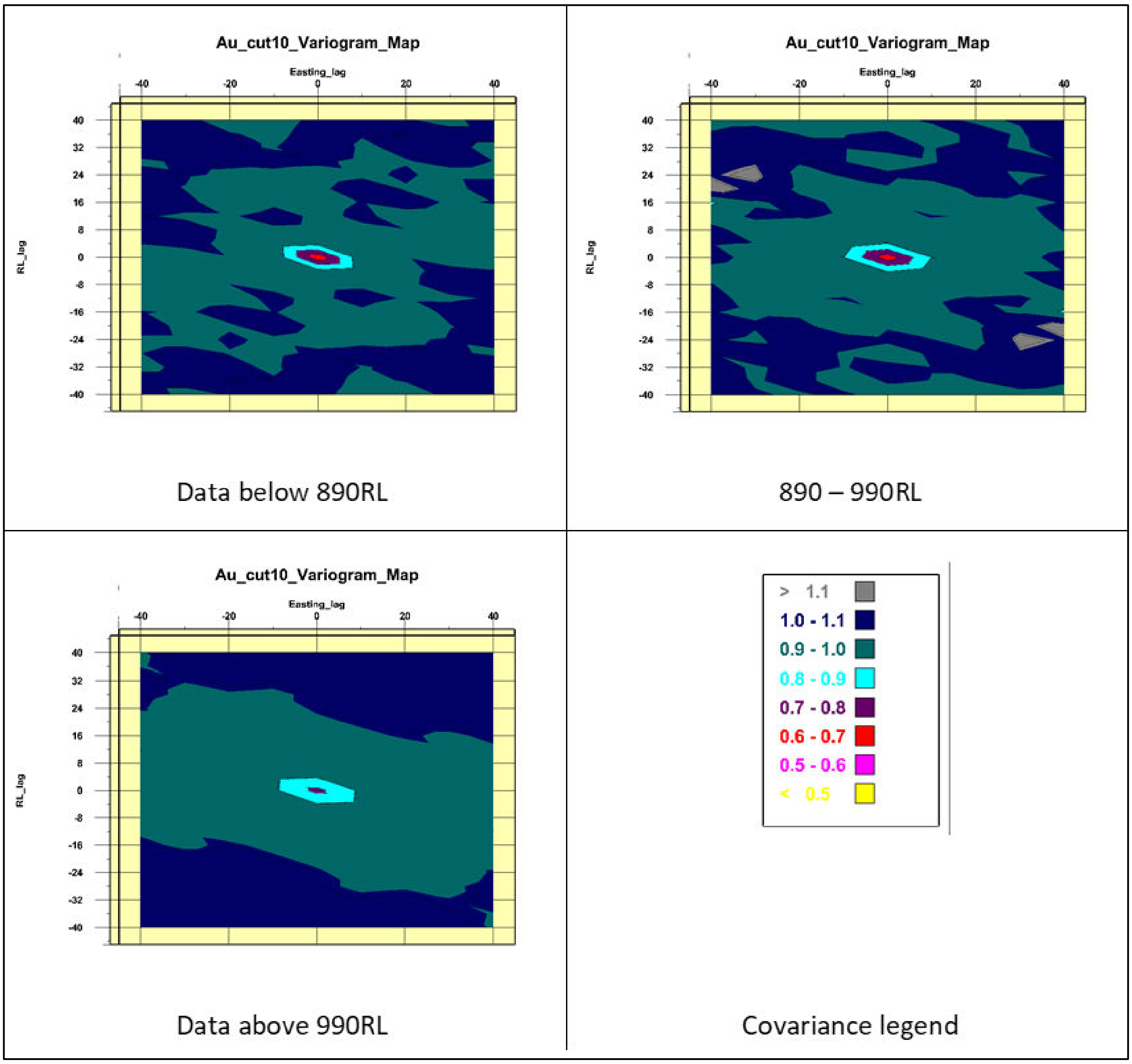

Figure 14-15: XZ variogram maps for three depth regions

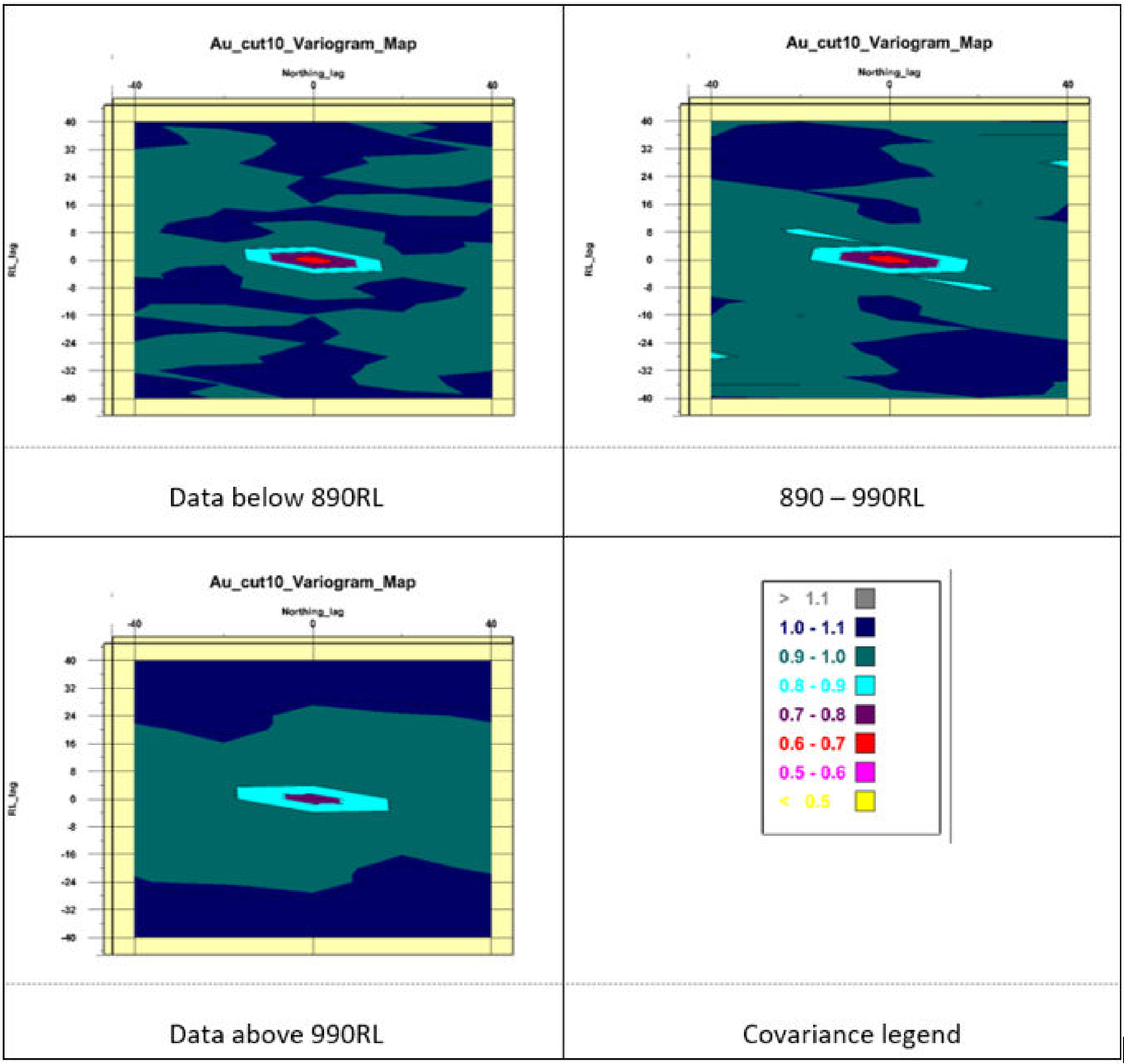

Figure 14-16: YZ variograms maps for three depth regions

Experimental variograms of gold grades were calculated in several directions permitted by the sample spacing and fitted with an optimal variogram model using the surface fitting process provided in FSSI's MP® software (Figure 14-17 to Figure 14-20). The directions in these variograms model conform to Cartesian convention (i.e., azimuth 0 is east, azimuth 90 is north and azimuth 180 is west).

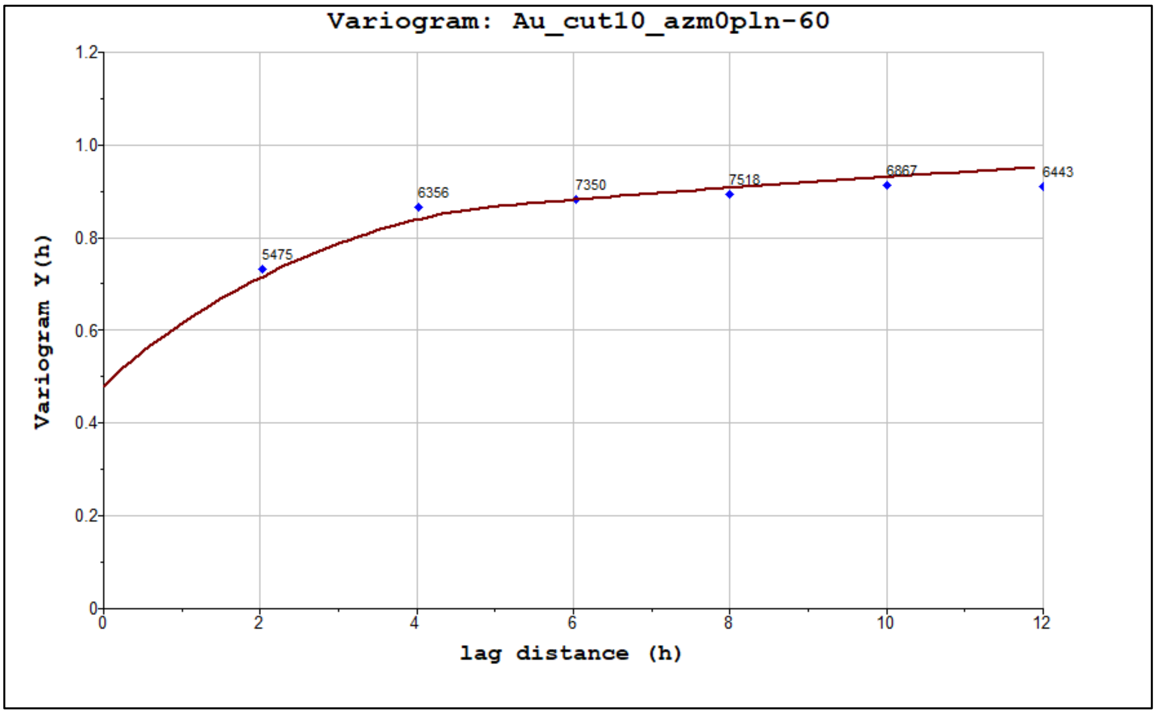

Figure 14-17: Experimental variogram and model in grid direction -60° à 090°

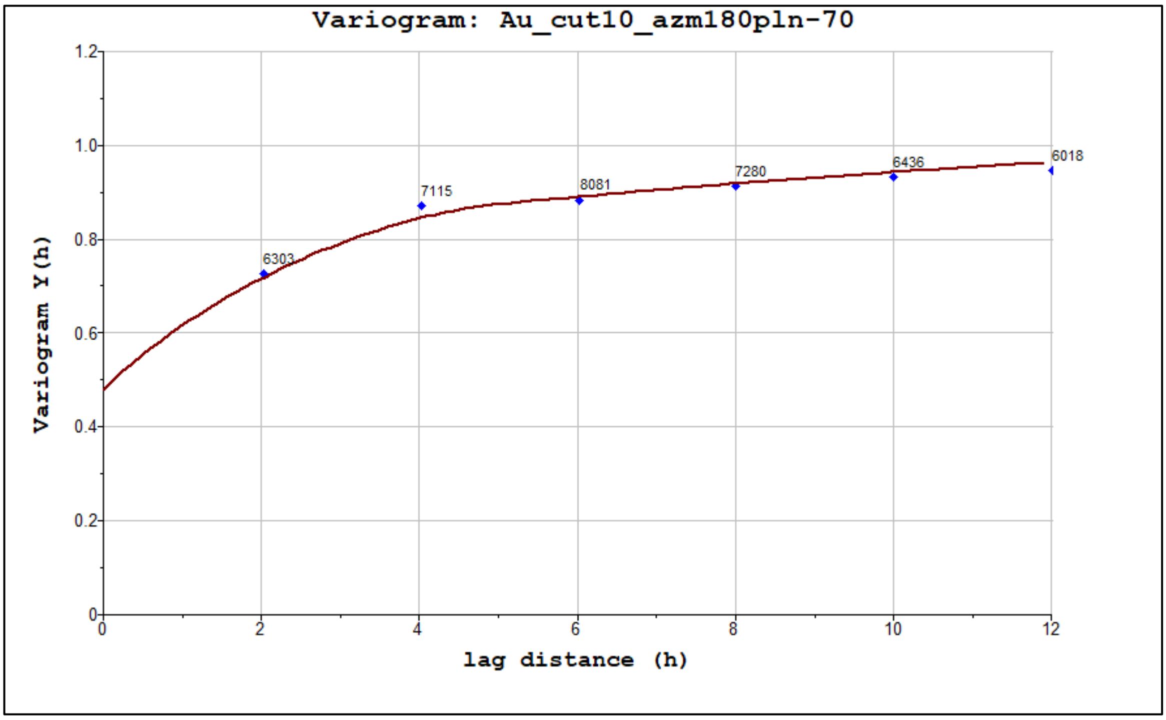

Figure 14-18: Experimental variogram and model in grid direction -70° à 270°

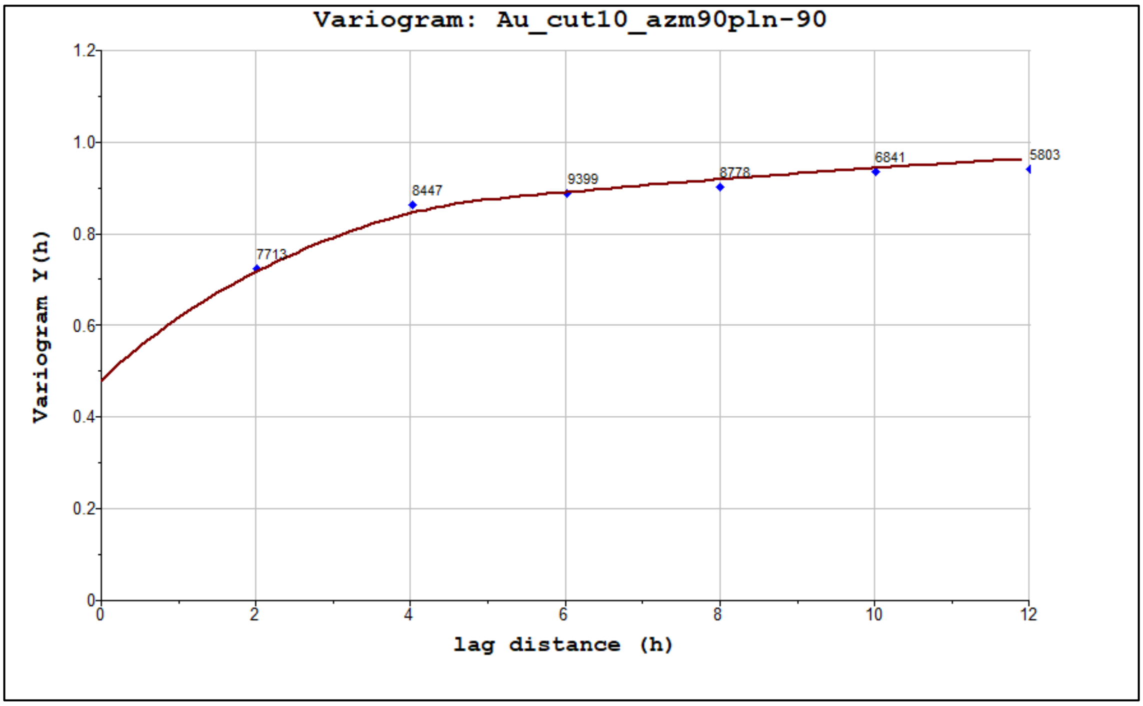

Figure 14-19: Experimental variogram and model in vertical direction

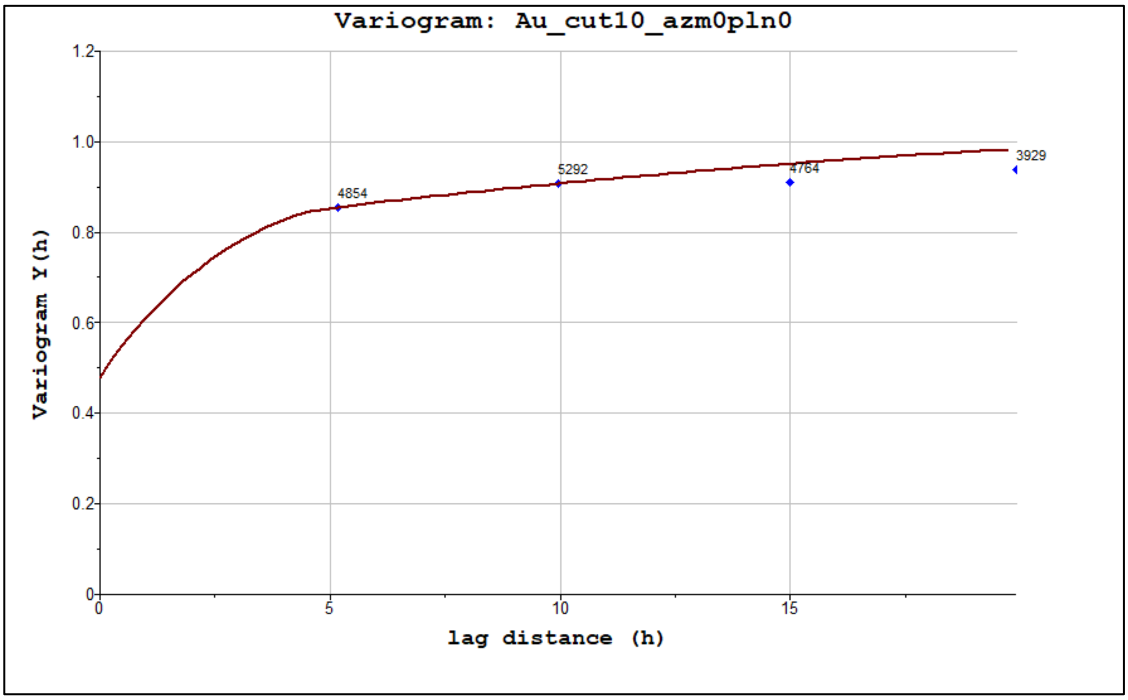

Figure 14-20: Experimental variogram and model in horizontal east-west direction

Figure 14-21 shows representations of the variogram model at different views.

The ranges in the strike, dip and plunge directions conform to observations of the distribution of grades in the drill holes i.e., strike slightly west of grid north and plunge about 5° to the north. The almost isotropic model in the XZ plane probably results from zones of higher gold grades dipping toward both grid east and grid west.

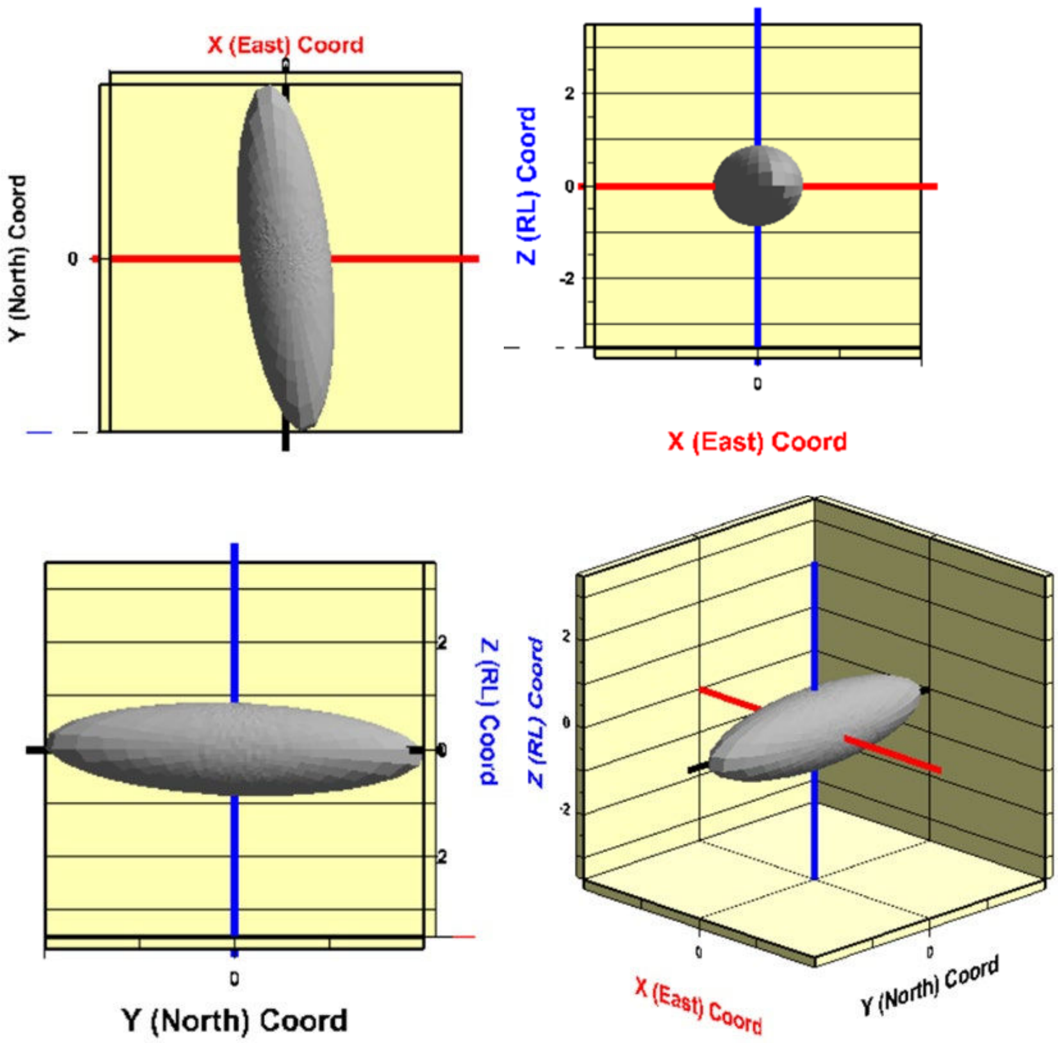

Figure 14-21: Representations of the variogram model (clockwise from top left – plan view 60% sill; looking north 60% sill; long section looking west 80% sill and 3D view 80% sill)

Variogram model parameters are tabulated in Table 14-39. The rotations conform to the right-hand trigonometric convention and are applied in order Z->Y->X.

Table 14-39: Variogram model parameters

	Values	Structure Type	Range			Rotations		
			X	Y	Z	X	Y	Z
CO	0.48							
C1	0.11	Exponential	4	12	4	-2	10	6
C2	0.21	Spherical	5	23	5	-2	10	6
C3	0.20	Spherical	27	151	19	-2	10	6

14.5.10.2 Search Criteria

Search radii in the north and down-dip directions are approximately 1.5 × hole spacing and are 3 × the across-dip search distance. Search pass 2 applied an ellipsoid with radii expanded by 50% in each direction, i.e., 45 × 45 m × 15 m and the same data constraints. Search pass 3 applied an ellipsoid expanded by 100% in each direction to 60 m × 60 m × 20 m and halved the data constraint requirements to a minimum of eight data in two octants. These parameters are summarised in Table 14-40.

The estimation utilised only sample composites flagged as lying within the granite wireframe (i.e., a hard search boundary was imposed).

Table 14-40: Search pass parameters

Search Pass		
1	Search radii (X)	30 m
	Search radii (Y)	30 m
	Search radii (Z)	10 m
	Rotation (Y)	-30°
	Minimum samples	16
	Maximum samples	32
	Minimum octants	4
2	Search radii (X)	45 m
	Search radii (Y)	45 m
	Search radii (Z)	15 m
	Rotation (Y)	-30°
	Minimum samples	16
	Maximum samples	32
	Minimum octants	4
3	Search radii (X)	60
	Search radii (Y)	60
	Search radii (Z)	20
	Rotation (Y)	-30°
	Minimum samples	8
	Maximum samples	32
	Minimum octants	2

14.5.11 Density

Densities were applied according to the interpreted weathering surfaces which include base of complete weathering and top of fresh. The original weathering surfaces were updated after the completion of the 2020 resource and geotechnical drilling.

Densities were assigned into the model sub-blocks are per Table 14-41. Fresh rock mineralisation makes up more than 99% of the Mineral Resource.

Table 14-41: Assigned densities – Esuajah South

MaterialTtype	Density (t/m^3)
Oxide	1.8
Transitional	2.2
Fresh	2.7

14.5.12 Mineral Resource Classification

With the additional sample data provided by the 2020 drilling, all resources above 990 mRL have been classified as Measured.

The primary guide for allocation of resources to Indicated was satisfaction of the search criteria in the first and second estimation search passes. Blocks were viewed in conjunction with informing data in plan, cross-section and long projection views and a wireframe constructed that encompasses a volume within which the majority of block estimates were informed by the first search pass (30 mN × 30 mE × 10 mRL) and within which drill intercept spacing is approximately 20 mN × 30 - 40 m down-dip. Blocks within that wireframe were allocated Indicated and all other blocks were allocated as Inferred.

Figure 14-22 shows a representative cross section at 6240N illustrating the satisfaction of search criteria and the allocated resource confidence categories.

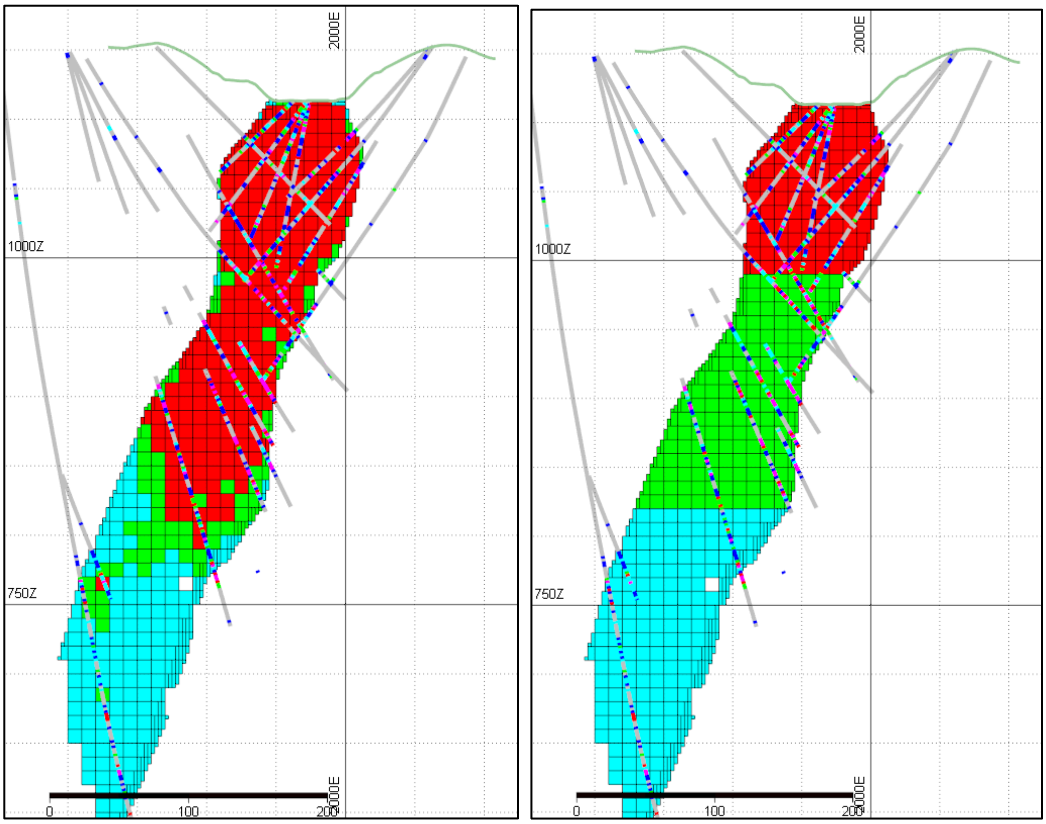

Figure 14-22: LHS – pass 1 = red, pass 2 = green, pass 3 = cyan; RHS – Measured = red, Indicated = green, Inferred = cyan

14.5.13 Model Reporting

A summary of the November 2020 Esuajah South Mineral Resource estimate by varying cut-off grades is shown in Table 14-42.

The estimate is limited to material between 600 mRL, the maximum depth of drill coverage, and the post AGC mining surface. The grade tonnage curve for the resource is shown in Figure 14-23.

Perseus has evaluated the economics of mining Esuajah South using sub-level caving under fill – a mass mining method. The method requires breaking of all mineralised material but drawing broken ore only until dilution by backfill results in ore grade falling below a shut-off grade. Estimated mining costs, including development capital, and haulage and processing costs and a gold price of US$1,800/oz result in a cutoff grade of 1.0 g/t Au. These parameters were used to conform to the "Reasonable Prospects for Eventual Economic Extraction".

