

# Misima PFS confirms potential for long-life, low-cost gold mine with 1.35Moz Reserve

**Forecast gold production of ~130kozpa at AISC A\$1,159/oz with compelling project economics, long life, low capital intensity and outstanding growth potential**

## **CAUTIONARY STATEMENT**

*As the Pre-Feasibility Study (PFS) for the Company's Misima Gold Project (Project) utilises a portion of Inferred Resources, the ASX Listing Rules require a cautionary statement be included in this announcement.*

*This announcement refers to a Probable Ore Reserve based on a mine plan excluding Inferred Resources and a Production Target based on a mine plan including Inferred Resources.*

*The PFS referred to in this announcement is based upon a Production Target derived from the JORC Code 2012 Compliant Mineral Resource Estimate inclusive of the Probable Ore Reserve referred to in this announcement. The Company advises that the Probable Ore Reserve provides 54% of the total milled tonnage and 57% of the total contained gold metal, the Indicated Resource outside the Ore Reserve provides a further 7% of the total milled tonnage and 7% of the total contained gold metal. The remaining tonnage (39%) and contained ounces (36%) is comprised of Inferred Resources. There is a low level of geological confidence associated with Inferred Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production targets reported in this announcement will be realised.*

*The Company confirms that the use of Inferred Resources is not a determining factor of the Project's viability. The Company notes that the Project forecasts a positive financial performance when incorporating Ore Reserve ounces only and is therefore satisfied that the use of Inferred Resources in Production Target reporting and forecast financial information is not the determining factor in overall Project viability and that it is reasonable to report the PFS including the Inferred Resources.*

*The Ore Reserves and Mineral Resource Estimate underpinning the PFS have been prepared by Competent Persons with Competent Persons' Statements attached.*

*The Company has concluded that it has a reasonable basis for providing the forward-looking statements included in this announcement. The detailed reasons for this conclusion are outlined throughout this announcement. These include assumptions about availability of funding. While the Company considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the study will be achieved. To achieve the potential mine development outcomes indicated in the study, additional funding will be required. Investors should note that there is no certainty that the Company will be able to raise funding when needed. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the PFS.*



ASX: KSN  
Shares on Issue: 231M  
Market Cap: A\$59M  
Cash: A\$6.8M (30 Sept 2020)

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*Forecast gold production of ~130kozpa at AISC A\$1,159/oz with compelling project economics, long life, low capital intensity and outstanding growth potential*

## A significant, long-life Asia-Pacific gold operation:

- 130,000ozpa average annual gold production over a 17-year mine life.
- 5.5Mtpa mining and processing operation on a brownfields site with extensive mining history.
- Conventional CIL plant fed by the main Umuna Open Pit and Ewatinona Starter Pit.
- Low capital intensity with A\$283m CAPEX including A\$37m contingency.

## Compelling project economics:

- Life-of-mine (LOM) average AISC of A\$1,159/oz.
- LOM revenue of A\$4.9 billion.
- LOM free cash-flow of A\$1.5 billion.
- Pre-tax Net Present Value (NPV<sub>8%</sub>) of A\$822m and 33% IRR at US\$1,600/oz gold price.
- Pre-tax Net Present Value (NPV<sub>8%</sub>) of A\$1.28b and 48% IRR at spot US\$1,900/oz gold price.
- Payback period of 4.7 years at US\$1,600/oz gold price, reduced to 2.75 years at US\$1,900/oz.

## Large high-quality Mineral Resource and Ore Reserves:

- 1.35Moz Ore Reserve for a 10-year mine life based on Reserve ounces only.
- 12.5% increase in global Mineral Resource from 3.2Moz to 3.6Moz Au.
- Robust economics based on Reserve ounces only – pre-tax NPV<sub>8%</sub> of A\$481m, 30% IRR and 5.4-year payback

## Significant upside to be unlocked as development studies advance:

- Significant project upside to be delivered through drilling campaigns currently underway to identify additional near-surface ounces for early years of ore production
- Work programs now being planned for next phase of studies



Kingston Resources Limited (ASX: **KSN**) (**Kingston** or **the Company**) is pleased to advise that it has taken an important step towards its objective of becoming a significant new low-cost, mid-tier gold producer in the Asia-Pacific region with the completion of a positive Pre-Feasibility Study (**PFS**) for its flagship 100%-owned **Misima Gold Project** in Papua New Guinea.

The PFS confirms the potential to develop a technically robust, large-scale, long-life, low-cost operation delivering gold production of 130,000oz per annum at forecast life-of-mine (LOM) all-in sustaining costs (AISC) of A\$1,159/oz over a forecast 17-year mine life.

The PFS is based on the redevelopment of the brownfields site of the former Misima gold mine, which was operated previously as a successful 5.5Mtpa Carbon-in-Leach (CIL) open pit operation by Placer Pacific, producing 230kozpa over a 15-year production history.

Kingston plans to leverage off this strong production history and construct a new 5.5Mtpa CIL treatment facility and modern infrastructure on the footprint of the historic mine, establishing a new standalone, long-life gold mining and processing operation underpinned by two major ore sources – a cut-back of the existing Umuna open pit and an expansion of the existing small pit at Ewatinona in the Quartz Mountain area.

Together with the PFS, Kingston is pleased to report a maiden JORC Probable Ore Reserve of **48.3Mt @ 0.9g/t for 1.35Moz**, which underpins the large scale, long-life Misima Gold Project, together with a further 12.5% increase in the global Resource to **144Mt at 0.78g/t for 3.6Moz**. The Ore Reserve is based on a standalone mine plan and financial model excluding Inferred Resources. The PFS is based on a Production Target mine plan and financial model including Inferred Resources which demonstrates the potential for the project to grow beyond the Ore Reserve if further work can upgrade confidence in the Inferred Resources to at least Indicated status.

The scale and quality of the Mineral Resource and Ore Reserve, together with the brownfields nature of the Misima Project, the extensive mining and processing history, the relative softness of the ore and simplicity of the process flowsheet all give Kingston a high degree of confidence in the technical and commercial viability of the Project as the foundation for a long-term Asia-Pacific gold operation.



Figure 1: Misima Gold Project site layout



**Kingston Resources Managing Director, Andrew Corbett said:** “We are extremely excited to be able to report such strong results from the Pre-Feasibility Study, together with an impressive maiden 1.35Moz Ore Reserve and a further increase in our global Mineral Resource to 3.6Moz. This is a significant milestone for all stakeholders in the Misima Gold Project, and represents a meaningful step towards our goal of becoming a substantial new mid-tier Asia-Pacific gold producer.

“The PFS confirms a robust, large-scale, long-life, low cost operation delivering annual average production of 130,000 ounces at an extremely attractive average all-in sustaining cost of below A\$1,200/oz. The contained gold metal in the mine plan comprises 64 per cent Ore Reserves and Indicated Resources, with the balance of 36 per cent derived from Inferred Resources.

“We also have confidence in our ability to convert these Inferred ounces to the Indicated category as drilling continues in parallel with the next stage of Feasibility work. Importantly, there was a high conversion of historic Resources to Reserves at Misima, which bodes well for the future performance of the operation.

“Other key takeaways for investors include the relatively low capital intensity for a gold project of this scale and mine life, with forecast capital expenditure of A\$283 million. The compelling economic parameters speak for themselves, with life-of-mine revenue of almost A\$5 billion, free cash-flow of A\$1.5 billion, a pre-tax NPV of A\$822 million using an 8% real discount rate and conservative A\$1,600/oz gold price, and an IRR of 33%. These numbers jump to an NPV of A\$1.28 billion and an IRR of 48% at the current spot gold price of US\$1,900/oz.

“These are outstanding results that highlight Misima as one of the best undeveloped projects in the Asia-Pacific region. It is also a platform from which we will continue to unlock further value through the targeted drilling campaigns currently underway at Misima. We are now planning a number of additional work programs which will feed into the DFS, which is anticipated to commence during Q2 2021.”

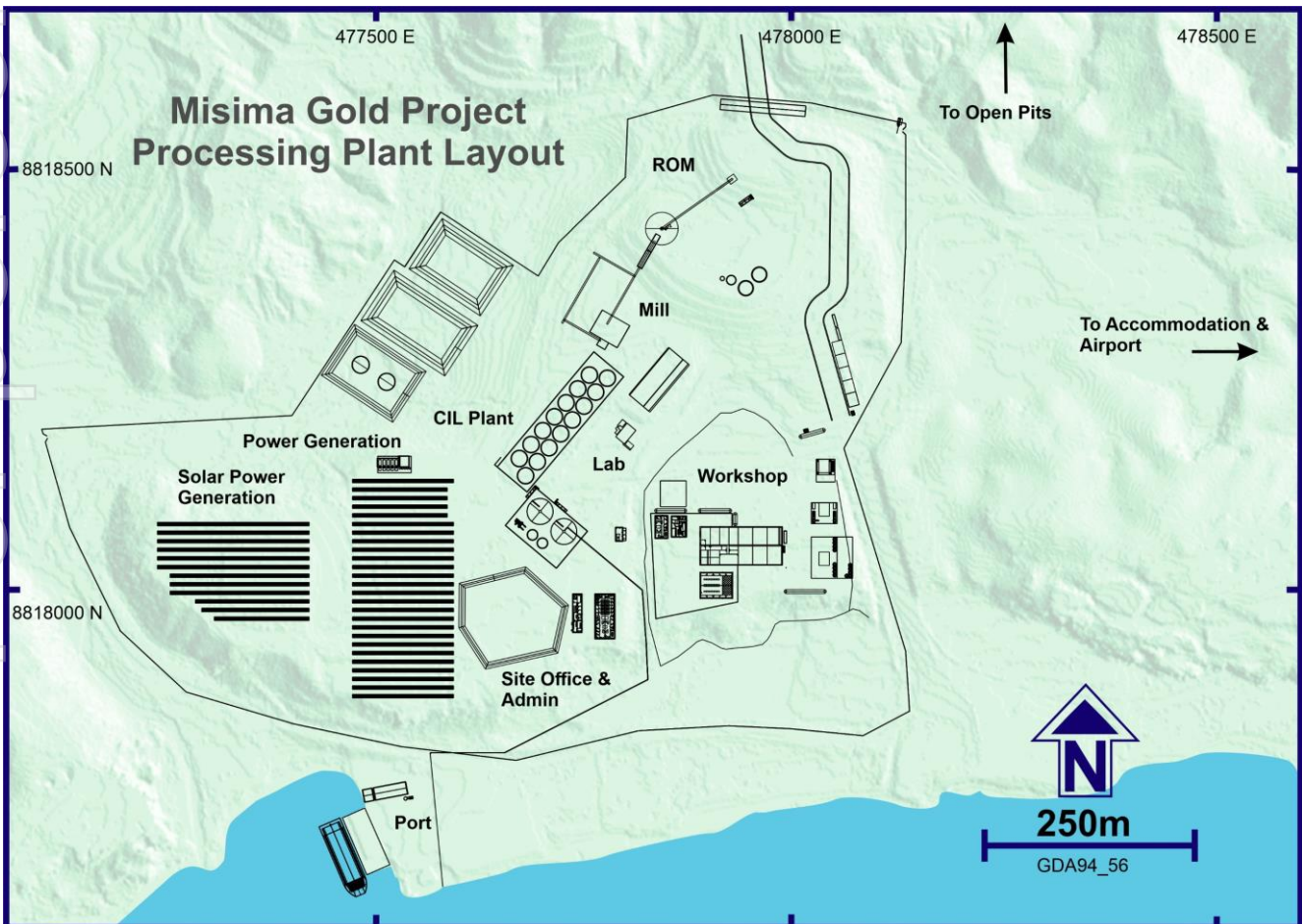


Figure 2: Misima Gold Project plant layout

## MISIMA GOLD PROJECT – PRE-FEASIBILITY STUDY RESULTS

Mineral Resource	Mt	Au g/t	Au Moz
Indicated	68	0.80	1.8
Inferred	76	0.76	1.9
<b>Total Resource</b>	<b>144</b>	<b>0.78</b>	<b>3.6</b>
<b>Ore Reserve</b>			
Probable	<b>48.3</b>	<b>0.87</b>	<b>1.35</b>

### PFS Production Target Summary & Economics

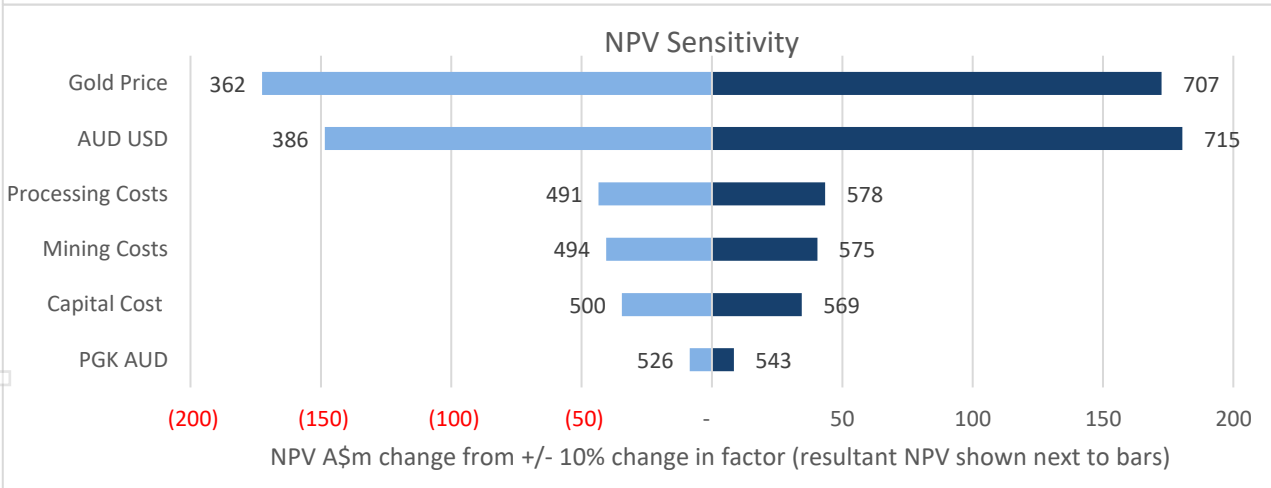
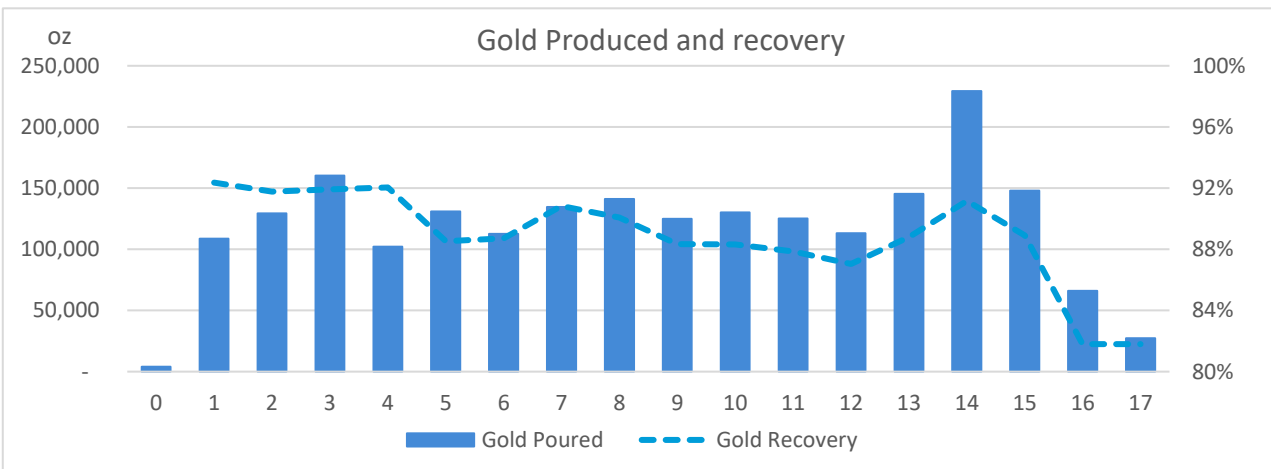
LOM	Years	17	
LOM Gold production	oz	2,133,157	
LOM Avg gold production	oz	129,282	
Annual mill throughput	Mt	5.5	
Capital Expenditure	A\$m	283	
LOM AISC	A\$/oz	1,159	
LOM avg recovery	%	89.4%	
LOM strip ratio	waste:ore	5.1	
LOM strip ratio (excluding backfill removal)	waste:ore	3.7	
Gold Price		<b>US\$1600/oz</b>	<b>Spot (US\$1900)</b>
Exchange Rate	AUD	A\$0.70	A\$0.70
LOM Revenue (Gold @ US\$1600/AUD0.70)	A\$m	5,081	5,996
LOM Free Cash Flow	A\$m	1,466	2,094
NPV <sup>(8% real)</sup> pre-tax	A\$m	822	1,279
NPV <sup>(8% real)</sup> post-tax	A\$m	535	857
IRR pre-tax	%	33%	48%
IRR post-tax	%	26%	37%
Payback	years	4.7	2.8

### Capital Costs

5.5Mtpa Processing Plant	A\$m	99.0
Other infrastructure	A\$m	61.5
Mine development	A\$m	17.2
Capitalised pre-strip	A\$m	32.5
Owners costs	A\$m	35.7
Contingency	A\$m	37.2
<b>Total Pre-Production Capital Expenditure</b>	<b>A\$m</b>	<b>283</b>
LOM Sustaining Capital Expenditure	A\$m	135

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LOM Operating Cost Summary			
		A\$/tonne	A\$/oz
Mining		10.42	440
Processing		13.23	558
SG&A		3.20	135
Royalties		1.40	59
Sustaining Capex		1.50	63
Silver by-product credit		(2.28)	(96)
<b>AISC</b>		<b>27.47</b>	<b>1,159</b>



		USD/Oz Au					
NPV		1,500	1,600	1,700	1,800	1,900	2,000
AUD : USD	0.60	680	806	931	1,057	1,182	1,307
	0.65	544	660	776	891	1,007	1,123
	0.70	427	535	642	750	857	965
	0.75	325	426	526	627	727	828
	0.80	236	331	425	519	614	708
	0.85	157	246	335	424	513	602
	0.90	85	171	256	340	424	508

Figure 3: PFS Production Target Summary and Economics and Net Present Value sensitivities

Ore Reserve Case Summary & Economics			
LOM	Years	10	
LOM Gold production	oz	1,246,312	
LOM Avg gold production	oz	130,050	
Annual mill throughput	Mt	5.5	
Capital Expenditure	A\$m	280	
LOM AISC	A\$/oz	1,247	
LOM avg recovery	%	89.0%	
LOM strip ratio	waste:ore	6.1	
LOM strip ratio (excluding backfill removal)	waste:ore	4.6	
Gold Price		<b>US\$1600/oz</b>	<b>Spot (US\$1900)</b>
Exchange Rate	AUD	A\$0.70	A\$0.70
LOM Revenue (Gold @ US\$1600/AUD0.70)	A\$m	2,937	3,471
LOM Free Cash Flow	A\$m	700	1,068
NPV (8% real) pre-tax	A\$m	481	809
NPV (8% real) post-tax	A\$m	308	541
IRR pre-tax	%	30%	45%
IRR post-tax	%	24%	35%
Payback	years	5.4	3.5

### Misima: Low-Cost Advantage to Repeat

Historically, Misima was a very low-cost operation. Under Placer, Misima delivered LOM average EBIT margins of 37% despite the weak prevailing gold price in its years of operation from 1989 to 2004<sup>1</sup>. The PFS has further reinforced the low-cost nature of mining and processing at Misima, delivering LOM AISC of A\$1,159/oz.

There are a number of significant advantages of the Misima orebody and operation that have resulted in the low-cost outcome, which include:

- Coarse grind - P80 passing at 250 micron;
- Low bond work index (BWi) of 7 in oxide ore, 11 in fresh ore;
- Low power consumption processing – 16MW total generation capacity for a 5.5Mtpa plant;
- Low powder factor – 0.11 – 0.15kg/t;
- Low deleterious elements;
- Long and well understood history of successful mining and processing; and
- Low cost operating environment in PNG.

### Further opportunities – Exploration strategy

Kingston's recent drilling was focused on delivering to its strategy of identifying near-surface ounces to deliver ore feed for the early years of operation into the Misima mine plan while access to the main Umuna orebody was re-established via a pit cut-back.

This led to the successful identification of Ewatinona as a 200koz starter pit for inclusion in the PFS.

<sup>1</sup> Placer Annual Reports 1989 to 2004, Placer Archive

Kingston has now identified a number of further target areas to continue to deliver on this strategy:

- **Kulumalia** – Targeting conversion of near-surface ounces from Inferred to Indicated and potential Reserve status. Currently drilling in this area;
- **Umuna East** – Further drilling at Umuna East will target the expansion and upgrade of the Inferred Resource in this area. As with Kulumalia, Umuna East is a possible target for adding higher grade feed to early years production;
- **Kobel/Maika** – These are historical Placer starter pits located between Umuna and Ewatinona that have had little follow up exploration. Following the successful brownfield program at Ewatinona that resulted in its inclusion as a starter pit in the PFS, Kingston now intends to replicate this strategy at Kobel and Maika. Desktop work is underway assessing existing data ahead of developing a drill program at these targets; and
- **Abi** – Kingston will follow up on the Abi discovery hole, Abi's proximity to Ewatinona and the proposed processing plant location make it an ideal, high grade, near surface exploration target.

### Social Licence

Kingston is fortunate to have constructive and active relationships in place with the Misima communities. It is committed to local training and employment as reflected in its current employment statistics. It anticipates being able to replicate Placer's high utilisation of Misimans in the future project workforce, while also providing home-based opportunities for the existing Misimans that work FIFO throughout PNG.

The Company is also committed to local business development and working with communities to ensure that the Project provides benefits beyond direct employment. Kingston also anticipates working with Misiman communities to establish businesses that ensure the local population can continue to benefit post mine-closure.

### Next Steps

- Drilling activity currently underway at Misima, is, as outlined above, focused on identification of further near surface, higher grade ounces for early years mill feed. First results from this program are expected to be reported in Q1 2021.
- Existing environmental baseline work will now start to expand to incorporate further elements for input into the environmental approvals process.
- Metallurgical and geotechnical test work programs required to confirm and expand data for input into the Definitive Feasibility Study (DFS) are now underway or due to commence shortly.
- Kingston expects to commence the DFS by mid-2021.

This release has been authorised by the Kingston Resources Limited Board. For all enquiries please contact Managing Director, Andrew Corbett, on +61 2 8021 7492.



**KSN**

**KINGSTON  
RESOURCES  
LIMITED**

**Misima Gold Project  
Prefeasibility Study**

**Executive Summary**

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## 1 Executive Summary

Kingston Resources Limited (ASX: KSN) (“Kingston” or “the Company”) is pleased to report the results from its Preliminary Feasibility Study (PFS) for the Misima Gold Project. The PFS confirms a robust, large scale, long life, low cost operation delivering annual average production of 130,000 ounces at an average all-in sustaining cost of below A\$1200/oz.

### Background

This Preliminary Feasibility Study (PFS)<sup>1</sup> has been prepared by Kingston Resources Limited on behalf of Gallipoli Exploration (PNG) Limited (“Gallipoli Exploration”), a subsidiary of Kingston, for the proposed Misima Gold Project (“the Project”).

The Project is located on Misima Island, approximately 600km east of Port Moresby in Milne Bay Province, Papua New Guinea (PNG).

Alluvial gold was first discovered on Misima Island in 1888, mining commenced that year and continued for the next 100 years under various forms. Major operations were then commenced by Placer (PNG) Pty Ltd in 1989 and continued until 2004, producing approximately 4million ounces (Moz) of gold over a 15-year mine life. Kingston is proposing to recommence mining at the Misima Gold Project in the previously mined open pits and potentially develop new deposits identified through recent exploration activities as part of the Project.

Kingston Resources Limited owns a 100% share of the Misima Gold Project, subject to the successful completion of the agreed transaction to acquire its joint venture partner Pan Pacific Copper Co. Ltd’s 19% interest in Gallipoli Exploration<sup>2</sup>.

The proposed Project is situated within the granted exploration licence, EL1747, which covers the eastern portion of Misima Island.

### Basis of the Preliminary Feasibility Study

In May 2018, Kingston commenced a diamond drilling program to grow and increase confidence in its Misima Gold Project JORC 2012 Mineral Resource Estimate (MRE). To date, Kingston has completed 87 diamond drill holes on the Misima Gold Project. This drilling has delivered a 29% increase in total gold ounces and a 74% increase in total silver ounces.

An initial JORC 2012 MRE upgrade was reported to the ASX on the 21 May 2020 delivering a 15% increase in total gold ounces and a 30% in total silver ounces to 106Mt @ 0.93 g/t Au and 5.4 g/t Ag for 3.2Moz Au and 18.2Moz Ag. A subsequent JORC 2012 MRE upgrade has been completed alongside the PFS and released to the ASX on 24 November 2020. This reported a new Mineral Resource Estimate of 144Mt @ 0.78g/t Au and 5.2 g/t Ag for 3.6Moz Au and 24.2Moz Ag, delivering a further 13% increase in total gold ounces and 33% increase in total silver ounces. This MRE was used as the basis for completion of the Ore Reserves and the PFS Production Target.

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<sup>1</sup> This PFS has been prepared with an accuracy of +/-30% and the findings, estimates and forecast should be considered in this context. The PFS has been completed in compliance with Clause 39 of the JORC Code (2012 Edition). Project approval and development is subject to market conditions, project financing, Board approval and regulatory conditions.

<sup>2</sup> ASX Announcement released 24 June 2020

The preparation of the PFS was completed by Kingston with work undertaken by the following Kingston employees and external consultants:

- Study management: Duane Maxwell of Maxwell Energy and Resources, Chartered Mechanical Engineer, Bachelor of Mechanical Engineering, engaged to manage the PFS on behalf of Kingston Resources
- Mineral Resources: Stuart Hayward, Bachelor of Applied Science (Geology), of Kingston Resources with the assistance of Chris De-Vitry of MHGEO and partial peer review by Mark Berry of Derisk Geomining Consultants
- Ore Reserves, pit optimisation and mine planning: John Wyche, Bachelor of Mining Engineering, of Australian Mine Design and Development Pty Ltd (AMDAD)
- Geotechnical engineering: Dr Felicia Weir, Principle Engineering Geologist, of Pell Sullivan and Meynink (PSM)
- Metallurgy and process engineering: Guy Butcher, independent consulting metallurgist
- Engineering, processing and infrastructure: Mincore were appointed as the mineral processing engineers to develop the plant and infrastructure engineering and estimating for the project
- Environmental and social: Coffey appointed for environmental input into the PFS and lead consultant on the Environmental Impact Statement (EIS), Daniel Moriarty is the Principal Environmental and Social Consultant
- Financial modelling: Duncan Freeman of Freeman Financial Modelling
- Geology: In house capability within Kingston Resources lead by Stuart Hayward, Chief Geologist

The aim of the PFS is to ensure technical, engineering, risk, operational readiness and financial aspects of the Project are sufficiently advanced for an investment decision to progress to a Definitive Feasibility Study and Project approvals. The PFS is supported by an engineering cost study, which targets a +/-30% accuracy cost estimate.

### **Location**

The Misima Gold Project is located near the town of Bwagaoia, on the eastern portion of Misima Island, Milne Bay Province, Papua New Guinea (see Figure 1). The island forms part of the Louisiade Archipelago and lies 200km east of the PNG mainland and 600km east of Port Moresby.

Figure 1: Misima Island Location



Access to the island for personnel is by air only. Commercial flights operate between Bwagaioa and Port Moresby via Alotau three times weekly for the 1.5 hour journey. A limited number of regularly scheduled commercial services are available between Bwagaioa and Alotau.

Misima Island forms part of the Louisiade Archipelago which is a continuation of the Papuan Fold Belt of the Papuan Peninsula offshore eastwards through the Papuan Plateau. The oldest rocks on Misima are Cretaceous to Paleogene metamorphic rocks, which can be subdivided into the western Awaibi Association and the younger overthrust eastern Sisa Association that is host to the gold and copper mineralisation. The two associations are separated by an original thrust fault with later extensional activation.

The Misima Gold Project comprises two main deposits, Umuna and Ewatinona, and multiple reconnaissance exploration targets along and adjacent to the 10km strike length of the Umuna Fault Corridor that hosts the historical Umuna deposit, and Quartz Mountain area that hosts the Ewatinona deposit

Climatically, Misima is categorised as “lowland humid”, typical of wet coastal and lowland areas. The island is located within the tropical cyclone belt and has experienced over 10 cyclones in the last 100 years. Daily mean temperatures on the coast are around 30° to 32°C, with minima around 23°C and maxima around 37.5°C. During previous operations, rainfall was consistently recorded on a daily basis at the mine site, the data indicate that the mean annual rainfall ranges from 2655mm on the coast (plant site) to 3141mm at higher elevations inland (Umuna pit).



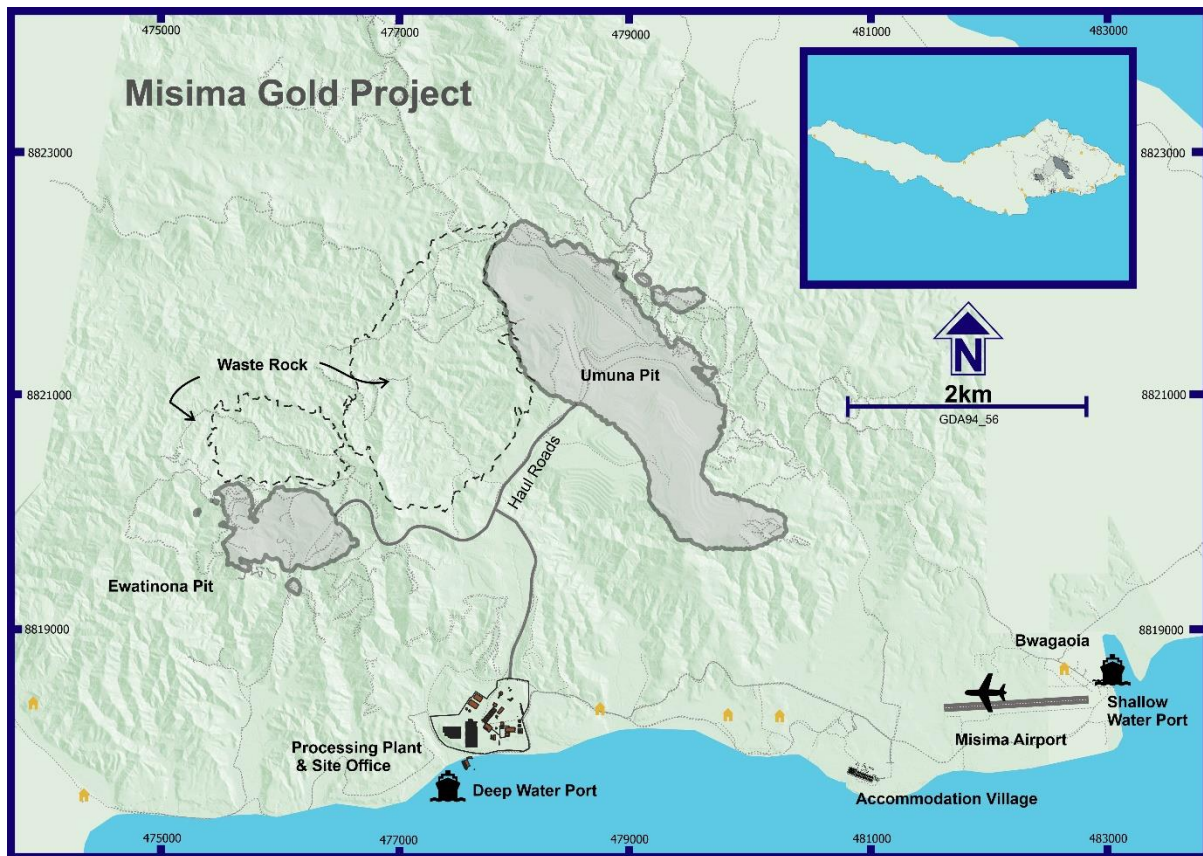
## Tenure

The Misima Gold Project is located within EL1747 which was first granted on 21 March 2011 under and the PNG Mining Act 1992 to Gallipoli Exploration (PNG) Limited. EL1747 encompasses the eastern half of Misima Island

EL1747 comprises of 53 sub blocks which consist a total area of 178.03 km<sup>2</sup>, exploration licences in PNG are subject to a two-year renewal program and require biannual and annual reporting. Gallipoli Exploration (PNG) Limited is a 100% owned subsidiary of Kingston Resources Limited (subject to completion of the transaction noted above with its joint venture partner). Gallipoli Exploration is held within WCB Pacific Pty Ltd a wholly owned subsidiary of Kingston Resources Limited.

Before mining can commence the Project will require an approved Environment Permit (EP) and Mining Lease (ML).

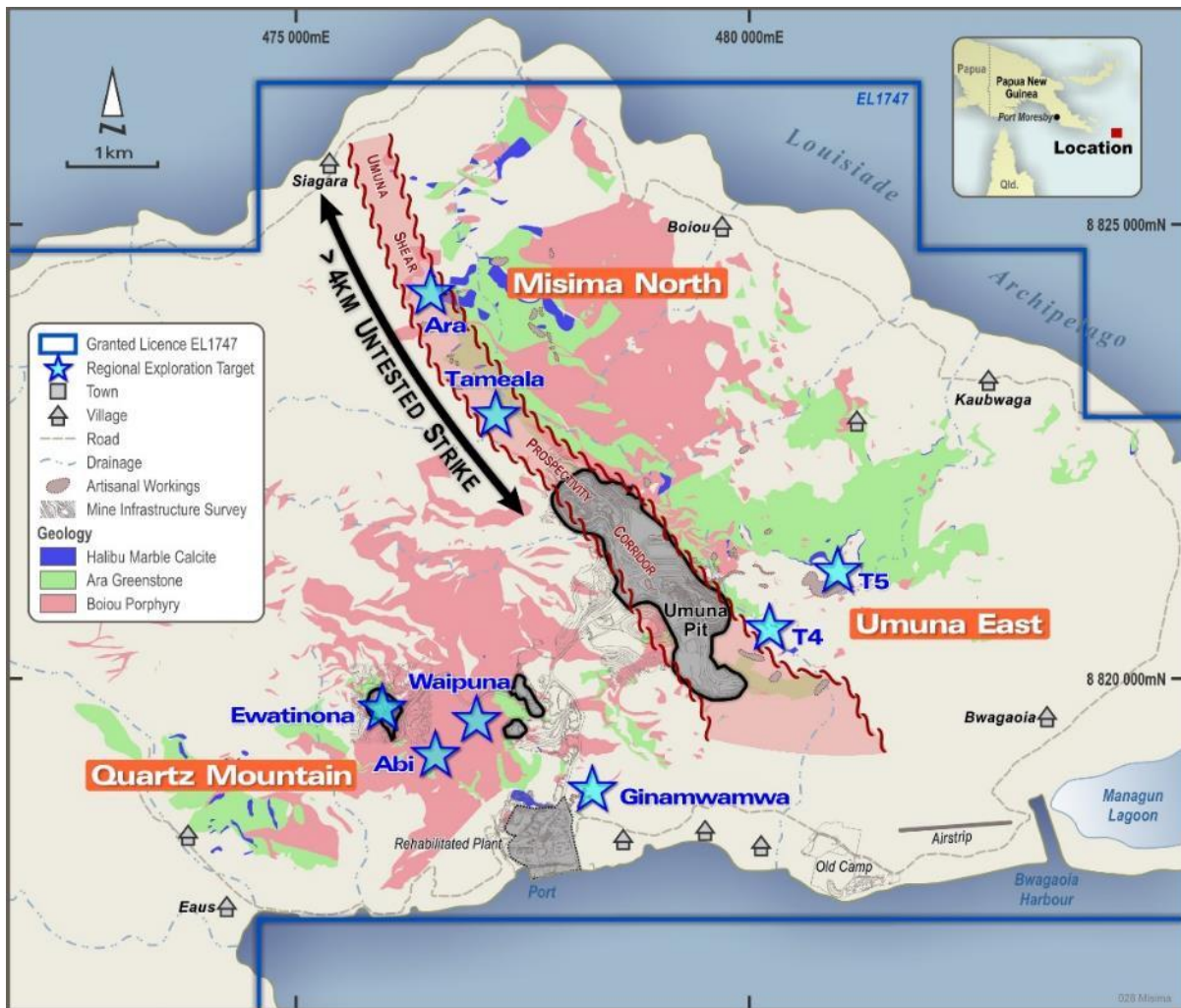
Figure 2: Misima Gold Project site layout



## 1.1 Geology

The Misima Gold Project comprises two main deposits at Umuna and Ewatinona, and multiple reconnaissance exploration targets along and adjacent to the 10km strike length of the Umuna Fault Corridor that hosts the historical Umuna deposit, and Quartz Mountain area that hosts the Ewatinona deposit which can be seen in Figure 3.

Figure 3: Misima Geology overview with historical open pits



The Umuna deposit is described as a continuous (fault) zone of gold and silver mineralisation that has previously been mined as a single open pit over a strike length in excess of 3 km. Geochemical anomalism extends a further 2 km to the north of the mined area and a further 1 km to the south of the mined area. The Umuna zone is interpreted to represent a major fault zone within which mineralisation is typically developed in areas of increased fracture density and shearing.

Mineralisation is developed as disseminations, stockworks, fracture vein networks, breccias, skarns and replacements. The Umuna Fault Zone is a complex fault array, with an overall steep west dip, which exhibits steepening and dip reversals in the southern part of the structure. Intersections of fracture sets have created strongly jointed and brecciated wedges which are important loci of mineralisation (Figure 4). Mineralization occurs in all rock types including the Ara greenstone, the overlying Umuna schist, the Halibu Limestone, and various suites of complex intrusives.

