PMRC 2020 TECHNICAL REPORT ON THE METALLURGICAL ENGINEERING STUDY AND ASSESSMENT OF OCEANAGOLD (PHILIPPINES), INC.'S DIDIPIO GOLD-COPPER PROPERTY UNDER FINANCIAL OR TECHNICAL ASSISTANCE AGREEMENT (FTAA) NO. 001, NUEVA VIZCAYA AND QUIRINO PROVINCES, PHILIPPINES

PROJECT NO.: MVI-OGPI-002-2023

Report No.: MVI24-003OGP

PREPARED FOR:

OCEANAGOLD (PHILIPPINES) INC.

by:

MINERCON VENTURES, INC.

Data Cut-off Date: December 31, 2023

Report Date: January 20, 2024

Prepared by:

Enrico C. Nera, SMEP ACP Registration No. CP-006

EXECUTIVE SUMMARY

OceanaGold (Philippines), Inc. (OGPI/Company) operates a gold-copper mine in Didipio, Kasibu, Nueva Vizcaya under Financial and Technical Assistance Agreement (FTAA) No. 001. The mine is located on the boundaries of Nueva Vizcaya and Quirino provinces in Northern Luzon, in the Region II. The FTAA covers 7,750 hectares (as of the December 31, 2022 relinquishment) from an original 37,000 ha reduced over the years under the agreement. A Partial Declaration of Mining Project Feasibility (PDMPF) was issued for 975ha of the property now covering the operations.

Processing Plant started commercial operations in 2013 with a nameplate capacity of 2.5Mtpa. Additional comminution equipment and improvements were subsequently introduced into the process flowsheet design which allowed the plant to increase processing capacity to 3.5Mtpa. Since then, continuous process improvements have allowed the plant to reach a capacity of 4.0Mtpa with the potential for higher capacity once current process improvement projects are implemented.

The process for the recovery of the valuable minerals starts with a crushing and grinding circuit to attain the necessary degree of liberation essential to producing satisfactory recovery and desired concentrate grade.

The Didipio ore contains copper in the form of chalcopyrite with some bornite, with gold attached to the copper minerals. These minerals are easily recovered by the flotation process. Gold is also present as free Au. Thus, installation of a gravity concentration process within the grinding circuit is essential to recover gold in as coarse form as possible to avoid overgrinding. Two products are formed in the process – (i) a copper concentrate which is trucked to Poro Point, La Union for shipping to overseas smelters; and (ii) a gold-silver Dore, shipped to metal traders. One quarter of the bullion production is sold to the Bangko Sentral ng Pilipinas (BSP) as part of the FTAA.

This report is part of the tri-technical report compliant to the Philippine Mineral Reporting Code (PMRC 2020) to be submitted by OGPI to the Philippine Stock Exchange (PSE). The three reports are:

1) Technical Report 1 – PMRC 2020 Technical Report on the Exploration Results and Mineral Resources Estimation of OGPI's Didipio Gold-Copper Property under FTAA No. 001, Nueva Vizcaya and Quirino Provinces, Philippines

2) Technical Report 2 – PMRC 2020 Technical Report on the Economic Assessment and Mineral Reserves Estimation of OGPI Didipio Gold / Copper property under FTAA No. 001 Didipio, Kasibu, Nueva Vizcaya and Cabarroguis, Quirino, Philippines.

This report comprises of the Technical Report 3, whose primary objective is to provide the metallurgical modifying factors necessary in Technical Report 2 for the conversion of the mineral resources into mineral reserves.

The basis for the development of the process to extract the gold and copper minerals are extensively discussed, and the process flow diagram of the existing process plant is described in detail. Historical performance of the plant is evaluated and models for predicting metal recoveries have been assessed and presented. These are important inputs to the economic analysis needed for mineral reserve calculations.

Also, current offtake contract for the sales of copper concentrates is discussed to show how the net smelter returns are calculated from the extraction of the metals from the copper concentrates. Bullion sales contracts, both with ABC Refinery and BSP are discussed to show how revenues from the gold bullion production revenues. Both revenues are key inputs to the calculation of the mineral reserves.

Technical and business risks are also considered in order to assess the process plant's capability to recover from business and technical interruptions.

ACCREDITED COMPETENT PERSON'S CONSENT FORM AND CONSENT STATEMENT, AND CERTIFICATES

Accredited Competent Person's Consent Form

Pursuant to the requirements under the prevailing Philippine Stock Exchange, Inc.'s Consolidated Listing and Disclosure Rules and Clause 10 of the PMRC 2020 Edition (the "Consent Statement")

Report Name to be Publicly Released:
PMRC 2020 Technical Report on the Metallurgical Engineering Study and Assessment of OceanaGold (Philippines), Inc.'s Didipio Gold-Copper Property under Financial or Technical Assistance Agreement (FTAA) No. 001, Nueva Vizcaya and Quirino Provinces, Philippines (the "Report")

Name of Company releasing the Report: **OceanaGold (Philippines), Inc.**

Name of Mineral Deposit to which the Report Refers: **Didipio Gold-Copper Deposit**

Data Cut-off Date: **December 31, 2023**

Report Date: **January 20, 2024**

Consent Statement

I, Enrico C. Nera, confirm that I am the Accredited Competent Person for the Report, and:

- That I am a Registered Metallurgical Engineer with registration No. 000243 after having signed the roster of Metallurgical Engineers at the Professional Regulation Commission on 27 September 1987, currently residing at 8 Fokker St. Filinvest II, Batasan Hills, Quezon City, Metro Manila 1126 Philippines.
- I have read and understood the requirements of the 2020 Edition of the Philippine Mineral Reporting Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves (PMRC 2020 Edition).
- I certify that this Report has been prepared in accordance with PMRC 2020 Edition.
- I am an Accredited Competent Person-Metallurgical Engineer as defined by the PMRC 2020 Edition and certified by the Society of Metallurgical Engineers of the Philippines (SMEP), having a minimum of five years relevant experience in copper and gold beneficiation described in the Report, and to the activity for which I am accepting responsibility.
- I am a Life Member of the Society of Metallurgical Engineers of the Philippines (SMEP), a regular member of the Australian Institute of Mining and Metallurgy (AusIMM) and a regular member of the Society for Mining, Metallurgy and Exploration – AIME (SME-AIME).

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- I am an independent consultant of OceanaGold (Philippines), Inc. (the "Company"). I am neither employed nor affiliated with the Company in any manner. I do not own any shares, options, and/or warrants of the Company nor do I hold any other interest over the Company or any of its assets.

- I am the President of Nasaco International, Inc., a chemical trading company duly registered with the Securities and Exchange Commission, representing Nasaco International Ltd., a company based in Switzerland, promoting mineral processing reagents, and that Nasaco is currently supplying flocculants to the Company and promoting other flotation reagents, and that the Company is aware of this and has posed no objection or sees no conflict of interest.

- I assume full responsibility for the whole of the Report which have been prepared under my supervision.

- I have reviewed the Report to which this Consent Statement applies.

I have disclosed to the reporting Company the full nature of the relationship between myself and the Company, including any issues that could be perceived by investors as a conflict of interest.

I verify that the Report is based on, and fairly and accurately reflect in the form and context in which it appears, the information in my supporting documentation relating to Metallurgical Engineering Study and Assessment and to best of my knowledge, all technical information that are required to make this Report not misleading, have been included.

I have attached to this Consent Statement copies of my relevant identification cards and Professional Tax Receipt.

Consent

I consent to the release and public disclosure of the Report and this Consent Statement by the Board of Directors of OceanaGold (Philippines), Inc. for the purpose of the initial public offering of the Company, including the listing of the Company's shares with The Philippine Stock Exchange, Inc. and the registration of the Company's shares with the Securities and Exchange Commission of the Philippines, and the compliance by the Company of its reportorial obligations once the same becomes a public company. For the avoidance of doubt, this consent includes submission of this Report to any regulatory authority, making accessible this Report to the general public, and quoting the Report or using its extract or summary in the prospectus and other materials for such initial public offering and/or for purposes of complying with any regulatory requirement. Any extracts or summary of the said Report for purposes other than the foregoing would require my prior written consent.

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VENTURES INC.

ENRICO C. NERA Accredited Competent Person	22 January 2024 Date
Society of Metallurgical Engineers of the Philippines Professional Representative Organization of the ACP	PRC PIC Registration No. 0000243 / Valid Until 18 May 2027 ACP ID No. 006 / Valid Until 18 May 2024 Professional Tax Receipt No. 5694227 / Issued at QC on 1/22/24.

ACKNOWLEDGMENT

REPUBLIC OF THE PHILIPPINES)
QUEZON CITY) SS.

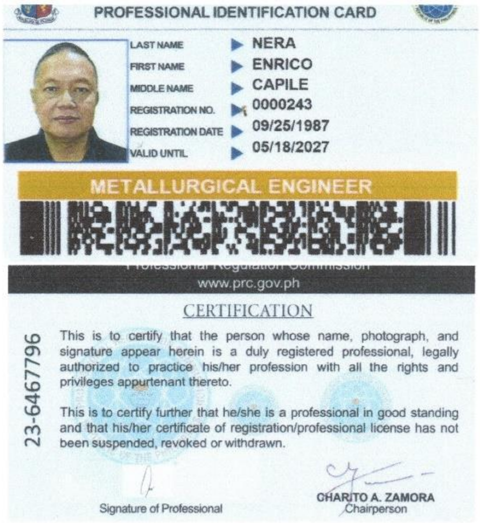
BEFORE ME, this 22nd day of January, 2024, personally appeared before me Enrico C. Nera with PRC Professional Identification Card No. 0000243 valid until 18 May 2027, known to me to be the same person who executed this instrument which he acknowledged before me as his free and voluntary act and deed.

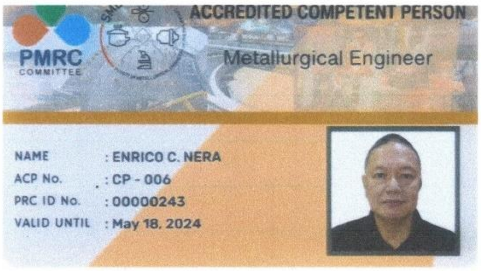
IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal on the date and at the place first above written.

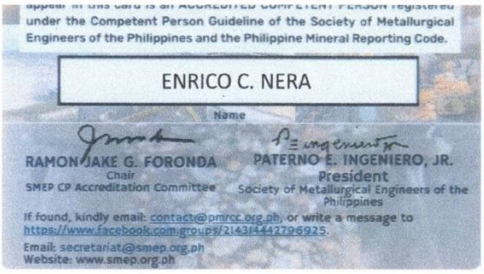
Doc. No. 461;
Page No. 93;
Book No. VI;
Series of 2024

ATTY. GODOFREDO T. LIBAN II
NOTARY PUBLIC
Admin. Matter No. NP-053 (2023-2024)
PTR No.5565664, JAN. 3, 2024
IBP No. 180583, NOV. 25, 2022
Roll No. 29257, MAY 14, 1979
MCLE COMPLIANCE No. VI-0012922
2nd FLR. LEGISLATIVE WING
QUEZON CITY HALL, DILIMAN
QUEZON CITY

MINERCON
VENTURES INC.







OFFICIAL RECEIPT

Republic of the Philippines
Quezon City
OFFICE OF THE TREASURER

Accountable Form No. 51 Revised August 1994	**ORIGINAL**
DATE 1/22/24	№ 5694227 D

PAYOR: Enrico C. Nera

NATURE OF COLLECTION	FUND AND ACCOUNT CODE	AMOUNT
PTR 2024		₱ 300
metallurgical engr		
985 1045		
(EM)		
		₱ 300

AMOUNT IN WORDS: three hundred

Received ☐ Cash ☐ Treasury Warrant ☐ Check ☐ Money Order	Received the Amount Stated Above.
Treasury Warrant, Check, Money Order Number	
Date of Treasury Warrant, Check, Money Order	EDGAR T. VILLANUEVA CITY TREASURER COLLECTING OFFICER

NOTE: Write the number and date of this receipt on the back of treasury warrant, check or money order received.

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1. INTRODUCTION

1.1. Purpose and Scope of Work

Minercon Ventures Inc. has been engaged by OGPI to undertake reporting of Exploration Results, Mineral Resources and Mineral Reserves under the PMRC 2020 and its Implementing Rules and Regulations (IRR). Since the IRR is not yet approved by the Securities and Exchange Commission (SEC), best efforts had been exerted to conform to the latest draft of the IRR.

As such, the project involves writing of technical reports to cover the following subjects:

Technical Report 1 – Exploration Results and Mineral Resources (Angeles et al. 2024)
Technical Report 2 – Mineral Reserves (Buada, 2024)
Technical Report 3 – Metallurgical Assessment and Study on a Mineral Deposit (this Report)

For this Technical Report 3, specific scope of work includes the following:

- Provide the metallurgical basis for the recovery of the valuable minerals and precious metals.

- Describe the recovery process, the major equipment involved and the various support activities to produce the final products and delivery to its final destination.

- Determine the models for predicting the milling capacity, recovery of the minerals and metals, and the final product specifications necessary for mineral reserve calculations.

- Identifying the financial parameters such as sustaining capital costs, operating costs, metal price forecasts and foreign exchange needed for the mineral reserve calculations.

1.2. Country Profile (Optional for Mineral Property in the Philippines)

The Didipio Mineral Property is located in the Philippines.

1.3. Location of the Mineral Property and Accessibility

The Didipio operation is located in the northeast part of Luzon Island approximately 270 km north-northeast (NNE) of Manila, in the Republic of the Philippines as highlighted in Figure 1-1.

Figure 1-1. Location Map Didipio Gold Mine

The site is at 121.45º E 16.33º N (Longitude/Latitude – World Geodetic System 1984). The FTAA straddles a provincial boundary, with part of the property within the Province of Nueva Vizcaya and part within the Province of Quirino. The location of the FTAA area and the Didipio operation are shown in Figure 1-2 subject to the outcome of a pending litigation between the two provinces in the area.

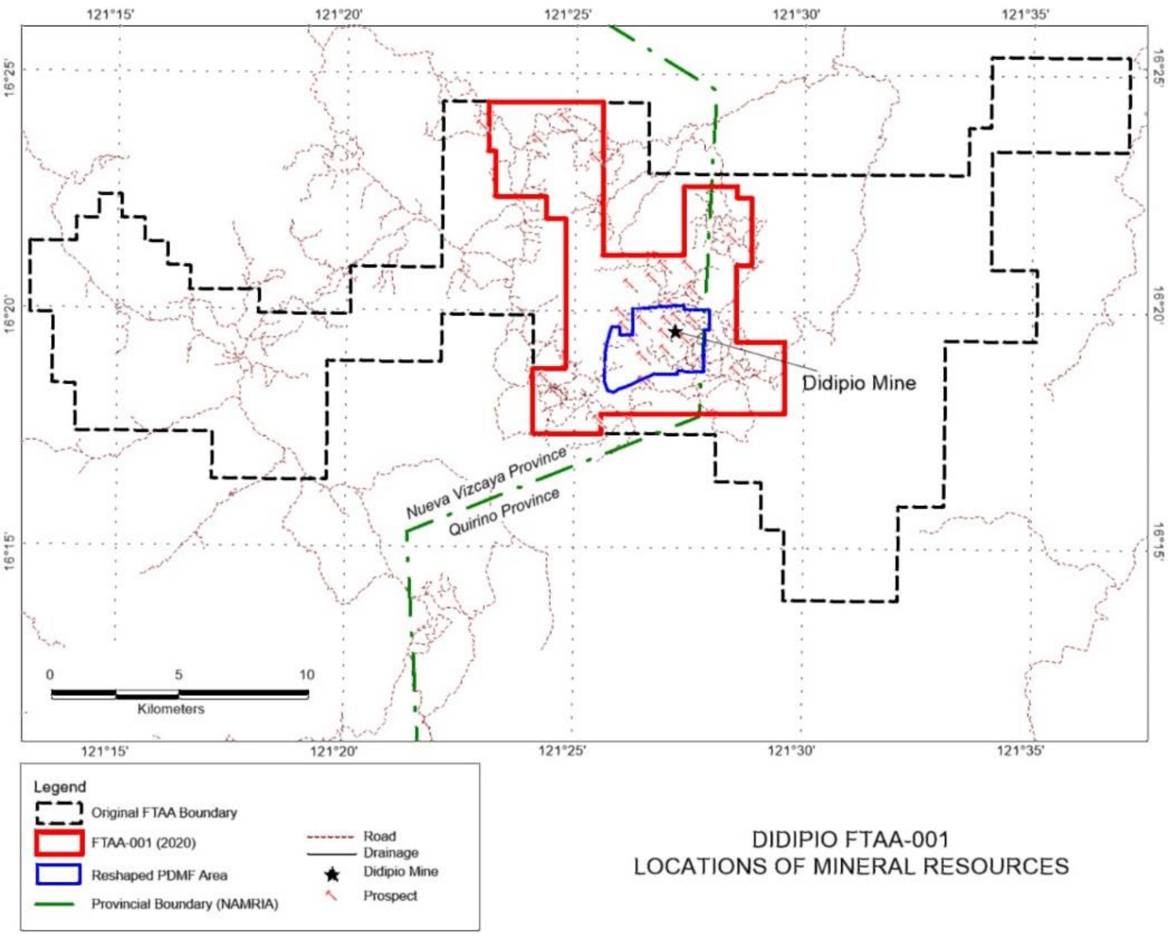

Figure 1-2. FTAA Boundaries and Provincial Boundaries (subject to pending legal proceedings)

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1.4. Property Description

The FTAA No. 001 tenement covers 7,750 hectares (ha) as of the December 31, 2022 relinquishment as shown in Figure 1 - 1. On December 21, 2023, OGPI filed with the MGB its mandatory annual notice to relinquish approximately 793 ha and once the relinquishment is approved, the new FTAA area will be at 6,957 ha. The original FTAA covered 37,000 ha with parts relinquished over the years under the terms of the agreement. The approved Partial Declaration of Mining Project Feasibility (PDMF) for the Didipio Mine covers 975 ha within the FTAA.

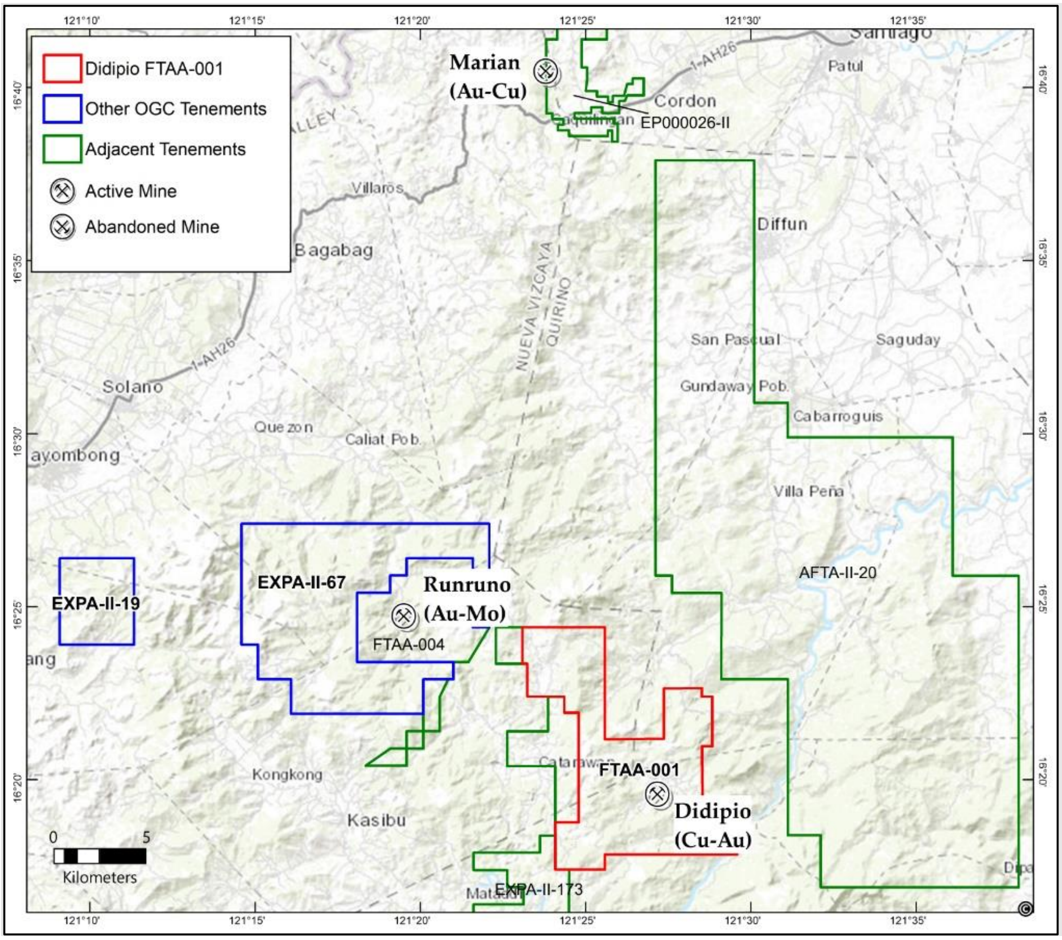

Figure 1-3 Adjacent Properties to Didipio FTAA-001

1.5. Qualifications of Accredited Competent Person(s), Key Technical Staff, and Other Experts

This Technical Report was prepared under the supervision of Enrico C. Nera, ACP-Metallurgist. The qualifications of the ACP-Metallurgist are enumerated below.

Enrico C. Nera	Bachelor of Science in Metallurgical Engineering University of the Philippines – 1983 Registered Metallurgical Engineer #0000243 ASEAN Eng., APEC Eng. MAusIMM, MSME-AIME, MSMEP Managing Director Minercon Ventures Inc. 40 years of experience in mineral processing and extractive metallurgy -research, operations, plant design, plant audit, plant valuation, academe

This technical report was prepared with the assistance of the following key experts and technical staff:

Joan Adaci-Cattiling	Bachelor of Laws University of the Philippines (Quezon City, 2000) Bachelor of Arts in Communication: Major in Journalism University of the Philippines (Quezon City, 1996) OGPI Corporate Affairs Department OGPI President & General Manager-External Affairs and Social Performance
Raymond Setiagani	Bachelor of Metallurgical Engineering Bandung Institute of Technology (Indonesia, 2006) MAusIMM Process Department Manager – Process
Kristine Nina B. Monilla	Bachelor of Science in Chemistry Bicol University College of Science, 2005 Process Department Superintendent – Process Operations
Aldrin Dummanao	Bachelor of Science in Metallurgical Engineering University of the Philippines – Diliman 2014 Registered Metallurgical Engineer #001033 Process Department Senior Metallurgist – Process
Dyan A. Sy	Bachelor of Science in Metallurgical Engineering University of the Philippines – Diliman 2015 Registered Metallurgical Engineer #000930 Process Department Metallurgist (L2) – Process
Cherrie Lou B. Burabod	Master in Business Administration Aquinas University (now University of Sto. Tomas of Legazpi) (Legaspi City, Albay, 2010) BS in Accountancy Bicol University College of Arts and Sciences (Daraga, Albay, 2001) OGPI Commercial Department Manager – Commercial

Annabel P. Escalante	Bachelor of Science in Mining Engineering University of the Philippines (Quezon City, 2011) Registered Mining Engineer (EM 0002895) Accredited Permanent Safety Engineer by Mines and Geosciences Bureau - Region 2 Philippine Society of Mining Engineers - Member OGPI Health and Safety Department Manager - Occupational Health and Safety
Peter T. Benaires	Bachelor of Science in Forestry University of the Philippines (Los Banos, 1999) OGPI Community Relations Department Acting Manager - Community Relations and Development
Windsor Jude T. Vergara	Bachelor of Science in Metallurgical Engineering University of the Philippines – Diliman 2016 Registered Metallurgical Engineer #001046 Minercon Ventures, Inc. Technical and Administrative Support
Eligia D. Clemente	PhD in Environmental Engineering at University of the Philippines (Diliman, 2017) MS in Metallurgical Engineering at University of the Philippines (Diliman, 1999) BS in Metallurgical Engineering at University of the Philippines (Diliman, 1977) Minercon Ventures, Inc. Environmental Engineer

The ACP – Metallurgical Engineer was assisted by the following OGPI staff on the following aspects:

- Metallurgy, Mineral Processing, Process Plant Design, Cost Estimates, and Implementation Schedules: Raymond Setiagani, Aldrin Dummanao, Kristine Nina B Monilla,

- Market Study and Contracts: Cherrie Lou B. Burabod

- Risk Analysis: Annabel P. Escalante, Peter T. Benaires

The MVI Technical Team provided support to the ACP Metallurgical Engineer on the Sustainability Considerations.

1.6. Disclaimer

This report is prepared using the data acquired by OGPI including results from past exploration programs and current drilling campaigns. The primary sources of information are in the form of digital files, databases, maps and reports prepared by or under the supervision of process plant and other technical personnel of OGPI. The undersigned Accredited Competent Person or the "Author" also relied on archived information and works conducted by previous employees or consultants hired by the Company.

The Author, as part of the MVI Team, conducted process plant inspection, reviewed the data diligently, and carried out reproducibility checks. However, it was not possible to independently confirm all the supplied information due to the limitation of time. While the validation process was conducted with detailed attention, the accuracy of the formulated conclusions in this Technical Report relies entirely on the veracity and completeness of the information provided.

The Author does not accept responsibility for the operational and non-operations aspects of this Report including legal, tenement and mineral rights, environmental, socio-economic, governance, and other related aspects including any errors or any omission in the supplied data and does not accept any consequential liability arising from commercial decisions or actions resulting from them.

The contributions of professionals and subject matter experts are hereby acknowledged and mentioned in relevant sections of this Report. All technical information including models and statistical analysis were validated by the Author. A list of the reports and scientific papers used in this Report is given in Section 12 of this Report.

1.7. Units of Measure, Currency, and Foreign Exchange Rates

The principal unit of measure used in this Technical Report is the International System of Units (SI). Currencies used are the United States dollar (USD) and the Philippine peso (PHP). The foreign exchange rates used were the ones that OGPI uses in their financial projections (Table 1-1).

Table 1-1: Foreign currency exchange rate

Unit	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
USD/PHP	55	55	55	55	55	55	55	55	55	55	55	55	55

1.8. Previous Works

This section is the same as in Section 1.8 of Angeles et al. (2024).

Indigenous miners from Ifugao Province first discovered alluvial gold in the Didipio region in the 1970s. Gold was mined either by the excavation of tunnels following high-grade quartz-sulfide veins associated with altered dioritic intrusive rocks, or by hydraulicking in softer, clay-altered zones. Gold was also recovered by panning and sluicing gravel deposits in nearby rivers, and small-scale alluvial mining still takes place. No indications of the amount of gold recovered have been recorded.

Since 1975, exploration work carried out in the area has been managed by the following:

- From 1975 to 1977, Victoria Consolidated Resources Corporation (VCRC) and Fil-Am Resources Inc undertook a stream geochemistry program, collecting 1,204 pan concentrates samples that were assayed for gold, copper, lead and zinc. A large area of hydrothermal alteration was mapped, but, although nine drill holes were planned to test it, no drilling eventuated. Despite recognition of an altered diorite intrusive (the Didipio Gold-Copper Deposit), no further work was undertaken;

- Marcopper Mining Corporation investigated the region in 1984, followed in April 1985 by a consultant geologist (E P Deloso) who was engaged by local claim owner Jorge Gonzales. Work by Deloso included geological mapping, panning of stream-bed sediments and ridge and spur soil sampling. Deloso described the Didipio Gold-Copper Deposit as a protruding ridge of diorite with mineralized quartz veinlets within a vertically dipping breccia pipe containing a potential resource. The resource is not compliant with PMRC guidelines and is therefore not quoted;

- Benguet Corporation examined the Didipio area in September 1985 and evaluated the bulk gold potential of the diorite intrusion. Work included grab and channel sampling of mineralized outcrops, with sample gold grades ranging up to 12g/t Au and copper averaging 0.14% Cu. It was concluded that the economic potential of the diorite intrusion depended on the intensity of quartz veining and the presence of a clay-quartz-pyrite stockwork at depth;

- Geophilippines Inc investigated the Didipio area in September 1987 and carried out mapping, gridding, rockchip and channel sampling over the diorite ridge. In November 1987, Geophilippines Inc commissioned the Department of the Environment and Natural Resources (DENR), Region One, to undertake a geological investigation of the region in conjunction with mining lease applications;

- Between April 1989 and December 1991 Cyprus and then Arimco Mining Corporation (AMC) carried out an exploration program that included the drilling of 16 diamond core holes into the Didipio Ridge deposit. This work outlined potential for a significant deposit;

- From 1992, Climax exploration work concentrated on the Didipio Gold-Copper Deposit, although concurrent regional reconnaissance, geological, geophysical, and geochemical programs delineated other gold and copper anomalies in favorable geological settings within the Didipio area. Diamond drilling and other detailed geological investigations continued in the Didipio operation area and elsewhere in the Didipio region through 1993 and were coupled with a preliminary Environmental Impact Study (EIS) and geotechnical and water management investigations. These works, producing 21 diamond drill holes for a total of 7,480m of drilling, formed the basis for a preliminary resource estimate (not quoted as it is not compliant with PMRC and commencement of a Project Development Study (PDS) by Minproc Limited in January 1994;

- Additional diamond drilling was completed at the Didipio operation as part of the PDS, providing a database of 59 drill holes within the deposit. A model of the deposit was developed, and a resource estimate made (not quoted as it is not compliant with PMRC guidelines). The work identified the key parameters for potential project development, which included the likelihood of underground block caving for ore extraction. The economics of this scenario were dependent in part on the delineation of a central core of higher-grade gold and copper mineralization, but drill intersections in this area were too widely spaced to confirm geological and grade continuity for measured resource category;

- A program of 17 additional diamond drill holes was undertaken to provide closer spaced sampling data primarily within an area lying above the 2400mRL. This program was completed in June 1997, with all drill core assays received by early August 1997. These data formed the basis for a study completed by Minproc Limited in 1998; and

- By the time the FTAA was assigned to Australasian Philippines Mining Incorporated (APMI) in 2004, Climax-Arimco Mining Corporation (CAMC) had drilled 94 drill holes into the Didipio gold-copper deposit for a total of 35,653m of drilling.