Table 14-42: Mineral Resources at varying cut-offs – Esuajah South

	Measured			Indicated			Total Measured and Indicated			Inferred		
Cutoff (g/t)	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
0	4.4	1.40	200	6.9	1.90	420	11.3	1.70	620	7.9	1.3	340
0.4	4.4	1.41	200	6.8	1.90	420	11.2	1.71	620	7.6	1.4	340
0.6	4.1	1.48	195	6.7	1.93	420	10.8	1.76	610	6.8	1.5	330
0.8	3.6	1.57	184	6.4	1.99	410	10.0	1.84	590	5.7	1.6	300
1.0	**3.1**	**1.70**	**168**	**5.9**	**2.09**	**390**	**8.9**	**1.95**	**560**	**4.8**	**1.8**	**270**
1.2	2.4	1.85	145	5.2	2.21	370	7.7	2.09	520	3.9	1.9	240
1.4	1.9	2.00	123	4.4	2.37	340	6.3	2.26	460	3.1	2.1	210
1.6	1.5	2.15	102	3.8	2.51	310	5.3	2.41	410	2.3	2.3	170
1.8	1.0	2.33	78	3.1	2.68	270	4.2	2.60	350	1.6	2.5	130
2.0	0.7	2.52	59	2.6	2.85	240	3.3	2.78	300	1.2	2.7	110

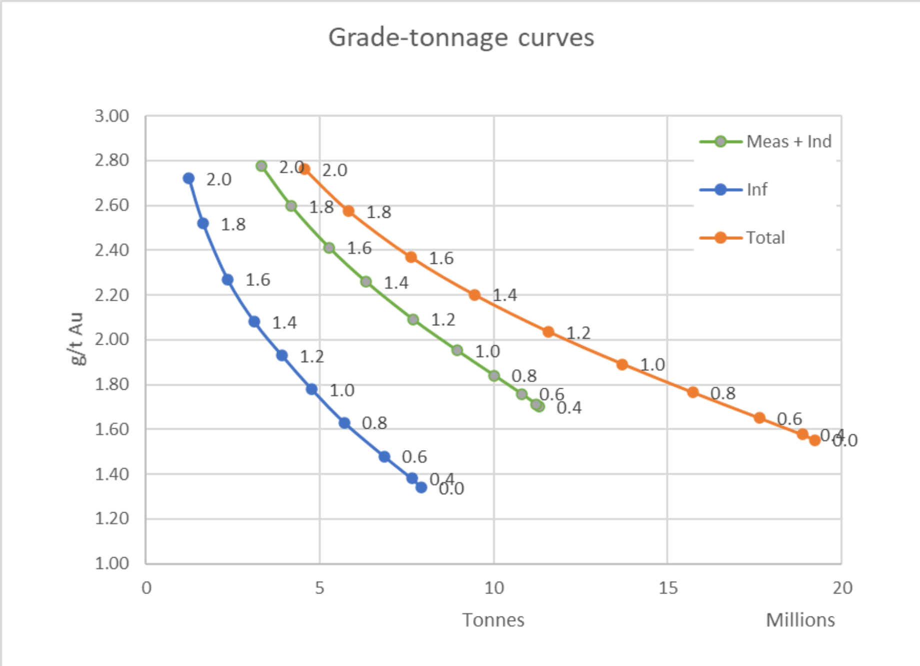

Figure 14-23: Grade-tonnage curve – Esuajah South

14.5.14 Model Validation and Reconciliation

Block grade estimates were viewed with associated informing drill hole data in plan (Figure 14-24 and Figure 14-25) and cross-sections (Figure 14-26 and Figure 14-27). These confirm that the spatial distribution of block grades reasonably reflects that of sample grades. This is also confirmed by a swath plot (Figure 14-28).

The additional DD holes drilled in 2020 increased the data density down to the 990 mRL sufficient enough for the Mineral Resource to classified as Measured. The data density down to the 820 mRL is sufficient to classify the Mineral Resource as Indicated and below that the Mineral Resource is Inferred which extends to 600 mRL (500m below surface).

Conversion of Inferred resources in the interval 820 – 690 mRL by drilling from underground platforms at the 890 mRL (presently the lowermost development level in a draft underground mine design) would require about 6,650 m of drilling at an estimated cost of about US$1.25M. Alternately drilling could be conducted from the surface. This would require around 17,000 m of drilling with holes ranging from 400 – 600 m depth, at a cost of approximately US$2.8M. Achieving accurate placement of drill intercepts in holes drilled from surface is likely to be problematic and may require navigational drilling.

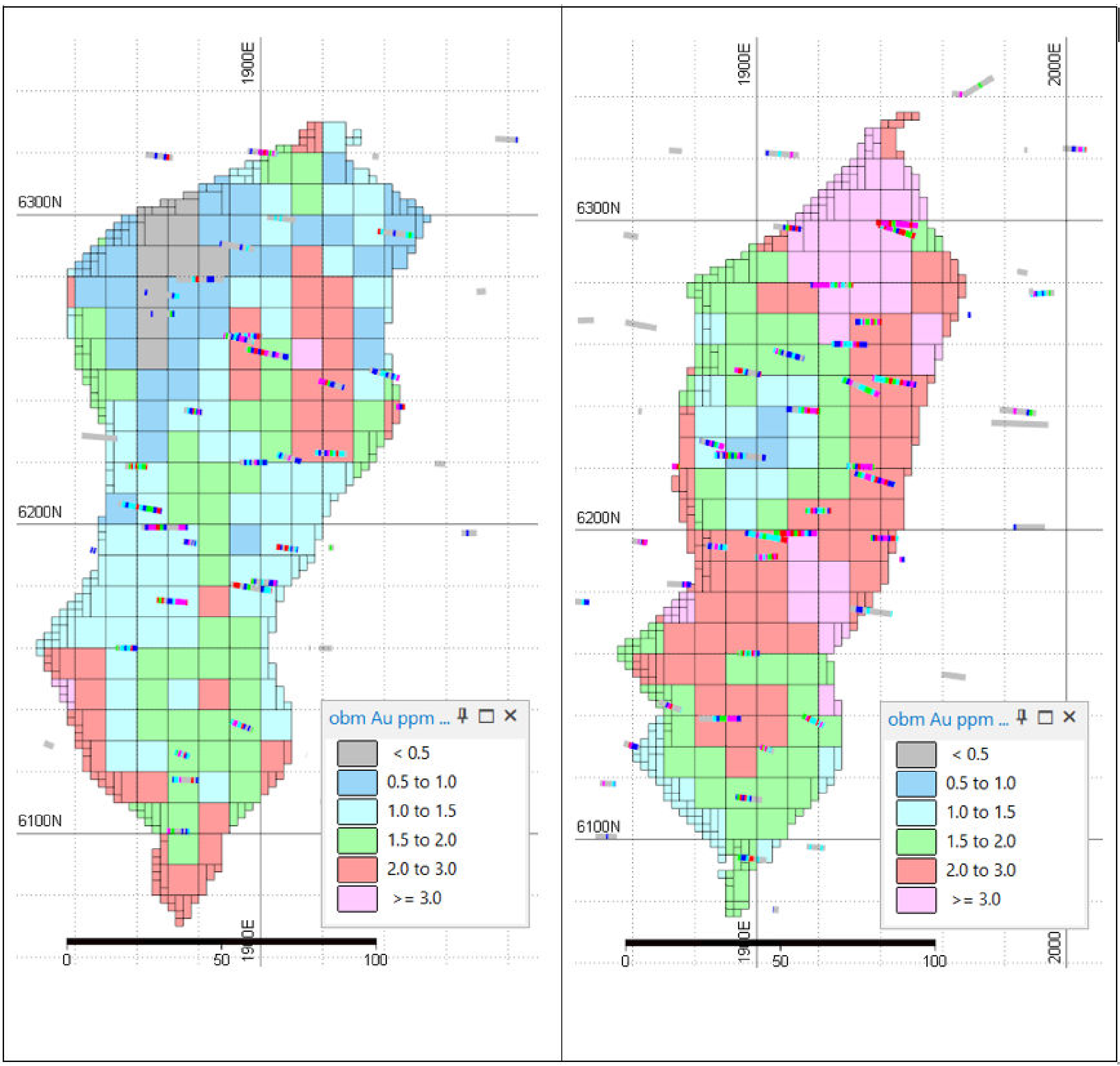

Figure 14-24: Plan view comparing block model grades and informing composites (LHS – 860 mRL; RHS – 920 mRL)

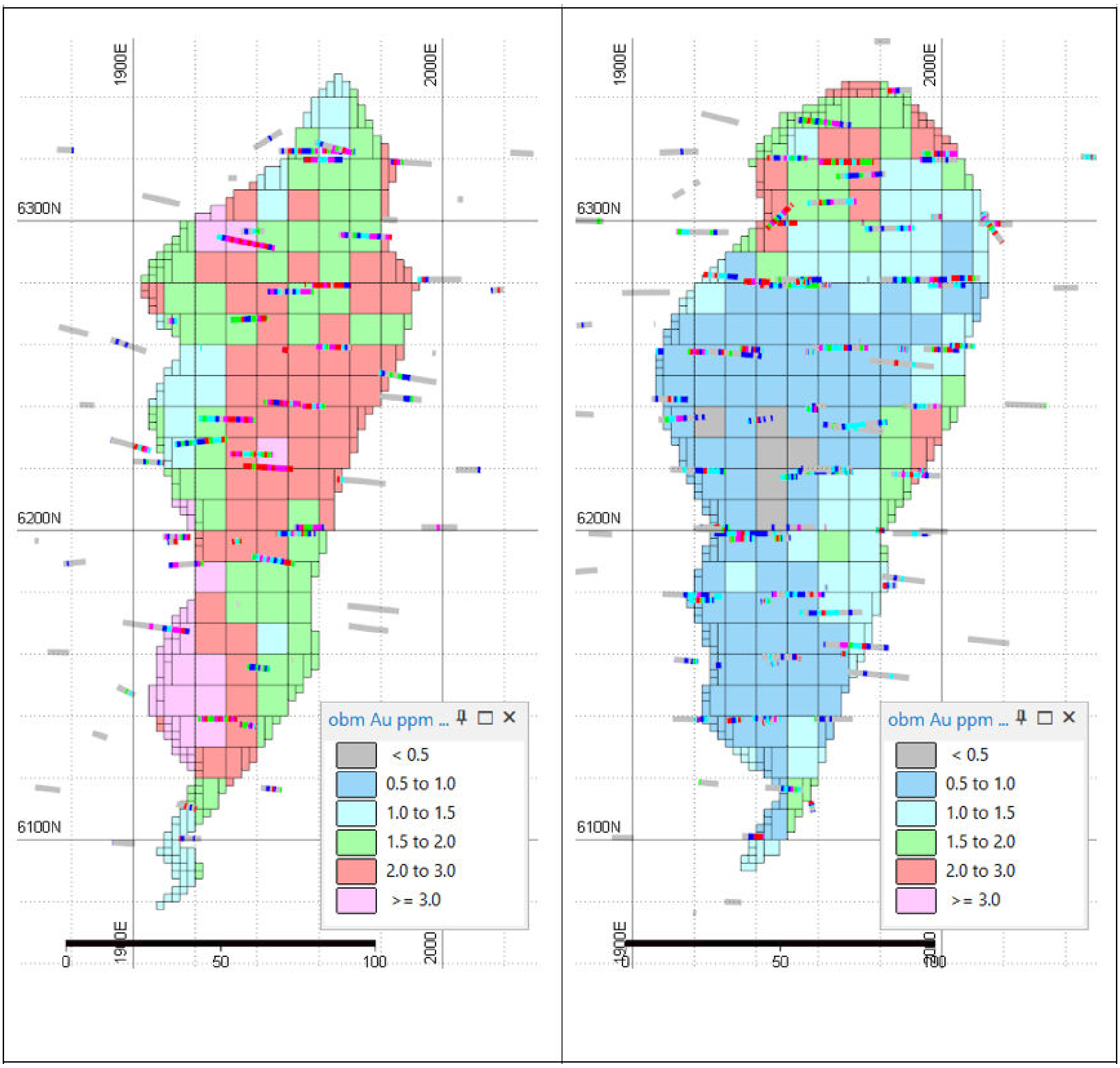

Figure 14-25: Plan view comparing block model grades and informing composites (LHS – 980 mRL; RHS – 1040 mRL)

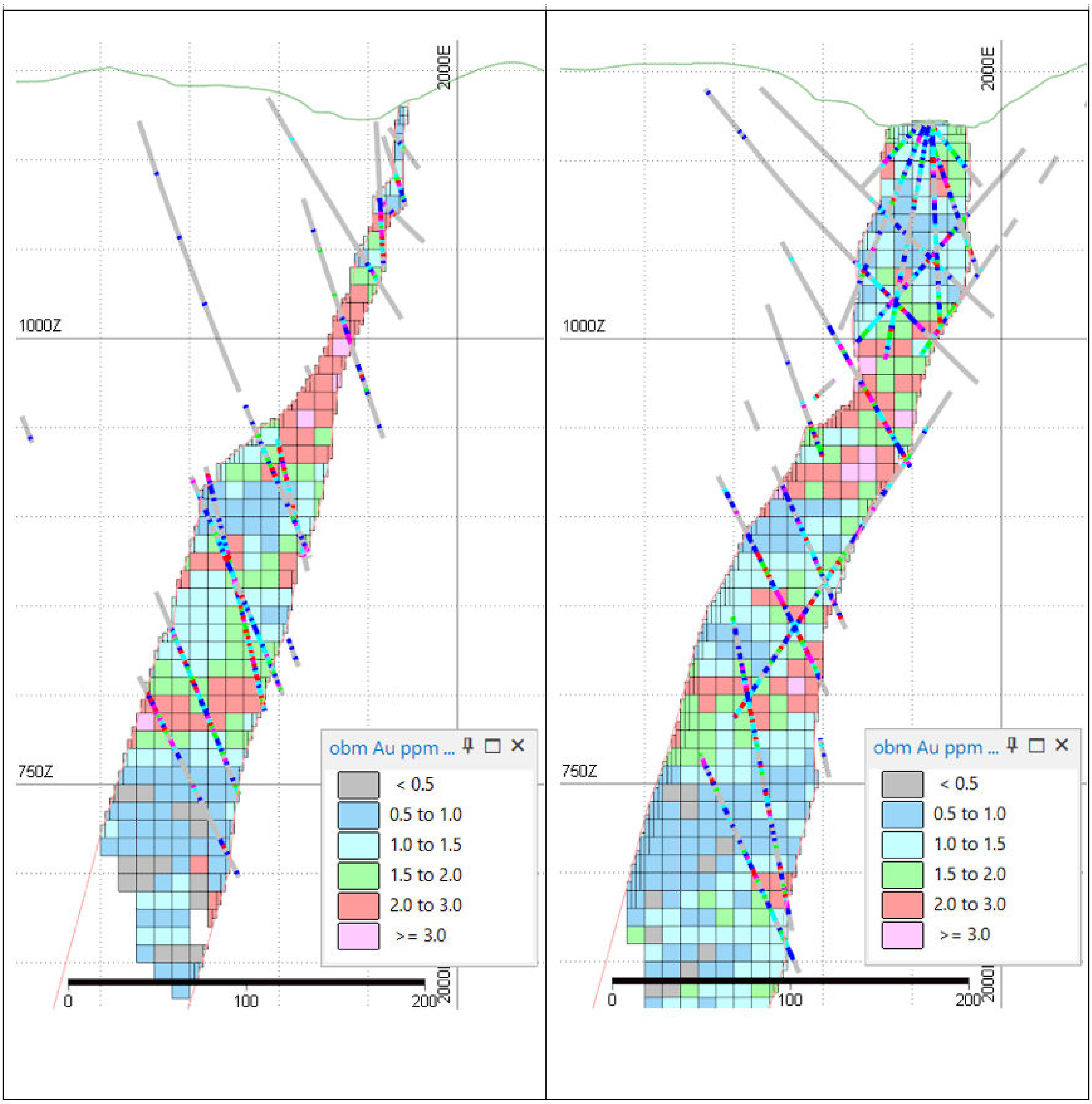

Figure 14-26: Cross section view comparing block model grades and informing composites (LHS – 6120 N; RHS – 6180 N)

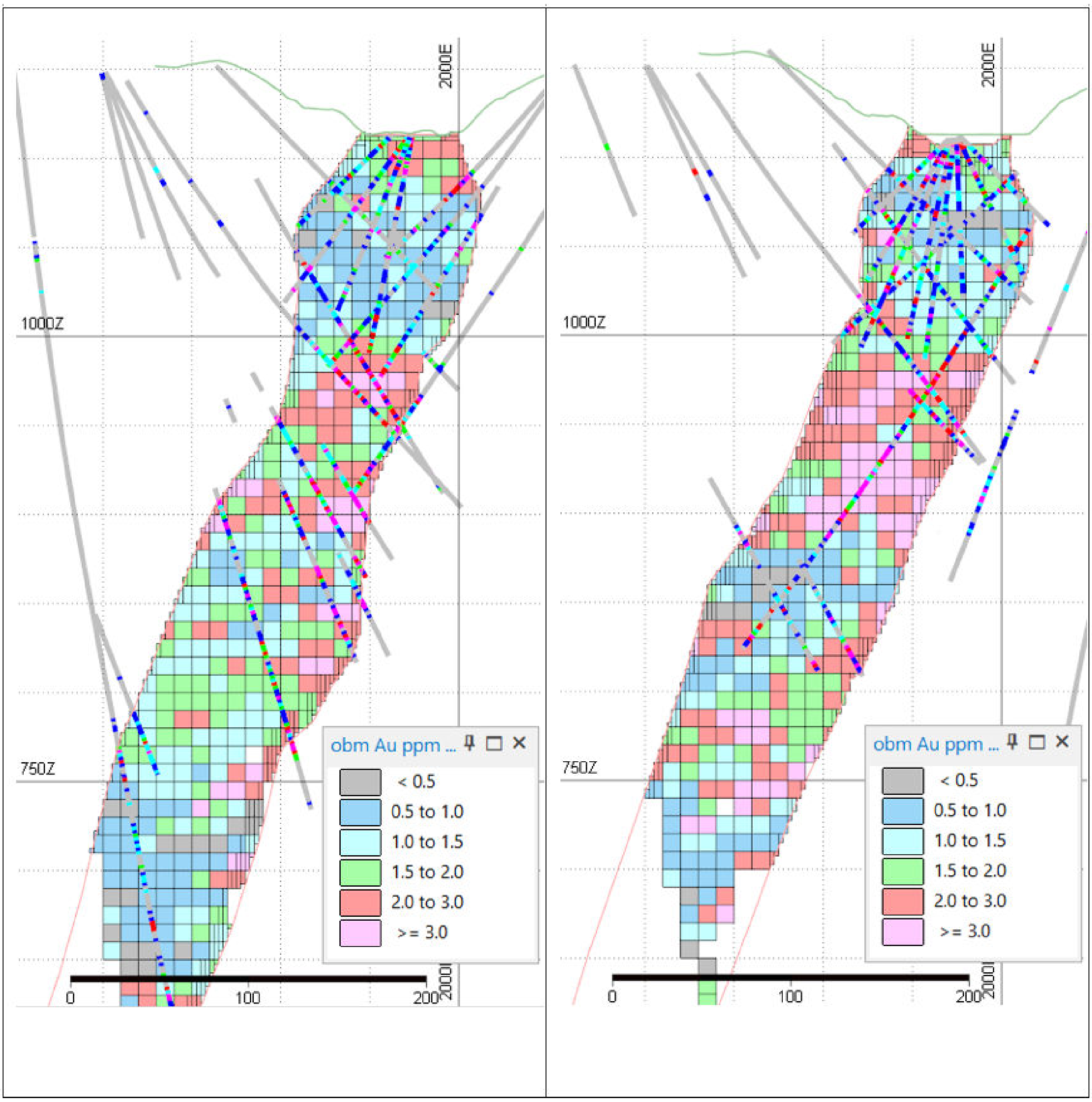

Figure 14-27: Cross section view comparing block model grades and informing composites (LHS – 6240 N; RHS – 6300 N)

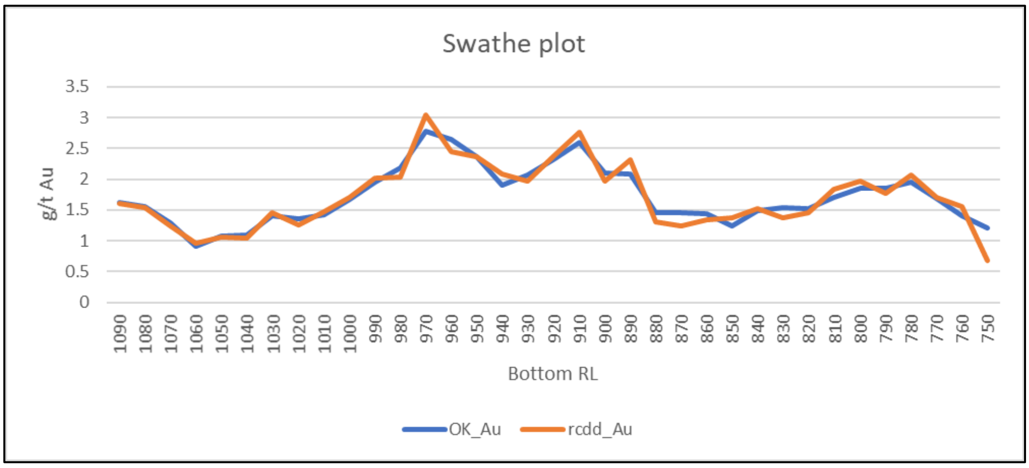

Figure 14-28: Swathe plot by elevation

There is no reliable record of ore production from AGC's open pit mining at Esuajah South and grade control data are not available, therefore it is not possible to validate the estimate using historical production data.

14.6 Fetish

14.6.1 Summary

The current resource model for Fetish was completed in January 2017 by MPR. The Fetish MRE includes the Bokitsi North deposit, which lies around 125 m to the west of Fetish, but as both are exploited by a single open pit, both are included in the same resource model. The 2017 work also included mineralisation at the Bokitsi South deposit. That deposit no longer forms part of the Edikan MRE inventory, having been mined out in November 2020.

The gold mineralisation within the Fetish deposit is mainly hosted within two granite bodies with minor mineralisation hosted in adjacent metasediments. The Bokitsi North deposit is hosted by a north trending (local grid), steeply dipping shear zone within metasediments.

Drill hole sample data were allocated to three mineralised domains for resource estimation, extending for around 760 m along strike with widths of 30 – 130 m. The domains were interpreted using a nominal 0.1 g/t Au 2 m composite cut-off and were based on holes drilled on 20 m north sections with hole spacings of 20 – 40 m.

The MRE is based on 127 RC, 356 DD and 192 of unknown type, with the later suspected of being RC. The MRE consists of estimated recoverable resources using MIK with block support adjustment, a method that has been demonstrated to provide reliable estimates of recoverable open pit resources in gold deposits of diverse geological styles.

Table 14-43: Fetish Mineral Resources

Deposit	Deposit Type	Measured Resources			Indicated Resources			Measured + Indicated Resources		
Fetish [1,2,3,4]	Open pit	6.2	0.97	194	11.7	0.93	348	17.9	0.94	542

Notes:

1. Based on January 2017 Mineral Resource model.
2. Depleted to 30 June 2021 mining surface.
3. 0.4g/t gold cut-off applied.
4. Rounding of numbers to appropriate precisions may have resulted in apparent inconsistencies.

14.6.2 Drilling Database

Drill hole data for the Eastern deposits were supplied to MPR by Perseus as a MS Access database dated 11 November 2016. It is understood that the supplied data was essentially unchanged from data used in the 2013 MRE completed by RPM (Section 14.2.2). MPR extracted the data relevant to the Fetish – Bokitsi North area and imported the data into Micromine for domain wireframing and creation of composites.

The data were used by MPR on a 'as received' basis with QAQC on the sampling and assaying techniques undertaken by Perseus.

14.6.3 Local Grid Conversion

All data used were based on the Edikan East Grid (0, above). EGM96 elevations have been adjusted by adding 1,000m to avoid negative values.

14.6.4 Data Used in Estimate

The database used in the MRE comprised 71,002 m of drilling in 208 RC holes, 56 pre-collared core holes (RCDD) and 148 holes cored from surface (DD; Table 14-44).

Table 14-44: Breakdown of drilling used in MRE

Hole Type	No. of holes	Metres		
		RC	**Diamond**	**Total**
AGC pre-2006 RC	170	10,200	-	10,200
AGC pre-2006 DD	9	-	1,002	1,002
Perseus 2006-2007 RC	22	2,785	-	2,785
Perseus 2006-2008 RCDD	5	385	454	839
Perseus 2010-2012 RC	16	2,266	-	2,266
Perseus 2010-2012 RCDD	51	6,538	9,985	16,523
Perseus 2010-2012 DD	139	-	36,657	36,657
Perseus 2015 RCDD	4	367	363	730
TOTAL	**416**	**22,541**	**48,161**	**71,002**

14.6.5 Modelling Domains

The mineralised domains were interpreted by MPR using the granite wireframes provided by Perseus and 2 m down-hole composites to effectively capture zones of continuous mineralisation with grades > 0.10 g/t Au. The domains were digitized on 20 m north sections and then wireframed into solids.

There were three mineralised domains interpreted for Fetish-Bokitso North that strike north, have varying dips and extend for 760 m along strike. These are referred to as domain 2, 3 and 4. Domain 1 is a waste domain. The domains vary in width from 30 – 130 m. The domains are generally regular in shape and consistent between drilling traverses. It was not considered necessary to consider alternative interpretations given the consistency and apparent reliability of the mineralisation interpretation. A plan view and typical cross section of the mineralised domains are shown in Figure 14-29 and Figure 14-30 respectively.

MPR was provided interpreted surfaces representing the base of weathered material and base of transitional material (top of fresh rock) by Perseus. Those surfaces were based on a combination of drill hole logging of exploration and grade control holes and open pit exposures.

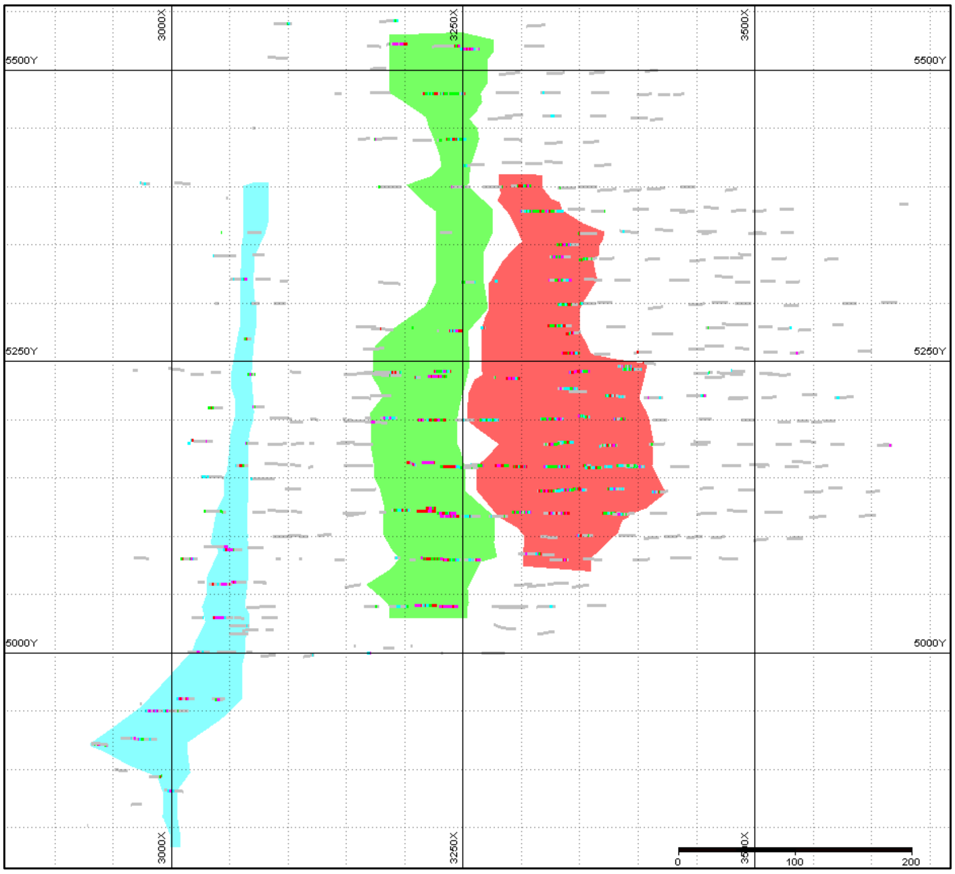

Figure 14-29: Plan view of Fetish-Bokitsi North mineralisation domains 2, 3, 4

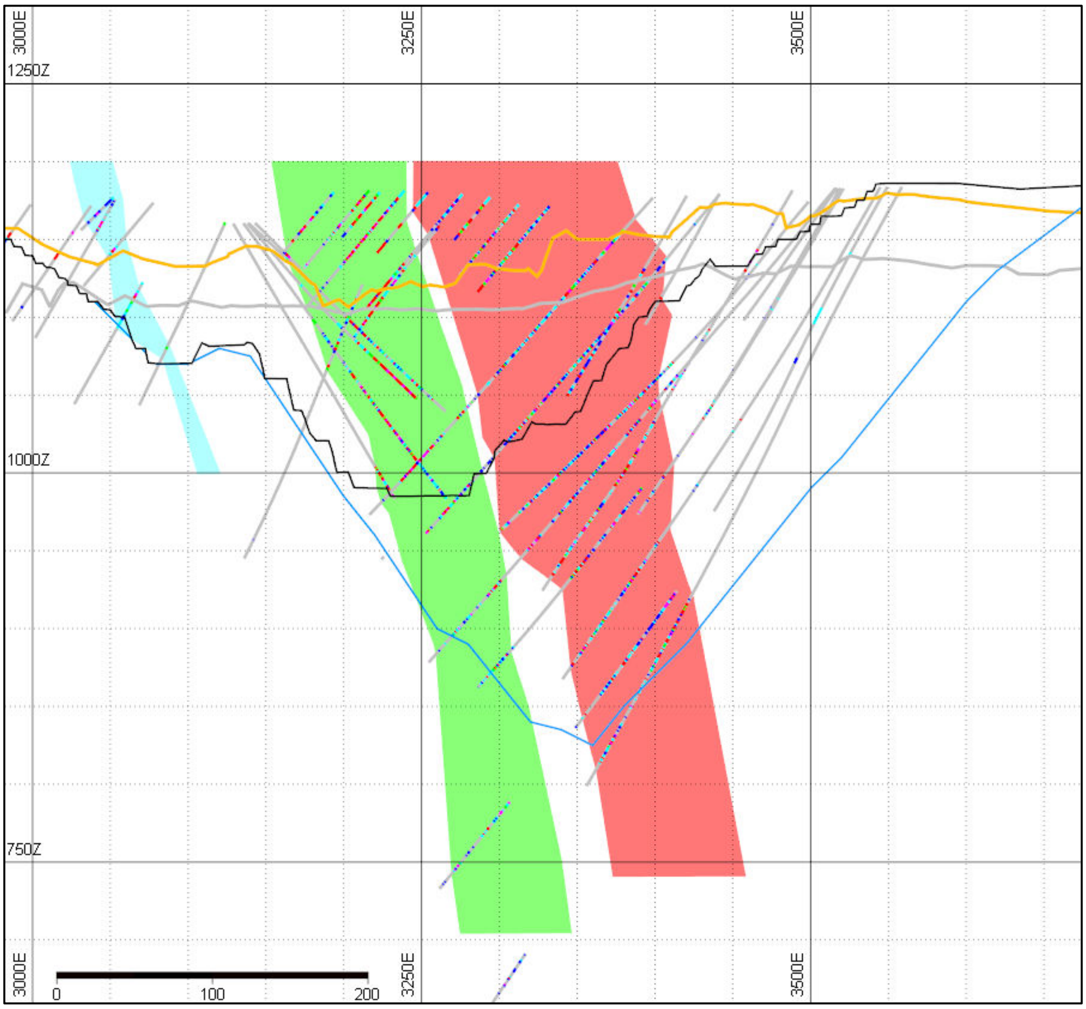

Figure 14-30: Cross section 5240N showing Fetish-Bokitso mineralisation domains, weathering surfaces, 30 June 2021 pit surface and $1,800 resource constraint pit shell

14.6.6 Compositing and High Grade Cuts

The estimate is based on two metre down-hole composited assay grades from RC and diamond drilling coded by the mineralisation and weathering domains described in Section 14.6.5. Un-assayed composites were assigned a grade of 0.00 g/t Au for portions of holes not sampled because they were logged as visually barren. After some trimming of large areas of barren grade intercepts not relevant to the estimate, 39,108 composites were used.