Figure 4: Umuna Cross section looking to the NW

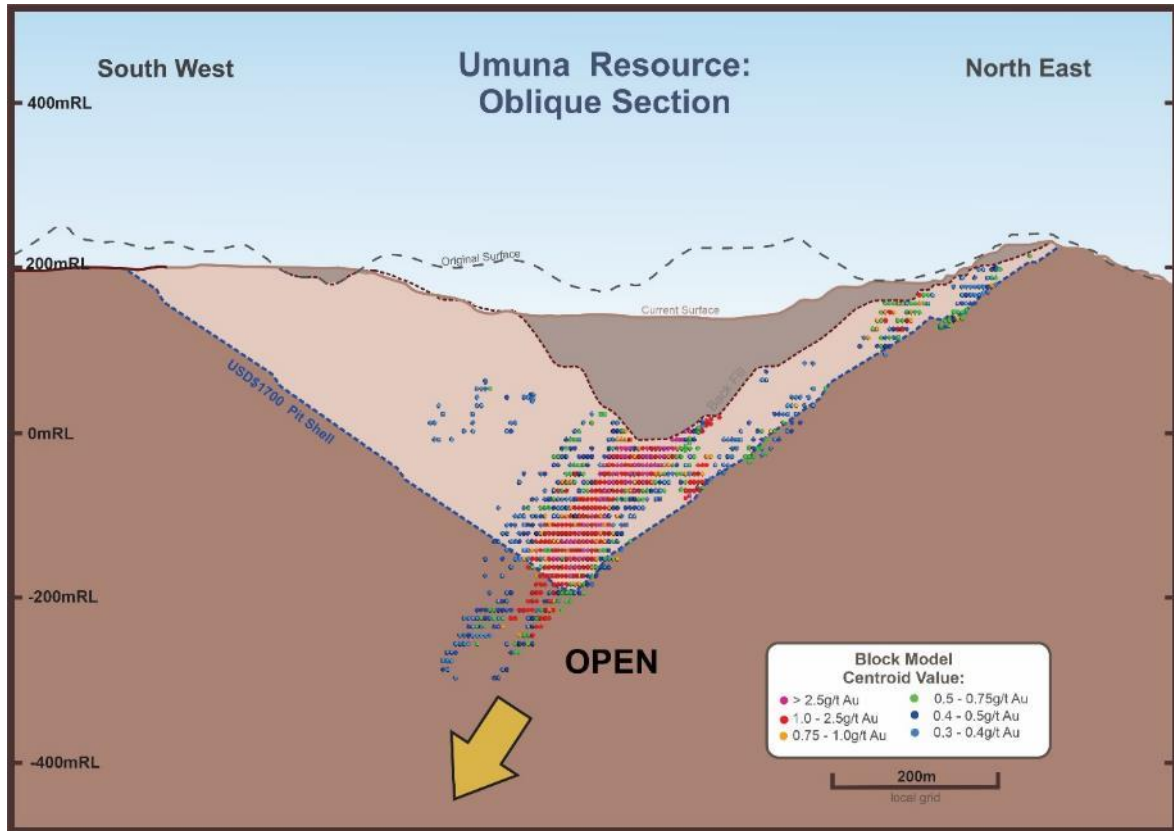
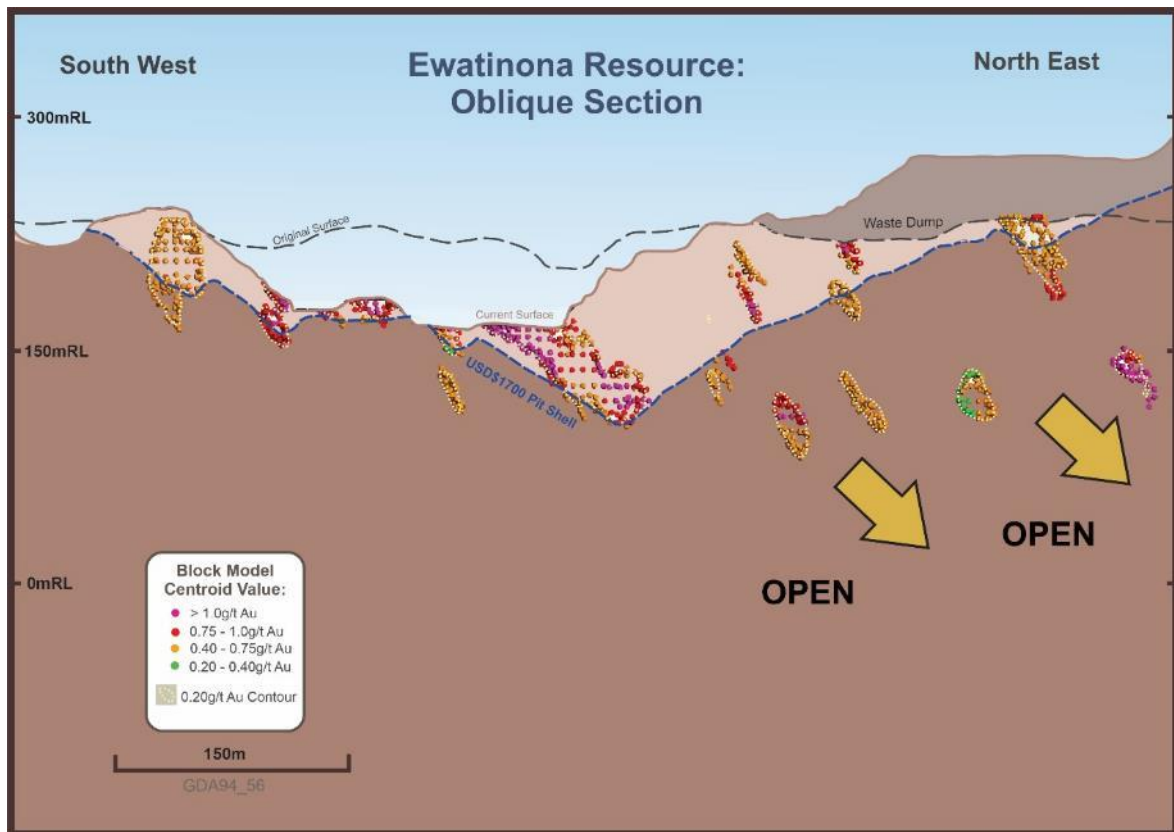


Figure 5: Ewatinona cross section looking to the South West





The Ewatinona deposit is dominated by brecciated porphyry units which are cut by faults trending in three major directions (northwest, west northwest and southwest) with steep north and north east dips (Figure 5). Mineralised structures can range from crackle brecciated porphyry with base metal sulphide and quartz-carbonate-base metal sulphide infill, to more well-defined fault breccia with stockwork veining and crackle brecciation haloes.

Orientations of mineralised structures are reflected by and inferred from 3D implicit modelling of grade distribution in grade control data and supported by pit mapping. Combining all data sets with orientated drill core data for mineralised veins and breccias defines the predominant structural trends in the deposit and the foundation for the resource model. The current interpretation is that Ewatinona mineralisation is open along strike and at depth.

## **1.2 Mineral Resource and Ore Reserves**

The JORC 2012 Mineral Resource for the Misima Gold Project incorporating the results of recent drilling programs and updated gold price assumptions for the Umuna and Ewatinona Deposits totals 144Mt @ 0.78g/t Au and 5.2g/t Ag for 3.6Moz Au and 24.2Moz Ag, comprising 50% (1.8Moz gold) classified as Indicated (Table 1).

Individual Mineral Resources were calculated for Umuna (May 2020) and Ewatinona (July 2020) and updated in November 2020, with results combined to calculate a total resource for Misima for inclusion in pre-feasibility studies taking into consideration environmental, social, geographical constraints, assumptions, and modifying factors specific to each deposit and common across the project.

Geology models for both deposits have been evaluated using Whittle pit shells at gold price points of USD\$1400, USD\$1500, USD\$1600, USD\$1700 and USD\$1800, and USD\$20 for silver. Pit shells were generated based on input mining parameters that are unchanged from previous Resource estimations and are based on historical operational design factors and performance. Cut-off grades at each deposit have been assessed by Kingston as meeting the test of having reasonable prospects of eventual economic extraction.

### **1.2.1 Umuna Mineral Resource**

Umuna Mineral Resources are estimated as 132.7Mt @ 0.78g/t Au and 5.3g/t Ag, for 3.3Moz gold and 22.6Moz silver. The November 2020 Umuna Resource update was based on an unchanged existing geology/block model that has been re-evaluated based on gold and silver price assumptions consistent with the May 2020 update, as inputs to development of Whittle pit shells for reporting. Resource classifications were not changed or modified from previous Resource estimations. Mineral Resources at Umuna are reported as material classified as Indicated and Inferred at a  $\geq 0.3\text{g/t Au}$  cut-off within a USD\$1700 pit shell, and material at  $\geq 0.8\text{g/t Au}$  cut-off immediately down dip and along strike that does not extend significant distances (50-75m) from the pit shell. The increase in contained gold and silver was due to the combined effect of cut-off grade and increased volume of material reporting within the USD\$1700 pit shell. Classification of the Umuna Mineral Resource has not changed between the Skandus 2017b (JORC 2012) Resource and the Kingston November 2020 update.

### **1.2.2 Cooktown Mineral Resource**

The Cooktown Stockpile Inferred Mineral Resources are estimated as 3.8Mt @ 0.65g/t Au & 7.0g/t Ag for 0.1Moz Au and 0.9Moz Ag.



### 1.2.3 Ewatinona Mineral Resource

Ewatinona Mineral Resources are estimated as 7.9Mt @ 0.81g/t Au and 2.8g/t Ag, for 0.2Moz Au and 0.7Moz Ag. The Ewatinona Mineral Resource has been significantly updated and improved using all available historical and recently acquired geological data to develop a well-supported three-dimensional geological, structural and mineralisation model. Orientated drill core has provided corroborating data, supporting interpretation of 3D structure trends. Geological data was used to model a structural trend in Leapfrog Geo as the foundation for a 0.2 ppm Au grade shell defining the estimation domain and constraining a kriged estimate of Au and Ag. Cu, Pb and Zn has been estimated by inverse distance squared interpolation within the 0.2 ppm Au grade shell. Mineral Resources at Ewatinona are reported as material classified as Indicated and Inferred  $\geq$  0.3g/t Au cut-off within a USD\$1700 pit shell.

Classification has been revised in the November 2020 Ewatinona model to reflect a combination of confidence in the underpinning geology model and 3D spatial models of mineralisation/ structures, supported and corroborated by drilling spacing, and estimation metrics such as slope of regression for Au and Ag, Kriging variance, and distance to nearest samples informing a block estimate. 54% of material in the USD\$1700 pit shell immediately below the centre of the historical open pit and within the volume tested by new drilling completed by Kingston, is classified as Indicated. The remainder of material is classified as Inferred. This represents a material change from the Skandus 2017b (JORC 2012) Resource, and May 2020 Resource (Kingston).

Table 1: Mineral Resources

Deposit	Oxide	Classification	Cutoff g/t Au	Tonnes Mt	Gold g/t Au	Silver g/t Ag	Au Moz	Ag Moz	
Umuna within USD\$1700 Pit Shell	Oxide	Indicated	0.3	6.3	0.63	10.7	0.1	2.2	
		Inferred	0.3	12.1	0.67	10.4	0.3	4.1	
	Primary	Indicated	0.3	57.7	0.82	3.9	1.5	7.2	
		Inferred	0.3	53.2	0.75	5.1	1.3	8.7	
	Sub-total	Indicated			64.0	0.80	4.6	1.6	9.4
		Inferred			65.3	0.74	6.1	1.6	12.7
Total		Combined		129.3	0.77	5.3	3.2	22.2	
Umuna Extension outside USD\$1700 Pit Shell	Primary	Inferred	0.8	3.4	1.35	4.1	0.1	0.4	
Umuna Total Resource	Indicated			64.0	0.80	4.5	1.6	9.4	
	Inferred			68.7	0.77	5.9	1.7	13.2	
<b>Umuna TOTAL</b>				<b>132.7</b>	<b>0.78</b>	<b>5.3</b>	<b>3.3</b>	<b>22.6</b>	
Cooktown Stockpile	Ox-Tran-Prim	Inferred	0.5	3.8	0.65	7.0	0.1	0.9	
<b>Cooktown Stockpile</b>				<b>3.8</b>	<b>0.65</b>	<b>7.0</b>	<b>0.1</b>	<b>0.9</b>	
Ewatinona within USD\$1700 Pit Shell	Oxide	Indicated	0.3	0.4	0.68	3.2	0.01	0.04	
		Inferred	0.3	1.8	0.69	3.4	0.04	0.20	
	Primary	Indicated	0.3	3.9	0.89	2.5	0.11	0.31	
		Inferred	0.3	1.8	0.77	2.8	0.04	0.16	
	Sub-total	Indicated			4.3	0.87	2.6	0.12	0.4
		Inferred			3.6	0.73	3.1	0.08	0.4
<b>Ewatinona TOTAL</b>				<b>7.9</b>	<b>0.81</b>	<b>2.8</b>	<b>0.2</b>	<b>0.7</b>	
MISIMA	Indicated			68.3	0.80	4.5	1.8	9.8	
	Inferred			76.1	0.76	5.9	1.9	14.4	
<b>MISIMA TOTAL</b>				<b>144</b>	<b>0.78</b>	<b>5.2</b>	<b>3.6</b>	<b>24.2</b>	

Notes:

1. JORC Code 2012 definitions are used for the Mineral Resources
2. Rounding may cause apparent computational errors
3. Reported at USD1,700/oz gold price
4. Cut-off grades are based on mining studies completed as part of 2020 Misima PFS
5. Pit shells derived based on historical and PFS mining parameters

#### 1.2.4 Ore Reserves

The PFS work included an initial Ore Reserve as defined by the JORC Code 2012. Sections of Umuna and Ewatinona have only been estimated to Inferred confidence which cannot be included in an Ore Reserve. There are sufficient Indicated Resources to support an Ore Reserve, however this significantly understates the potential of the full Resource which includes the Inferred material. The Mineral Resource Estimate does not currently include any Measured Resources so there are no Proved Ore Reserves. The Ore Reserve estimate does not include the Inferred-category Cooktown Stockpile.

Table 2: Ore Reserves

Item	Mt	Au g/t	Ag g/t	Au koz	Ag koz
<b>Ewatinona</b>					
Probable	3.5	0.84	2.6	95	291
<b>Ewatinona Total</b>	<b>3.5</b>	<b>0.84</b>	<b>2.6</b>	<b>95</b>	<b>291</b>
<b>Umuna</b>					
Probable	44.8	0.87	4.3	1,251	6,191
<b>Umuna Total</b>	<b>44.8</b>	<b>0.87</b>	<b>4.3</b>	<b>1,251</b>	<b>6,191</b>
Probable	48.3	0.87	4.2	1,347	6,482
<b>Misima Total</b>	<b>48.3</b>	<b>0.87</b>	<b>4.2</b>	<b>1,347</b>	<b>6,482</b>

Notes:

1. The tonnes and grades shown in the totals rows are stated to a number of significant figures reflecting the confidence of the estimate. The table may nevertheless show apparent inconsistencies between the sum of components and the corresponding rounded totals.
2. Ore Reserves are based on a gold price of US\$1500/oz and cut-off grades of 0.28 g/t Au for oxide ore and 0.33 g/t Au for fresh ore.
3. Au koz refers to contained gold in the mined ore before process recoveries are applied.
4. For clarification, there are no Proved Ore Reserves included in the Total Ore Reserve
5. The Ore Reserves do not include the Cooktown low grade stockpile left from the previous open cut mine.

### 1.3 Mining

This study is based on the currently defined Resources at Umuna and Ewatinona and leverages historical Placer operational information but includes improvements for current technology where applicable.

Key elements of the proposed mine plan include:

- Owner mining using large hydraulic excavators and rigid body trucks
- Drilling and blasting of all material other than backfill, although production records from the Placer mine show very low powder factors
- Haulage of ore down to the plant site on the south side of the island
- Haulage of waste rock to out of pit waste dumps to be formed adjacent to the pits, and
- A mining sequence designed to access shallow mill feed while the Umuna pushback and backfill are being mined.

In order to assess the full project and provide guidance for the future Feasibility Study (FS) two mine plans were developed in parallel:

- Ore Reserve Case based on Indicated Resources only, and
- Production Target Case based on Indicated and Inferred Resources.

Both cases are designed to feed the same 5.5 Mtpa Carbon-In-Leach (CIL) gold processing plant.

Mine planning followed the normal sequence of pit optimisation, design and scheduling. Most of the inputs for initial definition of the pits are drawn from either the former mining operation or updated estimates from KSN and other consultants contributing to the PFS.

### 1.3.1 Pit Design Criteria

Practical pit designs with berms and ramps were prepared for the Ore Reserves and Production Target cases. In both cases Ewatinona was designed as a single stage pit and Umuna was designed as three staged pits (Umuna North, Umuna South, Kulumalia) along strike which were then joined to form the final pit.

The pit design incorporated a CAT 789D as the design haul vehicle and allowed for a 10-12.5% grading on hauls. A geotechnical review indicated that a bench width of 20m between berms and a height of 10m between benches will be possible. Calculated slope angles were based on analysis of existing geotechnical information, for slopes above the line of oxidation 34° was used and 38° below the line of oxidation.

### 1.3.2 Ore Reserve Pit Designs

The Ore Reserves pit designs are shown in Figure 6 and Figure 7. They are based on the Ore Reserves pit optimisation runs which only consider Indicated resources.

The Ewatinona pit design is based on an Ore Reserves optimised pit shell (no. 35). It is a single stage pit. The ramp exit is on the north east corner to join the existing haul road from the former Placer operation. Approximately 8% of the waste tonnes in Ewatinona Pit are backfill dumped in the northern side of the old pit.

The Umuna North pit requires a high section of the eastern wall to be cut back. This area cannot be easily accessed across the old pit void so the ramp access is designed to exit the pit at the north end of the old pit void. Waste rock can be dumped onto the northern end of the new Umuna waste rock dump close to the pit exit. Ore can be hauled along the western side of the old pit to join the existing haul road mid way down the west side of the pit. In order to minimise the waste rock volume in the east wall pushback the upper portion of the ramp is designed as a one way road. Part of the backfill placed in the central area of the old pit rills into the Umuna North pit. This makes up 12% of the waste tonnes.

The Umuna South pit mines the area known as Tonowak. Ramp access to the main haul road is off the western wall through the Cooktown Stockpile area. Approximately 32% of the waste tonnes in Umuna South pit are backfill.

Kulumalia forms a separate pit south of the main Umuna Pit in the Ore Reserves case. Access will be over the northern wall and along a haul road to be formed to reach the main haul road through the Cooktown Stockpile area.

The Umuna Final Pit joins the North and South Pits and goes much deeper in the middle area. The North and South pits are mined to the full width of the final pit so all of the wall pushbacks and deepening for the final pit are in the middle area. The North Pit is designed to mine all of the upper level pushback of the eastern wall so all the waste and ore from the Final Pit can be hauled across the central backfill area to the pit exit on the western side. The Final Pit ramp is then formed as a switchback in the western wall as the pit is deepened.



Figure 6: Early Stage Pits – Reserve Case

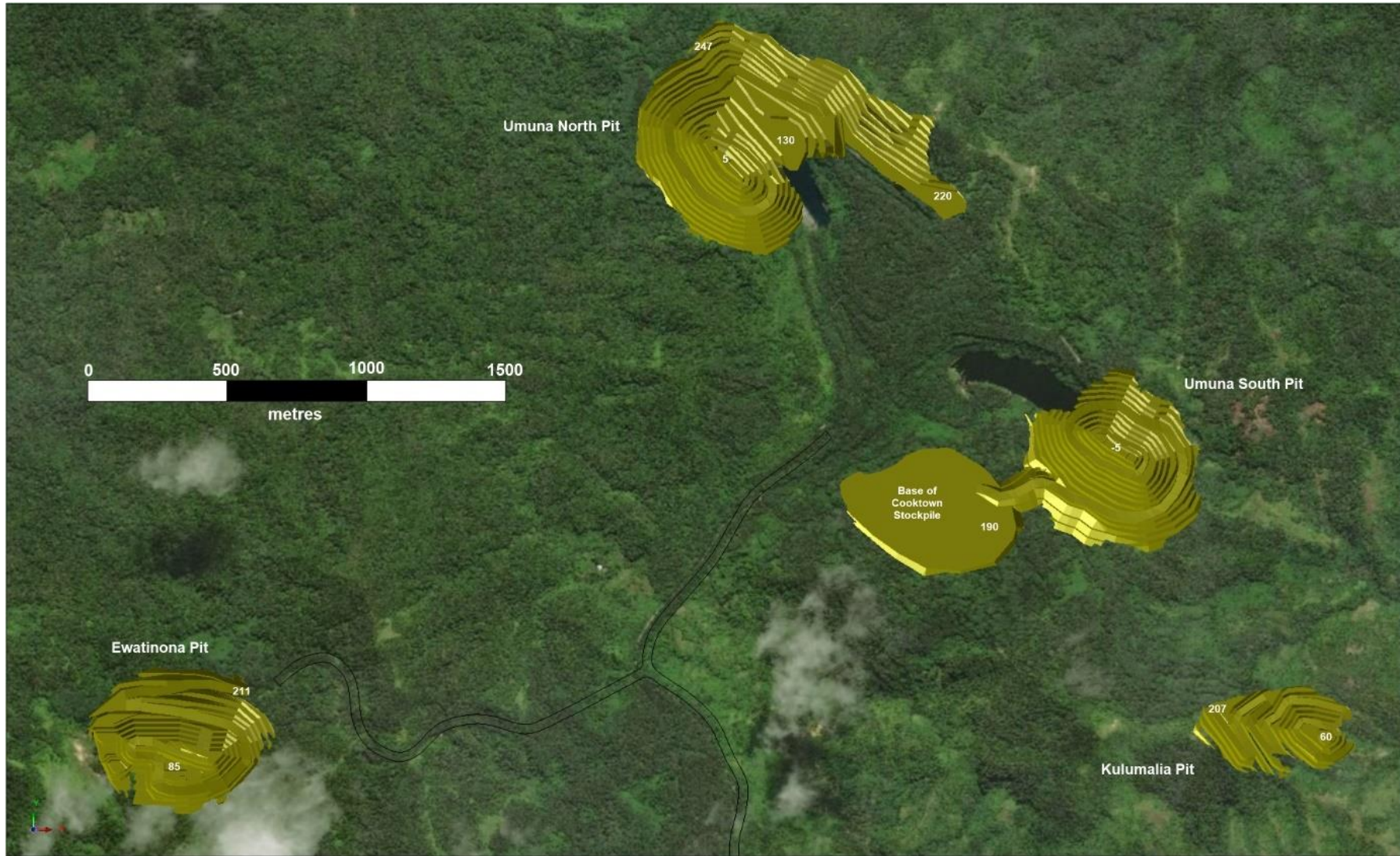
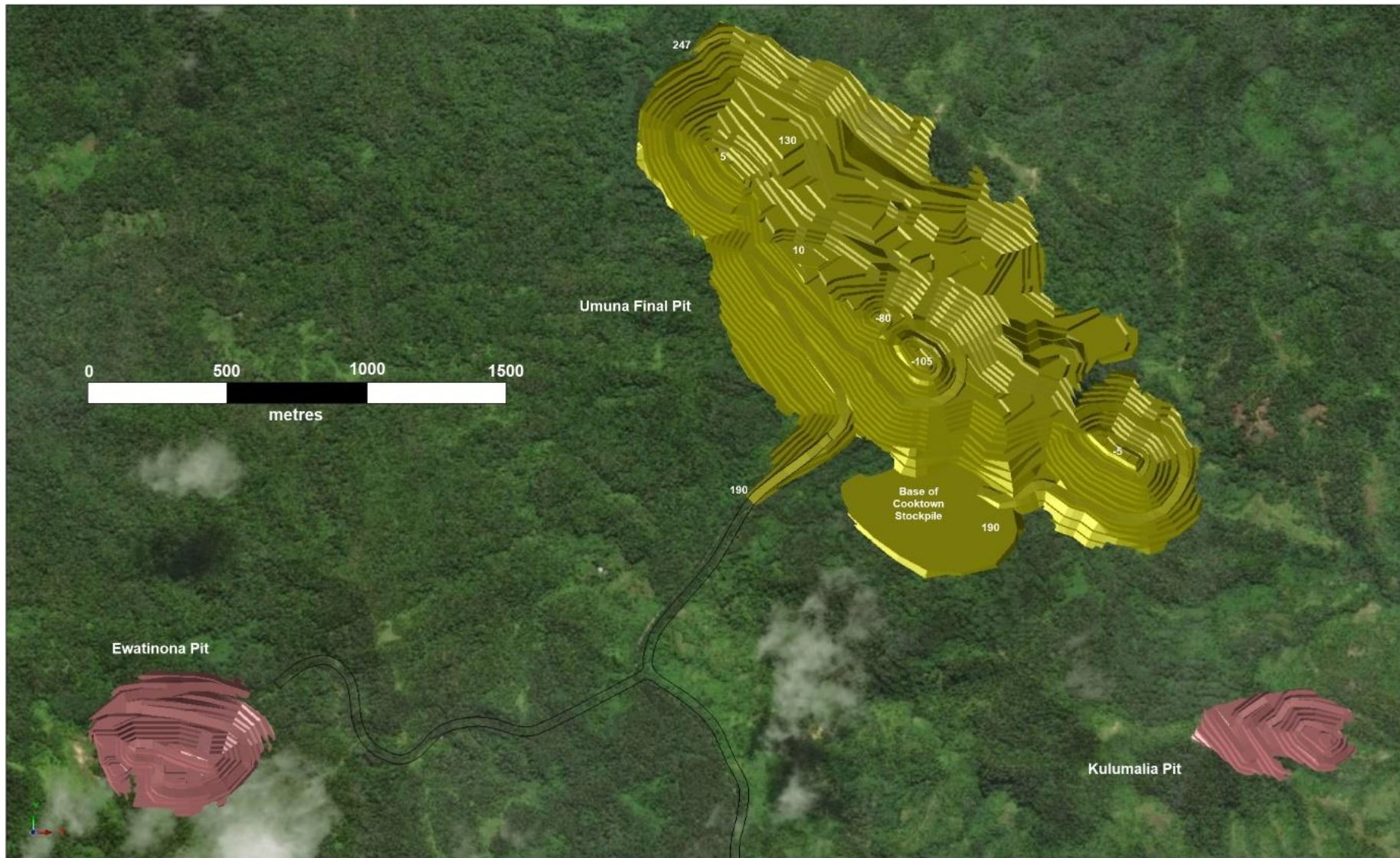




Figure 7: Final Pits – Reserve Case





### 1.3.3 Production Target Pit Designs

The Production Target pit designs are shown in Figure 8 and Figure 9. They are based on the Production Target pit optimisation runs which consider Indicated and Inferred resources.

The Ewatinona Pit and Umuna North, South and Kulumalia Pits are similar to the Ore Reserve staged pits but with the addition of Inferred Resources they are larger and deeper. The Ewatinona Pit is based on Production Target optimised pit shell 34. The Umuna Pits are based on Production Target optimised pit shell 16.

Ramp accesses to all Production Target pit stages are in similar positions to the Ore Reserves pit stages.

As with the Ore Reserves pits, water in the current Umuna pit void will have to be pumped out early in the mine life to allow mining of the Umuna North and Umuna South Pits.

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Figure 8: Early Stage Pits - Production Target Case

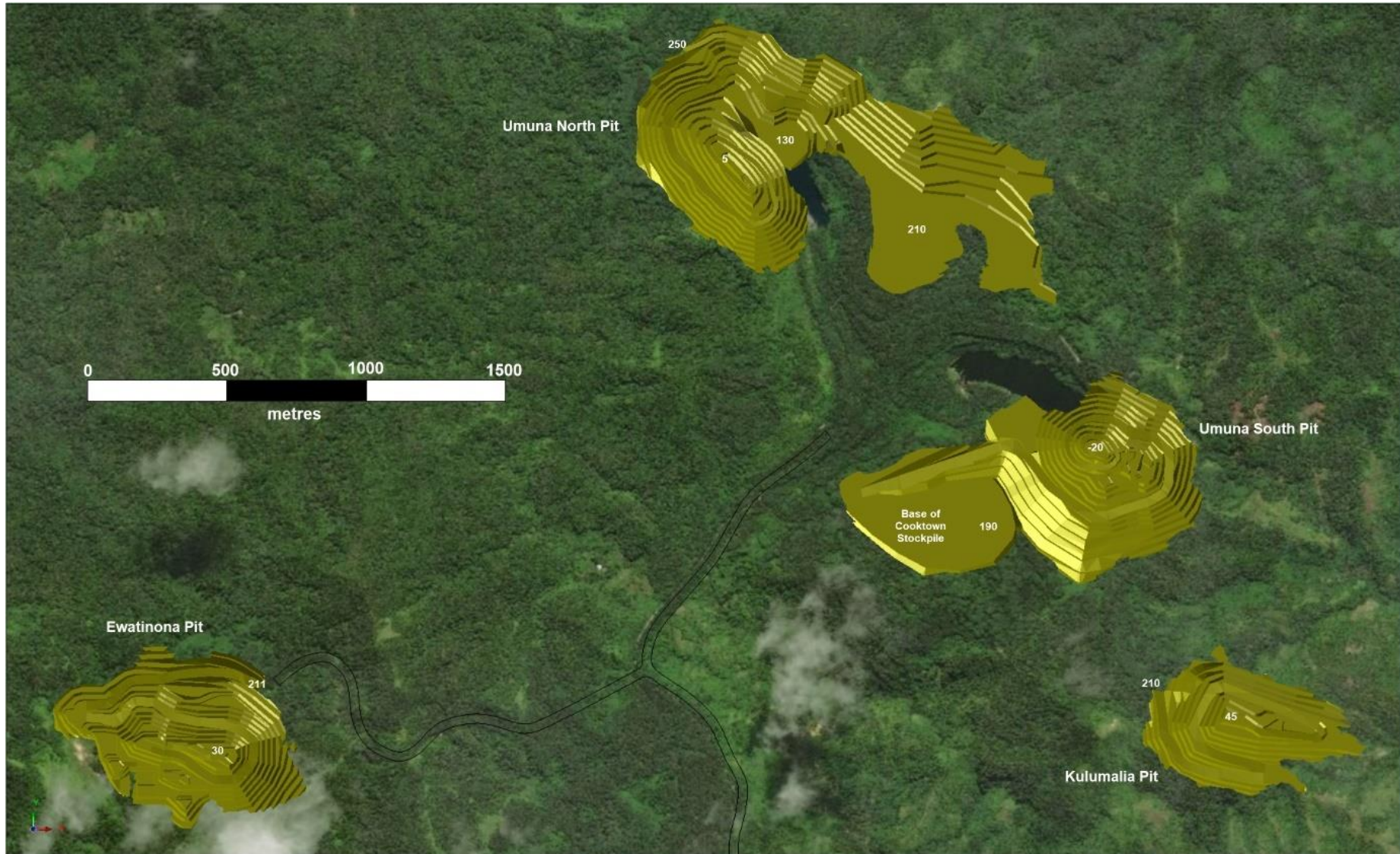




Figure 9: Final Pits - Production Target Case





### 1.3.4 Waste Rock Dump Designs

Waste rock dumps with sufficient capacity to hold all the waste rock from the Production Target case were designed adjacent to the Ewatinona and Umuna Final Pits.

Figure 10: Waste Rock Dumps



The Ewatinona waste rock dump is on the north slope of the ridge forming the north wall of Ewatinona Pit. Entry to the dump is close to the pit exit.

The Umuna waste rock dump is in a broad valley on the north west side of Umuna Final Pit. The dump can be accessed either from the north at the level of the Umuna North Pit exit or from the south east off the main haul road close to the main pit exit serving the Umuna South, Kulumalia and Umuna Final Pits. The north west and south west toe of the dump is keyed in along a ridge line so that it is completely contained within a small catchment with only one outlet on the north western side. This will allow any drainage through the dump onto the original surface to be managed. The western face drains towards the pit. The south west face, which includes the main dump ramp, drains to the main haul road which will assist with management of any run-off.

### 1.3.5 Production Schedules

Most of the target ore zones are below the base of the former open pits resulting in high levels of waste movement in the early years of the project life to access the majority of the ore. With this issue in mind, production schedules were determined based on delivering the following goals:

- Keep the process plant fully fed at 5.5 Mtpa,

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- Maximise early head grades and hence gold production and revenue to offset costs of high waste to ore ratio mining in the early years,
- Aim to keep annual gold production above 100 koz.

The schedules were run on a monthly basis. Mining rates are based on estimated productivity for the size of excavators and trucks chosen. Production schedules have a four month ramp up period for the process plant in Year 1 based on a target feed rate of 5.5 Mtpa.

All months are scheduled at the same production rates. The Feasibility Study may consider variable rates each month to allow for weather delays in the wet season.

### 1.3.6 Ore Reserve Case Schedule

Apart from inclusion of the Cooktown Stockpile the Ore Reserves schedule only includes Indicated Resources which are classified as Probable Ore Reserves. Neither Ewatinona nor Umuna have any Measured Resources so there are no Proved Ore Reserves.

The schedule is based primarily around four 400 tonne excavators with 22m<sup>3</sup> buckets loading a fleet of 180 tonne payload trucks.

Cut-off grades for the schedule are 0.28 g/t Au for oxide and transitional ore and 0.33 g/t Au for fresh ore. Ore is divided into Low Grade (cutoff grade to 0.65 g/t Au) and High Grade ( $\geq 0.65$  g/t Au).

Mining in the initial years is run at the highest rate considered practical to maximise the High Grade ore to boost early gold production and to build a stockpile of Low Grade ore to maintain mill feed while the pushbacks and backfill are being mined in Umuna Final Pit.

The starter pits and early stage pits are mostly mined out in the first two years of operations. Completion dates are:

- Ewatinona Pit                      Year 2, Month 1
- Kulumalia Pit                      Year 2, Month 3
- Umuna South Pit                      Year 2, Month 6
- Cooktown Stockpile                      Year 2, Month 7
- Umuna North Pit                      Year 4, Month 10

Key outcomes from the Ore Reserves schedule include:

- Nearly nine years of mining including Year 0.
- Eight years of ore processing during mining and a further year processing reclaimed Low Grade stockpiles.
- Total production of 1.25 Moz of gold and 2.47 Moz of silver.
- All years except Year 3 exceed 100 koz of gold production.
- Peak Low Grade stockpiles of 7.7 Mt in Year 8.
- Total material mined (ore and waste) rapidly reaches 2 Mbcm per month but then drops off in Year 2 when mining rates slow in the base of the starter pits. The mining rate then picks up to just under 2.2 Mbcm per month during Year 3 as the excavators are moved from the early stage pits into the broad benches in Umuna Final Pit.
- Mining rates start to fall from Year 6 as Umuna Final Pit reaches the base of the former Placer pit and ore below the old pit becomes available.

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Constraints considered in the Ore Reserves schedule include:

- Sinking rates in each pit stage generally less than one 10 metre bench per month,
- Cooktown Stockpile must be partially mined to allow access from Umuna South and Kulumalia Pits.
- Umuna North Pit must be mined down far enough ahead of Umuna Final Pit to allow access across the pit on backfill for Umuna Final Pit.

Figure 11: Yearly Volumes Mined by Pit Stage – Ore Reserves Case

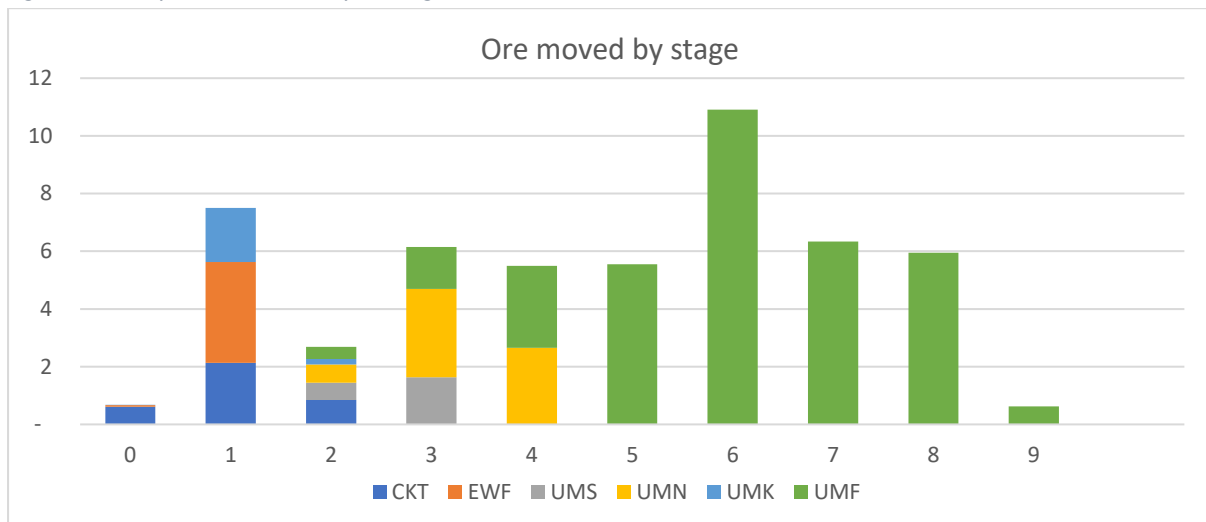
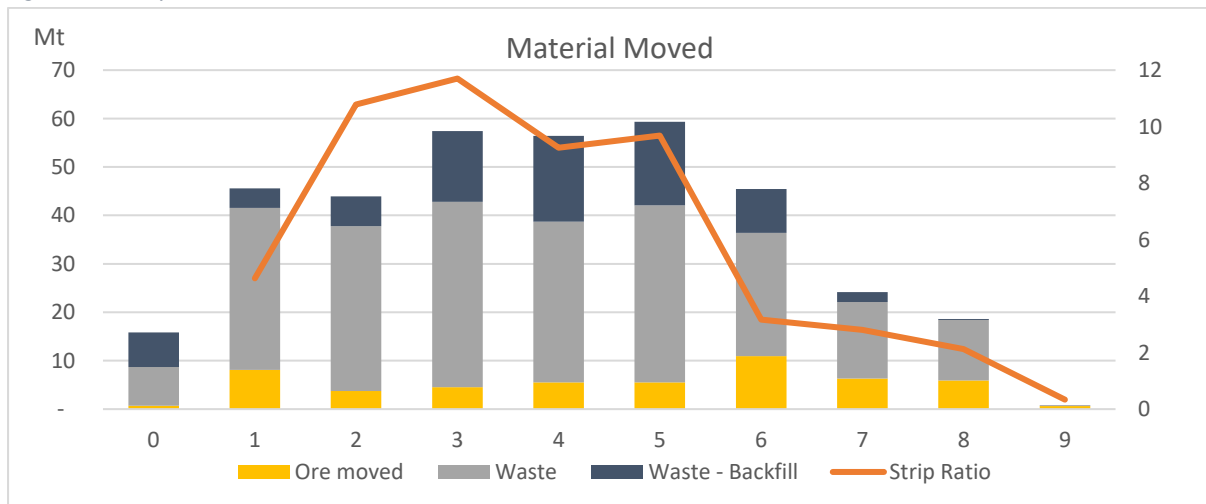


Figure 12: Yearly material movement – Ore Reserves Case



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Figure 13: Yearly ROM Stockpiles – Ore Reserves Case

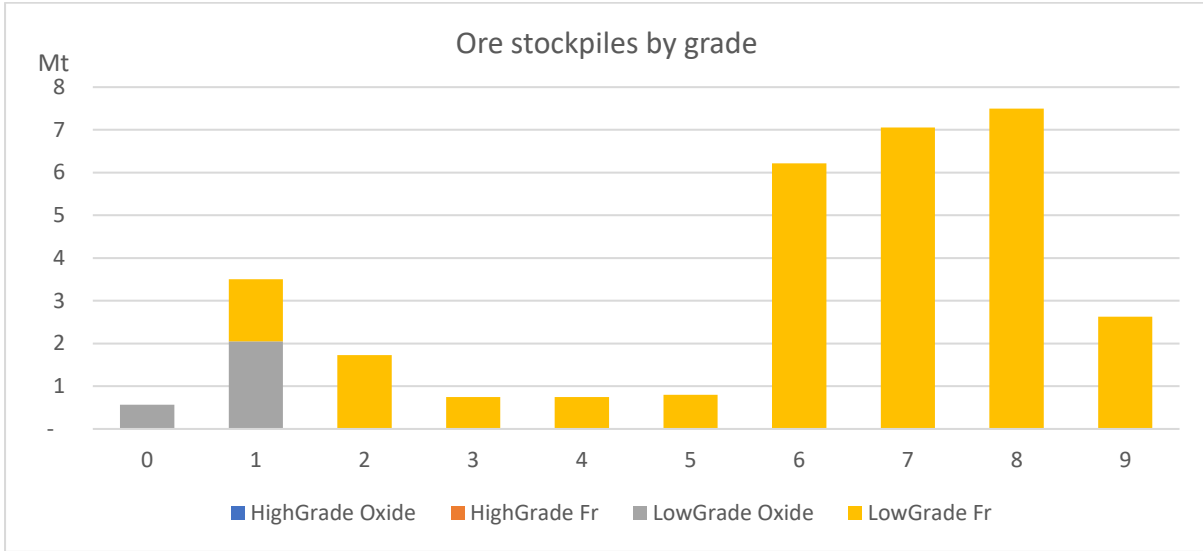


Figure 14 Monthly Mill Feed – Ore Reserves Case

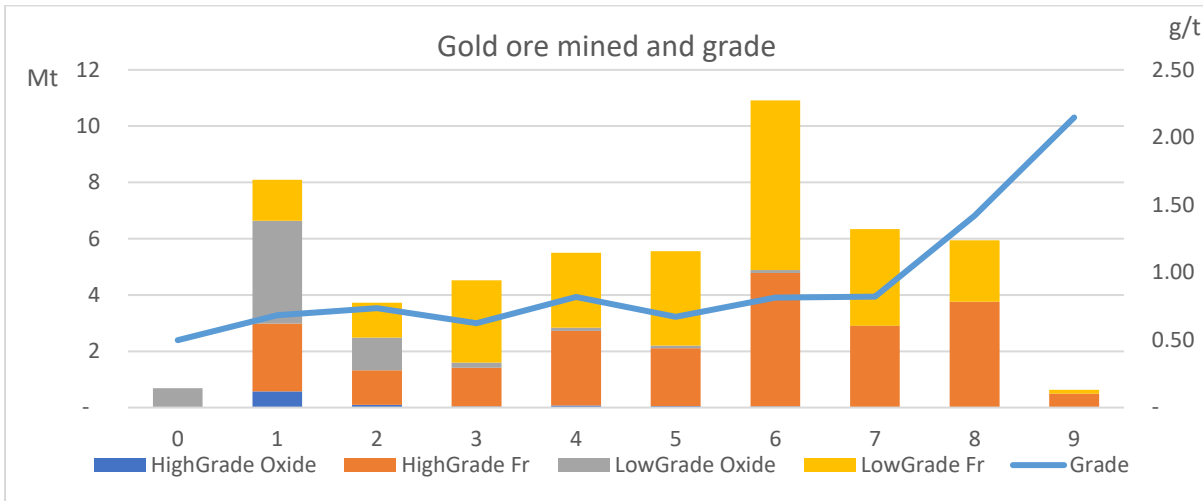
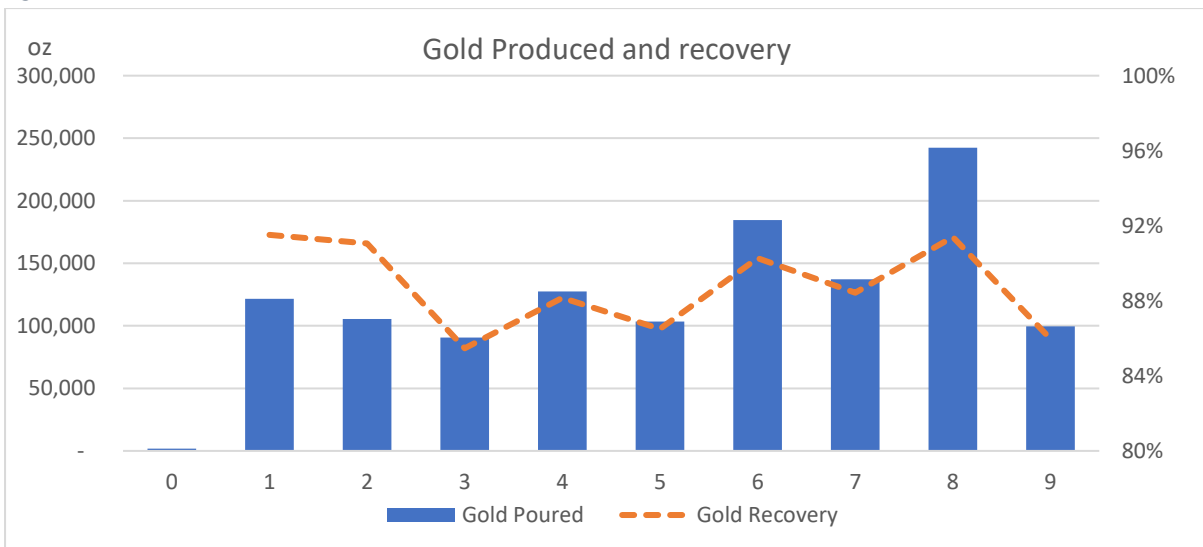


Figure 15 Annual Gold Production - Ore Reserves Case



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### 1.3.7 Production Target Schedule

The Production Target schedule includes Indicated and Inferred Resources. In keeping with the JORC Code 2012 which does not allow Inferred Resources to be classed as Ore Reserves the Production Target quantities do not constitute an Ore Reserve.