2. TENEMENT AND MINERAL RIGHTS

2.1. Description of Mineral Rights

The Didipio Gold/Copper operation is covered by the FTAA No. 001 which grants OGPI the right to undertake large-scale exploration, development and mining of gold, silver, copper, and other minerals within a fixed fiscal regime. A complete description of the mineral rights is covered in Section 2.1 of Angeles et al. (2024).

2.2. History and Current Status of Mineral Rights

The Didipio FTAA application was first lodged in February 1992 and granted to OGPI's related company, AMC, on June 20, 1994, under Executive Order No. 279 and the Mineral Resources Development Decree of 1974 (Angeles et al., 2024). The FTAA therefore pre-dates the Mining Act, which is the empowering legislation for subsequent FTAAs. On December 23, 1996, OceanaGold (Philippines) Exploration Corporation (OGPEC) - formerly AMC, entered an Assignment, Accession and Assumption Agreement with OGPI affecting the transfer of all

OGPEC's rights and obligations under the FTAA to OGPI. That transfer was approved on December 9, 2004, by an Order of the Philippines DENR. OGPI is the current holder of the Didipio FTAA.

Pursuant to the FTAA, OGPI notified the DENR that commercial production had commenced at the Didipio operation on April 1, 2013.

The FTAA makes provision for exploration over tenements outside the FTAA area for a five-year term from grant of the FTAA. On February 20, 2002, OGPI requested a five-year extension of the FTAA exploration period, and this was approved by the DENR on August 15, 2005. On June 28, 2010, OGPI applied for a further five-year extension of the exploration period of the FTAA, which was approved on March 10, 2016, for a further five years which expired in March 2021. In a letter dated December 19, 2022, the Mines and Geosciences Bureau (MGB) granted OGPI's request to continue its exploration activities on the basis that OGPI was not able to conduct exploration for two years due to the suspension of operations.

The initial 25-year term of the FTAA ended on June 18, 2019. The MGB issued a letter dated June 20, 2019, stating that OGPI was permitted to continue its mining operations pending confirmation of the renewal of the FTAA. On June 25, 2019, the Nueva Vizcaya Provincial Government, which took the position that the FTAA expired, ordered the municipality, barangay, and other agencies to enjoin and restrain operations of the mine. This resulted in road blockades and in the temporary suspension of underground mining in mid-July 2019 and processing in October 2019.

The renewal of the FTAA was confirmed by the Philippine Government on July 14, 2021, with the execution of an Addendum and Renewal Agreement (of the FTAA) providing for the amendments, summarized below:

- Provision for an additional Social Development Fund (SDF) equivalent to 1.5% of the gross mining revenue of the preceding calendar year. 1% of the fund will be allocated as Community Development Fund (CDF) and 0.5% is for the Provincial Development Fund (PDF) for the provinces of Quirino and Nueva Vizcaya. The expenses for the SDF shall be included as an allowable deduction;

- Reclassification of the Net Smelter Return (NSR) to be an allowable deduction and shared 60%/40% rather than wholly included in the government share;

- Listing of at least 10% of the common shares in OGPI on the PSE within three years from confirmation of FTAA renewal, which can be extended for another two years as may be required;

- OGPI to offer for purchase by the BSP not less than 25% of its annual gold doré production at a fair market price and on mutually agreed terms; and

- OGPI shall transfer its principal office to a local government unit in either of the host provinces of Nueva Vizcaya or Quirino within two years.

Following the confirmation of the renewal of the FTAA, OGPI commenced a restart of operations. In November 2021 the mill restarted with stockpile feed, followed by underground production later that month. By first quarter of 2022, the Didipio Mine has achieved full production.

2.3. Royalties, Receivables, and Liabilities

The Royalties, Receivables and Liabilities have already been discussed extensively in Sec. 2.3 of the Technical Report 1, PMRC 2020 Technical Report on the Exploration Results and Mineral Resources Estimation of OGPI's Didipio Gold-Copper Property under FTAA No. 001, Nueva Vizcaya and Quirino Provinces, Philippines (Angeles et al., 2024) and will not be discussed here any further.

3. GEOGRAPHICAL AND ENVIRONMENTAL FEATURES

3.1. Physiography, Climate, and Vegetation

The Physiography, Climate and Vegetation of OGPI have already been discussed extensively in Section 3.1 of the Technical Report 1, PMRC 2020 Technical Report on the Exploration Results and Mineral Resources Estimation of OGPI's Didipio Gold-Copper Property under FTAA No. 001, Nueva Vizcaya and Quirino Provinces, Philippines (Angeles et al., 2024) and will not be discussed here any further.

3.2. Land Use and Infrastructure

3.2.1. Site Infrastructure and Surface Rights

The Site Infrastructure and Surface Rights of OGPI have already been discussed extensively in Section 3.2.1 of the Technical Report 1, PMRC 2020 Technical Report on the Exploration Results and Mineral Resources Estimation of OGPI's Didipio Gold-Copper Property under FTAA No. 001, Nueva Vizcaya and Quirino Provinces, Philippines (Angeles et al., 2024) and will not be discussed here any further.

3.2.2. Power Supply

Didipio's power requirements were originally self-generated on site by an OGPI owned power station consisting of fourteen diesel powered generator sets supplying a maximum of 16MW of power to site. This power station remains in place and provides back-up power to the operation.

Construction of an overhead power line (OHPL) was completed in September 2015. Since November 2015 the Didipio mine site has been operating on National Grid Power as its main operational power supply. A high voltage transformer was installed to step down the National Grid Power to the Didipio mine site voltage of 13.8kV.

With the commencement of underground mining the power demand for the Didipio operation increased from 16MW to a maximum of 22MW.

3.2.3. Port Facilities

The Port of Manila (372km from the Didipio site) is the destination port for inwards transit of bulk goods and reagents, while the existing copper concentrate storage and shipment facilities at Poro Point, La Union (356km from the Didipio site) are the departure port for the shipment of ore concentrate. See Section 7.6.6 of this report for descriptions of the routes between these ports and the site.

3.3. Environmental Features

The Didipio Mine's environmental programs and mitigation strategies are incorporated into the Environmental Protection and Enhancement Program (EPEP). An EPEP is a regulatory requirement and involves a conceptual environmental management plan for the Life of Mine Plan (LoMP), including an estimated total cost. The EPEP provides a description of the expected impacts and proposed mitigation of the activities comprising the Didipio operation, sets out the Life of Mine (LoM) environmental protection and enhancement strategies based on best practices in environmental management in mining, and presents the environmental management program for the operation.

An Annual Environmental Protection and Enhancement Program (AEPEP) is a yearly environmental management work plan based upon the EPEP which OGPI is required to lodge with the MGB. The AEPEP makes provision for monitoring of meteorological data, noise levels, and water quality data from designated measurement stations within the river and Tailing Storage Facility (TSF) systems, water quality and flow velocity data from the stream gauging stations, and groundwater data. Air and water quality monitoring is carried out to ensure compliance with Philippine ambient and water air quality objectives during both construction and operation activities, and similarly noise and vibration monitoring checks for compliance with noise and vibration requirements.

3.3.1. Natural Resources

The general issues with regards to Natural Resources are already covered in Technical Report 1, PMRC 2020 Technical Report on the Exploration Results and Mineral Resources Estimation of OGPI's Didipio Gold-Copper Property under) FTAA No. 001, Nueva Vizcaya and Quirino Provinces, Philippines (Angeles et al., 2024) Section 3.3 and will not be discussed here any further.

4. SUSTAINABILITY CONSIDERATIONS

A detailed discussion of Sustainability issues and subsequent sections on:

- Environmental Aspects
- Corporate Environment Policy
- International Organization for Standardization (ISO)/Environmental Management System (EMS) certifications in place for operating mine
- Environmental compliance including project permitting requirements.
- Energy consumption and management
- Water Quality Management
- Ambient Air Quality Management
- Hazardous Waste Management
- Mineral Waste Management
- Tailings Disposal Requirements and Plans
- Mine closure (remediation and reclamation) requirements and costs
- Environment Opportunity

This is already covered in Section 5 of the Technical Report 1, PMRC 2020 Technical Report on the Exploration Results and Mineral Resources Estimation of OGPI's Didipio Gold-Copper Property under) FTAA No. 001, Nueva Vizcaya and Quirino Provinces, Philippines (Angeles et al., 2024) and will not be discussed here any further.

5. METALLURGY

5.1. Introduction

The Didipio Processing Plant has been in operation since 2013. It was designed by Ausenco with construction of the plant commencing in November 2011. There was a hiatus in production from October 2019, but ore was re-introduced to the plant on November 2021.

Recovery of copper and gold at Didipio is achieved by flotation following a conventional semi-autogenous grinding (SAG)/Ball mill/Pebble Crusher (SABC) grinding circuit and gravity gold recovery. The design criteria for the process plant were established from metallurgical test work as outlined in this report. The current Didipio process flowsheet utilizes conventional technologies that are well proven and accepted by industry. The plant has been in operation since 2013 with well-established plant performance metrics.

Didipio Processing Plant utilizes a Yokogawa Distributed Control System (DCS) to enable fully automated control, with additional advance control systems to control its grinding and flotation circuits. The control system is connected to OSISoft PI data historian to provide long term trending, reporting and integration to other data sources.

5.2. Sampling and Sample Collection Program

Discussions on the sampling system utilized in the processing plant are taken up in Section 6.3.1.

The metallurgical accounting procedure is discussed in detail in Section 6.3.3.

5.3. Mineralogical Characterization Studies

Regular mineralogical and mineral surface tests are performed annually on final concentrate and final tail composite samples to determine forms and carriers of gold and copper recovered in the concentrate and lost to the tail. This supports identification of opportunities to improve recovery and grade, to determine how these opportunities can be pursued from mineralogical and metallurgical perspective and to determine mineralogical abundance and association of dilutants in the concentrate.

5.3.1. General Mineralogy

The dominant rock minerals are hard silicates: feldspar, amphiboles, and quartz. Sulfide minerals are made up of chalcopyrite, pyrite and bornite with minor chalcocite and covellite present.

Gold occurs in two forms - gold minerals and sub-microscopic inclusions. Gold minerals include native gold, electrum, and auric tellurides. Gold grains observed as free/liberated and associated (as attachments and inclusions) with copper sulfides, pyrite, tellurides, iron oxides and silicate gangue. Due to the inclusions in the pyrite, flotation is performed at a natural pH to recover the pyrite as well as copper sulfide minerals to the concentrate.

5.3.2. Tail and Concentrate Mineralogy

In the final tail, gold losses are primarily attached with unfloatable particles (silicates and low-sulfide composite). However, some of fine free gold is lost in the slimes (<7 µm) due to the limitation of mechanical flotation equipment that cannot recover coarse and ultra-fine particles.

Loss mechanisms for copper to the tail is primarily due to slime fraction (<7 µm), while some amount of free copper sulfide of readily floatable size range loss is due to surface oxidation hindering the attachment of the collector to the surface.

In the concentrate, primary dilutant of the copper grade is un-liberated silicate gangue and carbonates. The second most abundant grade dilutant is pyrite minerals. Pyrite is purposedly not rejected in the flotation circuit due to the inclusion of sub-microscopic gold in this mineral. The copper grade in the final concentrate is targeted at 21%-22% copper.

The latest Mineral Liberation Analysis (MLA) studies are presented in Appendix 4.

MLA studies are recommended to be conducted on major process stream composites, i.e., feed, rougher concentrate, cleaner tails, final tails and final concentrate on a regular basis, minimum every six months. MLA is a powerful process tool which can be used to identify process bottlenecks and limitations like grind size, flotation parameters and reagent combinations. The information from the MLA can provide a good insight on the process improvement projects.

5.4. Mineral and Metallurgical Test Programs and Procedures

Test work programs on the gold-copper deposit at Didipio have been conducted in several stages as the predominate ore source has changed from open pit to stockpiles to underground:

- The first program was conducted from 1990-1993 and incorporated several bench-scale flotation tests to determine the characteristics of the materials.

  The second program was conducted by several laboratories from 1994-1995 with more detailed test programs, including locked cycle flotation tests and two mini-pilot plant studies.

  The third phase was conducted in 1997, testing primarily core from deeper drill holes, being material potentially mineable via underground methods, and included confirmatory tests based on the flow sheet developed in the previous test work.

- Test work between 2006 and 2008 managed by Ausenco and conducted by Ammtec and internally by OceanaGold has generally confirmed the previous results.

- The plant was commissioned in Q4 2012 and upgraded to 3.5Mtpa in Q4 2014 and operational plant performance matched predicted metallurgical performance.

- During 2017 the mill feed transitioned from open pit (un-oxidized ore) to being entirely from stockpiles. Stockpile drilling and metallurgical test work commenced in 2017 to estimate partially oxidized stockpile performance with age and indicated maximum ore oxidation will be 10% which will result in a 5 to 7% drop in copper recovery. Several processing options and reagent modifications are under evaluation to increase metallurgical performance of stockpile material.

- Projected mill feed blend from 2017 onward comprises 30%-40% underground ore and 60%-70% stockpile ore.

- Consequently, a series of test work to determine underground ore grindability and metallurgical performance started in 2016, including the free gold content and estimated gravity recovery of the underground ore.

- Regular annual mineralogical studies of the tails and concentrate.

5.4.1. Comminution and Hardness Test Work

Several studies and tests were conducted to investigate the physical and comminution characteristics of the various mineralized samples to represent currently processed open pit/stockpile ore and reserve underground ore.

A summary of comminution test works and studies follows:

- Enviromet, Mar 1992, BWi of DDDH-11 225 to 249 meters.

- AMMTEC, Mar 1995, standard comminution tests, including Bond Work Indice tests, on HQ samples from different rock types at different deposit depths and JK Tech Proprietary Limited (JK) Pendulum tests on PQ core from the pilot plant test work sample.

- Minproc, Jun 1995, comminution tests on early stages deposit drilling, 5 composites of primary material from 3 vertical sections of deposit, composite made up of large number of mineralization intercepts.

- Ausenco – AMMTEC, Mar 2006, SMC tests on DDH083 composite sample.

- Amdel, media competency tests on PQ core intersections.

- Metso – JKTech, Jul 2013, SMC tests and JKSim modelling of actual circuit survey data.

- ALS Metallurgy, Oct 2013, PLI and SMC tests of actual circuit sample.

- Metso – JKTech, Oct 2013, SMC test and optimization modelling of actual circuit sample for 3.5Mtpa.

- JKTech, Aug 2015, PLI and SMC tests of 8 composite drill core samples representing whole reserve sample.

- Metso, Jan 2016, classification circuit modelling and optimization of actual circuit data.

- Metso, Apr 2016, grinding circuit modelling of actual circuit data for 4.0-4.5Mtpa.

These results indicate that the Didipio rock types can be classified as having a low to moderate level of competency, which suggests a relatively low power consumption to reduce the material to the required particle size distribution for processing. The abrasion indices also suggest relatively low levels of abrasive wear on grinding media, liners, plant chutes and pipes. Ausenco has adopted 14.6 kilowatt-hours per tonnes (kWh/t) for the Ball Mill Work Index and 14.5 kWh/t for the Rod Mill Work Index with an Abrasion Index of 0.26.

The 2006 test work programs were carried out by JKTech and Dr Steve Morrell of SMCC Proprietary Limited. JK comments that the DWi, or drop weight index, at 3.9 is relatively low, indicating that the Didipio material is fairly soft with relatively low power requirements to grind to a specified size, with a minimum of critical size development. The parameters A, b and the product A*b also indicate a relatively soft material.

In 2016, OceanaGold submitted an underground breccia sample and a plant feed sample to JK Tech for standard comminution tests.

The DWi of the breccia sample was 1.88, hence was categorized as very soft, while the open pit/stockpile sample was 4.54 which is still in the soft range in terms of resistance to impact breakage. On the other hand, the calculated work indices suggest the samples can be classified as “Medium” hardness in terms of resistance to grinding.

In terms of grindability and throughput, underground ore is less competent due to lithological differences compared with open pit and stockpile ore. The blending of the underground and stockpile ore is not expected to impact mill throughput adversely.

The throughput increase in 2022 and 2023 from 3.5Mtpa to 4.0-4.1Mtpa is attributed to the increased portion of softer underground ore in the mill feed from 10%-30% in 2018-2019 to 40% in 2022-2023.

5.4.2. Recovery Test Work

A number of studies and tests were conducted to investigate the recovery response of the various mineralised samples to represent currently processed open pit/stockpile ore and reserve Underground ore.

Recovery testwork conducted includes:

- Optimet, Jun 1995, gravity, and recovery tests of composite low-grade sample DDDH18, 20, 21, 22, 24, 25, 28 RL2400-2600, composite high-grade sample of DDDH20, 22, 25, 28 RL2400-2600 and composite high-grade sample of DDDH24, 26, 28 RL below 2800.
- Optimet, Mar 1995, pilot scale flotation tests of composite PQ core and ¼ HQ core.
- Metcon, Aug 1996, gravity, and recovery response of oxide zone ore.
- AMMTEC, Jun 2006, locked cycle flotation tests of DDDH71.

- XPS, Aug 2014, mineralogy analysis of actual circuit composite sample.
- Consep, Mar 2017, Gravity Recoverable Gold (GRG) tests and modelling of actual circuit data.
- XPS, May 2017, mineralogy analysis of actual circuit composite sample.
- In-house, 2017, oxidized stockpile ore recovery tests and modelling.
- MetSolve, Jan 2018, processing plant audit and modelling.
- JKMRC, Sep 2018, mineralogy, and deportment analysis of actual circuit composite sample.
- MetSolve, Oct 2018, GRG tests of 6 Underground ore lithologies.
- AMTEL, May 2019, mineralogy, deportment, and surface analysis of actual circuit composite sample.

General conclusions of the recovery tests were that:

- Copper flotation kinetics were rapid.
- Copper recoveries were generally high with acceptable concentrate grades.
- Over-grinding was detrimental to good metallurgical performance.
- Gold recovery to copper concentrate generally ranged from 80-90%.

The Didipio Process Plant was designed to recover fine GRG (<100 µm grain size), flash flotation and gravity concentrator were included in the flowsheet to target recovery of this specific fine GRG. In 2016, additional gravity circuit capacity was installed in the flotation circuit to recover smaller free gold that escapes the grinding circuit and enters the flotation circuit. However, further test work of underground ore indicated that free gold grain size has coarsened to >200 µm, which the previous circuit flowsheet is not intended/optimized to recover. In 2022, installation of an additional gravity concentrator in the grinding circuit and expansion of Gold Room was completed. These modifications targeted recovery of the coarser gold particles. The improvement of gravity recovery comes in stages from 24% gravity recovery (initial flowsheet) to 27% gravity recovery (installation of flotation gravity concentrator) to 34%-40% gravity recovery (installation of grinding gravity concentrator).

5.4.3. In-House Metallurgical Test Work

Routine optimization test work is performed in the on-site Metallurgical Laboratory. The result of the tests is used for performance monitoring and optimization of the plant.
Some of the regular tests and analyses performed include:

- Bond Work Index of the ore, used as indication of the hardness and grinding power requirement of the ore fed to the Processing Plant.
- Diagnostic flotation test work to determine potential improvement to the flotation operating parameters.
- On-stream Analyzer calibration to ensure accuracy of the On-stream Analyzer reading.
- Particle Size Analyzer calibration to ensure accuracy of the Particle Size Analyzer reading.
- Composite sample analysis to determine losses mechanism, grade dilutant and improvement opportunity.
- Grinding survey to determine grinding circuit performance.
- Gravity survey to determine gravity circuit performance.
- Flotation survey to determine flotation circuit performance.

5.5. Metallurgical Test Results and Determination of Capacities, Recoveries, Product Specification, and Process Flow

The Processing Plant has a current nameplate of 4.0Mtpa, this nameplate is used for the development of Life of Mine Plan and production schedule. Initially, Ausenco designed the plant at 2.5Mtpa with spare mill power to increase up to 3.5Mtpa in future. In 2014, the Processing Plant was upgraded to 3.5Mtpa by installation of a Pebble Crusher to re-configure the SAB circuit to an SABC circuit.

The initial Processing Plant feed was 100% of open pit ore, and with the open pit mining rate higher than the milling rate, lower grade open pit ore was stockpiled for future feeding. In April 2017, mining from open pit was completed and underground mining commenced. Underground development commenced in April 2015 via a portal within the open pit. Stoping commenced in December 2017 with underground throughput ramping up to 1.6Mtpa rates in 2018. The mill feed blend comes from underground ore and stockpile ore of lower grade open pit.

With on-going improvement projects and increasing less competent and softer underground ore portion in the mill feed blend that is softer than the stockpile/open pit ore as described, nameplate of the Processing Plant has increased to 4.0Mtpa.

However, the Processing Plant throughput was limited to 3.5Mtpa as the ECC stated. In April

2022, the ECC amended to allow up to 4.3Mtpa processing throughput. In 2022, full year production reached 3.99Mtpa and 4.1Mtpa in 2023. With minor capital investment Processing Plant nameplate can be increased above current nameplate of 4.0Mtpa.

Processing Plant recoveries performs as predicted by the recovery models considering different input variables and as described in section 5.6.

Processing Plant final products consist of dore with 85% gold purity and copper/gold concentrate with an average of 22% copper and 35 g/t gold content. Around 40% of the gold produced is bullion and 60% is copper/gold concentrate.

5.6. Development of Process Response Models

Didipio Processing Plant recovery model:

$$\boldsymbol{Cu\ Recovery\ Model} = A\ x\ (100 + B)\%\ x\ (100 + C)\ x\ D$$

$$where:$$

$$(\boldsymbol{A})\ Base\ Cu\ Recovery\ Model = 7.3477\ x \ln(\%Cu_{feed}) + 99.845$$

$$(\boldsymbol{B})\ Oxidation\ Penalty\ Model = -0.5336\ x\ Feed\frac{CuAS}{Cu} - 4.0645$$

$$(\boldsymbol{C})\ CPS\ Improvement\ Model = \frac{0.5336\ x\ Feed\frac{CuAS}{Cu} + 4.0645}{2}$$

$$(\boldsymbol{D})\ Cu\ Grind\ Size\ Penalty\ Model = \begin{cases} 1 + \left(\frac{P_{80}}{1000} - 0.106\right)^2 x - 0.1991, & P_{80} > 106\mu m \\ 1, & P_{80} < 106\mu m \end{cases}$$

Figure 5-1. Didipio Processing Plant Cu Recovery Model

$$\boldsymbol{Au\ Recovery\ Model} = (\boldsymbol{A} + \boldsymbol{B} + \boldsymbol{C} + \boldsymbol{D} + \boldsymbol{E})\ \boldsymbol{x}\ \boldsymbol{F}, \quad \boldsymbol{top\ limit}: \boldsymbol{91.5\%}$$

$$where:$$

$$(\boldsymbol{A})\ Base\ Au\ Recovery\ Model = \begin{cases} \frac{\left(\left(Au_{feed} - (0.0313\ x\ \ln(Au_{feed}) + 0.1084)\right)\right.}{Au_{feed}\ x\ 100}, & Au_{feed} < 1.0\ gpt \\ \frac{\left(\left(Au_{feed} - (0.0313\ x\ \ln(Au_{feed}) + 0.1182)\right)\right.}{Au_{feed}\ x\ 100}, & Au_{feed} > 1.0\ gpt \end{cases}$$

$$(\boldsymbol{B})\ Cleaner\ Tails\ Recirculation\ Improvement\ Model = 0.1\%$$

$$(\boldsymbol{C})\ GC03\ Improvement\ Model = 0.3\%$$

$$(\boldsymbol{D})\ GC04\ Improvement\ Model = 2\%$$

$$(\boldsymbol{E})\ Paste\ Dilution\ Penalty = -2\%$$

$$(\boldsymbol{F})\ Au\ Grind\ Size\ Penalty\ Model = \begin{cases} 1 + \left(\frac{P_{80}}{1000} - 0.106\right)^2 x - 2.3257, & P_{80} > 106\mu m \\ 1, & P_{80} < 106\mu m \end{cases}$$

Figure 5-2. Didipio Processing Plant Au Recovery Model

Copper and Gold recovery model was initially considering as a function feed grade. These models were based on results of the various flotation tests and are normalized to predict performance at a primary grind size P80 of 75µm.

But as throughput increased when the nameplate increased from 2.5Mtpa to 3.5Mtpa in 2016, the sensitivity of gold recovery to grind also increased, hence the model was refined to incorporate the grind size in 2016. While the copper recovery is not significantly affected by the variation of grind size, the copper recovery model was still updated to be more sensitive to head grade.

The depletion of open pit and transition to stockpile and underground ores occurred in 2017. It was observed that introduction of stockpile ore had an impact on copper recovery, and the model did not capture the surface oxidation factor. A copper recovery model incorporating surface oxidation was introduced in 2019, this model now more accurately aligns with actual plant performance.

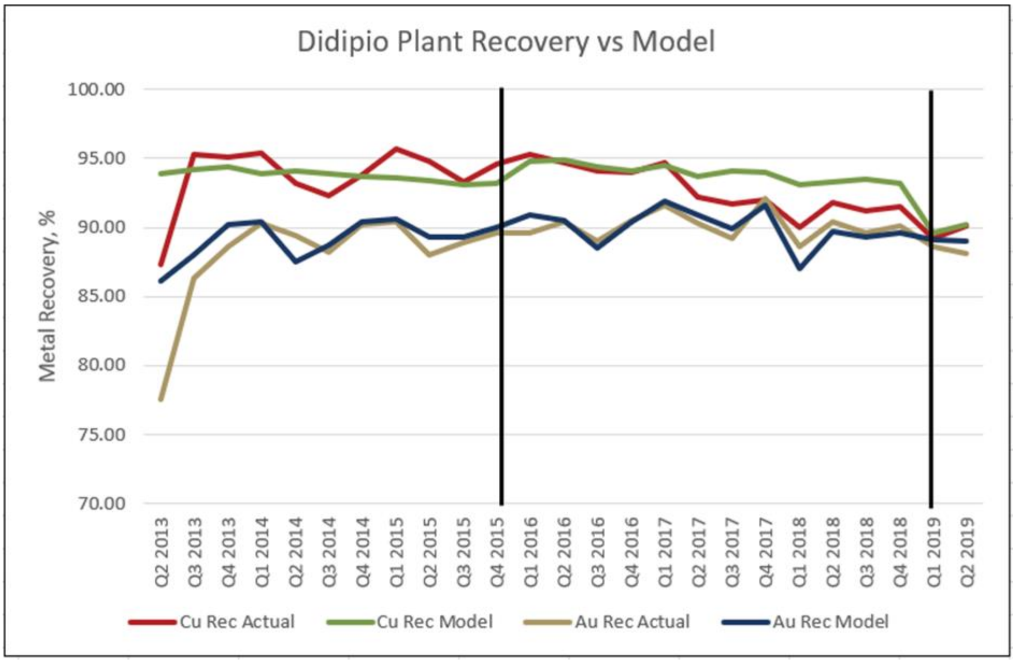

Figure 5-3. 2013-2019 Pre-stoppage Plant Recovery

A snapshot zoom-in of the post 2021 resumption performance is presented below. The copper recovery model accurately predicts the plant performance. In contrast, the gold recovery model starts to deviate (both under and over) when the underground ore portion increases above 40% of total mill feed. Paste contamination of underground feed is also having a negative impact on recoveries with the rise in flotation circuit pH suppressing pyrite flotation.

The overall gold recovery model includes recovery improvements from cleaner tail (CLT) recirculation and gravity concentrators no. 3 and no. 4 (GC003 and GC004) projects.

- The CLT recirculation project's purpose is to increase the residence time in the flotation circuit. Cleaner tails mass is being pumped back to the rougher feed to allow further recovery of finer size particles, which translates to 0.1% additional Au recovery.

- The GC003 project targets to improve Au recovery from the liberated Au particles in the rougher concentrate stream. A semi-batch SB750 Falcon gravity concentrator was installed to treat the rougher concentrate and direct the gravity concentrate to the gold room for further processing. An improvement of 0.3% to the overall Au recovery can be realized.

- From 2013, the presence of gold as tellurides has become more dominant with the recent samples, making it more difficult to recover in the flotation circuit. Mineralogical analysis also shows that gold grain size has increased, which poses negative impact to sampling and recovery, as the flotation circuit cannot recover particles greater than 150 microns. The GC004 project addresses this concern and a semi-batch SB5200 Falcon gravity concentrator has been integrated in the grinding circuit to treat cyclone feed material. This additional gravity concentration unit results in a 2% overall gold recovery improvement.

The gold model post-resumption has incorporated a paste dilution penalty of -2% recovery. But, in day-to-day operations, paste diluted underground ore is not regularly fed but instead fed in isolation from other "clean" ore. This causes the model to under-estimate the performance during "clean" ore feeding, but over-estimate the performance during paste-contaminated ore feeding when the recovery may drop by 4%-6%.