Based on domain summary statistics (Table 14-45) and review of cumulative histograms there may be a case for excluding, in some cases, high grades prior to generating the conditional statistics or alternatively using the median of the highest indicator bin as the average grade of the bin, rather than the mean. Both strategies are commonly used in MIK models to guard against a few extreme grades within a population having a disproportionate influence on the estimate. In the current estimates both strategies have been used and selected on a domain-by-domain basis.

14.6.7 Univariate Statistics

Estimation dataset statistics were examined for each mineralisation domain and then split on weathering domain (Table 14-45). In cases where the numbers of resource composites coded to a particular primary and weathering combination were small, combining the weathering subdomain data was necessary to generate robust conditional statistics for the affected domains.

Table 14-45: Estimation dataset statistics – Fetish

	Domain 2				Domain 3				Domain 4			
	Oxide	**Trans**	**Fresh**	**Total\ Weighted average**	**Oxide**	**Trans**	**Fresh**	**Total\ Weighted average**	**Oxide**	**Trans**	**Fresh**	**Total\ Weighted average**
Number	237	472	668	1,377	1,345	609	4,356	6,310	885	591	9,728	11,204
Mean	1.136	1.135	1.411	1.269	1.287	0.88	0.915	0.991	0.725	0.635	0.789	0.776
Variance	8.18	7.719	27.642	17.482	2.813	1.513	6.755	5.433	0.782	1.371	3.789	3.425
Coef. Var.	2.519	2.449	3.727	3.296	1.303	1.398	2.841	2.352	1.219	1.844	2.467	2.385
Minimum	0	0	0	0	0	0	0	0	0	0	0	0
1st quartile	0.07	0.01	0.015	0.02	0.165	0.047	0.025	0.045	0.17	0.04	0.12	0.12
Median	0.21	0.08	0.18	0.155	0.68	0.34	0.265	0.345	0.45	0.25	0.375	0.375
3rd quartile	0.62	0.69	0.9	0.84	1.625	1.23	0.87	1.07	0.9	0.735	0.805	0.81
Maximum	25.3	29.1	105.515	65.52	10	7.916	50	37.41	5.89	14.485	79.68	70.41

14.6.8 Block Model

Table 14-46 displays the block model architecture and panel sizes for Fetish. Plan view panel dimensions were selected on the basis of sample spacing. The model origin was selected to yield panel centroids consistent with drilling traverses.

Table 14-46: Block model architecture - Fetish

	X	Y	Z
Origin	2,920	4,820	692.5
Extents (m)	640	800	500
Panel size (m)	20	20	5
Number of panels	32	40	100

14.6.9 Grade Interpolation

14.6.9.1 Indicator Thresholds and Class Grades

All class grades used for estimation of the mineralised domain were derived from the class mean grades with the exception of the upper bin grades which were selected for the most part from the bin median, with or without exclusion of a few high composite grades. This approach reduces the impact of small numbers of high-grade outlier composites. The indicator thresholds and means for each domain are listed in Table 14-47 through to Table 14-49.

Table 14-47: Indicator threshold and class grades for Fetish mineralised domain 2 (all weathering codes)

Percentile	Domain 2	
	Threshold	**Mean**
10%	0.000	0.000
20%	0.010	0.006
30%	0.030	0.016
40%	0.070	0.046
50%	0.150	0.112
60%	0.280	0.206
70%	0.580	0.415
75%	0.800	0.681
80%	1.210	0.972
85%	1.760	1.451
90%	3.060	2.408
95%	5.450	4.187
97%	7.300	6.308
99%	11.260	9.519
100%	19.905	15.116

Table 14-48: Indicator threshold and class grades for Fetish mineralised domain 3

Percentile	Oxide		Transitional		Fresh	
	Threshold	Mean	Threshold	Mean	Threshold	Mean
10%	0.050	0.033	0.003	0.000	0.000	0.000
20%	0.120	0.081	0.035	0.024	0.010	0.004
30%	0.240	0.172	0.075	0.050	0.045	0.027
40%	0.400	0.314	0.170	0.118	0.130	0.084
50%	0.680	0.547	0.340	0.254	0.265	0.193
60%	1.005	0.836	0.610	0.473	0.460	0.359
70%	1.385	1.202	1.010	0.817	0.690	0.570
75%	1.625	1.511	1.230	1.123	0.870	0.780
80%	2.000	1.806	1.545	1.394	1.090	0.971
85%	2.500	2.248	1.905	1.712	1.435	1.255
90%	3.430	2.926	2.365	2.148	2.000	1.693
95%	4.950	4.115	3.440	2.882	3.455	2.598
97%	5.850	5.429	4.250	3.868	5.215	4.211
99%	7.600	6.707	5.200	4.683	9.980	6.843
100%	19.905	15.116				

Table 14-49: Indicator threshold and class grades for Fetish mineralised domain 4

Percentile	Oxide		Transitional		Fresh	
	Threshold	Mean	Threshold	Mean	Threshold	Mean
10%	0.040	0.016	0.000	0.000	0.010	0.001
20%	0.125	0.083	0.010	0.001	0.070	0.033
30%	0.220	0.171	0.073	0.039	0.170	0.122
40%	0.335	0.282	0.155	0.119	0.270	0.221
50%	0.450	0.396	0.250	0.205	0.375	0.322
60%	0.560	0.506	0.380	0.323	0.505	0.436
70%	0.770	0.674	0.590	0.474	0.685	0.585
75%	0.900	0.841	0.735	0.673	0.805	0.741
80%	1.030	0.966	0.890	0.805	0.995	0.892
85%	1.320	1.177	1.140	1.015	1.245	1.118
90%	1.690	1.505	1.610	1.322	1.685	1.446
95%	2.500	2.048	2.370	1.964	2.770	2.106

Percentile	Oxide		Transitional		Fresh	
97%	3.150	2.761	3.090	2.853	3.890	3.243
99%	4.520	3.831	5.670	4.150	6.985	5.057
100%	5.890	5.182	14.485	7.585	79.680	9.360

14.6.9.2 Variogram Models

The estimate utilises indicator variograms modelled from the combined weathering datasets for each domain. Indicator variograms were modelled on combined domain 3 and 4 datasets. Domain 3 variograms were used to model the gold in Domain 1 (waste domain) and Domain 2. The variogram models for domain 3 and 4 are tabulated in Table 14-50 and Table 14-51 respectively.

Table 14-50: Variogram models – domain 3

Percentile			Range (1st structure - Exp)				Range (2nd structure - sph)				Range (3rd structure - sph)			Rotation		
	CO	C1	X	Y	Z	C2	X	Y	Z	C3	X	Y	Z	Z	Y	X
10%	0.18	0.38	13	5	6	0.16	63	15	9	0.28	65	113	14	16	61	-79
20%	0.22	0.38	37	7	8	0.02	50	9	9	0.38	63	185	62	16	61	-79
30%	0.27	0.38	22.5	9	26.5	0.02	37	13	72	0.33	96	133	73	16	61	-79
40%	0.33	0.38	31	10.5	54.5	0.02	145	31	55	0.27	153	694	126	16	61	-79
50%	0.33	0.38	28.5	9.5	56	0.02	109	198	100	0.27	161	217	104	16	61	-79
60%	0.35	0.38	27	9.5	36	0.21	133	197	102	0.06	137	837	107	16	61	-79
70%	0.35	0.38	23	7.5	16	0.18	99	120	90	0.09	102	777	97	16	61	-79
75%	0.35	0.38	12.5	5.5	6	0.02	93	311	75	0.25	95	574	89	16	61	-79
80%	0.70	0.38	6	6	25.5	0.14	102	218	27	0.11	103	793	99	16	61	-79
85%	0.37	0.38	4	4	19.5	0.14	41	31	21	0.11	91	406	90	16	61	-79
90%	0.43	0.47	25.5	5	16.5	0.05	138	302	138	0.05	142	1,050	139	16	61	-79
95%	0.45	0.52	4	4	16	0.03	275	641	141					16	61	-79
97%	0.49	0.49	29	4	23.5	0.02	185	416	1,241					16	61	-79
99%	0.58	0.40	32.5	4	30.5	0.02	1,096	447	1,224					16	61	-79
Au g/t	0.35	0.43	4	4	26.5	0.05	216	30	27	0.06				16	61	-79

Table 14-51: Variogram models – domain 4

Percentile			Range (1st structure - Exp)				Range (2nd structure - sph)				Range (3rd structure - sph)			Rotation		
	CO	C1	X	Y	Z	C2	X	Y	Z	C3	X	Y	Z	Z	Y	X
10%	0.15	0.46	18.5	24	5	0.31	52	37	293	0.08	53	426	427	-22	-17	-27
20%	0.18	0.46	12	39.5	5	0.31	52	37	293	0.05	57	457	460	-22	-17	-27
30%	0.18	0.46	4	5	4.5	0.23	16	57	129	0.13	173	58	455	-22	-17	-27
40%	0.24	0.46	4.5	4	4	0.23	15	48	121	0.07	1,784	222	1,759	-22	-17	-27
50%	0.29	0.46	4	29	4	0.23	16	52	123	0.02	205	240	486	-22	-17	-27
60%	0.29	0.52	4	4	4	0.17	16	58	87	0.02	1,264	668	1,261	-22	-17	-27
70%	0.31	0.59	4	5	5	0.10	65	87	522					-22	-17	-27
75%	0.31	0.59	4	4	4	0.10	40	63	320					-22	-17	-27
80%	0.33	0.61	4.5	9	4	0.03	625	78	626	0.03	681	85	684	-22	-17	-27
85%	0.37	0.61	5	29	4	0.02	781	442	953					-22	-17	-27
90%	0.37	0.61	4	4	4	0.02	381	108	803					-22	-17	-27
95%	0.47	0.50	4	4	4	0.03	427	1,046	1,212					-22	-17	-27
97%	0.50	0.48	4	4	4	0.02	253	1,105	1,129					-22	-17	-27
99%	0.57	0.41	4	4	4	0.02	773	1,611	2,013					-22	-17	-27
Au g/t	0.38	0.61	4	31.5	4	0.01	1082	1,965	1,108	0.08				-22	-17	-27

14.6.9.3 Search Criteria

Three progressively more relaxed search and sample selection criteria are used for the estimate to produce three confidence categories. These parameters are presented in Table 14-52. No rotation was applied to the search axes.

Table 14-52: Estimation search passes - Fetish

Search Pass	Radii			Minimum Data	Minimum Octants	Maximum Data
	X	Y	Z			
1	20	20	15	16	4	48
2	40	40	30	16	4	48
3	40	40	30	8	2	48

14.6.9.4 Variance Adjustment

The Fetish estimate includes a variance adjustment to yield estimates of recoverable resources across a range of cut off grades. The variance adjustments were applied using the direct lognormal method and the adjustment factors listed in Table 14-53. The variance adjustment factors reflect comparatively large-scale open pit mining consistent with Edikan's current mining practices.

The variance adjustment factors were estimated from the variogram model for gold grades assuming mining selectivity of approximately 6 m × 10 m × 2.5 m (across strike, strike, vertical) with high quality grade control sampling on a 8 m × 8 m × 1 m staggered pattern.

MPR's experience indicates that the variance adjustments applied to the current estimates can be reasonably expected to provide reliable estimates of potential mining outcomes at the assumed mining selectivity without the application of additional mining dilution or mining recovery factors.

Table 14-53: Variance adjustment parameters - Fetish

Domain	Total Adjustment
1, 2, 3	0.038
4	0.050

14.6.10 Density

Densities were assigned to the block model using weathering surfaces and density values provided by Perseus (Table 14-31). MPR did not review available density data.

Table 14-54: Assigned densities – Fetish and Bokitsi North

Material Type	Density (t/m^3)
Oxide	1.8
Transitional	2.1
Fresh	2.7

14.6.11 Mineral Resource Classification

The Fetish estimate uses a classification scheme producing a resource code based on the number and location of gold composites used to estimate proportions and gold grade of each block. This is based on the principle that larger numbers of composites, which are more evenly distributed within the search neighbourhood, will provide a more reliable estimate. The search parameters used to decide on the classification of the initial three categories of a resource block are summarised as below:

- Minimum number of composites found in the search neighbourhood - for the Category 1 and 2, this parameter is set to 16. For Category 3, a minimum of eight composites is required.
- Minimum number of spatial octants informed - the space surrounding the centre of the block being estimated is divided into 8 octants by the axial planes of the data search ellipsoid. This parameter ensures that the informing composites are relatively evenly spread around the block and do not all come from one drill hole. For the Category 1 and 2, at least 4 of these octants must contain at least one composite. For the Category 3, this parameter is set to 2.
- Length of the radii of the search ellipsoid - the search radii define how far the kriging program may look in any direction to find composites to include in the resource estimation for a block. Block dimensions usually influence the lengths of these radii, the sampling density in any direction and the parameters of the variogram model. It is essential that the search radii be kept as short as possible while achieving the degree of resolution required in the modelling. For Category 1 estimates the easting, northing and vertical search radii set to 20 m, 20 m and 15 m respectively. For the Category 2 and Category 3 estimates, these radii are expanded by 100 per cent.

The number of samples and their geographic configurations that may qualify the block as Measured rather than Indicated or Inferred may be a somewhat subjective decision. The Qualified Person is satisfied that the strategy adopted in this estimate results in a geologically sensible classification whereby Category 1 and 2 are surrounded by data in close proximity and can properly be considered Measured and Indicated, respectively. Category 3 blocks may occur on the peripheries of drilling but are still related to drill hole data within reasonable distances and are included in the Mineral Resource as Inferred.

Downgrading of these confidence categories may result from a consideration of other factors such as QA/QC, drill hole density and inadequate RC samples. After considering these additional criteria along with the reconciliation between the resource model and mining outcomes, the Qualified Person considers that the modelled categories 1, 2 and 3 can be reported as Measured, Indicated and Inferred Mineral Resources.

14.6.12 Model Reporting

Estimated recoverable resources for Fetish North are constrained by a US$1,800 pit shell, below the 30 June 2021 pit surface and reported using a 0.4 g/t Au cut-off. Table 14-55 shows the current Mineral Resources as of 30 June 2021.

Table 14-55: Fetish Mineral Resources

Deposit	Deposit Type	Measured Resources			Indicated Resources			Measured + Indicated Resources		
Fetish 1,2,3,4	Open pit	6.2	0.97	194	11.7	0.93	348	17.9	0.94	542

Notes:

1. Based on January 2017 Mineral Resource model.
2. Depleted to 30 June 2021 mining surface.
3. 0.4g/t gold cut-off applied.
4. Rounding of numbers to appropriate precisions may have resulted in apparent inconsistencies.

14.6.13 Model Validation and Reconciliation

A review of the estimate included visual comparisons of the model against drillhole composites. Figure 14-31 shows an example cross section of the model estimates at 0.4 g/t Au cut-off, relative to the mineralised domain and drill hole traces coloured by composited Au grades. Figure 14-32 displays the same cross section but with the resource blocks coloured by confidence categories.

The plots presented in the figures demonstrate that the model estimates are consistent with the informing sample composites.

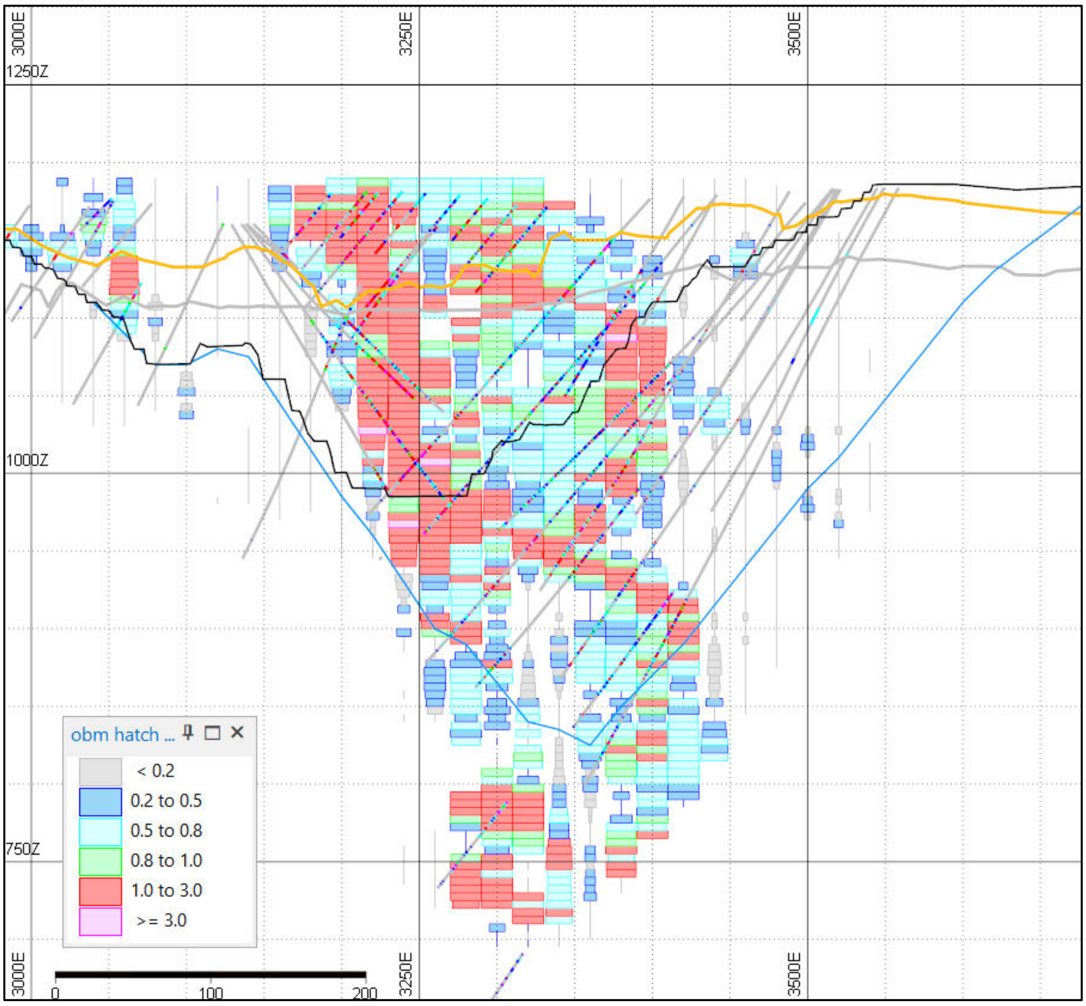

Figure 14-31: Cross section 5240NN showing MIK panels scaled by recoverable proportion above 0.4g/t Au cut-off and coloured by panel average grade, June 30 2021 pit, weathering surfaces, US$1,800 pit shell and drillhole composites

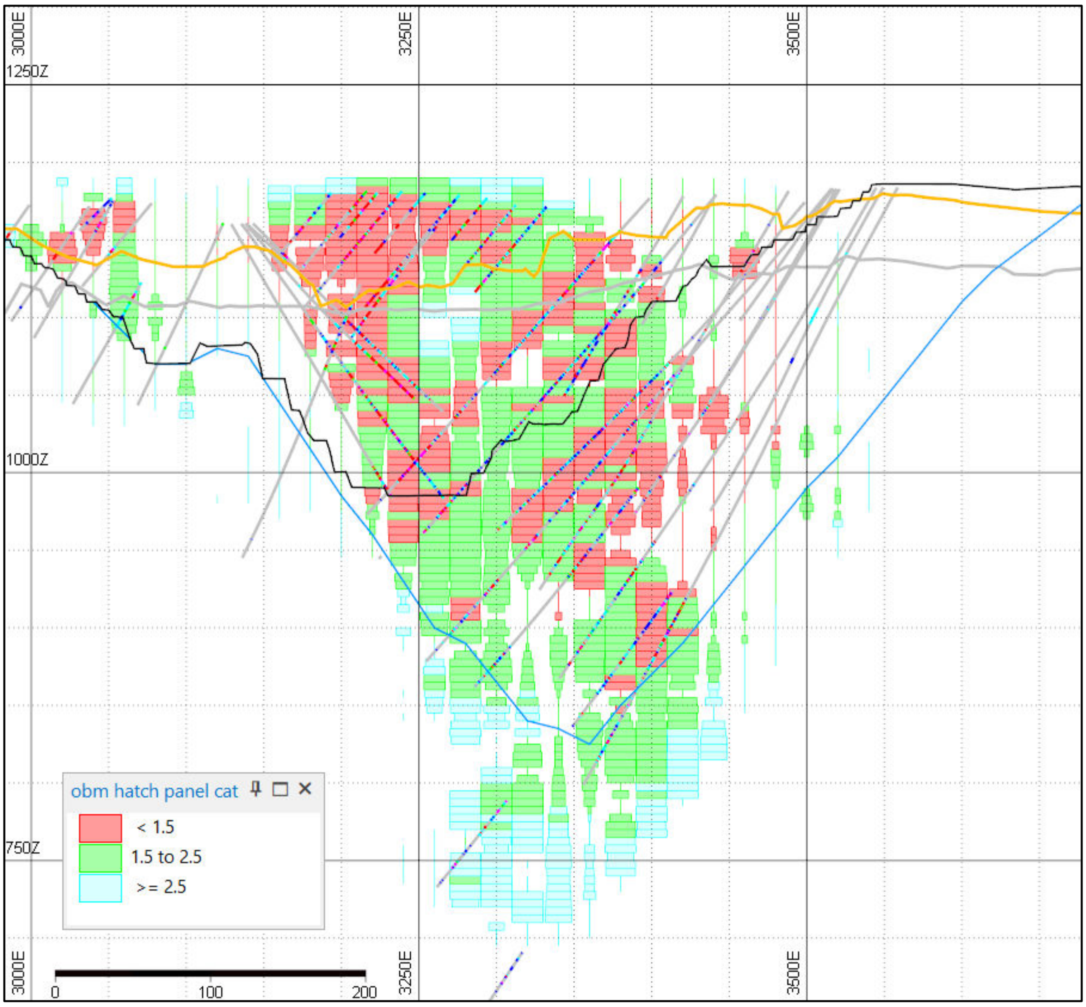

Figure 14-32: Cross section 5240NN showing MIK panels scaled by recoverable proportion above 0.4g/t Au cut-off and coloured by panel confidence category, June 30 2021 pit, weathering surfaces, US$1,800 pit shell and drillhole composites

Table 14-56 compares mine production to the Mineral Resource estimate for the volume mined from Fetish open pit during the 12 months ending 30 June 2020 during which a cut-back was mined to access ore from the western (footwall) granite at greater depth.

The deteriorating reconciliation over the last three months of the period possibly indicates decreasing reliability of the resource model at depth where the spacing between resource drill hole traces increases.

Table 14-56: Fetish reconciliation for 12 months to 30 June 2021

	Unit	3 months	6 months	12 months
Mined from resource model				
Tonnes	tonnes	751,871	1,476,228	2,684,776
Grade	g/t	1.32	1.28	1.17
Contained gold	Oz	31,892	60,988	100,597
Mine Claim				
Tonnes	tonnes	624,402	1,310,658	2,705,603
Grade	g/t	1.23	1.17	1.09
Contained gold	oz	24,627	49,338	94,845
Mine Claim/Resource model				
Tonnes		0.83	0.89	1.01
Grade		0.93	0.91	0.94
Contained gold		0.77	0.81	0.94

14.7 Heap Leach

14.7.1 Summary

The Heap Leach Mineral Resource only comprises material contained within the “Africa Heap”; the other heaps being presently regarded as being uneconomic to process through the Edikan plant. This heap comprises of around 55% of the total volume of heap leach material remaining after processing of oxide ores by previous operators Cluff Mining Plc and Ashanti Goldfields Corporation between 1994 and 2001. The current Heap Leach Mineral Resource is tabulated in Table 14-57. This is based on a 0.0 g/t Au cut-off grade.

The Heap Leach MRE is based on an Ordinary Kriged block model created in November 2015 by Mr Steffen Brammer who is a Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr Brammer is an employee of Perseus Mining Limited and is considered a Competent Person.

Table 14-57: Heap Leach Mineral Resources

Deposit	Deposit type	Measured Resources			Indicated Resources			Measured + Indicated Resources		
		Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
Heap Leach 1,2,3,4	Stockpile	-	-	-	2.9	0.60	58	2.9	0.6	58

Notes:

1. Based on November 2015 Mineral Resource model.
2. Depleted to 30 June 2021 mining surface.
3. At zero cut-off grade.
4. Rounding of numbers to appropriate precisions may have resulted in apparent inconsistencies.

14.7.2 Drilling and Sampling

The Africa Heap has been sampled by 372 vertical RC and air core (AC) drill holes at a nominal 20 m × 20 m spacing. Hole depths varied from 18 m to 45 m. Drill hole collar locations were accurately surveyed by Perseus qualified mine surveyors (Figure 14-33).

RC and AC samples were subsampled at the drill sites using a multi-tier riffle splitter. The Mineral Resource estimate is informed by 1.934 samples collected over 1 m intervals and 3,323 samples collected over 2 m intervals.

Table 14-58: Breakdown of drilling used in MRE

Hole Type	No. of holes	Metres		
		RC	AC	Total
Perseus 2011-2012 RC	109	2,145	-	2,145
Perseus 2015 AC	263		5,770	5,770
TOTAL	**372**	**2,145**	**5,770**	**7,915**

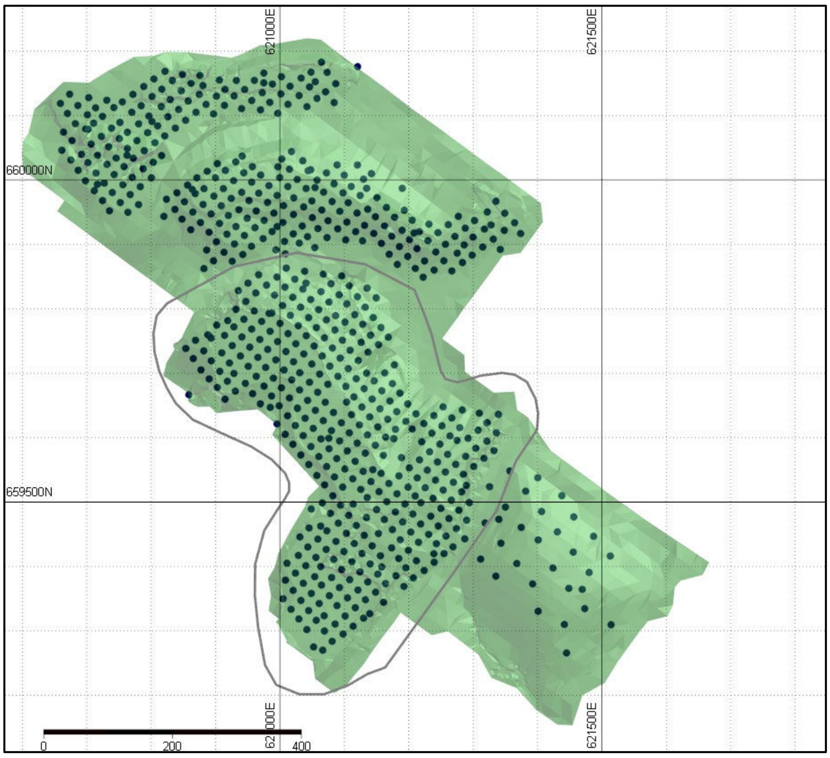

Figure 14-33: Plan view of Heap Leach RC and air core drill holes; outline indicates "Africa" portion

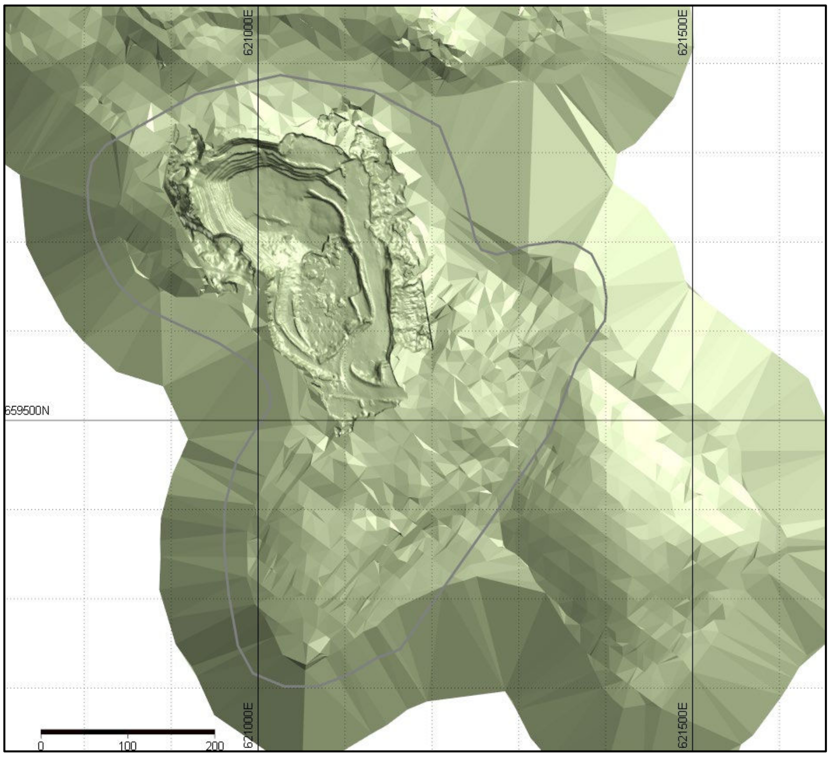

Figure 14-34: Heap leach June 2021 end of month surveyed surface; outline indicates "Africa" portion

14.7.3 Assaying

Samples from the first 27 RC and first 27 AC holes were analysed for gold using a 24-hour bottle roll cyanide leach with AAS finish at Intertek Minerals Ltd in Tarkwa, Ghana. For all subsequent RC and AC holes, gold was assayed by Fire Assay (FA50) with AAS finish at either Intertek Minerals Ltd or at ALS Minerals in Kumasi, Ghana.