The schedule is based around five 400 tonne excavators with 22m<sup>3</sup> buckets loading a fleet of 180 tonne payload trucks.

Mining sequences are similar to the Ore Reserves schedule but with additional Inferred tonnes, larger pits and the same process plant feed rate the starter pits run longer.

Key outcomes from the Production Target schedule include:

- Nearly 16 years of mining including Year 0
- 15 years of ore processing during mining with an average gold production of 136,000ozpa
- 2 years processing reclaimed low grade stockpiles
- Total production of 2.13 Moz of gold and 5.76 Moz of silver
- All years exceed 100 koz of gold production
- Peak low grade stockpiles of 14.8 Mt in Year 8
- Total material mined (ore and waste) of 1.6 to 2 Mbcm per month in Years 0 to 3. The mining rate then picks up to around 2.5 Mbcm per month during Year 3 as the excavators are moved from the early stage pits into the broad benches in Umuna Final Pit
- Mining rates start to fall from Year 7 as Umuna Final Pit reaches the base of the former Placer pit and ore below the old pit becomes available

Figure 16: Yearly Volumes Mined by Pit Stage – Production Target Case

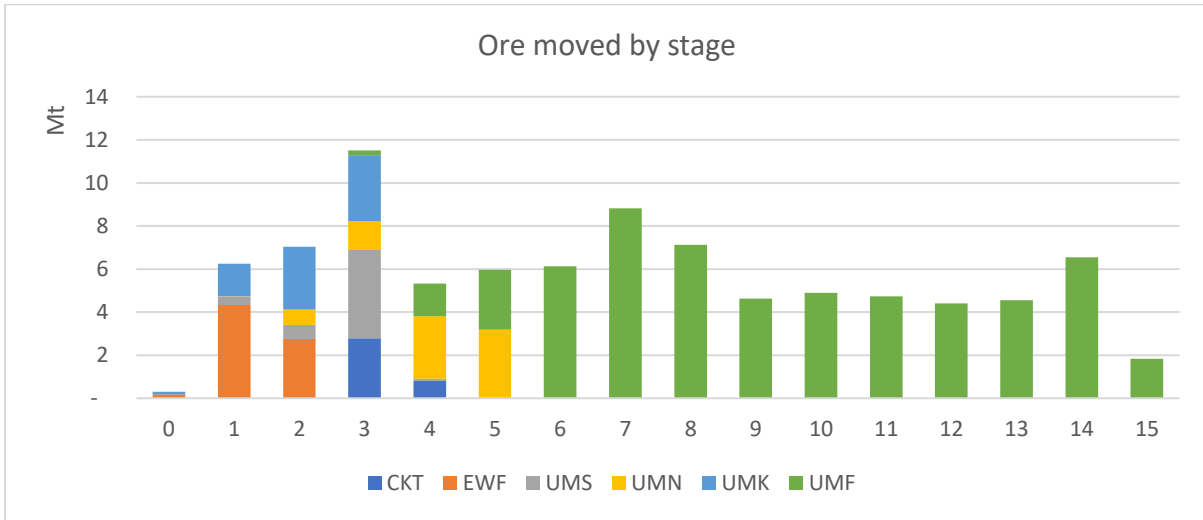


Figure 17: Yearly material movement – Production Target Case

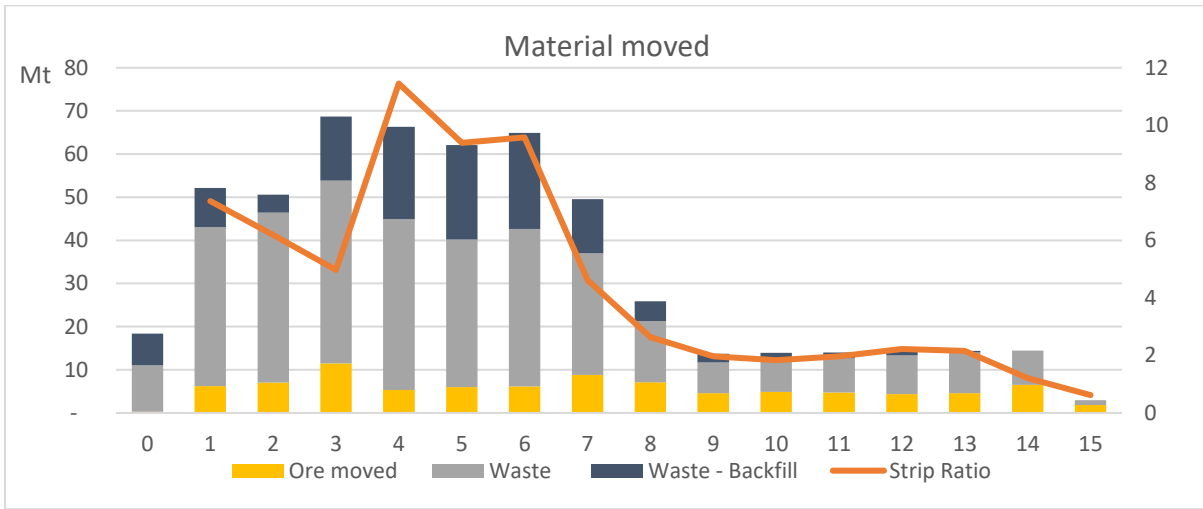
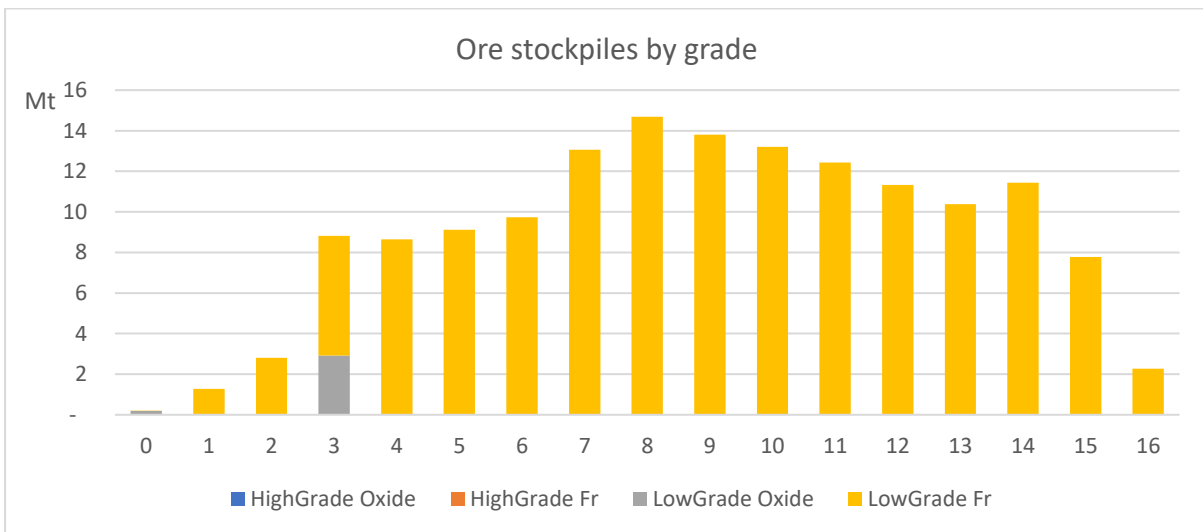


Figure 18: Yearly ROM Stockpiles – Production Target Case



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Figure 19: Monthly Mill Feed – Production Target Case

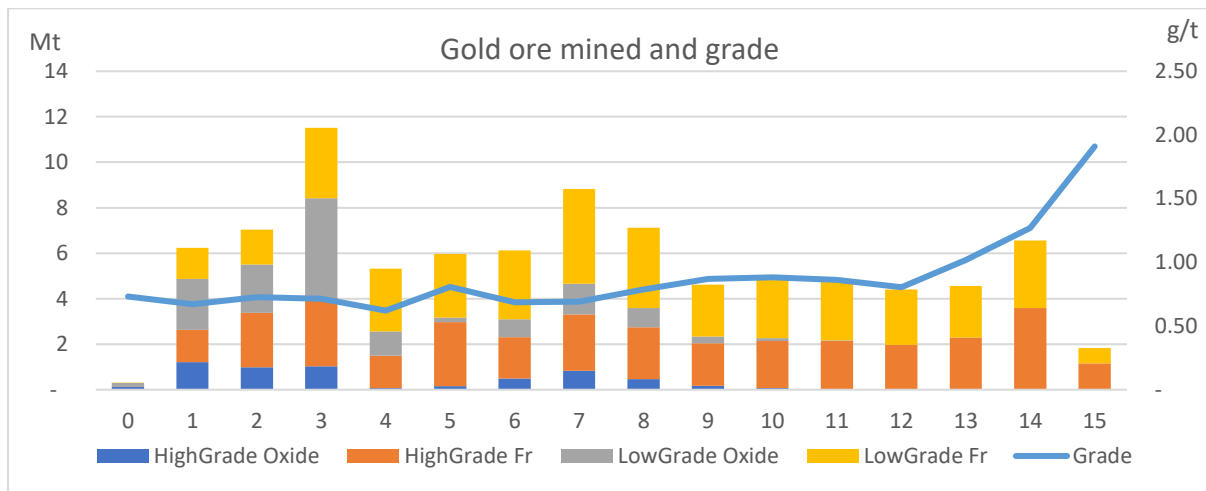
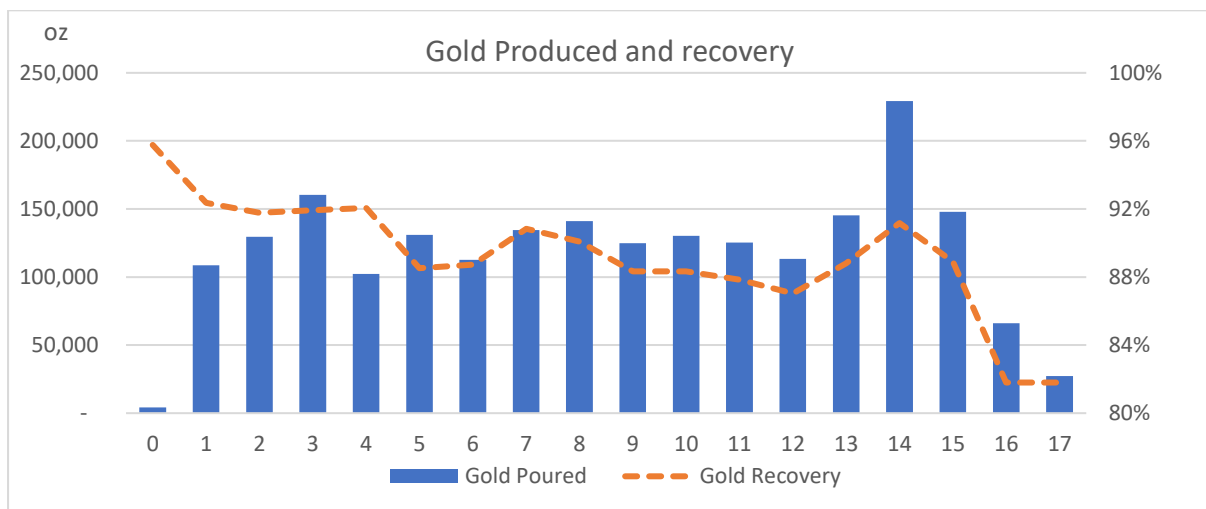


Figure 20: Annual Gold Production – Production Target Case



**1.3.8 Loader Fleet**

The mining fleet is based around 400 tonne, 22m<sup>3</sup> hydraulic excavators in backhoe configuration. The machine used for cost estimation is a Caterpillar 6040BH. Trial schedules showed this size of excavator is required to mine the wall pushbacks and backfill fast enough to maintain 5.5 Mtpa feed to the process plant.

**1.3.9 Truck Fleet**

The truck fleet is estimated by haul modelling for Caterpillar 789D trucks. These machines have a rated payload of 191 tonnes. The haulage model is a more detailed version of the Mining Cost Model using designed pit and waste dump benches, ramps and haul roads against monthly scheduled quantities.

**1.3.10 Drill and Blast**

Production records from 1989 to 2000 show consistently low blasting powder factors in the range 0.09 to 0.12 kg/t rock blasted. The records also show Ammonium Nitrate Fuel Oil (ANFO) as the main explosive.

Using the production records as a guide, blast patterns were designed to give powder factors of 0.11 kg/t for oxide rock and 0.15 kg/t for transition and fresh rock. Emulsion explosives are assumed to

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handle expected wet holes due to rainfall and increasing ground water as the pits become deeper. Explosives would be delivered to each blast hole in mobile manufacturing unit (MMU) trucks operated by the explosives supplier.

### 1.3.11 Mining Support Fleet

A mining support fleet was built up around the excavator, truck and drill fleets for each schedule case. The main machines in the fleet are as follows.

**Pit Bulldozers** – Tracked bulldozers in the Caterpillar D9T class. One bulldozer was matched to each excavator and operating hours were set at 75% of the excavator hours.

**Waste Dump Bulldozers** – Tracked bulldozers in the Caterpillar D10T class. These machines clear vegetation, cut haul road paths and spread and compact the waste dumps. Fleet numbers and hours mostly match the pit bulldozers but the full fleet was allocated in Year 0 to allow for clearing of the initial mining and waste rock dump areas.

**Graders** – Caterpillar 16 class machines. One grader was allowed for each 7 trucks in the fleet. Hours were based on assumed 60% utilisation of available time.

**Water Trucks** – Caterpillar 775G class trucks with 50k litre tanks. One water truck was allowed for each 7 trucks in the fleet. Hours were based on assumed 60% utilisation of available time.

**Lighting Plants** – Trailer mounted, diesel powered lighting towers with 4 x 1000W lamps. One lighting plant was allowed for each excavator, blast hole drill and waste dump bulldozer. Each lighting plant was assigned 11 hours per day.

**Pit Pumps** – Trailer or sled mounted 100 mm diesel pumps with 60m head capability. Two pumps were allocated for each excavator. Each pump was assigned 12 hours per day.

The equipment described above forms the majority of the mine fleet. Other smaller items such as light vehicles, service vehicles and cranes were allowed for by applying an additional 5% to the capital and leasing costs and an additional 2% to the parts and diesel costs of the main fleet.

## 1.4 Processing Plant

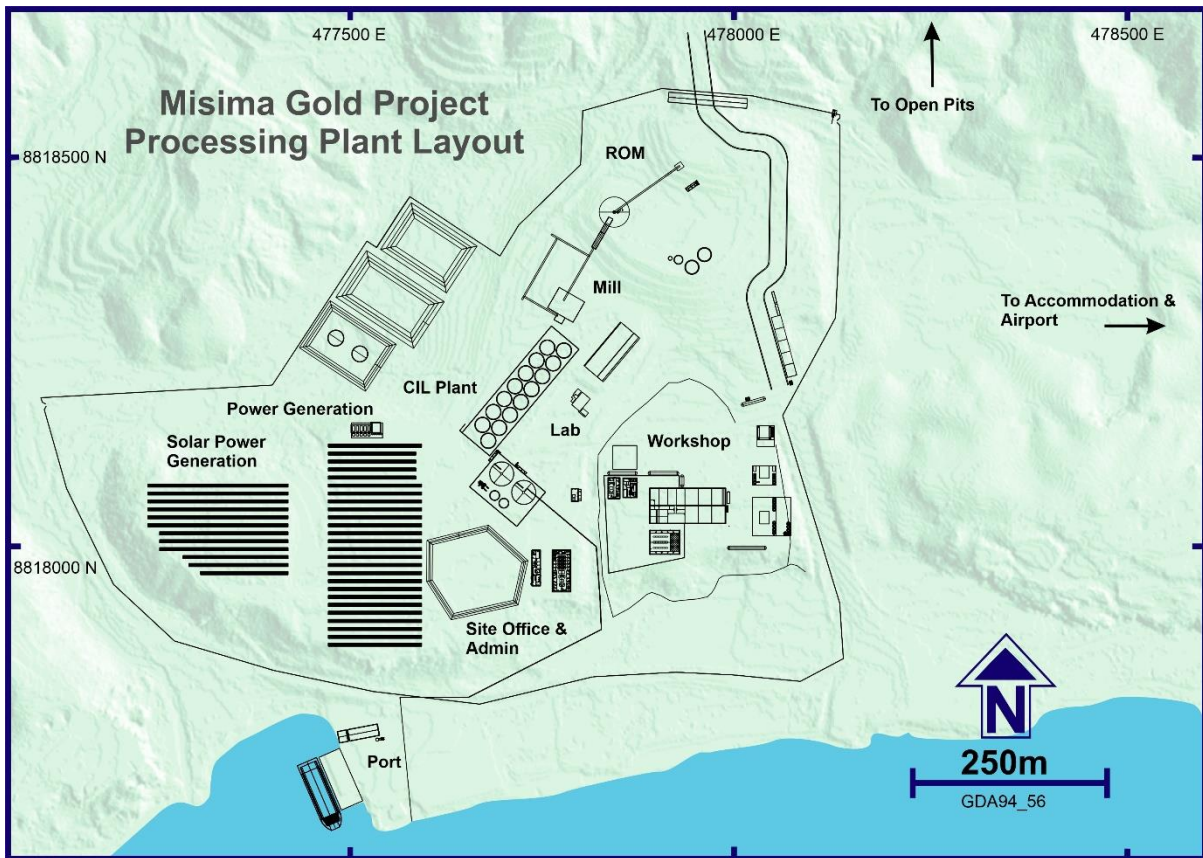
The basis of design for the Processing Plant is almost identical to that employed by Placer but with some modernisation to reflect current gold processing industry standards and practice. The main areas of change relate to a higher percentage of hard fresh ore, with lower silver grades, in the mill feed, and the inclusion of cyanide destruction prior to tailings disposal. Table 3 contains a summary of the key process design criteria adopted for the design of the processing plant and Figure 22 summarises the process design.

Table 3: Key Process Design Criteria

Parameter	Units	Value
Throughput	Mtpa	5.479
	tph	695
Operating time	%	90
Feed grade, Au	g/t	0.84
Au recovery	%	89.4

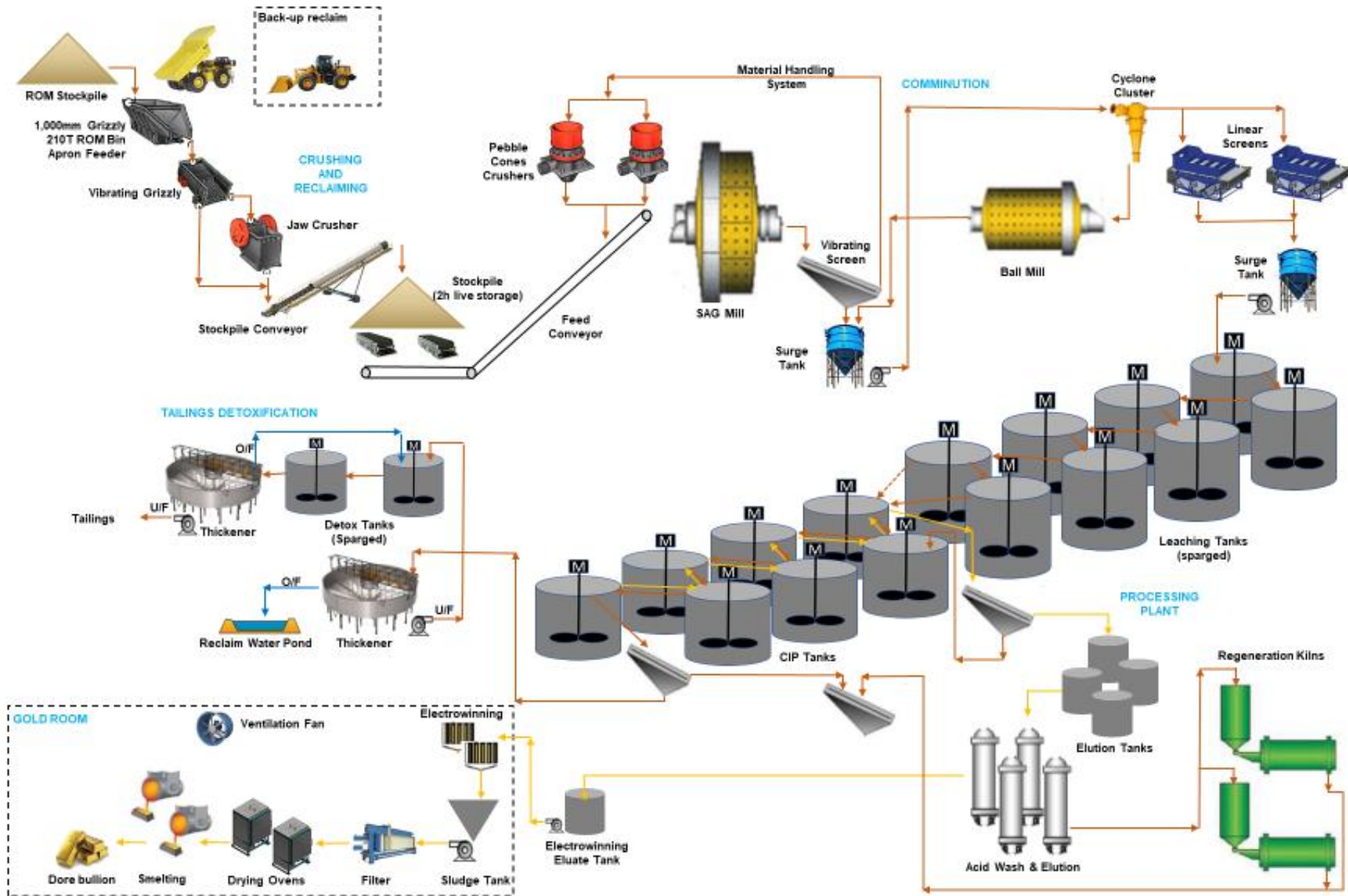
Parameter	Units	Value
Feed grade, Ag	g/t	5.7
Ag recovery	%	35.0
Oxide Ore Bond Work Index	BWi	7
Fresh Ore Bond Work Index	BWi	11
Grind size P80	µm	250

Figure 21: Misima Gold Project processing plant layout



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Figure 22: Block Flow Diagram - Mineral Processing Plant



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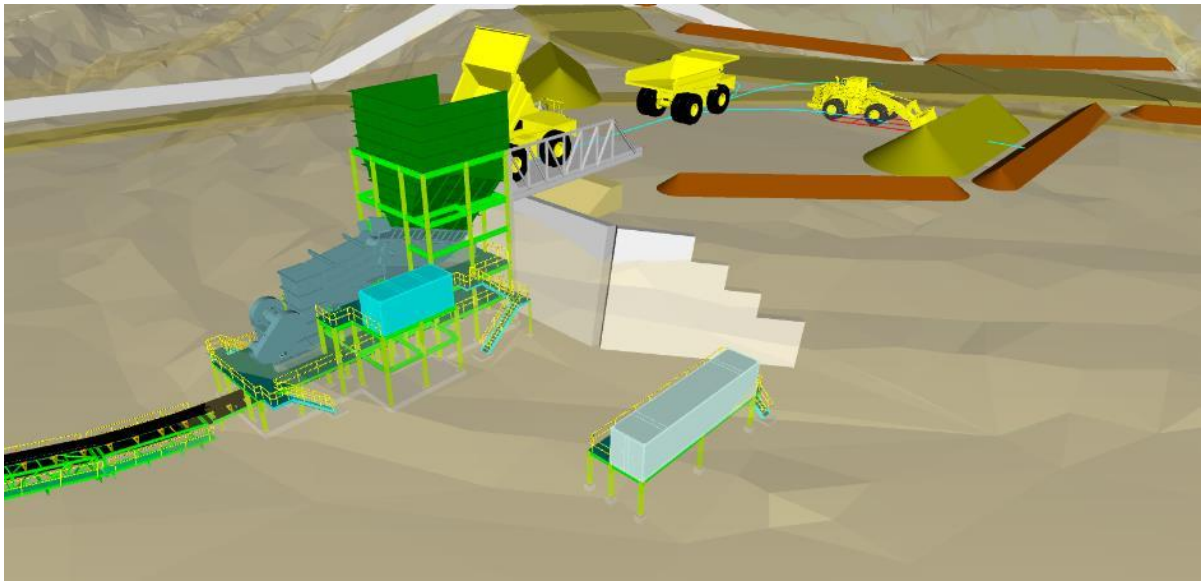


The main process will involve reducing the particle sizes of the ore by jaw crusher, SAG Mill and Ball Mill, leaching with cyanide and adsorption onto activated carbon by a seven stage carbon in pulp (CIP) circuit, acid wash and elution in separate columns, and electrowinning the gold and silver onto stainless steel mesh cathodes. The following sections provides a description of the main processes.

#### 1.4.1 ROM and Crushing

The Run of Mine and Crushing will consist of a ROM pad with storage of approximately 2hrs of plant supply, a 210 tonne ROM bin, an apron feeder and jaw crusher. Figure 23 provides an overview of the ROM and crushing area.

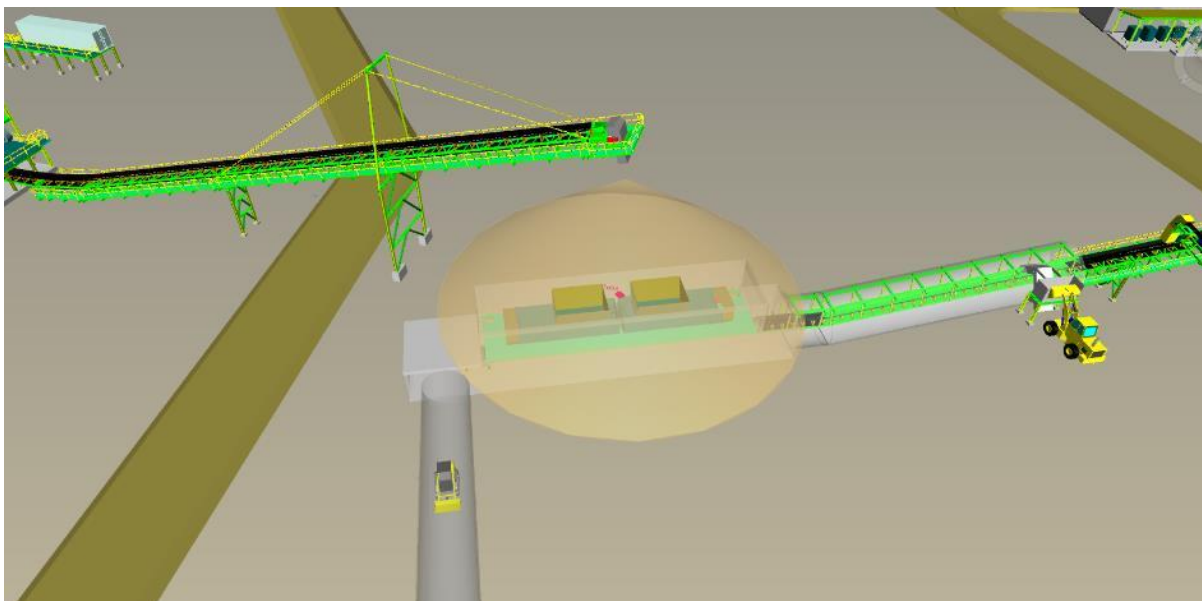
Figure 23: ROM and Crushing Area



#### 1.4.2 Stockpile and Reclaim

The crushed ore will be stockpiled as shown in Figure 24. The stockpile will be of sufficient size to store a minimum of 1,400 tons (live) of crushed ore, representing a feed supply to the plant for two hours.

Figure 24: Crusher ore stockpile



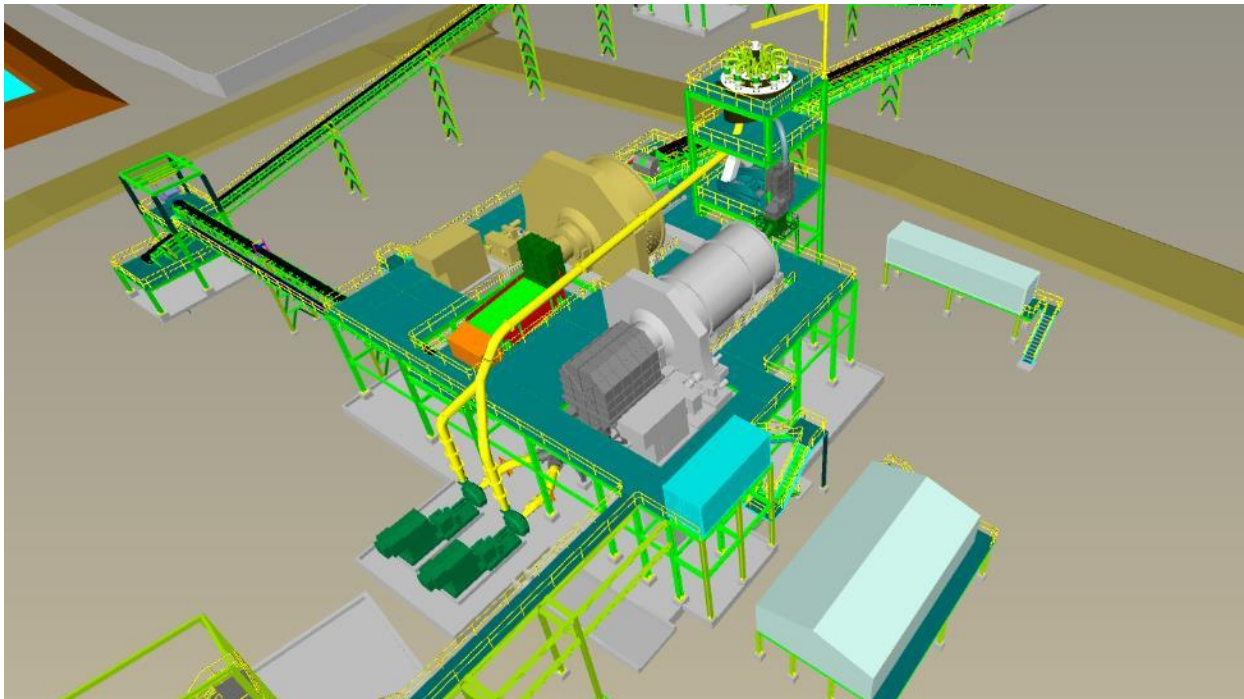
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### 1.4.3 Milling and Classification

The grinding circuit will be operated seven days per week, with a plant utilization of 90% to achieve the annual design capacity of 5,479,000 tons. Plant utilisation of 90% for series semi-autogenous grinding/ball milling/crushing circuits (SABC) and conventional wet plant equipment is regularly achieved by comparable gold operations within the tropics. The SABC will include the following main components:

- SAG mill measuring 8.0 m diameter by 3.5 m.
- The SAG mill discharge slurry feeds to a single vibrating screens with 12 x 34 mm aperture.
- A pebble circuit including conveyers, tramp metal magnets, metal detectors with bypass chute to a bunker and 2 pebble cone crushers
- The SAG mill is followed by an overflow ball mill measuring 5.5 m diameter by 9.5 m.
- Trommel undersize from both the SAG mill and the ball mill are combined in the cyclone feed hopper. The slurry is diluted to the correct cyclone feed density and then pumped to the cyclone cluster for classification.
- Overflow from the cyclones will be removed from the grinding circuit and delivered to the linear screen feed box ahead of the CIP circuit. The linear screen feed box feeds into two sets of linear screens with 1.0 mm aperture.

Figure 25: Comminution Circuit



### 1.4.4 Leaching and CIP

Slurry from the grinding circuit will be fed into the leach circuit, consisting of eight leach tanks, via a leach feed distribution box. Lime solution will be added to the slurry to give a controlled pH of the slurry within the circuit. In addition, a controlled rate of cyanide solution will be added via a flow meter and automatic control valve to give the required concentration of cyanide in the slurry.

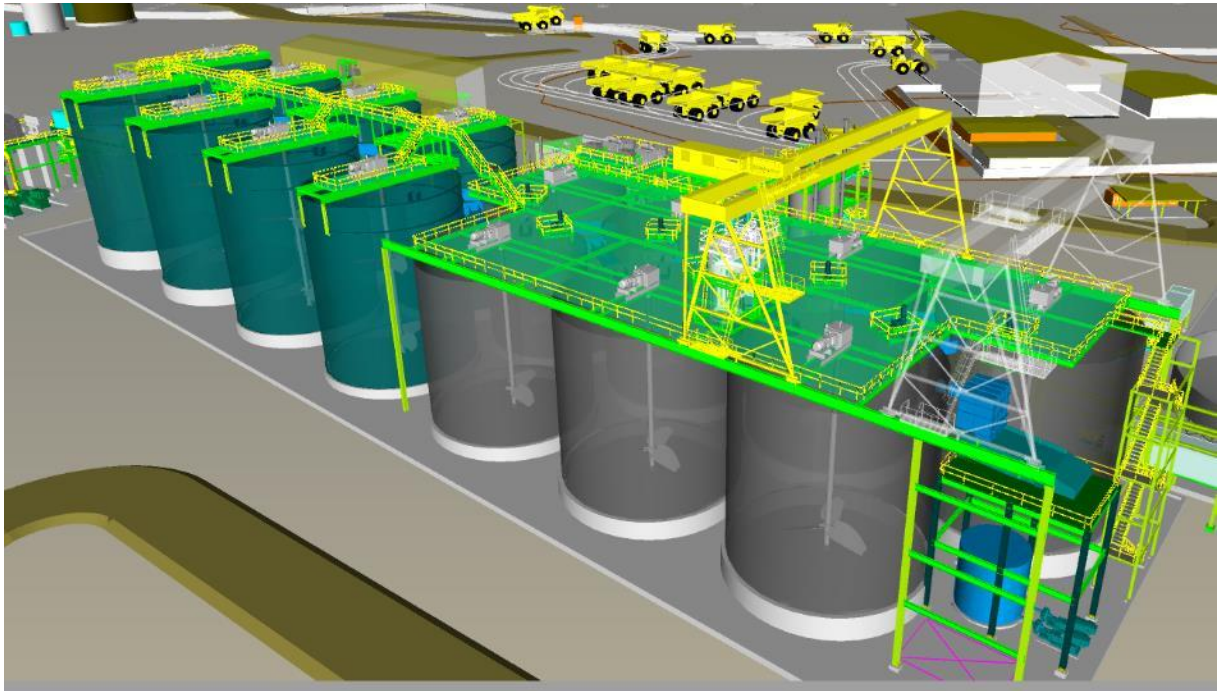
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The design residence time of the leach circuit is 22 hours at the design treatment rate and pulp density of 40%.

The CIP circuit will consist of seven CIP tanks. The design residence time of the CIP circuit is 14 hours at the design treatment rate and pulp density of 40%. Each CIP tank contains a pumped inter-tank screen to allow the pulp to flow down the circuit and an agitator to maintain solids in suspension. Activated carbon is moved by a series of air lifts that move slurry and activated carbon up to the previous tank in the train of the slurry flow.

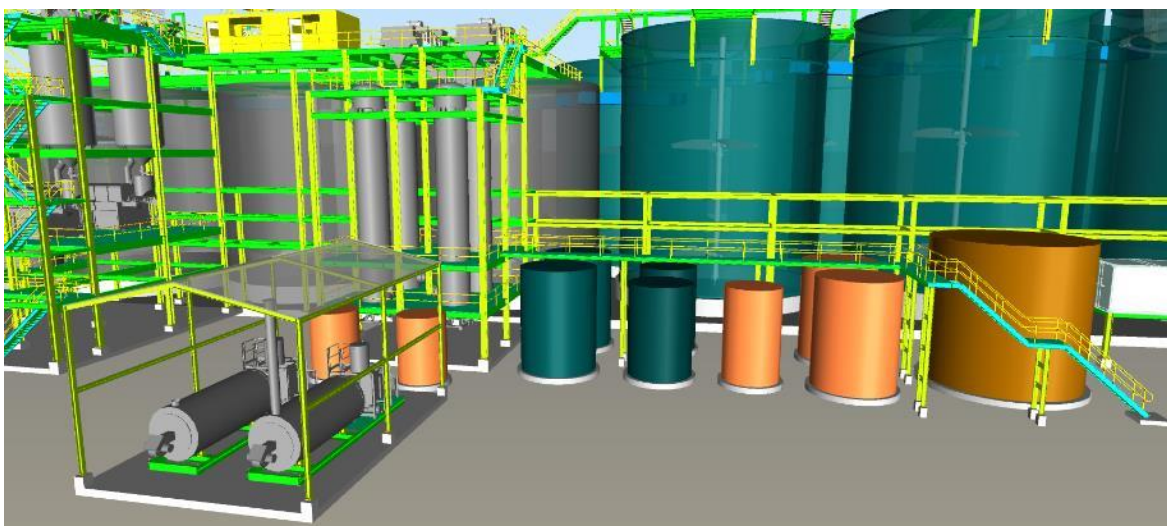
Figure 26: Leach and CIP tanks



#### 1.4.5 Elution

Two acid wash columns and two elution columns will be provided for the separate acid washing and elution operations. Each column is sized for a 7.4 tons batch of loaded carbon. The elution circuit will be based on the split AARL process. Twenty elution cycles per week have been selected for design.

Figure 27 Elution Circuit



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The elution plant will include the following:

- 1 off Vibrating Loaded Carbon Recovery Screen – Aperture 0.8mm x 0.8mm
- 1 off Vibrating Barren Carbon Dewatering Screen – Aperture 1.2mm x 1.2mm
- 2 off Acid Wash Columns – 1.4m Diameter x 9.8m Height
- 2 off Elution Columns – 1.4m Diameter x 9.8m Height

#### 1.4.6 Electrowinning Cells

Two parallel electrowinning cells constructed from stainless steel outer shell and fitted with 12 cathodes using stainless steel as the cathode material are used for the electrowinning of gold removed from carbon in the AARL elution.

#### 1.4.7 Gold Recovery

Doré will be recovered from the stainless-steel mesh cathodes removed from the electrowinning cells, and from the electrowinning cell sludge. The stainless-steel mesh cathodes will be pressure washed, the sludge filtered, dried into one of the two drying ovens, mixed with fluxes and smelted in one of the two diesel fired tilting bullion furnace.

Doré and gold bearing bullion will be stored in a double combination safe within a double combination vault.

#### 1.4.8 Carbon Regeneration

There are two carbon regeneration kilns. Each kiln will be a horizontal rotary unit, diesel fired and capable of up to 1500 kg/h throughput. The proposed arrangement includes a dewatering screen, kiln feed (pre-drier) hopper, kiln and a carbon quench tank.