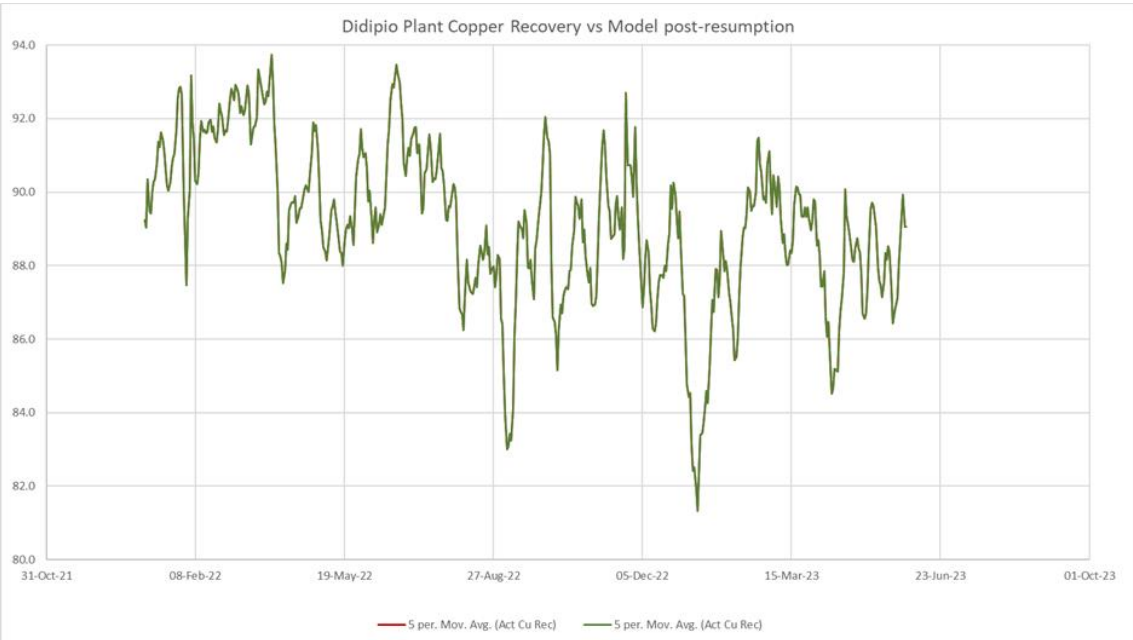

Figure 5-4. Didipio Plant Copper Recovery vs. Model Post-resumption Model

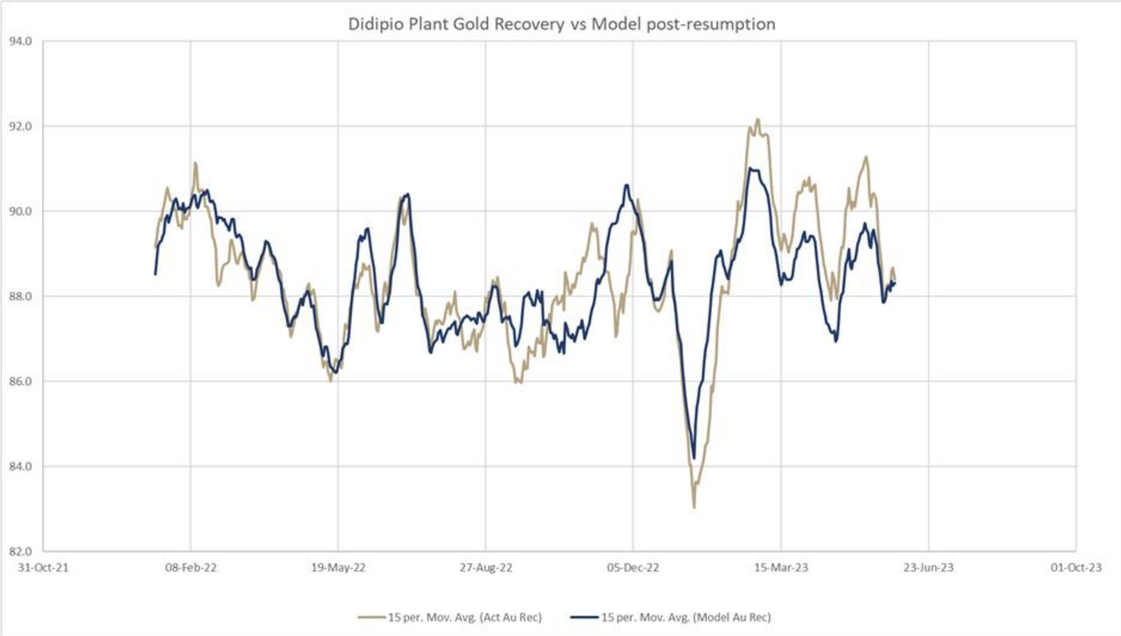

Figure 5-5. 2021 to Date Model Recovery Performance against Model

5.7. Recommended Future Test Work

5.7.1. Controlled Potential Sulfidization (CPS)

Since late 2016, Didipio has started to process stockpile ore in addition to supplement underground ore. Ore blend of life-of-mine is on average 60% of stockpile ore and 40% of underground ore. Several test programs and plant trials have confirmed negative impacts of increased surface oxidation of stockpile ore on copper recovery.

CPS method will be utilized to mitigate the copper recovery reduction due to surface oxidation of stockpiled open pit ore. The introduction of sodium hydrosulfide (NaHS) into the circuit as a sulfidizing agent will be the main treatment mechanism to lessen the copper losses associated with flotation of oxidized ore. A CPS plant trial on stockpile ore with an oxidation ratio of 5% - 20% was conducted in 2018 and 2023. Trial results showed a copper recovery increase of up to 2% compared to non-CPS. The copper recovery model used for production forecast and planning was changed to incorporate the stockpile ore oxidation and found more accurate than the old model when compared with the actual recovery achieved from the plant trial.

5.7.2. Paste Contamination Control

In recent times, paste contamination of underground ore has had a negative impact on flotation recoveries, with the cement matrix raising flotation pH to a point that suppresses pyrite flotation, lowering gold recovery by 2%. This reduction is reflected as well in the recovery model.

Laboratory test work of controlling and modifying pH back to the natural ore pH using acid found to minimize the gold recovery loss and able to improve gold recovery by 1%.

5.7.3. Metallurgical Characterization of Future Ores

Around 13Mt of underground resources have been added to the 2023 Resources & Reserves Report. To understand the metallurgical performance of these future ores, a test work program has been initiated. This program includes:

- Ore hardness characterization of 6 drill core samples, with five samples taken from Panels 1 & 2 (monzonite, syenite, balut, east breccia, breccia), and one sample taken from Panel 3 (monzonite). This work includes SMC, Bond Ball Mill Work Index, and Abrasion Index test work and will be conducted externally by JK Tech and Australian Minmet Metallurgical Laboratories (AMML).

- Recovery test work on 15 samples from Panel 3. This work includes flotation and GRG test work and will be conducted externally by AMML.

- Recovery test work on 38 samples from Panels 1 & 2. This work includes flotation and GRG test work and will be conducted internally by the on-site metallurgical laboratory.

The purpose of this future ores test work program is to (i) support metallurgical assumptions used for forecasting assumptions; and (ii) identify any risks to throughput or recovery well in advance of processing. Expected completion timeline is mid-2024.

6. MINERAL PROCESSING

6.1. Process Design Criteria

Ausenco produced a detailed design for the 2.5Mtpa processing plant in February 2011 and site construction of the plant commenced in November 2011. First ore was introduced to the plant on December 14, 2012, and the plant commenced commercial production on April 1, 2013.

Since commissioning, a ramp-up project to de-bottleneck the plant with the aim of achieving 40% above plant design to 3.5Mtpa, was achieved during Q4 2014. With further improvements and fine-tuning over 2015 & 2016 the plant is now capable of processing up to 4.0Mtpa and is potentially able to achieve higher throughput with further improvements with a minimal capital outlay.

6.2. Proposed Flowsheets and Process Routes

The process flowsheet is presented below where ore is processed using a conventional SABC grinding circuit with a secondary pebble crusher circuit followed by froth flotation for recovery of gold/copper concentrate. A gravity circuit is incorporated within the grinding and flotation circuits to produce gold bullion on site. Copper concentrate is transported by road to the San Fernando port facilities for export.

The design criteria for the process plant, was established from metallurgical test work outlined in this report. The Processing Plant was designed with 2.5Mtpa nameplate, after installation of a pebble crusher in 2014, the nameplate increased to 3.5Mtpa in 2014. Several upgrade and optimization works between 2016 – 2017 increasing the nameplate further to 4.0Mtpa. Though from 2017 to date, with increasing of underground ore portion in the mill feed blend gradually up to the design of 40% underground ore, the plant has able to achieve more than 4.0Mtpa. The hardness characteristic of Underground ore that is less competent compared to Stockpile ore contributes to this further potential increase above 4.0Mtpa.

In 2022 and 2023, throughput was 4.0 – 4.1Mtpa. 4.0Mtpa is used as the basis of LOM production schedule.

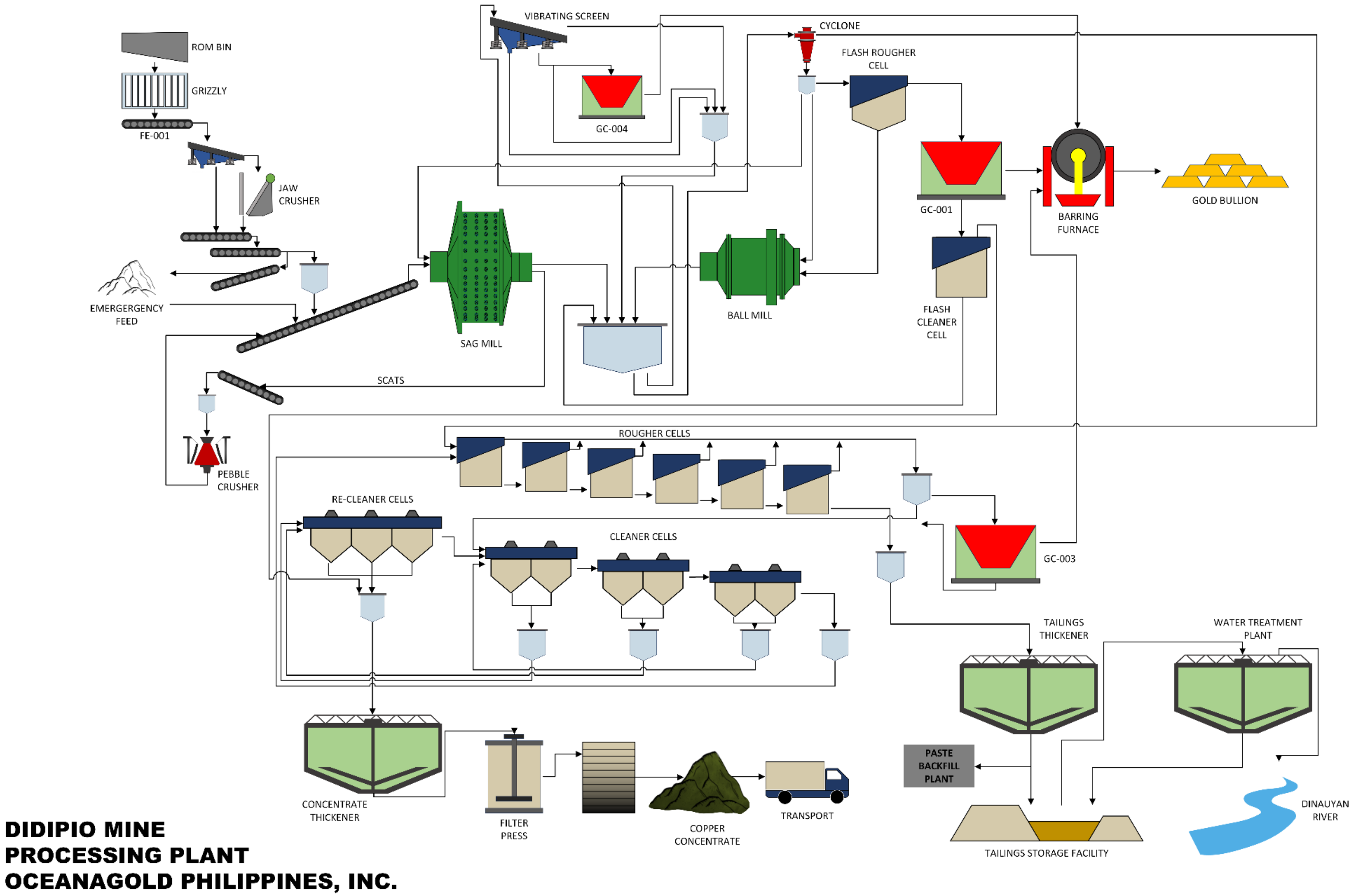

Figure 6-1. Flow sheet of Processing Plant

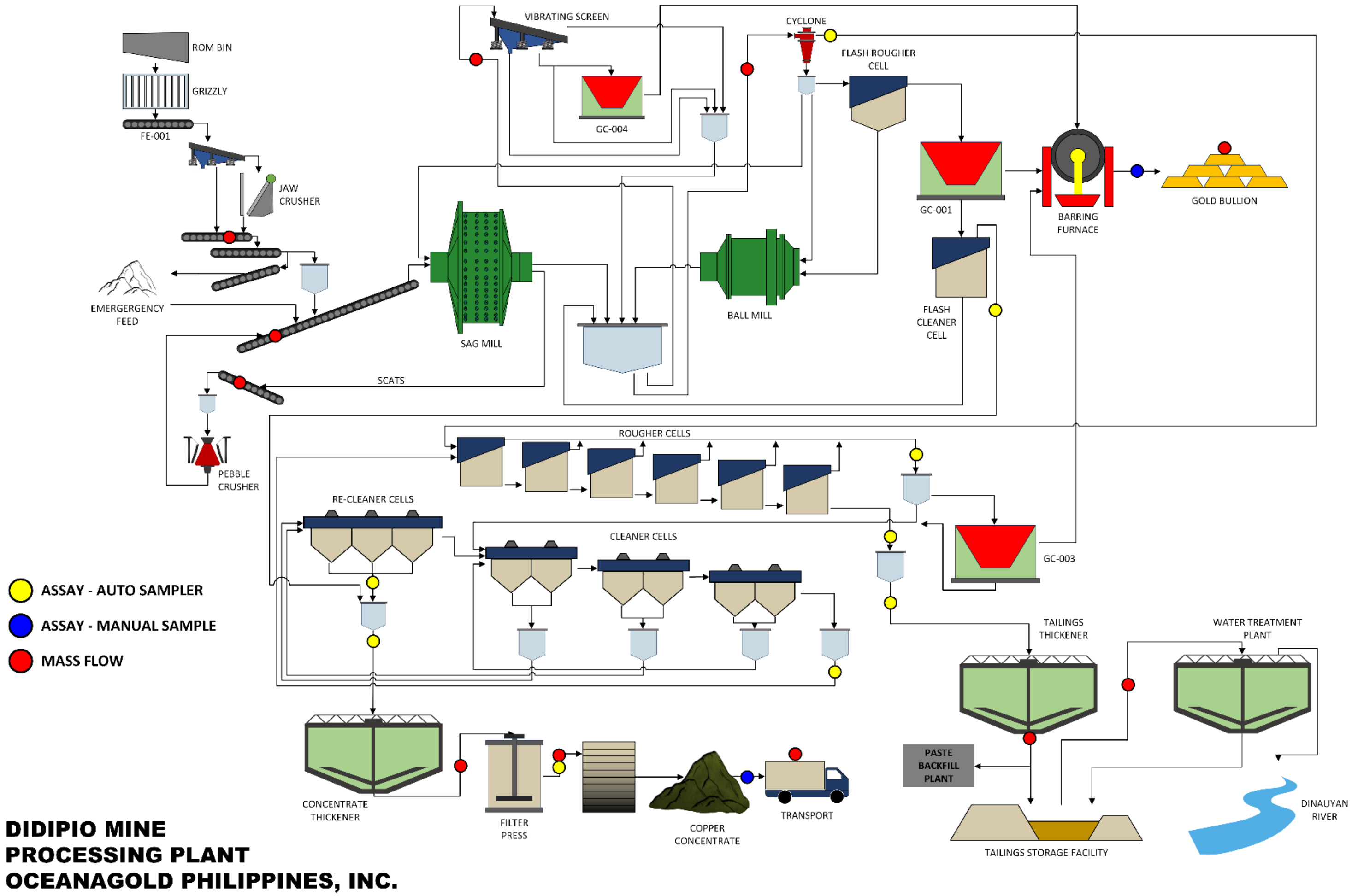

Figure 6-2. Sampling Points of the Processing Plant

6.3. Material Balance

Material balance representing 4.0Mtpa processing rate is presented in Figure 6-2.

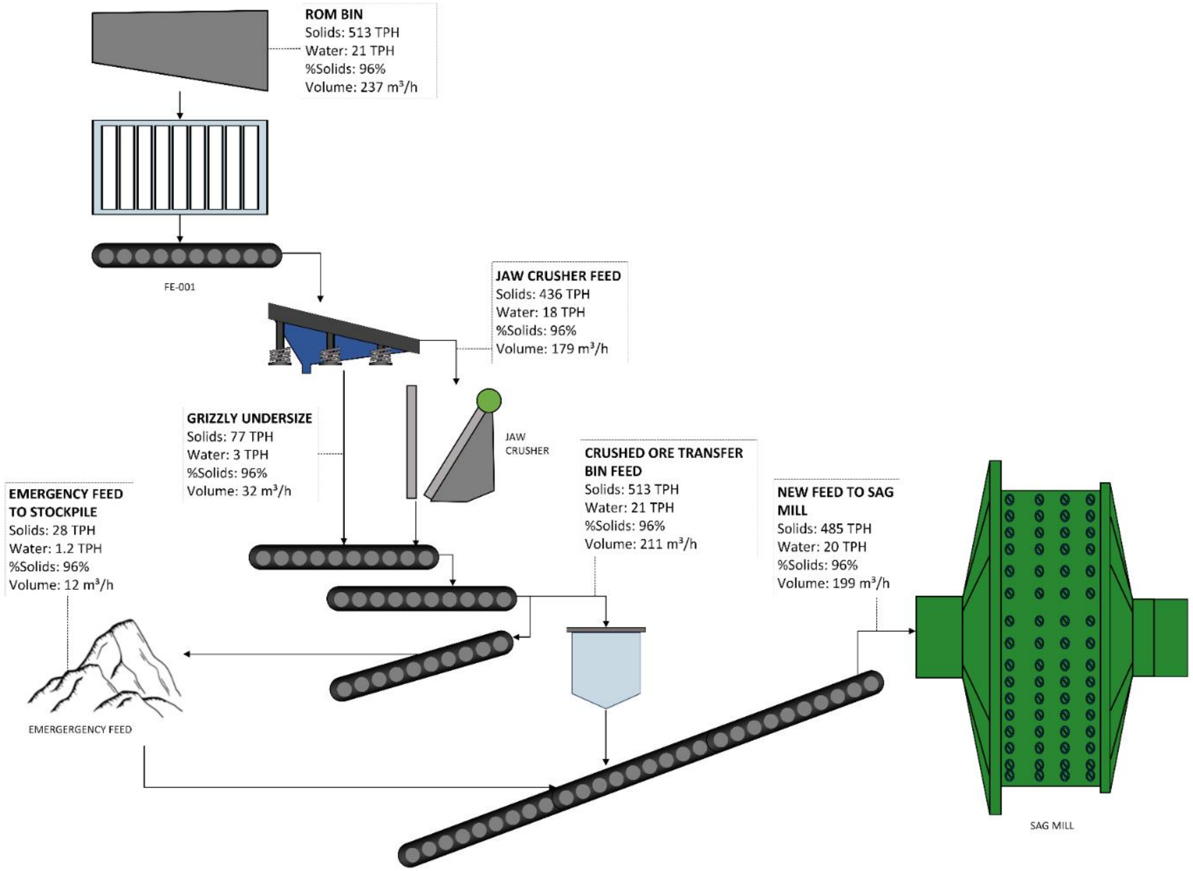

Figure 6-3. Material Balance-Crushing Circuit

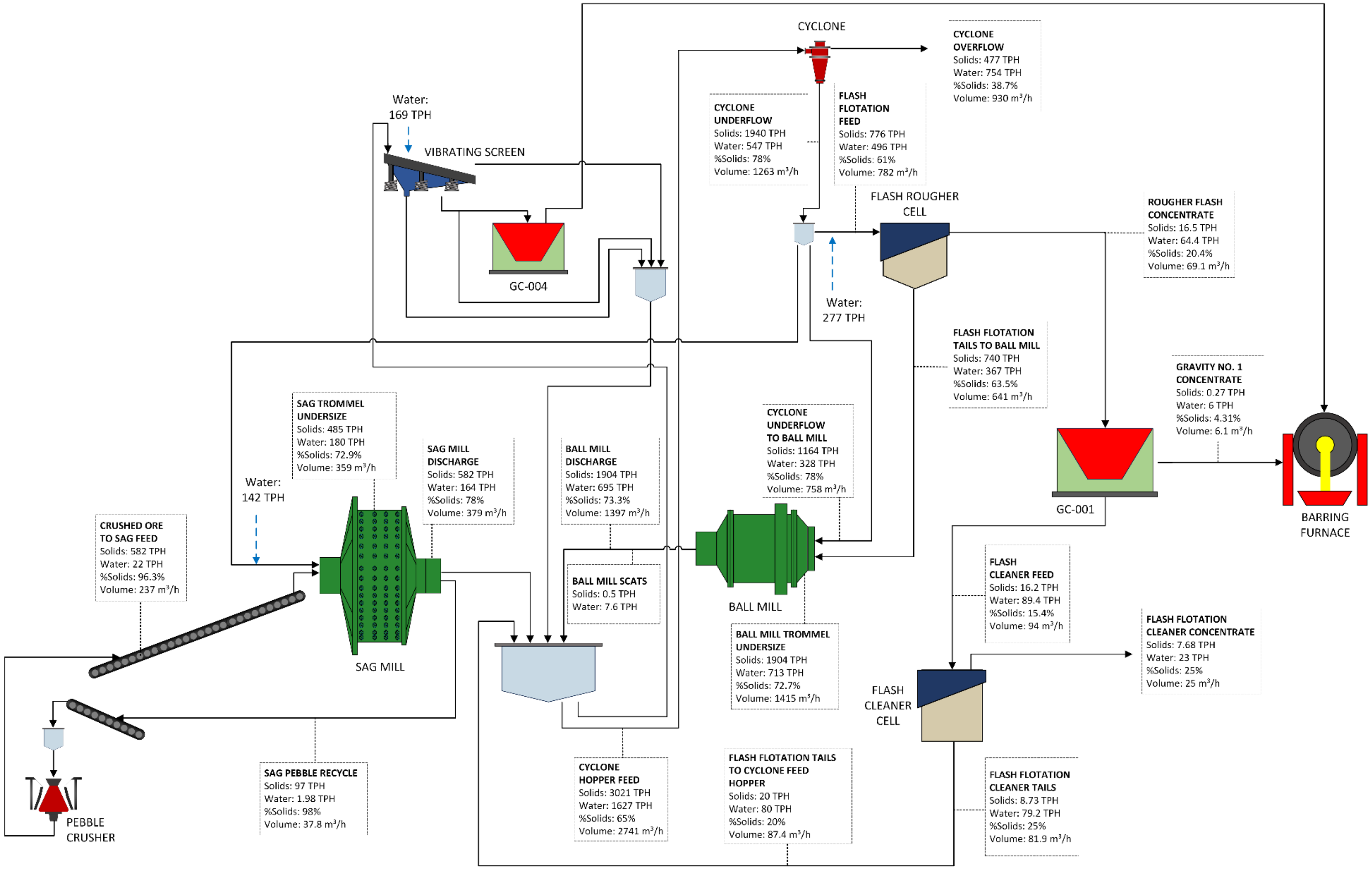

Figure 6-4. Material Balance – Grinding Circuit (1)

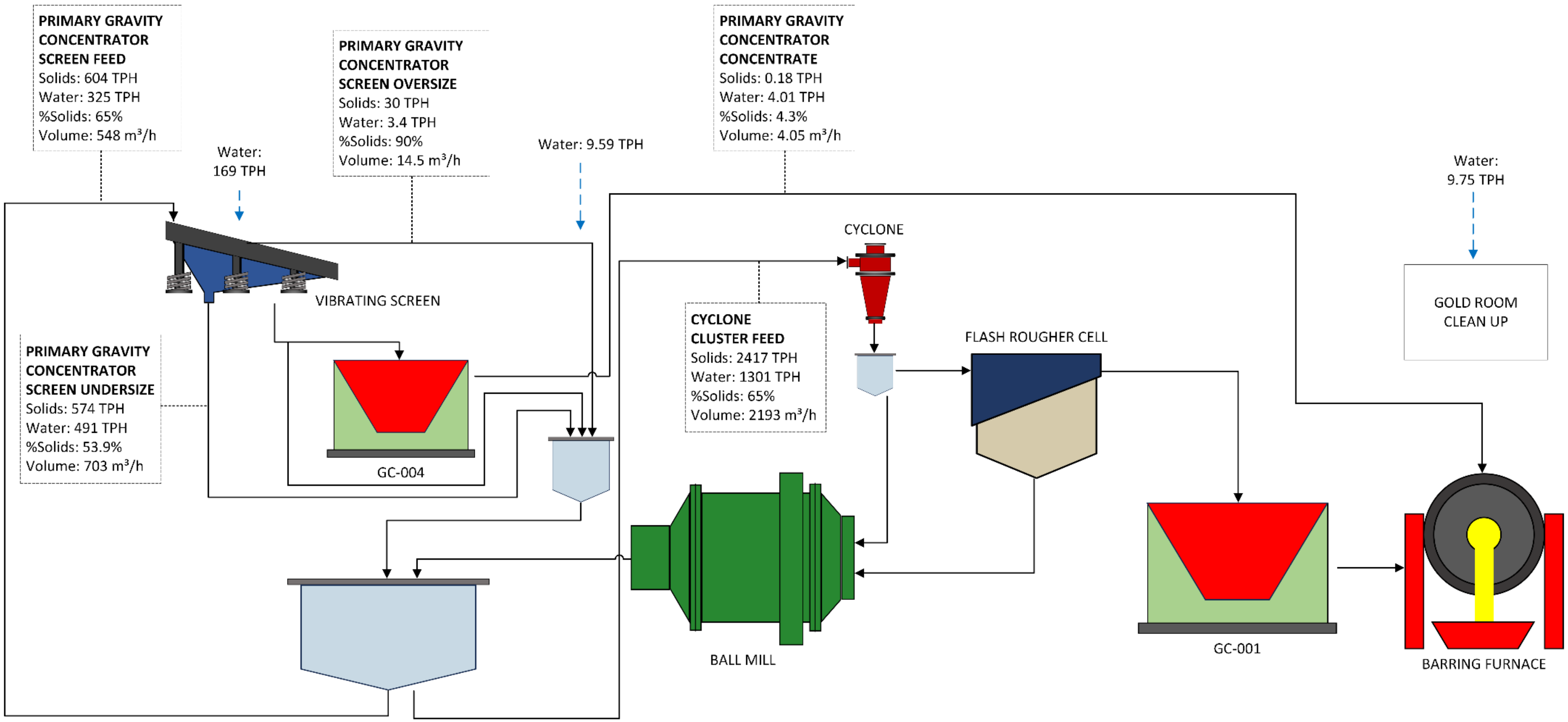

Figure 6-5. Material Balance – Grinding Circuit (2)

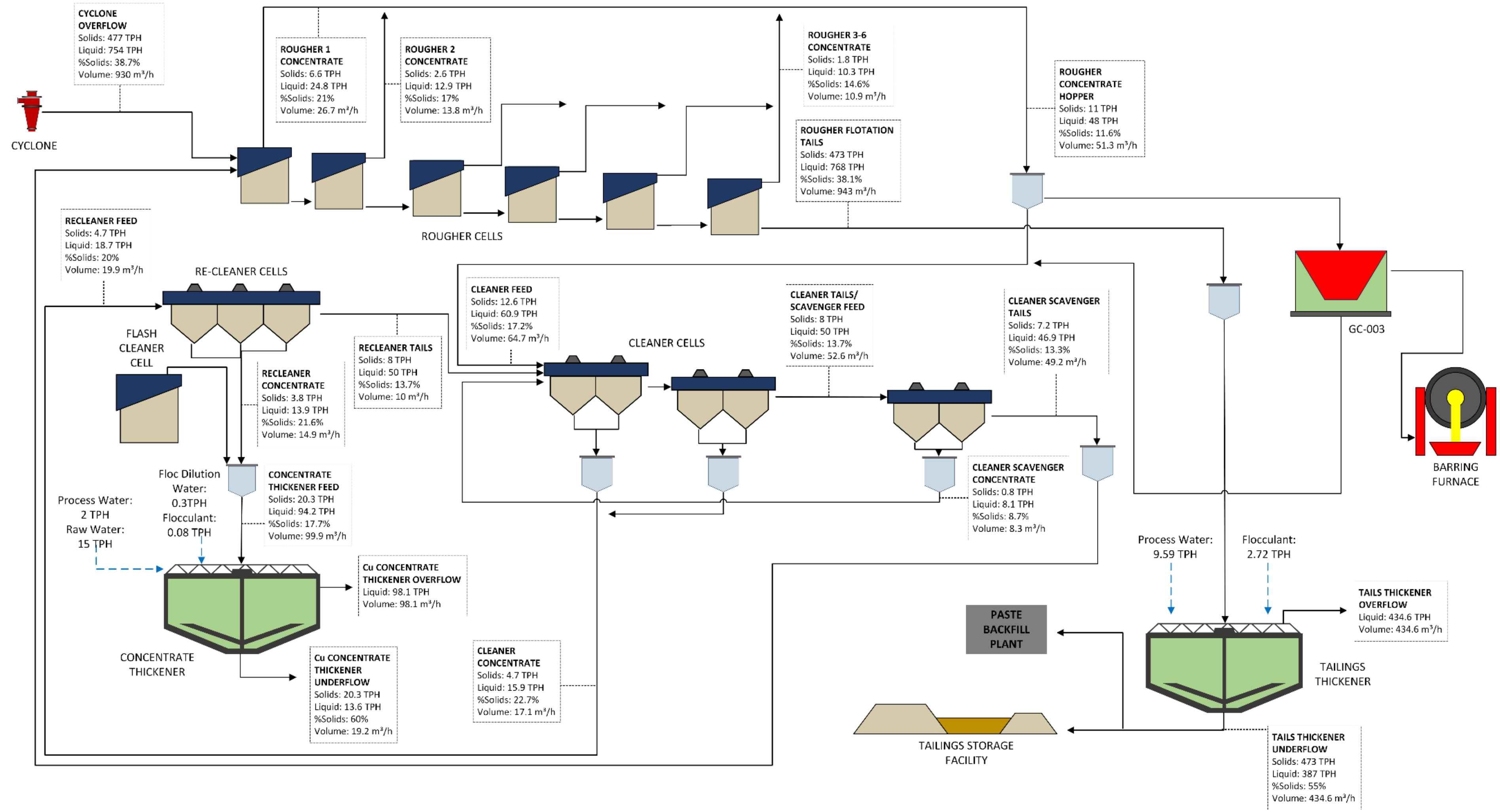

Figure 6-6. Material Balance-Flotation Circuit

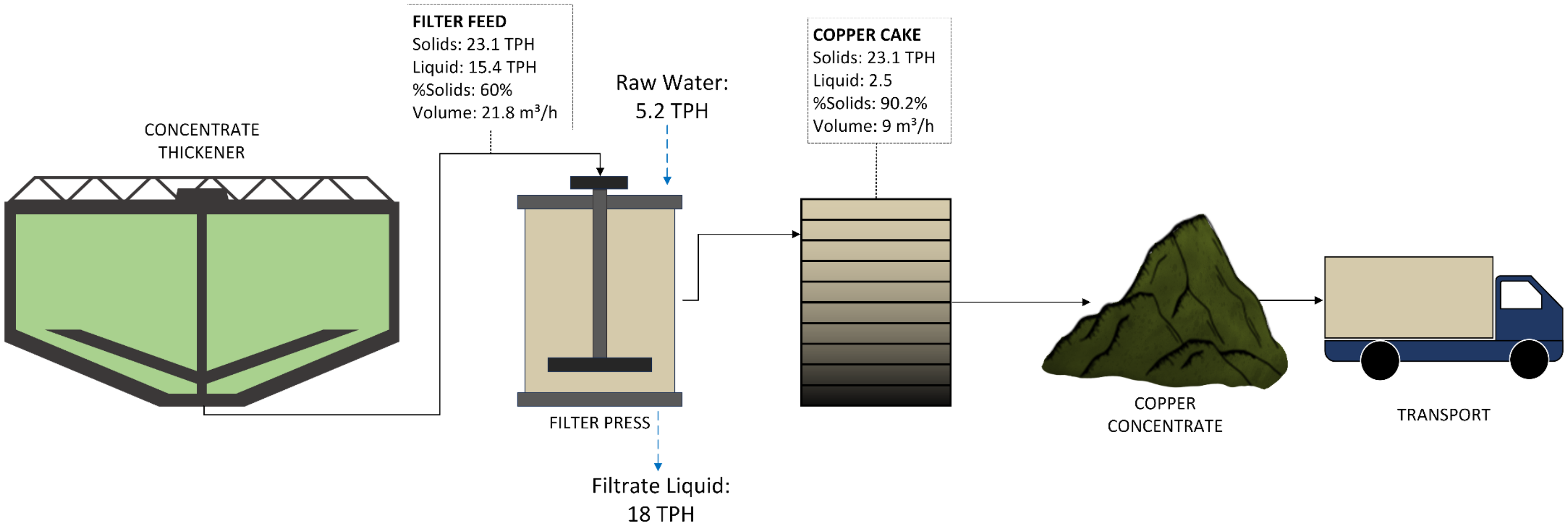

Figure 6-7. Material Balance-Cu Concentrate Circuit

6.3.1. Processing Plant Sampling

Processing Plant utilizes automated metallurgical samplers for its sample collection, compositing and produce representative samples over the 12 hours shift. The collected filtered composite samples are then delivered to the in-house SGS laboratory for analysis, with normal turn-around time of 10 hours.