CRMs and blanks were submitted at a rate of one standard or blank for every 15 samples. Field duplicate splits were taken at a nominal rate of one duplicate per drill hole.

14.7.4 Grade Interpolation

The grade of the Africa Heap was estimated by several methods including inverse distance squared weighting (ID^2), Ordinary Kriging, Simple Kriging and Sequential Gaussian Simulation. All methods resulted in essentially identical estimates of average grade. The OK model has been adopted for estimation of Mineral Resources. Grades were estimated into parent blocks measuring 20 mE x 20 mN x 10 mRL with sub-blocking to 10 m x 10 m x 2.5 m to maintain a reliable estimate of the resource volume.

14.7.5 Volume Determination

The volume of the Africa Heap was generated between two triangulated surfaces; topographic surface based on approximately 2,300 surveyed spot heights and drill hole collar locations, and a bottom surface based on depths at which drill holes penetrated the plastic liner at the base of the heap.

14.7.6 Density

A dry in-situ density estimate of 1.32 t/m^3 was assigned to the heap leach pad material. Density values and moisture content were determined Dr J.A. Yendaw of the Geological Engineering Department at the University of Mines and Technology, Tarkwa in the capacity of an independent consultant in August 2015 using samples from 30 test pits. The mean of this test work was applied to the whole Mineral Resource.

14.7.7 Mineral Resource Classification

The Mineral Resource is classified as Indicated, based on drill and sample density, accurate and detailed surface survey of the heaps and the close match of average grades derived from the various estimation methods. No cut-off grade was applied as it is assumed that it is not feasible to selectively mine higher grade portions of the material.

14.7.8 Model Validation and Reconciliation

Heap leach material has been reclaimed and processed at Edikan since September 2018, typically comprising 5-10% of total ore feed. The material is fed through a separate apron feeder with belt samples collected at, nominally, 2 hour intervals. There has been no thorough reconciliation of the gold grades of belt samples to those expected based on the resource model but they do generally agree.

Table 14-59: Heap leach material processed to 30 June 2021

Year	Tonnes	Grade g/t	Contained oz
2018-2019	325,101	0.74	7,720
2019-2020	204,272	0.65	4,243
2020-2021	523,404	0.62	10,402

14.8 Stockpiles

Mineral Resources contained in stockpiles are based on volume estimates based on ground survey data, loose bulk densities derived over time by reconciliation of volumes mined (at in-situ densities) to stockpile movements and volumes and estimates of stockpile grades based on predicted grades of mined material transferred onto stockpiles and material depleted by processing. Mineral Resources contained within the stockpiles are as per closing stockpiles at 30 June 2021. These are tabulated in Table 14-56. These stockpiles are all classified as Measured.

A formal sign-off process by site personnel ensures that estimates of closing stockpiles at the end of each calendar month have been checked for logic and calculation errors.

Table 14-60: Edikan closing stockpiles (30 June 2021)

Material	Tonnes	Au (g/t)	Ounces
Low grade oxide	529,298	0.49	8,395
Low grade fresh	2,045,244	0.61	39,974
High grade transition	225,634	0.98	7,132
High grade fresh	54,031	0.86	1,486
Crushed ore stockpile	79,931	0.82	2,114
TOTAL	**2,934,138**	**0.63**	**59,101**

14.9 Estimation Reviews

14.9.1 AF Gap

No independent reviews of the MRE have been completed.

14.9.2 Esuajah North

No independent reviews of the MRE have been completed.

14.9.3 Esuajah South

No independent check estimates have been completed on the 2020 MRE conducted by Perseus, however a comparison of the model across a range of grade cut-offs against the Perseus July 2019 MRE (also estimated using OK) and checks of this estimate conducted by MPR (using MIK and LMIK), showed no large differences.

The two check estimates conducted by MPR in 2019 are tabulated in Table 14-61 and Table 14-62 and the two Perseus estimates are tabulated in Table 14-63 and Table 14-64 for 2019 and 2020 respectively.

Table 14-61: Reported Mineral Resources from MPR 2019 MIK estimate

	Measured and Indicated			Inferred		
Cutoff	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
0.0	16.89	1.35	731	1.84	1.02	60
0.5	15.49	1.44	715	1.44	1.22	56
1.0	10.82	1.73	600	0.69	1.76	39
1.5	5.95	2.12	406	0.35	2.29	26
2.0	2.64	2.62	222	0.18	2.82	16
2.5	1.14	3.16	116	0.10	3.23	11
3.0	0.51	3.72	61	0.07	3.53	8

*some rounding may occur

Table 14-62: Reported Mineral Resources from MPR 2019 LMIK estimate

	Measured and Indicated			Inferred		
Cutoff	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
0.0	14.34	1.46	672	1.47	1.04	49
0.5	13.54	1.52	663	1.07	1.33	46
1.0	9.78	1.81	570	0.53	1.94	33
1.5	5.65	2.23	405	0.29	2.55	23
2.0	3.43	2.49	275	0.21	2.81	19
2.5	1.08	3.12	109	0.13	3.15	13
3.0	0.44	3.74	52	0.79	3.45	9

*some rounding may occur

Table 14-63: Reported Mineral Resources from Perseus 2019 OK estimate

	Measured and Indicated			Inferred		
Cutoff	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
0.0	12.01	1.64	633	3.94	1.45	184
0.5	11.74	1.67	629	3.64	1.54	180
1.0	9.09	1.92	562	2.45	1.93	152
1.5	5.75	2.31	428	1.54	2.34	116
2.0	3.18	2.77	283	0.80	2.91	75
2.5	1.68	3.26	177	0.43	3.48	48
3.0	0.87	3.75	105	0.23	4.15	30

*some rounding may occur

Table 14-64: Reported Mineral Resources from Perseus 2020 OK estimate

	Measured and Indicated			Inferred		
Cutoff	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
0.0	12.14	1.66	646	3.82	1.46	180
0.5	11.83	1.69	642	3.52	1.55	176
1.0	9.32	1.93	578	2.36	1.95	148
1.5	5.90	2.32	440	1.51	2.35	114
2.0	3.29	2.78	294	0.81	2.88	75
2.5	1.78	3.24	186	0.45	3.40	49
3.0	0.93	3.73	111	0.23	4.04	30

*some rounding may occur

14.9.4 Fetish

No independent reviews have taken place.

14.9.5 Heap Leach

No independent reviews have taken place.

15 Mineral Reserve Estimates

15.1 Introduction

Current estimates of Mineral Reserves, released to the ASX on 24 August 2021 (Perseus Mining Limited, 2021b) is a depletion of the previous Mineral Reserve, dated 26 August 2020. The Esuajah South Mineral Reserve is based on an updated Mineral Resource using underground mining methods.

All Mineral Reserves are reported in accordance with the JORC (2012) Code and are reported by category, deposit and type, above cut-off grades calculated after applying modifying factors. The classification categories of Proved and Probable Ore Reserves under the JORC (2012) Code are equivalent to Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Proven Mineral Reserves and Probable Mineral Reserves respectively.

The QP's are of the opinion that Mineral Reserves were estimated using industry-accepted practices and conform to the 2014 CIM Definition Standards. Mineral Reserves are based on open pit and underground mining methods. The Mineral Reserves are acceptable to support mine planning. There are no other environmental, legal, title, taxation, socioeconomic, marketing, political or other relevant factors known to the QP and not discussed in this report that would materially affect the estimation of Mineral Reserves.

15.2 Mineral Reserve Statement

Mineral Resources are reported inclusive of Mineral Reserves (that is, Mineral Reserves are not additional to Mineral Resources). Mineral Reserves may be subdivided into Proven Mineral Reserves and Probable Mineral Reserves categories to reflect the confidence in the underlying Mineral Resource data and modifying factors applied during mine planning. A Proven Mineral Reserve can only be derived from a Measured Mineral Resource while a Probable Mineral Reserve is typically derived from an Indicated Mineral Resource. Note that a Probable Mineral Reserve can also be made up of a Measured Mineral Resource should the Qualified Person have reason to downgrade the confidence of the estimation.

For current Mineral Reserves, readers are referred to ASX release "Perseus Updates Mineral Resource and Ore Reserve Estimates" dated 24 August 2021 (Perseus Mining Limited, 2021b) and the notes contained therein. Estimation of Mineral Reserves at AF Gap, Fetish, Stockpile and Heap Leach Mineral Reserves was supervised by Mr Paul Thompson. Mr Thompson is a Fellow of the Australasian Institute of Mining and Metallurgy and is an employee of Perseus Mining Limited. Mr Thompson has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the JORC (2012) Code and a Qualified Person as defined in NI43-101.

Mineral Reserves for the Esuajah South underground are supported by an updated Feasibility study completed in January 2021 (Perseus Mining Limited, 2021c). The underground mining component of the Feasibility study was completed by Mining Plus Pty Ltd (Mining Plus). Mr Peter Lock (FAusIMM) of Mining Plus is the Qualified Person for the underground Mineral Reserves and has sufficient experience, that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC (2012) Code and a Qualified Person, as defined in NI 43-101. Mr Lock has no economic, financial or pecuniary interest in the company.

The Mineral Reserves for the Edikan Property are listed in Table 15-1 and are based on the mining surfaces as of 30 June 2021.

Table 15-1: Edikan Gold Mine Proven and Probable Mineral Reserves – 30 June 2021 [4,6]

Deposit	Deposit Type	Proven Reserves			Probable Reserves			Proven + Probable Reserves		
		Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)	Tonnes (Mt)	Au (g/t)	Oz (koz)
AF Gap [1,2,3]	Open pit	6.1	1.14	222	11.5	1.03	381	17.6	1.06	603
Fetish [1,2,3]	Open pit	3.1	1.14	113	5.1	1.11	183	8.2	1.12	296
Sub Total		**9.2**	**1.14**	**336**	**16.6**	**1.05**	**563**	**25.8**	**1.08**	**899**
Esuajah South [2,4]	Underground	1.9	1.37	85	2.8	2.40	217	4.8	1.98	302
Heap Leach [1,5]	Stockpile	-	-	-	2.9	0.62	58	2.9	0.62	58
ROM Stockpiles [5]	Stockpile	2.9	0.63	59	-	-	-	2.9	0.63	59
TOTAL		**14.1**	**1.06**	**480**	**22.3**	**1.17**	**837**	**36.4**	**1.13**	**1,318**

Notes:

1. Based on depletion to 30 June 2021 mining surfaces.

2. Based on Mineral Resource Estimates which were current at 30 June 2021.

3. Variable gold grade cut-off for each material type, ranging from 0.35 g/t to 0.70 g/t.

4. Inferred Mineral Resource is considered as waste.

5. Based on EOM June 2021 stockpile balance report.

6. Rounding of numbers to appropriate precisions may have resulted in apparent inconsistencies.

15.3 Mineral Reserve Cut-off Grades

15.3.1 Open pit

Cut-off grades were calculated for each of the three different weathering stages and the two pit locations using a gold price of US$1,300/oz and are shown in Table 15-2 below.

Table 15-2: Open pit cut-off grades

Deposit	Cut-off Grade by Ore Type (g/t Au)		
	Oxide	Transitional	Fresh
AF Gap	0.35	0.70	0.50
Fetish	0.40	0.65	0.55
Heap Leach	0.40	-	-

No cut-off grades have been applied to existing ore stockpiles and it is assumed that all stockpiles will be fed to the processing facility over the life of mine.

15.3.2 Underground

The Esuajah South underground Mineral Reserves are based upon a mineable envelope generated for a sub-level caving mining method. The mineable envelope used for the Esuajah South underground sub-level cave (SLC) mine design was generated based on a cut-off grade of 1.26 g/t Au. The cut-off grade is the limit of the designed mineable envelope. During PCSLC cave modelling (flow modelling of rock within the cave), a higher shut-off grade of 1.46g/t provided the highest relative net revenue based on the Feasibility study set of project assumptions. The shut-off grade is the grade limit to which material is drawn from a caving draw-point. At grades lower than the shut-off grade, excess dilution will have rendered the draw-point uneconomic.

15.4 Mineral Reserve Dilution and Ore Loss

15.4.1 Open Pit

The AF Gap and Fetish deposits were estimated using Multiple Indicator Kriging (MIK) with block support adjustment. This method produces reliable recoverable resource estimates of mining outcomes without the application of additional mining dilution and ore loss. No additional ore loss and dilution was therefore added to any open pit Mineral Reserves.

No ore loss or dilution was added to the Heap Leach or Stockpile Mineral Reserves.

15.4.2 Underground

Modifying factors used for the sub-level mining underneath introduced rock fill (SURF) mining method are based on PCSLC (Dassault Systems caving software) modelling that was undertaken as part of the Feasibility Study for the ESS underground and completed in January 2021 (Perseus Mining Limited, 2021c). Dilution and recovery factors have been included in the PCSLC modelling, which is based on SURF extraction to a shut off grade of 1.46g/t.

In total, 96% of the designed ring tonnes are extracted and the mined grade is 99% of the average in-situ grade, which includes lower grade zones that are broken but only partially extracted.

The estimated volume recovered at Edikan from the SURF mining method is lower than, and the metal is proportionally slightly higher than what is typical for SLC style mines. This is due to the large number of sub-economical (but mineralised) rings that are included in the design to ensure connectivity to surface. It should be noted that these are sub-economical at the gold price (US$1,300/oz) and other input factors used. External dilution from backfill that is mined with the ore is lower than usual for SLC style operation but is considered appropriate in this case due to the much larger than typical mineralised broken material blanket remaining from rings where only swell is drawn in the upper levels.

15.5 Mineral Reserve Modifying Factors

15.5.1 Open Pit

The chosen method for the open pit Mineral Reserves is conventional open pit mining utilising hydraulic excavators and trucks, mining bench heights of 5 metres with 2.5 metre flitches to minimise ore loss and waste rock dilution. The economic pit shell was defined using Whittle pit optimisation software ("Whittle") with inputs such as geotechnical parameters, ore loss and dilution, metallurgical recovery and mining costs.

The pit optimisation was run with revenue generated only by Measured and Indicated Mineral Resources. No value was allocated to Inferred Mineral Resources. Whittle input parameters were generally based on Perseus's operating site experience and supporting technical studies.

Pit ramps have been designed for a 100-tonne payload truck fleet and are set at 24 metres (dual lane) to 16 metres (single lane). Vertical mining advance has generally been capped at 90 vertical metres per year based on Perseus's operating experience. A minimum mining width of 40 metres was generally applied to the pit cutback designs.

15.5.1.1 Mining Lease and Physical Mining Constraints

The final determination of mining method for Esuajah South, that is, whether underground or open pit or a combination of both, was greatly influenced by the location of the nearby township of Ayanfuri. A proposed open pit expansion would result in the re-location of numerous households. The development of an underground mine would greatly reduce the need for relocation.

15.5.1.2 Geological Block Model and Topography

The AF Gap and Fetish Mineral Resource block models were estimated using MIK with block support adjustment by MPR ((MPR Geological Consultants Pty Ltd, 2017) and were supervised by Gary Brabham. The block models were supplied to Perseus in CSV format then converted to GMP (General Mining Package) software native format.

15.5.1.3 Geotechnical Parameters

For the open pit deposits, pit slope angles, berm widths and berm spacings are based on assumptions derived from ongoing geotechnical studies supervised by George Orr and Associates. The final designs result in overall pit slopes of 30 - 50°, berms spaced at 5 – 20 m and berm widths of 5 – 12 m. Pit slope parameters vary by weathering domain.

15.5.1.4 Metallurgical Factors

As the Edikan plant has been successfully in operation since 2011, the performance of the plant and the Edikan ore sources are well known. In association with metallurgical testwork, the metallurgical recoveries for gold per weathering domain have been applied as per Table 15-3. No deleterious material has been found so far at the Edikan Property in the Mineral Reserves that remain to be mined.

Table 15-3: Assigned metallurgical Au recoveries- open pit

Deposit	Oxide (%)	Transitional (%)	Fresh (%)
AF Gap	61	73	88
Fetish	61	73	90
Heap Leach	67	-	-

15.5.1.5 Operating Costs

Open pit operating costs are based on a schedule of rates provided by Perseus mining contractors and actual performance. All other operating costs have been provided by Perseus. Mining cost ranges compiled from detailed bench by bench breakdowns are shown in Table 15-4 and Table 15-5.

Processing costs are based on actual performance of the Edikan processing plant and general and administrative costs are based on current costs incurred by the Edikan Gold Mine. These costs are summarised in Section 21.221.

Table 15-4: Mining Costs for AG Pit

Item	Units	Costs			
		Heap Leach	Oxide	Transitional	Fresh
Waste Mining					
Drill and Blast	US$/t waste	-	-	0.83	0.88
Depth <50m					
Load and Haul	US$/t waste	-	2.21	1.89	1.47
Haulage cost per vertical metre	US$/t waste/m	-	-	-	-
Depth >=50m					
Load and Haul	US$/t waste	-	1.98	1.70	1.32
Haulage cost per vertical metre	US$/t waste/m	-	0.0051	0.0044	0.0034
Ore Mining					
Drill and Blast	US$/t ore	-	-	0.95	1.30
Depth <100m					
Load and Haul	US$/t ore	2.69	2.79	2.39	1.86
Haulage cost per vertical metre	US$/t ore/m	-	0.0005	0.0004	0.0003
Depth >=100m					
Load and Haul	US$/t ore	-	2.22	1.90	1.48
Haulage cost per vertical metre	US$/t ore/m	-	0.0060	0.0051	0.0040
Other Mining Costs					
Dayworks	US$/t material		0.06	0.06	0.06

Item	Units	Costs			
Presplit	US$/t material		-	-	0.14
Mine Rehabilitation	US$/t material		0.04	0.04	0.04
Fixed Mining Cost	US$/t material		0.58	0.58	0.58
Other Ore Costs					
Grade Control	US$/t ore		0.46	0.46	0.46
Rehandle	US$/t ore		0.31	0.31	0.31

Table 15-5: Mining Costs for Fetish Pit

Item	Units	Costs			
		Heap Leach	**Oxide**	**Transitional**	**Fresh**
Waste Mining					
Drill and Blast	US$/t waste	-	-	0.83	0.88
Load and Haul	US$/t waste	-	1.80	1.58	1.49
Haulage cost per vertical metre	US$/t waste/m	-	0.0088	0.0068	0.0031
Ore Mining					
Drill and Blast	US$/t ore	-	-	0.98	1.27
Load and Haul	US$/t ore	-	4.37	3.92	3.01
Haulage cost per vertical metre	US$/t ore/m	-	0.0050	0.0040	0.0030
Other Mining Costs					
Dayworks	US$/t material		0.05	0.05	0.05
Presplit	US$/t material		-	-	0.14
Mine Rehabilitation	US$/t material		0.04	0.04	0.04
Fixed Mining Cost	US$/t material		0.58	0.58	0.58
Other Ore Costs					
Grade Control	US$/t ore		0.46	0.46	0.46
Rehandle	US$/t ore		0.31	0.31	0.31

15.5.1.6 Metal Selling Price, Royalties and Selling Costs

The gold price and selling cost assumptions for Edikan are shown below.

Table 15-6: Metal Selling Price and other costs- open pit

Description	Units	Cost
Open Pit		
Gold Price	US$/oz	1,300
Royalty	% of Gross Revenue	6.75
Refining Charge	US$/oz	2.24

15.5.2 Underground

15.5.2.1 Mining Lease and Physical Mining Constraints

As mentioned in section 15.5.1.1, the final determination of mining for Esuajah South i.e., underground or open pit or a combination of both, was greatly influenced by the location and potential for impact on the nearby township of Ayanfuri.

15.5.2.2 Geological Block Model and Topography

The Esuajah South resource was estimated in-house using Ordinary Kriging (OK) estimation methodology within Micromine software and was supplied in .csv format. The final version of the block model used by Mining Plus for the Underground Feasibility Study was 20201118_ess_ok_sub.csv.

15.5.2.3 Reserve Classification

The Mineral Resource model classified the geological confidence as being both Measured and Indicated material. Although open pit mining took place at ESS, no underground mining has been completed.

It is the opinion of Mr Peter Lock, Mining Plus Principal Consultant, that, at a gold price of US$1300/oz, it is reasonable to convert the Measured Mineral Resource material to Proven Mineral Reserves, and the Indicated Mineral Resource material within the mining envelope to Probable Mineral Reserves. There is a small amount of Inferred Resource material in the schedule amounting to only 0.3%. It is not included in the Reserves. The ESS Mineral Reserves are shown in Table 15-1 in Section 15.2.

15.5.2.4 Geotechnical Parameters

The Esuajah South deposit geotechnical Feasibility study was carried out by Golder (Golder Associates, 2014) during 2014. Subsequent reviews and studies were undertaken by George Orr and Associates (George Orr and Associates, October 2020) in relation to location, design and construction of the box-cut and sub-level cave (SLC) parameters. These studies were based on a limited amount of geotechnical drilling and hence it is assumed that interpreted ground conditions derived from these holes will not alter materially in other locations.

It is envisaged that underground mining at Esuajah South will encounter low to moderate rock stress conditions and as mining will occur at relatively shallow depths (<260 m below surface), rock stress magnitudes are not expected to be a liming factor.

Underground development and stoping will generally be carried out in fair to good rock quality designations, which is the major contributing factor in selecting the SURF mining method. If ground conditions encountered are worse than expected, current assumptions will need to be reassessed.

15.5.2.5 Metallurgical Factors

As per section 15.5.1.4, the Edikan plant has been successfully in operation since 2011, the performance of the plant and ore sources are well known. Metallurgical Recovery for the Esuajah South underground has been applied as per Table 15-7. No deleterious material is expected in the Esuajah South granite material.

Table 15-7: Assigned metallurgical Au recoveries- underground

Deposit	Oxide (%)	Transitional (%)	Fresh (%)
Esuajah South	-	-	90

15.5.2.6 Operating Costs

For Esuajah South underground, activity costs were sourced from contract tender submissions made by underground mining contractors. Any costs associated with open pit activities i.e., construction of the box-cut, was sourced from current open pit earth moving costs. Costs are based on the assumption that other feed sources (open pit, heap leach or stockpile) will be available to the Edikan processing plant, as the underground, as a stand-alone operation, will not be able to supply ore to the capacity of the processing facility. The assumed operating costs of Esuajah South are listed in Table 15-8.

Table 15-8: Operating Costs for Esuajah South underground

Item	Units	Cost
Mining	US$/t ore	43.61
Processing	US$/t ore	9.75
General and Administration	US$/t ore	3.38

15.5.2.7 Metal Selling Price, Royalties and Selling Costs

Table 15-9: Metal Selling Price and other costs-underground

Description	Units	Cost
Esuajah South Underground		
Gold Price	US$/oz	1,300
Royalty	% of Gross Revenue	6.75
Refining Charge	US$/oz	2.24

15.6 Economic Modelling

15.6.1 Open Pit

Edikan is an operating mine with a 10-year history of open pit mining and processing of similar ore types to the Mineral Reserves in this Technical Report. Open pit Mineral Reserves generate a positive cashflow under the economic assumptions and other modifying factors discussed in this report. A gold metal price US$1,300/oz has been used for open pit Mineral Reserves evaluation.

15.6.2 Underground

The Esuajah South (ESS) deposit has been subject of a Feasibility Study completed in 2021 (Perseus Mining Limited, 2021c). The ESS underground Mineral Reserve is cashflow positive under the economic parameters assumed for this Technical Report.

The current Feasibility Study assessed all applicable modifying factors and has established technical and economic viability at the long term gold price of US$1,300/oz.

16 Mining Methods

16.1 Open Pit

16.1.1 Introduction

Open Pit mining at Edikan has been undertaken by Perseus Mining since the re-start of operations in 2011.

16.1.2 Pit Optimisation

The Mineral Resource model names used in the open pit optimisations are tabulated in Table 16-1.

Table 16-1: MRE models used for optimisations

Deposit	MRE Model name	Date MRE completed	Date Optimisation Completed
AG	agf_mik_201612.csv	19 December 2016	11 July 2019
Fetish	fet_mik_201612.csv	19 December 2016	12 July 2019

Although the latest available Resource model for AG pit is the April 2020, it was decided not to update the pit optimisation using the 2020 model as there is no material difference between the two models.

Table 16-2: Optimisation shells selected for design

Deposit	Date Completed	Shell no.	Shell ($/oz)	Total Tonnes (Mt)	Ore Tonnes (Mt)	Grade (g/t)
AG	11 July 2019	11 (RF 100%)	$1,300/oz	76.8	20.8	1.04
Fetish	12 July 2019	11 (RF 100%)	$1,300/oz	37.0	12.4	1.09

Table 16-3: Optimisation shells selected for design – cost per ounce

Deposit	Date Completed	Mining Cost	Processing Cost incl. ore mining costs	Selling (including royalty)	Revenue	Cashflow	Cost per Ounce
AG	11 July 2019	$229,450,209	$320,363,907	$55,026,845	$794,920,523	$190,078,563	$989/oz
Fetish	12 July 2019	$115,654,252	$228,495,507	$35,413,202	$511,580,877	$132,017,915	$965/oz

16.1.3 Selective Mining Method

The chosen mining method is conventional open pit mining utilising hydraulic excavators and trucks. Ore will be drilled and blasted in 5m height separated from waste material then mined in 2.5m flitches to minimise dilution.

16.1.4 Pit and Dump Design

16.1.4.1 Site Layout and Pit Designs

The locations of the AG and Fetish Pits are shown in Figure 16-1.

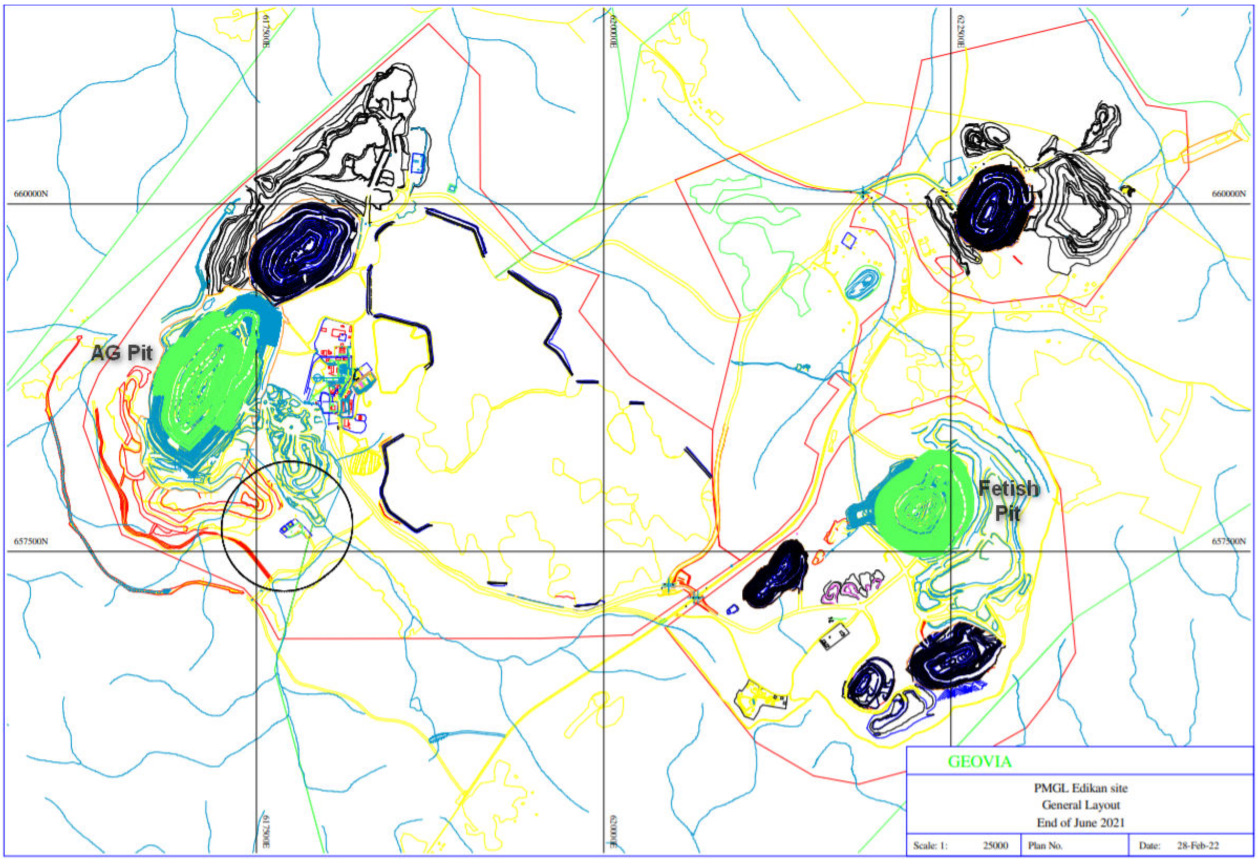

Figure 16-1: Edikan Site Layout as of end of June 2021

16.1.4.2 Pit Design Parameters

The pit slope design assumptions are based on ongoing geotechnical studies supervised by George, Orr and Associates (Australia) Pty Ltd. The pit slope design parameters are shown in the table below.