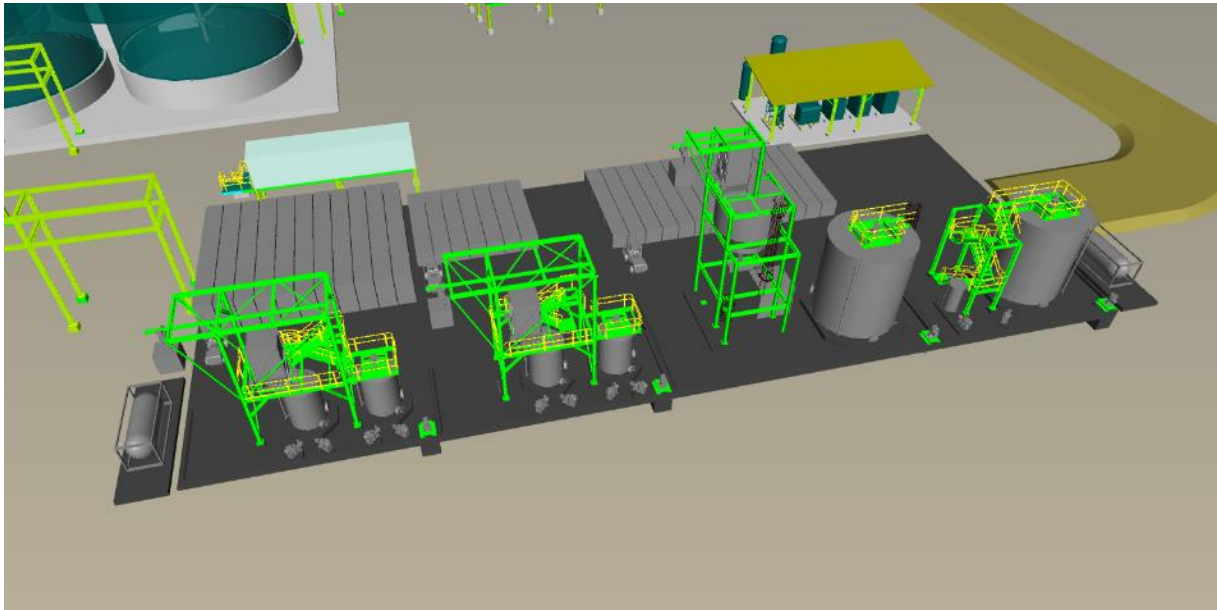
#### 1.4.9 Reagents

Major consumables and reagents used for ore processing and their expected usage are as follows:

*Table 4: Consumables and Reagents*

Reagent	Placer Typical	PFS Consumption
Grinding media	0.63kg/t	0.84kg/t
Sodium cyanide	0.45kg/t	0.45kg/t
Hydrated Lime	2.70kg/t	2.87kg/t
Activated carbon	185 t/a	164 t/a
Flocculant	0.030kg/t	0.030kg/t

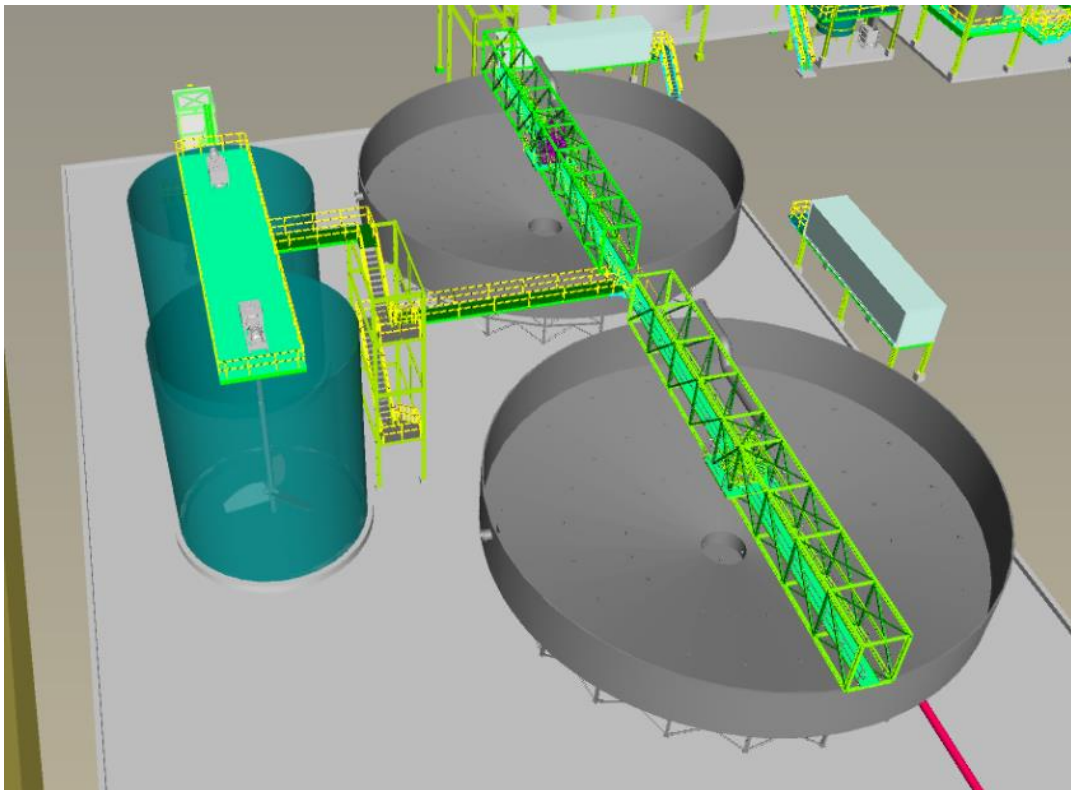
Figure 28: Regents Area



#### 1.4.10 Tails Thickening and Detox

Slurry from the last CIP tank will flow by gravity to the feed box of the carbon safety screen. The carbon safety screen will be a horizontal vibrating screen fitted with polyurethanes screen panels with an aperture of 1.0 mm.

Figure 29: Tailings Thickeners and Detox Tanks



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#### 1.4.11 Tailings Management

Historical mining operations at Misima utilised deep-sea tailing placement (DSTP), this has formed the basis of the PFS. Tailings management options, including DSTP and land tailing storage will be further reviewed as part of the next phase of studies.

DSTP was selected as the preferred option for tailing management for the Placer mine based on consideration of the following factors:

- All flat and gently sloping land near the coast and in the deep inland valleys of Misima Island suitable for waste impoundment structures, was in productive agricultural use at the time and provided the principal means of support for the island's 10,800 people (1986 census), who were mainly subsistence gardeners. Misima Island's population is thought to have doubled since the 1986 census.
- To avoid causing a general shortage of subsistence gardening land on the island, waste impoundment structures would need to have been located in the forested and mountainous hinterland.
- Containment of tailings and soft (incompetent) waste rock in mountainous terrain would have required the construction of very large impoundment structures capable of withstanding severe seismic activity and extreme rainfall events during cyclones.
- The location of impoundment structures in the mountainous hinterland would have posed a long-term public safety risk to the coastal villages below them.
- Deep-water was available a short distance from shore making it possible to discharge directly onto the steep submarine slope off the south coast of Misima Island, thereby allowing the discharged or dumped material to flow or slide down the slope and onto the deep ocean floor, in the same way as natural sediments are transported to the deep ocean floor.
- Misima Island has a history of low utilisation of marine resources by Misimans. Prior to development of the Placer mine, fishing in the vicinity of the island was limited to shallow water with no deep-water subsistence fishery utilisation and no commercial fishery development.
- The risk of tailing rising to the surface could be minimised by locating the tailing outfall terminus below the depth at which the ocean is consistently stratified.

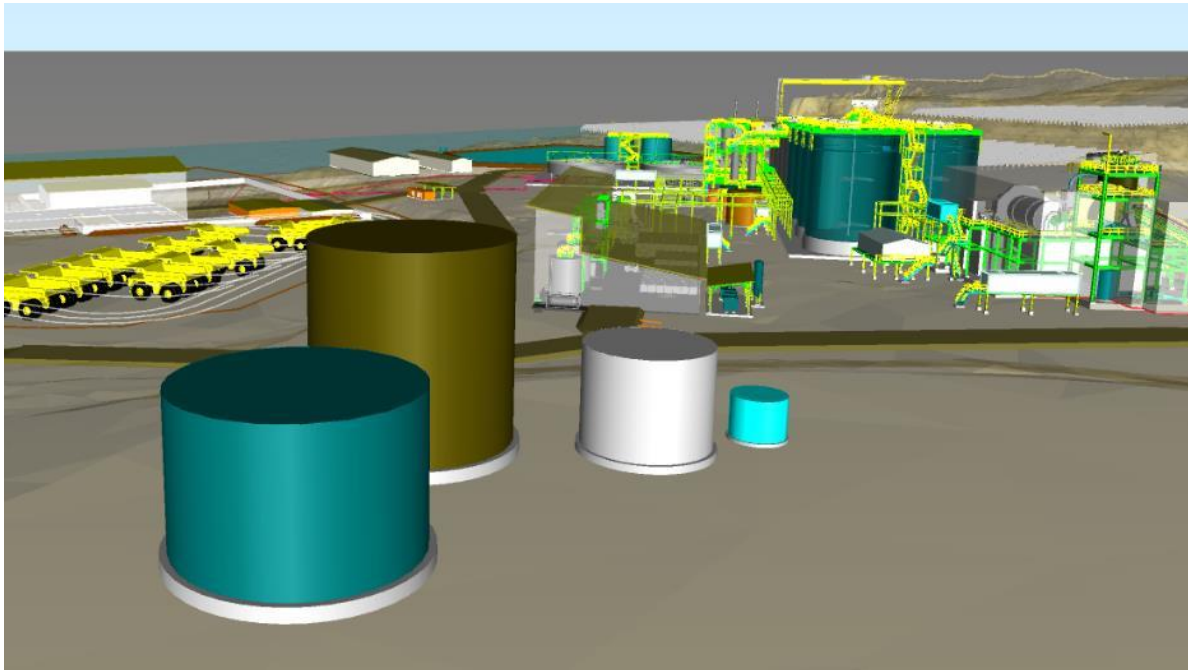
#### 1.4.12 Water Services

The site water services will include the following systems:

- A raw water tank, capacity 3,200 m<sup>3</sup>
- A process water tank, capacity 2,000 m<sup>3</sup>
- A plant potable water tank, capacity 38m<sup>3</sup>
- A fire water system with 4hrs of capacity



Figure 30: Water Tanks



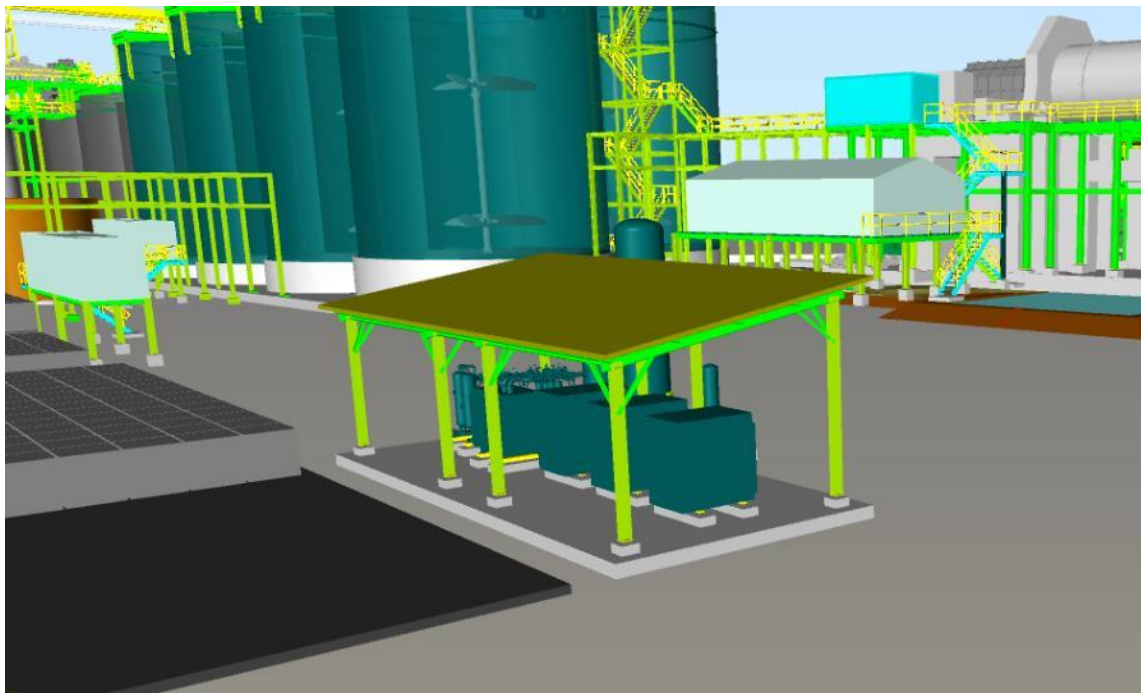
#### 1.4.13 Air Circuits

The centralised compressed air system comprises two high-pressure compressors, air dryer, filters and receivers contained within a service area with sunshade, ventilation, lighting, and power supply.

The system will provide two different types of air (plant air and instrument air) at 7 bars.

A low-pressure air system will provide air to the detoxification and leaching processing areas. It will consist of one blower for the leaching tanks and two blowers for the detoxification tanks.

Figure 31: Compressed Air

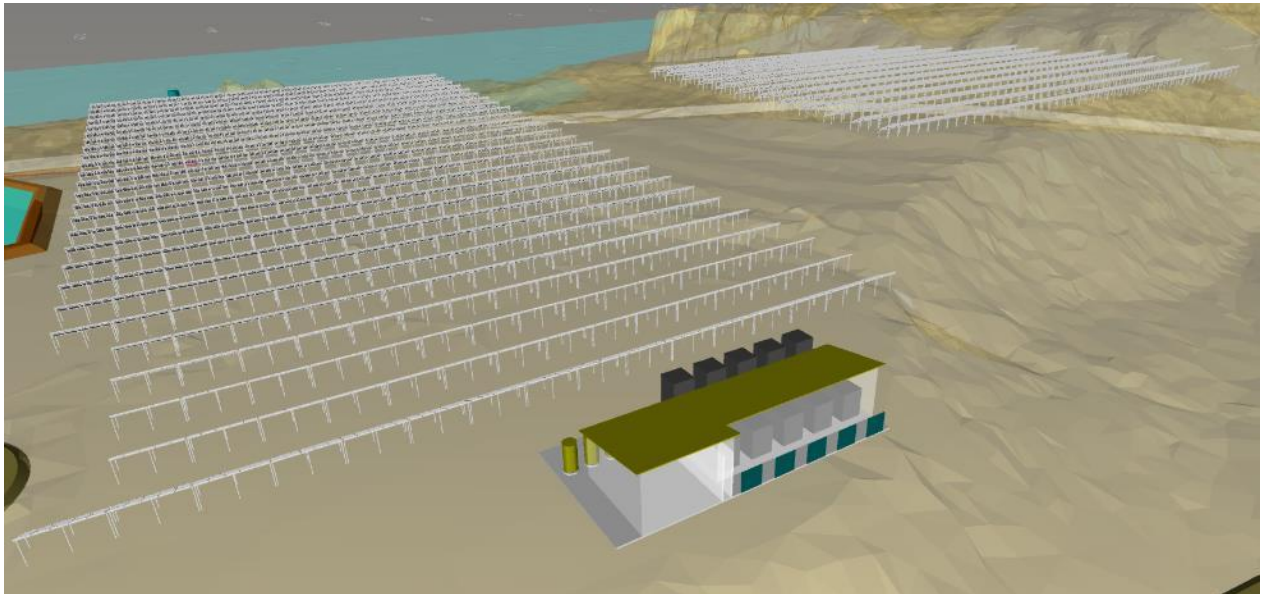


## 1.5 Mine Infrastructure and Services

### 1.5.1 Power Generation

A hybrid power station will be fueled by diesel which consists of ten 1.6 MW Cummins generating sets (QSK60-G4 model) generating at 11 kV and approximately 3.6MWp of solar photo-voltaic panels. The power station will be provided on a Build, Own, Operate basis which provides the advantage of reducing capital cost and deferring capital into operating costs.

Figure 32: Power Plant and solar farm



### 1.5.2 Power Reticulation

Power will be distributed throughout the site from the power generation plant through the main plant 11kV switchboard using 11kV reticulation.

Two overhead lines (OHL) will distribute power from the plant to the offsite facilities:

- 11kV OHL to Umuna pit
- 6.6kV OHL to the Bwagaoya village including a spur to the accommodation village. This 6.6kV line is partially existing and will be repaired, upgraded and completed where required.

### 1.5.3 Administration Building

A centralised administration building will be designed with a technical area and an administration area. The complex will consist of a 42m long by 18m wide building with a surface area of approximately 760m<sup>2</sup>.

### 1.5.4 Gate House & Security

A gate house will be arranged at the plant site entrance, on the North-East of the plan. The building will be of containerised type, 6m long by 2.4m wide and fully fitted with a turn gate with swipe card access and a boom gate.

The processing plant and infrastructures will be fenced with a main entrance access, where the gate house is located, North-East of the plant and a secondary entrance located West of the plant.

### 1.5.5 First Aid Centre

A first aid centre will be located between the processing plant, and the administration and workshop areas. The first aid centre / emergency vehicles bay complex will have total area of approximately 120 m<sup>2</sup>

### 1.5.6 Assay Laboratory

A modular laboratory will consist of a 36.4m by 8.4m modular building, equipped with manually operated doors. Verandas will be installed above the doors at either end of the building over approximately 37m by 8.5m concrete aprons to enable receipt of samples and will be established to provide assaying and metallurgical testing services to the operation.

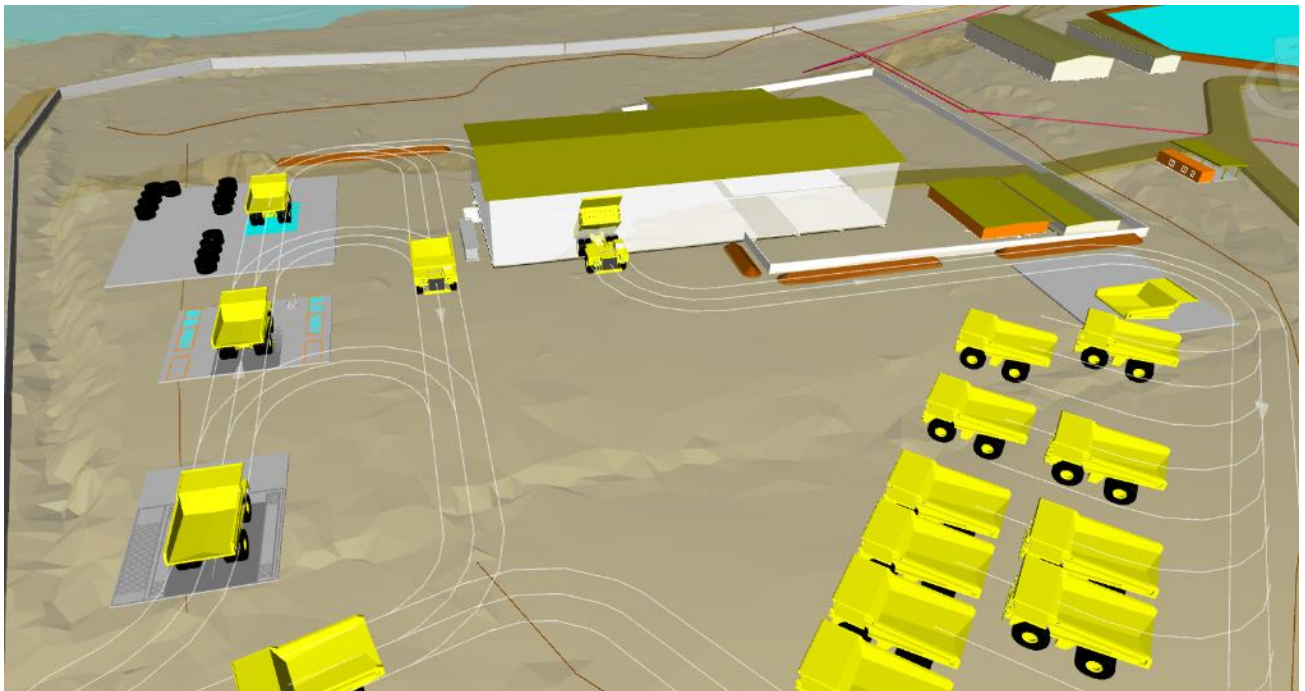
### 1.5.7 Change Room

A centralised change house will be designed to accommodate the mining and processing crews at shift change. The complex will consist of a 19.2m long by 14m wide building with a surface area of approximately 270m<sup>2</sup>.

### 1.5.8 Mining Office and Training Centre

A centralised mining and training centre building will be designed and located at the workshop area. The complex will consist of a 21m long by 12m wide building with a surface area of approximately 250m<sup>2</sup>.

Figure 33: Mine Infrastructure buildings complex



### 1.5.9 GO Line

The GO line bay or Queue waiting line is located adjacent to the HV road coming from the ROM pad and going to the HV workshop area. This GO line bay has the capacity to accommodate 10 trucks.

#### **1.5.10 Heavy & Light Vehicle Refueling**

A Heavy Vehicle refuelling station with a self-bunded 60,000L storage tank is located adjacent to go-line.

A Light Vehicle refuelling station with a self-bunded 30,000L storage tank will be located at the LV segregated area of the workshop area.

#### **1.5.11 Heavy & Light Vehicle Wash Bays**

To support mining operations and maintenance activities at the workshop facility, an HV wash bay will be located within the workshop vicinity. It will be the first “maintenance station” stop after the GO-line and before the lubrication station.

The LV wash-down is designed to cater for all light vehicles at site and is segregated from the HV Wash-down pad.

#### **1.5.12 Workshop**

To support mining operations a new workshop facility will be located within the workshop and maintenance area south-east of the processing plant. The facility will be capable of completing all major servicing and repairs of the mining fleet and all associated light vehicles. The workshop will include a lubrication station, tyre change bay and truck body repair area.

#### **1.5.13 Vehicle Parking**

A truck park located in the vicinity of the workshop will be able to accommodate most of the mining vehicles. The park is arranged to facilitate trucks to come directly from either one of the HV workshop bays or one of the “maintenance station” (washdown, lubrication station, tyre change, dump body removal).

#### **1.5.14 Stores and Warehousing**

An enclosed warehouse will be installed adjacent to the workshop area to contain spare parts, critical spares and reagents that require undercover storage. The building will be steel framed, 30 metres long by 25 metres wide. On each side of the building, containers will be used to store valuables and small items such as instruments, electrical equipment, hoses and plumbing items. Two containers will be used as offices and one for file storage.

An external 3,000m<sup>2</sup> fenced area will contain items of equipment and spares that are not weather affected. A limited amount of pallet racking for the interior will be provided.

#### **1.5.15 Fuel Storage**

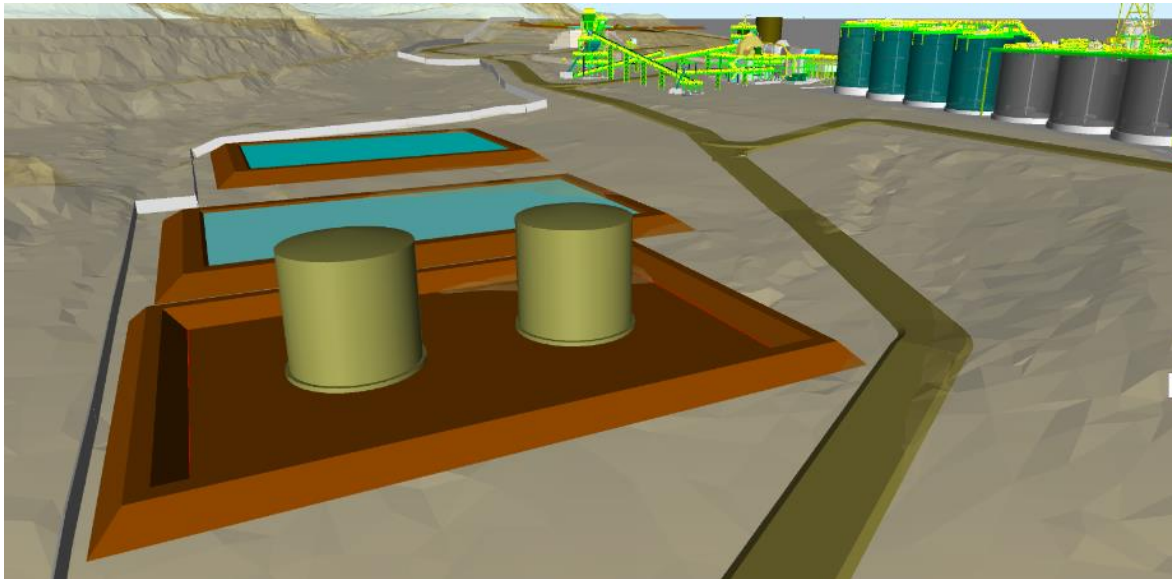
The fuel supply and storage facility will be a centralised system that will supply all necessary fuel for the mining fleet and power station including all support equipment associated with the mining activity.

The storage facility will consist of two 3ML capacity storage and each tank will be 16m diameter and 15m high. The two tanks will be located North-West of the plant close to the run-off water ponds.

Storage capacity for the installation will allow for about 2 months of supply storage buffer to mitigate against delivery disruptions.



Figure 34: Fuel Storage



#### 1.5.16 Wharf laydown area

A substantial laydown area of about 150 metres by 100 metres will be established adjacent to the shoreline and the wharf to house an office, a pump house, and a laydown area. The full area will be fenced. A fuel transfer tank will be used to offload the fuel from the barge/vessel and transfer it to the fuel main storage located at the plant. A shed will temporarily accommodate any container or bulk delivered from barges to reduce the barge immobilisation time on Misima.

#### 1.5.17 Mine Dewatering

Two sections of the historical Umuna pit have been covered by vegetation since 2005 and two dams have naturally been formed containing approximately 5.4ML of water which will be dewatered during construction.

For operations, a skid mounted diesel-powered pit dewatering pump system will be installed to pump water from the southern dam to the plant for the first year. The water from Umuna North will have to be dewatered.

#### 1.5.18 Magazine

Explosives and Magazine facilities will be provided on a build own operate basis and provide storage, manufacture, charging and shot firing.

#### 1.5.19 Communications

An offsite communication network will be provided by a specialist contractor and will consist of an upgrade of the existing 2G network to bring the bandwidth up to at least 4G capacity. A satellite connection will be maintained as a secondary communication link for emergency use when the 4G network has an outage.

The on-site communications systems will be established to include radio, wifi, LAN and CCTV capabilities.

A main control room located at the SAG and Ball mills platform will allow control and monitoring of the processing plant by the plant wide control system and SCADA.

There will be two satellite control rooms in addition to the main control room, one located at the crusher and the other in the refinery. A titration hut will be located on top of the elution and acid wash circuit and allow for taking samples and provide simple measurements.

All control rooms will be of modular construction.

#### **1.5.20 Core Shed and Geology Office**

A new core storage shed will be built as a part of the project and will consist of a membrane dome structure on shipping containers with a concrete slab for mobile plant.

### **1.6 Transport Infrastructure**

#### **1.6.1 On-site Roads**

HV roads have been designed for a CAT 789, a design speed of 60km/hr, 21m wide double lane travel suitable for 7m wide dump trucks and 30m turning radius. All roads are fully HV/LV segregated.

#### **1.6.2 Bwagaioa Air strip**

The existing commercial airport's 1,200m long landing strip with run-offs/turning areas at either end will be used.

A portion of the operations personnel will be expatriates or PNG nationals working on a fly-in, fly out basis, either direct from Australia or from Port Moresby, Lae or Alotau.

#### **1.6.3 Port**

As mentioned in previous sections, a plant has already been operated until its closure in 2004. The port associated with these operations is still in place and will be reinstated, however, the wharf will need rehabilitation works prior to it being operational. The wharf is suitable for an 8m draft and a 60m long vessel.

#### **1.6.4 Public Road from Bwagaioa**

The existing road from Bwagaioa to the plant via the coastline or inland will be repaired. It will consist of minor patching repairs to make it fit for bussing from the accommodation village.

#### **1.6.5 Mobile Equipment**

A number of mobile plant will be provided for the processing plant and ROM area, including light vehicles, trucks, buses, mobile cranes, and other ancillary equipment and vehicles.

### **1.7 Temporary Facilities**

Temporary services and facilities required will be provided either by the individual contracting companies or the EPCM team.

These will preferably be located at the HV parking area providing an easy access to the different work fronts. These will be sized for the construction and commissioning operations.

### **1.8 Accommodation Village**

The accommodation village will be in the same location as the original Placer design, 3kms East of the plant, close to Bwagaioa airport on the seashore. The layout and buildings specification will be broadly based on the Placer design.

The accommodation village will be constructed at an early stage of the construction phase as part of the early works. It has been assumed that the accommodation village will accommodate about 200 people during operations, expatriates or PNG nationals. For the construction phase, an extra 100 beds capacity will be required.

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Figure 35: Accommodation Village



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## 1.9 Pre-production Capital Cost

The following table provides a summary of the Pre-production capital costs for the project. The capital cost estimate was completed to a  $\pm 30\%$ . In addition to processing plant and mine infrastructure, it includes capital for dewatering the Umuna pits, down payments on the mining fleet and costs to complete pre-stripping activities at Ewatinona.

Table 5: Capital Cost Summary

Item	Production Target Cost (A\$)	Reserves Cost (A\$)
Mining Fleet	17,156,212	17,156,212
Pre-strip	32,536,976	29,645,586
Dewatering	1,187,010	1,187,010
Processing Plant	99,220,248	99,220,248
Infrastructure	26,646,113	26,646,113
<b>Total Direct Costs</b>	<b>176,746,559</b>	<b>173,855,169</b>
Indirect Costs	33,399,201	33,399,201
EPCM	26,796,519	26,796,519
Owner's Cost	8,930,980	8,930,980
<b>Total Indirect Costs</b>	<b>69,126,700</b>	<b>69,126,700</b>
<b>Total Capital Cost pre Contingency</b>	<b>245,873,259</b>	<b>242,981,869</b>
Contingencies	37,212,416	37,212,416
<b>Total Capital Costs</b>	<b>283,085,675</b>	<b>280,194,285</b>

## 1.10 Operating Costs

Historically, Misima was a very low-cost operation, this saw it deliver LOM average EBIT margins of 37% despite the weak prevailing gold price in its years of operation from 1989 to 2004. This PFS has further reinforced the low-cost nature of mining and processing at Misima. Operating costs are summarised in Table 6.

There are a number of significant advantages of the Misima orebody that have resulted in the low-cost outcome, these include:

- Coarse grind - P80 passing at 250micron
- Low bond work index - BWi of 7 in oxide ore, 11 in fresh ore
- Low power consumption processing - 16MW total generation capacity
- Low powder factor - 0.11 – 0.15kg/t
- Low deleterious elements
- Long and well understood history of successful mining and processing

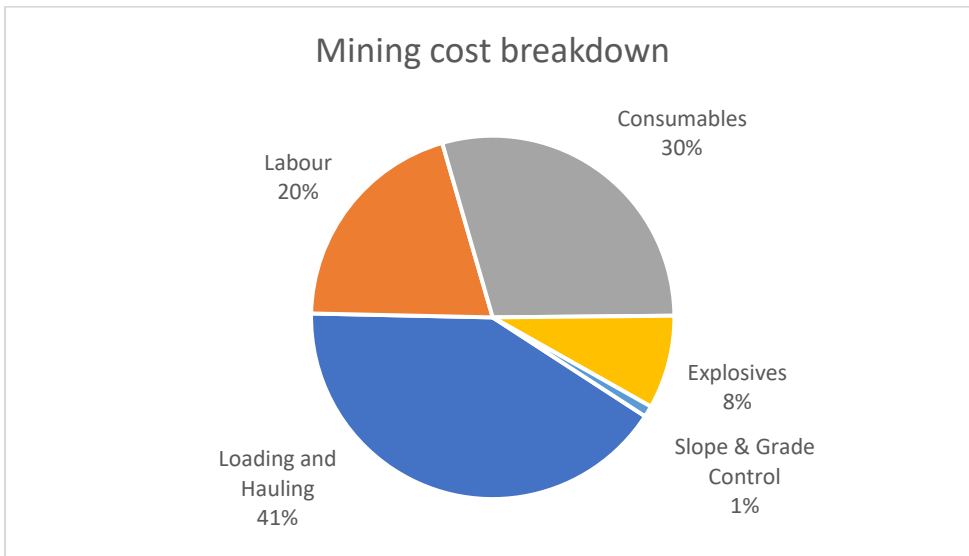
Table 6: Operating Cost Summary

Area	A\$/t - Production Target	A\$/t – Reserve case
Mining (per tonne of ore processed)	10.42	11.93
Processing	13.23	13.47
G&A	3.20	3.16

Royalties	1.40	1.41
Silver credit	-2.28	-1.70
<b>Operating Cost Total</b>	<b>25.97</b>	<b>28.27</b>
Sustaining Capital Costs	1.50	1.69
<b>All-In Sustaining Costs</b>	<b>27.47</b>	<b>29.96</b>

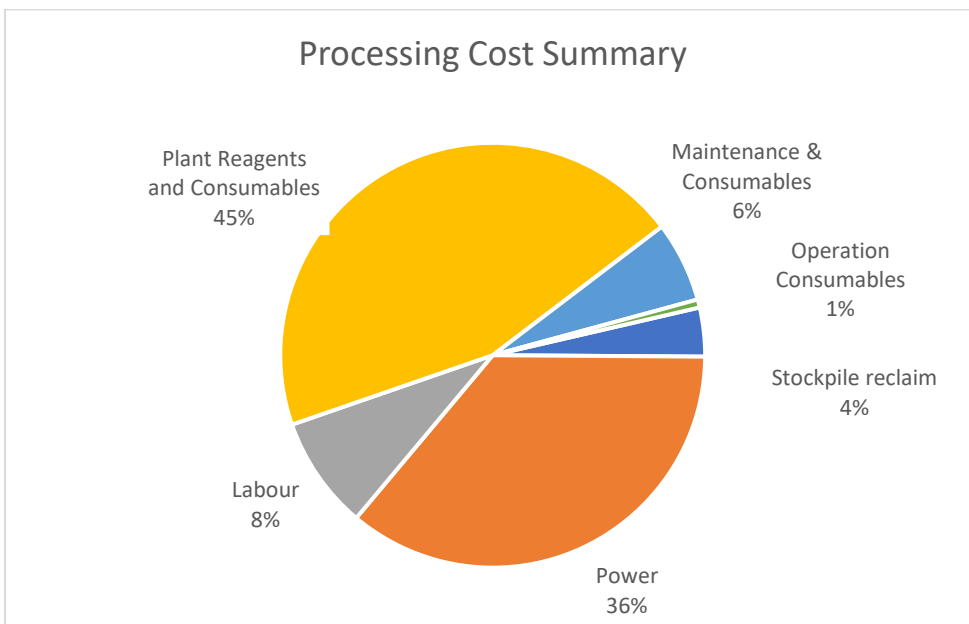
Mining costs are built up from pit and waste dump designs and scheduled quantities, market based labour rates and market pricing for equipment. Figure 36 provides a summary of the breakdown in cost distribution across the mining operational costs.

Figure 36: Mining OPEX



Processing costs were largely calculated based on consumption rates calculated from the process design. Where the consumption rates materially affected the overall operational costs, market pricing was sourced. For the smaller consumables benchmarked pricing was applied from similar projects. Figure 37 summarises the breakdown of processing costs for the life of mine.

Figure 37: Processing OPEX



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Pricing of General and Administrative (G&A) expenses is a mix of pricing obtained through quotations (accommodation village) and through benchmarking from other similar projects.

### **1.11 Project Execution Strategy**

The pre-feasibility cost estimates for the project have been prepared under the assumption that the project will be executed by Kingston who will self-manage the Misima Gold Project, with a major Engineering, Procurement and Construction Management (EPCM) contractor to construct process plant and site infrastructure. Construction packages will be entered into with key contractors for each discipline (Civil, SMP, E&I).

This delivery model is considered to be the most appropriate for the project. The model will allow for maximum opportunity to competitively source and evaluate the most effective cost and time outcomes, while ensuring the use of local resources remains a key consideration as part of the Kingston development strategy and social license commitments.

### **1.12 Environmental and Social**

Environmental impact assessments have commenced for the Misima Gold Project and Kingston has submitted an Environment Impact Review (EIR) to the department of Conservation and Environment Protection Authority (CEPA) of PNG. In addition, a review of surface water and sediment programs have been completed and initial stakeholder engagement has commenced on the inclusion of a Deep Sea Tailings Pipeline (DSTP).

Following the initial review work, a number of key risks have been identified for the project for the baseline studies phase and the construction and operations phase which will be addressed and mitigated throughout the course of the project.

The work to date has scoped out the approvals pathway for the project which includes the following key milestones:

- Commence long-lead technical studies (including Acid Mine Drainage (AMD)) – February 2021
- DSTP modelling and testwork – June 2021
- Commence preparation of EIS – September 2021
- Submit EIS – December 2021
- CEPA/Independent Peer Review of EIS – Jan to August 2022
- EIS roadshow – July 2022
- Approval in principle – September 2022
- Grant of environment permit – October to December 2022

The forward work plan is focused on the development of the Environmental Impact Statement.

### **1.13 Human Resources**

#### **1.13.1 Construction**

The construction phase workforce will be sourced through PNG national contracting entities as a priority with foreign nationals in key roles as employed by the EPCM contractor and Kingston.

Foreign nationals and mainland PNG nationals will be operating on a Fly in Fly Out (FIFO) basis on a 6 weeks on and 2 weeks off basis during the construction phase. Construction labor hours forecasting has been completed on a single 10 hour shift per day basis for 6 days per week.

Locals will work on a 10hr shift 5 days per week.

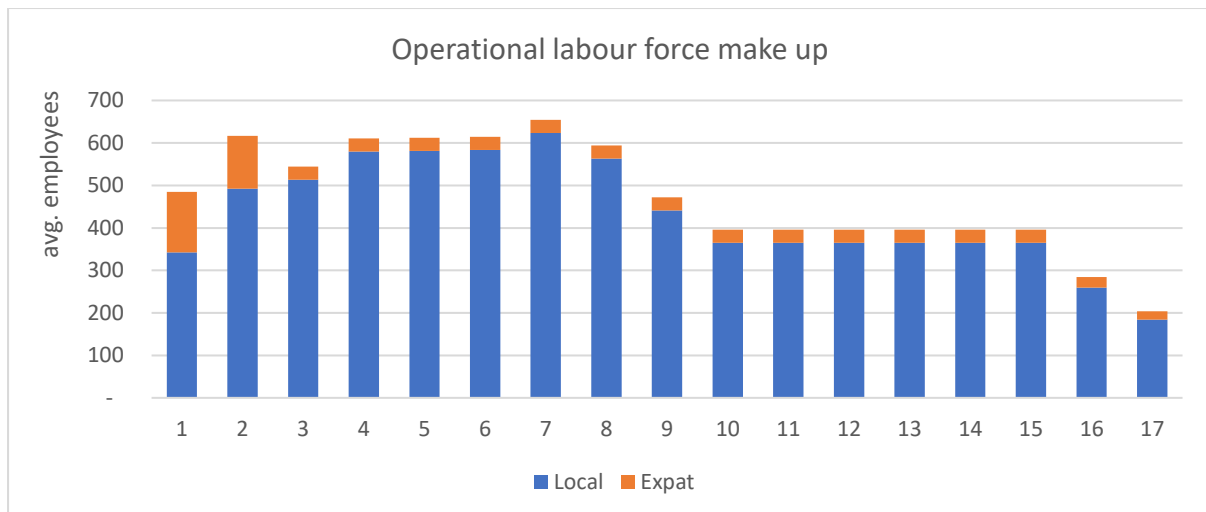
### 1.13.2 Operations

Kingston has targeted a long term employment ratio of PNG nationals to expatriate workforce of 90:10 where local labour will be sourced either from Misima or on a FIFO basis from mainland PNG. The mining sector in PNG has grown considerably in the past 2 decades which has developed local mining skillsets that enable a large local labour content to be engaged with the project.

Kingston is committed to local training and employment at the Misima Gold Project. It anticipates being able to replicate Placer's high utilisation of Misiman's in the Project workforce, including provision of home based opportunities for the existing Misiman's that work FIFO throughout PNG.

Figure 38 outlines the projected labour workforce split over the life of mine for the production target.

Figure 38: Production target labour force composition



### 1.13.3 Mining

The mine is assumed to operate on 2 x 12 hour shifts per day, 7 days per week. A four panel roster was assumed for operators and maintenance crews.

Mine workforce numbers were estimated as follows:

- Machine operators – 4 operators for each excavator, haul truck, bulldozer, grader and water truck plus an additional 5% for minor support fleet operators.
- Maintenance crews – set at 60% of the operator workforce.
- Non-operators – 6 employees per shift crew (4 crews) plus an additional 5%.
- Blast crew – 12 contractor employees. Cost included in explosives supply contract.
- Salaried staff – Up to 44 personnel covering mine management, supervision, mine technical; services and maintenance management, supervision and planning.