The in-house SGS laboratory is managed by SGS and follows SGS standards and certification. Gold is analyzed using the Fire Assay method with gravimetric finish for high grade samples and with Atomic Absorption Spectrometry (AAS) finish for low grade samples. Copper is analyzed using the short iodide titration method for high grade samples and by X-ray Fluorescence (XRF) for low grade samples.

Full details of sampling protocols for metallurgical and production reporting are described below.

- Throughput is measured online by weightometers located on the Crusher product conveyor (CV-001) and Mill feed conveyor (CV-003). The amount of crushed ore stored to Emergency Fine Ore stockpile (EFO stockpile) located in between the two conveyors is calculated from the two weightometers and the diverter gate timing. Internal calibration of the weightometers is performed weekly.

- Moisture sampling of the ore is taken every week from full width belt cut sampling of Crusher product conveyor (CV-001).

- Cyclone overflow sample is taken with an automated cutter and Multiplexer sampler to the amount representing the flow proportion. The cyclone overflow sample is automatically filtered and collected at the end of every 12 hours shift. This stream also passes through an Online Stream Analyzer and Particle Screen Analyzer to monitor real-time grades and grind size respectively.

- Cleaner tail sample is taken with an automated cutter and Multiplexer sampler to the amount representing the flow proportion. The cleaner tail sample is automatically filtered and collected at the end of every 12 hours shift. This stream also passes through an Online Stream Analyzer to monitor real-time grades.

- Rougher tail sample is taken with an automated cutter and Multiplexer sampler to the amount representing the flow proportion. The rougher tail sample is automatically filtered and collected at the end of every 12 hours shift. This stream also passes through an Online Stream Analyzer to monitor real-time grades.

- Rougher concentrate sample is taken with an automated cutter and Multiplexer sampler to the amount representing the flow proportion. The rougher concentrate sample is automatically filtered and collected at the end of every 12 hours shift. This stream also passes through an Online Stream Analyzer to monitor real-time grades.

- Re-cleaner concentrate sample is taken with an automated cutter and Multiplexer sampler to the amount representing the flow proportion. The re-cleaner concentrate sample is automatically filtered and collected at the end of every 12 hours shift. This stream also passes through an Online Stream Analyzer to monitor real-time grades.

- Flash cleaner concentrate sample is taken with an automated cutter and Multiplexer sampler to the amount representing the flow proportion. The flash cleaner concentrate sample is automatically filtered and collected at the end of every 12 hours shift. This stream also passes through an Online Stream Analyzer to monitor real-time grades.

- Final tail sample is taken with an automated two-staged horizontal and rotary cutter and Multiplexer sampler to the amount representing the flow proportion. The final tail sample is automatically filtered and collected at the end of every 12 hours shift. This stream also passes through an Online Stream Analyzer to monitor real-time grades.

- Final concentrate sample is taken with an automated two-staged rotary cutter and Multiplexer sampler to the amount representing the flow proportion. The final concentrate sample is automatically filtered and collected at the end of every 12 hours shift. This stream also passes through an Online Stream Analyzer to monitor real-time grades.

- Concentrate storage tank inventory is determined at 12 hours shift cut-off period utilizing online level sensor reading and manual density sample taken every end of 12 hours shift.

- Filtered concentrate product is measured using a weightometer on the Filtered concentrate conveyor (CV-008) where a representative sample is taken using a two-staged horizontal belt cut and rotary cutter to have a 12-hour sample represent the full amount of product passing the conveyor belt.

- Trucked concentrate samples are taken during loading from the front-end loader bucket. Samples are taken using a spear tube, with three samples collected per loader bucket and around nine samples taken per truck load. The trucked concentrate samples are composited with one lot containing 25 truckloads and one sub-lot containing 5 truckloads. Moisture is analyzed per sub-lot and metal assays are analyzed per lot.

6.3.2. Assaying

Assaying services are performed by in-house SGS Didipio laboratory under management of SGS Philippines, an independent laboratory services contracted by OceanaGold Philippines to conduct assaying of its Geology and Mill samples. SGS Philippines Inc is currently certified to ISO 9001, 14001, and 45001. The ISO 17025:2017 accreditation preparation of SGS Philippines Inc - Didipio Laboratory is ongoing as they work through the reaccreditation process with the Philippines Accreditation Bureau. Whilst this process is being undertaken, SGS Philippines Inc – Didipio Laboratory has ensured their operation is fully aligned with the ISO 17025:2017 requirements as supported by the satisfactory results of the 2023 audit conducted by the SGS Philippines internal auditors. All the results included in this summary were validated through the independent QC monitoring by both the SGS Philippines Inc - Didipio Laboratory and

OceanaGold Philippines with the insertion of duplicate, replicate, and blank samples, as well as certified reference materials with no issues noted.

Gold is analyzed using the Fire Assay method with gravimetric finish for high grade samples and with AAS finish for low grade samples. Copper is analyzed using the short iodide titration method for high grade samples and by XRF for low grade samples.

6.3.3. Metallurgical Accounting

Metallurgical accounting and production reporting is generated every day. The daily production report uses balanced figures of the grades. Mill feed grade is back calculated from the final tail and final concentrate.

At the end of the week and month, full inventory reweighing, and sampling are performed to reconcile the production. Monthly reconciled figures are produced after considering inventory stock-take, followed by mine-to-mill reconciliation.

Reconciliation of production and sales figures is performed when the final binding assays and weight of the concentrate sales from the smelter are received.

The General Accounting Procedure is presented in the Appendix 5 (Document ID DID-459-PRO-064-5).

OGPI conducts a weekly (EOW)and monthly (EOM) metallurgical accounting reconciliation to ensure that production data is aligned with actual physical measurement of the final concentrate, both in terms of the weights of solids and metals, and the assays.

The Metallurgical Reconciliation Procedure is presented in the Appendix 6(Document ID: DID-459-PRO-082-0). This procedure is regularly reviewed and updated.

6.3.4. Material Balance

Presented in Section 6.3.

6.3.5. Energy Balance

As the process does not involve the chemical decomposition of the minerals extracted, it is deemed not necessary to discuss the energy balance of the process.

7. PROCESS PLANT DESIGN, COST ESTIMATES, AND IMPLEMENTATION SCHEDULE

7.1. Key Design Parameters

Main inputs and assumptions of the Processing Plant production schedule are listed below.

- 99.0% of power supply availability in 2024.
- Mill relining schedule every 5 months in 2024.
- In average 94%-95% availability and 93%-94% utilization of calendar year.
- Throughput of 500 tph.
- Flotation residence time in between 20-30 mins to accommodate 4.0-4.3Mtpa throughput.

7.2. Plant Capacity and Production Schedule

Didipio Processing Plant has an original nameplate capacity of 2.5Mtpa which was commissioned in 2012 and reached design capacity in 2013. The plant has since expanded in 2015 with the installation of the pebble crusher, which is essentially a cone crusher that is installed specifically to de-stress the circulating load of the SAG mill. This effectively increases the throughput of the SAG mill and by extension, the plant itself to 3.5Mtpa.

In 2016 – 2017, several optimization works, and upgrade of Processing Plant were undertaken to further increase the nameplate from 3.5Mtpa to 4.0Mtpa. List of the optimization works, and upgrades implemented during 2016 – 2017 are:

- Installation of Jaw Crusher intermediate plate to further close jaw gap from 120mm to 80mm. This change reduces the feed size going to SAG Mill to further increase SAG Mill capacity.
- Replacement of Krebs 20” cyclones to Cavex 15” cyclones. This upgrade improves classification efficiency and reduce Recirculating Load from 700% to 300%-350%. This upgrade also removed cyclone feed pump bottleneck and Ball Mill limited condition.
- Improving SAG Mill efficiency by increasing SAG Mill ball charge from 8%-9% to 11%-13%.
- Increasing SAG Mill efficiency by increasing SAG Mill maximum speed from 65% Critical speed to 70% Critical speed.

In 2022, with the underground operation ramp-up and reaching design delivery of 1.6-1.7Mtpa of underground ore, Process Plant feed portion of underground ore has increased from previous 30% in 2019 to 40% of total Process Plant feed, with the balance coming from stockpile ore. The increase portion of underground ore to Process Plant has inherently increased Process Plant mill circuit capacity to above 4.0Mtpa due to the less competent underground ore requiring less specific grinding energy compared to Stockpile ore.

Minor upgrades of Processing Plant equipment and pumps are required to allow sustained operation of the plant at greater than 4.0Mtpa processing rate which is limited by pumping capacity of the downstream circuit.

Historical Processing Plant throughput and utilization rate shows Process Plant consistently achieved its nameplate and improves its utilization rate. The utilization rate of calendar year of 93% - 94% is considered as world class and well managed Processing Plant.

Current production schedule is based on 4.0Mtpa nameplate presented in Table 7-1.

Table 7-1. Production schedule 2024 Life-of-Mine Plan

LOM		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	LOM
Milled Tonnes	T	4,004,255	4,008,261	4,003,012	4,008,840	4,005,447	4,001,917	4,008,840	3,708,059	1,590,080	1,796,743	1,651,200	1,777,442	38,564,097
Gold in Feed	oz	144,890	140,285	133,297	127,620	109,635	99,136	83,803	60,796	43,684	57,550	49,851	44,454	1,095,003
Cu in Feed	T	16,526	15,121	14,973	15,012	15,371	13,287	11,085	10,271	6,652	6,621	5,921	5,482	136,319
Gold Recovery	%	90.7%	91.4%	91.1%	90.6%	89.2%	88.5%	87.9%	85.9%	89.3%	90.5%	90.1%	88.5%	89.8%
Cu Recovery	%	89.2%	88.1%	88.3%	88.9%	88.6%	88.4%	86.5%	88.0%	88.4%	88.1%	89.3%	88.6%	89.2%
AuEq recovery	%	90.2%	90.1%	90.6%	90.0%	90.4%	89.6%	87.7%	89.8%	90.3%	90.7%	91.9%	90.6%	89.6%
Total Didipio Gold Recovered	oz	131,448	128,170	121,368	115,665	97,751	87,699	73,631	52,228	39,003	52,095	44,896	39,326	983,280
Total Didipio Cu Recovered	T	14,478	13,345	13,183	13,216	13,601	11,724	9,854	9,133	6,216	6,125	5,465	4,999	121,607
Total Didipio Ag Recovered	oz	155,479	138,712	137,192	144,028	148,574	121,002	102,071	83,145	33,163	35,412	28,417	16,089	1,143,284

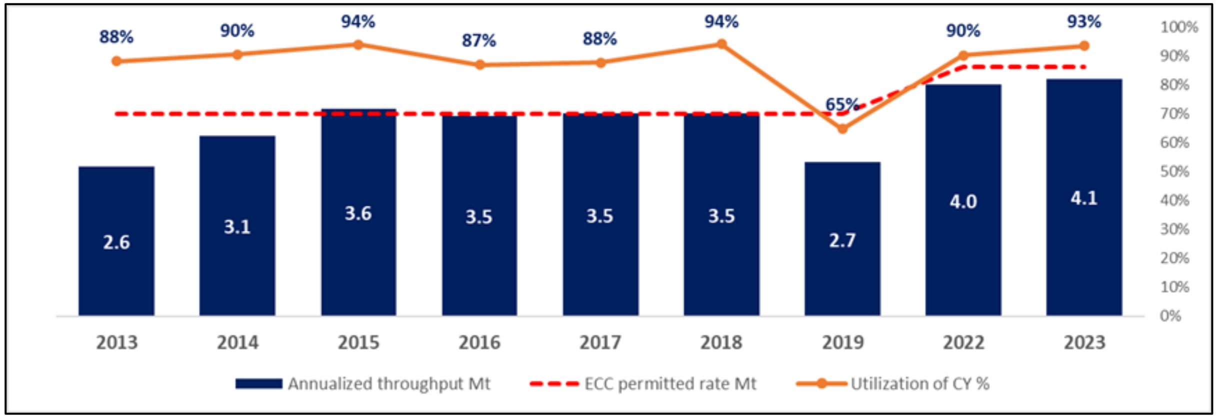

Figure 7-1. Historical Process Plant throughput and utilization rate

7.3. Plant Layout and Operations Description

7.3.1. Primary Crushing

The crushing circuit is situated next to the ROM pad. Mining trucks haul ore from the open pit stockpiles or from the underground portal to the Run of Mine (ROM) pad and dump on separate finger stockpiles to allow blend control. ROM ore is fed by a front-end loader (FEL) through an 800mm square aperture static grizzly into a 100-tonne live capacity ROM bin. The FEL is required to remove oversize material retained by the static grizzly.

The ROM ore is reclaimed from the ROM bin by an apron feeder and is discharged on to a static grizzly into a single toggle crusher. Fines will bypass the crusher. Static grizzly bars are set at nominally 100mm clearance.

The single toggle crusher, selected to handle 900mm maximum lump size, crushes the ROM ore to a typical P80 product size of 90-100mm. An overhead travelling crane is provided for changing out crusher jaw plates and for maintenance on other adjacent equipment. Dust suppression water sprays are provided at the ROM bin and at the head of the transfer bin feed conveyor, emergency stockpile feed conveyor and SAG mill feed conveyor. The sprays will be automatically turned on/off from the plant control system.

7.3.2. Crushed Rock Handling and Storage

The ore from the crusher is transported via conveyor CV-001 and CV-006 to a transfer bin. The transfer bin has a live capacity of approximately 15 minutes of mill feed. An apron feeder located beneath the bin transfers the crushed ore onto the mill feed conveyor CV-003, if CV-003 (or the SAG mill) is offline a diverter gate at the top of the bin directs the ore onto CV-002 the Extra Fine Ore (EFO) conveyor, CV-002 discharges ore onto an emergency stockpile with 20,000t maximum operating capacity that can allow for crusher downtime of more than 24 hours.

If the crusher is offline, then the ore from this emergency stockpile is fed onto CV-003 via the emergency feeder which is a low-profile belt feeder. The ROM FEL is utilized to feed this emergency feeder as required. This allows crusher maintenance to be done outside of mill shutdowns and to reduce overall manning levels.

7.3.3. Primary and Secondary Grinding

The 7.3 m diameter by 4.57 m effective grinding length (EGL) SAG mill is fitted with steel liners and vortex discharge grate and pulp discharge liners. The SAG mill is equipped with a 4,300 kW wound rotor induction motor and Liquid Resistance Starter (LRS) and has capability to provide speed variation through a Slip Energy Recovery (SER) unit.

Media charging is from 900 kgs drum of 125 mm grinding balls via a kibble to the mill feed chute. A target ball charge of 13% is maintained with a media addition rate of 0.20 kg/tonne of feed. Mill load is determined from monitoring the hydrostatic pressure in the trunnion mill lube system. A rock sizing camera is installed on the SAG feed conveyor to monitor feed size distribution and a vibration meter is placed at the outside shell of the SAG mill. The vibration meter or scanner can measure intensity/vibration energy, toe of the charge, impact (number of events whereby the ball is directly hitting the steel liner). The scanner gives live and accurate reading of the condition inside the mill. The integration of feed size, inside mill parameters (intensity, toe, and impact), mill weight and SAG power is used to control the mill speed and feed rate.

Discharge from the SAG mill flows through a rubber-lined trommel and into a common mill discharge hopper. Oversize from the trommel screen (scats) is directed to a Sandvik CH-440 pebble crusher through the scats recycle conveyor to reduce the scats size to -12 mm. A portion of the recirculating load (cyclone underflow) is fed back to the SAG mill to assist with the transfer of the scats out of the discharge end of the mill.

The 5.5 m diameter by 8.38 m rubber lined ball mill is fitted with a 4,300 kW wound rotor induction motor, LRS, trommel screen and retractable feed spout/chute. Discharge from the ball mill flows through a rubber-lined trommel into the common mill discharge hopper. The combined SAG and ball mill discharge is pumped to a nest of nineteen Cavex 15" hydrocyclones. The hydrocyclone underflow is split, with approximately 30% reporting to ball mill feed and 10% reporting to the SAG mill. The other 60% reports to an Outotec SK-500 Flash Flotation Rougher cell for recovery of the coarse liberated gold and copper particles. The concentrate from the Flash Flotation Rougher reports to a gravity circuit and the hydrocyclone overflow gravitates on to the flotation rougher circuit.

The Flash Flotation Rougher utilizes the twin outlet design with the low-density top valve tailings reporting to the common mill discharge hopper to maintain ball mill density.

7.3.4. Gravity Circuit

The purpose of the gravity circuit is to recover free gold from the Flash Flotation concentrate. The gravity circuit utilizes a Falcon SB2500 batch concentrator. A bypass option allows the Flash Flotation Rougher concentrate to bypass the concentrator and report directly to the Flash Flotation Cleaner when the concentrator is in a rinse cycle or is offline. Other gravity circuit components consist of coarse and fine surge bin for the concentrate, a Gemini and two Deister table treating all the concentrate and a further two Falcon model SB250 concentrator on the table tails, all of which are located in the secured area of the gold room.

The concentrate from the SB2500 concentrator unit gravitates to the gold room for further processing. The tailings from the concentrator reports to the Flash Flotation Cleaner TC-10 flotation cell where the coarse copper and gold particles are recovered with the concentrate, then report to the combined final concentrate hopper with the Re-cleaner concentrate and pumped to the concentrate thickener. The tailings from the Flash Flotation Cleaner report to a hopper and are then pumped back to the combined mills discharge hopper to be pumped back to the cyclones.

An additional Falcon SB750 batch concentrator was installed in November 2016 in fine flotation circuit and was fully operational in February 2017. This gravity concentrator treats the rougher concentrate stream prior to entering the Cleaner circuit. The concentrate from

SB750 reports directly to the surge bin in the gold room while the tailing goes to the cleaner circuit. A bypass option allows the rougher concentrate to bypass the concentrator and report directly to the Cleaner circuit when the concentrator is in a rinse cycle or is offline.

In August 2022, an additional Falcon SB5200 batch concentrator was installed in the grinding circuit and was fully operational in January 2023. This gravity concentrator treats part of the cyclone feed stream by using a dedicated feed pump to the scalping vibrating screen. The concentrate from SB5200 reports directly to the coarse surge bin in the gold room while the tailing goes back to the mill discharge hopper.

7.3.5. Flotation Circuit

Cyclone overflow reports by a gravity line to the first of six rougher flotation cells. Outotec TC-40 tank cells are used for the roughers with progressively increasing froth crowders installed down the train. Rougher concentrates are pumped to the Falcon SB750 fine gravity concentrator (GC003), while rougher tailings report to the flotation tailings hopper for pumping to the tailing's thickener. Tails of the GC003 feed the cleaner bank, and its concentrate is discharged to the gold room.

Concentrate from the cleaner cells feeds the bank of re-cleaner cells. Tailings from the re-cleaner cells mix with the GC003 tails as feed to the cleaner cells. Concentrate from the re-cleaner cells is directed to the final concentrate pump box and then transferred to the concentrate thickener. The tails from the cleaner cells feed into the cleaner-scavenger cells, while the tails from the last cleaner-scavenger cell report to the cleaner tail hopper, and then pumped back to the rougher feed bank.

The concentrate from the cleaner/cleaner-scavenger cleaner cells can be fed to either the feed of the re-cleaner cells or the cleaner cells dependent on concentrate grade. The concentrate from the cleaner- scavenger cells report back to the feed of the cleaner cells.

An advance control system called FrothSense was installed in 2016 to automatically control the operating parameters of the flotation cells.

7.3.6. Concentrate Handling

Final copper concentrate is thickened in a 12m diameter high-rate thickener fitted with a vane feed well and de-aeration tank. The underflow is pumped at about 60-70% solids to a pair of 450m3 storage tanks. A Outotec PF-930 horizontal plate pressure filter press produces a concentrate filter cake at about 8% moisture, which will be suitable for transport and sea freight to smelter customers. As part of the efforts to increase the annual throughput to 3.5Mtpa, four additional plates were installed in the concentrate filter to increase its capacity by 20%.

The filter cake discharges to a concentrate stockpile of about 15 days capacity located within the concentrate storage shed. The concentrate is loaded into dump trucks using a FEL with a nominal payload of 20 wet tonnes per load. Composite samples are prepared from trucks as they are loaded, for moisture and metal content. A weighbridge weighs all trucks leaving site to account for movement, inventory control of material and tracking for permit requirements. Concentrate is trucked by road to a storage shed located at Poro Point, La Union with the capacity to hold up to 15,000 tonnes of material. Ships are loaded periodically in 5,500 tonnes or 11,000 tonnes shipments. Turnaround time for the concentrate trucks averages 27-32 hours.

7.3.7. Tailings Handling

Flotation tailings from the hopper are pumped to a 20m diameter high-rate thickener with a vane feed well. Flocculant is dosed to the thickener feed box by variable speed helical rotor pumps to aid in the settling of tails and to provide necessary clarity in thickener overflow.

Three stage variable speed thickener underflow pumps pump thickened tails to the TSF through a 250mm steel/High Density Polyethylene (HDPE) line approximately 2,000m to the dam crest. Tailings then moves through a spigot manifold along the length of the dam wall allowing formation and control of the tailings beach. Approximately 340m^3/h of decant water (a mixture of tailings transport water and rainfall in the catchment) is pumped back to the process plant for makeup water. Excess water in the catchment is pumped to the water treatment plant for release.

Approximately 40-50% of tailings from the process plant are diverted to feed to the paste back-fill plant.

7.3.8. Gravity Gold Concentrate Treatment

The concentrates from the Falcon SB2500 and Falcon SB750 concentrators are screened with an Amkco Vibra-screen. The screen oversize product reports to the Gemini shaking table while the undersize product is treated using the Deister shaking table. Concentrates from the tables are filtered and dried prior to smelting in a standard diesel-fired barring furnace. The tailings and middling's product from both tables are retreated in a small Falcon concentrator, with the concentrate joining the Deister feed. The tailings from the Falcon concentrator are returned to the final concentrate pump box to minimize any gold losses from the gravity cleaning circuit.

The dried gravity concentrates are mixed in batches with fluxes designed to allow the best separation of the gold and silver into doré. These batches are smelted and poured into molds to produce the gold/silver doré bars, which assay 85% gold and 15% silver. Iron and base metal levels in the bars are typically less than 3%.

7.3.9. Reagents

Flocculant is delivered in 25kg bags. This powder is mixed in a Ciba Jetwet mixing unit to 0.25% solution strength and then stored in a storage tank. Flocculant distribution is by a variable speed pump.

Coagulant is also delivered in 1000 L Intermediate Bulk Containers (IBC). It is used to aid in the settling of solids in the water treatment plant and settling ponds.

Two collectors are currently used in the process plant. Hostaflot 10420 is delivered to site in 1,000 L IBC containers and is dosed to the flash flotation feed as a primary copper collector to minimize issues with natural hydrophobicity.
Sodium Isobutyl Xanthate (SIBX) is delivered in pellet form in two 400 kgs bags sealed inside wooden crates and mixed on site to a 5% target strength. A header tank with a control valve and flow meter, controls dosing of SIBX to three points in the rougher circuit as a secondary copper collector.

Flotanol 10379-4 frother comes in 1000 L IBC containers and is distributed to the selected flotation points with peristaltic dosing pumps.

7.3.10. Control Room and Maintenance Workshop

A Yokogawa CentumVP DCS is utilized throughout the process plant and power station for process control. A permanently manned control room monitors and controls the process from the primary crusher to the TSF return water pumps. The PI Historian from OSISoft collects process and alarm data from the DCS for reporting and analysis.

A maintenance workshop facility is located adjacent to the process plant allowing for overhaul of equipment on site.

7.3.11. Metallurgical Laboratory

A metallurgical laboratory is located adjacent to the maintenance workshop and is provisioned with a laboratory rod mill, L40 Falcon Concentrator, flotation cells, pressure filters, ovens, rotary splitter, laboratory Bond ball mill, laboratory crusher and cyclosizer. The laboratory undertakes routine diagnostic testing on the process plant, processes survey samples and future ore testing programs on drill core samples.

7.3.12. Paste Plant

The Paste Plant was commissioned in 2018 and the process flow sheet is shown in Figure 7-2. The paste backfill plant treats the Didipio tailings from the flotation circuit to produce paste. Approximately 40%-50% of mill tailings are used for paste fill which reduces the TSF volume requirement.

This is achieved by de-watering the tailings to produce a nominal 72% solids (by weight) paste containing binder. The paste is delivered to underground stopes by gravity via a distribution piping system. The paste plant has been designed to treat a feed rate of 205 tph of dry tailings solids and produce nominally 150m3/hr of paste fill at 60% utilization. The paste is delivered by gravity to the underground workings through two paste fill boreholes. Flocculant is used to aid the filtration process on the horizontal belt filter. The cake produced is mixed in the paste mixer with binder at 3% - 12% ratio by weight. The paste then delivered by gravity to the reticulation line. Several readings such as borehole level, paste flow, reticulation line pressure is used to monitor the filling process.

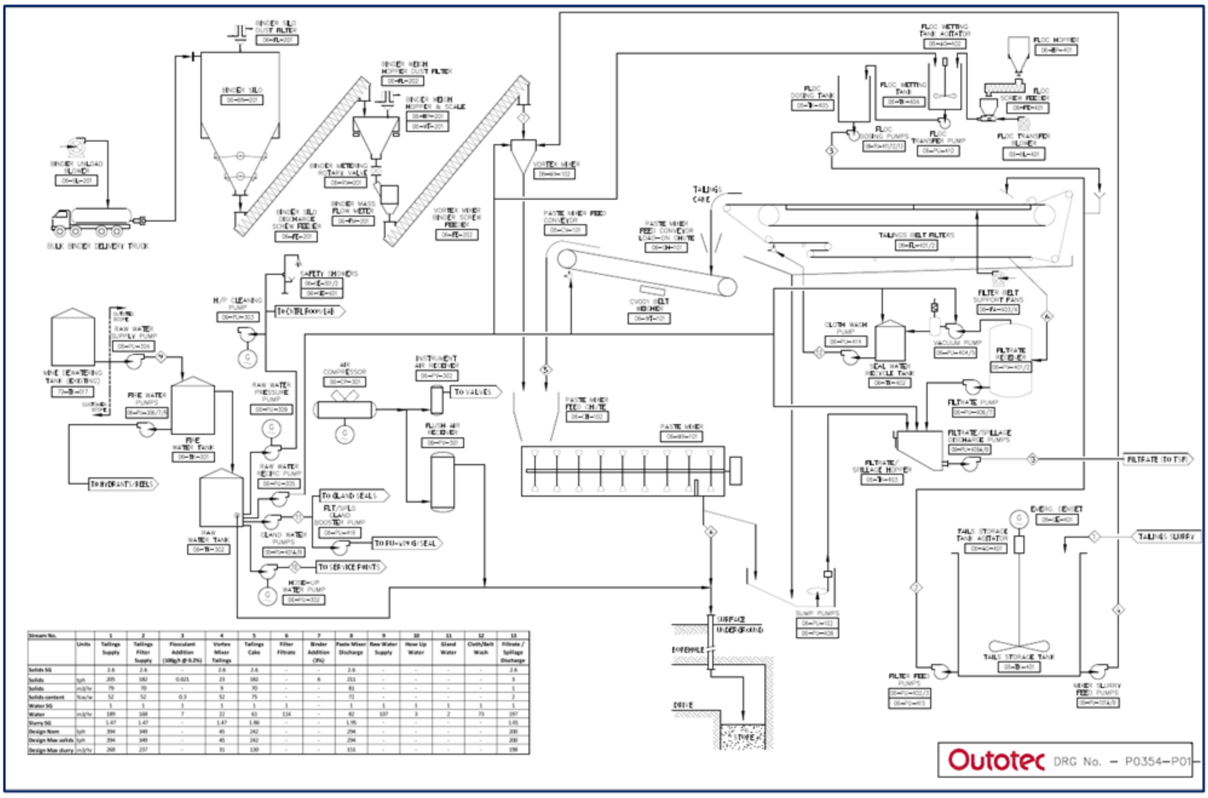

Figure 7-2. Didipio Paste Fill Plant (PFD) Schematic

7.3.13. Arsenic Treatment Plant (ATP)

The Didipio ATP is designed to treat underground mine water. The facility has a treatment capacity of 15million m3/annum.