Table 16-4: Mine design criteria

Description	Unit	Oxide/Transition	Fresh
Ore bench height	m	5	5
Flitch height	m	2.5	2.5
Height between berms	m	5	20
Safety berm width	m	6	10
Batter angle	degrees	80	80
Minimum mining width	m	40	40
Ramp gradient	%	10	10
Double lane ramp width	m	24	24
Single lane ramp width	m	16	16

Figure 16-2 to Figure 16-5 below are plan and section views of the Fetish and AG open pit designs. The topographic as-mined surface from the end of June 2021 is also shown in green. Mineral Resources above cut-off are coloured by classification.

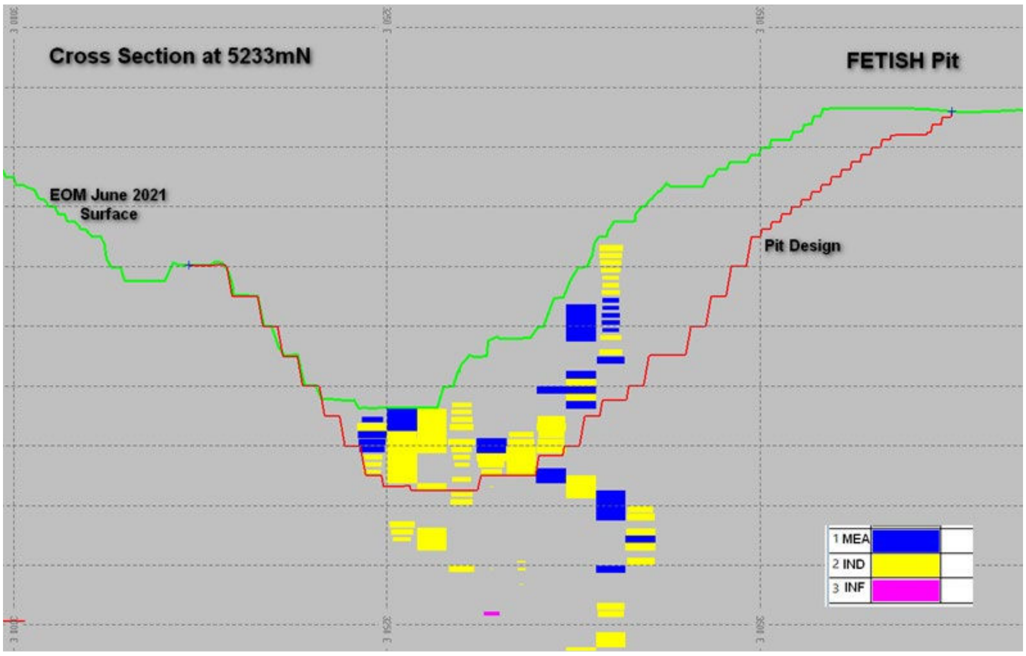

Figure 16-2: Cross Section of Fetish pit design at 5233mN. Resource model shown above cut-off, coloured by classification.

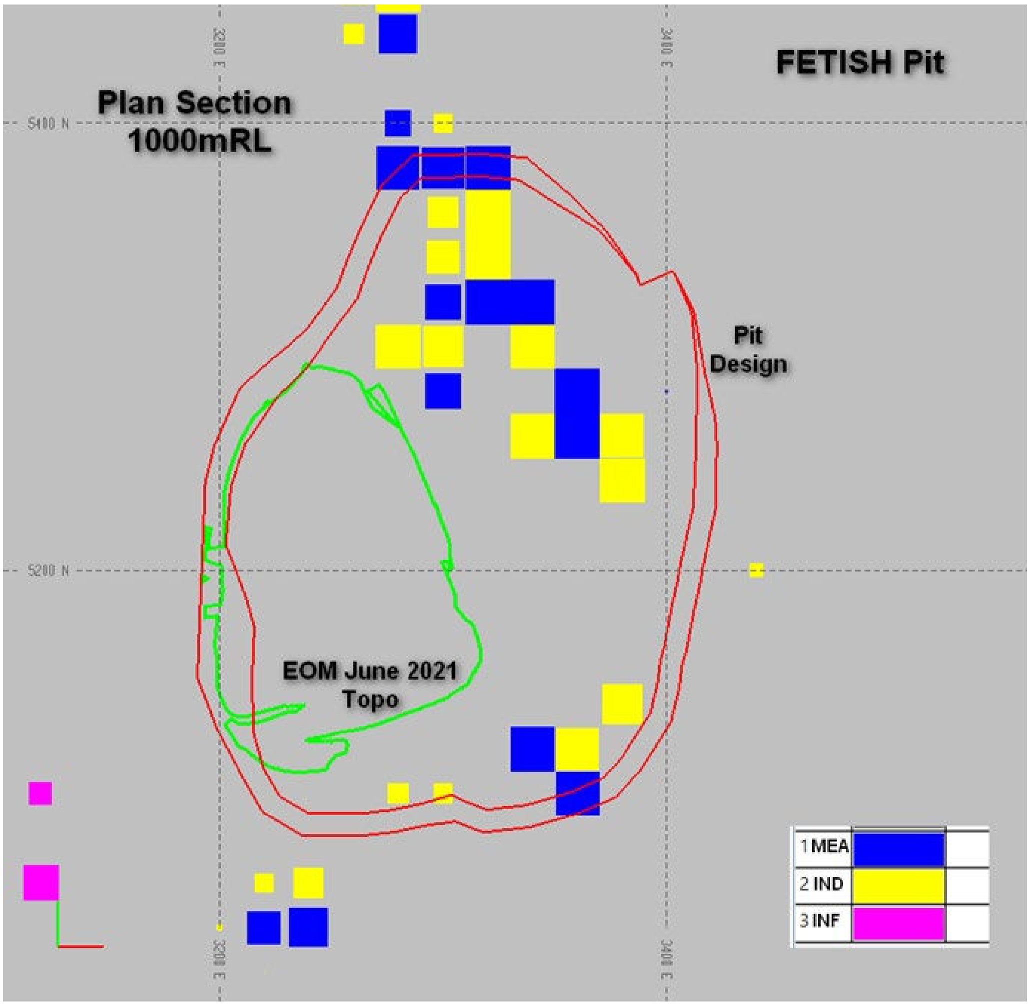

Figure 16-3: Plan view of Fetish pit design at 1000mRL. Resource model shown above cut-off, coloured by classification.

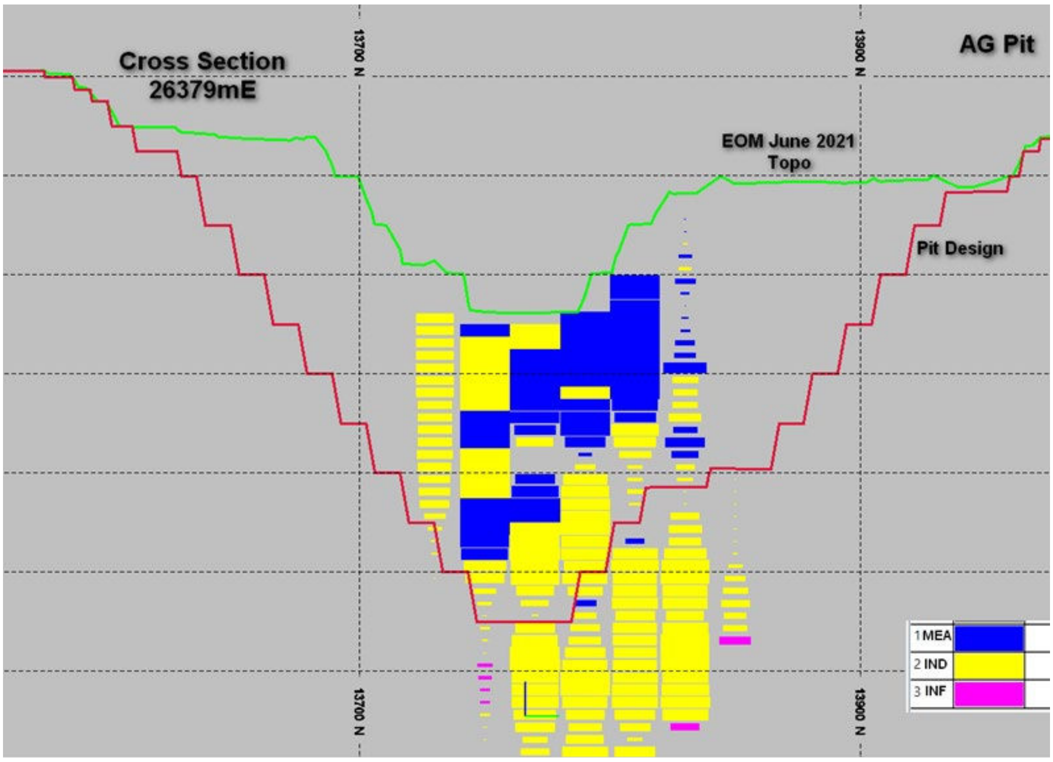

Figure 16-4: Cross Section of AG pit design at 5233mN. Resource model shown above cut-off, coloured by classification.

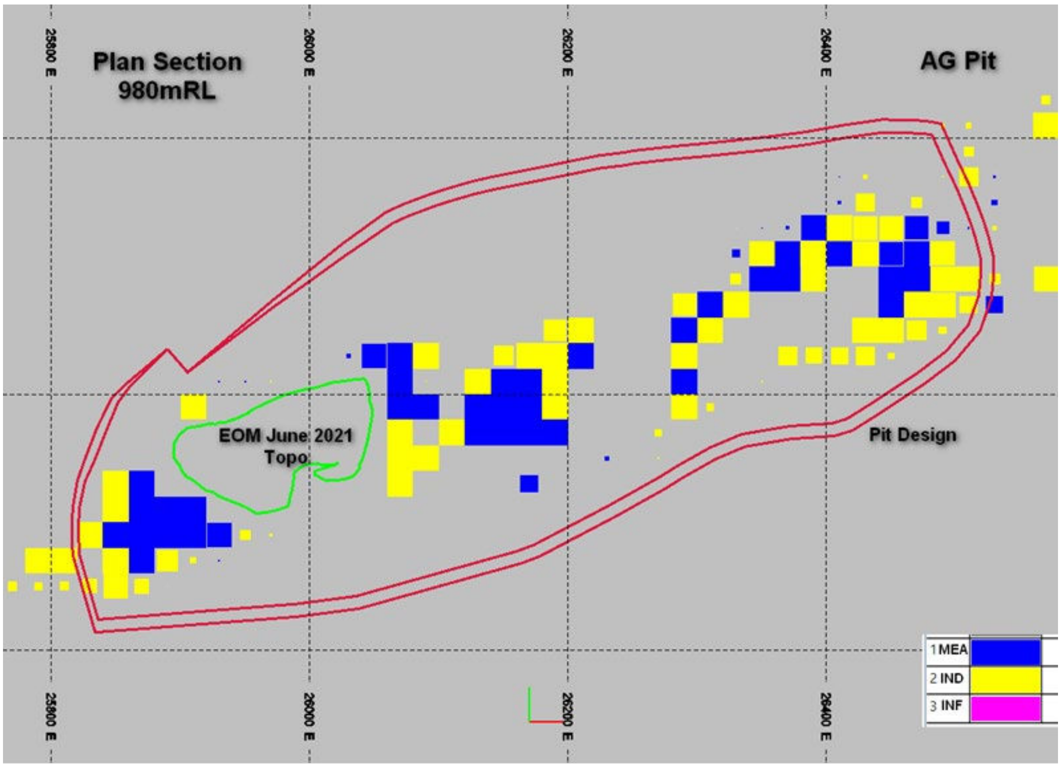

Figure 16-5: Plan view of AG pit design at 980mRL. Resource model shown above cut-off, coloured by classification.

16.1.4.3 Waste Dump Design Parameters

Waste dumps are designed with 15m high lifts, 10m wide berms and using the natural angle of repose (35°) slopes during active waste placement. For rehabilitation process, the waste dump face will be re-shaped to 20° slopes to increase the long-term stability factor, erosion retention, and considering the maximum working gradient for dozers. The final slope configuration will be 15m high batters, approx. 0.5m wide berms and 20° batter slopes.

16.1.4.4 Drill and Blast Design

The drill and blast pattern for ore material is 3.1m x 3.5m for 5m benches meanwhile the waste pattern is larger based on 3.5m x 3.9m for the same 5m bench height.

16.1.5 Production Schedule

16.1.5.1 Mine Scheduling

Total open pit mine life remaining as EOM June 2021 is 5 years excluding Esuajah UG.

Table 16-5: Mine Scheduling

Description	Unit	TOTAL	FY22	FY23	FY24	FY25	FY26
Total mined	Mt	80.7	30.6	26.1	16.6	6.7	0.7
Waste	Mt	55.0	25.1	18.3	8.9	2.3	0.3
Ore	Mt	25.8	5.5	7.8	7.7	4.4	0.4
Ore grade	g/t	1.08	1.10	1.05	1.08	1.11	1.18
Strip Ratio	t:t	2.1	5.3	2.4	1.2	0.5	0.8

16.1.5.2 Processing

Mineral Reserves for Edikan will be processed at a rate of approximately 7Mtpa, depending upon material type. Processing head grades are expected to be in line with Mineral Reserves, depending upon the combination of material sources available for processing at the time.

Remaining oxide ore and heap leach are fed at a nominal 10% of the total feed.

16.1.6 Mining Equipment

16.1.6.1 Load and Haul

The mining activities of load and haul are performed by excavator type loading equipment. The fleet owned by Perseus' mining contractor is Komatsu PC2000 (180t class) and Komatsu PC1250 (100t class) excavators in a backhoe configuration. The excavators are matched by Komatsu 785 off-highway haul trucks.

16.1.6.2 Drill and Blast

Drilling activity is carried by Pantera 1500 drill rigs. Explosives used for blasting is mainly emulsion based due to wet holes and availability in West Africa. The explosives are supplied under contract.

16.1.6.3 Ore Rehandle

Ore rehandle is carried out by a CAT 990 front end loader for high grade stockpile material within a 200m distance from the crusher bin. Additional Komatsu 785 trucks are used for rehandle of low grade stockpile material from distances greater than 200m.

16.1.6.4 Ancillary Support

The support equipment includes graders and dozers.

16.2 Underground

16.2.1 Introduction

16.2.1.1 Background

The Esuajah South Mineral Resource was estimated to have been previously mined during 2008 or 2009 as a small open pit, prior to the acquisition of Edikan by Perseus Mining. Studies for further mining of the deposit were carried out in 2016 and again in 2019. Additional resource, geotechnical and operating cost information became available at the end of 2020, and this information was used to update the Feasibility Study in January 2021 (Perseus Mining Limited, 2021c).

Additional information has subsequently been obtained covering geotechnical aspects and updated costs based on contract tenders and equipment quotes. None of the additional information impacts the selection of the underground standalone option as the preferred method for extraction of the ESS Mineral Resource.

Perseus have negotiated all relevant amounts payable to the central government of Ghana and to local landowners, for surface rights in the area of all proposed production activities. The mine-take area already in place is suitable for an underground operation and relocation from within the mine-take has already progressed.

16.2.1.2 Location

The Esuajah South orebody is located within the Ayanfuri mining lease (PL 6/15), which is registered in the name of Perseus Mining (Ghana) Limited (PMGL), which is a subsidiary of Perseus. The lease expires on 30 December 2024, but extensions can be applied for.

The now completed Esuajah pit and location of the proposed underground mine is located to the west of the Ayanfuri township (Figure 16-6).

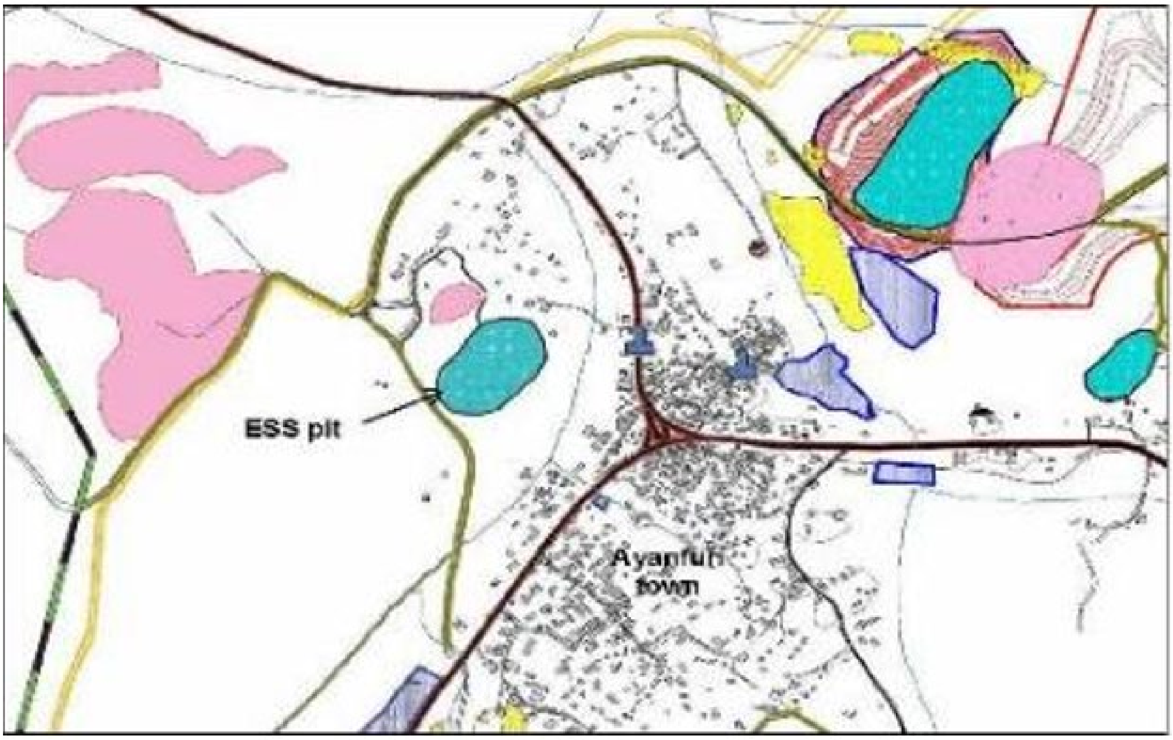

Figure 16-6: Location of Esuajah South in relation to Ayanfuri township

16.2.2 Geotechnical

Geotechnical information and analysis for the ESS underground has been completed to Feasibility level by Golder during 2014 (Golder Associates, 2014). Subsequent reviews and studies were undertaken by George Orr and Associates (George Orr and Associates, October 2020) in relation to location, design and construction of the box-cut and Sub-level Cave (SLC) parameters. These studies were supported by a geotechnical drilling campaign carried out in July/August 2020. It is assumed that interpretated ground conditions derived from these holes will not alter materially in other locations. Apart from adjustments for the box-cut and portal design, the information supplied (and interpretations made thereof) implies that no significant geotechnical factors or influences exist which would exclude the proposed Esuajah South underground development and stoping.

Sub-level Caving (SLC) methods of mining generally create a surface expression of subsidence (lowering of ground surface) following extraction of an orebody. The modified version of the mining method planned for Esuajah South underground is proposed to break through to the base of the existing Esuajah South open pit at the commencement of mining. This breakthrough to the surface will be used to partially backfill the existing open pit void with fresh waste rock from underground waste development and a mineralised waste dump from nearby Esuajah North pit. This will keep the void choked with waste rock backfill at all times as the mining progresses and restrict ground relaxation and subsequent surface subsidence.

Whilst some surface disturbance can reasonably be expected, typical SLC cave propagation behaviour towards surface is not anticipated at Esuajah South.

16.2.3 Hydrology and Hydrogeology

Hydrological and hydrogeological assessment has been completed to Feasibility level through series of studies between 2016 and 2020 (CSA Global, 2020). Hydrogeological assessment included the development of a numerical groundwater model to predict groundwater inflows into the mine and to assess the potential impact of mine dewatering on adjacent receptors such as the local rivers and groundwater abstractions for water supply. The hydrological assessment considered the impact of storm events on the underground mine dewatering system requirements.

The underground project was assessed for three different surface water inflow scenarios;

1. A 24-hour 100 year return period storm event.
2. A 90-day wet period.
3. Seepage from the existing pit through the pit base to the underground limited to a rate of 2,000 m^3/day.

All three scenarios require two lift stages, from the base of the underground to an intermediate transfer station and from the intermediate transfer station to the surface. The surface water inflows would be captured at the intermediate transfer station and pumped out of the underground from there. For scenarios 1, 2 and 3 the pumping rates required from the intermediate pumping station are 210 L/second, 115 L/second and 95 L/second, respectively, based on the dewatering of the 24-hour 100 year return period storm event inflows in approximately one day. The pumping rate from the base of the underground for all scenarios is 70 L/second, based solely on the groundwater inflows (which does not change between the different scenarios). It is considered the estimated inflow rates for all scenarios are easily manageable.

16.2.4 Mining method

Several studies have been completed to select the most suitable mining method for the ESS deposit. From these studies, sub-level mining underneath introduced rock fill (SURF) was identified as the preferred method and forms the basis of this study for the following reasons:

- Orebody geometry – dimensions of up to 250 m × 100 m and dipping at around 70° are well suited to a transverse SURF layout.
- Mechanisation – mechanised mining is well understood and has been used in many locations worldwide, including Ghana.
- Production rate – SURF can deliver the required production rate at much lower costs than stoping methods.
- Surface influence – any surface subsidence or large open void could cause concerns in the vicinity of the Ayanfuri town. SURF will ensure the void on surface is backfilled as mining progresses and will minimise the potential for major surface subsidence.

The underground design, scheduling and costing were completed by Mining Plus ((Mining Plus, 2016), (Mining Plus, 2019a) and (Mining Plus, 2021)). Studies were completed to Feasibility level using the latest block model and costs from quotes, including the outcomes from a mining contract tendering process involving three major underground mining contractors during 2020.

The outcomes of the Feasibility-level geotechnical and hydrological studies were used in the selection of the mining method and mine design. Figure 16-7 below shows an isometric view of the transverse SURF mining design.

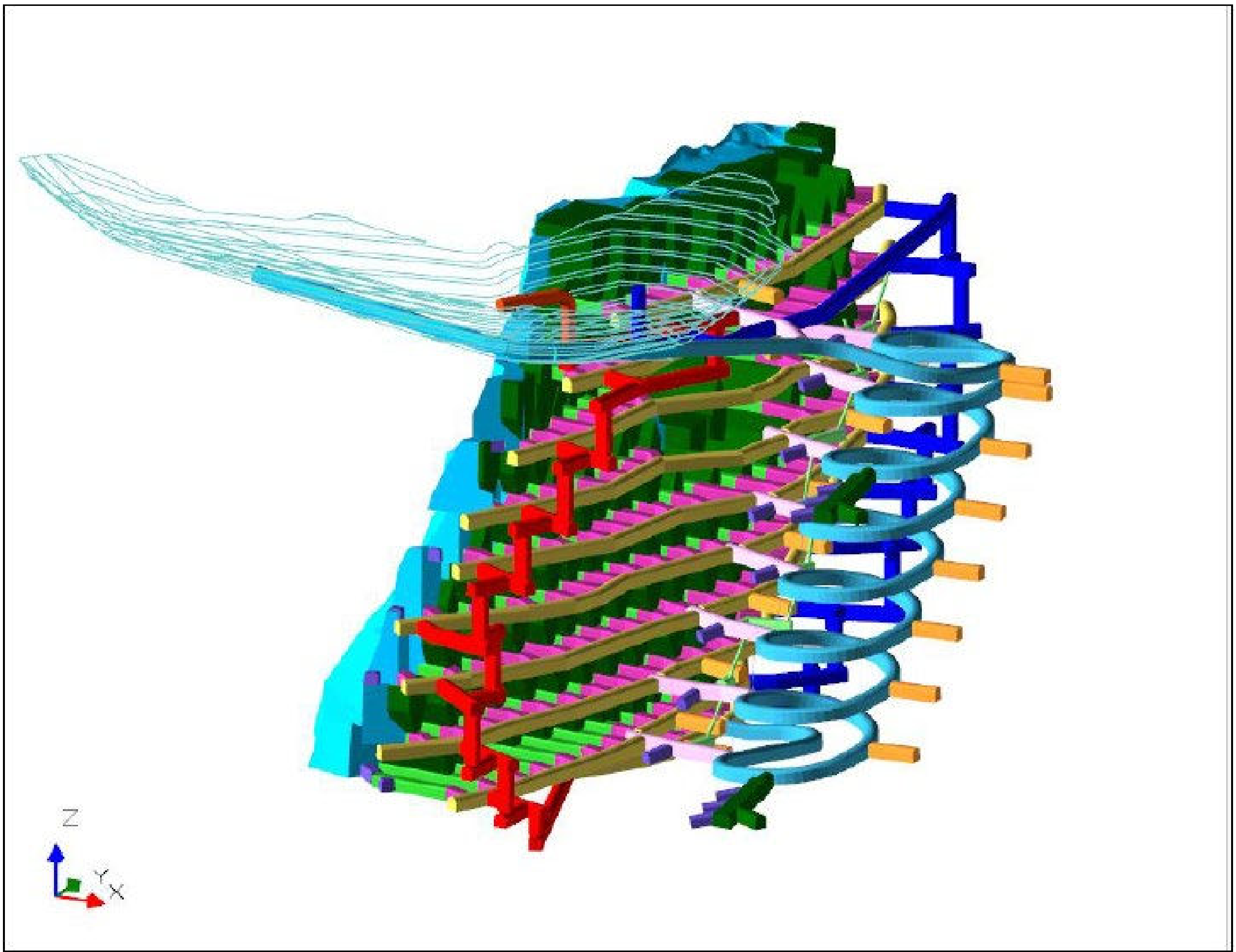

Figure 16-7: Isometric view of the ESS underground design

16.2.5 Mine Design

The mine designs for this study were constructed using Deswik CAD to a Feasibility study level of accuracy. The SLC designs were also re-created using Dassault Geovia GEMS PCSLC software in order to undertake modelling of the SLC cave mixing and estimate the extracted tonnes and grade to be mined from each ring.

Access to the underground mine will be provided through a box-cut. Once the portal is established Armco steel arches will be installed from the portal upwards and the box-cut partially backfilled to control slope stability, to protect the portal brow and Armco tunnel.

A single spiral decline will provide access near the centre of each sub-level, see Figure 16-8 below.