For the purposes of planning the mine ramp up period, a training period of 18 months has been incorporated. Over this period, sufficient expatriate labour is incorporated to man the fleet, and each is matched with a local operator for training purposes.

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#### 1.13.4 Processing

For the purposes of planning the mine ramp up period, two labor composition numbers were prepared, one proposal for the mine ramp up over the first 18 months and second for life of mine operations. The only distinction being that during ramp up the plant is targeting an 80:20 ratio of PNG nationals to expatriate workers while the life of mine is a 90:10 ratio of PNG nationals to expatriate workers.

*Table 7: Life of Mine Plant Operations and Maintenance*

Area	PNG	Expats
Process Plant	73	2
Fixed and Mobile Plant Maintenance	72	7

#### 1.13.5 General and Administrative

General and administration is management and administration personnel who are based at the mine. The profile of the workforce adopted provides an increased expat ratio for the first 18 months of operations as the local workforce is trained up. Table 8 contains the expected workforce for the life of mine.

*Table 8: Life of mine General and Administration*

Area	PNG	Expat
Community, Environment, Safety and Employee Relations Operating Personnel	23	3
Administration	16	1
Management	0	7

#### 1.14 Financial Evaluation

A financial model used for evaluation of the Project was developed specifically for the Pre-Feasibility Study by Freeman Financial Modelling.

The financial analysis of the Misima Gold Project was carried out using a discounted cash flow (DCF) approach. Monthly estimated cash flow projections were developed over the Project's life based on capital expenditures, production costs, revenues, royalty costs (government and transaction royalties), deal milestone payments, studies costs and taxes.

The resulting net annual cash flows are discounted back to the date of valuation and aggregated to determine the Net Present Value (NPV) of the project at an assumed discount rate of 8%. The internal rate of return (IRR) is expressed as the discount rate that yields an NPV of zero. The payback period is the time calculated from the production commencement date until LOM cashflow reaches a positive value.

This economic analysis includes sensitivities to variations in operating costs, capital costs and metal prices. For discounting, cash flows are assumed to occur at the mid-point of each period. An accumulated tax loss of AUD 25 m has been included in the project evaluation.

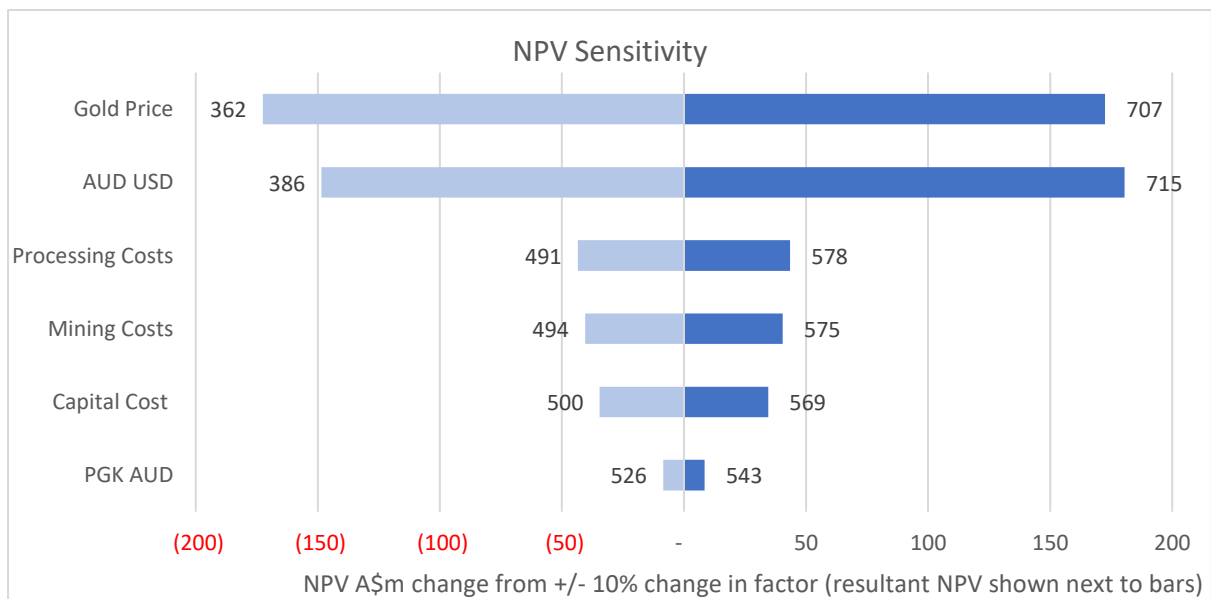
Table 9 provides the key economic assumptions used in the financial model.

Table 9: Key Economic Assumptions of the Financial Model

Assumptions	Units	Value
<b>Commodity Prices</b>		
Gold	US\$/oz	1,600
Silver	US\$/oz	25
<b>Exchange rates</b>		
AUD USD	1 AUD = USD	0.70
PGK AUD	1 PGK = AUD	0.40
<b>Other</b>		
Corporate tax rate	% p.a.	30.00
Infrastructure tax credit	% p.a.	0.75
Discount rate (real)	% p.a.	8.00

Table 10: NPV Sensitivity to Gold Price and FX assumptions

		USD/Oz Au					
		1,500	1,600	1,700	1,800	1,900	2,000
AUD : USD	0.60	680	806	931	1,057	1,182	1,307
	0.65	544	660	776	891	1,007	1,123
	0.70	427	535	642	750	857	965
	0.75	325	426	526	627	727	828
	0.80	236	331	425	519	614	708
	0.85	157	246	335	424	513	602
	0.90	85	171	256	340	424	508



## 1.15 Project Funding

As is typical at the PFS stage, Project funding for the Misima Gold Project is yet to be sourced. Subject to successful outcomes of further feasibility studies, Kingston anticipates that project funding would be largely achieved through a combination of debt and equity finance. Other potential sources of financing include royalty agreements.

In addition, the Company is in a position to consider strategic alternatives for the development pathway of Misima if they are determined to be of benefit to shareholders. This could include typical mining industry transactions such as potential earn-in agreements or a project level sell-down of an equity interest to development partners.

The Project's low technical risk, being a brownfields re-development of an operation with a long and successful mining history, as well as its strong economic fundamentals provide a solid basis for the Company to advance discussions with debt and equity financiers as well as potential forward sale and royalty counterparties.

The Board has extensive experience in financing and developing projects in Australia and overseas including projects in Australia, Laos, the Philippines, and the United States. Based on this experience it believes traditional debt financing can be secured for part of the total pre-production capital cost of the project. Total free cash generation of A\$1,466m over the LOM is considered sufficient to support debt financing within typical ranges.

Company management has also demonstrated a strong track record of securing funding to pursue the ongoing development of the Company's assets.

Overall, based on the reasons outlined above, the Board believes that there is a reasonable basis to assume funding can be secured for the project when required. However, investors should note that there is no certainty that the Company will be able to raise the amount of funding required to develop the project.

## 1.16 Risks and opportunities

### 1.16.1 Risks

During the course of the Pre-Feasibility Study risk assessments were conducted and the following were highlighted as the main risks to the project development

- Adverse movement in gold price
- Adverse movement in exchange rates
- Delayed timeline for approvals
- Regulatory uncertainty
- Metallurgical testwork yields results that negatively impact mill production.
- Inability to secure project funding

### 1.16.2 Opportunities

At the completion of engineering an opportunities workshop was held to identify areas that would improve the performance of the project. A summary of factors considered to provide potential positive impacts:

- Leaching times may be reduced as a result of the metallurgical testwork
- Milling throughput could increase if the ore is found to be softer than the design conditions
- Identification of near surface, higher grade ounces for inclusion in early years of the mine schedule through drilling of current exploration targets
- Mine life extensions through additional drilling extensions of the Umuna orebody which remains open to the North, South and at depth
- Optimised mine plan through scheduling opportunities
- Earlier processing of stockpiles through potential plant expansion
- Optimisation of the procurement strategy could yield capital savings during construction.

### **1.17 Forward Work Plan**

Following conclusion of the PFS report, Kingston will continue to move the project forward into the next phase. This will include additional in-fill and exploration drilling to build on the Resources and Reserves already declared as well as targeting additional areas outside the current mine plans. The metallurgical testwork program will continue to be progressed to establish a basis to, if necessary, refine the process design further in the next phase. Existing environmental baseline data collection will expand to incorporate further elements as needed for the environmental approvals process.

A Definitive Feasibility Study will be the next step to establish a bankable path forward for the project. It is anticipated that tendering the consultants for this phase will take place in Q2 2021 with the study being completed in the second half of 2021. This study will refine the capital cost estimate to a +/-15% level of accuracy and set up the Project for the execution phase.

In addition to the engineering effort the project will continue to prepare for baseline environmental and social assessments on the island with a view to submission of an EIS in Q4 of 2021.



# Misima Gold Project

## Resources and Reserves Statement

**24 November 2020**

Prepared by

Kingston Resources Limited  
and  
Australian Mine Design and Development Pty Ltd

For

Kingston Resources Limited

Authors:  
Mineral Resource  
Ore Reserve

Stuart Hayward (Kingston)  
John Wyche (AMDAD)

Effective Date: 24 November 2020  
Submitted Date: 24 November 2020



## Executive Summary

Mineral Resource and Ore Reserve estimates have been completed for Misima gold deposits in accordance with the JORC Code 2012 and are current as at 24<sup>th</sup> November 2020.

Misima Mineral Resources have been estimated as 144Mt @ 0.78g/t Au & 5.2g/t Ag for 3.6 Moz gold and 24.2Moz silver (Table 1).

Misima Ore Reserves are estimated at 48.3Mt @ 0.9g/t Au & 4.2g/t Ag for 1.4Moz gold and 6.5 Moz silver (Table 2).

### Umuna

- Gold Mineral Resource of 3.3Moz
  - 132.7Mt @ 0.78g/t Au & 5.3g/t Ag for 3.3Moz Au and 22Moz Ag
  - 49% of Umuna containing 1.6Moz Au is classified as Indicated
- Gold Ore Reserves of 1.25Moz
  - 44.8Mt @ 0.87g/t Au & 4.3g/t Ag for 1.25Moz Au and 6.2Moz Ag

### Cooktown Stockpile

- Gold Mineral Resource of 0.1Moz
  - 3.8Mt @ 0.65g/t Au & 7.0g/t Ag for 0.1Moz Au and 0.9Moz Ag
- Cooktown Stockpile is classified as Inferred and not included in the Ore Reserve Estimate

### Ewatinona

- Gold Mineral Resource of 0.2Moz
  - 7.9Mt @ 0.81g/t Au & 2.8g/t Ag for 0.2Moz Au and 0.7Moz Ag
  - 60% of Ewatinona containing 0.12Moz Au is classified as Indicated
- Gold Ore Reserve of 0.1Moz (95koz)
  - 3.5Mt @ 0.8g/t Au & 2.6g/t Ag for 0.10Moz Au and 0.29Moz Ag

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## 1 SCOPE

The Misima Gold Project Mineral Resource refers to mineral deposits at Umuna and Ewatinona and Mineralised Stockpiles at Umuna.

The Misima Gold Project Ore Reserve is calculated based on open cut mining of the Umuna and Ewatinona Pits as of 24 November 2020. The two adjacent open cut pits are being brought back into production to supply ore feed to a new Carbon in Leach (CIL) processing facility at Misima Island.

## 2 CONTRIBUTING PERSONS

The November 2020 Mineral Resources and Ore Reserves Statement is prepared by Mr Stuart Hayward (Kingston) and Mr John Wyche (AMDAD) and is supported by contributions from the persons listed in Table 3.

## 3 ACCORD WITH JORC CODE

This Mineral Resource and Ore Reserves Statement has been prepared in accordance with the guidelines of the Australasian Code for the Reporting of Resources and Reserves 2012 Edition (the JORC Code 2012).

The Competent Person signing off on the Mineral Resources Estimate is Mr Stuart Hayward BAppSc (Geology), of Kingston Resources, who is a member of the Australian Institute of Geoscientists and who has 36 years of relevant experience in mineral exploration, advanced projects, mining operations, geoscience consulting, and epithermal Au and porphyry Cu-Au mineral deposits.

The Competent Person signing off on the overall Ore Reserves Estimate is Mr John Wyche BE (Min Hon), of Australian Mine Design and Development Pty Ltd, who is a Fellow of the Australasian Institute of Mining and Metallurgy and who has 31 years of relevant experience in operations and consulting for open pit metalliferous mines.

## 4 MINERAL RESOURCE SUMMARY

The Mineral Resources Estimate is summarised in Table 1

## 5 ORE RESERVE SUMMARY

The Ore Reserves Estimate is Summarised in Table 2



Deposit	Oxide	Classification	Cutoff g/t Au	Tonnes Mt	Gold g/t Au	Silver g/t Ag	Au Moz	Ag Moz	
Umuna within USD\$1700 Pit Shell	Oxide	Indicated	0.3	6.3	0.63	10.7	0.1	2.2	
		Inferred	0.3	12.1	0.67	10.4	0.3	4.1	
	Primary	Indicated	0.3	57.7	0.82	3.9	1.5	7.2	
		Inferred	0.3	53.2	0.75	5.1	1.3	8.7	
	Sub-total	Indicated			64.0	0.80	4.6	1.6	9.4
		Inferred			65.3	0.74	6.1	1.6	12.7
Total	Combined			129.3	0.77	5.3	3.2	22.2	
Umuna Extension outside USD\$1700 Pit Shell	Primary	Inferred	0.8	3.4	1.35	4.1	0.1	0.4	
Umuna Total Resource	Indicated			64.0	0.80	4.5	1.6	9.4	
	Inferred			68.7	0.77	5.9	1.7	13.2	
<b>Umuna TOTAL</b>				<b>132.7</b>	<b>0.78</b>	<b>5.3</b>	<b>3.3</b>	<b>22.6</b>	
Cooktown Stockpile	Ox-Tran- Prim	Inferred	0.5	3.8	0.65	7.0	0.1	0.9	
<b>Cooktown Stockpile</b>				<b>3.8</b>	<b>0.65</b>	<b>7.0</b>	<b>0.1</b>	<b>0.9</b>	
Ewatinona within USD\$1700 Pit Shell	Oxide	Indicated	0.3	0.4	0.68	3.2	0.01	0.04	
		Inferred	0.3	1.8	0.69	3.4	0.04	0.20	
	Primary	Indicated	0.3	3.9	0.89	2.5	0.11	0.31	
		Inferred	0.3	1.8	0.77	2.8	0.04	0.16	
	Sub-total	Indicated			4.3	0.87	2.6	0.12	0.4
		Inferred			3.6	0.73	3.1	0.08	0.4
<b>Ewatinona TOTAL</b>				<b>7.9</b>	<b>0.81</b>	<b>2.8</b>	<b>0.2</b>	<b>0.7</b>	
MISIMA	Indicated			68.3	0.80	4.5	1.8	9.8	
	Inferred			76.1	0.76	5.9	1.9	14.4	
<b>MISIMA TOTAL</b>				<b>144</b>	<b>0.78</b>	<b>5.2</b>	<b>3.6</b>	<b>24.2</b>	

Table 1 Misima Mineral Resource Estimate

Notes:

1. JORC Code 2012 definitions are used for the Mineral Resources
2. Rounding may cause apparent computational errors
3. Reported at USD1,700/oz gold price
4. Cut-off grades are based on mining studies completed as part of 2020 Misima PFS
5. Pit shells derived based on historical and PFS mining parameters

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Deposit	Tonnes Mt	Gold Au g/t	Silver Ag g/t	Gold Au koz	Silver Ag koz
<b>Ewatinona Pit</b>					
Oxide - Proved	0	0	0	0	0
Oxide - Probable	0.4	0.6	3.2	7	37
Oxide - Subtotal	0.4	0.6	3.2	7	37
Fresh - Proved	0	0	0	0	0
Fresh - Probable	3.2	0.9	2.5	88	254
Fresh - Subtotal	3.2	0.9	2.5	88	254
<b>Ewatinona Proved</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Ewatinona Probable</b>	<b>3.5</b>	<b>0.8</b>	<b>2.6</b>	<b>95</b>	<b>291</b>
<b>Ewatinona Total</b>	<b>3.5</b>	<b>0.8</b>	<b>2.6</b>	<b>95</b>	<b>291</b>
Waste	21.8				
Waste : Ore	6.1				
Total Material	25.3				
<b>Umuna Pit</b>					
Oxide - Proved	0	0	0	0	0
Oxide - Probable	2.9	0.6	8.6	55	813
Oxide - Subtotal	2.9	0.6	8.6	55	813
Fresh - Proved	0	0	0	0	0
Fresh - Probable	41.8	0.9	4	1,197	5,378
Fresh - Subtotal	41.8	0.9	4	1,197	5,378
<b>Umuna Proved</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Umuna Probable</b>	<b>44.8</b>	<b>0.9</b>	<b>4.3</b>	<b>1,251</b>	<b>6,191</b>
<b>Umuna Total</b>	<b>44.8</b>	<b>0.9</b>	<b>4.3</b>	<b>1,251</b>	<b>6,191</b>
Waste	288.2				
Waste : Ore	6.4				
Total Material	333				
<b>Total</b>					
Oxide - Proved	0	0	0	0	0
Oxide - Probable	3.3	0.6	8	62	850
Oxide - Total	3.3	0.6	8	62	850
Fresh - Proved	0	0	0	0	0
Fresh - Probable	45	0.9	3.9	1,284	5,632
Fresh - Total	45	0.9	3.9	1,284	5,632
<b>Proved</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Probable</b>	<b>48.3</b>	<b>0.9</b>	<b>4.2</b>	<b>1,347</b>	<b>6,482</b>
<b>Misima Total</b>	<b>48.3</b>	<b>0.9</b>	<b>4.2</b>	<b>1,347</b>	<b>6,482</b>
Waste	310				
Waste : Ore	6.4				
Total Material	358.3				

Table 2 Misima Ore Reserve Estimate

Notes:

1. The tonnes and grades shown in the totals rows are stated to a number of significant figures reflecting the confidence of the estimate. The table may nevertheless show apparent inconsistencies between the sum of components and the corresponding rounded totals.
2. Au koz refers to contained gold or silver in the mined ore before process recoveries are applied.
3. The Ore Reserves do not include the Cooktown low grade stockpile left from the previous open cut mine.
4. Reported at USD1,500/oz gold price



Expert Person/Company	Area of Expertise	References / Information Supplied
Stuart Hayward Kingston Resources Limited	Geology and Mineral Resource Estimation	Mineral Resource Estimate
Murray Guy Butcher G Butcher Consulting Pty Ltd	Metallurgy	Process plant design, test work and relevant capital and operating costs.
Daniel Moriarty Coffey	Environment, Approvals and Community Relations	Environmental studies and permitting/approvals
Duane Maxwell, Maxwell Engineering Thomas Keraghel, Mincore Pty Ltd	Design, Engineering, Construction and Estimation	Process plant and infrastructure capital and operating costs
Felicia Weir, Principle Pells Sullivan Meynink	Geotechnical Engineering	Geotechnical review and input
Duncan Freeman, Freeman Financial Chris Drew, Kingston Resources	Commercial Manager	Financial modelling
Andrew Corbett Kingston Resources Limited	Managing Director Kingston Resources Limited	Strategy and operational philosophy, gold and silver prices
John Wyche AMDAD Pty Ltd	Mining Engineering, Ore Reserves	Pit optimisation, design, scheduling. Competent Person for Ore Reserves.

Table 3 Contributing Experts

The contributing experts listed above are responsible for elements of the Mineral Resource and Reserves or Modifying Factors.

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## 6 PROJECT DESCRIPTION

### 6.1 Location

The Misima Gold Project is located on Misima Island, Milne Bay Province, Papua New Guinea approximately 625km east of the capital of PNG, Port Moresby (Figure 1). The project sits within granted EL1747 (The Property) that encompasses the eastern half of Misima Island (Figure 2).

### 6.2 Geology

Misima Island forms part of the Louisiade Archipelago which is a continuation of the Papuan Fold Belt of the Papuan Peninsula offshore eastwards through the Papuan Plateau (Figure 1). The Misima Gold Project comprises two main deposits, Umuna and Ewatinona, and multiple reconnaissance exploration targets along and adjacent to the 10km strike length of the Umuna Fault Corridor that hosts the historical Umuna deposit, and Quartz Mountain area that hosts the Ewatinona deposit (Figure 3).

Mineralisation deposit style on Misima Island is best described as low sulphidation carbonate base-metal epithermal. Mineralisation is strongly controlled by pre-existing structures that have been reactivated and mineralised over time.

The Umuna deposit is a complex fault array with a large SE-NW striking fault zone hosting the majority of the precious metal mineralisation, with numerous ancillary splays developed in the footwall east of the main structure. Internal structures within the fault complex and the intersection of structures and splays with the dominant Umuna Fault, are loci for zones of well-developed mineralisation.

The Ewatinona deposit is dominated by brecciated porphyry units which are cut by steeply dipping faults trending northwest, west northwest and southwest. Mineralised structures can range from crackle brecciated porphyry with base metal sulphide and quartz-carbonate-base metal sulphide infill, to more well-defined fault breccia with stockwork veining and crackle brecciation haloes.

### 6.3 Mineral Resource Estimation

Mineral Resource estimation has been completed for each deposit separately. Specific details of the modelling parameters and modelling approach for Umuna and Ewatinona, as well as details of data support and assumptions for contained tonnes and grades of Cooktown Stockpile are referenced in the attached deposit specific JORC 2012 Table 1.

The Mineral Resource Estimate and model for Umuna was completed by Skandus in 2017 (McManus 2017). It has not been modified in any way and can be referenced in ASX announcement 18 May 2020.

The Ewatinona geology and mineralisation model has been revised and rebuilt using all available historical and new data sets. Grade estimation has been completed by an Independent Consultant Resource Geologist Mr. Chris De-Vitry (MAIG, AUSIMM) of Manna Hill Geoconsulting. Geology, structure, and validated data inputs to the resource estimation are managed and provided by Kingston with geological and mineral system context provided through direct consultation between Mr. De-Vitry and Mr. Hayward (CP).



Cooktown Stockpile is a mineralised waste stockpile constructed by Placer that was not drawn down and processed at the end of the previous project life cycle (Figure 6). Kingston reported the stockpile as an Exploration Target in 2019 (Ref. ASX Announcement 2019.03.21). Historical datasets including production records and Mineral Resource Statements from 1995 to 1999 produced by Placer during mining operations record the stockpile as a “Measured Resource”. Based on a detailed review of the historical datasets and reports, Kingston report an Inferred Mineral Resource for Cooktown Stockpile recognising the requirement for confirmatory drilling and sampling during future studies.

#### 6.4 Mineral Resources

The Misima Mineral Resource totals 144Mt @ 0.78g/t Au and 5.2g/t Ag, for 3.6Moz gold and 24.2 Moz silver (Table 1), comprising 49% classified as Indicated containing 1.8Moz gold.

Individual Mineral Resources were calculated for Umuna (May 2020), Ewatinona (July 2020), and Cooktown Stockpile (November 2020) with results combined to calculate a total Resource for Misima for inclusion in Pre-Feasibility Studies. Considerations, assumptions, and modifying factors specific to each deposit and common across the project are discussed in detail in the next section and JORC 2012 Table 1.

Geology models for both Umuna and Ewatinona deposits have been evaluated using optimised pit shells at gold price points of USD\$1400, USD\$1500, USD\$1600, USD\$1700 and USD\$1800, and USD\$20 for silver. Pit shells were generated based on input mining parameters that are unchanged from previous Resource Estimations and are based on historical operational design factors and performance. Cut off grades at each deposit have been derived by mining studies completed as part of the 2020 Misima PFS.

Umuna Mineral Resources are estimated as 132.7 @ 0.78g/t Au and 5.3g/t Ag, for 3.3Moz gold and 22Moz silver (Table 1). The Umuna Resource is based on an unchanged existing geology/block model that has been re-evaluated based on revised gold price assumptions. Resource classification has not been changed or modified from previous Resource Estimations, and Mineral Resources at Umuna are reported as material classified as indicated and inferred  $\geq 0.3\text{g/t Au}$  cut-off within a USD\$1700 pit shell, and material at  $\geq 0.8\text{ g/t Au}$  cut-off immediately down dip and along strike that does not extend significant distances from the pit shell.

The Cooktown Dump Exploration Target material reported on 21 March 2019, has been upgraded to an Inferred Mineral Resource of 3.8mt @ 0.65g/t Au & 7.0 g/t Ag containing 79koz Au and 850koz Ag (Table 1), based on historical data sets and mineral resource reports produced by Placer. The Cooktown Stockpile is included as a separate component to any tonnes and grade calculations in the 2020 Mineral Resource Estimation for Umuna.

Ewatinona Mineral Resources are estimated as 7.9Mt @ 0.81g/t Au and 2.8g/t Ag, for 0.2Moz Au and 0.7Moz Ag (Table 1). The Ewatinona Mineral Resource has been significantly updated and improved using all available historical and recently acquired geological data to develop a well-supported three-dimensional, geological, structural and mineralisation model. Mineral Resources at Ewatinona are reported as material classified as Indicated and Inferred  $\geq 0.3\text{g/t Au}$  cut-off within a USD\$1700 pit shell. Classification at Ewatinona has been revised to include 54% of the Resource now assessed as Indicated using the approach detailed in the next section.

Mineral Resource Models are assessed as fit for purpose as input into Mining and Feasibility Studies.





## 6.5 Historical Mining

Gold was discovered at Misima in the late 1880s and was mined by small scale underground methods until the Second World War.

Placer Dome Inc acquired leases over parts of the eastern end of the island in 1977 and commenced exploration. Misima Mines Pty Ltd, a subsidiary of Placer Dome, commenced mining by open cut methods in 1989. Mining continued until 2001 followed by processing of low grade stockpiles through to closure of the operation in 2004. Cooktown Stockpile was not processed at the end of operations. Umuna was the main pit with contributions from satellite pits including Ewatinona and Quartz Mountain. The project produced 3.7Moz of gold from 1989 to 2004.

The Mining Licence was relinquished after closure of the operation and was then granted to Gallipoli Exploration, a wholly owned subsidiary of Pan Pacific Copper (PPC). WCB Resources entered a farm-in agreement with PPC in late 2011. In 2013 WCB Resources released an updated Mineral Resource Estimate based entirely on historical exploration and production data.

Kingston Resources (KSN) acquired WCB in late 2017. In 2018 KSN re-commenced exploration drilling leading to an updated Resource in May 2020 of 106 Mt at 0.93 g/t Au for 3.2 Moz. In June 2020 KSN executed a binding agreement to purchase PPC's remaining stake in the Misima Project. When completed this will move KSN to 100% ownership of the Mining Licence and associated exploration permits.

## 6.6 Proposed Mine Plan

KSN is seeking to re-establish operations using open cut mining and a CIL gold processing plant. The 2020 Pre-feasibility Study (PFS) is based on the currently defined resources at Umuna and Ewatinona and a new 5.5 Mtpa CIL gold processing plant based on the former Placer operation but with improvements for current technology where applicable.

Most of the target ore zones are below the bases of the existing pit voids in Umuna and Ewatinona with up to 90% of the mill feed coming from Umuna. Pushbacks of the existing pits will be required to access the majority of the target zones. There is approximately 37 Mm<sup>3</sup> of waste rock backfill in the Umuna pit void and 0.97 Mm<sup>3</sup> in the Ewatinona pit void.

Key elements of the proposed mine plan include:

- Owner mining using large hydraulic excavators and rigid body trucks,
- Drilling and blasting of all material other than backfill, although production records from the Placer mine show very low powder factors,
- Haulage of ore down to the plant site on the south side of the island,
- Haulage of waste rock to out of pit waste dumps to be formed adjacent to the pits, and
- A mining sequence designed to access shallow mill feed while the Umuna pushback and backfill are being mined.

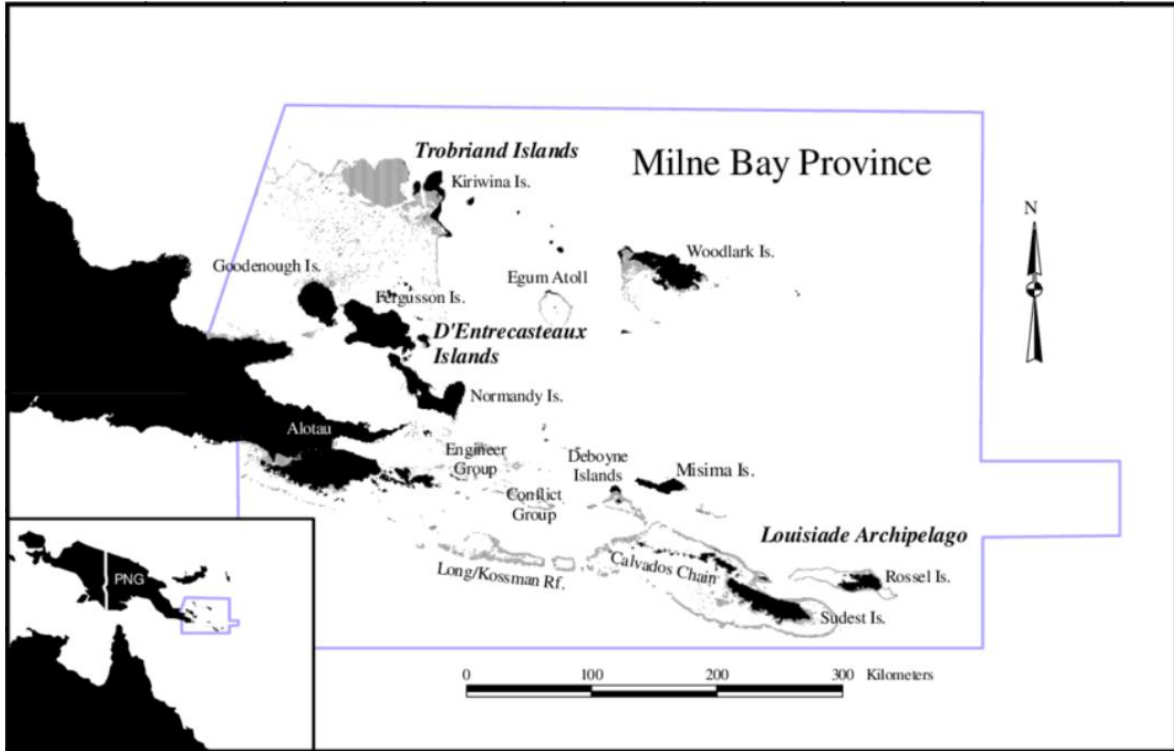


Figure 1 Misima Island Location Map

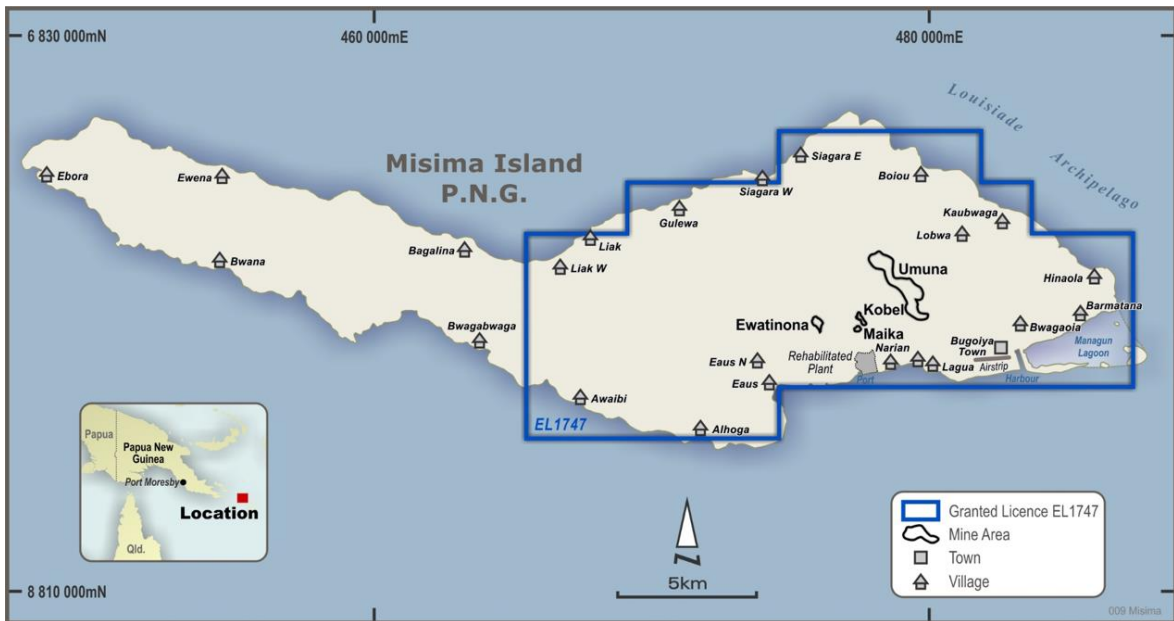
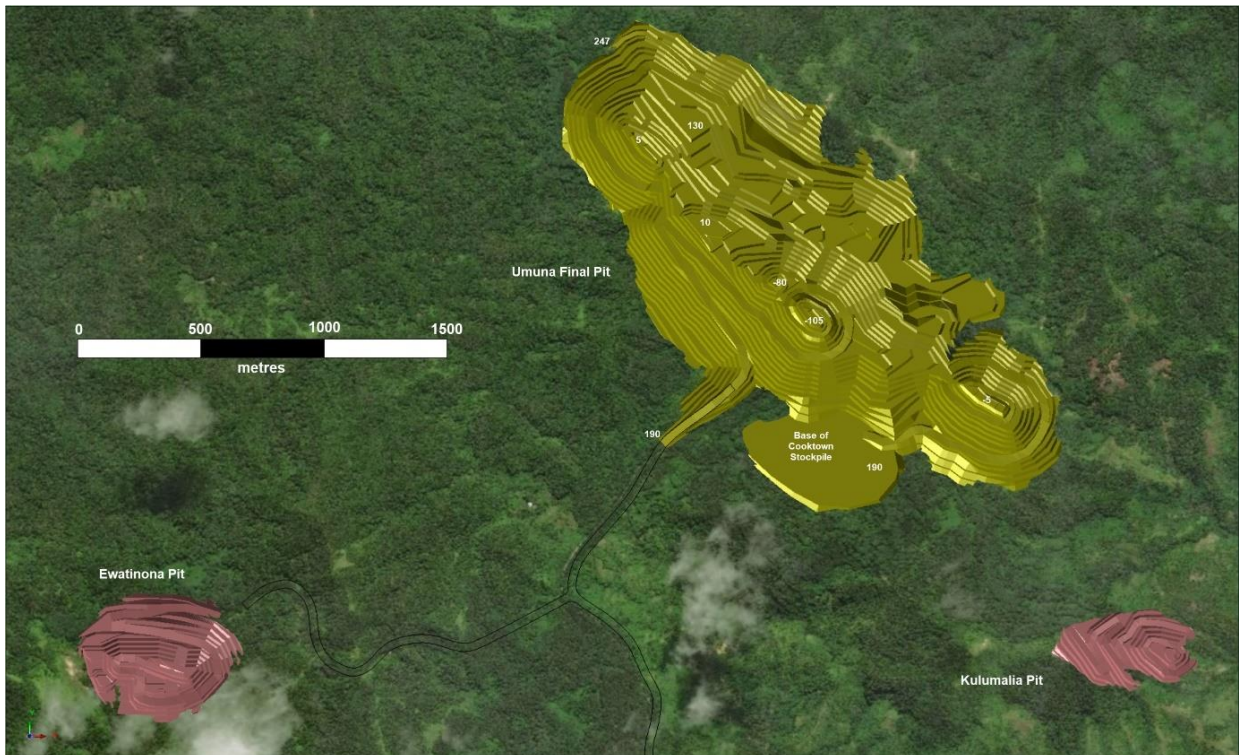
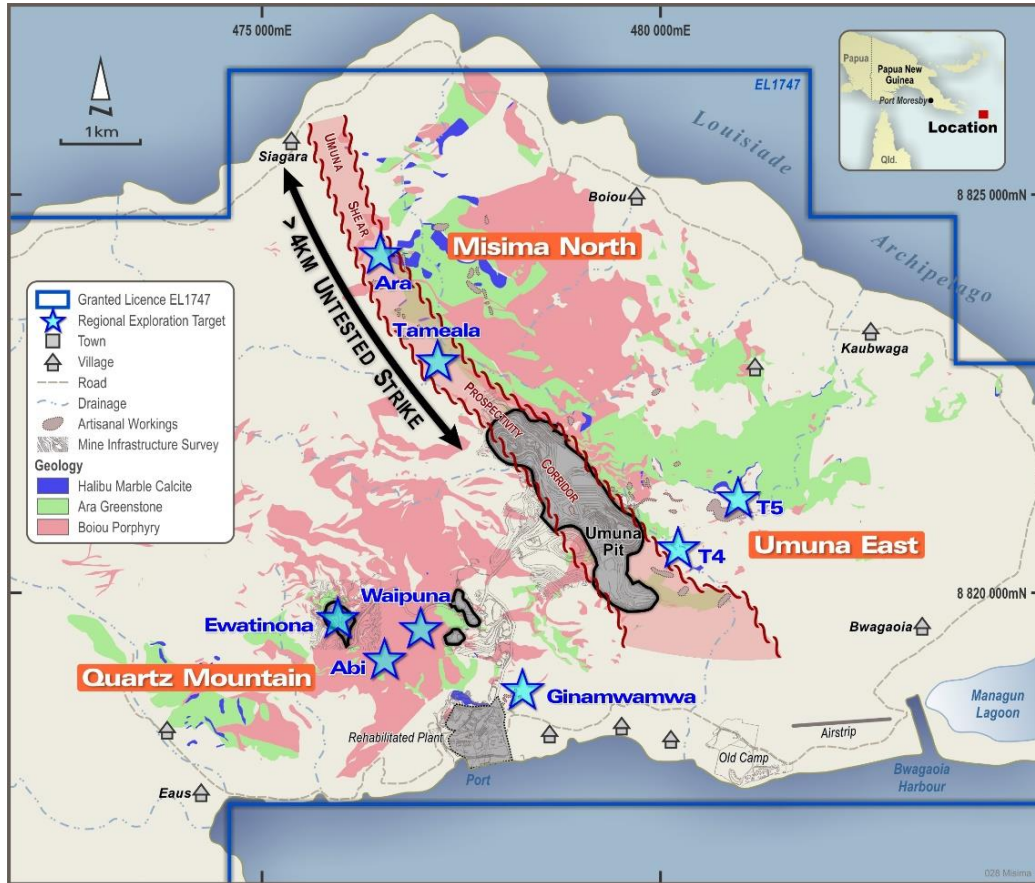


Figure 2 Granted Licence EL1747

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## 7 MINERAL RESOURCE ESTIMATION

Mineral Resource estimation for each deposit (Umuna and Ewatinona) and Cooktown Stockpile are described separately as the data inputs both historical and new, domaining and estimation approach, and key assumptions are specific to each.