- Treatment Pond, SP12;
- Monitoring Pond, SP04 (5,804 m^3); and
- Compliance/Buffer Pond, SP06 (2,201 m^3).

The treated water is directed to an intake at the compliance/buffer pond and transferred by gravity through a 630mm pipeline and discharged into the Class D Didipio River as shown on Figure 7 – 3.

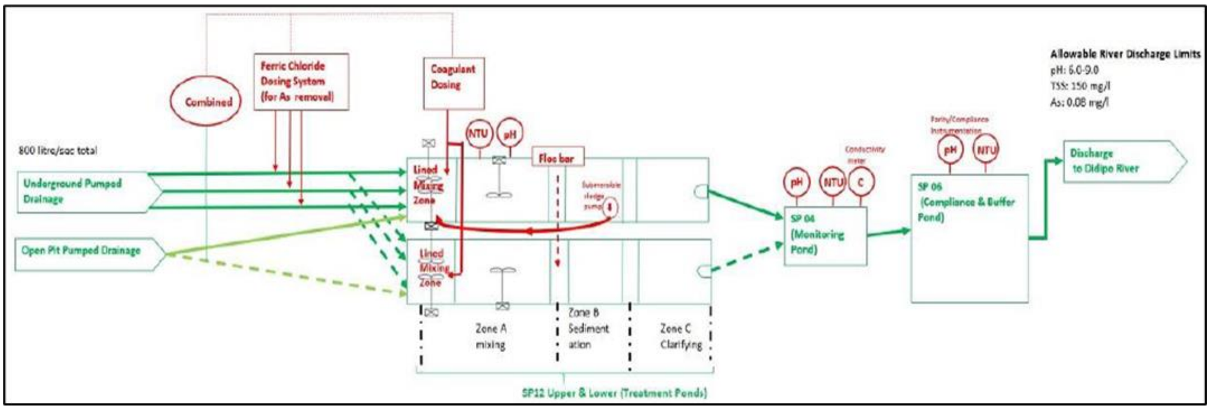

Figure 7-3. Didipio ATP Schematic

To ensure that the equipment and instruments are in satisfactory operating condition, scheduled maintenance tasks is performed on a weekly/monthly basis or depending on the number of run hours.

In the event of varying intake water volume, reagents are adjusted automatically, and reagent flows are checked for any blockages. If treated water Arsenic value is still above the allowable limit despite reagent dosage adjustments, Underground (UG) personnel will be contacted for possible stoppage of underground mine water pumping until issues are resolved.

Regular Arsenic monitoring and analysis are performed by on-site laboratory to provide feedback on treatment efficiency and to optimize the operation of ATP. External independent analysis of water quality is undertaken regularly and used for compliance reporting.

The facility has been fully commissioned and operational since June 2023 and able to meet discharge requirements.

7.4. Product and By-product Specifications

Processing final product are dore and copper/gold concentrate. Around 40% of the gold produced as dore and 60% in the copper/gold concentrate.

Dore has around 85% gold purity. While specifications of the copper/gold concentrate are shown in the table below.

Table 7-2. Copper Concentrate Elemental Composition

Element	Unit	Typical	Range
Cu	%	22	21 - 25
Au	g/t	35	25 - 90
Ag	g/t	80	50 - 120
Fe	%	24	22 - 29
S	%	28	24 - 34
SiO_2	%	12	4 - 20
F	ppm	100	0 - 300
Cl	ppm	100	0 - 1000

7.5. List of Capital Equipment and Works.

Table 7-3. List of Main Equipment

DESCRIPTION	VENDOR	SPECIFICATIONS
Rom Bin		Concrete Bin, 16THK BIS400 Lined
Primary Jaw Crusher	METSOBNE	Metso C140, 1400x1070mm Feed Opening C/W Auto CSS Adjustment, 554TPG @ Design CSS
Rom Bin Grizzly		800mm Screen Spacing, Carbon Steel, BIS400 Lined
Crusher Grizzly		Static Finger Grizzly, 100mm Grizzly Bar Aperture
Transfer Bin		Carbon Steel, 16THK BIS400 Liners
Emergency Stockpile Reclaim Bin		Included With Emergency Reclaim Feeder 12-FE-004
Classifying Cyclone No. 1-7	FLSKREB	Krebs gMAX 20 (20") Cyclone, Included in 21-XM-016 Supply
Classifying Cyclone No. 8 (Future)		FUTURE KREBS gMAX 20 (20") CYCLONE
Cyclone Feed Hopper		Carbon Steel, 12THK Rubber Lined
Sag Mill	OUTOTEC	7.32m DIA x 4.5m EGL, 4.3MW
Ball Mill	OUTOTEC	5.5m DIA x 8.4m EGL, 4.3MW
Classifying Cyclone Cluster	FLSKREB	Rubber Lined Distributor, Launders, Air Actuated Isolation Valves, 5 Operating/2 Standby/1 Spare
Rougher Flash Flotation Cell	OUTOTEC	SK500 Skimair, Cast Polyurethane Stator & Rotor, Rubber Lined Wetted Internals
Flash Flotation Cleaner Cell	OUTOTEC	OK10TC, Cast Polyurethane Stator & Rotor, Rubber Lined Wetted Internals
Flash Flotation Gravity Concentrator	FALCON	Falcon SB2500, VVVF Supplied With Concentrator
Flash Flotation Cleaner Tailings Hopper		Carbon Steel, 6THK Rubber Lined, 3m3 LV
Barring Furnace	FURNTECH	GTA200-C, Diesel Fired, Electric Tilt, A200 Crucible, 1400DEGC, 380V 3PH 60Hz Feed Into Panel
Goldroom Gravity Concentrator	FALCON	Falcon SB250, VVVF Supplied With Concentrator
Primary Gravity Surge Hopper		3CR12 Hopper, Carbon Steel Support Frame, 2.94m3 LV
Secondary Gravity Surge Hopper		3CR12 Hopper, Carbon Steel Support Frame
Shaking Table Tailings Launder		Carbon Steel
Shaking Table	CPGRESOU	Gemeni GT1000, 450KG/HR Capacity, c/w x9 20L Pails x8 40NB Hoses x1 25NB Hose
Rougher Flotation Cell No. 1-6	OUTOTEC	OK40TC, Cast Polyurethane Stator & Rotor, Partially Rubber Lined Internals

Recleaner Flotation Cell No. 1-2	OUTOTEC	OK3HG, Cast Polyurethane Stator & Rotor, Partially Rubber Lined Internals - Dual Mechanism Drive
Recleaner Flotation Cell No. 3	OUTOTEC	OK3HG, Cast Polyurethane Stator & Rotor, Partially Rubber Lined Internals - Single Mechanism Drive
Cleaner Flotation Cell No. 1-2	OUTOTEC	OK8, Cast Polyurethane Stator & Rotor, Partially Rubber Lined Internals
Cleaner / Cleaner Scavenger Flotation Cell No. 1-2	OUTOTEC	OK8, Cast Polyurethane Stator & Rotor, Partially Rubber Lined Internals
Cleaner Scavenger Flotation Cell No. 1-2	OUTOTEC	OK8, Cast Polyurethane Stator & Rotor, Partially Rubber Lined Internals
Concentrate Thickener	OUTOTEC	12m High-Rate Thickener C/W Feedwell, Froth Boom, Sprays, Froth Removal System, Hydraulic Power Pack
Tailings Thickener	OUTOTEC	20m High-Rate Thickener C/W Feedwell, Hydraulic Power Pack

7.6. Project Infrastructures Layout

The Didipio operation has been in full production since April 2013 and all mine site infrastructure has been completed to support the underground operations. Infrastructure includes a tailings storage facility, workshops, camp, water treatment plant, arsenic treatment plant, paste fill plant and ore processing facilities.

Power supply for the project is now connected to the national grid via a 69 kV dedicated line to Bayombong allowing the diesel generators on site to be used as a backup only reducing the cost of electricity appreciably.

The tailings storage facility has been designed to accommodate the life of mine tailings requirement net of paste backfill. The current construction schedule supports the filling schedule with most of the dam core constructed during open pit mining.

Figure 7-4 presents the general site layout of the Didipio operation, showing the main items of infrastructure associated with the current operations including that associated with the current surface land use. The infrastructure includes:

- A 52 ha open pit (final design surface disturbance);
- A 4.0Mtpa capacity processing plant;
- A diesel-powered backup power station;
- An incoming overhead HV powerline and switchyard;
- A 129 ha TSF which includes the flowthrough intake and the impoundment area;
- A 64 ha waste rock dump, apportion of which has already been rehabilitated;

- Workforce accommodation compounds;
- Water treatment plant;
- Arsenic treatment plant;
- Plant sediment ponds and other wastewater storage ponds;
- Warehousing, workshops, offices, crib rooms;
- Fuel farm, paste plant, emulsion plant;
- Site roads and bridges; and
- Armored river diversion channel.

OGPI has acquired surface rights over all the land on which the current and planned site infrastructure is located.

Figure 7-4. General Site Layout

7.6.1. Mineral Processing Plant Layout

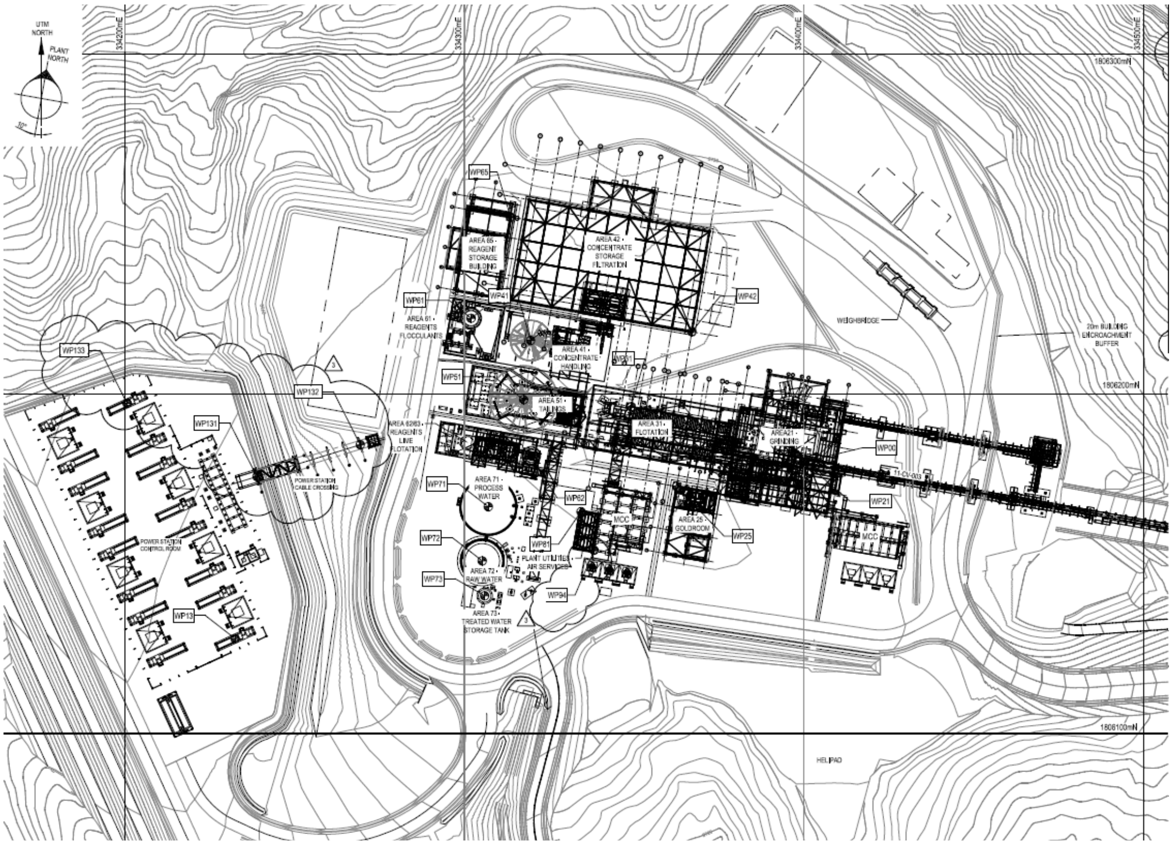

Figure 7-5. Process Plant Layout Plant

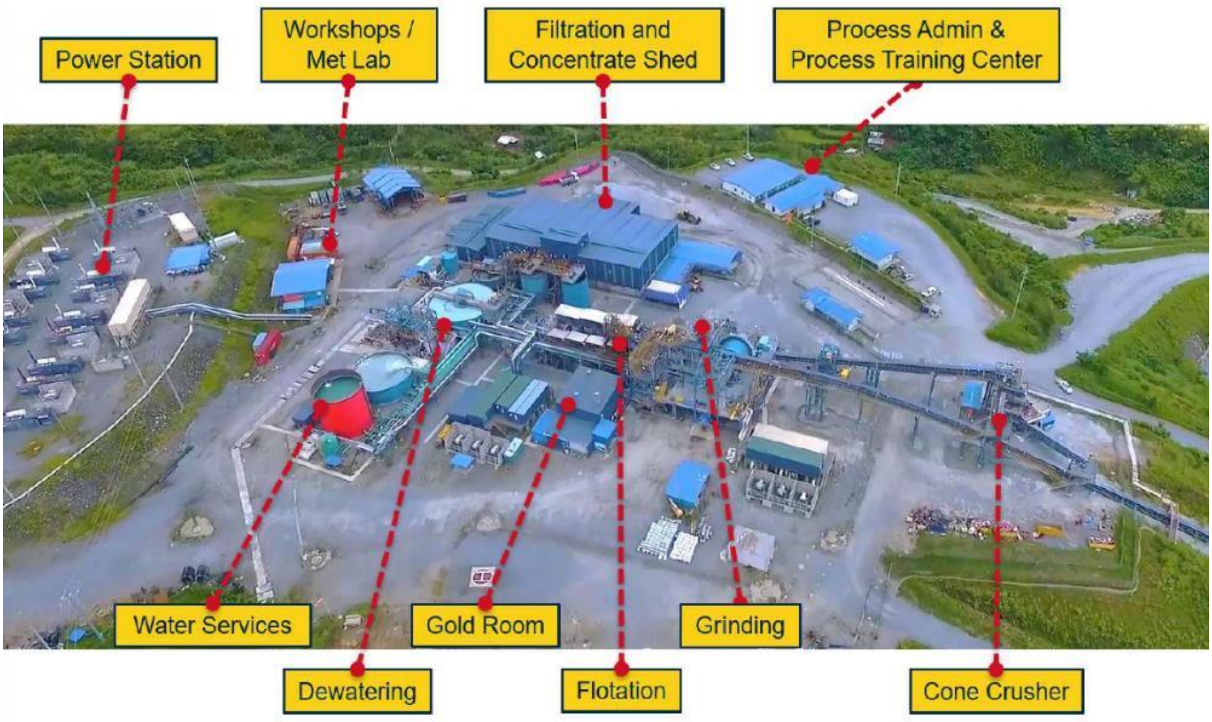

Figure 7-6. Process Plant Aerial Layout view

7.6.2. Tailings Storage Facility

The target minimum clay-raise for 2023 as stipulated in the TSF Operations, Maintenance, and Surveillance (OMS) Manual is 2801.8 mRL. The maximum level attained is 2802.7 mRL while the minimum level is 2802.15 mRL.

For 2024, the target minimum clay-raise is 2803.7 mRL, construction is targeted to resume by February 2024. This value will be reviewed once an update to the OMS will be released by GHD in consideration of the recalibrated tailings deposition data from the new LoMP.

Materials will be sourced from identified clay borrows and waste rock dump with the crusher facility producing sand and gravel filters.

The TSF infrastructure project consisting of the site preparation (earthworks) for the relocation of the decant infrastructure to the west, and construction of the east perimeter tails pipe bench, has commenced in Q4 2023 with the target completion in 2024.

7.6.3. Port Facility

The existing copper concentrate storage and shipment facility at Poro Point is sufficient to handle the concentrate shipments from the Didipio operation. The shipment entails a 365-kilometre truck haul over an existing well maintained sealed pavement national highway, prior to storage at the port. The storage facility has capacity for 18,000 tonnes of concentrate.

7.6.4. Power Source(s)

For the first five years of operation, the Didipio gold-copper mine was planned as a conventional truck and shovel open pit targeting the mineralized rocks of the Didipio Igneous Complex. The required power demand during open pit mine operation was approximately 10 MW and was supplied by the on-site diesel power generation (14 x 1.3 MW individually enclosed diesel generators). It was initially planned that in 2016 a decline would commence for underground development with underground production to begin in 2019. However, the underground project at Didipio was brought forward by one year and the development of the underground portal and surface facilities commenced in the first quarter of 2015. The first underground ore was mined in 2018, almost two years earlier than originally planned. The power demand for the Didipio operation is currently 18 to 22 MW.

The on-site diesel power generation (14 x 1.3 MW units) initially represented 50% of the processing costs. However, at the end of 2015, a power line connecting Didipio to the Luzon electricity grid was commissioned resulting in significant power cost savings. Didipio operations are connected to the 69 kV Luzon electricity grid National Grid Corporation of Philippines (NGCP) via a 60km HV overland single power line from NUVELCO (Nueva Vizcaya Electric Cooperation) Bambang Metering Station to a substation located near the existing Didipio site diesel power station. The construction of the overhead power line was completed in September 2015 and was followed by commissioning. Since 5 November 2015, the Didipio mine site has been operating on National Grid Power as its main operational power supply with the on-site diesel power generation remaining as an emergency backup power supply. A new 25 MVA high voltage transformer was installed as part of a new incoming HV Sub-station to step down the 69 kV National Grid Power to the Didipio mine site voltage of 13.8 kV. The power from the substation now feeds into the original power station substation from where power is distributed to the main consumers on-site at 13.8 kV.

The Didipio Mine has directly connected to 69 kV power line to the NGCP at Bayombong and discontinue the use of Nueva NUVELCO Bayombong-Bambang 69 kV power line since 2022. Line distance protection project to improve the fault finding especially during severe weather conditions to reduce time to inspect whole 73 km power line is scheduled for completion in 2024. This project will increase availability of current power line from 99.0% to 99.25%.

7.6.5. Water Source(s)

All water used in the processing plant is currently recycled from decant water from the TSF and treated Underground mine dewatering water from Arsenic Treatment Plant. Any fresh makeup water was sourced previously from the five deep bores around the perimeter of the open pit mine. Since the third quarter of 2018, these boreholes have been decommissioned. The current source of domestic and raw water supply for the Processing Plant, respectively comes from treated water from Arsenic Treatment Plant that processes underground mine dewatering.

7.6.6. Road/Rail Facility

Two lane road structures connect the camp to major national road networks. One is a cemented 2-lane road going to Cabarroguis and connects to the Maharlika highway. This goes to the Dalton Pass connecting the provinces of Nueva Vizcaya to Nueva Ecija and provides access to the Central Luzon network and eventually to Poro Point, La Union.

The other road connects through the town of Kasibu and eventually to the Maharlika highway. This road though is more suitable for light transport vehicles. Off the town of Sta. Fe is the Malico Road, connecting the provinces of Nueva Vizcaya and Pangasinan, providing a circuitous but scenic route, and avoiding Dalton Pass normally congested with heavy trucks.

7.7. Capital Cost Estimates

As the process plant is already in operation, all major capital expenditures have already been charged, and therefore is not anymore material in the calculation of the mineral reserves. Overall Capital Expenditure (CAPEX) since the start of the operations have amounted to USD 14.2 M, inclusive of improvements in the plant.

There are no more plans to indulge in major capital expenditure for the rest of the life of the mine.

7.8. Sustaining Capital Cost Estimates

Sustaining capital is expenditure required for maintaining and sustaining existing production assets at the current level. A list of projected sustaining CAPEX for the process plant is presented in Table. 7-5. The biggest of the expenditures will occur in 2024 – USD 6.09 M brought about by projects for the TSF, amounting to USD 3.9M, almost 2/3 of the annual budget.

Table 7-4. Historical CAPEX

CAPITAL EXPENDITURE ($000s)			
Year	Surface Operation	UG Mining	Milling
2013	1.405	0.000	0.384
2014	4.318	0.000	0.622
2015	6.832	0.000	0.520
2016	1.849	0.000	2.033
2017	2.750	0.000	2.007
2018	2.022	3.775	0.195
2019	2.941	1.876	1.803
2020	0.295	0.133	0.098
2021	0.994	0.292	0.856
2022	2.861	4.650	2.651
2023	2.767	11.940	2.986

Table 7-5. Processing Related Sustaining Capital Cost Estimates

SUSTAINING CAPITAL COST ESTIMATES				
YEAR	Sustaining - $ Per ounces sold	Sustaining CAPEX ($000s)	Non-Sustaining CAPEX	Gold Ounces Sold
2024	44.8	6.09	-	135,957
2025	6.4	0.83	-	128,941
2026	7.1	0.87	-	122,157
2027	3.3	0.38	-	116,452
2028	2.4	0.24	-	100,920
2029	2.5	0.22	-	89,296
2030	3.0	0.22	-	73,631
2031	6.1	0.32	-	52,099
2032	2.1	0.08	-	39,003
2033	5.6	0.29	-	52,095
2034	3.3	0.15	-	44,896
2035	-	-	-	39,326

7.9. Operating Cost Estimate

Table 7-6. Processing Related Historical Operational Expenditure (OPEX)

HISTORICAL			
YEAR	Annual Throughput (Mtpa)	Milling Opex ($000)	Milling Unit cost
2013	2,600	22.3	8.65
2014	3,100	34.8	11.20
2015	3,600	29.9	8.34
2016	3,500	29.7	8.57
2017	3,500	25.4	7.26
2018	3,500	24.1	6.89
2019	2,700	18.0	6.76
2020	-	3.2	-
2021	-	4.6	-
2022	4,000	31.2	7.80
2023	4,100	28.4	6.94

Table 7-7. Processing Related Projected OPEX

PROJECTED			
YEAR	Annual Throughput (Mtpa)	Milling Opex ($000)	Milling Unit cost
2024	4,004	28.8	7.19
2025	4,008	28.8	7.18
2026	4,003	29.2	7.30
2027	4,009	28.5	7.12
2028	4,005	28.8	7.18
2029	4,002	29.8	7.44
2030	4,009	28.6	7.13
2031	3,708	28.6	7.70
2032	1,590	15.9	10.00
2033	1,797	17.0	9.44
2034	1,651	16.9	10.25
2035	1,777	16.4	9.20

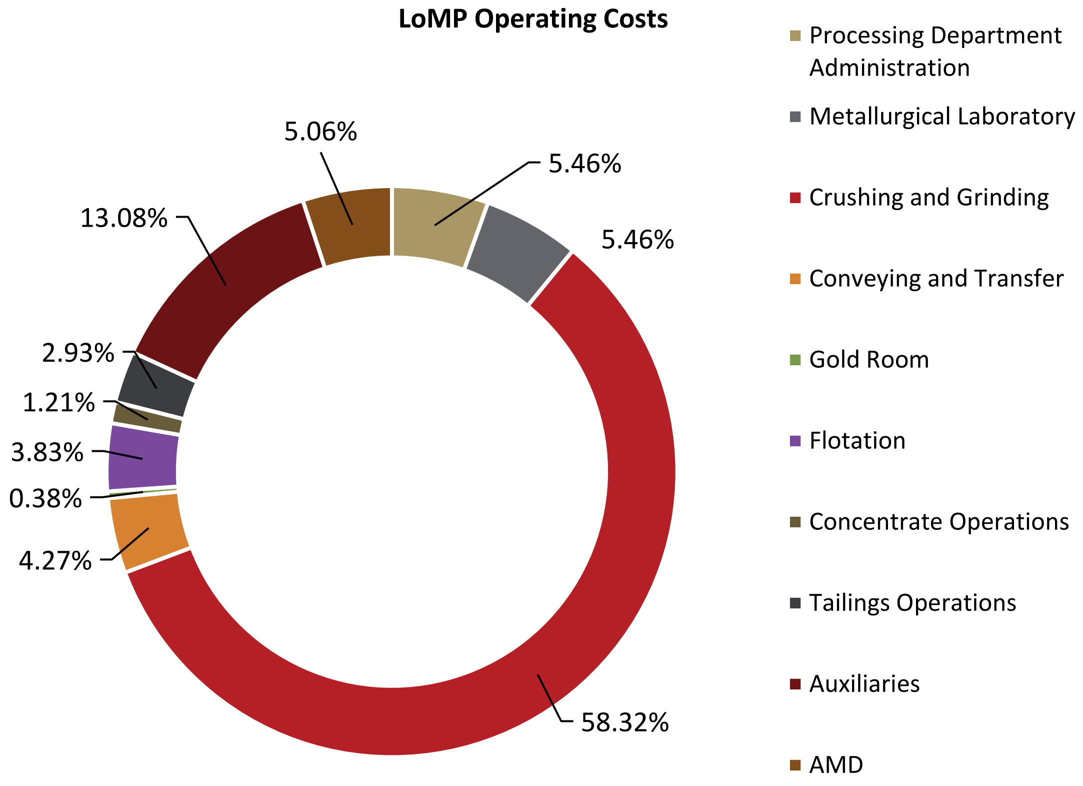

Figure 7-7. LoMP OPEX Breakdown by Cost Category

LoMP OPEX breakdown for the process plant is typical of milling costs globally – 58% of cost is due to crushing and grinding.

7.10. Specifications, Standards, and Codes

Not applicable as the process plant is already in operation.

8. MARKET STUDY AND CONTRACTS

8.1. Marketing Study

OGPI owns the on-site processing plant and undertakes all processing directly. Supply contracts with a typical term of one to three years are in place for a range of the main reagents, grinding media and other consumables used in processing the ore. These supply contracts set prices or contain mechanisms for the setting of prices for the relevant commodities under terms and conditions which generally comply with industry practices.

SGS is contracted by OGPI to do assaying services dedicated for OGPI samples only. Current contract with SGS lasts until 2026.

8.2. Commodity Prices

Table 8-1. Metals Price Forecast

METALS PRICE FORECAST			
Year	Gold US$/oz	Silver US$/oz	Copper US$/lb
2024	1,939	24	3.89
2025	1,910	24.3	4.08
2026	1,843	23.7	4.19
2027	1,813	23.2	4.16
2028 - 2035	1,724	22.7	3.81

8.3. Sales Contracts

8.3.1. Transportation and Refining of Bullion

A contract was previously in place with Western Australian Mint (Perth Mint) for the refining of doré bullion into fine gold and silver for sale. The contract commenced in March 2013 and ended March 31, 2022. This contract sets a range of prices and surcharges for refining the doré under terms and conditions which generally comply with industry norms.

Beginning April 1, 2022, OGPI has entered into a new bullion sales agreement with ABC Refinery which is also accredited with the London Bullion Market Association (LBMA) and operates policies and procedures consistent with LBMA Standards to prevent contributing to conflict, human rights abuses, terrorist financing practices, and to combat money laundering.

Pursuant to the FTAA renewal, OGPI has entered into a bullion purchase agreement with the BSP, which requires OGPI to offer for purchase to BSP at least twenty five percent (25%) of its annual doré production at fair market price.

8.3.2. Transportation and Sales of Copper/Gold Concentrate

In October 2012, OGPI signed an off-take agreement with Trafigura Pte Ltd (as Buyer) and Trafigura Beheer B.V. (as Guarantor) (collectively Trafigura) for the sale of gold/copper concentrate from the Didipio operation. Trafigura is leading international commodities trader, specializing in the supply and transport of concentrates. Trafigura owns and operates concentrate storage facilities worldwide which support OceanaGold's trading activity. The key terms of the off-take agreement, as amended and restated, are:

- 100% of the Didipio gold/copper concentrate production is sold to Trafigura under a pricing formula, including treatment/refining charges, that is considered competitive in world markets.

- The offtake was for a term of 5 years beginning April 4, 2013 and was renegotiated in February 2021 for a minimum of two years with an option to extend on rolling basis.

- Trafigura takes delivery of the copper concentrate at the delivery point, which is currently the warehouse at Poro Point, La Union.

- While Trafigura was initially responsible for the land transportation from the mine site to the port, the agreement was amended such that OGPI took over the land transportation of the concentrates with its own fleet of trucks. OGPI continues to engage the community corporation and other local contractors to provide additional trucks and in 2022 and will transition from owner-operator to contract in hauling the copper concentrates from the mine site to port.

In Q4 2023, a tender process was released for the sales of copper/gold concentrate which is still on tendering and reviewing processes by the time this report is released.

The transport from Didipio Mine to Poro Point, La Union entails a 365 km truck haul over an existing maintained sealed pavement national highway, prior to storage at the port. The storage facility has capacity of 18,000 tonnes of concentrate.