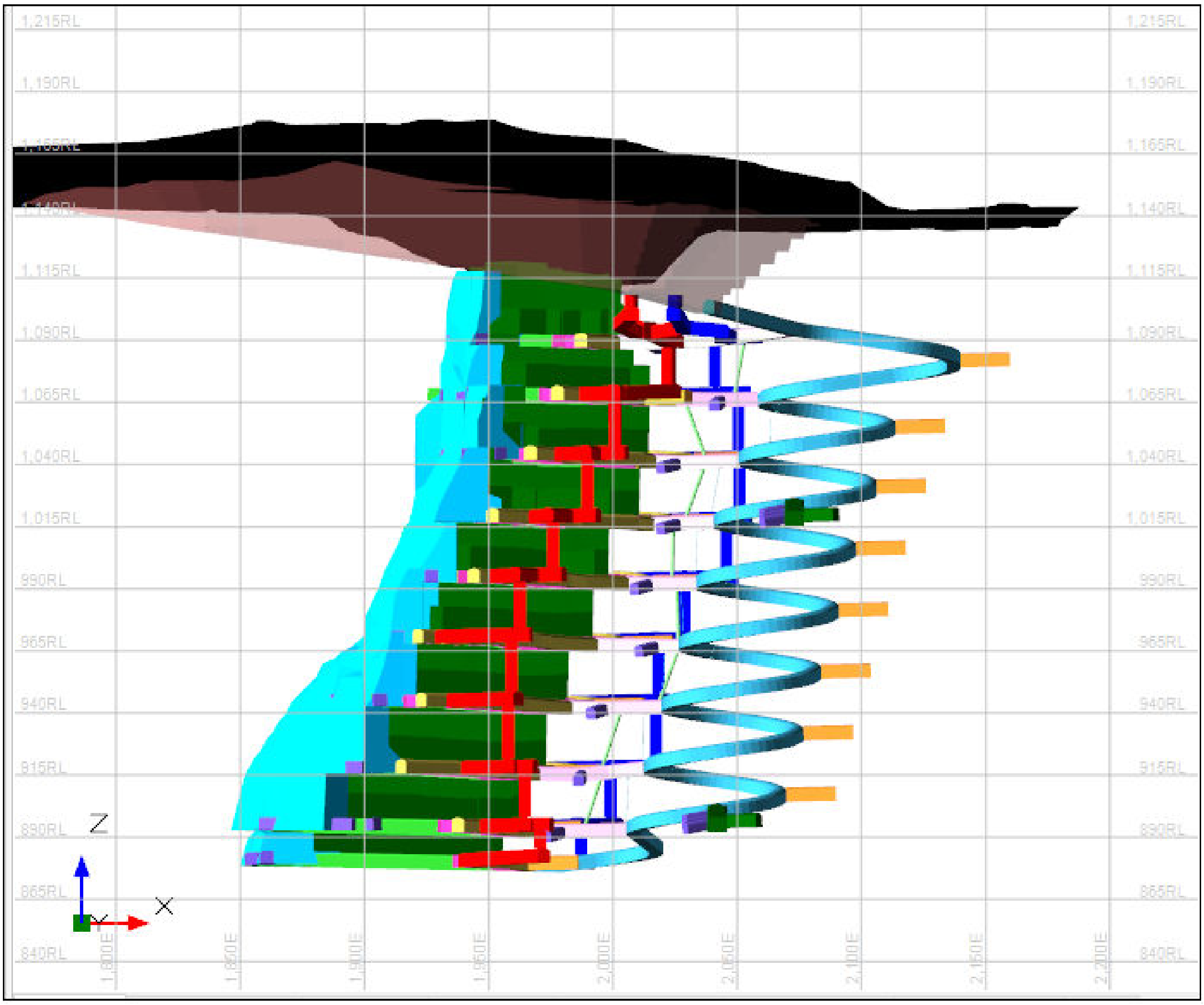

Figure 16-8: Cross Section view of the ESS underground SLC design

All major underground infrastructure is located in the footwall of the deposit. Fresh air is provided to each level through the decline, and a dedicated fresh air rise linked to the decline box-cut, with tubing installed to prevent recirculation of exhaust air. Return air is exhausted through a dedicated raise at the recommended distance away from the intake. Layouts of the mine design are shown in Figure 16-9 and Figure 16-10 below.

SURF mining method resembles a typical mechanised sub-level cave (SLC) layout. Parallel ore drives are developed through the ore body at 25 m level to level spacing, and 15 m between ore drives (measured from centre to centre). Ore drives are transverse (90 degrees) to the strike direction of the orebody. Rings (of longhole blastholes) at a burden of 2.5 m are retreated from a slot drive located against the hanging wall of the deposit towards the access drive located in the foot wall of the deposit. The hanging wall typically caves in a normal SLC mine, filling the void as rings are retreated, but good rock conditions at ESS make it unlikely that caving will occur. To avoid creating large open voids, mineralised fill from Esuajah North (ESN) will be introduced from surface, a method used successfully in other mines such as Resolute Mining's Mt Wright mine in Northern Queensland, Australia.

Waste fill has also been used at some block cave operations to prevent failure of the footwall or sidewalls in order to protect key infrastructure. Examples of this are King Mine in Zimbabwe and Havelock mine in Swaziland.

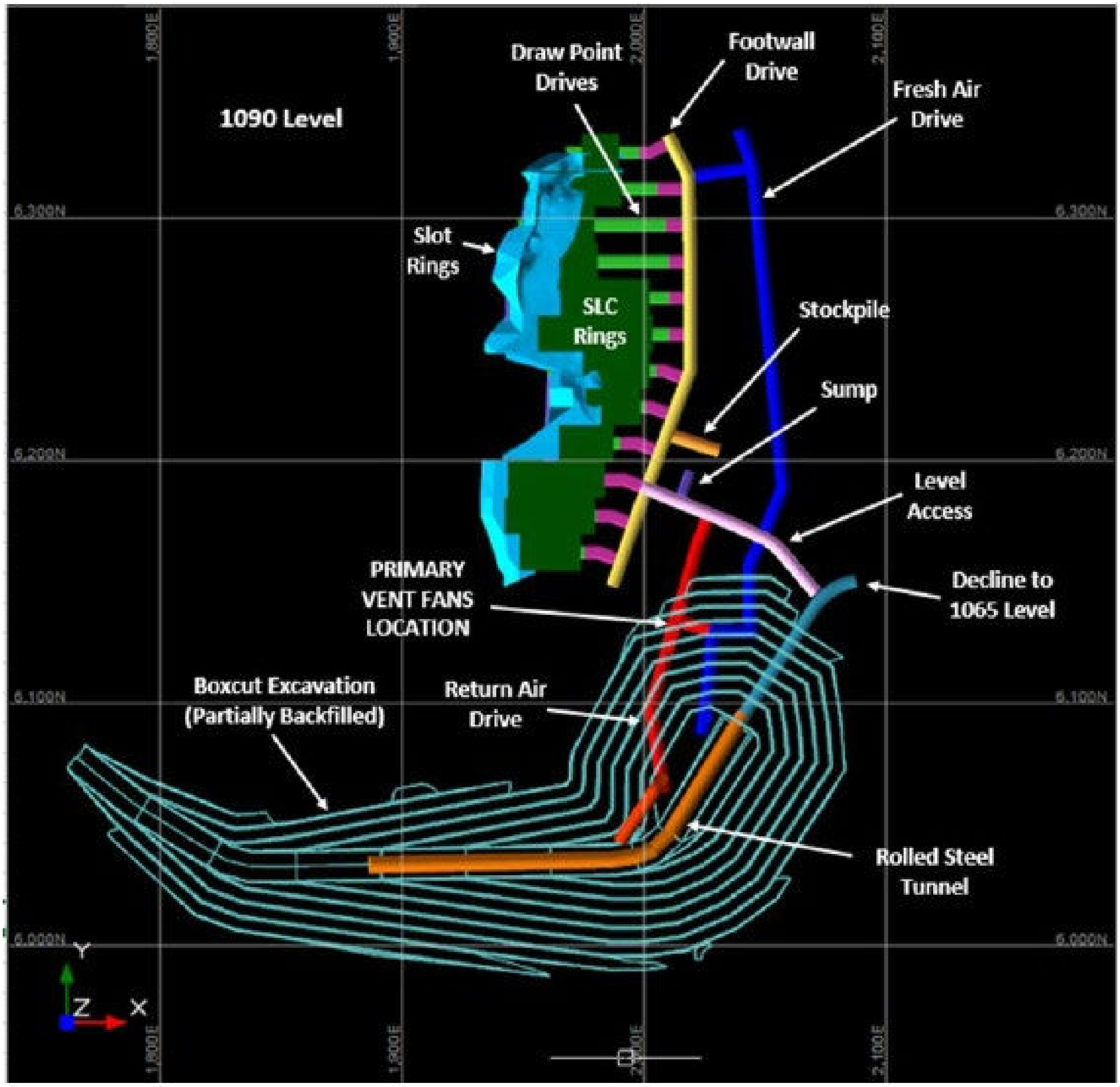

Figure 16-9: Plan view of the ESS underground design from the portal to the 1090 level

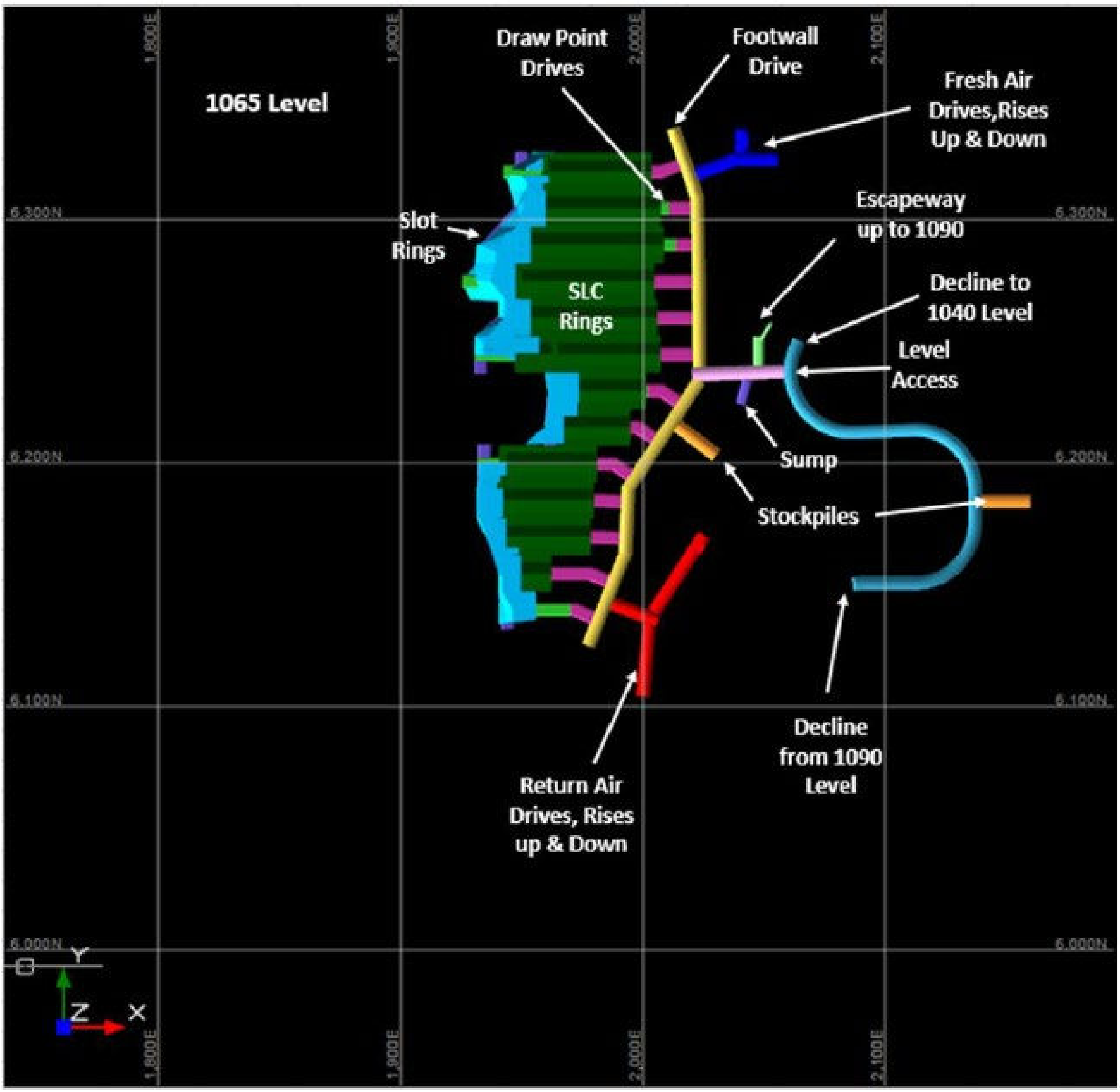

Figure 16-10: Plan view of the ESS underground design on the 1065 level

16.2.6 Mine Schedule

The mine was scheduled on expected productivities and rates using a contractor operated mobile fleet. The underground productivities and schedules were developed by Mining Plus. Production rings were scheduled using Geovia PCSLC, a purpose built mine planning package that takes into account the design and scheduling of SLC style production rings, and the resulting dilution and mixing that occurs from mining underneath previously mined material. The remainder of the development, after the start of production, was scheduled to be completed three months in advance of when access by production is required in order to reduce interference between development and production. Time is also allowed for unexpected development delays and update of geological and geotechnical mapping and modelling along the ore drives prior to production.

Allowing for permitting and initial construction it was estimated that production could commence from underground 23 months after commencing the permit approval process.

The schedule targeted a steady production of 100 kt ore per month from month 16, resulting in average development rate of 500 m per month for 33 months with 800 m per month periods to maintain development in advance of production.

The existing 'mine-take' is suitable for the underground requirements and relocation of the structures located within the required area is currently being undertaken. The intent would be to develop the mine in two phases, the first being an exploration phase and the second a production phase. The intent of the exploration phase is to reduce the risk associated with the gold grade and ground conditions before a decision is made to proceed with the production phase. The start date for the exploration phase and the production phase will be dependent on the time required to receive approvals, mobilise a mining contractor and the final equipment selected to complete development. The schedule adopted in the Feasibility study is conservative and there may be potential to start up to six months before that indicated, i.e., after approximately 17 months from initiating the permit applications.

Table 16-6 shows the key physicals for the mining of ESS underground. Ore tonnes mined are close to or above 1 Mtpa of ore for four years. After the first year of mining, the grade is consistently close to 2 g/t Au for four years.

As the ESS underground has not yet had a final investment decision made, the mining schedule stands alone from the open pit schedule. In a combined processing schedule, the ESS underground ore, which is higher grade than open pit and stockpile ore, will displace the lower grade material from other sources.

Table 16-6: ESS underground schedule

	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Total
UG Waste	Tonnes	382,325	464,839	166,216	0	0	1,013,381
UG Ore	Tonnes	169,118	1,276,047	1,226,838	1,142,245	950,101	4,764,348
UG Tonnes	Tonnes	551,444	1,740,886	1,393,054	1,142,245	950,101	5,777,729
UG Grade	g/t	1.68	1.82	2.08	2.00	2.11	1.98
Au Oz	oz	9,113	74,571	82,231	73,559	64,521	303,994

16.2.7 Mining Equipment and Infrastructure

The contractor development equipment includes jumbos, loaders, charge-up unit, shotcrete sprayer, agitator trucks, ITs, service truck and grader.

Mining requirements were estimated from first principals, based on expected productivities, the mining method, mine design, location and contractor operator model.

Dewatering infrastructure is designed based on the outcomes of the hydrological investigation described in Section 16.2.3.

Ventilation requirements were determined from the type and number of vehicles required to meet the production schedule. Once the production phase starts, the main ventilation fans will be located underground in order to minimise noise impact on the nearby community.

Power, air, water and other consumables requirements were based on the mobile equipment and fixed plant required to deliver the production schedule. Major power consumption is related to ventilation and pumping and major fuel consumption to loading and hauling.

A layout of proposed infrastructure for the ESS underground is shown in Figure 16-11 Figure 16-11below.

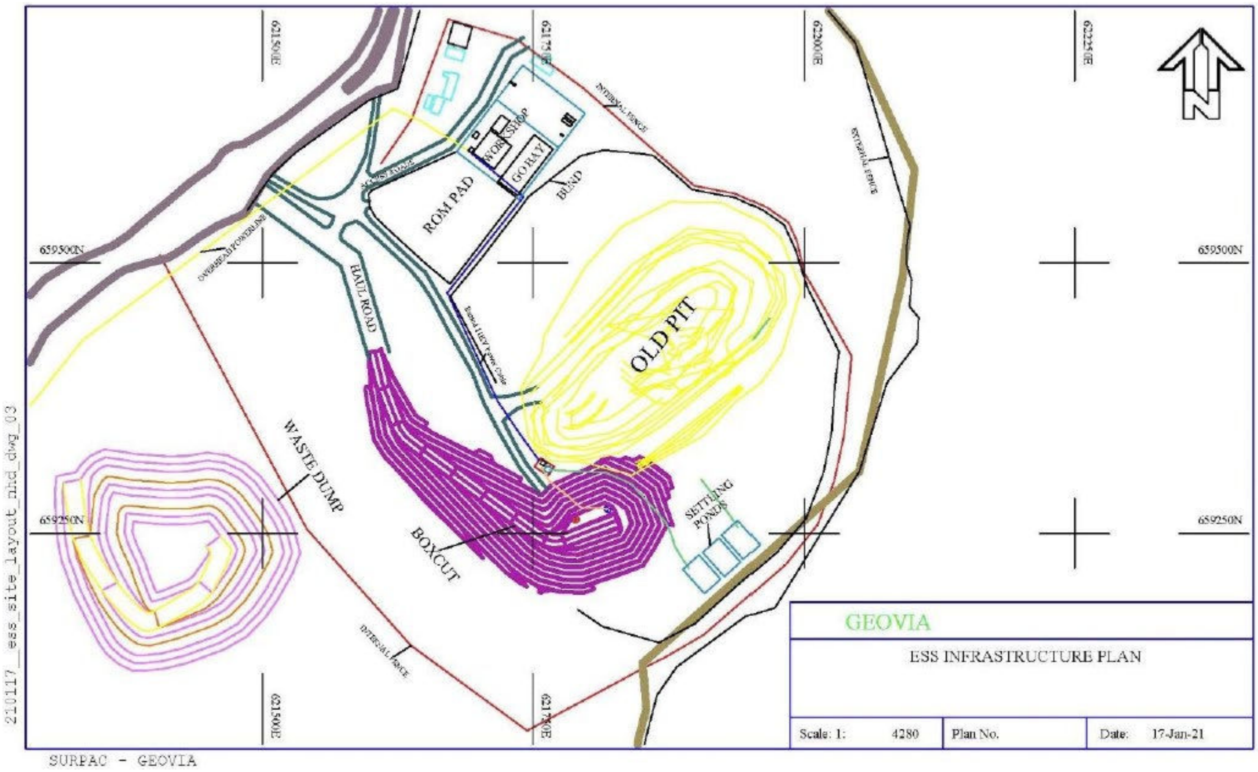

Figure 16-11: ESS underground infrastructure plan

16.2.8 Risk and Opportunity Review

In addition to the normal risk evaluation routinely conducted by PMGL, an expert review of the risks associated specifically with underground mining was carried out. From this review, the major threats identified include:

- The project is sensitive to gold price.
- Regional water drawdown may affect communities more than estimated.
- Mining contract cost may increase.
- Actual capital and operating costs may be higher in the future.
- Grade may be less than expected.
- Dilution may be higher than expected.
- Approval of sufficient expatriate labour may not be possible.
- Ability of underground mining contractors to find suitably experience personnel.
- Some residents within the mine-take area still need to be relocated.

- Delays in project approval potentially impacts the ability to keep the mill full.
- Additional government taxes and levies may be incurred in the future.

The main opportunities to the project are:

- Infill diamond drilling of lower sections may increase the ounces of the resource.
- Metallurgical recovery may be better than assumed in the study.
- More favourable geotechnical and geological conditions than currently planned for would reduce underground mining costs.
- Higher gold price could extend the overall mine life.
- Capital and operating costs may be lower than predicted.
- Ability to further rationalise the underground development and reduce capital cost.

A risk review has been integrated into the overall Edikan Site Risk Register. A final investment decision by Perseus has not yet been made with respect to the ESS underground.

17 Recovery Methods

17.1 Introduction

The Edikan gold plant has been in operation since commissioning in 2011. It was designed for a nominal 5.6Mt/y capacity although the primary crusher and SAG mill were oversized for that duty and annual production rates have varied between 4.8-7.2 Mt/y since commencement of operations.

In late 2016 a minor plant upgrade to improve plant reliability was completed which allowed for a significant increase in mill run time – refer Table 13-7.

With the exception of Esuajah South ores the majority of the ores to be treated are coming from cutbacks in the existing pits AG and Fetish. Gold in all the remaining pits is associated with sulphide minerals (pyrite and arsenopyrite) that are recoverable by flotation at coarse grind sizes (80% passing 212 µm). The concentrate can then be ground to a finer size (approximately 90% passing 45 µm) than would be achievable for whole of ore prior to cyanidation.

17.2 Process Flowsheet

A simplified process flow diagram for the Edikan plant is included as Figure 17-1.

The major equipment list is provided in Table 17-1.

There are no plans to upgrade the processing plant's capacity.

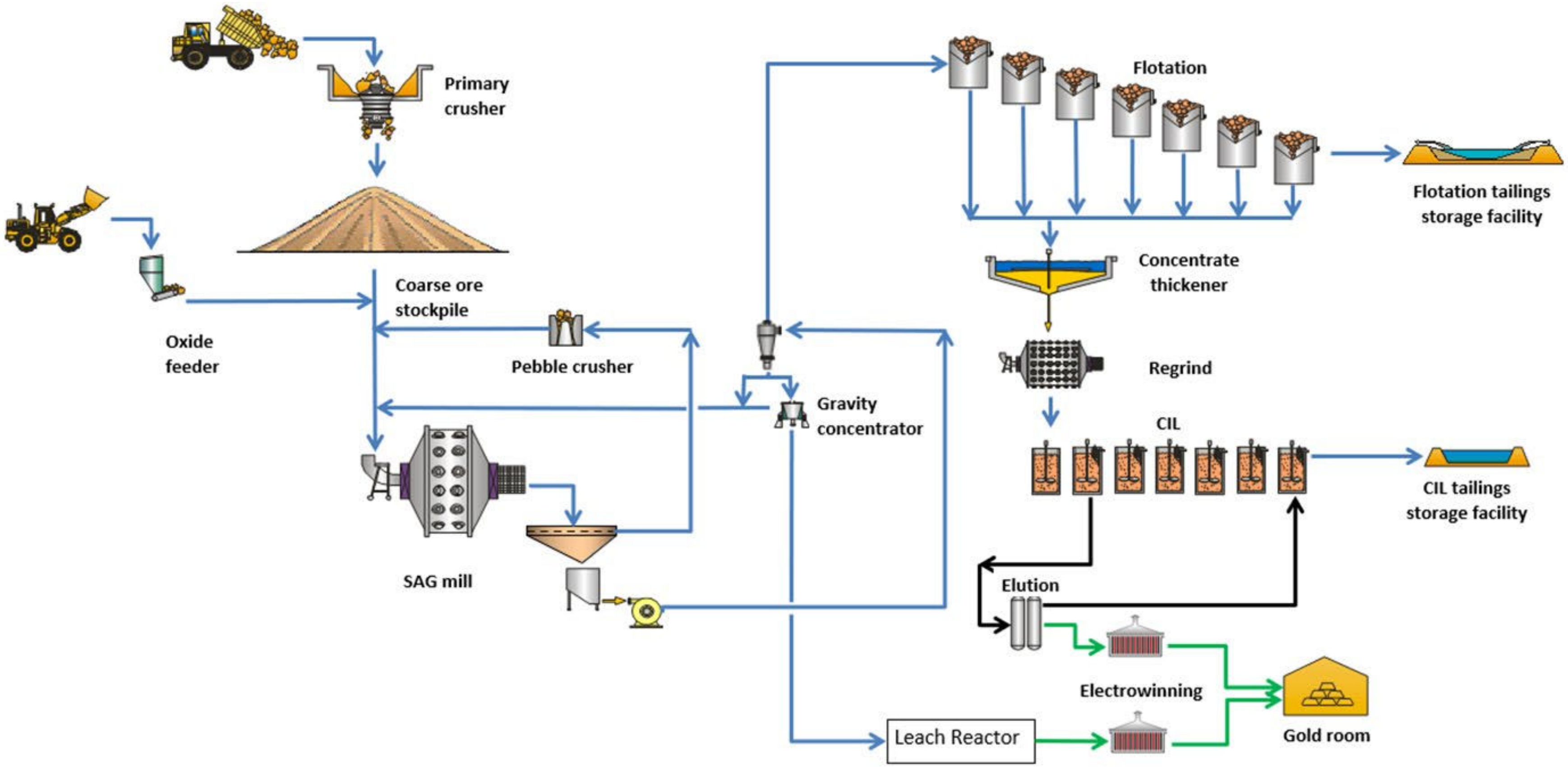

Figure 17-1: Simplified processing plant flowsheet

Table 17-1: Major Process Equipment

Description	Manufacturer	Model/Size	Quantity
Primary crusher	FLSmidth	1400 x 2100 – TS, 600kW motor	1
SAG mill	FLSmidth	34 ft diameter x 22 ft (flange to flange), 14MW motors (2x7MW)	1
Pebble crusher	Sandvik	CH660:02, 315kW motor	1
Gravity concentrators	Knelson	KCXD48MS	2
Intensive Leach Reactor	Consep	CS3000 Acacia	1
Flotation cells	FLSmidth	70 m^3 Wemco smart cells	7
Concentrate thickener	FLSmidth	8 m diameter, high rate	1
Regrind mill	FLSmidth	3 m diameter x 5 m (flange to flange), 600kW	1
CIL tanks	n/a	166m3 live capacity, 5.5m diameter x 7.5m high	7
CIL interstage screens	Kemix	MPSP 100	7

17.3 Metallurgical Recoveries and Reagent Consumptions

The expected or forecast recovery of gold from the remaining ores are as shown in Table 13-8.

The major processing reagents will include, grinding media, collector, activator, frother, flocculant, lime, cyanide, activated carbon, and hydrogen peroxide.

There are existing onsite facilities to store, mix and dose these reagents with all materials being transported to site via road transport.

No significant change to the historical consumption rates are envisaged.

17.4 Process and Plant Description

17.4.1 Crushing Plant, Stockpile and Reclaim

Run of mine ore is delivered to the plant by 100 tonne class rear dump haul trucks or by front end loader (FEL). Ore is crushed by an FLSmidth 1400 x 1600 TS gyratory crusher that operates with a closed side setting of ~120 mm. A rockbreaker is fitted to deal with oversize and rock bridging.

Crushed product is drawn from the crushing chamber by a low profile feeder and conveyed to the crushed ore stockpile (COS).

Mine life to date run time for the crusher is ~52% which is sufficient to keep the mill operating at its 90% run time.

The COS has a live capacity of 4-5 hours and is supplemented by a further 4-5 day's worth of ore that is side cast and reclaimed by mobile equipment.

Ore is reclaimed from COS by four vibrating pan feeders onto the SAG mill feed conveyor.

Oxide ore is fed to the circuit by FEL via a ROM bin located adjacent to the primary crusher. The ROM bin is fitted with a static grizzly to remove oversize. Ore is drawn from the ROM bin via an apron feeder onto the oxide feed conveyor which then discharges on to the SAG mill feed conveyor.

This circuit is a retrofit, necessitated by the need to prevent rat-holing and bridging within the COS and packing of the vibrating feeders, that was encountered when treating oxide material.

17.4.2 Grinding and Gravity

The grinding circuit consists of a 14MW (twin 7MW pinion drive) single stage SAG mill operating in closed circuit with primary cyclones.

New feed is reclaimed from the COS and combined with ore from the oxide circuit and conveyed into the SAG mill for grinding. The mill typically operates with a ball charge of 12-14% and a total volume of ~30%. Power draw varies between 12MW and 13.5MW depending on condition of lifters.

Slurry (ground ore and water) is passed over a vibrating screen to remove scats/pebbles which are subsequently conveyed to the pebble crusher for size reduction. Crushed pebbles are returned to the mill feed conveyor and reprocessed. Vibrating screen undersize is pumped to the primary hydrocyclone cluster which produces a coarse and fine fraction.

There are a total of 11 g-MAX 26-20 cyclones available in the cluster, with 6-7 cyclones operating at any time at pressures of 60-70kPa.

The fine cyclone product (cyclone overflow) is approximately 80% passing 212 µm and gravitates to the flotation circuit for gold recovery.

The coarse cyclone product (cyclone underflow) is returned to the SAG mill for re-grinding. A sub stream is split to feed twin Knelson KCXD48MS batch centrifugal gravity concentrators operating in parallel. Coarse particles (+3mm) are removed prior to feeding to each Knelson on a 4.88m long x 2.44m wide horizontal vibrating screen. Scalping screen oversize is directed to mill feed.

Concentrate from each "Knelson" is removed periodically and stored in the CS 3000 Acacia reactor. Knelson tails are returned to mill feed for regrinding.

Once per day the Acacia reactor is placed on a leach cycle to recover gold from the gravity concentrate. Gold bearing solution is pumped to the electrowinning circuit at the completion of the cycle.

The quantity of gold recovered by the gravity circuit varies but is typically about 25% of new feed.

17.4.3 Flotation and Thickening

Cyclone overflow slurry gravitates to the flotation circuit, which consists of a small conditioning tank/hopper and seven 70 m^3 Wemco smart cells in series.

The reagents suite consists of activator (copper sulphate), collector (sodium isobutyl xanthate) and frother. Napthalene sulphonate is only added when carbonaceous material is noted in mill feed.

Flotation concentrate from each cell is collected and thickened in an 8 m diameter high-rate thickener, thickened (~60% solids) and pumped to the regrind mill.

Flotation tails are pumped to the flotation tailings storage facility (FTSF) for impoundment.

Flotation is done at natural pH.

Automatic cross stream samplers are fitted at the feed and tail end of the circuit for metallurgical accounting purposes.

17.4.4 Concentrate Regrind

Thickened flotation concentrate is pumped to the regrind circuit which consists of a 600kW ball mill that operates in closed circuit with a cluster of 6 gMAX6 cyclones. Cyclone underflow is returned to the mill for regrinding, while the cyclone overflow (90% passing 45 µm) gravitates to the CIL circuit.

A cross stream sampler is located on the thickener underflow stream and on regrind cyclone overflow.

The regrind mill typically draws 300kW of power.

17.4.5 CIL

The CIL circuit consists of seven 166 m^3 tanks operating in series. The tanks are interconnected by launders and slurry flows by gravity from one tank to the next. Each tank is fitted with a MPSP 100 Kemix interstage carbon screen. The interstage screen prevents activated carbon from flowing by gravity downstream with the slurry.

Lime is added to raise pH to ~11 in order to prevent HCN gas generation.

Cyanide is added to dissolve gold from solid into solution. Oxygen is provided by a PSA plant and supplemented by the addition of hydrogen peroxide.

Activated carbon is added at the back of the circuit then moved forward by recessed impellor carbon transfer pumps counter current to the direction of slurry. Gold is adsorbed onto the activated carbon.

"Loaded" carbon is recovered in 4 tonne batches from the first CIL tank by pumping slurry over the loaded carbon screen. The carbon collects in the elution column, is washed with dilute hydrochloric acid to remove inorganic foulants then subject to a split AARL elution process. Pregnant solution is sent to electrowinning.

The now "Barren" carbon is moved from the elution column and sent to the regeneration kiln for thermal reactivation of the carbon (remove organic foulants) prior to sending back to the CIL circuit.