### 7.1 JORC Code, 2012 Edition – Table 1 Umuna Gold Deposit, Misima Island

#### Section 1 Sampling Techniques and Data

Table 4 JORC Table 1 Section 1, Sampling Techniques and Data – Umuna Deposit

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>The project was sampled using HQ, PQ and NQ triple tube diamond drill holes (DD) (540 holes for 88,255m), Reverse Circulation (RC) (1,307 holes for 146,740m) and 144 Trenches/Channels cut with a diamond saw (for 9,212m)</li> <li>DD samples were logged, photographed and marked up in lithological and structural units and sampled in 2m lengths. Whole Core was submitted due to issues with splitting the core. RC samples were taken using a riffle splitter into 1m samples. These were further representatively split and combined into a 2m composite. If samples were wet, a tube splitter was used instead of a riffle. Trench samples were mapped and sampled in 2m intervals.</li> <li>Sample preparation was carried out on site through jaw crusher then a hammer mill, and a split sent to a lab.</li> <li>No data prior to 1978 has been used in the estimate</li> <li>From 1978 to 1987 Gold was determined using a screen fire assay (after AAS) and Silver, Copper, Lead and Zinc using Atomic Absorption Spectrometry(AAS) at Fox Laboratories in Sydney.</li> <li>From 1987-2000 Gold was determined using a screen fire assay and Silver, Copper, Lead and Zinc using AAS at the Misima Mines Pty Ltd (Placer) on site lab. Where gold was &gt; 0.5 Au ppm a check assay was carried out at Classic Labs in Townsville using screen fire assay.</li> <li>From 2012-2015 WCB Resources Ltd (WCB) Drill Assays were carried out at ALS using Au-AA25 using a 30g charge and ME-ICP61 for a suite of 33 elements</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>Diamond drilling (DD) accounts for 36% (based on metres) of the drilling used in the Resource and comprises of PQ, HQ and NQ sized triple tube core. Drillhole depths range from 5 to approximately 433m with an average depth of 151m. Some Drill core was oriented to assist in structural interpretation. RC Drilling accounts for 60% of the drilling in the Resource. RC diameter ranged from 4" to 5". Drillhole depths range from 15 to 269m with an average depth of 120m.</li> </ul>





Criteria	Commentary
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>• DD Recovery was determined at the drill site while core was still in the inner tube of the wire-line core barrel. RC recovery was assessed at the rig, and where suspect it was noted in the log sheets. Attention was paid to expected sample weights. Placer procedure document outlines the recovery procedures for DD and RC drill holes.</li> <li>• Larger diameter PQ, HQ and NQ size core was used to provide improved recovery and triple tube drilling employed to preserve core in a more coherent state for logging and also to improve recovery in very broken or clayey lithologies. RC Samplers were to keep an eye on sample weights produced at the rig and advise the Geologist if the weight was more or less than expected. RC samples were riffle split to produce a representative sample on site. Where the sample was wet a tube splitter was used. Diamond core was not split, with the whole drill core been taken for sample.</li> <li>• There does not appear to be a correlation between mineralisation and poor core recovery for the DD holes that have recovery recorded. Core recovery was extremely variable during the project. WCB holes have good recoveries with 90+% in the mineralised intercepts. No bias with grade has been noted. Recovery of RC samples, where poor, was noted in the drill logs, and intervals marked as suspect.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• All core and chips have been suitably logged to industry standard and are appropriate to support resource estimation.</li> <li>• Diamond core has been qualitatively logged for lithology, size, colour, texture, alteration, structure, weathering, and a mixture of qualitative and quantitatively logged for mineralisation, structure orientation, geotechnical and veining. RC chips were qualitatively logged for colour, weathering, lithology, alteration and mineralisation quantitatively logged. Magnetic susceptibility was logged for all drill holes. All core was photographed wet. Digital and Analogue photography is available for DD core.</li> <li>• All intervals for RC and DD have been logged. For a total of 244,207m</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• Core was not sub-sampled as the whole core was taken as a sample. Quartered samples were taken as required for petrography.</li> <li>• Chip samples were riffle split (tube split if the sample was wet) and sampled dry, which was noted in log sheets. All 2m composites were assayed. Anomalous or suspect intervals were re-assayed from coarse rejects.</li> <li>• Sample preparation for all samples followed Placer or WCB standard methodologies which are appropriate.</li> <li>• QAQC procedures included checking the homogeneity of the sample at the hammer mill split via duplicates, assay reliability via inter lab checks of lab pulp and coarse rejects, free Au potential via screen fire assay, as well as the use of matrix specific standards, blanks and field duplicates. All samples that had reported gold had their coarse rejects kept in labelled core trays in the core yard for later checks and duplication as required (This material is no longer available due to the fast decomposition of the material).</li> <li>• Field duplicates were taken to ensure representative sampling.</li> </ul>

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Criteria	Commentary
<p><i>Quality of assay data and laboratory tests</i></p>	<ul style="list-style-type: none"> <li>• Diameter of core sizes employed are considered appropriate to the grain size of the gold and in line with general industry practice for epithermal style gold deposits. Field duplicates were routinely checked to ensure that they reported within acceptable limits. Screen fire assays were routinely taken to check for the presence of free gold and the gold sizing.</li> <li>• All assay techniques used during the three stages of drilling used in the estimate are appropriate. Gold is determined by 50g Fire Assay. The technique is total.</li> <li>• No geophysical tools were used to determine any element concentrations used in this Resource Estimate. Grind size checks were performed by the labs and reported as part of their due diligence.</li> <li>• One reference sample was inserted into laboratory dispatches every 50 samples submitted. The various standards used were: &lt; 5 ppb Au, &gt; 0.1 ppm Au and &gt; 2.5 ppm Au. The geologist who logged the hole was required to select the standard that he thought best reflected the assay result expected for that batch of 50 samples. Sixty gram samples of standards were weighed from the original shipment of certified reference material. Blanks, consisting of unmineralised limestone, were used from at least 1999. Duplicates of all samples and the reject from the jaw-crusher and hammer-mill stages of subsampling were retained at the geology storage shed for reassay if required. Two pulps were made from the hammer-milled samples that had sample numbers ending in zero; i.e., every tenth sample. The letters “A” and “B” were added to these sample numbers and both were presented to the mine laboratory for assay. The rejected hammer-milled pulp from the “A” sample was then split: one of these splits was sent to ALS, Townsville, Australia and the other to Classic Laboratories also in Townsville, Australia as check samples.</li> </ul> <p>Files were provided to Australian Mining Consultants (AMC) during the 2013 and 2015 Resource Estimate and to Skandus which provide evidence that the documented sampling protocols were carried out across the Property. They also include some of the QA/QC checks and results between the years 1978 and 2004 at Misima and nearby deposits, including Ewatinona.</p> <ul style="list-style-type: none"> <li>• The files are not sufficient to demonstrate the continuous implementation of the QA/QC system or results throughout the drilling history. However, the files do indicate that sampling and assaying protocols and a level of QA/QC checks were in place certainly for some of the drilling programs during these years.</li> <li>• AMC reviewed the available QA/QC data in terms of validity of procedures and the spatial impact of results on the 2015 Mineral Resource.</li> </ul> <p>In summary:</p> <ul style="list-style-type: none"> <li>• An industry standard QA/QC system was in place during early years of drilling, from 1978 to 1987</li> <li>• There was an awareness and some focus of sampling limitations and protocols in 1990 and steps were taken to improve sample preparation</li> <li>• A more comprehensive QA/QC system was in place from 1999 to 2004</li> </ul>

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Criteria	Commentary
	<ul style="list-style-type: none"> <li>• Drillholes from 2000–2004 appear to have had undergone regular QA/QC checks and are therefore likely to have a higher level of confidence. Although it would be desirable to have demonstrated higher precision in the samples, the QA/QC data indicates that the assays were unbiased.</li> <li>• There is sufficient information on sampling and assaying protocols, supported by sufficient QA/QC and mine production data to conclude that the sample database is adequate to support Measured or Indicated Mineral Resource Estimates.</li> <li>• Skandus reviewed MML mine memos relating to QAQC and concluded that there was an ongoing active program where issues were identified and efforts were taken to improve process, this also included a site visit by Pitard (1990) which coincides with the site efforts to improve sampling limitations and protocols.</li> </ul>
<p><i>Verification of sampling and assaying</i></p>	<ul style="list-style-type: none"> <li>• Significant intersections were inspected in the field by staff geologists to confirm nature of mineralisation and verify integrity of sampled intervals.</li> <li>• Twinning had not been regularly carried out, during 2013 and 2015 AMC carried out a review of drill holes close by using boundary tools in Datamine and found acceptable correlation.</li> <li>• All Data, data entry procedures, data verification and data storage has been carried out in accordance with Placer and WCB Standard Operating Procedures (SOPS). Historical records are currently stored at a facility in Townsville whilst WCB Records have been transferred to KSN. Digital records are stored in various electronic formats. Skandus carried out its own validation checks on the drill hole files and original GEOLOG files provided after transfer and found there to be very few validation issues. Skandus also reviewed all Placer data and data protection SOPS, and selected documentation and found all work had been carried out to acceptable industry standard and care. Skandus has experience with the GEOLOG system and also reviewed original GEOLOG format files, and scans of Analogue GEOLOG log forms. Despite the data not being in a suitable database the data quality is good.</li> <li>• No adjustments or calibrations were made to any assay data used in this Resource Estimate.</li> <li>• Historical data from Placer (which was extracted from the GEOLOG system on behalf of WCB) and WCB data has been translated and stored in acquire database management system.</li> </ul>
<p><i>Location of data points</i></p>	<ul style="list-style-type: none"> <li>• Data locations were not modified or changed in any way in 2020.</li> <li>• Drillhole collar surveys were conducted as soon as possible after drilling. Downhole surveys, to maintain a record of hole deviation, were conducted on angled cored holes after each 50m was drilled. Packets containing downhole survey discs were present in several scanned images, indicating that an Eastman single shot camera was the survey tool in use at the time.</li> </ul> <p>During recent resource estimation work, it was established that all survey azimuths used in the GEOLOGs were magnetic, allowing easy adjustment of the down-the-hole survey data for the grid being used.</p> <p>In the recent diamond drilling completed by WCB, down hole surveying was conducted on intervals approximating every 30 metres.</p>

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Criteria	Commentary
	<ul style="list-style-type: none"> <li>GDA94 datum (Zone 56).</li> <li>All data is provided in either GDA94, AGD66, Truncated AGD or Placer local mine grid. The estimate has been carried out in the local Placer mine grid. There is good documentation outlining the conversion methodology. LOCAL MMPL X = -5,146,863 + ( 0.8420881 * AMGX ) + ( 0.5400387 * AMGY ) LOCAL MMPL Y = -7,149,444 + ( -0.540031 * AMGX ) + ( 0.8420999 * AMGY )</li> <li>Topographic control was checked during 2015 by a new topographic survey conducted by WCB. AMC during the 2015 report reviewed the control with drillhole collars and end of mine surveys and found it was sufficient to support measured or indicated mineral resource estimates.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Drillhole spacing is approximately 25m by 25m with downhole sampling predominantly at 2m intervals adjacent to the main Umuna zone, at depth and distal zones have a 50m x 50m drill hole spacing. The majority of the RC and diamond holes were angled holes at a variety of dips and orientation, predominantly normal to the structure of interest. Some historical drilling was vertical until orientation of target structures were well known.</li> <li>For the size of the deposit and expected mining block (and historical mining block), the spacing gives good coverage of the mineralised zone and at a suitable spacing to Estimate Blocks. Sample spacing has been taken into consideration for classification of the Resource Blocks.</li> <li>Samples were composited to 2m.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Based on the current geological model of steep structurally controlled and gently dipping strata bound mineralisation, the orientation is appropriate for each of the differently oriented zones and styles.</li> <li>No orientation based sampling bias has been identified in the data at this point.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>Placer and WCB had industry standard SOPs and protocols for governing sample security. Skandus interviewed previous Senior Technicians and Geologists from WCB and Placer as well as reviewed the SOP documents and found that sample security on historical samples was adequate, this is backed up by the physical remnants of material such as sample tags, lock ties, bags and drums used during the WCB campaign still in storage at the WCB site office.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>Skandus, has reviewed sampling memos and a report by Pitard that audited and reviewed the Placer sampling in 1990. Pitard identified some issues and made recommendations to improve sampling. Documentation shows that these recommendations were put into practise by Placer. WCB sampling and data was reviewed by AMC during a 2013 technical report. AMC found that the core handling, logging and sampling was carried out to industry standards.</li> <li>No new audits or reviews of data have been completed by Kingston for the 2020 Resource Update</li> </ul>

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## 7.2 Section 3 Estimation and Reporting of Mineral Resources -Umuna Deposit

Table 5 JORC Table 1 Section 3, Estimation and Reporting of Mineral Resources – Umuna Deposit

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> <li>• Drilling of the Umuna zone was conducted between 1978 and 2000 by MMPL. Barrick acquired Placer in 2006. Barrick provided the drillhole data to WCB which was used for the current Mineral Resource Estimate. The data was provided in a software format called GEOLOG, and the data was converted to a Microsoft Access format by Mr R F Williams of WIZTECH Information Services, (WIZTECH). WIZTECH personnel had a long history with MMPL, and were familiar with the data. The assay data loaded from the supplied GEOLOG files was checked for quality using standard statistical analysis, including mean pair relative difference (MPRD), scatterplots and summary statistical tables. The information consisted of files for surveys, assays and geology for 2,640 drillholes and trenches, including 1,945 drillholes and 144 trenches in the Umuna area</li> <li>• In addition, production blasthole data for the Umuna deposit, provided by the Centre for Computational Geostatistics, University of Alberta was used as a data set for completing validation checks against the new Resource Model as well as providing additional control data for the “as mined” surface. Additional support and documentation including original drill logs, assay sheets, survey sheets, core photographs, monthly production records, monthly exploration reports, reconciliation reports, site survey data, mining consultant’s reports, mill records, environmental data and additional technical data were also located by WCB in Cairns, Australia and were available for review and inclusion in the assessment of data quality.</li> <li>• This was audited and confirmed by AMC during a Nat Inst 43-101 report, this has included checking against assay files, core photography, reconciliation of blast hole vs drill hole data, a review of variography, a review of topographic control against a 2015 survey.</li> <li>• Data from WCB exploration has been stored electronically and is able to be checked and validated against hand logs and excel initial log sheets and core photography.</li> <li>• Skandus has reviewed the work carried out by Wiztech and AMC and carried out its own validation and verification against photos and original snap shots of GEOLOG files and hand-written geology files and confirms their findings. Skandus had experience with GEOLOG whilst working at Pancontinental mining during the 1990s.</li> <li>• No new data has been included in this update and original data files used by Skandus used to review the model and reporting</li> </ul>

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Criteria	Commentary
<p><i>Site visits</i></p>	<ul style="list-style-type: none"> <li>• Stuart Hayward in the role of FIFO Exploration Manager and Chief Geologist was in regular attendance on site overseeing and managing geology and drilling and sampling activities since April 2019. Mr. Hayward is familiar with carbonate-base metal-Au mineral systems and the Umuna and Ewatinona deposits, having spent significant time reviewing data sets and completing on ground traverses of all prospect and work areas within the Misima Gold Project.</li> <li>• Scott McManus of independent geological consulting firm Skandus Pty. Ltd, completed a site visit in August 2017 and traversed the main Umuna and Kulumalia structures, viewed artisanal mining of a splay which confirmed the thickness of the splays in the Resource Model, met local land owners, traced out the porphyry alteration halos, examined channel samples cut into the existing pit wall and reviewed past exploration practise with previous MMPL and WCB employees and located historical drill collars. No exploration was active during the visit.</li> </ul>
<p><i>Geological interpretation</i></p>	<ul style="list-style-type: none"> <li>• The Umuna geology model has not been modified in any way from that generated in 2017 by Skandus.</li> <li>• The current model is a progression from MMPL models and the 2013 and 2015 model. The 2017 model has split the main Umuna zone into sections separating out skarn and splay mineralisation and extending the broad zones of the eastern breccia zone making use of recent mapping and structural work of WCB field geologists. The model is entirely reasonable and is supported by WCB field geologists.</li> <li>• The current model makes use of surface mapping data (especially mapped breccias), channel samples, indicators of alteration in categorical drillhole lithologies and blast holes where geological confidence was high to extend the wireframe envelopes for drill targeting and allowing blocks to be created during estimation up to the limits of the variogram ranges. The process of interpreting the new domains was an iterative process where;             <ul style="list-style-type: none"> <li>• Implicit models of various gold grades were created</li> <li>• Implicit models of indicator categorical lithological, structural and alteration values were created</li> <li>• Implicit models of blast hole gold grades were created</li> <li>• Surface channel samples were pressed on to the original topography wireframe and used as a guide in section for surface extents of mineralization to aid in estimating structural and mineralization orientation</li> <li>• Breccia and other lithological units from surface mapping were digitised and their outlines pressed on to the original topography wireframe and used as a guide in section for surface extents of mineralization to aid in estimating structural and mineralization orientation</li> <li>• Drill hole samples showing Copper, Lead, Zinc and Silver as well as Gold, structural information and alteration minerals were displayed in section</li> <li>• Rings interpreting the zones were digitised on screen using 50m sections. For the Kulumalia zone the sections were angled to present a normal plane to the mineralization, whilst the other 5 zones used north sections (east-west)</li> <li>• Interpretations were reviewed by WCB geologists to ensure the interpretations matched the current WCB geological interpretation for the deposit</li> <li>• Drill results indicate that the mineralisation continues at depth and along strike of the Umuna Zone. Surface exploration activities have further identified additional extensions of mineralised material and suggested the potential</li> </ul> </li> </ul>

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Criteria	Commentary
	<p>of additional mineralised splays. Oxidation due to weathering has been defined by logged codes and low value Sulphur assays. There is evidence of gold enrichment at the base of the oxide zone.</p> <ul style="list-style-type: none"> <li>• Oxidation flags (SOX, SUP and SSX for oxidized, partly oxidized and fresh) were included in most logged intervals in the original drillhole GEOLOGs. These were used to model a solid for complete oxidation. As the oxidation surface is locally overturned, it could not be built as a DTM. The samples were flagged by the oxidation zone, creating an OXID field (1=oxidized, 2=fresh). Oxidation is important as it affects the distribution of gold and silver at Misima.</li> <li>• Geological understanding is high and appropriate for resource estimation</li> <li>• Alternative interpretations are possible for parts of the mineral zone definition but are unlikely to affect the estimates. Blast hole data provides good information on the local controls to the mineralization.</li> <li>• The complexity of overlapping mineral styles and the orebody type means there is both a strong strata bound and strong structural control to the gold grade and geological continuity of the mineralisation.</li> </ul>
<i>Dimensions</i>	<ul style="list-style-type: none"> <li>• The model measures 3,400m in the north axis up to 750m in the East axis and by 500m from surface. (Maximums)</li> <li>• The Resource is divided into 5 main lithological domains, 6 mineralisation domains and then two oxide domains. The mineralisation domains are sub domained by the oxide for a total of 12 mineralisation domains.</li> <li>• At Kulumalia the Deposit outcrops, as does parts of the Umuna zone in the bottom of the existing pit and in the pit walls.</li> </ul>
<i>Estimation and modelling techniques</i>	<ul style="list-style-type: none"> <li>• The Gold and Silver block grade was estimated using Ordinary Kriging using Datamine Studio 3 software. Pb, Zn and Cu were determined by distance weighted methods.</li> <li>• Ordinary Kriging is an appropriate method to use as long as top cutting is carried out and the data is domained.</li> <li>• There is no strong correlation between Au and Cu and Ag but there is a moderate correlation between Au and Pb &amp; Zn</li> <li>• The base of oxidation was treated as a soft boundary in all search passes as were boundaries between the domains that had previously been modelled as Umuna structure or where the intersection of two structures makes it difficult to allocate drill intercepts.</li> <li>• The Estimation was made using a minimum of 5 and a maximum of 25 composites to make estimates with an average of 14 composites.</li> <li>• No assumptions were made regarding the recovery of any by-products.</li> <li>• Variography parameters were determined for each mineralisation domain in both oxide and fresh. Where insufficient points were available previous variogram parameters were used. The spatial continuity demonstrated within blastholes and drillhole composites is comparable even though the sample support and density differs. The variography of the two blasthole subsets are similar. There is support from this analysis that a correlation exists between gold grades up to a distance of 170 m along strike, 90 m down dip, and 85 m across dip.</li> <li>• Drill holes are on relatively regular but variably spaced grids with a nominal spacing of 25 by 25m increasing to a nominal 50 by 50m. Block size was set at 5x15x10m (X, Y and RL) following on from modelling size used during production. Discretisation was set to 2x4x6 (E, N, RL respectively).</li> <li>• Dynamic anisotropy modelling was used to handle the changes in strike and dip of the Umuna mineralized zones. In this technique, each block has a unique search orientation. This method was also used for the 2013 and 2015 estimates.</li> </ul>

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Criteria	Commentary
	<ul style="list-style-type: none"> <li>Modelling used an expanding search pass strategy with the initial search radii based on the detailed drill spacing increasing to take in the geometry of the mineralisation and the variography. Modelling consisted of one estimation run with 3 passes. The minimum search used was 60% of the variogram, and the second search pass was 90% of the variogram. The third pass was not used in classification and only used to estimate exploration targets. It was 2.5 x the first search pass and extends just past the maximum range of the variograms.</li> <li>The maximum extrapolation of the estimates is about 99m for search pass 2, which is less than the maximum continuity found in variograms or approximately 90% of the range of the variogram.</li> <li>No deleterious elements or acid mine drainage has been factored in.</li> <li>The final Block Model was reviewed visually in section and plan and it was concluded that the block model fairly represents the grades observed in the drill holes. Skandus also validated the Block Model statistically using a variety of histograms and summary statistics in the X, Y and Z directions. Grade and Tonne Profiles (swath plots) were also compared to the 2015 blast hole model and 2015 drill hole based Resource Estimate as well as to the 2m composites.</li> <li>Gold mineralisation at Umuna lacks the extreme high grades of other epithermal deposits. The maximum gold grade for a 2 m composite is 72.5 g/t. Free gold was reported to be very rarely seen in Misima drill core. Silver has a more extreme range than gold, reaching a maximum of 1,320 g/t Ag. When the Coefficient of Variance (CV) is greater than 1.2, it is appropriate to apply a cut. Top-cuts were selected using a combination of cutting-statistic plots, histograms and probability plots using both Phinar X10 Geo and Snowden Technology Supervisor. High grade tails were identified and their distribution shown in 3D to ascertain if they were closely grouped or widely dispersed within the domain. If closely grouped the cut was applied where the high grade tail fully disintegrated and there was not enough samples to define the tail. Where the high grade data was more widely dispersed, the cut was applied close to the start of the high grade tail, as these samples are more likely to have an effect on blocks. Each domain was top cut separately.</li> <li>Whilst production has taken place there are no detailed records with which to compare local reconciliations. Global reconciliations as well as comparison of models generated from production blast holes provide good correlation.</li> </ul>
<i>Moisture</i>	<ul style="list-style-type: none"> <li>Tonnages are estimated on a dry weight basis; moisture not determined.</li> </ul>
<i>Cut-off parameters</i>	<ul style="list-style-type: none"> <li>The cut-off grade at which the Resource is quoted reflects an intended mining approach by KSN and is consistent with initial pit optimisation work and mine planning and scheduling during the 2020 PFS using the 2017 model.</li> <li>A 0.30 g/t gold cut off was used for oxide and transitional and for fresh material within the US\$1700 pit shell.</li> <li>The base of oxidation was used to divide the oxide and fresh rock Resources</li> <li>A 0.8g/t Au cut-off grade is used to define Resources that are down dip extensions that extend to approximately 75 m below the pit floor that may be feasibly minable based on schedule and operational and design modifications during mining</li> </ul>
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> <li>KSN is assuming extraction will be consist of conventional large-scale open pit methods capable of mining between 5-6Mtpa using an ore-waste cut-off grade of 0.3g/t Au and bulk mining techniques.</li> <li>Any internal dilution has been accounted for with the modelling and as such is appropriate to the block size.</li> <li>KSN has completed a Pre-Feasibility Study on the Resource Model.</li> </ul>

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Criteria	Commentary
	<ul style="list-style-type: none"> <li>Minimum mining dimensions are expected to be in the order of 5m and 10m bench height and 10m across strike (X dimension). The block sizes used in the model are considered appropriate for this style of mining. These assumptions are based upon MMPL's previous experience mining at Umuna and consideration of the distribution of mineralisation.</li> </ul>
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li>Metallurgical assumptions have been reviewed by KSN during PFS studies and is based on information from the past operation by Placer. Refer to JORC 2012 Table 1 Section 4 below.</li> <li>It is assumed that there will be no other significant problems recovering the gold.</li> <li>No penalty elements identified in work so far.</li> </ul>
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> <li>The area lies within hilly terrain with narrow watercourses and is very close to the coast.</li> <li>The area is covered with secondary vegetation.</li> <li>There are no existing environmental liabilities associated with the Property. Previous liability associated with the mining operation ceased upon the surrender of SML1 which was completed in April 2012.</li> <li>MMPL adopted a continuous rehabilitation approach to the staged operation. Environmental data including site sampling has been sourced and is used for baseline studies.</li> <li>During previous Placer production CIP tailings were washed in a three-stage counter-current decantation circuit before disposal to the ocean floor via a sea-water mix tank, one valley was also used for low grade waste.</li> </ul>
<i>Bulk density</i>	<ul style="list-style-type: none"> <li>Bulk density at Misima is affected more by weathering than by rock type. The 1986 feasibility report used values based on measurements on large pieces of PQ drill core (measured volume and dry weight) and measurements using surface excavations (volume of excavation and dry weights of the excavated material). During mining these values were found to be accurate and have been continued to be used for Resource Estimates. The following values are applied for each material type, Oxide 2.10, Fresh 2.49, Backfill 1.90 and Water 1.0 (t/m<sup>3</sup>)</li> </ul>
<i>Classification</i>	<ul style="list-style-type: none"> <li>Mineral Resources have been classified on sample spacing, grade continuity, QAQC, geological understanding sensible mining depths, topography, block variance, the number of samples used and the number of holes used to inform the block.</li> <li>Classification has included Indicated &amp; Inferred Resources.</li> <li>The classification appropriately reflects the Competent Person's view of the deposit.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>No audits or reviews completed.</li> </ul>
<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"> <li>The relative accuracy and confidence level in the Mineral Resource estimates are considered to be in line with the generally accepted accuracy and confidence of the nominated Mineral Resource categories. This has been determined on a qualitative, rather than quantitative, basis, and is based on the Competent Person's experience with similar deposits.</li> <li>The geological nature of the deposit, the modelling method and the composite/block grade comparison lend themselves to a reasonable level of confidence in the resource estimates.</li> <li>The Mineral Resource estimates are considered to be reasonably accurate globally, but there is some uncertainty in the local estimates due to the current drillhole spacing.</li> <li>No local production data is available for local comparison but it is for global which provides a good correlation.</li> </ul>

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### 7.3 JORC CODE 2012 EDITION, TABLE 1 - Ewatinona Deposit, Misima Island

#### Section 1 Sampling Techniques and Data

Table 6 JORC Table 1 Section 1, Sampling Techniques and Data - Ewatinona

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>The project was historically sampled by Misima Mines Pty Ltd (Placer) between 1998-2000 using HQ, PQ and NQ triple tube diamond drill holes (DD) (100 holes for 13,840m) and Reverse Circulation (RC) (246 holes for 23,452m)</li> <li>Kingston completed an additional 36 PQ and HQ triple tube diamond drill holes in 2019-2020 for 6017m.</li> <li>Placer:               <ul style="list-style-type: none"> <li>DD samples were logged, photographed, and marked up in lithological and structural units and sampled in 2m lengths. Whole Core was processed and submitted for analysis due to issues with splitting the core.</li> <li>RC samples 1m long were taken using a riffle splitter. These were further representatively split and combined into a 2m composite. If Samples were wet, a tube splitter was used instead of a riffle. Sample preparation was carried out on site through jaw crusher than a hammer mill, and a split sent to a lab.</li> <li>From 1989-2000 gold was determined using a screen fire assay and silver, copper, lead and zinc using an AAS at the Misima Mines Pty Ltd (Placer) on site lab. Where gold was &gt; 0.5 Au ppm a check assay was carried out at Classic Labs in Townsville using screen fire assay.</li> </ul> </li> <li>Kingston (2019-2020):               <ul style="list-style-type: none"> <li>Diamond drill core is sampled in 2m intervals away from the ore zone or to lithological contacts, whichever is shorter. In mineralised areas core is sampled in 1 to 2m lengths or to lithological contacts. Minimum interval sampled being 0.5m.</li> <li>Samples are transported to Intertek in Lae where they are dried and crushed to 95% passing 3mm. The crushed sample is then pulverised and a 50g charge is taken for gold analysis by fire assay.</li> <li>A 100g pulp from each sample is flown to Townsville where they are analysed using Intertek's Four Acid 33 Element package. An optical emission spectroscopy (OES) finish is provided for Ag, Pb, Zn and Cu values that report over-range assays.</li> </ul> </li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>Diamond drilling (DD) accounts for 44% (based on metres) of the drilling used in the geology modelling and Mineral Resource and comprises of PQ, HQ and NQ sized triple tube core. Drillhole depths range from 46 to approximately 388 m with an average depth of 113m. RC drilling accounts for 56% of the drilling used for geology modelling and the Resource. RC diameter ranged from 4" to 5". RC drill hole depths range from 50 to 171m with an average depth of 94m.</li> </ul>

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Criteria	Commentary
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Kingston: PQ and HQ triple-tube diamond drilling. Of the additional 4,609 metres 34% is PQ and 66% HQ core size.</li> <li>All core Kingston drill core is oriented using a Reflex digital orientation tool. Only a portion of Placer drill core was orientated.</li> <li>Placer (1989-2000) <ul style="list-style-type: none"> <li>DD recovery was determined at the drill site while core was still in the inner tube of the wire-line core barrel. RC recovery was assessed at the rig, and where suspect it was noted in the log sheets. Attention was paid to expected sample weights.</li> <li>Larger diameter PQ, HQ and NQ size core was used to provide more improved recovery and triple tube drilling employed to preserve core in a more coherent state for logging and to improve recovery in very broken or clayey lithologies. RC samplers were to keep an eye on sample weights produced at the rig and advise the Geologist if the weight was more or less than expected. RC samples were riffle split to produce a representative sample on site where the sample was wet a tube splitter was used. Diamond core was not split, with the whole drill core been taken for sample.</li> <li>Review of historical data sets by WCB found that there does not appear to be a correlation between mineralisation and poor core recovery for the DD holes that have recovery recorded. Core recovery was extremely variable during the project. No bias with grade has been noted. Recovery of RC samples, where poor, was noted in the drill logs, and intervals marked as suspect.</li> </ul> </li> <li>Kingston (2019-2020) <ul style="list-style-type: none"> <li>Core recovery is measured as the difference between core recovered in a drill run and the down-hole run shown on the driller's core blocks.</li> <li>The Driller modifies drilling pressure to optimise core recovery as much as possible, particularly in areas of softer lithologies.</li> <li>There is no observed relationship or bias between sample recovery and grade.</li> </ul> </li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>All core and chips have been logged to an industry standard and the logging is appropriate to support resource estimation.</li> <li>Diamond core has been qualitatively logged for lithology, size, colour, texture, alteration, structure, weathering, and a mixture of qualitative and quantitatively logged for mineralisation, structure orientation, geotechnical and veining. RC chips were qualitatively logged for colour, weathering, lithology, alteration and mineralisation quantitatively logged. Magnetic susceptibility was logged for all drill holes. All core was photographed wet. Digital photography is available for DD core.</li> <li>All intervals for RC and DD have been logged for a total of 41,901m.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>Placer drill core was not sub sampled as the whole core was taken as a sample. Quartered samples were taken as required for petrography.</li> <li>Chip samples were riffle split (tube split if the sample was wet) and sampled dry, which was noted in log sheets. All 2 m composites were assayed. Anomalous or suspect intervals were re-assayed from coarse rejects.</li> <li>Kingston:</li> </ul>

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Criteria	Commentary
	<ul style="list-style-type: none"> <li>Up to September 2019, PQ3 core is cut and sampled as quarter core. From Oct. 2019, PQ3 core is cut and sampled as half core.</li> <li>HQ3 core is cut as half core. The orientation line is used as a cutting guide to ensure consistency in sampling.</li> <li>The sampling interval and technique is considered appropriate for the style of mineralisation and is consistent with the techniques used by Misima Mines Ltd (Placer) during previous exploration and mining of the project.</li> <li>The sample size is appropriate to the observed mineralisation style and historical geostatistical distribution of gold values.</li> <li>Sample preparation for all samples followed Placer standard methodologies and modified and updated by Kingston where appropriate.</li> <li>Diameter of core sizes employed are considered appropriate to the grain size of the gold and in line with general industry practice for epithermal style gold deposits. Field and laboratory duplicates were routinely checked to ensure that they reported within acceptable limits. Screen fire assays were selectively taken to check for the presence of free gold and the gold sizing.</li> </ul>
<p><i>Quality of assay data and laboratory tests</i></p>	<ul style="list-style-type: none"> <li>All assay techniques are appropriate. The technique is total.</li> <li>No geophysical tools were used to determine any element concentrations. Grind size checks were performed by the labs and reported as part of their due diligence.</li> <li>Placer:             <ul style="list-style-type: none"> <li>QA/QC procedures included checking the homogeneity of the sample at the hammer mill split via duplicates, assay reliability via inter lab checks of lab pulp and coarse rejects, free gold potential via screen fire assay, as well as the use of matrix specific standards, blanks and field duplicates. All samples that had reported gold had their coarse rejects kept in labelled core trays in the core yard for later checks and duplication as required. This material is no longer available due to the fast decomposition of the material.</li> <li>Field duplicates were taken to ensure representative sampling.</li> <li>One reference sample was inserted into laboratory dispatches every 50 samples submitted. The various standards used were: &lt; 5 ppb Au, &gt; 0.1 ppm Au and &gt; 2.5 ppm Au. The Geologist who logged the hole was required to select the standard that they thought best reflected the assay result expected for that batch of 50 samples. Sixty-gram samples of standards were weighed from the original shipment of certified reference material. Blanks, consisting of unmineralised limestone, were used from at least 1999. Duplicates of all samples and the reject from the jaw-crusher and hammer-mill stages of subsampling were retained at the geology storage shed for re-assay if required. Two pulps were made from the hammer-milled samples that had sample numbers ending in zero, i.e., every tenth sample. The letters "A" and "B" were added to these sample numbers and both were presented to the mine laboratory for assay. The rejected hammer-milled pulp from the "A" sample was then split: one of these splits was sent to ALS, Townsville, Australia and the other to Classic Laboratories also in Townsville, Australia as check samples.</li> </ul> </li> </ul>

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Criteria	Commentary
	<ul style="list-style-type: none"> <li>As part of the 2013 &amp; 2015 Resource Estimate data and information were provided to Australian Mining Consultants (AMC) and to Skandus which provide evidence that the documented sampling protocols were carried out across the Property. They also include some of the QA/QC checks and results between the years 1978 and 2004 at Misima and nearby deposits, including Ewatinona. AMC reviewed the available QA/QC data in terms of validity of procedures and the spatial impact of results on the 2015 Mineral Resource. AMC concluded that:               <ul style="list-style-type: none"> <li>An industry standard QA/QC system was in place during early years of drilling, from 1978 to 1987</li> <li>There was an awareness and some focus of sampling limitations and protocols in 1990 and steps were taken to improve sample preparation</li> <li>A more comprehensive QA/QC system was in place from 1999 to 2004</li> <li>Drillholes from 2000–2004 appear to have had undergone regular QA/QC checks and are therefore likely to have a higher level of confidence. Although it would be desirable to have demonstrated higher precision in the samples, the QA/QC data indicates that the assays were unbiased.</li> <li>There is enough information on sampling and assaying protocols, supported by sufficient QA/QC and mine production data to conclude that the sample database is adequate to support Measured or Indicated Mineral Resource estimates.</li> </ul> </li> </ul> <p>Skandus reviewed MMPL mine memos relating to QA/QC and concluded that there was an ongoing active program where issues were identified and efforts were taken to improve processes, this also included a site visit by Pitard (1990) which coincides with the site efforts to improve sampling limitations and protocols.</p> <p>Kingston 2019-2020</p> <ul style="list-style-type: none"> <li>Standard reference materials are inserted at a frequency of one per 20 samples.</li> <li>Field duplicates are inserted at a frequency of one per 20 samples.</li> <li>Blanks are inserted at a frequency of one per 50 samples.</li> <li>QA/QC performance is tracked using acQuire database software.</li> <li>Acceptable levels of accuracy have been achieved using these techniques.</li> <li>Intertek conducts periodic laboratory QA/QC including sizing tests and crushate / pulp duplicate tests. Laboratory QA/QC also shows acceptable levels of accuracy.</li> <li>Gold values are also verified by assaying batches of pulps at an independent assay lab in Perth returning high correlation with original assays.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>Significant intersections were inspected in the field by staff geologists to confirm nature of mineralisation and verify integrity of sampled intervals.</li> <li>Twinning had not been regularly carried out, during 2013 and 2015 AMC carried out a review of drill holes close by using boundary tools in Datamine and found acceptable correlation. No twinned holes were conducted by Kingston.</li> </ul>



Criteria	Commentary
	<ul style="list-style-type: none"> <li>All Data, data entry procedures, data verification and data storage has been carried out in accordance with Placer and WCB SOPs. Historical records are currently stored at a facility in Townsville whilst WCB Records have been transferred to KSN. Digital records are stored in various electronic formats. Whilst there are database formats of the drill data it is recommended that an appropriate drill hole database is used to house the Placer (which was extracted from the GEOLOG system on behalf of WCB) and WCB data. KSN is in the process of merging the drill hole data into its own drill hole database which is an appropriate drill hole database.</li> <li>Skandus carried out its own validation checks on the drill hole files and original GEOLOG files provided after transfer and found there to be very few validation issues. Skandus also reviewed all Placer data and data protection SOPs, and selected documentation and found all work had been carried out to acceptable industry standard and care. Skandus has experience with the GEOLOG system and also reviewed original GEOLOG format files, and scans of Analogue GEOLOG log forms. Despite the data not being in a suitable database the data quality is good.</li> <li>No independent data verification procedures were undertaken other than the QA/QC mentioned above.</li> <li>Primary data is recorded on site either digitally or on paper logs before being transferred to Perth for loading into an acQuire database. Assay data is provided digitally as CSV and PDF files.</li> <li>No adjustments or calibrations were made to any assay data used in this estimate.</li> </ul>
<p><i>Location of data points</i></p>	<ul style="list-style-type: none"> <li>Placer: Drill hole collar surveys were conducted as soon as possible after drilling. Downhole surveys, to maintain a record of hole deviation, were conducted on angled cored holes after each 50 m was drilled. Packets containing downhole survey discs were present in several scanned images, indicating that an Eastman single shot camera was the survey tool in use at the time.</li> </ul> <p>During recent resource estimation work, it was established that all survey azimuths used in the GEOLOGs were magnetic, allowing easy adjustment of the down-the-hole survey data for the grid being used.</p> <ul style="list-style-type: none"> <li>In the recent diamond drilling completed by Kingston, down hole surveying was conducted with a collar setup check survey at 15 metres down hole, and on intervals approximating every 30 metres as the hole is advanced using Reflex downhole survey equipment.</li> <li>All spatial data sets and the 2020 Resource Estimate are located with respect to GDA94 datum (Zone 56).</li> <li>Historical data is provided in either GDA94, AGD66, Truncated AGD or Placer local mine grid.</li> </ul> <p>A truncated AMG grid (AGD66) was used while the Ewatinona mine was in operation (8,000,000 was usually removed from AGD66 northings to reduce precision problems during grid conversions). During the drilling period there was an 8° difference between magnetic north and AGD66 in the Ewatinona area. A correction was made to measured magnetic drill hole azimuths and the resulting drill hole traces were cross checked against historical drill hole location plans.</p> <p>Topographic control was checked during 2015 by a new topographic survey conducted by WCB.</p>

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Criteria	Commentary
	<p>Kingston converted all historical spatial data sets to GDA94 Zone 56 using a 2-point planar conversion derived from a detailed land survey and rigorous review of geographic and spatial data sets against LiDAR topography and resurvey of relocated collars. All data translations are checked and verified at the time. The location of spatial data sets has been assessed as appropriate and logical with respect to the 3D topography and logical geographic features such as flat drill pads.</p> <ul style="list-style-type: none"> <li>• AMC during the 2015 report reviewed the control with drill hole collars and end of mine surveys and found it was sufficient to support measured or indicated mineral resource estimates. An as-mined surface to deplete the resource was created from blast-hole collars.</li> <li>• All Kingston 2019-2020 drill holes have been surveyed by PNG Land Surveys using high accuracy RTK GPS in PNG94 zone 56, with XYZ locations updated in the database. PNG94 is the same datum as GDA94.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• Drill hole spacing is approximately 50m by 50m with downhole sampling predominantly at 1 to 2m intervals. There are areas that have a 25m x 25m drill hole spacing. Most of the Placer RC and diamond holes were angled holes at a variety of dips and orientation, predominantly normal to a structure of interest. Some historical and recent drilling was vertical until orientation of target structures were well known.</li> <li>• The geological uncertainty associated with interpretation at Ewatinona within the central parts of the deposit has been significantly reduced due to the angled drill holes and orientated drill core.</li> <li>• For the size of the deposit and expected mining block (and historical mining block), the spacing gives good coverage of the mineralised zone and at a suitable spacing to estimate blocks. Sample spacing has been taken into consideration for classification of the Resource Blocks.</li> <li>• Samples were composited to 4m based on analysis by MHG.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• Review of historical data from mine bench maps and reports, combined with orientated drill core data, concludes that the Kingston drill holes are orientated to minimise sampling bias.</li> <li>• Historical drilling and some early Kingston drilling comprised as number of vertical holes that are interpreted to have poorly tested the steep dipping mineralisation and could potentially introduce a degree of bias.</li> <li>• It is assessed that an adequate number of angled holes have been drilled into the core of the deposit to minimise this risk.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• Placer had industry standard SOPs and protocols for governing sample security. Skandus interviewed previous Senior Technicians and Geologists from WCB and Placer as well as reviewed the SOP documents and found that sample security on historical samples was adequate, this is backed up by the physical remnants of material such as sample tags, lock ties, bags and drums used during the WCB campaign still in storage at the WCB site office.</li> <li>• Kingston samples are placed in large polyweave bags that are sealed with either a plastic zip tie or wire twist fastener. The contents of each bag and makeup of each batch is recorded in a ledger and digital and hard copy sample submission forms. Samples are submitted by air or sea freight from Misima to Lae and collected from Nadzab airport or Lae shipping</li> </ul>