8.3.2.1. Sample Revenue Calculations

Using the commercial contracts for the offtake agreement with Trafigura and bullion purchase agreements with ABC Refinery and BSP, sample revenue projections were calculated for each product stream. Values used for this exercise are price and cost projections for 2024. This is for illustrative purposes only. The revenues used for the reserve calculations are taken from the projected metal prices, Treatment Charge/Refining Charge (TC/RC) and processing fees.

8.3.2.1.1. Concentrate

Tables 8-2 and 8-3 shows that the concentrate of OGPI is of good enough quality that any metal revenues are not penalized by any deleterious elements.

Table 8-2. Key Assumptions and Projections

KEY ASSUMPTIONS AND PROJECTIONS		
Item	**Unit**	**Value**
Concentrate Quality		
Quantity	WMT	5,500
Moisture	%	8%
Dry Weight	DMT	5,060
Cu Content	%Cu	22.00%
Au Content	g/t Au	35.00
Ag Content	g/t Ag	100.00
Payable Metal Content		
Cu	%	21%
Au	g/t	34.1
Ag	g/t	90.0
Metal Prices		
Cu	US$/lb	$3.89
Au	US$/oz	$1,939
Ag	US$/oz	$24.00
Smelter Deductions		
Treatment Charges	$/DMT	$68.00
Refining Charges		
Cu	$/lb	$0.08
Au	$/oz	$4.50
Ag	$/oz	$0.40
Logistics and Insurance		
Freight: Didipio to Poro Point	$/WMT	$200.00
Ocean Freight	$/WMT	$40.00
Handling	S/WMT	$2.00
Insurance	$/WMT	$2.00

Table 8-3. Sample Revenue Calculations for a 5,500 WMT Concentrate Shipment

SAMPLE REVENUE CALCULATION (2024)	
Metal Revenues	
Cu	$9,112,828
Au	$10,764,447
Ag	$351,395
Smelter Deductions	
Treatment Charges	$344,080
Refining Charges	
Cu	$187,410
Au	$24,981
Ag	$5,856
Logistics and Insurance	
Freight: Didipio to Poro Point	$1,100,000
Ocean Freight	$220,000
Handling	$11,000
Insurance	$11,000
Net Revenue	
Gross Metal Revenue	$20,228,669
Less: Smelter Deductions	$562,329
Less: Logistics and Insurance	$1,342,000
Net Revenue	$18,324,340

8.3.2.1.2. Gold Bullion (ABC Refinery)

Table 8-4. Sample Revenue Calculations for a Bullion Sale with ABC Refinery

KEY ASSUMPTIONS AND PROJECTIONS		
ITEM	**UNIT**	**VALUE**
DETAILS		
Max. Weight per lot	kg	12.5
After-Melt Weight	kg	12.5
Lots		1
%Final assay of Au	%	85.00%
Metal Recovery Factor	%	99.0%
USD:PHP Exchange Rate		55
BSP Gold Buying Rate	USD/oz	$1,939
Unit Processing Cost	PhP/oz material	₱39.37
Assay Fee	PhP/Lot	₱1,600
Taxes		
Excise Tax	%	4%
Creditable Withholding Tax	%	1%
FINAL PAYMENT COMPUTATION		
Unit Processing Cost	PhP	₱15,307
Assay Fee	PhP	₱1,600
Taxes		
Excise Tax	PhP	₱1,442,631
Creditable Withholding Tax	PhP	₱360,658
NET REVENUE		
Gross Au Revenue	USD	$655,742
Gross Au Revenue	PhP	₱36,065,783
Less: Taxes	PhP	₱1,803,289
Less: Assay and Processing Fees	PhP	₱16,907
Net Au Revenue	PhP	₱34,245,587
Net Au Revenue	USD	$622,647

8.3.2.1.3. Gold Bullion (BSP)

Table 8-5. Sample Revenue Calculations for a Bullion Sale with BSP

KEY ASSUMPTIONS AND PROJECTIONS		
ITEM	**UNIT**	**VALUE**
DETAILS		
Max. Weight per dore	kg	32
Actual Weight	kg	20
Actual Weight	oz	643.0
kg-oz conversion		32.15
Gold Metal Return	%	99.98%
Silver Metal Return	%	99.5%
AUD-USD Exchange Rate	USD	0.72
Gold Buying Rate	USD/oz	$1,939
Silver Buying Rate	USD/oz	$24.00
PAYABLE METAL CONTENT		
Gold Payable Content	kg	17.00
Gold Payable Content	oz	546.43
Silver Payable Content	kg	2.99
Silver Payable Content	oz	95.97
METAL REVENUE CALCULATIONS		
Gold Payable Content	USD	$1,059,519
Silver Payable Content	USD	$2,303
REFINING CHARGES		
Refine Charge	AUD/oz	$0.20
Refine Charge	USD/oz	$0.28
Gross Refining Charge	USD	$178.62
NET REVENUE		
Gross Gold Revenue	USD	$1,059,519
Gross Silver Revenue	USD	$2,303
Less: Refining Charges	USD	$179
Net Revenue	USD	$1,061,643
Net Revenue	USD/oz	$1,651

9. RISK ANALYSIS

9.1. Environmental

The improvements that enable the additional capacity of the Processing Plant were found to not have any additional adverse effects on the environment.

9.2. Tailings Storage Facility

The TSF has been designed and continues to be constructed as a robust structure, including an engineered waste rock dump behind the main embankment which acts also as a buttress. The potential earthquake and rainfall hazards have been adequately catered for in the design and construction and are being continuously re-assessed by the designer and site personnel. Based on the information received from site and site visual observations, at this time, the risks related to this facility remain low. GHD is the Engineer of Record for this facility.

9.3. Water Management

The proposed overall approach to water management at the Didipio Project is to minimize discharge from the operating site, direct all dirty water flows, including any waste rock seepage and plant area runoff, to the processing plant. Runoff from disturbed areas will be discharged to the Dinauyan River via series of settling pond, and diversion of clean surface water flows around disturbed areas of the site.
Water recycled from the TSF flows via a gravity fed pipe for reuse in the process cycle.

Discharge to the nearby river system is necessary in most years due to the positive net water balance and this is managed via the decant system discharging to the Processing Plant and the Water Treatment Plant. In the event of a storm in excess of the combined capacity of the decant system, the water treatment plant and available storage capacity in the TSF, clean decant water from the TSF can be discharged via emergency discharge pipeline to the Dinauyan River.
In summary, there is little threat to the continuity of the operations from water supply.

9.4. Emergency Response Team

There is a permanent, full time emergency response team with good composition, equipment, and readiness at Didipio. Training and realistic firefighting drills must continue (including in the Processing Plant, e.g., simulating a fire at the SAG mill platform – mill feed elevated conveyor) in order for this team to inspire confidence in their response.

9.5. Permits

OceanaGold Philippines – Didipio Mine FTAA has already been renewed and valid until 2044 therefore any uncertainty of operations continuity is largely addressed.

9.6. Social and Community

Didipio Mine appears to have good relations with the nearby communities. Elsewhere in the Philippines however (e.g., Mindanao in the South) there have been few attacks by rebel groups targeting mining companies in recent years and these resulted in some destruction of mobile equipment. An attempted (foiled) attack on the Philex Padcal mine (near Baguio) was reported in the Philippines media on 11th of February 2017. This attack resulted in two torched trucks.

9.7. Off-Site Transport

During normal operation the movement of freight may represent a significant logistical challenge for the Didipio operation in case of significant civil or natural access roads disturbance. However natural causes will not interrupt transport for more than a few days for any one event. Site logistics are being managed effectively. Heavy goods can be also air freighted into Cauayan if required. There is helipad located in the mine site for emergency transportation purpose.

10. DISCUSSION AND CONCLUSIONS

10.1. Overall Impression of the Process Plant

The OGPI Processing Plant is well designed and engineered and considers the characteristics of the valuable minerals and metals in the crafting of the flow. The process plant employs the state-of-the-art mineral processing equipment and process control systems that are at par with global standards. Metal recoveries of 89% both **for Cu and Au is the stamp of class for the processing operations.**

In addition to the world class technical expertise in operations, there is the meticulous attention to safety, security, and maintenance within the plant ensuring the smooth continuity of day-to-day operations.

10.2. Milling Capacity

Starting from a nameplate capacity of 2.5Mtpa in 2012, they have achieved 3.5Mtpa in 2014 with the completion of an SABC circuit. Mining from the underground commenced in 2017 with the remaining ore in the open pit stored in a stockpile. Continuous improvements and de-bottlenecking through the years, coupled with increasing amount of softer ore from the underground have resulted in milling capacity reaching above 4.0Mtpa level in 2023.

10.3. Recovery

Analyzing historical data of Cu feed, Copper in Acid Soluble (CuAS) in feed and grind size P_{80}, a copper recovery model was developed. This is presented in Fig. 5-1. Comparison of metallurgical accounting production with the model show very good correlation of the predicted results with the actual production. This model is being used to predict Cu recovery for LoMP studies.

As similar procedure was applied to Au recovery, using feed grades. Initially, correlation with actual plant production was good. However, the model started to deviate with increasing underground ore and the suspected contamination with paste fill material. The model was revisited and eventually revised with improvements in the mill with additional gravity concentrators, considering the negative effect of the paste fill operations and considering the effect of grind size, the model now is more in tune with actual production.

10.4. Product Specifications and Revenues

The specifications of the copper concentrate and Au-Ag bullion are discussed in detail in Section 7.4.

The forecast commodity prices through 2035 are presented in Section 8.2 Commodity Prices, Table 8-1 Commodity Price Forecast. These are the figures that were used to calculate the metal revenues for the LoMP.

Sample revenue calculations for both copper concentrate and Au bullion are presented in Section 8.3.2.1. Using production forecasts, metal price and TC/RC forecasts, the annual net revenues from the sales of the product and by-product are computed.

10.5. CAPEX and OPEX

LoMP Sustaining CAPEX (Section 7.8) and OPEX (Section 7.9) were presented in their respective sections. The annual figures in these will be inputted to the annual cash flow for the computation and generation of the financial parameters for the calculation of the mineral reserves.

11. RECOMMENDATIONS

The OGPI Process Plant is already optimized for milling capacity. Process improvement work should focus on increasing recovery and lowering the cost. Some of the suggested improvements that can be considered:

- Improving classification – MLA reports indicate losses due to production of fines as some minerals are rendered unfloatable - < 7 µ. Overgrinding can also lead to losses of fine free gold in the gravity concentration circuit. Improving classification that reduces circulating load is one of the solutions.

- Flotation reagents – as the saying goes, "If you don't believe in research, then try guesswork!" Although there are very few new collector and frother chemistries that have been developed in the last 2 decades, the current trend is finding that key synergy that is developed when combining 2 or 3 chemistries.

- Invest in doing regular MLA work to identify process bottlenecks and determine solutions to getting that recovery up.

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APPENDIX 1.
COMMENTS ON PMRC 2020 TABLE 1 ASSESSMENT AND REPORTING CRITERIA

Introduction				
			PMRC 2020 Reporting Criterion	**Commentary**
	General	*(i)*	*The scope of work or terms of reference*	In 1.1 Purpose and Scope of Work
		(ii)	*The Accredited Competent Person's relationship to the issuer of the Public Report if any*	In Accredited Competent Persons' Consent Statements
		(iii)	*A statement for whom the Public Report was prepared; whether it was intended as a full or partial evaluation or other purpose, work conducted, effective date of Public Report, and remaining work*	In Accredited Competent Persons' Consent Forms and Statements
		(iv)	*Sources of information and data contained in the Public Report or used in its preparation, with citations if applicable, and a list of references*	In Executive Summary (pages 1-2), 1.6 Disclaimer and 12 References
		(v)	*A title page and a table of contents that includes figures and tables*	In cover page and pages 8 - 11
		(vi)	*An Executive Summary, which briefly summarizes important information in the Public Report, including mineral property description and ownership, geology and mineralization, the status of exploration, development and operations, Mineral Resource and/or Mineral Reserve estimates, and the Accredited Competent Person's conclusions and recommendations. If Inferred Mineral Resources are used, a summary valuation with and if practical without inclusion of such Inferred Mineral Resources. The Executive Summary should have sufficient detail to allow the reader to understand the essentials of the project*	In Executive Summary in pages 1 - 2

		(vii)	*A declaration from the Accredited Competent Person, stating whether 'the declaration has been made in terms of the guidelines of the PMRC 2020 Edition. If a reporting code other than the PMRC having jurisdiction has been used, an explanation of the differences*	In Accredited Competent Persons' Consent Statements, Executive Summary and in 1.1 Purpose and Scope of Work
		(viii)	*Diagrams, maps, plans, sections, and illustrations, which are dated, legible, and prepared at an appropriate scale to distinguish important features. Maps including a legend, author or information source, coordinate system and datum, a scale in bar or grid form, and an arrow indicating north. Reference to a location or index map and more detailed maps showing all important features described in the text, including all relevant cadastral and other infrastructure features*	Diagrams, maps, plans, sections, and illustrations are placed under the respective sections of the main report.
		(ix)	*The units of measure, currency, and relevant exchange rates*	In 1.7 Units of Measure, Currency, and Exchange Rates
		(x)	*The details of the personal inspection on the mineral property by each Accredited Competent Person or, if applicable, the reason why a personal inspection has not been completed*	In 1.1 Purpose and Scope of Work
		(xi)	*If the Accredited Competent Person is relying on a report, opinion or statement of another expert who is not an Accredited Competent Person, then a disclosure of the date, title, and author of the report, opinion, or statement, the qualifications of the other expert, the reason for the Accredited Competent Person to rely on the other expert, any significant risks, and any steps the Accredited*	In 1.5 Qualification of Accredited Competent Person(s), Key Technical Staff, and Other Experts

			Competent Person took to verify the information provided	
Section 1: Project Outline				
1.1	***Location***	*1.1.1*	*Description of location and map (country, province, and closest town/city, coordinate systems and ranges, etc.)*	In 1.3 Location of the Mineral Property and Accessibility
		1.1.2	*Country Profile if Mineral Property is outside the Philippines, with a description of information relating to the project host country that is pertinent to the project, including relevant applicable legislation, environmental and social context etc. An assessment, at a high level, of relevant technical, environmental, social, economic, political, and other key risks*	N/A
		1.1.3	***For Exploration Results:*** *A general topo-cadastral map / For* ***Mineral Resources:*** *Topo-cadastral map in sufficient* ***For Mineral Reserves****: Detail to support the assessment of eventual economics / Detailed topo-cadastral map, with applicable aerial surveys checked with ground controls and surveys, particularly in areas of rugged terrain, dense vegetation*	In Figures 1-1, 1-2, and 1-3
1.2	***Mineral Property Description***	*1.2.1*	*Brief description of the scope of project (i.e., whether in preliminary sampling, advanced exploration, Scoping, Pre-Feasibility, or Feasibility Study, Life-of-Mine plan for an ongoing mining operation or closure)*	In 1.1 Purpose and Scope of Work

		1.2.2	*Description of topography, elevation, drainage and vegetation, the means and ease of access to the mineral property, the proximity of the mineral property to a population center, and the nature of transport, the climate, known associated climatic and seismic risks and the length of the operating season and to the extent relevant to the mineral project, the sufficiency of surface rights for mining operations including the availability and sources of power, water, mining personnel, potential tailings storage areas, potential waste disposal areas, heap leach pad areas, and potential processing plant sites (noting any conditions that may affect possible exploration/mining activities)*	Discussed in detail in Technical Report 1 – Angeles, et. al, 2024
1.3	***Adjacent properties***	1.3.1	*Details of relevant adjacent properties. The inclusion on the maps of the location of common structures, whether related to mineralization or not, in adjacent or nearby properties having an important bearing on the Public Report. Reference to all information used from other sources.*	Discussed in detail in Technical Report 1 – Angeles, et. al, 2024
1.4	***History***	1.4.1	*Historical background to the project and adjacent areas concerned, including known results of previous exploration and mining activities (type, amount, quantity, and development work), previous ownership and changes thereto*	Discussed in detail in Technical Report 1 – Angeles, et. al, 2024
		1.4.2	*Previous successes or failures referred to transparently with reasons why the project should now be considered potentially economic*	Discussed in detail in Technical Report 1 – Angeles, et. al, 2024

		1.4.3	*Known or existing historical Mineral Resource estimates and performance statistics from actual production in the past and in current operations*	In: 1.8 Previous Works
1.5	***Legal Aspects and Permitting***	*1.5.1*	*The nature of the issuer's rights (e.g., exploration and/or mining) and the right to use the surface of the properties to which these rights relate. The date of expiry and other relevant details*	Discussed in detail in Technical Report 1 – Angeles, et. al, 2024
		1.5.2	*The principal terms and conditions of all existing agreements, and details of those still to be obtained, (such as, but not limited to, concessions, partnerships, joint ventures, access rights, leases, historical and cultural sites, wilderness or national park and environmental settings, royalties, consents, permission, permits or authorizations)*	Discussed in detail in Technical Report 1 – Angeles, et. al, 2024
		1.5.3	*The security of the tenure held at the time of reporting or that is reasonably expected to be granted in the future along with any known impediments to obtaining the right to operate in the area. Details of applications that have been made. See Clause 32 for declaration of a Mineral Reserve*	Discussed in detail in Technical Report 1 – Angeles, et. al, 2024
		1.5.4	*A statement of any legal proceedings, for example: adverse/competing claims, or land claims that may have an influence on the rights to prospect or mine for minerals, or claims that the tenurial instrument is defective, or an appropriate negative statement*	Discussed in detail in Technical Report 1 – Angeles, et. al, 2024

		1.5.5	*A statement relating to governmental/statutory requirements permits, and consents as may be required, have been applied for, approved or can be reasonably be expected to be obtained. A review of risks that permits will not be received as expected and impact of delays to the project*	Discussed in detail in Technical Report 1 – Angeles, et. al, 2024
1.6	***Royalties***	1.6.1	*The royalties or streaming agreements that are payable in respect of each mineral property*	Discussed in detail in Technical Report 1 – Angeles, et. al, 2024
	Liabilities	1.7.1	*Any liabilities, including rehabilitation guarantees and decommissioning obligations that are pertinent to the project. A description of the rehabilitation liability and decommissioning obligation, including, but not limited to, legislative/administrative requirements, assumptions, and limitations*	Discussed in detail in Technical Report 1 – Angeles, et. al, 2024
Section 2: Geological Setting, Mineral Deposit, Mineralization				
2.1	***Geological Setting, Mineral Deposit, Mineralization***	2.1.1	*The regional geology*	N/A
		2.1.2	*The project geology including mineral deposit type, geological setting, and style of mineralization*	N/A
		2.1.3	*The geological model or concepts being applied in the investigation and on the basis of which the exploration program is planned, along with a description of the inferences and assumptions made from this model*	N/A
		2.1.4	*Data density, distribution, and reliability and whether the quality and quantity of information are sufficient to*	N/A

			support statements, made or inferred, concerning the mineral deposit	
		2.1.5	*Significant minerals present in the mineral deposit, their frequency, size and other characteristics, including a discussion of minor and gangue minerals where these will have an effect on the processing steps and the variability of each important mineral within the mineral deposit*	N/A
		2.1.6	*Significant mineralized zones encountered on the mineral property, including a summary of the surrounding rock types, relevant geological controls, and the length, width, depth, and continuity of the mineralization, together with a description of the type, character, and distribution of the mineralization*	N/A
		2.1.7	*The existence of reliable geological models and/or maps and cross sections that support interpretations*	N/A
Section 3: Exploration and Drilling, Sampling Techniques, and Data				
3.1	***Exploration***	3.1.1	*Data acquisition or exploration techniques and the nature, level of detail, and confidence in the geological data used (i.e., geological observations, remote sensing results, stratigraphy, lithology, structure, alteration, mineralization, hydrology, geophysical, geochemical, petrography, mineralogy, geochronology, bulk density, potential deleterious or contaminating substances, geotechnical and rock characteristics, moisture content, bulk samples, etc.). Data sets with all relevant metadata, such as unique sample number, sample mass,*	N/A

			collection date, spatial location, etc.	
		3.1.2	*The primary data elements (observations and measurements) used for the project and a description of the management and verification of these data or the database. Description of the following relevant processes: acquisition (capture or transfer), validation, integration, control, storage, retrieval, and backup processes. If data are not stored digitally, presentation of hand-printed tables with well-organized data and information*	N/A
		3.1.3	*Acknowledgment and appraisal of data from other parties, and reference to all data and information used from other sources*	NA
		3.1.4	*Distinction between data / information from the mineral property under discussion and that derived from surrounding properties*	NA
		3.1.5	*The methods for collar and down-hole survey, techniques, and expected accuracies of data as well as the grid system used*	N/A
		3.1.6	*Discussion on the sufficiency of the data spacing and distribution to establish the degree of geological and grade continuity appropriate for the estimation procedure(s) and classifications applied*	N/A
		3.1.7	*Presentation of representative models and/or maps and cross sections or other two or three-dimensional illustrations of results showing location of samples, accurate drill hole collar positions, down-hole surveys, exploration pits, underground workings, relevant*	N/A

			geological data, etc.	
		3.1.8	*The geometry of the mineralization with respect to the drill hole angle because of the importance of the relationships between mineralization widths and intercept lengths. Justification if only down-hole lengths are reported*	N/A
3.2	***Drilling Techniques***	3.2.1	*Type of drilling undertaken (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Banka, sonic, etc.) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.)*	N/A
		3.2.2	*The geological and geotechnical logging of core and chip samples relative to the level of detail required to support appropriate Mineral Resource estimation, mining studies, and metallurgical studies*	N/A
		3.2.3	*The nature of logging (qualitative or quantitative) and the use of core photography (or costean, channel, etc.)*	N/A
		3.2.4	*The total length and percentage of the relevant intersections logged*	N/A
		3.2.5	*Results of any down-hole surveys of the drill hole*	N/A
3.3	***Sample Method, Collection, Capture, and Storage***	3.3.1	*A description of the nature and quality of sampling (e.g., cut channels, random chips, or specific specialized industry standard measurement tools appropriate to the minerals under investigation, such as down- hole gamma sondes, or handheld or fixed-position XRF instruments, etc.), without these examples limiting the broad*	N/A

			meaning of sampling	
		3.3.2	*A description of the sampling processes, including sub-sampling stages to maximize representativeness of samples, whether sample sizes are appropriate to the grain size of the material being sampled and any sample compositing*	N/A
		3.3.3	*A description of each data set (e.g., geology, grade, density, quality, geo-metallurgical characteristics, etc.), sample type, sample-size selection, and collection methods*	N/A
		3.3.4	*The nature of the geometry of the mineralization with respect to the drill hole angle (if known). The orientation of sampling to achieve unbiased sampling of possible structures, considering the mineral deposit type. The intersection angle. The down-hole lengths if the intersection angle is not known*	N/A
		3.3.5	*A description of retention policy and storage of physical samples (e.g., core, sample reject, etc.)*	N/A
		3.3.6	*A description of the method of recording and assessing core and chip sample recoveries and the results assessed, measures taken to maximize sample recovery and ensure representative nature of the samples, whether a relationship exists between sample recovery and grade, and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material*	N/A
		3.3.7	*The cutting of a drill core sample, e.g., whether it was split or sawn and whether quarter, half or full core was submitted for analysis. Non-core sampling, e.g., whether the sample was riffled,*	N/A

			tube sampled, rotary split, etc.; whether it was sampled wet or dry; the impact of water table or flow rates on recovery and introduction of sampling biases or contamination from above. The impact of variable hole diameters, e.g., by the use of a caliper tool	
3.4	***Sample Preparation and Analysis***	*3.4.1*	*The identity of the laboratory(s) and its accreditation status. The steps taken by the Accredited Competent Person to ensure the results from a non-accredited laboratory are of an acceptable quality*	N/A
		3.4.2	*The analytical method, its nature, the quality and appropriateness of the assaying and laboratory processes and procedures used, and whether the technique is considered partial or total*	N/A
		3.4.3	*A description of the process and method used for sample preparation, sub-sampling and size reduction, and the likelihood of inadequate or non-representative samples (i.e., improper size reduction, contamination, screen sizes, granulometry, mass balance, etc.)*	N/A
	Sampling Governance	*3.5.1*	*The governance of the sampling campaign and process, to ensure quality and representativeness of samples and data, such as sample recovery, high grading, selective losses or contamination, core/hole diameter, internal and external QA/QC, and any other factors that may have resulted in or identified sample bias*	N/A
		3.5.2	*The measures taken to ensure sample security and the Chain of Custody*	N/A

		3.5.3	*The validation procedures used to ensure the integrity of the data, e.g., transcription, input or other errors, between its initial collection and its future use for modeling (e.g., geology, grade, bulk density, etc.)*	N/A
		3.5.4	*The audit process and frequency (including dates of these audits) and disclose any material risks identified*	N/A
3.6	***Quality Control/ Quality Assurance***	3.6.1	*The verification techniques (QA/QC) for field sampling process, e.g., the level of duplicates, blanks, reference material standards, process audits, analysis, etc. Indirect methods of measurement (e.g., geophysical methods), with attention given to the confidence of interpretation. Reference to measures taken to ensure sample representativeness and the appropriate calibration of any measurement tools or systems used. QA/QC procedures used to check databases augmented with 'new' data have not disturbed previous versions containing 'old' data*	N/A
3.7	***Bulk Density***	3.7.1	*The method of bulk density determination with reference to the frequency of measurements, the size, nature, and representativeness of the samples*	N/A
		3.7.2	*Preliminary estimates or basis of assumptions made for bulk density*	N/A
		3.7.3	*The representativeness of bulk density samples*	N/A
		3.7.4	*The measurement of bulk density for bulk material using methods that adequately account for void spaces (vugs, porosity etc.), moisture, and*	N/A

			differences between rock and alteration zones within the mineral deposit	
3.8	***Bulk Sampling and/or Trial-mining***	*3.8.1*	*The location of individual samples (including map)*	N/A
		3.8.2	*The size of samples, spacing/density of samples recovered, and whether sample sizes and distribution are appropriate to the grain size of the material being sampled*	N/A
		3.8.3	*The method of mining and treatment*	N/A
		3.8.4	*The degree to which the samples are representative of the various types and styles of mineralization and the mineral deposit as a whole*	N/A
Section 4: Estimation and Reporting of Exploration Results and Mineral Resources				
4.1	***Geological Model and Interpretation***	*4.1.1*	*The nature, detail, and reliability of geological information with which lithological, structural, mineralogical, alteration or other geological, geotechnical, and geo-metallurgical characteristics were recorded*	N/A
		4.1.2	*The geological model, construction technique, and assumptions that form the basis for the Exploration Results or Mineral Resource estimate. The sufficiency of data density to assure continuity of mineralization and geology, and provision of an adequate basis for the estimation and classification procedures applied*	N/A
		4.1.4	*Geological data that could materially influence the estimated quantity and quality of the Mineral Resource or Mineral Reserve*	N/A
		4.1.5	*Consideration given to alternative interpretations or models and their possible effect*	N/A

			(or potential risk), if any, on the Mineral Resource estimate	
		4.1.6	*Geological discounts (e.g., magnitude, per reef, domain, etc.), applied in the model, whether applied to mineralized and/or unmineralized material (e.g., potholes, faults, dikes, etc.)*	N/A
4.2	***Estimation and Modeling Techniques***	*4.2.1*	***For Exploration Targets:*** *A detailed description of the estimation techniques and assumptions used to determine the grade and tonnage ranges /* ***For Mineral Resources & Mineral Reserves:*** *Histograms, statistical parameters, probability distributions of samples, and of block estimates. If geostatistics is done, must show variogram(s) and parameters (e.g., sill, range, nugget effect) depending on variogram type, sizes of estimation panels or blocks, assumed or known selective mining unit*	N/A
		4.2.2	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values (cutting or capping), compositing (including by length and/or density), domaining, sample spacing, estimation unit size (block size), selective mining units, interpolation parameters, and maximum distance of extrapolation from data points*	N/A
		4.2.3	*Assumptions and justification of correlations made between variables*	N/A
		4.2.4	*Any relevant specialized computer program (software) used (with the version number) together with the parameters*	N/A

			used	
		4.2.5	*The processes of checking and validation, the comparison of model information to sample data and use of reconciliation data, and whether the Mineral Resource estimate takes account of such information*	N/A
		4.2.6	*The assumptions made regarding the estimation of any co-products, by-products or deleterious elements*	N/A
4.3	***Reasonable Prospects for Eventual Economic Extraction (RPEEE)***	4.3.1	*The geological parameters, including (but not be limited to) volume / tonnage, grade and value / quality estimates, cut-off grades, strip ratios, upper- and lower- screen sizes*	N/A
		4.3.2	*The engineering parameters, including mining method, processing, geotechnical, hydrogeological, and metallurgical parameters, including assumptions made to mitigate the effect of deleterious elements. Dilution and mining recovery factors that might be applicable to convert in-situ Mineral Resources to Mineral Reserves*	N/A
		4.3.3	*The infrastructure including, but not limited to, power, water, and site access*	N/A
		4.3.4	*The legal, governmental, permitting, and statutory parameters*	N/A
		4.3.5	*The environmental and social (or community) parameters*	N/A
		4.3.6	*The marketing parameters*	N/A
		4.3.7	*The economic assumptions and parameters, including, but not limited to, commodity prices, sales volumes, and potential capital and operating costs*	N/A