A trash screen is located prior to the first CIL tanks to remove coarse particles that would otherwise build up in the CIL circuit and eventually block the interstage carbon screens.

Tails from the last CIL tank flows over a carbon safety screen to catch carbon in the event of screen failure, before being pumped to the calcine tailings storage facility (CTSF) for impoundment.

A cross stream sampler is located on CIL tails for metallurgical accounting purposes.

17.4.6 Goldroom

The electrowinning cells are located in the gold room. Gold concentrate collects on the cathodes as pregnant solution from the gravity circuit and CIL elution are passed through the cells.

Gold concentrate is periodically removed, filtered, dried and smelted to produce gold doré, which is then shipped for sale.

17.5 Power Requirements

Electrical power to site comes from three sources; national grid, standby diesel power station and a new contract gas fired power station. The site is currently transitioning from grid supply (with diesel backup) to a site-based contractor provided gas power station.

17.6 Water Requirements

The processing plant uses water sourced from various site surface collection points, pit water and bore water. Disused pits at Esuajah North and Fobinso contain water which can be accessed in dry periods if required.

17.7 ESS Underground

Sufficient testwork was carried out to determine the ore from the Esuajah South project is compatible with the existing processing circuit at Edikan. The Esuajah South ore will be blended with open pit ore for the life of the underground operation, with the ore making up only a small percentage of the total feed to the processing plant.

The 2009 Edikan Definitive Feasibility Study (DFS) was based on a flowsheet consisting of gravity, flotation, concentrate regrind and cyanidation. The supporting metallurgical testwork programme used samples drawn from all planned ore sources. Esuajah South ores were included in the composite sample testwork, however the only specific Esuajah South ore tests were limited to comminution work. Later testwork programs were carried on Esuajah South specific samples.

The test work was undertaken on three (3) bulk composites which represented:

- Primary West (Abnabna, AF-Gap and Fobinso deposits).
- Primary East (Fetish, Esuajah North and Esuajah South deposits).
- Oxide/Transitional ore zones.

Each of the bulk composite samples were tested to provide data for the project design criteria.

There are no recovery issues associated with the ores tested. The mass pull to concentrate is marginally higher than currently experienced from the open pit ore types at Edikan but this is not likely to be an issue given that the ores will be a small fraction of total mill feed and there is currently excess capacity in the existing regrind and CIL circuits.

The predicted plant recovery through the Edikan circuit is 90% for the Esuajah South ore, which represents a discount to 4-5% from the laboratory testwork. The discount was applied following review of actual and predicted recoveries of several Eastern pits ores recently processed.

18 Project Infrastructure

The Edikan site layout is illustrated in Figure 18-1, below.

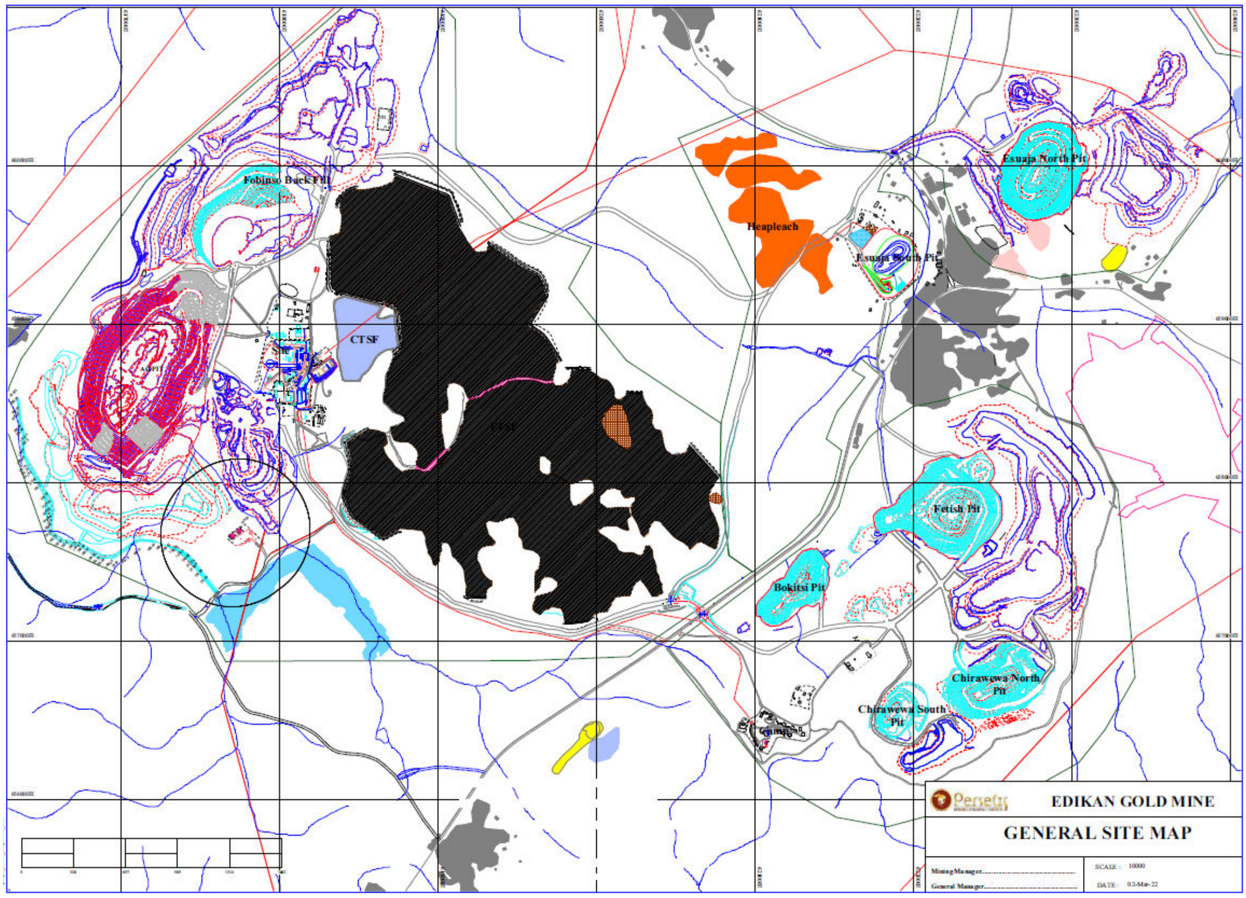

Figure 18-1 Edikan Gold Mine Layout

18.1 Roads

The Edikan Gold Mine is located approximately 2 km to the southwest of Ayanfuri, which itself is located some 107 km south of Kumasi and 186 km north of Takoradi. Access to site is from the Ayanfuri to Bogoso Road.

The site access road is a 3.4 km all weather gravel road that runs parallel to the mine haul road connecting the eastern pits to the plant ROM pad.

The site has a network of gravel roads that provide access to the processing facility, TSF, pits, waste dumps bores, various water sources and miscellaneous infrastructure items.

18.2 Buildings

The site has a number of existing buildings including:

- Administration
- Mining services
- Warehouse

- Clinic
- Emergency Services
- Exploration
- Chop house
- Security
- Processing and maintenance offices
- Workshop
- Laboratory
- Various MCC buildings
- Helipad

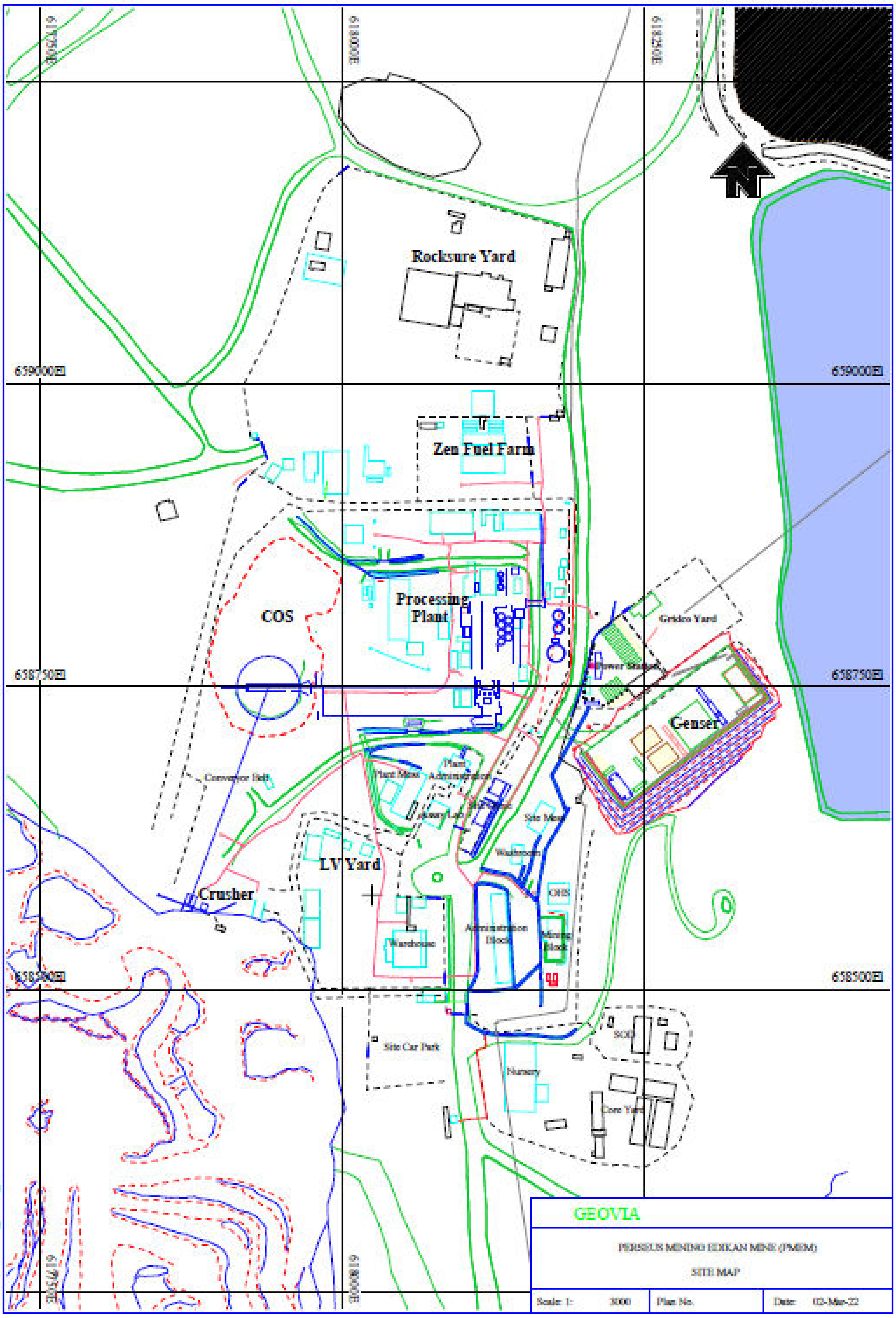

Figure 18-2 Edikan Site Layout

18.3 Mine Services Area

The mining contractor has been provided with a mine services area to enable mine fleet servicing and maintenance.

18.4 Workforce Accommodation

Senior staff at Edikan Gold Mine are housed in the site accommodation camp. It contains 21 blocks of accommodation with a total capacity for 144 single rooms and is at approximately at 84% capacity.

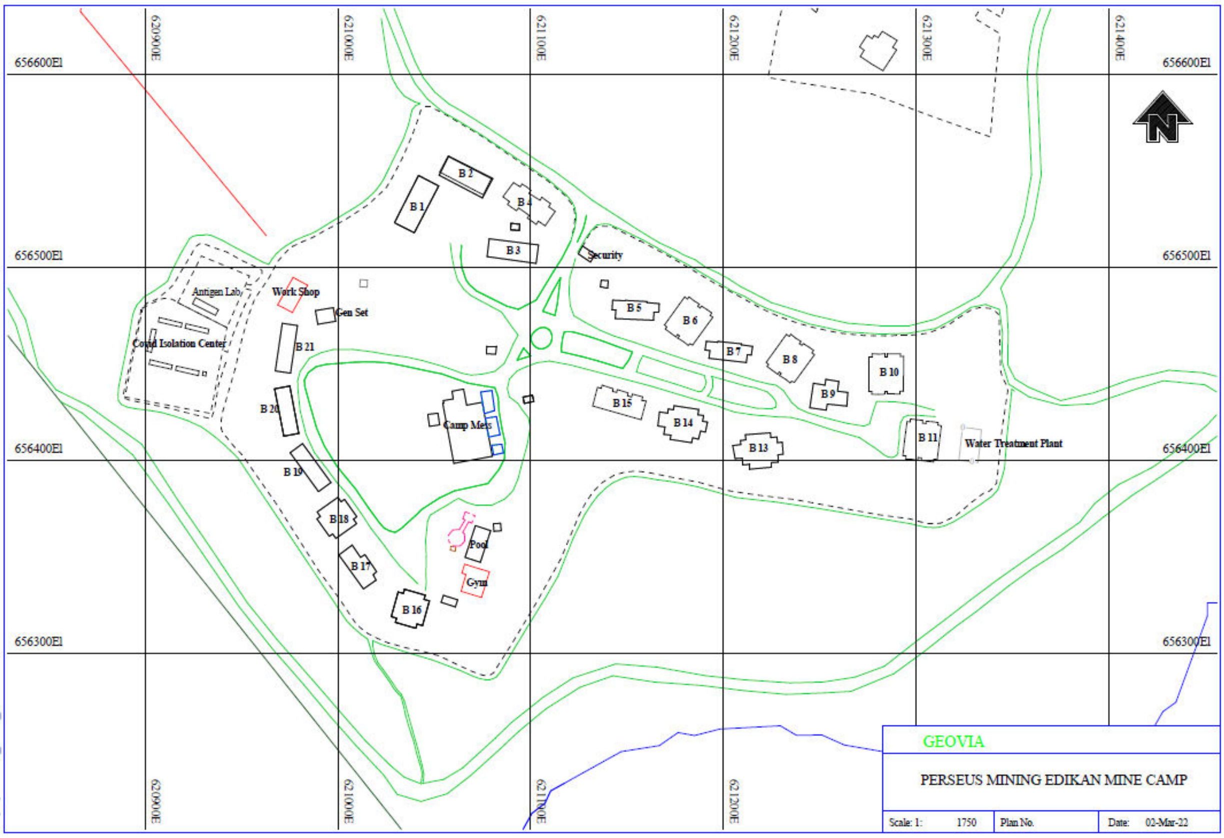

Figure 18-3 Edikan Camp Layout

18.5 Power Supply and Reticulation

The Edikan Gold Mine is connected to the national grid as shown in Figure 18-4.

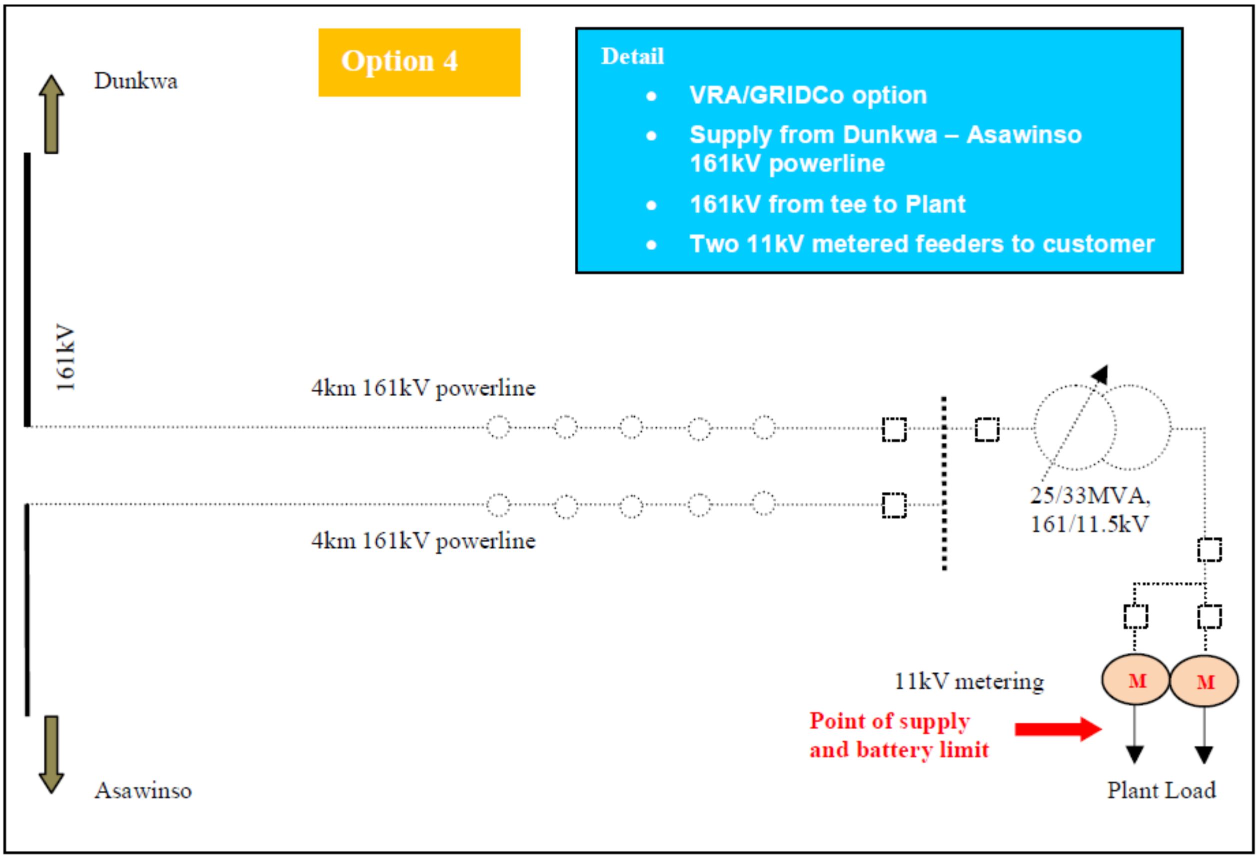

Figure 18-4: National Grid Supply

A 4 km line extension from the Dunkwa – Asawinso power line brings 161kV power to the site substation where it is stepped down to 11.5 kV and fed to the plant. The line has a capacity of approximately 150 MW

Total site power consumption is 17-18MW.

Post August 2022 the primary source of power will be provided by Genser Energy Ghana Limited (GEGL), from an on-site power station equipped with 2 Solar T130 gas turbines producing 16.5MW maximum per turbine. Rated output at 30 degrees Celsius is 14.5MW per turbine. The gas turbines are powered by natural gas that is transported to site via fixed pipeline infrastructure constructed by GEGL, that interconnects with the Ghana National Gas Company network fed from offshore natural gas reserves.

Backup power is available via the national grid under a tri-party Transmission Service Agreement (TSA) with GEGL and GRIDCo. GEGL have the capacity to supply Edikan full load requirement from their gas turbine GP Tarkwa facility and transmit it via GRIDCo network. The on-site Diesel power station provides a second source of backup power.

18.6 Emergency Power

Back-up power is provided by 12 x 400V 1.25MW generators coupled with 0.4/11kV transformers and 4 x 11kV 1.6MW generators.

18.7 Water Supply

Water is sourced from a number of surface water catchments; principally the:

- FTSF
- FTSF underdrainage pond
- "crocodile" pond
- "crusher" pond
- "embankent 8 " pond
- "lilly" pond

Additional raw water can be drawn from AG and/or Fobinso pits if required.

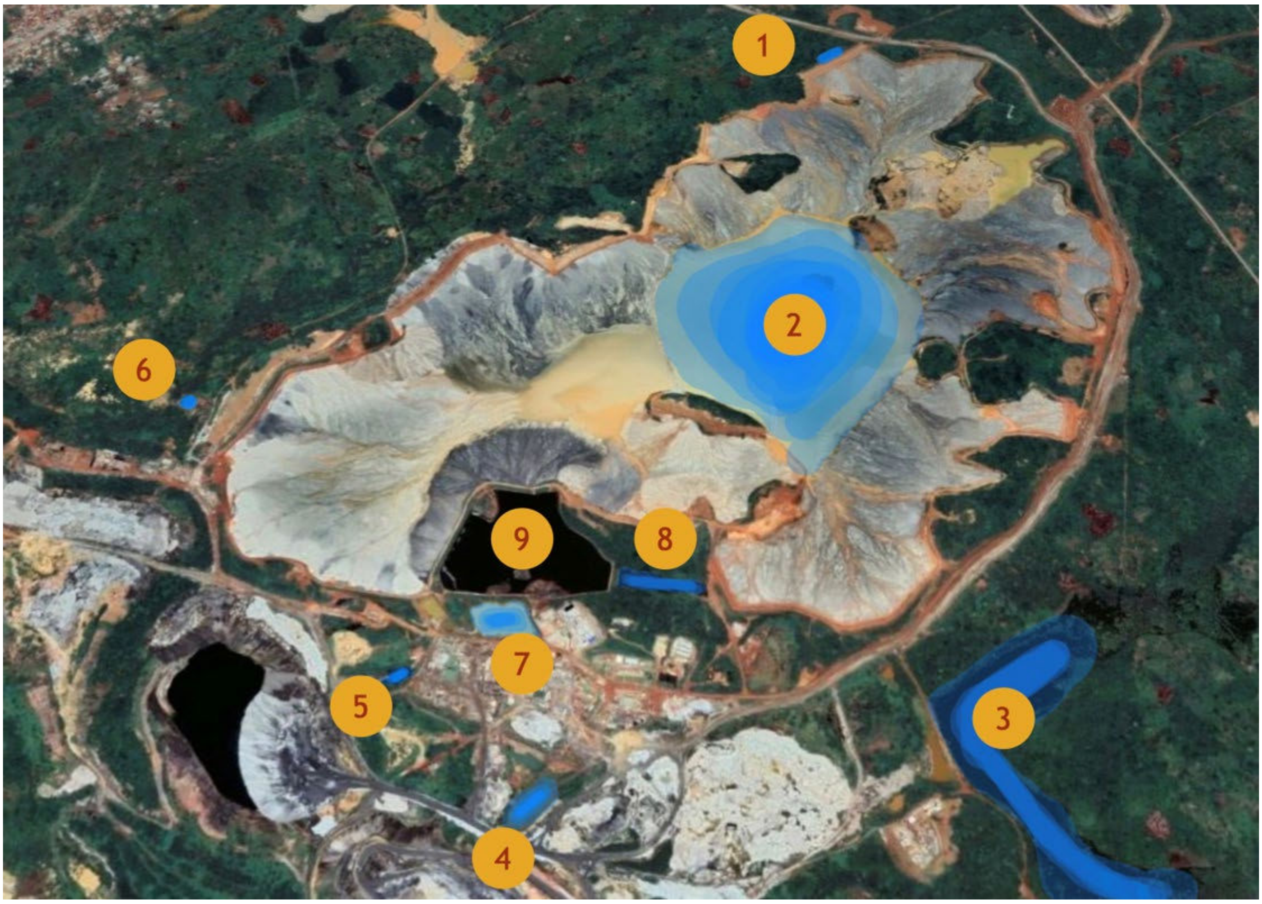

Figure 18-5: Edikan Raw Water Sources

18.8 Tailings Storage Facility

Float tailings from the process operation is discharged from the plant to a valley type tailings storage facility; the Float Tailings Storage Facility (FTSF) located to the east of the process plant. The tailings are discharged at approximately 40% solids and are relatively benign, non-acid forming (NAF).

The FTSF is a valley fill type facility and consists of one main and 17 saddle embankments.

Figure 18-6: FTSF looking from north to south

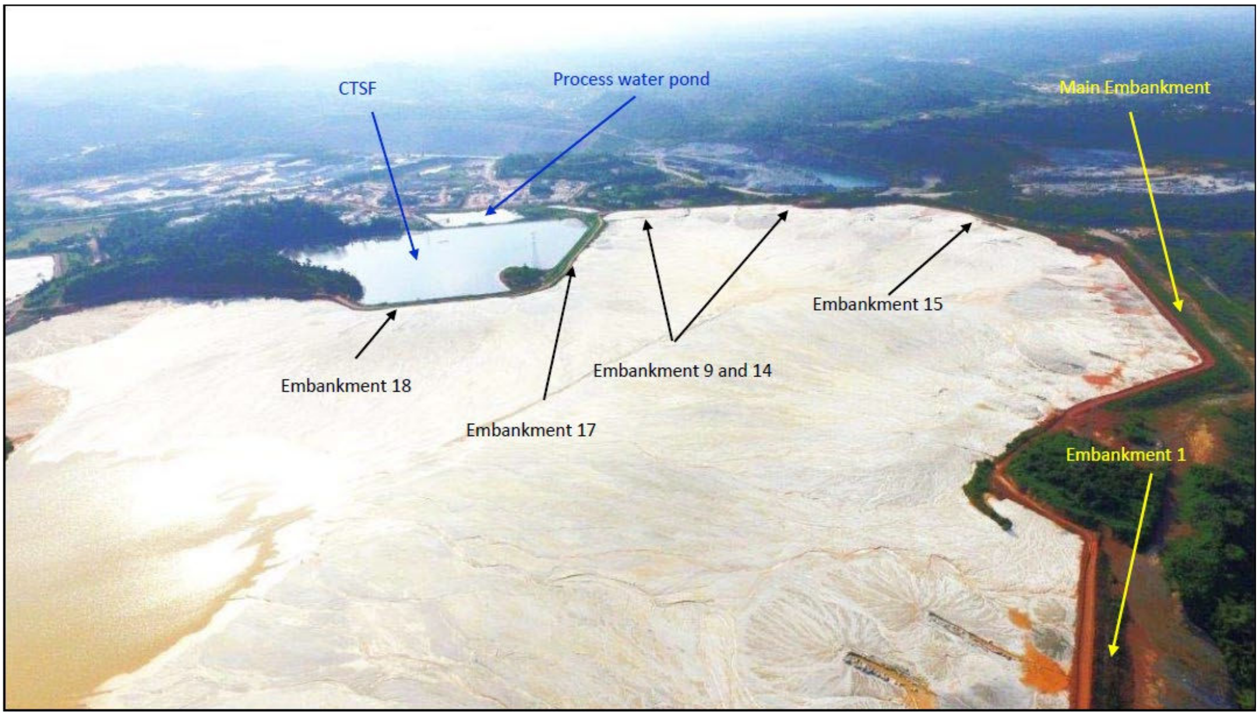

Figure 18-7: FTSF looking east.

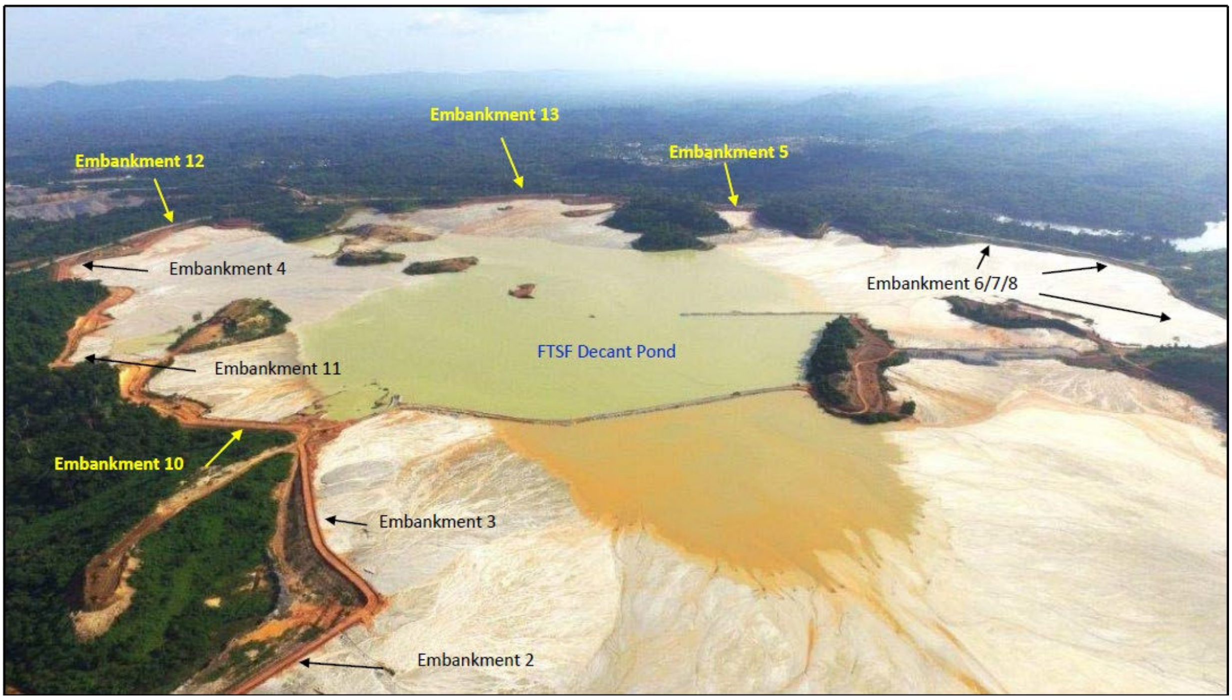

Figure 18-8: FTSF looking south

The main embankment and saddle embankments 1, 2 and 3 are downstream construction, with remining minor embankments being up stream construction.

Tailings from the Carbon in Leach (CIL) plant will be discharged to the Concentrate Tailings Storage Facility (CTSF) at approximately 45% solids. The CTSF is a double HDPE lined facility with underdrainage above the top liner and a leak detection system between the upper and lower liner.

The TSF type and TSF site selected for this project were derived from considerations including tailings geochemistry, a review of possible tailings storage options, topographic and cultural features, and an assessment of the potential sites within the current mining lease boundaries.

The FTSF will require a lift beyond the current permitted maximum embankment height in order to contain the tailings produced in the remining life of mine. A study is in progress to assess designs of raises along the southern embankments to provide the additional storage. Once finalised the relevant designs will be submitted to the Ghanaian regulatory authorities for approval.