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Criteria	Commentary
	wharf by Intertek staff. Samples are tracked via regular inspections and checks/counts along the logistics management chain. Sample submission forms and master sample register are used to track samples by batch submitted. Intertek provide sample receipt notices once received and checked in Lae. There were no other specific sample security protocols in place.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>Historical and Placer:           <ul style="list-style-type: none"> <li>Skandus (2017), has reviewed sampling memos and a report by Pitard that audited and reviewed the Placer sampling in 1990. Pitard identified some issues and made recommendations to improve sampling, most of the drilling at Ewatinona was completed after this review. Documentation shows that these recommendations were put into practise by Placer. WCB sampling and data was reviewed by AMC during a 2013 technical report. AMC found that the core handling, logging and sampling was carried out to industry standards. Kingston has continued and improved the process and procedures where applicable as part of continuous improvement programs.</li> </ul> </li> <li>No new audits and reviews have been completed for this resource estimation.</li> </ul>

## Section 2 Reporting of Exploration Results – Misima

Table 7 JORC Table 1 Section 2, Reporting Exploration Results - Misima

(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>Misima Island is part of the Louisiade Archipelago within Milne Bay Province of PNG. It is situated in the Solomon Sea about 625 km east of Port Moresby, the capital of PNG. The site is located at an approximate latitude of 10° 40' South and longitude of 152° 47' E.</li> <li>The Property consists of a single Exploration Licence, (EL) 1747, comprising 53 sub blocks, covering a total area of 180 km<sup>2</sup>. This EL is valid up until the 20th March 2021. A two-year renewal will be applied for prior to this date, as completed on previous occasions. All conditions pertaining to compliance of the title have been met. The Property is located on the eastern portion of the island and includes the historic mining areas of Umuna and Quartz Mountain. There are no known impediments.</li> <li>Kingston and its subsidiary WCB Pacific Pty Ltd are in a JV with Pan Pacific Copper Ltd, Gallipoli Exploration (PNG) Pty Ltd, a subsidiary of WCB Pacific Pty Ltd, is the legal entity and tenement holder and is responsible for performing its obligations under the Mining Act 1992.</li> </ul>

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Criteria	Commentary
<p><i>Exploration done by other parties</i></p>	<ul style="list-style-type: none"> <li>• 1958–1964 Oceanic Mineral Development Pty Ltd, taken over by Pacific Island Mines (PIM) - Diamond drilling / adit development.</li> <li>• 1964–1967 Oceanic/Cultus Joint Venture (JV) - Trenching, diamond drilling 5 holes for 1,383m in 1965, IP survey, U/G sampling new adit, steam sediment sampling.</li> <li>• 1967 CRA Exploration Pty Ltd (CRAE) - Stream sediment sampling at point of entry of all rivers and streams into the ocean.</li> <li>• 1967–1969 PIM/Cultus Joint Venture (JV) - Stream sediment sampling over whole island, ridge and spur soil sampling, percussion drilling, diamond drilling.</li> <li>• 1969–1972 Noranda/PIM/Cultus JV - Noranda was operator diamond drilling 15 holes for 3,568 m at Mount Sisa copper anomaly, minor trenching at Umuna</li> <li>• 1973 Claims not renewed. No work carried out.</li> <li>• 1975–1976 Meneses Explorations Pty Ltd - Grid Mapping, Sampling of old trenches.</li> <li>• 1977–1987 Placer/Meneses - JV, Placer was operator. Deep trenching, and channel sampling, mapping, RC and diamond drilling.</li> <li>• 1978– 1985 CRAE - Also in JV, withdrew in 1985.</li> <li>• 1982 - Meneses bought out of JV.</li> <li>• 1987 - Placer forms Placer Pacific, Government of PNG becomes 20% shareholder Mining development agreement signed.</li> <li>• 2012 Barrick Gold - Relinquishment of Mining Lease (SML 1)</li> <li>• 2012 – 2017 WCB Resource Ltd - Collection and collation of sampling information, historical documentation, sourcing and reconciling production blast hole data to drilled data and 2015 Resource Estimate, topographic surveys to tie in topographic control, water levels, as mined surfaces and collar locations, converting Geolog drill hole data into a modern format, and carrying out QA/QC on the data and conversion with checking against analogue documents and photographs. Reviews of historical assay QA/QC. Work on validating and verifying historical data so it could be reliably used in a modern code compliant context. Compiling of historical information into NAT-INST 43-101 format for modern reporting. 3,669 auger ridge and spur soil samples, helimagnetic aeromagnetic survey with processing and interpretation (2,035 line kms of survey), 658 channel samples and geological mapping, analysis of structural measurements, comparative analysis of WCB channel sampling and Placer channel sampling to confirm validity of Placer data and drilling of 5 diamond holes into the Mt Sisa area.</li> <li>• 2018-2020 Kingston Resources Limited: Focused exploration on Umuna, Umuna East, Misima North, and Quartz Mountain project areas. Building on compilation work by WCB, Kingston completed field mapping and sampling (rock chips, channels, auger) developing drilling targets. Ewatinona is a deposit within the Quartz Mountain Project area with</li> </ul>

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Criteria	Commentary
	work completed by Kingston focused on increasing confidence in surface and subsurface geology as a key input to a Mineral Resources Estimate.
<i>Geology</i>	<ul style="list-style-type: none"> <li>Misima Island forms part of the Louisiade Archipelago which is a continuation of the Papuan Fold Belt of the Papuan Peninsula offshore eastwards through the Papuan Plateau. The oldest rocks on Misima are Cretaceous to Paleogene metamorphic rocks, which can be subdivided into the western Awaibi Association and the younger overthrust eastern Sisa Association that is host to the gold and copper mineralisation. The two associations are separated by an original thrust fault with later extensional activation.</li> <li>Mineralisation deposit style on Misima Island is best described as Low Sulphidation Epithermal due to the veining and characteristics, the dominance of Ag, Zn, Pb, Au, Cu &amp; Mn geochemistry as well as complex alteration styles and geometry, and strong association with precursor porphyry Cu-Au style alteration.</li> <li>Styles of mineralisation observed across Misima Island include multiphase hydrothermal breccia, stockworks both sheeted and three-dimensional, skarn, jasperoidal replacement, and poorly banded vein infill of quartz and carbonate with associated pyrite, galena, sphalerite, barite and minor tetrahedrite.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>Exploration results not being reported.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>Exploration results not being reported.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>Exploration results not being reported.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>Exploration results not being reported.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>Exploration results not being reported.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>Exploration results not being reported.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>Exploration results not being reported.</li> </ul>

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### Section 3 Estimation and Reporting of Mineral Resources- Ewatinona

**Table 8 JORC Table 1 Section 3, Estimation and Reporting of Mineral Resources - Ewatinona**

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> <li>• Drilling of the Ewatinona zone was conducted between 1989 and 2000 by Placer and Placer Pacific. Barrick acquired Placer in 2006. Barrick provided the drillhole data to WCB which was used for the current Mineral Resource Estimate. The data was provided in a software format called GEOLOG, and the data was converted to a Microsoft Access format by Mr R F Williams of WIZTECH Information Services, (WIZTECH). WIZTECH personnel had a long history with Placer and were familiar with the data. The assay data loaded from the supplied GEOLOG files was checked for quality using standard statistical analysis.</li> <li>• In addition, production blasthole data for the Ewatinona deposit provided by the Centre for Computational Geostatistics, University of Alberta, was used as a data set for completing validation checks against the new Resource Model as well as providing additional control data for the “as mined” surface. Additional support and documentation including original drill logs, assay sheets, survey sheets, core photographs, monthly production records, monthly exploration reports, reconciliation reports, site survey data, mining consultant’s reports, mill records, environmental data and additional technical data were also located by WCB in Cairns, Australia and were available for review and inclusion in the assessment of data quality.</li> <li>• Database integrity was audited and confirmed by AMC during a Nat Inst 43-101 report, this has included checking against assay files, core photography, reconciliation of blast hole vs drill hole data, a review of variography, a review of topographic control against a 2015 survey.</li> <li>• Data from WCB exploration has been stored electronically and is able to be checked and validated against hand logs and Excel initial log sheets and core photography.</li> <li>• Skandus, (2017) reviewed the work carried out by Wiztech and AMC and carried out its own validation and verification against photos and original snap shots of GEOLOG files and handwritten geology files and confirms their findings. Skandus had experience with GEOLOG whilst working at Pancontinental mining during the 1990s.</li> <li>• Drilling data by Kingston in 2019 and 2020 was uploaded into the acQuire database via CSV files.</li> <li>• Kingston have completed a review of the 2019-2020 geological data that is stored and managed in acQuire via a process of cross-checking manual log sheets with CSV files for upload, and core photography, with the data stored in the database. No significant errors were identified. Most errors comprised typographic errors that were corrected.</li> </ul>
<i>Site visits</i>	<ul style="list-style-type: none"> <li>• Stuart Hayward in the role of FIFO Exploration Manager and Chief Geologist was in regular attendance on site overseeing and managing geology and drilling and sampling activities since April 2019. Mr. Hayward is familiar with carbonate-base</li> </ul>

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Criteria	Commentary
	<p>metal-Au mineral systems and the Umuna and Ewatinona deposits, having spent significant time reviewing data sets and completing on ground traverses of all prospect and work areas within the Misima Gold Project.</p> <ul style="list-style-type: none"> <li>• Mr De-Vitry has not made any site visits and completed the Resource Estimation under guidance and in cooperation with Mr. Hayward.</li> </ul>
<i>Geological interpretation</i>	<ul style="list-style-type: none"> <li>• The 2020 Model is supported by comprehensive field and digital data collection, compilation, and analysis by Kingston geologists, combined with comprehensive compilation and review by WCB field geologists. The geological uncertainty associated with geological interpretation and understanding controls on mineralisation at Ewatinona within the central parts of the deposit that encompasses the Mineral Resource has been significantly reduced due to this work and recent program of overlapping angled drill holes.</li> <li>• Geological understanding is commensurate with classification as Indicated and Inferred.</li> <li>• Structural controls on mineralisation are interpreted and inferred from mapping drill pad and access cuttings, orientated drill core, pit mapping by Cyre 1989 on the 100mRL bench, Placer mining production and annual reports, and implicit models of close spaced grade control data.</li> <li>• All data sources support mineralisation being hosted by a series of WNW, NW and broadly E-W trending, steep to moderate N to NE dipping structures that can be individual structures, or stacked towards the NE, and intersecting within the footprint of the Ewatinona pit. Highest grades occur as pods and shoots at the intersection of structures and on WNW trending structures.</li> <li>• A grade shell was deemed necessary to reduce the smearing/mixing of weakly mineralised and mineralised material during kriging of Au. Implicit models of gold from drill holes were created utilising the interpreted structural controls to guide the construction of grade shell wireframes using a Radial Basis Function (RBF) modelling technique in Leapfrog. The resultant 0.2g/t Au shell is considered to appropriately reflect the geometry and spatial distribution of mineralised structures based on the available drill hole data. The choice of a 0.2g/t Au grade boundary is below the Resource cut-off of 0.3 g/t Au which will reduce conditional bias.</li> <li>• Oxidation flags (SOX = oxidized, SUP = partially oxidised, SSX = fresh) are included in most logged intervals in the original drillhole GEOLOGs. Kingston drill holes are also logged for oxidation and coded using the Placer code system and a combined simplified oxide logging data set provided for modelling. An oxidation model was built in Leapfrog. Some inconsistencies are observed in logging in some drillholes that requires review for future work. Oxide, transitional and fresh surfaces have been generated.</li> <li>• The 2020 geological model and interpretation of steeper structures (vertical to -76°) controlling mineralisation contrasts with the 2017 model that had flatter dipping structures and predominantly NW trends and resultant estimation parameters. Recent drilling has confirmed the steeper dips and variable trends that are reflected in the modelled 0.2g/t Au shell.</li> </ul>
<i>Dimensions</i>	<ul style="list-style-type: none"> <li>• The foundation geological model built in Leapfrog encompasses an area 1.7km (N-S) x 1.5km (E-W) and 580m in RL.</li> </ul>

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Criteria	Commentary
	<ul style="list-style-type: none"> <li>The block model extent encapsulates the mineralised structure model defined by the 0.2g/t Au shell that sits within the volume of the geology model, and has slightly reduces extents due to its geometry.</li> <li>The Resource is constrained by Whittle pit shells that have a footprint of 1.1km NW-SE, 850m NE-SW, and 200m in RL.</li> <li>Pit shells have been optimised based on the block model within the 0.2g/t Au domain</li> <li>The Resource is divided into three oxide domains that are superimposed on a granitic unit that contains mineralisation within and adjacent to throughgoing structures defined by the 0.2g/t Au shell. Oxidised and transitional material have been combined for external reporting.</li> <li>Parts of the deposit crop out in adjacent drainages and road cuts, as does parts of the remanent mineralisation in the bottom of the existing pit and in the pit walls. There is water and minimal back fill cover where some pit slopes have been reduced.</li> </ul>
<p><i>Estimation and modelling techniques</i></p>	<ul style="list-style-type: none"> <li>The gold and silver block grades were estimated using Ordinary Kriging with Isatis software. Pb, Zn and Cu estimates were determined by Inverse Distance Squared interpolation.</li> <li>Ordinary Kriging is an appropriate method to use if top cutting or outlier restriction is carried out and the data is domained.</li> <li>The base of oxidation and transitional was treated as a soft boundary during estimation.</li> <li>The estimation parameters for Au and Ag are as follows:             <ul style="list-style-type: none"> <li>Rotated search without quadrants;</li> <li>Search dimensions of 170m x 60m x 40m;</li> <li>Search strikes to 115° and dips 75° to the NNE. The plunge is horizontal;</li> <li>Minimum of 1 and a maximum of 16 composites;</li> <li>Maximum of 4 composites per drill hole;</li> <li>Anisotropic search (i.e. search distances are relative to the search ellipse);</li> <li>Domain boundaries are treated as hard during estimation;</li> <li>All composites located within a block must be used to estimate that block;</li> <li>All blocks are estimated in a single pass; and</li> <li>Discretisation is 3 x 3 x 3.</li> </ul> </li> <li>The minimum search of 1 composite is low for a kriged estimate and minimums of between 4 to 8 eight would be more typical. The reason for the low minimum is that there are numerous meshes in the peripheries of the mineralisation that only contain one composite.</li> <li>No assumptions were made regarding the recovery of any by-products.</li> <li>Block size was 10m X by 10m Y by 10m Z (with sub-celling to 2.5m). This block size is similar to previous estimates used during production and is reasonable given the drill spacing and support from blast-holes.</li> </ul>

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Criteria	Commentary
	<ul style="list-style-type: none"> <li>• Outlier restrictions cap higher grade assay values when they are outside a specified distance from the block being estimated. The outlier restriction distance is 15m.</li> <li>• The outlier restriction grades are as follows:               <ul style="list-style-type: none"> <li>• For the mineralised domain 4.5 ppm Au and 20 ppm Ag; and</li> <li>• For the unmineralised domain 0.5 ppm Au and 9ppm Ag.</li> </ul> </li> <li>• The final block model was reviewed:               <ul style="list-style-type: none"> <li>• Visually in section against composites;</li> <li>• Statistically by comparing declustered composites to the mean block grades by domain; and</li> <li>• Using swath plots.</li> </ul> </li> </ul>
<i>Moisture</i>	<ul style="list-style-type: none"> <li>• Tonnages are estimated on a dry weight basis; moisture has not been determined.</li> </ul>
<i>Cut-off parameters</i>	<ul style="list-style-type: none"> <li>• A 0.30 g/t gold cut off was used for oxide and transitional and for fresh material.</li> <li>• Oxide and transitional material are combined for the external reporting of Resource.</li> <li>• The cut-off grade at which the Resource is quoted reflects an intended mining approach by KSN and is consistent with initial pit optimization and mine scheduling work completed during the 2020 PFS.</li> </ul>
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> <li>• The mining scenario for Ewatinona is consistent with that used to evaluate the deposit in 2017.</li> <li>• Cut-off grade has been modified for the November 2020 Mineral Resource update. The pit shell (USD\$1700) has not been changed.</li> <li>• Any internal dilution has been accounted for with the modelling and as such is appropriate to the block size.</li> <li>• KSN has included the Ewatinona Resource Model in the 2020 Misima Pre-Feasibility Study.</li> <li>• KSN is assuming extraction will be consist of conventional large-scale open pit methods capable of mining between 5Mtpa and 6Mtpa using an ore-waste cut-off grade of 0.3g/t and bulk mining techniques.</li> <li>• Minimum mining dimensions are expected to be in the order of 5m and 10m bench height and 10m across strike (X dimension). The block sizes used in the model are considered appropriate for this style of mining. These assumptions are based upon Placer's previous experience mining at Ewatinona and consideration of the distribution of mineralisation.</li> </ul>
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li>• Metallurgical assumptions have been reviewed by KSN during PFS studies and is based on information from the past operation by Placer. Refer to JORC 2012 Table 1 Section 4 below.</li> <li>• WCB did not carry out any new studies during their tenure.</li> <li>• It is assumed that there will be no other significant problems recovering the gold.</li> <li>• No penalty elements identified in work so far.</li> </ul>

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Criteria	Commentary
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> <li>• Environmental factors and assumptions have not been changed or modification for the 2020 Mineral Resource update.</li> <li>• The area lies within hilly terrain with narrow watercourses and is close to the coast.</li> <li>• The area is covered with secondary vegetation.</li> <li>• There are no existing environmental liabilities associated with the property. Previous liability associated with the mining operation ceased upon the surrender of SML1 which was completed in April 2012.</li> <li>• Placer adopted a continuous rehabilitation approach to the staged operation. Environmental data including site sampling has been sourced and is used for baseline studies.</li> <li>• During previous Placer production CIP tailings were washed in a three-stage counter-current decantation circuit before disposal to the ocean floor via a seawater mix tank, one valley was also used for low grade waste. KSN is investigating both on-land and deep-sea tailing management options and its preferred tailing management option will be described in the project's Environmental Impact Statement.</li> <li>• Ongoing base line water and sediment sampling and testing on a monthly basis show no degradation of water quality or anomalous geochemistry or pH due to Kingston exploration and drilling or the rehabilitated mine workings and operational areas.</li> </ul>
<i>Bulk density</i>	<ul style="list-style-type: none"> <li>• Bulk density at Misima is affected more by weathering than by rock type.</li> <li>• Bulk density determinations are based on measurements on large pieces of PQ and HQ drill core (measured volume and dry weight). The following values are applied for each material type, Oxide 2.34, Transitional 2.45 and Fresh 2.55.</li> </ul>
<i>Classification</i>	<ul style="list-style-type: none"> <li>• Mineral Resources have been classified on geological understanding and continuity, and a contiguous assessment of quantitative variables including sample spacing, grade continuity, QA/QC, slope of regression, block variance, the average distance to samples used to estimate a block, and sensible mining depths.</li> <li>• Due to a greater degree of confidence in the current geological model and 3D continuity of mineralisation, both Inferred and indicated resources have been classified.</li> <li>• The classification appropriately reflects the Competent Person's knowledge and view of the deposit.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• No new audits or reviews completed.</li> </ul>
<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"> <li>• The relative accuracy and confidence level in the Mineral Resource Estimates are in line with the generally accepted accuracy and confidence of the nominated Mineral Resource categories. This has been determined on a qualitative, and semi-quantitative, basis, and is based on the Competent Person's experience with similar deposits.</li> <li>• The geological nature of the deposit, the modelling method and the composite/block grade comparison lend themselves to a reasonable level of confidence in the resource estimates.</li> <li>• The Mineral Resource Estimates are reasonably accurate globally, but there is some uncertainty in the local estimates due to the current drill hole spacing and uncertainty in the interpretation.</li> </ul>

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Criteria	Commentary
	<ul style="list-style-type: none"> <li>Local production data is available for local comparison but not completed at this stage.</li> </ul>

## 7.4 JORC CODE 2012 EDITION, TABLE 1 – Cooktown Stockpile, Misima Island

Table 9 JORC Table 1 Section 1, Sampling Techniques and Data - Cooktown Stockpile

### Section 1 Sampling Techniques and Data- Cooktown Stockpile

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>The project was historically mined by Placer between 1989 and 2004               <ul style="list-style-type: none"> <li>Grade control drilling was used to obtain bench scale samples for analysis</li> <li>Average gold and silver grades are derived from historical production records and Resources and Reserves reports spanning 1995-1999</li> <li>Grades are determined from mine production grade control drilling and sampling process with material having a gold grade &gt;0.5g/t Au and &lt;0.7g/t Au classified as Mineralised Waste and sent to the 'Mineralised Waste' stockpile designated as 'Cooktown Stockpile'</li> </ul> </li> <li>Kingston (2019-2020):               <ul style="list-style-type: none"> <li>No new sampling of test work has been completed by Kingston</li> </ul> </li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>No drilling data is included in the Mineral Resource Estimate</li> <li>Production grades used to define Mineralised Waste are derived from grade control drilling completed in line with Placer processes and procedures</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Assessment of drill sample recovery from grade control drilling is not possible</li> <li>It is assumed that Placer processes and procedures at the producing mine controlled how grade control drilling was compiled and samples collected, processed and analysed.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>No grade control logging data is available in digital format</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>Grade control holes were sampled on a bench scale with chips submitted to the on-site laboratory for analysis</li> <li>Standard production logging and sampling procedures are assumed</li> <li>QAQC was completed by Placer. No specific records have been retained.</li> </ul>

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Criteria	Commentary
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>All assay techniques are considered appropriate as grade control information supported a successful mining operation.</li> <li>Placer:               <ul style="list-style-type: none"> <li>No geophysical tools were used to determine grade</li> <li>QAQC procedures were completed by Placer with no specific data sets retained or discovered to assess performance</li> <li>It is assumed that the QAQC was sufficient to report the material as Mineral Resources by Placer</li> <li>Mine production reconciliation supports a reasonable assumption of quality of data and the Mineral Resource figures reported by Placer. In fact, historical reconciliation reports suggest grade control assay data was conservative.</li> </ul> </li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>No check and verification has been completed to date.</li> <li>No direct verification of grade control samples is possible</li> <li>No twinned holes are possible as the material is mined-out Resource</li> <li>Placer (MMPL) executed mining operations using defined process and procedure. Documentation of these is not available.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>No load by load production data is available to link specific volumes with specific locations within the mine and Grade Control Model</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>No new data informs the Cooktown Dump Mineral Resource</li> <li>Historical Mineral Resources and Ore Reserves statements by Placer that include Cooktown are informed by historical production data that is no longer available</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Grade control drilling was optimised to test and sample benches during the mining process and is optimised based on the orientation of the mineralised structures within the open pit.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>Placer had industry standard SOPS and protocols for governing sample selection and security during production</li> <li>Placer operated an onsite sample preparation and analytical laboratory with documented and monitored process and procedure</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>No new audits and reviews have been completed for this Resource Estimation.</li> </ul>

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### Section 3 Estimation and Reporting of Mineral Resources Cooktown Stockpile

**Table 10 JORC Table 1 Section 3, Estimation and Reporting Mineral Resources Cooktown Stockpile**

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> <li>No database of specific truck load grades is available from specific production information</li> <li>Data and average grade and total tonnes have been sourced from Placer mineral resource and ore reserve statements</li> </ul>
<i>Site visits</i>	<ul style="list-style-type: none"> <li>Stuart Hayward in the role of FIFO Exploration Manager and Chief Geologist was in regular attendance on site overseeing and managing geology and drilling and sampling activities since April 2019. Mr. Hayward is familiar with carbonate-base metal-Au mineral systems and the Umuna and Ewatinona deposits, having spent significant time reviewing data sets and completing on ground traverses of all prospect and work areas within the Misima Gold Project. Mr Hayward has traversed the Cooktown Stockpile location.</li> </ul>
<i>Geological interpretation</i>	<ul style="list-style-type: none"> <li>The volume considered is a stockpile of material selected during historical mining operations as Mineralised Waste with gold grades in the range of 0.5 – 0.7g/t Au</li> <li>Material type and characteristics cannot be determined from historical data sources</li> <li>It is assumed that the material is a mix of all lithology and alteration units mined at the time for Stage 4 and Stage 6 as well as not specifically defined material outside of the designed pit shell.</li> <li>Short range variability of material type can be very high. Grade variability is assumed to likely be low.</li> <li>Oxidation state is assumed to be a mix of oxide, transitional and primary</li> </ul>
<i>Dimensions</i>	<ul style="list-style-type: none"> <li>The Mineral Resource comprises a stockpile that is located on the crest of the historical Umuna open pit.</li> <li>The stockpile is an elongate geometry of approximately 500m x 300m.</li> <li>LiDAR surveys have determined that the volume is consistent with the reported tonnes by Placer at 31st December 1998 and 1999 at 2.44 million cubic metres</li> </ul>
<i>Estimation and modelling techniques</i>	<ul style="list-style-type: none"> <li>No estimation has been completed and no geological or block model compiled</li> <li>No new sample data has been collected</li> <li>No deleterious elements are present in Misima style mineralisation that would report to a stockpile</li> <li>Average grades and homogenous material type reported by Placer are applied as a global average across the entire volume of the Stockpile, and supported by good mine to mill reconciliation during production</li> <li>Grade variability is assumed to be very low as the material stacked was historically selected with a narrow grade range of 0.5-0.7g/t Au</li> <li>The Mineral Resource is assumed to be accurate globally as it is based on detailed mine production data at the time</li> </ul>

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	of construction. There may be is some uncertainty in short range local estimates (c.6-10m) due to the material being sourced from different mining areas and stacked on a load by load basis
<i>Moisture</i>	<ul style="list-style-type: none"> <li>No moisture content has been determined</li> <li>Tonnages and inherent moisture content assumptions are as reported by Placer at 31st December 1998 and 1999</li> </ul>
<i>Cut-off parameters</i>	<ul style="list-style-type: none"> <li>A 0.5g/t Au cut-off grade is assumed based on the material being selected as Mineralised Waste during mining operations as material between 0.5g/t Au and 0.7g/t Au</li> <li>The cut-off grade is significantly greater that the cut-off grades used to report the Ore Reserve (0.28g/t Au Oxide; 0.33g/t Au Fresh)</li> <li>Material is reported as an average global gold and silver grade documented in Placer Mineral Resource and Ore Reserves statements dated 31 December 1998 and 1999</li> </ul>
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> <li>The mining scenario for Cooktown Stockpile is consistent with that used in the PFS</li> <li>The Stockpile is a positive topographic feature that will be mined using the Misima load and haul fleet</li> </ul>
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li>Metallurgical assumptions have been reviewed by KSN during PFS studies and is based on information from the past operation by Placer. Refer to JORC 2012 Table 1 Section 4 below.</li> <li>It is assumed that there will be no other significant problems recovering the gold.</li> <li>No penalty elements have been identified in work so far.</li> </ul>
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> <li>Environmental factors and assumptions have not been changed or modification for the 2020 Mineral Resource update.</li> <li>The area lies within hilly terrain with narrow watercourses and is close to the coast.</li> <li>The area is covered with secondary vegetation.</li> <li>There are no existing environmental liabilities associated with the property. Previous liability associated with the mining operation ceased upon the surrender of SML1 which was completed in April 2012.</li> <li>Placer adopted a continuous rehabilitation approach to the staged operation. Environmental data including site sampling has been sourced and is used for baseline studies.</li> <li>During previous Placer production CIP tailings were washed in a three-stage counter-current decantation circuit before disposal to the ocean floor via a seawater mix tank, one valley was also used for low grade waste.</li> <li>Ongoing baseline water and sediment sampling and testing on a monthly basis show no degradation of water quality or anomalous geochemistry or pH due to Kingston exploration and drilling or the rehabilitated mine workings and operational areas.</li> </ul>
<i>Bulk density</i>	<ul style="list-style-type: none"> <li>Bulk density at Misima is affected more by weathering than by rock type.</li> <li>Bulk density determinations from drilling are based on measurements on large pieces of PQ and HQ drill core (measured volume and dry weight. The following values are applied for each material type, Oxide 2.34, Transitional 2.45 and Fresh 2.55.</li> </ul>

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	<ul style="list-style-type: none"> <li>No new bulk density determinations have been completed</li> <li>Tonnages have been determined based on Placer Mineral Resource and Ore Reserve statements dated 31 December 1998 and 1999. 3D reconciliation of the stockpile volume from LiDAR data indicate that the tonnages reported by Placer remain stored in the current dump volume.</li> </ul>
<i>Classification</i>	<ul style="list-style-type: none"> <li>Mineral Resources have been classified on geological understanding and continuity</li> <li>Placer classified stockpile material as “Measured Resource” in the Mineral Resources and Ore Reserves statements dated 1998 and 1999</li> <li>Kingston classify Cooktown Stockpile as Inferred based on the requirement to collect further data to verify grade and material type</li> <li>The classification appropriately reflects the Competent Person’s knowledge and view of the deposit.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>No new audits or reviews completed.</li> </ul>
<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"> <li>The relative accuracy and confidence level in the Mineral Resource Estimates are in line with the generally accepted accuracy and confidence of the nominated Mineral Resource categories. This has been determined on a qualitative, and semi-quantitative, basis, and is based on the Competent Person’s experience with similar deposits.</li> <li>The confidence relates to a global average grade assigned to the entire volume of the stockpile</li> <li>The Mineral Resource Estimates are assumed to be reasonably accurate globally, but there is uncertainty in the short range local estimates due to the material being sourced from different mining areas and stacked on a load by load basis</li> <li>Local production data is not available for local comparison</li> </ul>

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## 7.5 Ore Reserve Assessment

Table 11 JORC Table 1 Section 4, Estimation and Reporting Ore Reserves

As this is a Maiden Ore Reserve Estimate for the current Misima Gold Project the ASX release is included as an Appendix to this Ore Reserve Estimate.

### JORC Code, 2012 Edition – Table 1

#### Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	Commentary
<i>Mineral Resource estimate for conversion to Ore Reserves</i>	<p>The Ore Reserve is based on Mineral Resource Estimates for Ewatinona and Umuna prepared under the direction of Mr Stuart Hayward of Kingston Resources Limited (KSN). The Mineral Resource Estimates were reported in an ASX release by KSN dated 21 May 2020, and updated in an internal report on 24 November 2020.</p> <p>The Mineral Resources for both Ewatinona and Umuna are inclusive of the Ore Reserves.</p>
<i>Site visits</i>	<p>The Competent Person for the Ore Reserve is Mr John Wyche of Australian Mine Design and Development Pty Ltd (AMDAD). Mr Wyche was unable to visit the site during 2020 due to the COVID19 pandemic.</p> <p>In lieu of a site visit Mr Wyche has taken reasonable steps to confirm topographic, geological, process, cost, environmental, permitting and local community information provided by KSN and their consultants. As well as discussions with personnel who have visited the site Mr Wyche was able to review extensive operation and production records from the former Placer opencut mine and process plant and literature on the operation and environmental impacts of that operation.</p> <p>Mr Wyche has extensive experience in planning of open cut gold and base metal mines in similar settings in the Solomon Islands, Indonesia and the Philippines. Mr Wyche is satisfied that the information available is adequate to support a Probable Ore Reserve.</p>
<i>Study status</i>	<p>The Ore Reserve Estimate was prepared as part of the November 2020 Pre-feasibility (PFS). The PFS covers:</p> <ul style="list-style-type: none"> <li>• Geology and Mineral Resource Estimate,</li> </ul>

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Criteria	Commentary
	<ul style="list-style-type: none"> <li>• Mining and Ore Reserves Estimate,</li> <li>• Mineral processing,</li> <li>• Infrastructure,</li> <li>• Environmental impact assessment and management,</li> <li>• Community relations,</li> <li>• Project execution,</li> <li>• Capital and operating cost estimation, and</li> <li>• Financial modelling.</li> </ul> <p>The PFS is based on opencut mining to supply a 5.5 Mtpa CIL gold processing plant. The processing plant will be located at the site of the previous processing plant on the south coast of Misima Island. The use of other existing onsite facilities, which will be re-established, rebuilt, refurbished or upgraded, will be maximised where practicable, including accommodation facilities, wharf and access roads. Other Project facilities including run-of mine (ROM) and other stockpiles, waste rock dumps, tailings management facilities, power plant, water treatment plant, water supply infrastructure and fuel storage areas will be required to support the operation.</p>
<p><i>Cut-off parameters</i></p>	<p>The cut-off grade is defined as the gold head grade, after applying mining loss and dilution adjustments, for which the value of gold after applying CIL process recoveries just equals the ore costs. Ore costs include:</p> <ul style="list-style-type: none"> <li>• Incremental cost of mining a tonne of material as ore instead of waste,</li> <li>• CIL processing costs per tonne, and</li> <li>• Site general and administration (G&amp;A) costs expressed as A\$/tonne.</li> </ul> <p>Ore costs do not include the cost of mining a tonne of material as waste rock as the purpose of the cut-off grade is to determine whether a tonne of material exposed on the pit bench should be classed as ore or waste. If the recovered value exceeds the sum of the ore costs it will make money and so is ore. If the value is less than the ore costs it is waste.</p> <p>The PFS study has variable gold and silver process recoveries for oxide and fresh ore based on Placer historical test work which was supported by 15 years of life-of-mine gold recoveries on Misima. All ore costs for both oxide and fresh ore types are assumed to be the same. Silver contributes less than 3% to the estimated revenue and is not included in the cut-off grade calculation.</p> <p>Cut-off grades calculated for the Ore Reserves Estimate are:</p> <ul style="list-style-type: none"> <li>• Oxide Ore 0.28 g/t Au</li> </ul>

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Criteria	Commentary
	<ul style="list-style-type: none"> <li>Fresh Ore 0.33 g/t Au</li> </ul> <p>At the time of running the pit optimisations, pit designs and production schedules for the PFS, process and G&amp;A costs were not finalised and the long term gold price was assumed to be US\$1500/oz with an AUD/USD exchange rate of 0.73. The final process and G&amp;A costs estimated for the PFS are close to the original assumptions and KSN set the final long term gold price at US\$1600/oz with an exchange rate of 0.70. The final inputs would result in lower cut off grades but the values above were retained for the Ore Reserves Estimate and production schedules because:</p> <ul style="list-style-type: none"> <li>Confidence in process recoveries reduces at very low grades.</li> <li>Retaining higher cut off grades is a more conservative approach. If lower grades are shown to be profitable during operations they can add to project value but assessment of the project based on current information doesn't have to rely to any degree on very low grade material.</li> </ul>
<p><i>Mining factors or assumptions</i></p>	<p>All ore and waste from Ewatinona and Umuna will be mined by conventional open cut methods using large hydraulic excavators and rigid body dump trucks. Open cut mining is appropriate for the relatively low grades and distribution of gold mineralisation within the depth range of the proposed pits.</p> <p>Pit wall overall slopes and berm / batter configurations are based a desk top review by Pells Sullivan Meynink geotechnical engineers which considered:</p> <ul style="list-style-type: none"> <li>Available geotechnical reports dating from 1985 to 2001,</li> <li>Core photographs from recent drilling,</li> <li>Current LIDAR topography surface,</li> <li>Approximate "as mined" pit surveys from the Placer operation,</li> <li>Interpreted mineralisation and weathering wireframes and surfaces, and</li> <li>Publicly available scientific reports on the Misima geology and mineralisation.</li> </ul> <p>The review concluded that overall wall slopes scaled from the as-mined pits are reasonable for use at a PFS level.</p> <p>The current Ewatinona and Umuna pit voids include waste rock from the former opencut mining operation. Ewatinona has 0.97 Mm<sup>3</sup> of backfilled waste rock and Umuna has 37 Mm<sup>3</sup>. This backfill will be mined as waste without blasting. The rest of the ore and waste to be mined is rock which will require blasting.</p> <p>The current Umuna pit void contains water at the north and south ends. Approximately 10.7 Glitres of water will have to be pumped from the void during the first two years of mining.</p>

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Criteria	Commentary
	<p>Pit designs are guided by Whittle™ pit optimisations run by AMDAD using:</p> <ul style="list-style-type: none"><li>• The current Mineral Resource models,</li><li>• Slopes scaled from the former opencuts,</li><li>• Mining costs estimated by AMDAD,</li><li>• Process operating costs benchmarked from other projects and later validated against final PFS estimates,</li><li>• General and administration costs based on the Placer operation and later validated against the PFS estimates</li><li>• Other cost, revenue and process recovery inputs supplied by KSN and their consultants.</li></ul> <p>The Mineral Resource models are Ordinary Kriged estimates with gold and silver grades presented as a single grade per block. The blocks are sub-blocked against interpreted mineralisation wireframes to model shapes of the lodes. AMDAD modelled mining loss and dilution by re-blocking the Mineral Resource to a fixed 5x5x5 metre block size on the basis that this would represent a workable mining unit size for the planned production rate of 5.5 Mtpa of ore feed. Re-blocking to this size mixes smaller sub-blocked resource blocks with the surrounding blocks resulting in dilution along the margins of the potential ore zones.</p> <p>The open pits planned for Ewatinona and Umuna are pushbacks of the Placer pits. Wherever possible a minimum pushback width of 30 metres was applied. This minimum width mainly affects upper benches on the north east wall of Umuna Pit. Mining rates were reduced in areas with narrow benches.</p> <p>The pit optimisations run to define the pits only considered Indicated Mineral resources. There are no Measured resources in the current Mineral Resource. Inferred was treated as waste. The life of mine production schedule includes low grade material from the Cooktown Stockpile left by the former mining operation. Production records and survey assessments indicate the stockpile contains an Inferred Resource of 3.8Mt @ 0.65g/t Au &amp; 7.0g/t Ag for 0.1Moz Au and 0.9Moz. Checks were done to ensure the pits would be viable without the Cooktown Stockpile.</p> <p>The mine plan is a re-development of a project which operated successfully from 1989 to 2004. The CIL process plant design is based on the Placer plant with improvements for current technology. Much of the necessary support infrastructure such as the air strip and haul roads either remains in place or can be readily refurbished. The engineering plan includes PFS level design and cost estimation for all infrastructure whether it is refurbishment of existing facilities or construction of new items such as the power station.</p>

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Criteria	Commentary
<p><i>Metallurgical factors or assumptions</i></p>	<p>CIL processing of the Misima gold ore was conducted at 5 Mtpa from 1989 to 2004. Planning for the new 5.5 Mtpa facility is based on the former operation with improvements for current technology.</p> <p>Process recoveries are based on Placer historical test work which was supported by 15 years of life-of-mine gold recoveries on Misima. The following empirical relationships were derived:</p> <ul style="list-style-type: none"> <li>• Oxide Recovery = <math>(Au_H - 0.045 \times Au_H^{0.6}) / Au_H</math></li> <li>• Fresh Recovery = <math>(Au_H - 0.044 \times Au_H + 0.063) / Au_H</math></li> </ul> <p>where <math>Au_H</math> = Gold head grade in g/t</p> <p>Insufficient data was available to reliably estimate a grade / recovery relationship for silver. Based on the process recovery records across all grades and ore types a fixed recovery of 35% was assumed for silver.</p>
<p><i>Environmental</i></p>	<p>The Environmental Inception Report (EIR) was submitted on 6th October 2020 to the PNG Conservation and Environment Protection Authority (CEPA) in accordance with the provisions of the Environment Act 2000 (Environment Act) and the Guideline for Preparation of Environmental Inception Report (Dec, 2004).</p> <p>Based on the proposed activities and scale, this Project is a Level 3 activity under the Environment Act (sub-categories 17.1 and 17.4), for which an environmental impact statement (EIS) is required. The environmental impact assessment process requires:</p> <ul style="list-style-type: none"> <li>• Submission of an EIR under Section 52 of the Environment Act.</li> <li>• Submission of an EIS under Section 53 of the Environment Act.</li> </ul> <p>The objectives of this EIR are to:</p> <ul style="list-style-type: none"> <li>• Identify potential environmental and social issues associated with the development of the Project.</li> <li>• Describe the proposed scope of the EIS to address those identified issues.</li> <li>• Initiate the process for formal stakeholder engagement.</li> <li>• Enable CEPA to review the proposed scope of the EIS and advise additional requirements.</li> </ul> <p>Issues likely to be addressed in the EIS include:</p> <ul style="list-style-type: none"> <li>• Waste rock placement in out of pit dumps. At this stage there are no known significant issues with acid rock drainage or other deleterious elements in the waste rock. Waste rock characterisation studies are planned.</li> <li>• Dewatering of pondages in the current Umuna Pit void. At this stage there is no reason to believe that the</li> </ul>

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Criteria	Commentary				
	<p>ponded water is acidic or contains any deleterious elements. Work is planned to confirm this and to expand the existing discharge approval.</p> <ul style="list-style-type: none"> <li>Tailings storage. KSN is currently assessing the feasibility of both on-land and Deep Sea Tailings Placement (DSTP) tailing management for the Project. As per the requirements of the PNG Draft General Guidelines for Deep Sea Tailing Placement, KSN will compare DSTP with other land-based options to ascertain the relative environmental and social impacts/risks from DSTP and other tailings disposal options.</li> </ul> <p>KSN is not aware of any environmental issues likely to prevent development of the project as set out in the PFS.</p>				
<i>Infrastructure</i>	<p>Much of the necessary support infrastructure such as the air strip and haul roads either remains in place or can be readily refurbished. The engineering plan includes PFS level design and cost estimation for all infrastructure whether it is refurbishment of existing facilities or construction of new items such as the power station.</p>				
<i>Costs</i>	<p>Owner mining costs were estimated on a first principles basis. The mining fleet, workforce and consumables, such as explosives and diesel were estimated against detailed production schedules using productivity estimates and haulage modelling. Sources of costs included:</p> <ul style="list-style-type: none"> <li>Vendor quotes for detailed capital and life cycle maintenance costs for the fleet,</li> <li>Wear parts, tyres and lubrication costs from an industry generic cost database,</li> <li>Vendor quotes for “down the hole” explosives supply,</li> <li>Vendor quotes for diesel supply,</li> <li>Labour rates from a PNG recruitment firm,</li> </ul> <p>The average mining cost of A\$1.92/tonne was benchmarked against comparable Australian mines by applying Australian labour rates, diesel price and explosives powder factors typical of Australian mines. The resulting benchmark cost of A\$3.29/tonne compares favourably with Australian mines of similar size.</p> <p>Operating and capital cost estimates for the process and infrastructure are based mainly on vendor quotes, first principles estimation and factoring of costs from other sources. A small portion of assumed and historical costs were also used.</p> <p>The capital and operating cost estimates meet the requirements of an AusIMM Class 4 estimate and have a stated accuracy of between +/- 30%. The inputs used to meet this level of accuracy are broken down in the following table:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Description</th> <th>Ratio (%)</th> </tr> </thead> <tbody> <tr> <td>Allowance</td> <td>4%</td> </tr> </tbody> </table>	Description	Ratio (%)	Allowance	4%
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	<table border="1"> <tr> <td>Budget Pricing</td> <td>48%</td> </tr> <tr> <td>Estimated</td> <td>20%</td> </tr> <tr> <td>Factored</td> <td>25%</td> </tr> <tr> <td>Historical</td> <td>3%</td> </tr> <tr> <td>Total Capital Costs</td> <td>100%</td> </tr> </table> <p>The following table provides a summary of the capital cost estimates prepared for the Ore Reserve:</p> <table border="1"> <thead> <tr> <th>Item</th> <th>A\$m</th> </tr> </thead> <tbody> <tr> <td>Processing Plant</td> <td>99.0</td> </tr> <tr> <td>Other Infrastructures</td> <td>61.5</td> </tr> <tr> <td>Mine Development</td> <td>17.2</td> </tr> <tr> <td>Capitalised Pre-Strip</td> <td>29.6</td> </tr> <tr> <td>Owner's Cost</td> <td>35.7</td> </tr> <tr> <td>Contingencies</td> <td>37.2</td> </tr> <tr> <td><b>Total Capital Costs</b></td> <td><b>280.2</b></td> </tr> </tbody> </table> <p>All costs in Australian dollars. PNG royalty at 2% of sales and 0.5% Production Levy.</p>	Budget Pricing	48%	Estimated	20%	Factored	25%	Historical	3%	Total Capital Costs	100%	Item	A\$m	Processing Plant	99.0	Other Infrastructures	61.5	Mine Development	17.2	Capitalised Pre-Strip	29.6	Owner's Cost	35.7	Contingencies	37.2	<b>Total Capital Costs</b>	<b>280.2</b>
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<i>Revenue factors</i>	Cut off grades were assessed against a gold price of US\$1500 and an AUD/USD exchange rate of 0.73. In the final economic model KSN used a long term gold price of US\$1600/oz and an AUD/USD exchange rate of 0.70. US\$25/oz was used for silver.																										
<i>Market assessment</i>	Gold is a readily marketable commodity. Demand is not an issue but the gold price can be variable. Gold price forecasts are as discussed under "Revenue Factors".																										