		4.3.8	*Material risks, e.g., legal, environmental, climatic, etc.*	N/A
		4.3.9	*The parameters used to support the concept of 'eventual' in the case of Mineral Resources*	N/A
4.4	***Classification Criteria***	4.4.1	*The criteria and methods used as the basis for the classification of the Mineral Resources into varying confidence categories*	N/A
4.5	***Discussion of Relative Accuracy/ Confidence***	4.5.1	*Where appropriate, a statement of the relative accuracy and confidence level in the Mineral Resource or Mineral Reserve estimate using an approach or procedure deemed appropriate by the Accredited Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the Mineral Resource or Mineral Reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relative tonnages, which should be relevant to technical and economic evaluation. Documentation shall include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	N/A
4.6	***Reporting***			
		4.6.5	*A comparison with the previous Mineral Resource estimates, with an explanation of the reason for material changes. A*	N/A

			comment on any historical trends (e.g., global bias)	
		4.6.6	*The basis for the estimate and if not 100%, the attributable percentage relevant to the entity commissioning the Public Report*	N/A
		4.6.7	*The basis of the Metal Equivalent formulae, if relevant*	N/A
Section 5: Technical Studies				
5.1	***Introduction***	5.1.1	*The level of study – Scoping, Pre-Feasibility, Feasibility, or ongoing Life-of-Mine Plan*	ongoing Life-of-Mine Plan
5.2	***Mining Design***	5.2.1	*Assumptions regarding mining methods and parameters when estimating Mineral Resources*	N/A
		5.2.3	*Mineral Resource models used in the study*	N/A
		5.2.4	***For Mineral Resources:*** *The basis of the cut-off grade(s) / For* ***Mineral Reserves:*** *The basis of (the adopted) cut-off grade(s) or quality parameters applied, including metal equivalents if relevant*	Metallurgical recoveries of 91% for Au and 89% for Cu are used in the calculation of cut-off grades and metal equivalents.
		5.3.3	***For Mineral Resources:*** *The possible processing methods and any processing factors that could have a material effect on the likelihood of eventual economic extraction. The appropriateness of the processing methods to the style of mineralization /* ***For Mineral Reserves:*** *The processing method(s), equipment, plant capacity, efficiencies, and personnel requirements*	Commercial production started in 2013. Recovery of Cu and Au is achieved from the use of a combination of flotation following a conventional SAG mill/ball mill grinding circuit and gravity gold recovery. Au and Cu processing recoveries are approximately 90%.
5.4	***Infrastructure***	5.4.1	***For Mineral Resources:*** *Comment regarding the current state of infrastructure or the ease with which the infrastructure can be provided or accessed and its effect on RPEEE*	

5.5	***Environmental & Social***	5.5.1	*Confirmation that the company holding the tenement has addressed the host country's environmental legal compliance requirements and any mandatory and/or voluntary standards or guidelines to which the company subscribes*	Discussed in detail in Technical Report 1 – Angeles, et. al, 2024
		5.5.2	*Identification of the necessary permits that will be required and their status, and where not yet obtained, and confirmation that there is a reasonable basis to believe that all permits required for the project will be obtained in a timely manner*	As OGPI is an operating mine, all permits required for operations are existing. Section 2. Tenement and Mineral Rights
		5.5.3	*Any sensitive areas that may affect the project as well as any other environmental factors including Interested and Affected Party (I&AP) and/or studies that could have a material effect on the likelihood of eventual economic extraction. Possible means of mitigation*	None.
		5.5.4	*Legislated social management programs that may be required and content and status of these*	None
		5.5.5	*Material socio-economic and cultural impacts that need to be managed, and where appropriate the associated costs*	None
5.6	***Market Studies & Economic Criteria***	5.6.1	***For Mineral Resources:*** *Technical and economic factors likely to influence the RPEEE /* ***For Mineral Reserves:*** *Valuable and potentially valuable product(s) including suitability of products, co-products and by-products to market*	In Section 8 – Product, Co-Product and by product Specifications, Commodity prices, Offtake agreement
5.7	***Risk Analysis***	5.7.1	*An assessment of technical, environmental, social, economic, political, and other key risks to the project. Actions that will be taken to mitigate and/or manage the identified risks*	In 9.0 – Risk Analysis

5.8	***Economic Analysis***	*5.8.1*	***<u>For Mineral Resources:</u>*** *The basis on which RPEEE has been determined. Any material assumptions made in determining the 'RPEEE'_/* ***<u>For Mineral Reserves:</u>*** *The inclusion of any Inferred Mineral Resources is not allowed in the Pre-Feasibility and Feasibility Studies economic analysis*	None
Section 8. Other Relevant Information				
8.1	***Other Relevant Information***	*8.1.1*	*Other relevant and material information not discussed elsewhere*	None
Section 9: Accredited Competent Person				
9.1	***Qualification of Accredited Competent Person(s) and Key Technical Staff***	*9.1.1*	*The full name of the Accredited Competent Person, profession, address, their PRC and Accredited Competent Person registration numbers and the name of the professional representative organization (or RPO), of which the Accredited Competent Person(s) is member. The relevant experience of the Accredited Competent Person(s) and other key technical staff who prepared and who are responsible for the Public Report*	In Accredited Competent Persons' Consent Forms, Consent Statements, and Certificates
	Relationship to the issuer	*9.1.2*	*The Accredited Competent Person's relationship to the issuer of the Public Report if any*	In Accredited Competent Persons's Consent Statements
		9.1.3	*The inclusion of the Accredited Competent Person's Consent Form (see Appendices 3 & 4). Such Consent Form should include the date of sign-off and the effective date of the Public Report.*	In Accredited Competent Persons' Consent Forms

APPENDIX 2.
DEFINITION OF TERMS

The following general mining terms may be used in this report.

- "**AAS**" atomic absorption spectroscopy
- "**ABC Refinery**" Gold refining company located on east coast of Australia
- "**AEPEP**" Annual Environmental Protection and Enhancement Program
- "**Ag**" silver
- "**AMC**" AMC Consultants Pty Ltd, a mining consultancy
- "**AMD**" Acid Mine Drainage
- "**Amdel**" an assay and metallurgical testing laboratory
- "**AMMTEC**" a metallurgical testing and consultancy firm
- "**APMI**" Australasian Philippines Mining Incorporated
- "**Arimco MC**" Arimco Mining Corporation
- "**As**" arsenic
- "**ASX**" Australian Securities Exchange
- "**ATP**" Arsenic Treatment Plant
- "**Au**" gold
- "**AUD**" Australian dollar
- "**AuEq**." gold equivalent
- "**Ausenco**" a metallurgical testing and consultancy firm
- "**Barangay**" is the smallest administrative division in the Philippines and is the native Filipino term for a village, district or ward.
- "**BD**" Bulk Density
- "**BFPP**" Back Fill Paste Plant
- "**BIR**" Bureau of Internal Revenue
- "**Block Model**" is a computer-based representation of a deposit in which geological zones are defined and filled with blocks which are assigned estimated values of grade and other attributes. The purpose of the block model is to associate grades with the volume model.
- "**bulk density**" is the dry in situ tonnage factor used to convert volumes to tonnage.
- "**BSP**" Bangko Sentral ng Pilipinas is the Philippines Central Bank
- "**CAMC**" Climax-Arimco Mining Corporation
- "**CCO**" Contractor Camp
- "**CDF**" Community Development Fund which is part of the FTAA agreement
- **"centrifugal pump"** a mechanical device designed to move a fluid by means of the transfer of rotational energy from one or more driven rotors, called impellers.
- "**CIM**" the Canadian Institute of Mining, Metallurgy and Petroleum
- "**CIM Standards**" are the CIM Definition Standards for Mineral Resources and Mineral Reserves adopted by the CIM Council on December 27, 2010, for the reporting of Mineral Resource, Mineral Reserve and mining studies used in Canada. The Mineral Resource, Mineral Reserve, and Mining Study definitions are incorporated, by reference, into NI 43-101, and form the basis for the reporting of reserves and resources in this Technical Report. With triple listings on the TSX, ASX and NZX, OceanaGold also reports in accordance with the JORC Code and where necessary

reconciles its reporting to ensure compliance with both the CIM Standards and the JORC Code.

- "**CIP**" carbon in pulp
- **"cleaner"** the next stage in the recovery of the valuable minerals and metals where non-valuable material is removed in order to upgrade the content.
- "**Climax**" Climax Mining Limited and, as the context requires, its related bodies corporate
- "**CLRF**" Contingent Liabilities and Rehabilitation Fund
- "**cm**" centimeter(s)
- **"collector"** flotation agents used to f form a thin hydrophobic layer over the surface of miners to render them hydrophobic.
- **"concentration"** involves the separation of valuable minerals from the other raw materials received from the grinding circuit.
- "**CPS**" Controlled Potential Sulfiidization is a process to reduce recovery losses due to the oxidation of sulfide ore.
- "**CPS**" Capital pump station
- "**CSP**" Crown Strengthening/Stabilization Project – Mining project to strengthen and stabilize the ground above the underground mine
- "**CRF**" cemented rockfill placed above the underground mine
- "**CSR**" corporate social responsibility
- "**Cu**" total copper
- **"CuAS"** acid soluble copper
- "**cut-off grade**" or CoG is the lowest grade value that is included in a Mineral Resource statement, being the lowest grade, or quality, of mineralized material that has reasonable prospects for eventual economic extraction.
- "**CWC**" Credible Worst Case
- "**Cyprus**" Cyprus Philippines Corporation
- "**DCS**" Distributed Control System is a platform for automated control and operation of industrial process
- "**DFS**" Definitive Feasibility Study is an economic study that indicates a project is economically viable
- **"degree of liberation"** the percentage of that mineral or phase occurring as free particles in relation to the total of that mineral occurring in the free and locked forms.
- "**Delta**" Delta Earthmoving, Inc
- "**DOE**" Philippines Department of Energy
- "**DENR**" is the Department for the Environment and Natural Resources. The DENR is the Philippines government agency primarily responsible for implementing the government's environmental policy and for regulating the exploration, development, utilization and conservation of the Philippine's natural resources.
- "**DH**" drill hole
- "**Dicorp**" Didipio Community Development Corporation is an organization formed to manage the Didipio Camp and its facilities
- "**DWi**" drop weight index is a measure of ore hardness
- "**E**" East
- "**ECC**" means an Environmental Compliance Certificate, issued by the DENR, certifying compliance with the EISS.

- “**EFO**” Extra fine ore
- “**EGL**” effective grinding length
- “**EIS**” Environmental Impact Study
- “**EMB**” means the Philippine Environmental Management Bureau, established within the Department of Environment and Natural Resources, as the Philippines national authority responsible for pollution prevention and control, and environmental impact assessment.
- “**EOM**” end of month
- “**EPEP**” means the Environmental Program and Enhancement Program for the Didipio operation submitted under the conditions of the ECC
- "**EPRMP**" Environmental Performance Report and Management Plan
- “**ERT**” Emergency Response Team
- “**ESE**” East South East
- **“excise tax”** four percent (4%) based on the actual market value of the gross output of the metals and minerals at the time of extraction or removal.
- **“Falcon”** A type of high G-force gravity concentration equipment
- “**Fe**” iron
- “**FEL**" font end loader
- “**Fibrecrete**” combination of concrete and carbon fibers which is sprayed onto wall
- **“filtration”** the process in which solid particles in a liquid or gaseous fluid are removed by the use of a filter medium that permits the fluid to pass through but retains the solid particles.
- **“fire assay”** is a process in which a material containing Au and/or Ag is melted down entirely, resulting in the separation of Au/Ag from other metals and impurities.
- **“flash flotation”** A mineral processing equipment designed toto rapidly recover coarse valuable minerals from the oversize of classifying equipment by rapid flotation.
- **“flocculant”** agents that make fine and sub fine solids or colloids suspended in water form large loose flocs through bridging, thus achieving solid-liquid separation.
- **“flotation”** the process of separating small particles of various minerals by treatment with chemicals in water in order to make some particles adhere to air bubbles and rise to the surface for removal while others remain in water.
- **“flotation machine”** vessels where an intense mixing action allowed bubble-particle collision in a pulp, and attachment occurs, and a quiescent region where the bubble-particle aggregates separate from the slurry.
- “**FMR/DP**” Final Mine Rehabilitation Plan / Decommissioning Plan
- "**FMRDF**" Final Mine Rehabilitation and Decommissioning Fund
- “**FMRDP**” means the Final Mine Rehabilitation/Decommissioning Plan which is reviewed by the Mine Rehabilitation Fund Committee
- “**FOREX**” foreign exchange
- **“frother”** are agents that produce stable and mobile troth so that that targeted hydrophobic particles can be picked up and floated to the top of the flotation cell where they are concentrated for further processing.
- "**FTAA**” Financial or Technical Assistance Agreement
- “**g**” gram(s)
- "**GHD**" GHD (Australia) Pty Ltd
- “**GRG**” gravity recoverable gold

- "**g/t**" grams per metric tonne
- "**h**" hour
- ("**H**") height
- "**ha**" hectare
- "**HDPE**" high density polyethylene
- "**Hg**" mercury
- "**HQ**" is a reference to the ~ 96 mm diameter of drill rods used to recover diamond drill core
- "**HV**" is High Voltage
- **"hydrocyclones"** mineral processing equipment used in slurry pulps to separate coarse and fine particles according to their size and density.
- "**IBC**" Intermediate Bulk Container used for transport of chemicals
- "**IRR**" implementing rules and regulations
- "(**IRR)**" internal rate of return
- "**IP**" is Induced Polarization, an electrical geophysical exploration method
- "**JK**" JK Tech Proprietary Limited
- "**JORC Code**" means the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves which became effective December 20, 2012, and mandatory from 1st December, 2013. The JORC Code is the accepted reporting standard for the ASX and the NZX.
- "**K**" Potassium
- "**kg**" kilogram(s)
- "**km**" kilometer(s)
- "**km^2**" square kilometer(s)
- "**kt**" thousand tonnes
- "**kV**" kilovolts
- "**kW**" Kilowatt
- "**kWh**" kilowatt hour(s)
- "**kWh/t**" kilowatt-hours per tonne
- "**lb**" pound(s)
- "**L**" length
- "**L**" liter
- "**L/s**" liter per second
- "**LHD**" Load Haul Dump loaders – underground mining equipment
- "**liberation"** the state of a mineral in a particle that is free from other minerals.
- "**LBMA**" Bullion Market Association
- "**LoM**" or "**LoMP**" Life-of-Mine – Life- of-Mine Plan
- "**LRS**" liquid resistance starter
- "**µm**" micron or micrometer
- "**m**" meter(s)
- "**M**" million(s)
- "Ma" million years
- "**MM**" Measurement scale for earthquakes Mercalli Scale
- "**m^3**" cubic meter(s)
- "**m^3/h**" cubic meters per hour

- "**m^3/d**" cubic meters per day
- "**m/s**" meters per second
- "**m/day**" meters per day
- "**m/month**" meters per month
- "**m^3/s**" cubic meters per second
- "**Ma**" million years
- "**MDT**" Mine dewatering tank
- "**Mesh**" a sieve hole size for sieves used in laboratories.
- "**Metso**" Metso Technology PTSI Pty Ltd
- "**MGB**" means the Mines and Geosciences Bureau, established under the DENR to administer the Mining Act.
- "**Mining Act**" means Republic Act No. 7942, also known as the Philippine Mining Act of 1995, which governs the granting of rights to explore and mine for minerals in the Philippines.
- "**Minproc**" A mining consultancy firm
- "**Ml**" million liters
- **"MLA"** Mineral Liberation Analysis – an automated mineral analysis system based on a scanning electron microscope.
- "**Mlb**" million pounds. The unit of measure for copper is pounds lb
- "**Mn**" manganese
- "**mm**" millimeter(s)
- "**Mo**" molybdenum
- "**Moz**" million troy ounces
- "**MRF**" Mine Rehabilitation Fund
- "**MPa**" million pascals
- "**Mt**" million tonnes
- "**Mtpa**" million tonnes per annum
- "**MW**" megawatt(s)
- "**N**" North
- "**NE**" Northeast
- "**NGCP**" National Grid Corporation of Philippines
- "**NI 43-101**" National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators.
- "**NNE**" North-Northeast
- "**NNW**" North-Northwest
- "**NSR**" Net smelter return
- "**NUVELCO**" Nueva Vizcaya Electric Cooperative
- **"Off take agreement"** an agreement to purchase all or a substantial part of the output or product produced by a project or operations.
- "**OGC**" means OceanaGold Corporation of Canada
- "**OGPEC**" means OceanaGold (Philippines) Exploration Corporation (previously Arimco Mining Corporation, then Climax-Arimco Mining Corporation)
- "**OGPI**" means OceanaGold (Philippines) Inc, a wholly owned entity of OceanaGold Corporation, (previously Australasian Philippines Mining Inc)
- "**OHPL**" Overhead Power Line
- "**OP**" Open pit

- "**Orica**" Orica Philippines Inc.
- "**oz**" Troy ounce (31.103477 grams)
- "**Pb**" lead
- "**PDF**" Provincial Development Fund
- "**PDMF**" Partial Declaration of Mining Feasibility
- "**PDS**" Project Development Study – a study into economic viability of a project
- "**PHP**" Philippine Peso
- "**ppm**" Parts per million
- "**PQ**" is a diamond drill tube size equivalent to 85 mm inside diameter.
- "**PSE"** Philippine Stock Exchange
- "**PSE**" Pollution Source Equipment
- **"pulp density"** the ratio of solids to water in any pulp, either by weight or volume
- "**pXRF**" portable X-ray fluorescence
- "**Q1**" Quarter beginning 1 January and ending 31 March
- "**Q2**" Quarter beginning 1 April and ending 30 June
- "**Q3**" Quarter beginning 1 July and ending 30 September
- "**Q4**" Quarter beginning 1 October and ending 31 December
- "**QA/QC**" quality assurance / quality control
- "**QP**" A qualified person as defined by the relevant reporting code or certification authority/body
- "**Qualified Person**" or "**QP**" as defined under the CIM Standards means an individual who is an engineer or geoscientist with at least five years of experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these; has experience relevant to the subject matter of the mineral project and the Technical Report; and is a member or licensee in good standing of a professional association.
- "**RC**" Reverse circulation
- "**RL**" Relative level. Note: for technical reasons all mRL coordinates described in this Technical Report have had 2000m added, i.e.: 2000m represents sea level.
- "**ROM**" Run-of-mine
- **"rougher"** the first step in the recovery of the valuable minerals and metals.
- "**S**" South
- "**SAG**" Semi-autogenous grinding
- "**Sandvik**" Sandvik Tamrock Philippines Inc
- "**Sb**" antimony
- **"scavenger"** the last stage in the recovery process aimed to increase recovery of the valuable minerals and metals
- "**SDF**" Social Development Fund with is part of the FTAA conditions
- "**SDMP**" means the Social Development and Management Program prescribed by the Mining Act and its implementing rules and regulations and approved by the MGB.
- "**SE**" Southeast
- "**SER**" Slip energy recovery
- "**SG**" Specific gravity
- "**SGS**" SGS Philippines Inc. SGS is a global analytical laboratory company and provides analytical services to all of OceanaGold's operating mines.
- "**SIBX**" Sodium Isobutyl Xanthate is a flotation reagent used in gold and copper

recovery

- **"SME-AIME"** Society for Mining, Metallurgy and Exploration – American Institute of Mining, Metallurgical and Petroleum Engineers
- "**SMEP"** Society of Metallurgical Engineers of the Philippines
- "**STDEV**" Standard deviation
- "**STP**" Sewage treatment plant
- "**t**" Metric tonne (1,000 kilograms)
- "**t/m3**" Tonnes per cubic meter
- **"thickener"** a vessel or stage in which solids suspended in water are allowed to settle through gravity thus achieving solid-liquid separation
- "**tpa**" Tonnes per annum
- "**t/day**" Tonnes per day
- "**Trafigura**" Trafigura Pte Ltd a concentrate refining company
- "**TSF**" Tailings storage facility
- "**TSP**" The total suspended particulate
- "**TSS**" Total suspended solids
- "**TSX**" Toronto Stock Exchange
- "**UCS**" Uniaxial Compressive Strength
- "**UG**" Underground
- "**USA**" United States of America
- "**USD**" United States dollars
- "**VCRC**" Victoria Consolidated Resources Corporation
- "**VHF**" Very high frequency
- "**W**" West
- "**(W)**" Width
- "**Water Code**" means Presidential Decree No. 1067, enacted in 1976, which regulates the taking of water from and discharges to rivers and waterways in the Philippines.
- "**WMP**" Water Management Plan documents how water is managed at the Didipio operation
- "**wmt**" Wet metric tonne
- "**WRD**" Waste rock dump
- "**WTP**" Water treatment plant
- "**wt**" Weight

APPENDIX 3.
DEPORTMENT OF GOLD AND COPPER IN FLOTATION PRODUCTS FROM DIDIPIO GOLD MINE

DEPORTMENT OF GOLD AND COPPER IN FLOTATION PRODUCTS FROM DIDIPIO GOLD MINE

For: Oceana Gold

Attn: Jenalyn Paredes jenalyn.paredes@oceanagold.com
CC: Jose Dioses jose.dioses@oceanagold.com

SUMMARY

Background:
The samples analysed at AMTEL were a Re-Cleaner Concentrate [RCC] and Final Float Tails [FFT] from the Didipio Gold Mine in Luzon, Philippines. Through the deportment of Au and Cu in the sample pair, AMTEL's aim was fourfold: i) to determine the forms and carriers of Au and Cu that were recovered in the Con and lost in the Tails; ii) to identify the opportunities to improve flotation performance; iii) to determine how, these opportunities can be pursued from a mineralogical and metallurgical perspective and iv) to determine the mineralogical abundance and association of dilutants in the concentrate sample.

Methodology:
AMTEL employed its standard analytical procedure for flotation products. This procedure involves the identification, independent quantification of all forms & carriers[1] of gold and copper using assaying (Appendix A2), microscopy (Appendix A3, A6) and microprobe [2] data (Appendices A3-A5 & A7). Gold and copper grains were identified and characterized by microscopy for size and association. Individually quantified gold carriers were summed to determine the mineralogically-accounted gold. Copper carriers were balanced to grade for each mineralogically-identified/separated fraction. The mineralogically-accounted gold & copper came to within 6% of the average assayed grade for each sample. The quality of the assayed gold values was monitored using commercially available standards, hidden within AMTEL's products, sent out to a certified, independent assay laboratory.

General Mineralogy
- The dominant rock minerals in the Final Flotation Tails are 'hard' silicates (feldspars, amphiboles and quartz) which combined make up to 85% of the total weight of the sample. 'Soft' silicate minerals (micas, clays and talc) follow with 6wt% and carbonates (calcite>dolomite) constituting 3%. Sulphides, chalcopyrite and pyrite, are only found in minor to trace amounts.
- In the Re-Cleaner flotation Concentrate, silicate gangue minerals (feldspars>amphiboles> quartz>phyllosilicates) make up almost 29% of the total mineralogy Carbonates add an additional 6wt.%. The remainder of the sample is made up of sulphides – essentially chalcopyrite 42.2%; pyrite, 13.9%; and bornite 7.2%. Minor chalcocite and covellite were also observed in the concentrate.

Gold Forms and Carriers
- Gold occurs in two forms: *gold minerals*, and *sub-microscopic Au:*
  - Gold minerals include native gold, electrum and auric tellurides (petzite observed).
  - Sub-microscopic Au was insignificant to the balance in both the Tails and Concentrate.
- Gold grains were observed as free/liberated and associated (attachments & inclusions): Free gold grains were sub-classified as being in the slimes (<7µm) or of more readily floatable size (>7µm). Associated gold grains were observed with Cu sulphides, pyrite, tellurides, Fe oxides, and silicate gangue.

[1] ***Form*** refers to the chemical state of gold i.e. native Au, electrum, colloidal, solid solution, and surface bound. ***Carrier*** refers to the particle which carries gold in one or more forms e.g. pyrite particles with associated gold grains and sub-microscopic gold.
[2] **SEM/EDX** to determine the bulk composition of gold grains. **SIMS** to quantify sub-microscopic gold in Cu sulphides & pyrite; **TOF-LIMS** to characterize the surface modifiers which affected the floatability of gold and sulphide grains.

Final Flotation Tails [0.135g/t Au; 0.043% Cu]

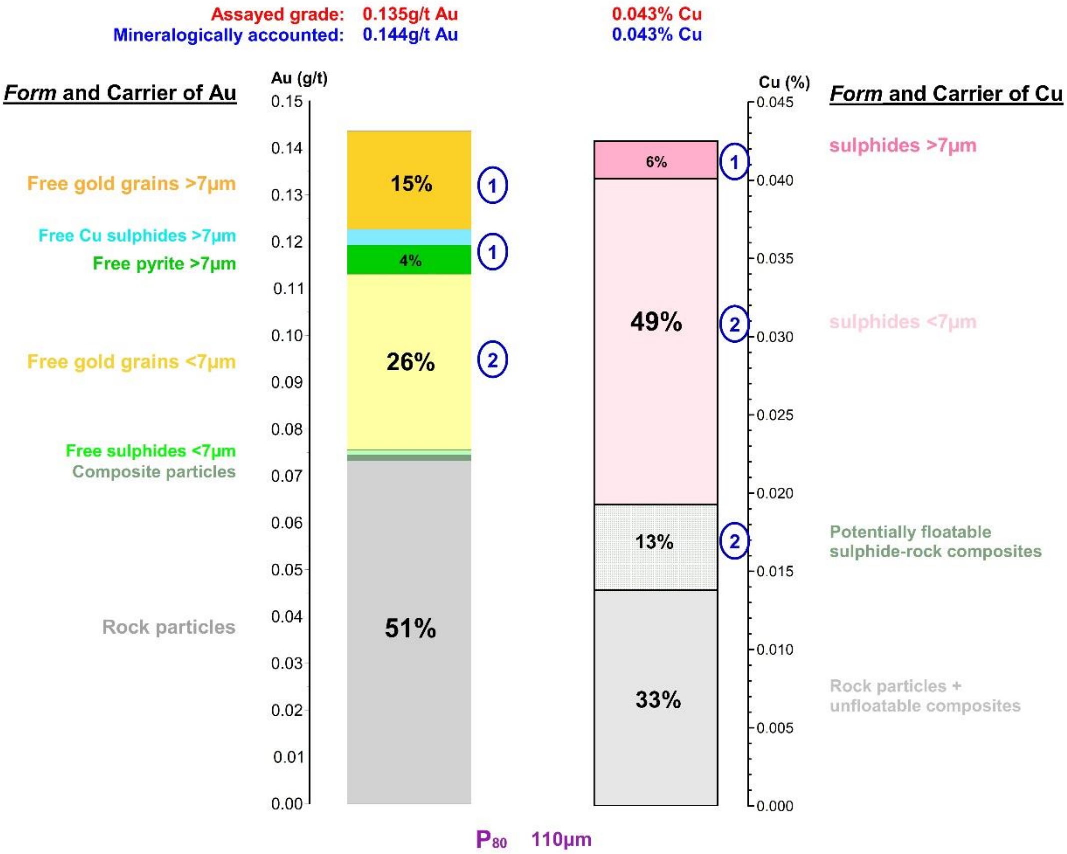
Gold

- The mineralogically accounted gold came to 106% of the average assayed grade.
- Free gold losses in these tails are very significant, contributing 41% to the grade.
- A significant portion (15%, 0.021g/t Au) of the losses are from free grains >7µm, which should have been readily floated.
- Au losses from free gold grains in the slimes account for 26% of the balance (0.037g/t Au): Small grain size will have contributed to their loss.
- The microscopy study characterised 331 free grains (from processing 7kg of tails). Observed grains ranged from 2-105µm in diameter. The presence of a small number of coarse gold grains >75µm suggest opportunity for reducing Au losses with (improved) up-front gravity processing.
- SEM/EDX analysis of the free grains identified native gold and electrum. The overall average composition of analysed grains was 87% Au, and 13% Ag.
- In total, rejected free sulphide particles carry 7.5% of the Au in this tails sample (0.010g/t Au).
  - Pyrite carries an estimated 4.5% and Cu sulphides 3% of the Au. Rejected Cu sulphides are about 3 times more abundant than pyrite, but associated gold grains in the tails were larger and more frequently observed hosted by pyrite.
- A total of 19 gold grain attachments were observed, from 3 to 22µm in diameter. A further 5 gold inclusions were observed, from 7 to 17µm (avg. 10µm). Associated grains were observed with pyrite, bornite, chalcopyrite, tellurides (undifferentiated) and gangue (haematite & undifferentiated silicate).
- Submicroscopic Au associated with rejected sulphides is insignificant: The total Au for all sulphide material – free & in rock binaries, comes to 0.002g/t Au.
- Gold associated with potentially floatable sulphide-rock composite particles constitutes less than 1% of the Au balance.
  - Gold liberates fairly sequentially from these composites, in particles of about 130µm and below.
- Unfloatable rock particles, with less than ~2.5wt.% associated sulphide, carry the majority of the Au in the Final Flotation Tails at 51% (0.073g/t Au).
  - These 'clean' rock particles have essentially the same Au grade as the sulphide-rock composites, indicating that the silicate component is an important Au carrier (i.e., Au is not solely affiliated with sulphides).
  - Gold liberates sequentially from these particles, with no specific liberation point.

Copper

- The mineralogically-accounted copper came to 99% of the assayed tails Cu.
- Rejected free Cu sulphides account for 54% of the copper losses.
  - The large majority of this Cu is in the slimes (<7µm) fraction and Cu sulphides were likely primarily lost due to small particle size.
  - Free Cu sulphides of readily floatable size carry 6% of the Cu in this sample (24ppm). Microscopy analysis of rejected chalcopyrite commonly showed visible oxidation rims. Surface chemical analysis by TOF-LIMS confirmed this oxidation layer on all Cu sulphides:
  - Relative to chalcopyrite in the Con. TOF-LIMS analysis showed rejected chalcopyrite in the tails had high surface concentrations of Fe oxides, carbonate, and hydroxide. Additionally, phosphate coatings and clay smearing [Al oxide] may have contributed to chalcopyrite rejection.
- Rock-sulphide composites, where the particle was considered potentially floatable due to large enough and exposed sulphide component, account for 13% of the Cu balance.
- Unfloatable rock particles, with tiny or encapsulated Cu sulphide, carry the remaining 33% of the copper.
  - The Cu liberates sequentially with decreasing particle size from these rock grains, with no distinct liberation point.