18.9 ESS Underground

Surface infrastructure requirements for the ESS underground include:

- Power line from existing 11 kV network at the processing facility.
- Integrated backup power generator to connect to Esuajah South mine 11 kV substation.
- Communications – phone and IT network connection to processing facility.
- Radio repeater and radio system at Esuajah South mine site.
- Potable water for offices and change house for 70 people per day shift and 50 people per night shift. This will be derived from local boreholes and existing water treatment plant.
- Sewerage treatment plant to cater for offices and ablutions.
- Desilting of underground water – minimum of 16 L/second to a maximum of 60L/second.
- Offices for 20 people.
- Change house for 42 people.
- Chop kitchen/dining room to serve 40 people per shift prepared off site and served in the kitchen.
- Fuel farm of 10,000 litres/day capacity plus the standby power requirements. Capacity to allow for three days backup.
- Workshop with two bays for underground vehicle minor servicing.
- Warehouse and workshop store.

The above includes all civil works, water reticulation, high voltage power reticulation and low voltage power reticulation. Allowances for bulk earth works, to provide a level compacted surface, and the bush clearing for the overhead line were included in the overall pre-production capital.

The cost estimate for the underground surface infrastructure was, as far as practicable, based on supplier quotes. Costs were obtained for the primary ventilation fan and the dewatering pumps for the underground.

The infrastructure cost estimate is considered to be at an accuracy of ±15% based on the revised layout with identified scope items. The surface infrastructure identified covers that required for any underground operation. Possible improvements and cost reductions could be forthcoming by a more detailed review of the availability of building and other components from within Ghana.

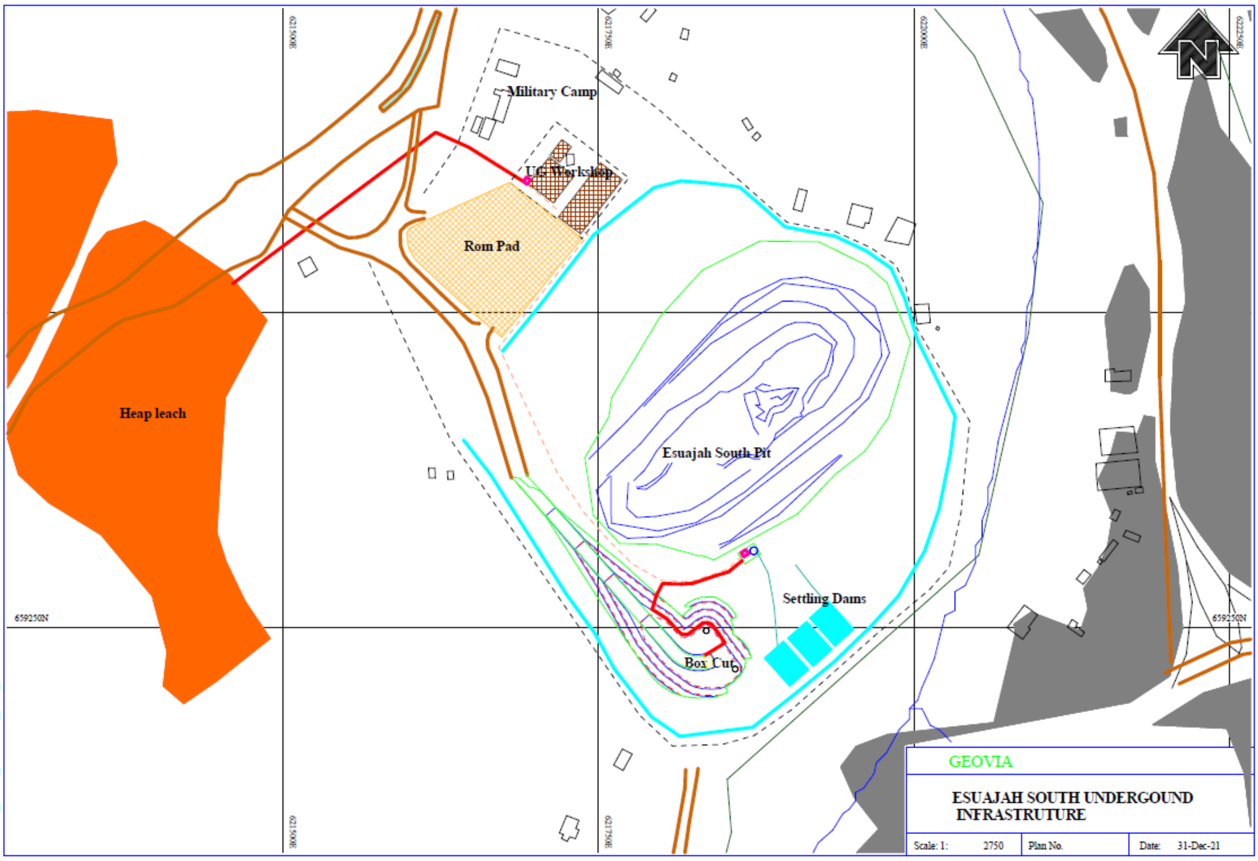

Figure 18-9 Esuajah South U/G Surface Site Layout

19 Marketing Studies and Contracts

19.1 Markets

Ghana allows for direct export of the gold doré to refiners with the proviso that all gold may be purchased by the Bank of Ghana at the standing sale price. All gold has been and shall continue to be sold on the open market after refining.

19.2 Gold Price

A gold price of US$1,300/oz has been assumed for Perseus Mineral Reserves estimates.

19.3 Transport

Gold doré from Edikan is transported by a contracted security company from Edikan site. Ghana has a mature gold mining industry and gold transport is not a significant risk.

19.4 Contracts

Several operational contracts have been executed. There is a mining contract in place with Rocksure International.

Hedging and forward sales agreements are in place with Macquarie Bank and Nedbank.

A refining contract is in place with MKS.

The contracted services are provided on an arms-length basis and the terms of all contracts are considered to be within industry norms.

20 Environmental, Permitting, Social and Community Impact

20.1 Environmental Studies

A number of environmental studies have been undertaken across the Edikan site, with the initial environmental baseline studies being the most comprehensive. The environmental baseline studies were required for the original western side Environmental Impact Statement (EIS) as well as the Eastern Pits Supplementary EIS and also the proposed Esuajah South Underground and included collecting baseline information on:

- Climate
- Air quality and noise
- Flora and fauna
- Surface water and groundwater quality
- Radiation
- Soils and land use
- Socio-Economic factors

Following these initial baseline studies, other environmental studies have been completed during the course of operations as required.

None of the studies completed to date have identified any environmental issues that could impact the mining or processing activities at Edikan.

20.2 Waste Management

PMGL has a Waste Management Plan for the Edikan Gold Mine which identifies the various streams of waste that are likely to be generated at Edikan and specifies the required disposal method for each waste type. Where possible, waste is reused or alternatively recycled. Disposal in landfill is only undertaken if no other options are available. Waste types include general and organic wastes, sewage, medical wastes from the site Clinic, hydrocarbons and other chemicals, scrap metal, used tyres and batteries, waste rock and tailings.

Tailings are deposited in one of two Tailings Storage Facilities (TSF) at Edikan. Tailings containing cyanide from the Carbon in Leach (CIL) process are deposited in a HDPE double- lined facility that has leak detection installed between the two layers. This facility is referred to as the CTSF. Benign tailings from the flotation circuit are deposited in Edikan's clay-lined and compacted facility, which is referred to as the FTSF

20.3 Mine Rehabilitation and Closure

The environmental reclamation cost is estimated at US$16.577M. It is considered that this value is sufficient for all current and historical works. An audit of the cost estimate is currently being undertaken of which the findings will be factored into the final closure plan. Reclamation is undertaken progressively during the operation of the mine.

PMGL is in the process of updating the detailed Decommissioning and Closure Plan following stakeholder consultation. Upon submission of this detailed plan and cost by PMGL, the Ghana EPA will then be in a position to advise of any new bonding requirements. PMGL signed a Reclamation Security Agreement with the EPA and posted a Reclamation Bond in early 2012, for the initial

Environmental Permit period starting 7 June 2010. An additional reclamation bond of US$7.44 was posted with the EPA as part of the grant of the Eastern Pits permit.

Mine closure will include activities such as removal of some structures, land forming waste dumps for aesthetic reasons and to minimise erosion, capping the tailings storage facilities, ripping haul roads and revegetating all affected areas. Initial Public consultation has been undertaken in an effort to understand the expectations of the various stakeholders following mine closure. More engagements will follow as expectations may have changed with time. Environmental monitoring will continue for a set period post-closure to ensure decommissioning initiatives have been effective and there is no ongoing impact on the natural environment.

20.4 Environmental Monitoring

PMGL have implemented a comprehensive environmental monitoring program that meets the requirements of the Ghana EPA and relevant legislation. Elements that are monitored on a regular or even continual basis include climate, surface and ground water quality, air quality, noise, blast air pressure and vibration. Other monitoring that occurs twice per year includes sediment and aquatic ecology monitoring.

20.5 Water Management

Water for use on site is currently obtained from a number of sources, including the mine pits, groundwater bores and the tailings storage facilities. The recycling of water is a priority, in an effort to minimise pumping costs and any potential impact of water extraction on the natural environment.

To accommodate the mining activities on the western side of the project area, the Asuafo Stream has been diverted. In order to minimise the sedimentation of local surface water drainage lines and streams, sediment traps have been established at the base of all waste dumps and topsoil stockpiles have been planted with vetiver grass to prevent erosion.

20.6 Permitting Requirements

20.6.1 Existing Permits

Edikan has an existing EPA Environmental Permit (Certificate Number EPA/EMP/200 dated 14th March 2019 and valid for 3 years) for the Property's current Eastern side. A combined Environmental Management Plan (EMP) 2022-2025 of the Eastern and Western Pits have been submitted to the EPA for the renewal of the certificates as directed by the Agency. EPA is working on the renewal certificate. The renewal of the Environmental Certificate is expected shortly.

20.6.2 ESS Underground

For mining operations to commence at Esuajah South a three-part process is required.

1. An application covering the environmental impact directly associated with the planned Esuajah South planned operation.
2. An application for permission to carry out mining activities. This application requires submission of the feasibility study covering the mining plan, methodology, schedules, all safety aspects and community related matters related to the underground mining activity and surface infrastructure.
3. A water use permit application.

The initial underground development work (Exploration Phase) will be carried out under an exploration licence. Additional special permit from Mincom for the Boxcut excavation needs to be acquired prior to the development due to the location proximity to the Ayanfuri Township. This will allow specific development to be carried out allowing the acquisition of valuable information including rock characteristics, ore body grade and water inflows, among others. The Mining Exploration Licence was approved and extended to December 2021 after which it is potentially renewable on a yearly basis. Full production (Production Phase) will be carried out under a permitted production licence. The timing of the project activities and how it is to fit with the overall LOM schedule for the Edikan Gold Mine will determine when the production licence is required. There are cost implications if the two phases cannot be seamlessly transitioned so planning and scheduling will aim for the Production Phase to ramp up as soon after the Exploration Phase as is practically possible.

20.7 Social Aspects

A number of community committees have been formed during the different stages of the Edikan operations. This includes the Community Consultative Committee (CCC), the Crop Negotiation Committee (CNC) for negotiating the crop compensation rates with PMGL and more recently the Resettlement Consultation and Negotiation Committee (RCNC). The RCNC was tasked with addressing issues and concerns relating to PMGL's requirement to resettle a number of residents within the blast zones of the Fetish, Chirawewa, Bokitsi and Esuajah North pits.

PMGL purchased land from the Ayanfuri Chief for the purpose of building new houses to resettle persons affected by the eastern pits mining activities. Crop compensation was finalised, along with deprivation of land use payments. Affected persons with structures that qualified for resettlement were provided with a new house, whilst cash compensation was provided to those persons whose structure did not qualify. Infrastructure works on the resettlement site were completed following receipt of the eastern pits EPA Environmental Permit.

PMGL has also established the Edikan Trust Fund, which is managed by a Board of Trustees. PMGL contribute to the fund annually, with the Trustees managing the actual projects that mainly relate to education, health and sanitation.

21 Capital and Operating Costs

21.1 Capital Cost Estimate

21.1.1 Summary

The overall future capital cost of the Edikan Gold Mine, inclusive of the Esuajah South Underground Mine is estimated at $91.1 M split (Table 21-1). The costs are based on a combination of first principals estimates and quotes from suppliers/contractors.

Table 21-1: Capital cost summary

Type	Cost Area	Total (US$M)
Development	Esuajah South U/G Mine	37.5
Sustaining	Site	53.6
Total Capital		91.1

21.1.2 Esuajah South Underground

Development capital for the Esuajah South Underground Mine is estimated at $37.5M and consists of infrastructure cost and pre-production development costs.

Infrastructure capital includes all the PMGL's expenditure on items of equipment and associated support costs (labour, consultants etc.) required to build and sustain the underground mining operations. The estimated total infrastructure requirement for the underground project is $11.83M. Of this, $6.12 is incurred before first ore production and is included in development capital, with the remaining $5.71M included in operating costs. The breakdown of the infrastructure capital is shown in Table 21-2 below.

Table 21-2: ESS-UG Infrastructure Capital Costs

Item	Cost (000'US$)
Surface Infrastructure	2,568
Power Supply	1,587
Boxcut Excavation	1,341
Boxcut Steelwork, Filling, Support	1,724
Primary Ventilation Fans, Motors and Excavation	1,472
Project Indirects	883
Truck Stop	500
Dewatering	271
Light Vehicles	420
Mine Planning and Survey Equipment	320
Permits and Studies	148
Pit Backfilling with Mineralised Waste	3508
Mine Rescue Equipment	249
Total	**11,833**

Development capital includes all the costs incurred in the exploration phase of the project. These items are listed in Table 21-3.

Table 21-3: ESS-UG Development Capital Costs

Item	Cost ('000 US$)
Mining Contractor Mobilisation	7,479
Mining Contractor Labour Cost	1,522
Mining Contractor Equipment Cost	1,040
Mining Contractor Mining Cost	3,437
PMGL Labour Cost	1,308
Box-cut Costs	2,941
Other Infrastructure Capital Cost	6,285
Backfill Costs	400
NHIL/GETFL taxes (5%)	1,221
Total	**25,628**

21.1.3 Site Sustaining Capital

The capital cost to sustain operations at the Edikan Gold Mine is estimated at $53.6M. It includes:

- $6.7 M for plant operations and maintenance
- $7.4 M for TSF stage lifts
- $3.6 M for general sustaining
- $33.4 M for closure costs
- $2.6 M allowance for additional TSF stage lift and closure costs associated with the Esuajah South Underground Mine.

21.2 Operating Cost Estimate

The operating cost estimate is summarised in Table 21-4.

Table 21-4: Operating Cost Summary

Cost Area	Unit	Open Cut	Underground
Mine	$/t ore	12.39	43.6
Processing	$/t ore	8.94	9.75
G&A	$/t ore	2.60	3.38

The underground mine operating costs are derived from Feasibility level cost modelling. The overall costs are estimated at $12.39/t ore from the open cut operations over the life of mine and $43.6/t ore for the Esuajah South Underground.

The processing costs are based on:

- Forecast reagent and consumable consumptions
- Current reagent and consumable pricing
- Forecast maintenance costs
- Site power consumption model and forecast power supply cost
- Forecast labour manning schedule and costs
- Check of all costs against historical precedence

The General and Administration (G&A) costs are based on historical actual costs.

21.2.1 Bullion Transport and Refining Costs

Bullion transport and refining costs are estimated at $2.24/oz and reflect current actual costs.

21.2.2 Royalties

The total royalty for Edikan Mineral Reserves is 6.75%. In the most recent ASX release relating to Mineral Reserves (Perseus Mining Limited, 2021b), the royalty rate was stated as 8.25%. The difference between the two rates is a 1.5% royalty to Franco-Nevada which is no longer payable.

For clarity, the Franco-Nevada royalty rate was initially 3.0%, and has reverted to a lower rate of 1.5% based on the discovery of new Mineral Resources on the Ayanfuri and Nanankaw leases. The current royalty paid is 1.5% for Franco-Nevada, which results in a total royalty (incorporating the government royalty and Waratah royalties) of 6.75%. The quotation of the higher 8.25% rate in the ASX release was an overly conservative estimate and no longer reflects the royalty rate incurred for Edikan.

21.2.3 Taxes

The major tax implication for the Edikan Gold Mine is the Ghana corporate income tax of 35%.

22 Economic Analysis

Perseus Mining Limited is a producing issuer under the Canadian Securities Administrators' National Instrument 43-101, and therefore may exclude the information required under Item 22 (of the Instrument) for Technical Reports on properties currently in production unless the technical report includes a material expansion of current production.

The ESS underground, along with Fetish and AF Gap open pits provide continuation of mine production at current levels. In the Qualified Person's opinion, no material expansion of production has been considered as part of this technical report.

An economic analysis was performed in support of estimation of Mineral Reserves; this indicated a positive cash flow using the assumptions and parameters detailed in this Report.

23 Adjacent Properties

There are no known significant occurrences of gold mineralisation on tenements adjacent to those controlled by Perseus. The boundaries of Perseus's tenements do not constrain the Mineral Resources, Mineral Reserves or planned mining operations disclosed in this report.

24 Other Relevant Data and Information

There are no other material data or information on the Edikan Gold Mine that have not been summarised and presented in the Report.

25 Interpretation and Conclusions

25.1 Mineral Resources

25.1.1 Exploration Information and Existing Mineral Resources

The reliability of Mineral Resource estimates at AF Gap, Esuajah South and Fetish deposits has been verified by reconciliation to mine production. At AF Gap and Fetish there are indications that the reliability of estimates may be deteriorating with depth due to the increased spacing between drill intercepts in the lower portions of the deposits. Reconciliations are carried out at each calendar month end and Perseus assesses the requirement for additional resource definition drilling and model updates on an ongoing basis.

After the infill core drilling completed at Esuajah South in 2020, the estimate of mineral resources in the upper part of the deposit is considered robust.

25.1.2 Resource Growth

There is potential to upgrade the confidence of open pit Mineral Resources at Esuajah North, AF Gap and Fetish at depth to permit evaluation of open pit cut-backs at higher gold prices. Perseus assesses opportunities for mine life extensions on an going basis. There are presently no firm work programs or budgets for resource extensions at the three deposits.

For Esuajah South the current mine design for underground sub-level caving places lowermost development at 890 mRL. A draft program of holes was planned to be drilled from 895 mRL in a hanging wall drive that stands off about 30 m from the west granite contact. Drilling would then be sufficient to enable estimation of Indicated resources to about 690 mRL, i.e., 200 m below the draft design lowest extraction horizon. An example cross-section showing proposed drill holes is shown in Figure 25-1. The program would total an estimated 6,650 metres of drilling in 33 holes ranging in length from 70 to 300 metres. Estimated cost is about US$1.25M, excluding the costs of underground development to achieve the required drill platforms. Drilling from the lowermost mine extraction level would have to be completed before stoping reached that level. The lead time between commencement of drilling and the requirement to extend mine development in time to maintain ore production might be problematic. Drilling from higher in the mine would require a greater stand-off distance and longer holes.

Drilling to convert resources at depth could alternatively be undertaken from surface. A program to do so would require about 3,400 metres of RC pre-collars and 13,600 metres of core drilling in 34 holes ranging from 400 to 600 metres depth (assuming 100 metre pre-collars, no wedging of daughter holes). Total cost is estimated at US$2.8M. Achieving accurate placement of drill intercepts when drilling from surface is likely to be problematic and may require navigational drilling.

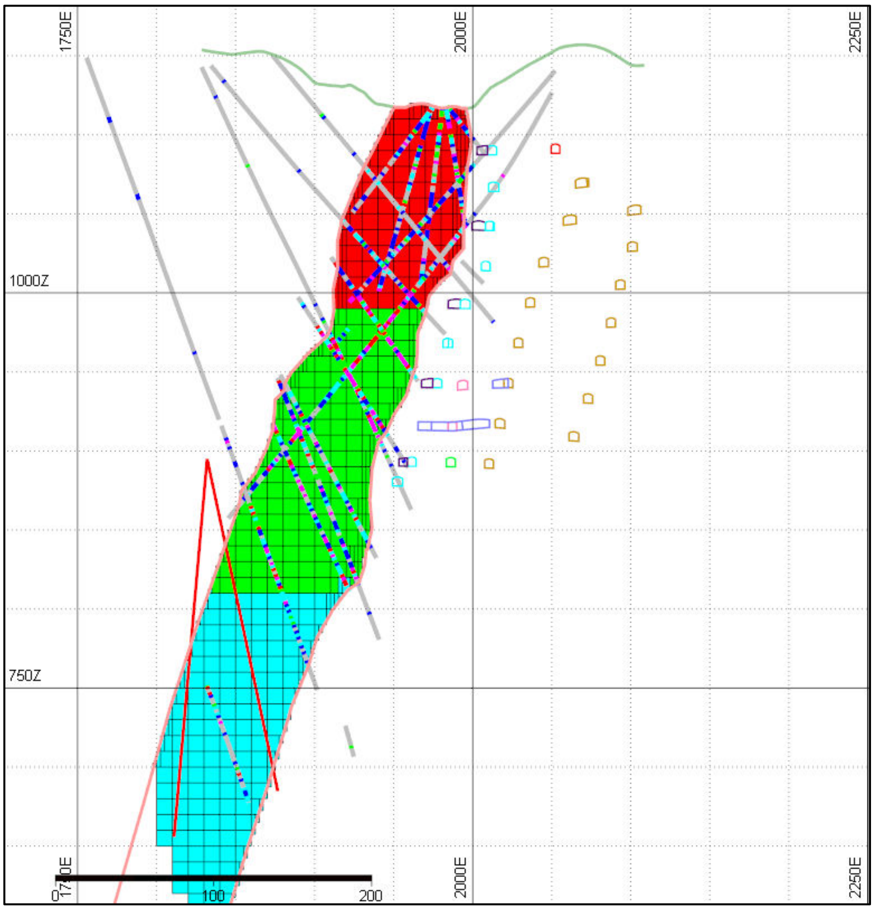

Figure 25-1: Cross section showing proposed underground drilling to convert resource (6220 N)

Nkosuo is a newly discovered deposit that is presently being drilled to evaluate Mineral Resources that may be amenable to open pit mining. Perseus expects to complete a Preliminary Economic Assessment in mid-2022 at an estimated cost of $9.8 million.

25.2 Open Pit Mining

Open pit mining is well understood and managed at Edikan. The Mineral Reserves can be mined with high confidence given the history of safe and effective extraction of such Reserves at Edikan. The principal risks to recovering the Mineral Reserves are reduced gold price and significantly increased operating costs due to, for example, significantly increased energy costs.

The current Edikan Life-of-Mine plan has simultaneous mining activities at AG pit and Fetish pit. The overall strategy is to have ore production from AG pit while Fetish pit is in the waste stripping stage to expose the ore material. When AG pit ore production is diminishing, Fetish pit will be the main ore production source. The existing low grade (LG) stockpile material will be rehandled to complement the ex-pit ore production to achieve a total production rate of 7Mtpa. The expected open pit mine life is four years.

Mining activities at Edikan will utilize conventional open-pit mining methods. Drill and blasting are planned for mainly fresh and transitional material, followed by conventional truck and excavator operations within the pits for the movement of ore and waste material. A fleet of two Komatsu

PC2000 and one PC1250 excavators, complimented with a fleet of twenty-four Komatsu 785 trucks will have sufficient capacity to achieve the mining movement as scheduled in the Section 16.1.5.1.

ROM ore material will be trucked from the pit to the ROM Pad and dumped either onto the ROM Pad to be reclaimed and loaded to the crusher bin or by direct tipping.

25.3 Metallurgy and Mineral Processing

Gold produced for the remaining life of mine will come from existing stockpiles and from cutbacks of existing granite hosted pits. The Edikan plant is best suited to these ore types.

Processing activities at Edikan will utilize the existing facility which has been in operation for the past 11 years. The plant consists of primary crushing, single stage SAG milling with pebble crushing, gravity, flotation, concentrate thickening and regrind and cyanidation.

The maintenance requirements and operating cost structure are well understood.

The Esuajah South deposit is also granite hosted and the metallurgical testwork shows that it should respond favourably when processed through the Edikan plant, with gold recovery similar to Fetish and throughput rates and processing costs between AG and Fetish

25.4 Project Infrastructure

The Esuajah South Underground Mine will require additional infrastructure for its development and operation. These include, power supply and reticulation, telephone/IT/radio communications, offices, chop kitchen/ dining room, fuel farm, workshop, warehouse and water desilting facilities.

Continued operation of the Edikan open cut mine and processing facilities will require additional stage lifts at the TSF.

By August 2022, power supply will transition from Volta River Authority (VRA) supply via Ghana grid Company Limited (GRIDCO) to onsite generation by Genser Energy Ghana Limited (GEGL) using a new build natural gas fired plant that interconnects to the Ghana National Gas Company network. Backup power will be provided by via the national grid VRA/GRIDCO under a tri-party Transmission Service Agreement.

No other significant new infrastructure items are required for continued operations.

25.5 Environment, Social Impact and Permitting

Environmental permitting for Edikan mine is up to date. Ongoing renewal of licenses and agreements with the Ghanaian government and other stakeholders, including local communities is well managed by the site-based community and environmental departments.

25.6 ESS Underground Risk and Opportunity

In addition to the normal risk evaluation routinely conducted by PMGL, an expert review of the risks associated specifically with underground mining was carried out. From this review, the major threats identified include;

- The project is sensitive to gold price.
- Regional water drawdown may affect communities more than estimated.
- Mining contract cost may increase.
- Actual capital and operating costs may be higher in the future.

- Grade may be less than expected.
- Dilution may be higher than expected.
- Approval of sufficient expatriate labour may not be possible.
- Ability of underground mining contractors to find suitably experience personnel.
- Some residents within the mine-take area still need to be relocated.
- Delays in project approval potentially impacts the ability to keep the mill full.
- Additional government taxes and levies may be incurred in the future.

The main opportunities to the project are:

- Infill diamond drilling of lower sections may increase the Mineral Reserve.
- Metallurgical recovery may be better than assumed in the study.
- More favourable geotechnical and geological conditions than currently planned for would reduce underground mining costs.
- Higher gold price could extend the overall mine life.
- Capital and operating costs may be lower than predicted.
- Ability to further rationalise the underground development and reduce capital cost.

A risk review has been integrated into the overall Edikan Site Risk Register.

25.7 ESS Underground Implementation

The overall management of the project will be under PMGL's control by way of a dedicated project management team, who will appoint an Engineering, Procurement and Construction (EPC) Contractor to be responsible for the detailed design and construction of the surface infrastructure and services that are the subject of the Study, and a Mining contractor to carry out the underground mining activities.

It has been assumed that after a decision has been taken to proceed, PMGL will call for surface infrastructure tenders from several experienced and reputable engineering companies for the implementation of the project on an Engineering Procurement and Construction (EPC) basis.

The EPC contractor will execute most of the engineering, design and procurement, within its contract, from its home office and will maintain a site-based construction management team during the construction phase. The site-based team will include engineers and discipline supervisors to suit the activities being undertaken at any given time.

The EPC Contractor will manage all surface infrastructure equipment supply contracts and the site works, which will be undertaken by experienced project contractors/suppliers who have been successful in open tenders for the respective work packages. All contracts, both EPC Infrastructure and the underground mining, will be between PMGL and the project contractor for equipment and material supply and site works contracts.

Tenders will be placed with several reputable underground mining contractors who have the requisite skills and experience to develop and operate the underground mine, to take on the task of completing all underground development and associated underground infrastructure, and commission and conduct the production phase. This work will be overseen by the PMGL management and technical team.

It is estimated that the first development on ore would be mined approximately 6 months after commencing the box-cut development. Production from ring blasting would commence on the successful completion of the Exploration Phase of the project.

Processing of the ore can only commence once approval for full production is received from Mincom and the EPA.

26 Recommendations

26.1 ESS Underground

The study has shown the ESS Underground project is both technically and economically viable.

The mining contractor tenders received as part of the feasibility study required significant expatriate labour. It is unclear if the government will approve the proposed number of expatriates and approval should be sought as soon as practical in order to remove the risk or determine alternatives.

The majority of residents have been relocated from within the Esuajah South mine-take area to the Ayanfuri resettlement site. Agreement with two remaining residents needs to be reached as soon as possible to avoid project delays.

Approvals for the exploration phase of the project are in place, including approval of a 200 m blast buffer zone for the excavation of the box-cut. Approval is now needed for the production phase of the project and it is recommended the approval is secured as soon as practical in order to avoid delays to the project.

26.2 Nkosuo Deposit

Nkosuo is a newly discovered deposit that is presently being drilled to evaluate Mineral Resources that may be amenable to open pit mining. Drilling has outlined a mineralised granite body extending over 600 m strike and up to 200m width, dipping at about 70° to the NW. Typical of Edikan granite-hosted mineralisation, gold is associated with sheeted and stockwork quartz veins in sericite altered granite containing disseminated pyrite and lesser arsenopyrite. The host granite remains open to the southwest and drilling is progressing in that direction.

Nkosuo is located about 7 km from the Edikan processing plant and preliminary indications are that the deposit will be amenable to processing through the existing plant.

Drilling is ongoing at the date of this report and Perseus expects to complete a Preliminary Economic Analysis in mid-2022 at a cost of about $9.8 million. Should that study indicate potential for economic development of the deposit, Perseus will progress a Feasibility Study that will support application for an exploitation licence and development of a satellite open pit mining operation. The additional cost to complete the Feasibility Study is estimated at $2.2 million.

26.3 Mineral Reserves

Under the assumptions in this Report, the Edikan Gold Mine shows a positive cash flow over the life-of-mine and supports the Mineral Reserve estimates. The projected mine plan is achievable under the set of assumptions and parameters used.

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