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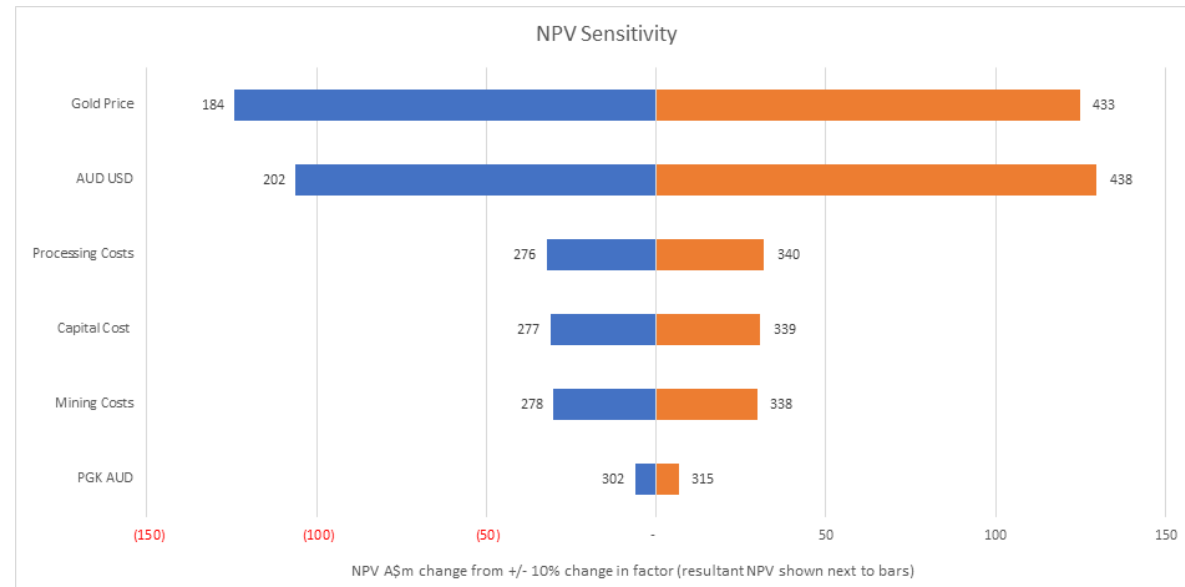
**Criteria**

**Commentary**

*Economic*

KSN prepared a detailed pre- and post-tax financial model using the final PFS production schedule, metal prices and operating and capital cost estimates. The model is in Australian dollars but uses PNG tax rules. Using the PFS inputs of gold at US\$1600/oz, silver at US\$25/oz and a AUD/USD rate of 0.70 the project has a life of 10 years with a payback period under 5.4 years and a post-tax net present value (NPV) of over A\$308 million.

Sensitivity analyses on key variables show the project is most sensitive to gold price. It is much less sensitive to increases in mining and processing costs.



The financial analysis is based on reasonable assumptions on the Modifying Factors which have been assessed at a PFS level of confidence.

*Social*

The population of Misima is currently estimated at 20,000 people. A number of villages are located along or adjacent to the coast, with the main town, Bwagaoia, located in the southeast corner of the island. Other villages in proximity to the mine site include Eaus, Kaubwaga, Narian, Laguna and Bwagaoia. There is no village relocation required for the proposed mining project.

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Criteria	Commentary
	<p>During Placer operations the mine employed and trained over 600 Misimans, with overall national employment of 90% achieved before mine closure. Today, there are still regular charter flights from Misima Island transporting ex-Placer operations workers who live on Misima Island to other major mines in PNG such as Ok Tedi, Poregra, Simberi and Lihir. The successful training and transfer of skills to these workers and their ongoing employment at other mines since Misima closed is one of the main beneficial socio-economic legacies of the previous mining operation.</p> <p>KSN has an active community relations presence as part of the exploration phase. Agreements on long term benefits to the local communities during and post-operations will be further developed through the EIS and through direct engagement with those communities.</p>
<p><i>Other</i></p>	<p>The proposed Project is situated within the granted exploration licence, EL1747, which covers the eastern portion of Misima Island and is held by Gallipoli Exploration a subsidiary of Kingston Resources Limited, a publicly-listed exploration and development company on the Australian Stock Exchange (ASX: KSN). KSN owns an 81% share of the Misima Gold Mine through its subsidiaries WCB Pacific Ltd and Gallipoli Exploration (PNG) Ltd. On the 24 June 2020, KSN executed a binding agreement to increase ownership to 100% of the Misima Gold Mine by purchasing the remaining 19% of Gallipoli Exploration that was held by Pan Pacific Copper Ltd.</p> <p>The Property consists of a single Exploration Licence, (EL) 1747, comprising 53 sub blocks, covering a total area of 180 km<sup>2</sup>. This EL is valid up until the 20th March 2021. A two-year renewal will be applied for prior to this date, as completed on previous occasions. All conditions pertaining to compliance of the title have been met. The Property is located on the eastern portion of the island and includes the historic mining areas of Umuna and Ewatinona. There are no known impediments.</p> <p>There are two streams of approval required for a mineral development in Papua New Guinea (PNG). The first is the granting of the ML, which is controlled by the Mining Act 1992 and administrated by the Mineral Resources Authority (MRA). The second is the grant of the Environmental Permit which is controlled by the Environment Act 2000 and administered by the PNG Conservation and Environment Protection Authority (CEPA). The Environment Permit must be granted before a Mining Licence (ML) can be issued under the PNG Mining Act 1992.</p> <p>Kingston commenced the project approval process in October 2020 with the submission of the EIR to CEPA. The planning process is underway for the completion of the studies and agreements required to submit the ML application with completion of a Bankable Feasibility study.</p>

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Criteria	Commentary
	<p>Key projects risks,</p> <ul style="list-style-type: none"> <li>• Commodity and currency price fluctuations</li> <li>• Delays to project approvals</li> <li>• Unachievable project approval conditions</li> <li>• Community and landowner support</li> <li>• Inability to obtain project funding</li> <li>• Incorrect capital cost estimation</li> <li>• Incorrect operating cost estimate</li> <li>• Adverse impacts from incorrect estimation in mining, geological, metallurgical and geotechnical inputs</li> </ul> <p>An internal risk assessment review by KSN concluded that on the information currently available none of these risks have a significant likelihood of preventing development and operation of the project or realisation of its value as set out in the PFS.</p>
<i>Classification</i>	<p>The modifying factors for conversion of the Mineral Resource to the Ore Reserve are defined at a PFS level of confidence. The current Mineral Resource has no Measured Resources so only Indicated Resources are available for conversion to Ore Reserves. Probable Ore Reserves are derived from Indicated Mineral Resources.</p> <p>The Ore Reserve does not include any Inferred Mineral Resources.</p> <p>In the opinion of the Competent Person for the Ore Reserves, Mr John Wyche, classification of the Probable Ore Reserve is an accurate reflection of the level of confidence for a mine plan based on many years of operating history and the current PFS level of project definition.</p>
<i>Audits or reviews</i>	<p>No external audits of the Ore Reserve estimate have been undertaken.</p>
<i>Discussion of relative accuracy/confidence</i>	<p>The Competent Person, John Wyche, believes the Ore Reserves provide a good global estimate of the tonnes and contained gold in the Umuna and Ewatinona Pits. Records from 12 years of mining by Placer provide very good confidence in the location of the mineralised zones exposed during mining. Most of the gold is in down dip extension of the zones mined in the final benches of the Placer pits. However, the steep topography, dense vegetation, flooded pit voids and location of target zones in the walls and floor of the old pits make it difficult to drill new exploration holes to define the gold and silver distribution in the targets to a high degree of confidence. This is reflected in the Mineral</p>



Criteria	Commentary
	<p>resource Estimate comprising Indicated and Inferred Resources but no Measured Resources.</p> <p>On the current level of resource definition it is likely that actual mined grades may show significant variance from the scheduled Ore Reserves on a month to month basis but should show better agreement over longer periods of one year or more. The Ore Reserve is expected to be a good global estimate but less reliable locally.</p>

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## 8 RESOURCE AND RESERVE CATEGORIES – EXPLANATION

According to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code) 2012 Edition:-

A 'Mineral Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to assume geological and grade (or quality) continuity between points of observation where data and samples are gathered.

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Ore Reserve.

A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

Geological evidence is derived from detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to confirm geological and grade (or quality) continuity between points of observation where data and samples are gathered.

A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Ore Reserve or under certain circumstances to a Probable Ore Reserve.



An 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

The guidelines in the JORC Code state that the term 'economically mineable' implies that extraction of the Ore Reserves has been demonstrated to be viable under reasonable financial assumptions. This will vary with the type of deposit, the level of study that has been carried out and the financial criteria of the individual company. For this reason, there can be no fixed definition for the term 'economically mineable'.

A 'Probable Ore Reserve' is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Ore Reserve is lower than that applying to a Proved Ore Reserve.

A 'Proved Ore Reserve' is the economically mineable part of a Measured Mineral Resource. A Proved Ore Reserve implies a high degree of confidence in the Modifying Factors.

The guidelines provided in the JORC Code note that "A Proved Ore Reserve represents the highest confidence category of reserve estimate and implies a high degree of confidence in geological and grade continuity, and the consideration of the Modifying Factors. The style of mineralisation or other factors could mean that Proved Ore Reserves are not achievable in some deposits."

The following figure, from the JORC Code, sets out the framework for classifying tonnage and grade estimates to reflect different levels of geological confidence and different degrees of technical and economic evaluation.

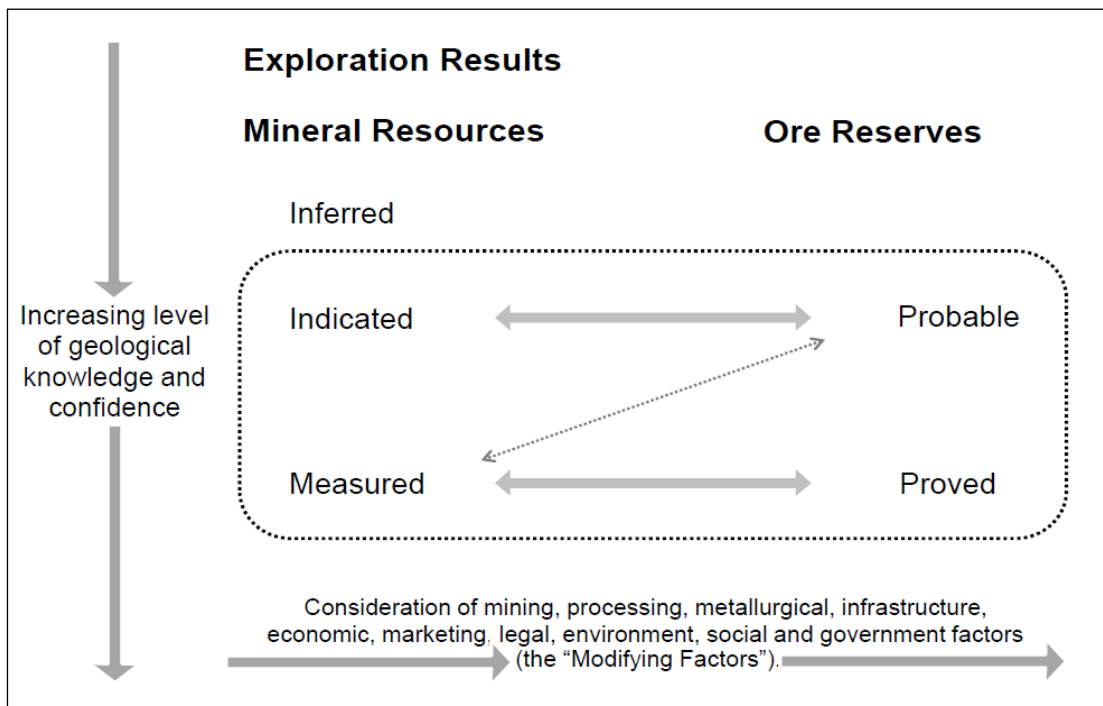


Figure 5 General relationship between Exploration Results, Mineral Resources and Ore Reserves, from 2012 JORC Code Figure 1



Mineral Resources can be estimated on the basis of geoscientific information with some input from other disciplines. Ore Reserves, which are a modified sub-set of the Indicated and Measured Mineral Resources (shown within the dashed outline in the Figure above), require consideration of the Modifying Factors affecting extraction, and should in most instances be estimated with input from a range of disciplines.

Measured Mineral Resources may be converted to either Proved Ore Reserves or Probable Ore Reserves. The Competent Person may convert Measured Mineral Resources to Probable Ore Reserves because of uncertainties associated with some or all of the Modifying Factors which are taken into account in the conversion from Mineral Resources to Ore Reserves.

Inferred Resources cannot convert to Ore Reserves.

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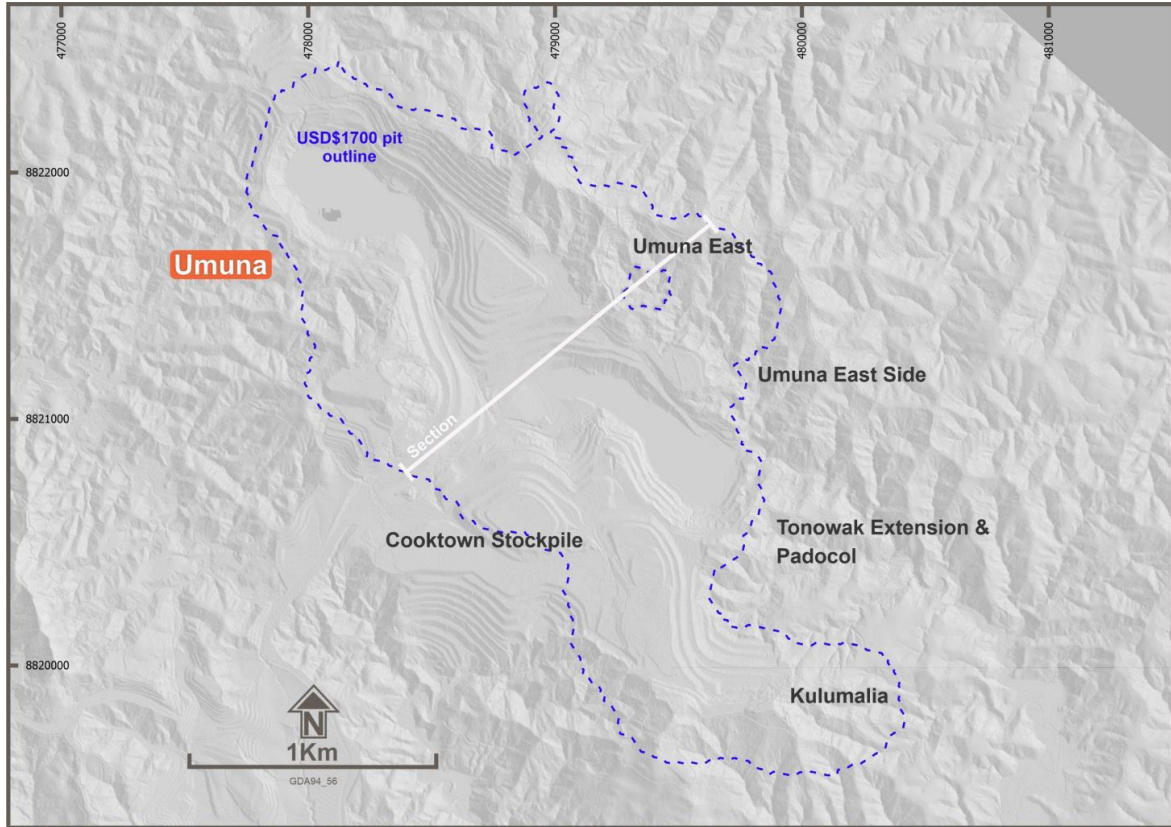


Figure 6 Umuna resource outline with Cooktown Stockpile location and priority exploration targets

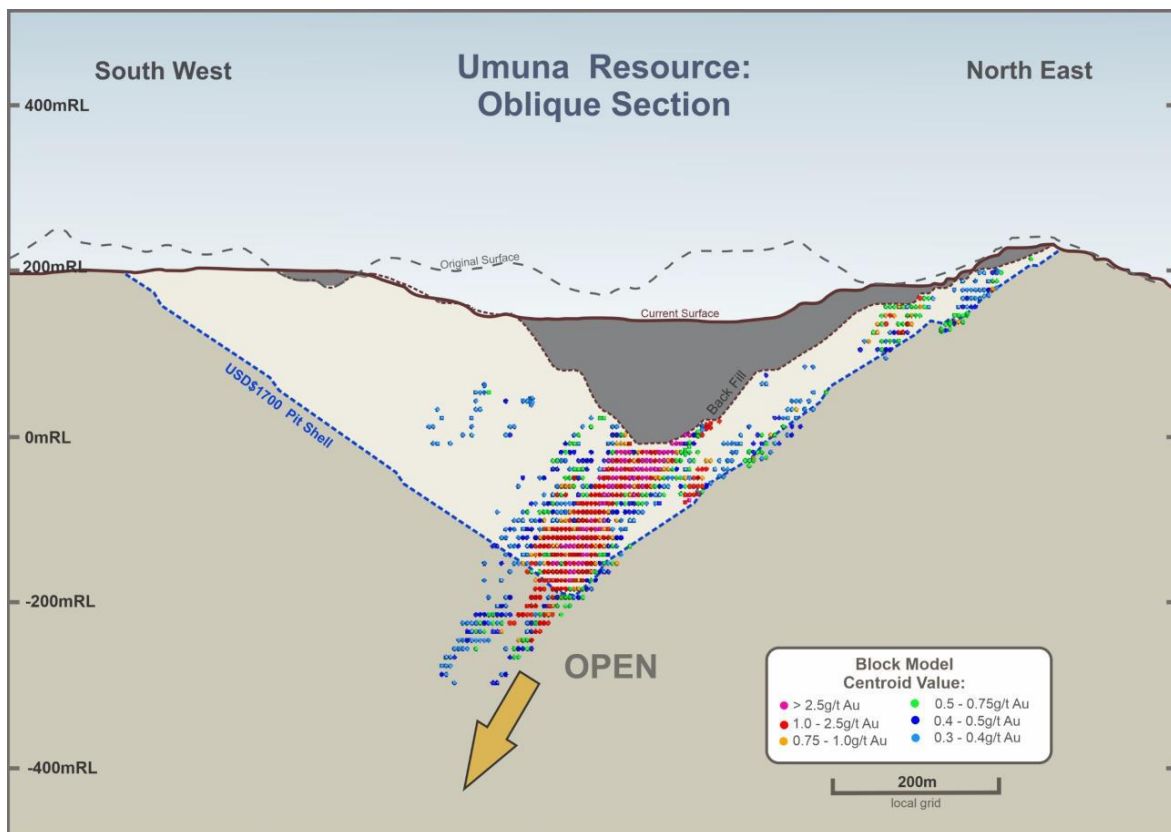


Figure 7 Umuna cross section

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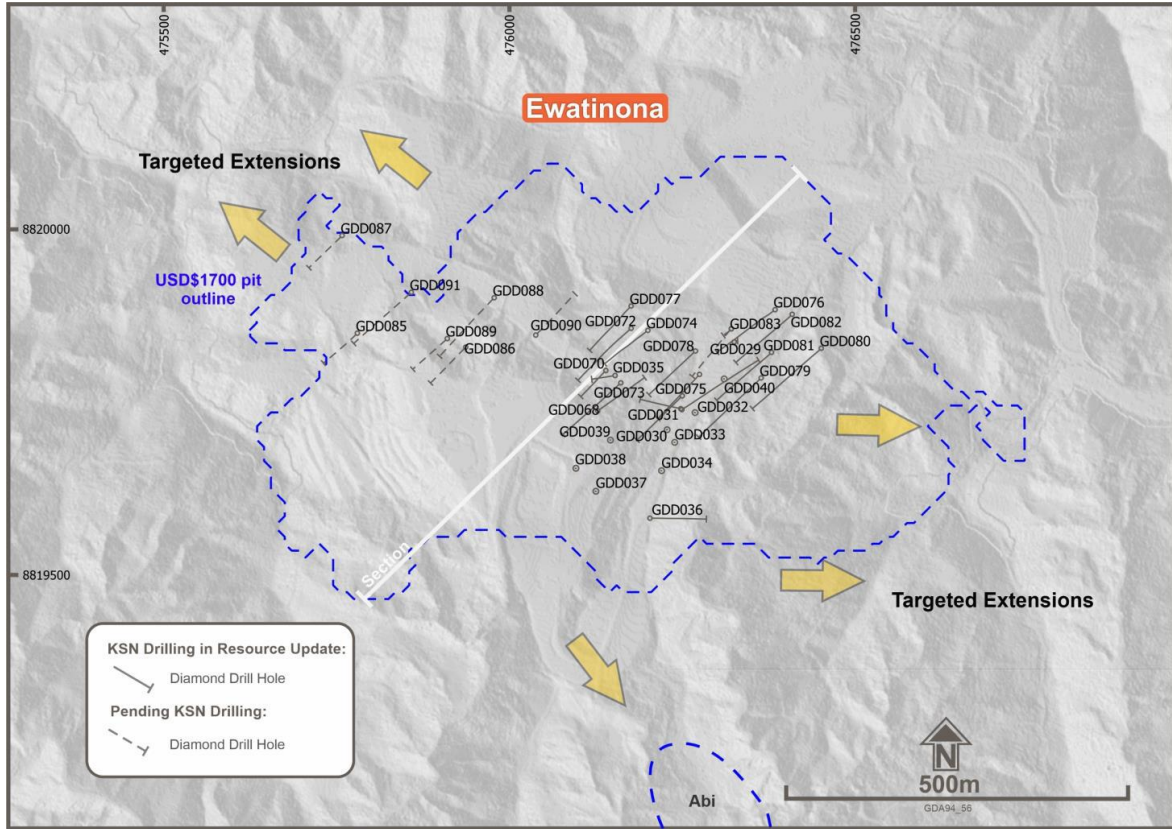


Figure 8 Ewatinona resource outline with KSN drilling and priority exploration targets

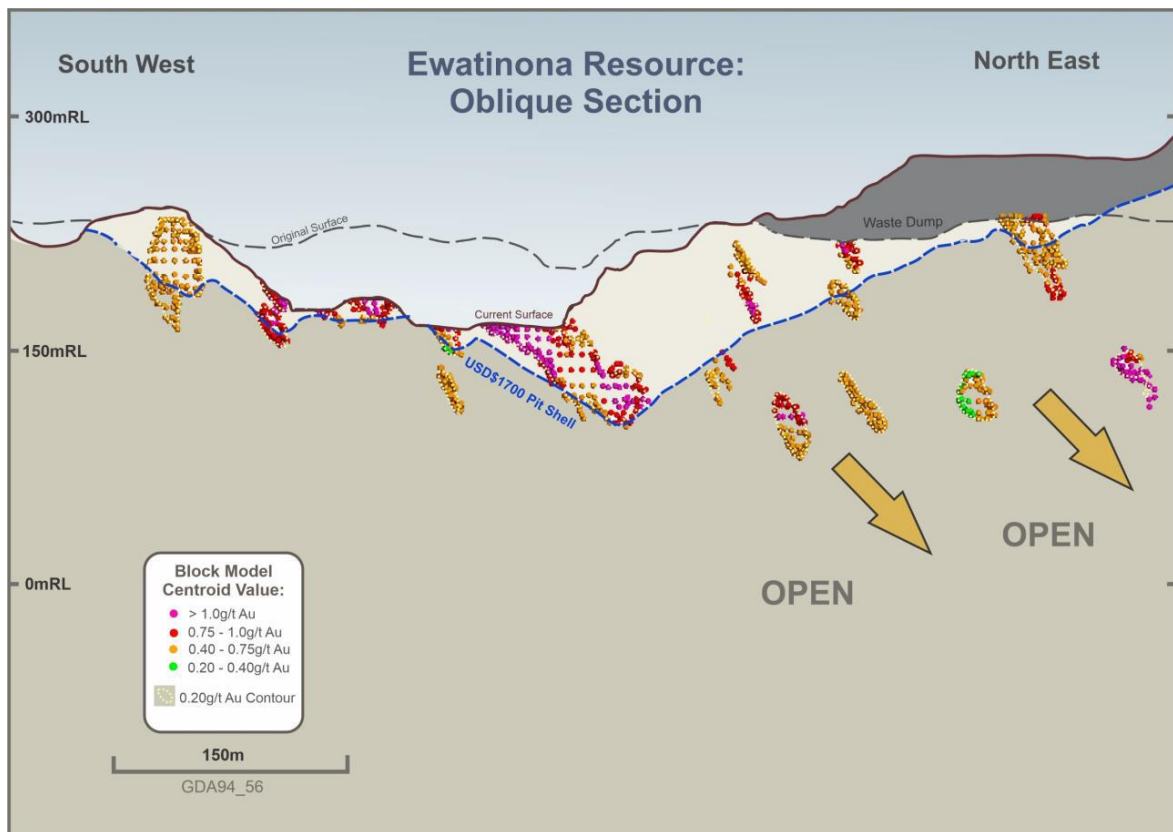


Figure 9 Ewatinona cross section

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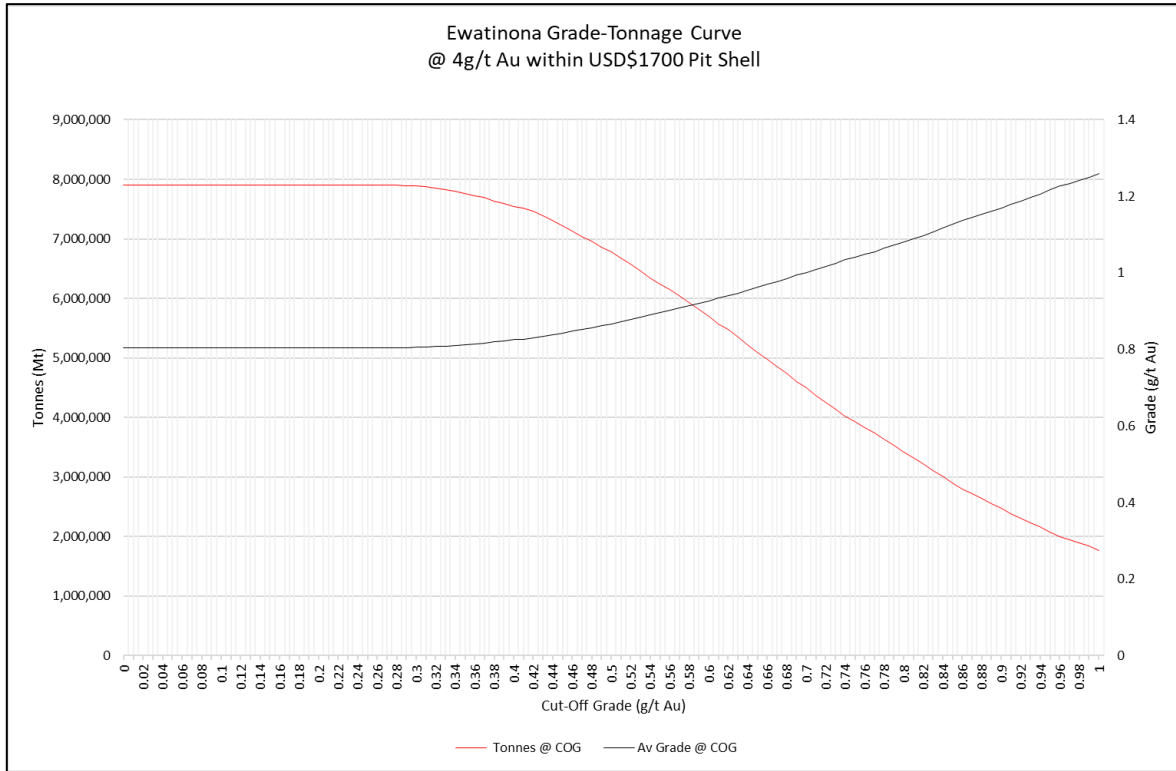


Figure 10 Ewatinona grade tonnage curve at 0.3g/t Au cut-off grade within USD\$1700 pit shell.

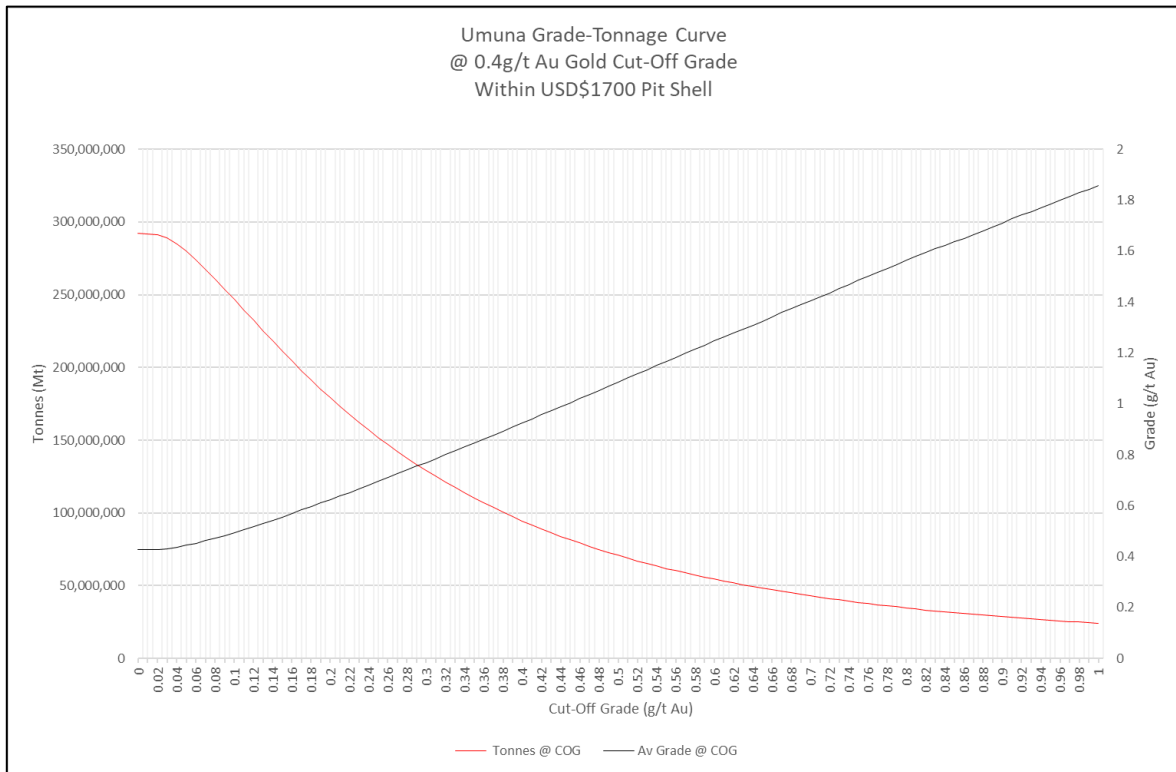


Figure 11 Umuna grade tonnage curve at 0.3g/t Au cut-off grade within USD\$1700 pit shell.



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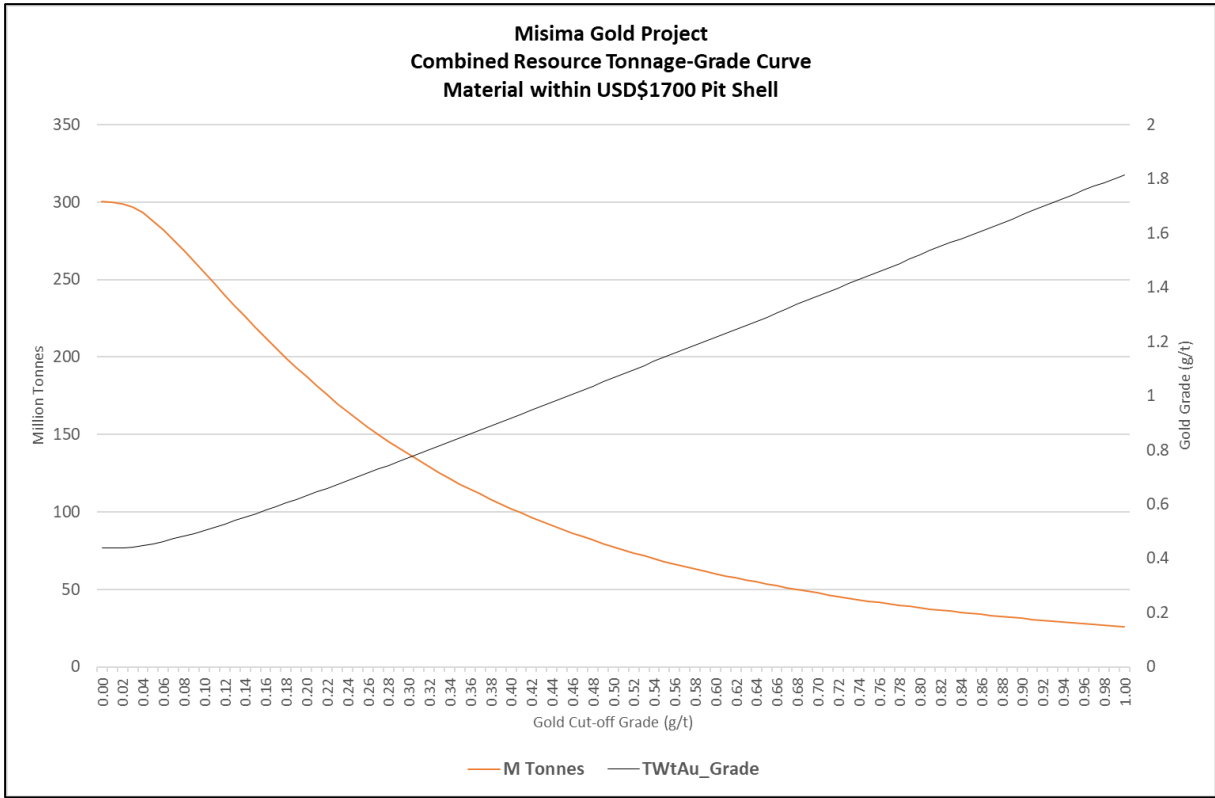


Figure 12 Misima Gold Project grade tonnage curve at 0.3g/t Au cut-off grade within USD\$1700 pit shell.



## About Kingston Resources

Kingston Resources is a metals exploration company which is focused on exploring and developing the world-class Misima Gold Project in PNG. Misima hosts a JORC Resource of 3.6Moz Au and an Ore Reserve of 1.35Moz. Misima was operated as a profitable open pit mine by Placer Pacific between 1989 and 2001, producing over 3.7Moz before it was closed when the gold price was below US\$300/oz. Kingston has concluded a Pre-Feasibility Study for Misima and is continuing to advance development activities. The Misima Project also offers outstanding potential for additional resource growth through exploration success targeting extensions and additions to the current Resource base. Kingston's interest in Misima is held through its PNG subsidiary Gallipoli Exploration (PNG) Limited.

In addition, Kingston owns 75% of the high-grade Livingstone Gold Project in Western Australia where active exploration programs are also in progress.



The Misima Mineral Resource estimate outlined below was released in an ASX announcement on 24 November 2020. Further information relating to the resource is included within the original announcement.

Resource Category	Cut-off (g/t Au)	Tonnes (Mt)	Gold Grade (g/t Au)	Silver Grade (g/t Ag)	Au (Moz)	Ag (Moz)
Indicated	0.3	68.3	0.80	4.5	1.8	9.8
Inferred	0.3 & 0.8	76.1	0.76	5.9	1.9	14.4
<b>Total</b>	<b>0.3</b>	<b>144</b>	<b>0.78</b>	<b>5.2</b>	<b>3.6</b>	<b>24.2</b>
Reserve	Cut-off (g/t Au)	Tonnes (Mt)	Gold Grade (g/t Au)	Silver Grade (g/t Ag)	Au (Moz)	Ag (Moz)
<b>Probable</b>	<b>0.3</b>	<b>48.3</b>	<b>0.87</b>	<b>4.2</b>	<b>1.35</b>	<b>6.48</b>

Misima JORC 2012 Mineral Resource & Ore Reserve summary table

### Competent Persons Statement and Disclaimer

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr. Stuart Hayward BAppSc (Geology) MAIG, a Competent Person who is a member of the Australian Institute of Geoscientists. Mr. Hayward is an employee of the Company. Mr. Hayward 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 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Hayward consents to the inclusion in this report of the matters based upon the information in the form and context in which it appears.

The Competent Person signing off on the overall Ore Reserves Estimate is Mr John Wyche BE (Min Hon), of Australian Mine Design and Development Pty Ltd, who is a Fellow of the Australasian Institute of Mining and Metallurgy and who has sufficient relevant experience in operations and consulting for open pit metalliferous mines. Mr Wyche consents to the inclusion in this report of the matters based upon the information in the form and context in which it appears.

Kingston confirms that it is not aware of any new information or data that materially affects the information included in all ASX announcements referenced in this release, and that all material assumptions and technical parameters underpinning the estimates in these announcements continue to apply and have not materially changed.