Figure 1: **Deportment of Gold & Copper in Final Flotation Tails**



1 Opportunity – value particles of readily floatable size
2 Potential – value particles too small to float, therefore likely only recoverable with modified flotation hardware

- Recovery in the tails can be improved. Over 40% of the Au in the tails is accounted for by free Au grains, of which 15% are of readily floatable size (>7µm), with a further 6% of the Au carried by free sulphides also of readily floatable size. Complete recovery of these free value particles >7µm could potentially lower tails grade by 0.030g/t.
- The bulk of Au losses in the flotation tails are carried by the least floatable rock-sulphide composites and rock particles.

- There is also potential for minimizing Cu losses to the Final Tails, with 55% of the Cu in the tails carried by free sulphides. However, the majority of these losses were due to small particle size, and therefore improving recovery would likely require treatment with non-mechanical flotation cells.
- Free Cu sulphide losses were also due to oxidation: These can only be directly attributed to 6% of the Cu losses, but may also have exacerbated losses in the slimes and composite particles.
- More rigorous scavenger flotation could potentially recover an additional 13% of the Cu.

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Re-Cleaner Concentrate [22.38 g/t Au; 19.40% Cu]

Gold

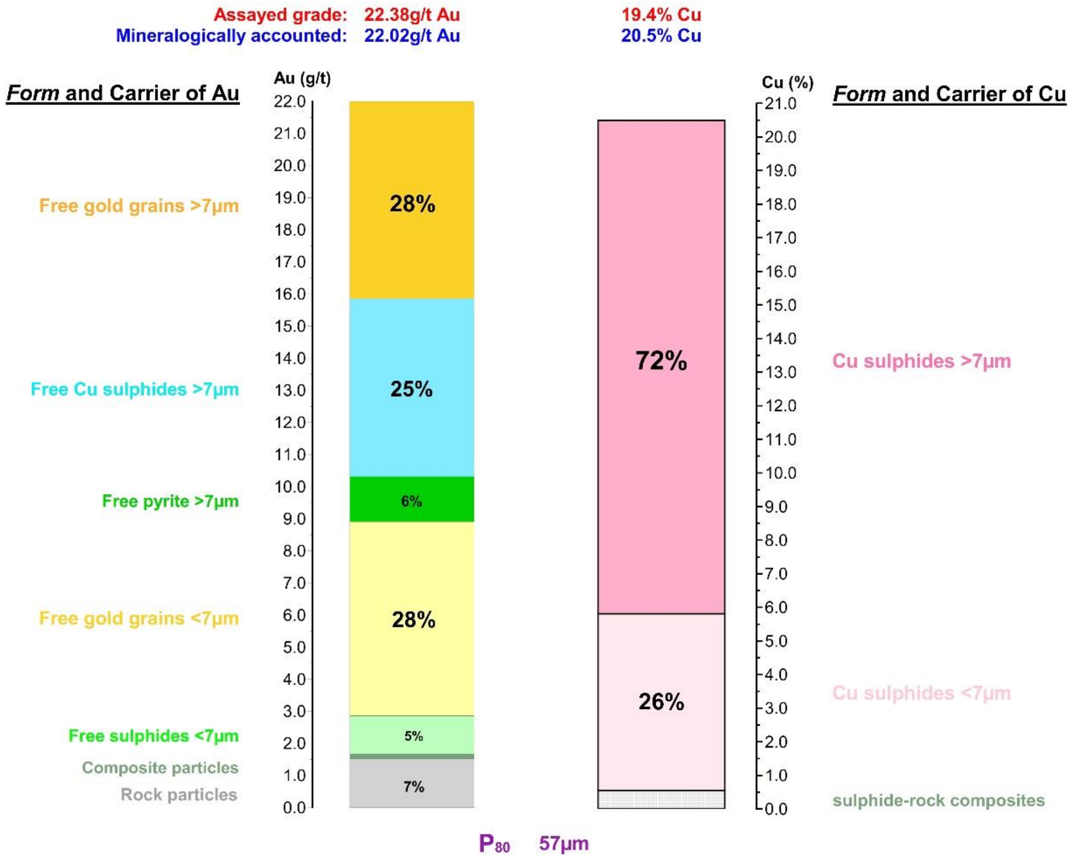
- The accounted gold grade came to 9.58% of the average assayed head for this sample.
- 55% percent of the Au is carried by free gold grains.
  - 27% of the Au is carried by free gold grains in the slimes (6.05g/t Au <7µm). 24% (5.18g/t) is carried by grains 7-40µm in size and the remaining 4% (0.97g/t) contributed by free gold grains >40µm.
  - Observed gold grains ranged from 1.5 to 107µm in diameter (n = 306).
  - There is no evidence that bulk gold grain composition affected gold grain flotation.
- Free sulphide particles carry almost 37% of the Au.
  - The vast majority of this Au is carried by Cu-sulphides grains >7µm (25%), followed by pyrite (6%)
  - Very little Au is associated with sulphides in the slimes (5% of accounted grade)
  - Observed gold grains associated with sulphides ranged from 0.5 to 78µm, and were observed with bornite, chalcopyrite, pyrite, tellurides, galena, sulfosalts, and rarely with digenite and silicate rock.
  - A total of 142 gold attachments were observed (measured average diameter 9.4µm) and 96 inclusions (avg. 4.3µm).
  - Submicroscopic Au carried by free sulphides accounts for 1.03g/t Au (~4.5% of the RCC grade).
- Rock-sulphide composites and rock particles in the Con contribute less than 8% to the Au balance: The gold can be associated with both the sulphide or rock component in these binaries. The bulk of the Au is carried by rock particles with insignificant sulphide associations (likely reported to the Con by entrainment rather than flotation due to the sulphide component).

Copper

- The mineralogically accounted copper came to 104% of the assayed grade.
- The copper is overwhelmingly (97% of grade) contributed by free sulphides: chalcopyrite >> bornite > covellite & chalcocite.
  - Two thirds of the Cu is carried by sulphides >7µm, and one third by Cu sulphides in the fines.
  - TOF-LIMS analyses showed that floated free chalcopyrites had very clean surfaces [high Cu, S] compared to rejected grains in Final Tails.
- Rock-sulphide composites and rock particles in the Con contribute less than 3% to the Cu balance: The majority of this (4/5ths) is contributed by 'high' sulphide binaries (floating due to their sulphide association).

- Silicate gangue minerals are the principal dilutant in the final concentrate. They account for up to 29.8% of the mass of the RC Con. An additional 6wt% is carried by carbonates (calcite>dolomite) and 0.8wt% by haematite.
  - Based on microscopy and mass analysis, the overwhelming majority of these rock particles were free & liberated (in total 31.8wt.%).
  - The free gangue particles are roughly equally split in weight ±7µm. 15.7wt.% of the gangue particles are in the slimes and 16.2wt% carried by free gangue >7µm. The free rock appears to be reporting to the RCC due to entrainment (poor washing of froth).
- Approximately 4.5wt.% of the concentrate comprises gangue-sulphide binaries: Although 2.6wt% of this rock is in low-sulphide binaries which could possibly be depressed/rejected.
- The second-most abundant grade dilutant in the RCC is pyrite: This also was overwhelmingly free and did not report to the concentrate due to association with copper sulphides.
  - Free pyrite constitutes a calculated 13.9wt.% of the RCC. The majority of the free pyrite is >7µm (i.e., not in the slimes).
  - Only ~0.03% of the Con mass appears to be from Cu sulphide-pyrite binaries.
  - Although not specifically investigated, it would seem most likely that free pyrite is floating due to Cu activation.

Figure 2: **Deportment of Gold & Copper in Re-Cleaner Con**



- The finer grind size of the flotation Con (compared to the Tails) will be contributing to the higher proportion of Au carried in the slimes (<7µm), and relatively small quantity of Au/Cu associated with rock/binary grains.
  - Even given the fine P80, it is notable that a significant proportion of the grade, particularly for Au, is contributed by value particles in the slimes (<7µm).

Conclusions

- Gold occurs in two forms: *gold minerals*, and *sub-microscopic Au*. Sub-microscopic Au was insignificant to the balance in both the Tails and Concentrate samples.
- The grade of gold mineralization is marginally higher in Cu sulphides than in pyrite. The importance of minerals to the Au balances is related to their abundance in flotation products; therefore silicates (rock) and pyrite are more important Au carriers in the Final Flotation Tails.
- Gold lost to the Final Flotation Tails is primarily lost with unfloatable particles, with rock and low-sulphide composites carrying 52% of the Au.
- However, a significant portion of the FFT grade is carried by free value particles (gold grains and sulphides):
  - Free gold grains were primarily lost due to the tails because of small particle size, with 26% of the FFT grade contributed by free gold in the slimes.
  - Complete recovery of free gold >7µm would lower tails by 0.021g/t Au, with complete recovery of all free copper sulphides and pyrite >7µm lowering tails by a further 0.010g/t Au. Therefore extended/improved flotation could lower FFT tails grade by 21%.
  - Free copper sulphide flotation was certainly negatively affected by surface oxidation, with thick, pervasive Fe oxide & carbonate rims evident.
  - There does not appear to be a single cause for poor flotation of free gold >7µm: There is some TOF-LIMS surface chemical evidence for depression by similar carbonate rims as seen for Cu sulphides. There is no difference in bulk composition of floated/rejected gold grains. The distribution of Au by free gold grain size class is the same in FFC and FFT [obviously the absolute g/t Au is very different]; this indicates no preferred flotation or rejection of gold grains by size – which is unusual!

- In the RCC, free gold grains are the principal contributor to Au grade, in total contributing ~12.5g/t Au (55%). The majority of the remaining Au in the concentrate is carried by free sulphides (37%): Copper sulphides are approximately 4 times more important than pyrite as Au carriers in the RCC.
- Copper grade is overwhelmingly contributed by free Cu sulphides (chalcopyrite>>bornite): Roughly 3/4s of the Cu grade is carried by sulphides >7µm and 1/4 from Cu sulphides in the slimes.
- Gangue particles are the principal dilutant in the flotation concentrate (36% of the sample by mass). The gangue is overwhelmingly liberated and not reporting to the concentrate because of association with sulphides. The mass of free gangue particles is equally split between ± 7µm fractions.
  - The free gangue, especially in the slimes, must be reporting to the Con by entrainment. Rejection of about half the free gangue (18wt.%; devoid of Cu values) would increase Cu concentrate grade to approximately 27% Cu.
- Free pyrite grains are the second-most abundant dilutant, accounting for over 13% of the RCC mass. These pyrites were likely Cu activated and will be more difficult to reject than free rock particles
- Surface contaminants do not appear to significantly influence any preferential flotation of free Au and sulphides: The floated grains are definitely 'cleaner; (free of oxidation/contaminants).

Future Considerations:

1. Significant room exists for lowering Au losses in the FFT stream, primarily through the complete recovery of all free gold grains >7µm (15% of tails grade). If the final tails are comprised of material from multiple (rougher+cleaner) streams then it would be beneficial to investigate which stream was more important to losses. Investigating the use of a more gold-specific collector blend might be considered.
2. Free silicate/carbonate gangue in the slimes fraction of the FFC may be minimised through more thorough froth washing (either above the slurry-froth interface; below the interface, or both). This gangue entrainment may also be lowered by maximizing forth residence time and increasing water drainage rates.
3. Minimising free pyrite reporting to the FFC may be less easily achieved: This pyrite is likely floating due to surface Cu activation, which would require additional agents to facilitate depression, e.g., DETA.
4. Free Cu sulphides reporting to the FFT show evidence of pervasive oxidation: This may have occurred in the ground, during stockpiling or potentially within the plant (least likely). Comparative surface analysis on a mill feed sample, as well as coarse ore chips (that would be crushed to reveal fresh surfaces), can pinpoint whether this oxidation is pre- or post-mining.. Preventing oxidation could also minimise Cu ion mobility, which is causing free pyrite flotation.

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Sample Classification

Table 1: Assayed Grades of the Flotation Products

Sample Label	Au	Cu	S_{tot}	Pb	Zn	Ag	Fe
	g/t	%	%	ppm	ppm	ppm	%
Final Flotation Tails	**0.135** ± 0.014	**0.043**	0.075	11.9	41	8.34	3.24
Re-Cleaner Concentrate	**22.38** ± 0.62	**19.40**	24.1	390	470	86.1	22.3

- Independent assaying performed by ALS Chemex (Vancouver, Canada)
- Gold grades are the average of 3x30g assays (appendix A2).

Table 2: Quality/Accuracy of Gold Assaying

Standard ID	Au (g/t) Nominal Concentration	Au (g/t) Assayed Values	No. of assays	Accuracy
VA19046433 –heads low grade				
OxA131	0.077	0.084	2	108.4%
OxC145	0.205	0.202	2	98.5%
OxD107	0.452	0.448	2	99.1%
			Average	**102.0%**
VA19046433 – heads high grade				
OxP91	14.92	13.53	2	90.7%
SQ48	30.25	25.80	2	85.3%
			Average	**88.0%**
VA19064988 - products				
OxA131	0.077	0.064	1	83.1%
OxC129	0.212	0.200	1	94.3%
SG84	1.026	0.985	1	96.0%
OxJ120	2.365	3.980	1	96.3%
SN60	8.595	8.200	1	95.4%
			Average	**91.2%**
VA19079312 – Knelson upgraded products				
OxA131	0.077	0.063	1	81.8%
OxD107	0.452	0.424	1	93.8%
SG84	1.026	0.944	1	92.0%
			Average	**92.9%**
VA19186841 – RCC products				
OxA131	0.806	0.780	2	96.8%
OxD107	4.134	4.005	2	96.9%
SG84	14.920	14.900	2	99.9%
			Average	**97.8%**

assays provided by ALS Chemex (FA/AAS–Appendix A2); accuracy was determined from hidden standards intermingled with samples.

- Based on deviation seen in all assay suites, corrections were applied to the assayed values – based on 2^{nd} order polynomial regression correction.

Size Distribution

Table 3: Weight % of Sample in Sized Fractions, by Wet Screening

Size fraction (µm)	FF Tls	RC Con
+212	1.9%	0.8%
150-212	7.3%	2.3%
100-150	13.1%	4.1%
75-100	13.4%	6.1%
53-75	11.8%	8.9%
40-53	9.2%	11.4%
20-40	14.2%	19.2%
7-20	6.6%	18.0%
-7	22.4%	29.2%
$P_{80\ (\mu m)}$	110µm	57µm

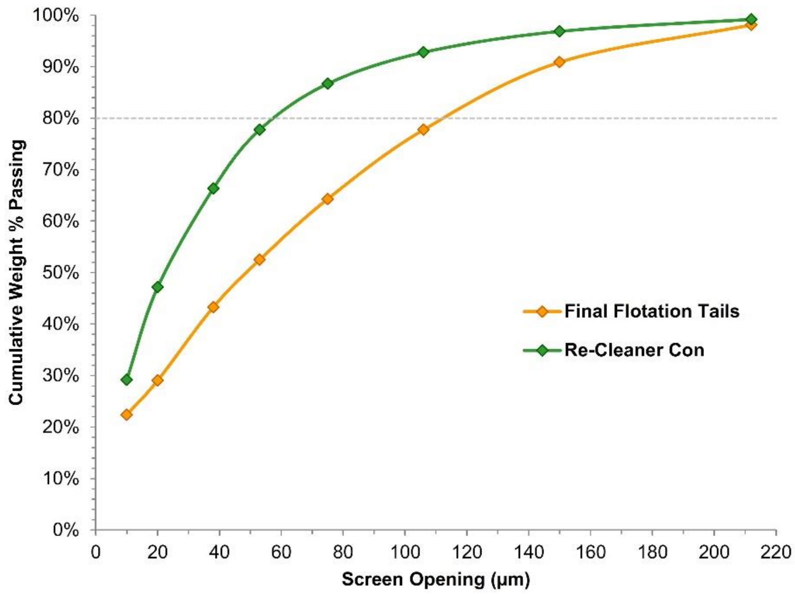

Figure 3: Size Distribution of Samples –by wet screening

Mineralogical Composition

Table 4: Mineralogy of Flotation Plant Samples from Didipio Gold Mine

Minerals	Chemical Formula	Final Flotation Tls	Re-Cleaner Con
		wt.%	wt.%
• **Quartz**	SiO_2	5.1	3.5
• **Feldspars**			
Orthoclase	$(K,Na)AlSi_3O_8$	24.5	7.6
Oligoclase	$Na[AlSi_3O_8]$ - $Ca[Al_2Si_2O_8]$	51.2	10.9
• **Chain silicates**			
Tremolite/Actinolite	$Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$	5.0	4.9
• **Sheet silicates**			
Kaolinite	$Al_2Si_2O_5(OH)_4$	1.1	0.2
Smectite	$K_{1-1.5}Al_4[Si_{7-6.5}Al_{1-1.5}O_{20}](OH)_4$	1.5	0.4
Biotite	$K(Mg,Fe)_3[AlSi_3O_{10}](OH,F)_2$	3.3	0.6
Muscovite		1.2	0.2
Talc		0.6	0.4
• **Carbonates**			
Calcite	$CaCO_3$	1.6	3.8
Dolomite		1.3	2.2
• **Oxides**			
Magnetite- Haematite	Fe_3O_4 Fe_2O_3	2.9	0.8
• **Accessories**			
Apatite	$Ca_5(PO_4)_3(F,Cl,OH)$	0.7	0.9
• **Sulphides**			
Pyrite	FeS_2	0.03	13.9
Chalcopyrite	$CuFeS_2$	0.11	42.2
Bornite	Cu_5FeS_4	✓✓	7.2
Covellite	CuS	✓	0.3
Chalcocite/digenite	Cu_2S	✓	✓
Tetrahedrite/Tennantite		✓	✓✓
Galena	PbS	✓	0.04
• **Au Minerals**			
Native Au & Electrum	[Au >80, Ag <20]	(331/24)	(306/238)

[1] based on multi-element and whole rock assay data, microscopy and XRD determinations
✓: trace amounts <0.01%;
number of Au mineral grains identified and characterized (free/associated)

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GOLD DEPORTMENTS

Plate 1: *Forms* and *Carriers* of Gold

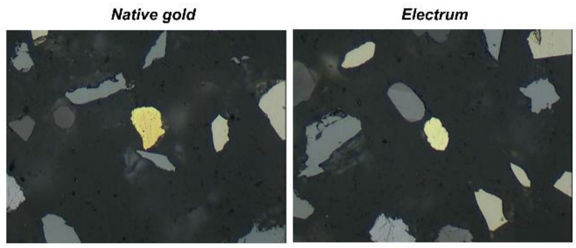
Forms of Au

Gold Minerals

- *native gold* and *electrum* identified by SEM/EDX analysis (Fig. 5 on following page)
- Native gold >> electrum
- Average of ~13% Ag in gold grains for both samples.
- Au-Tellurides were observed but were rare.

Sub-microscopic Au in Sulphides

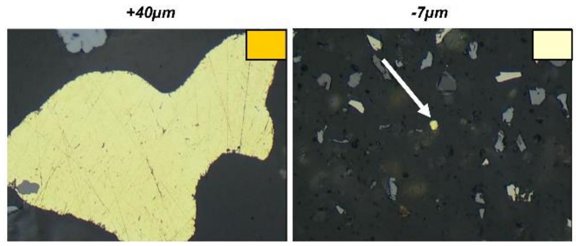
- Quantified by dynamic SIMS Measured in pyrite & Cu sulphides. Insignificant to Au balances – even in Cons.



Carriers of Au

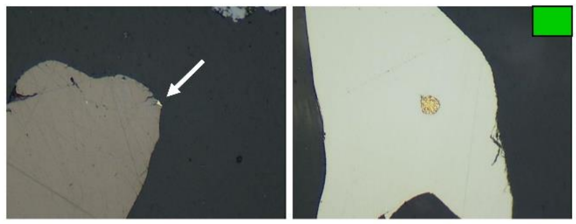
Free Gold Grains

- Free grains greater than ~7µm in size are readily floatable, with smaller grains less readily floated by conventional float cells.
- In the rougher stream, free gold >40µm should ideally be recovered by up-front Knelson concentrators.
- (Grains depicted are from the Final Flotation Tails)



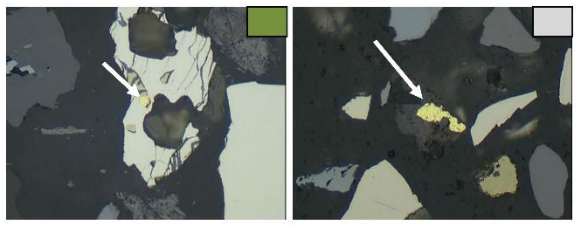
Free Sulphide Particles

- Primary associations are with pyrite and Cu sulphides (chalcopyrite and bornite)
- Particles >7µm are readily floatable
- Sulphides in slimes less readily recoverable with mechanical flotation cells.
- Gold associated with pyrite is significant in both the tails and con.



Sulphide-Rock Composite Grains

- Gold may be associated with both the sulphide and/or rock component – but more likely with the sulphide.
- Potentially floatable. depending on size and exposure of the sulphide or gold component. <20% exposed sulphide/gold likely unfloatable.



'Clean' Rock Particles

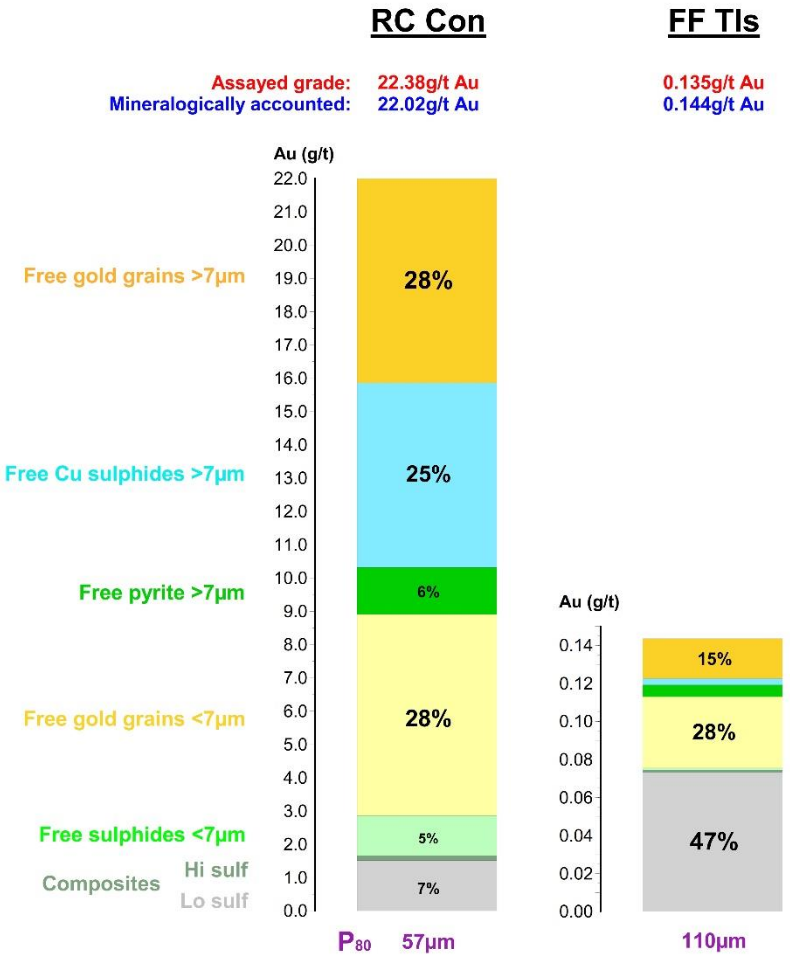
- Not likely floatable unless gold component is large and exposed at grain surface.

Deportment of Gold

Table 5: Deportment of Gold in Didipio Mine Samples

Form & Carrier of Au	Final Flotation Tails	Re-Cleaner Concentrate
Assayed Grade	0.135 ±0.014	22.38 ±0.68
Free/liberated gold grains		
• >7µm	0.021	6.152
• <7µm	0.037	6.047
Associated Gold Grains		
• free Pyrite >7µm	0.008	1.404
• free Cu-sulphides >7µm	0.001	5.548
• free sulphides <7µm	0.001	1.197
• rock-sulphide composites	0.001	1.669
• rock particles	0.073	
Total mineralogically accounted (% of assayed head)	0.144 (106.6%)	22.02 (98.4%)

Figure 4: **Deportment & Recovery of Au by Carrier**



- Because the Re-Cleaner Con is only a partial component of the Final Con, and the samples were obtained at different dates, then a direct calculation of recovery by carrier cannot be obtained.

Free Gold: Bulk Grain Composition

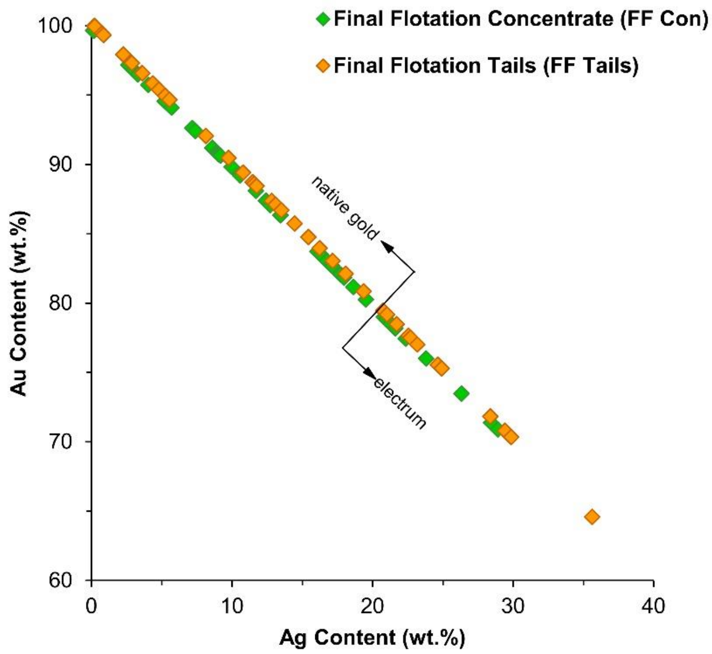


Figure 5: Composition of Free Gold Grains in Final Flotation Tails and Concentrate Determined by SEM/EDX Analysis.
The datasets were off-set slightly to allow observation of all analysis points [Con Ag +0.2%; Tails Au -0.2%].

- Gold grain composition is dominated by *Native Gold*, with *Electrum (>20% Ag)* being much less common.
- The Con sample had a single analysis with slightly higher silver content [Ag 35.4%] but the average gold grain composition is almost identical in both samples, with an average Ag content of 13.4%.
    - This shows that gold grain composition played no role in flotation/rejection (i.e., collector blend is well suited to recovering all gold grains).
- Gold grains in the RCC sample were not analysed.

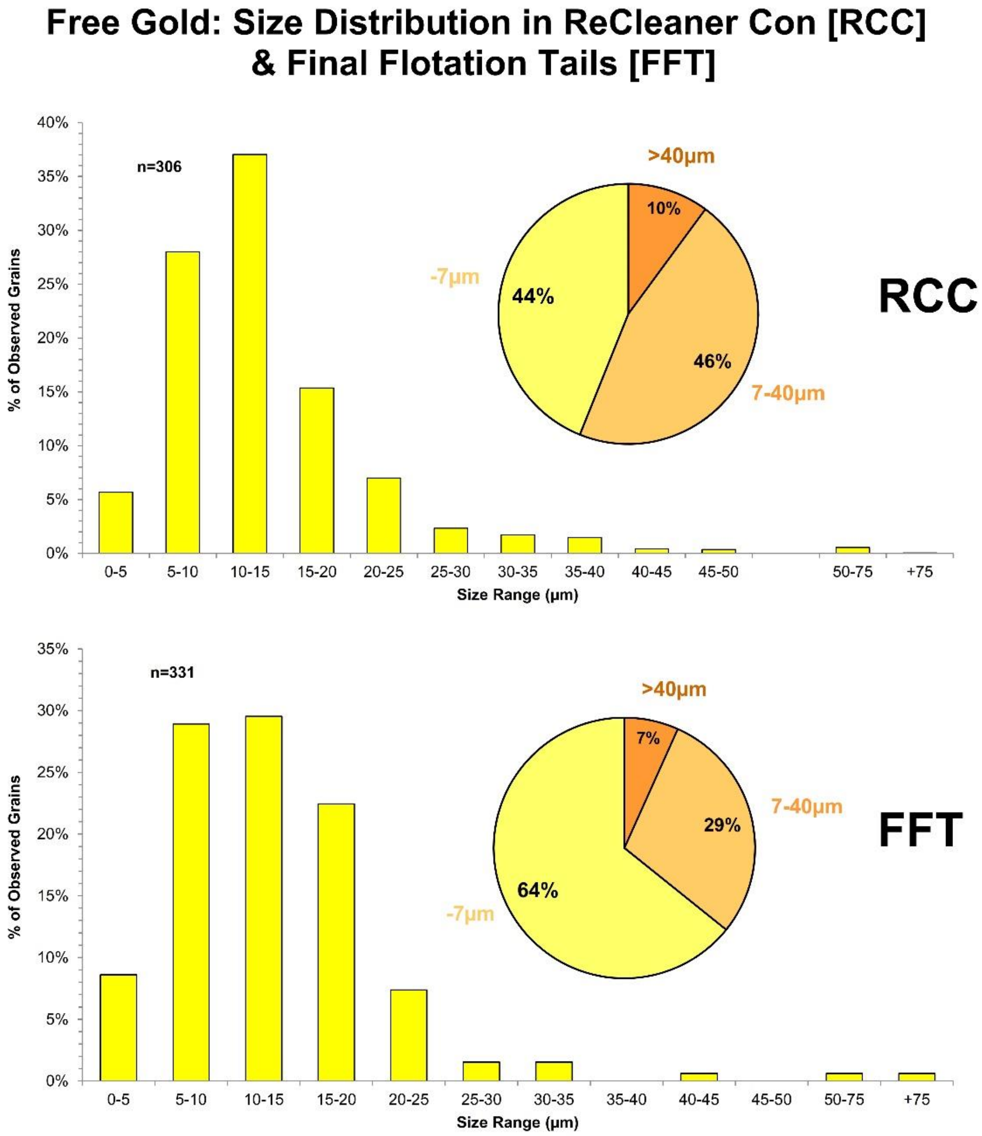


Figure 6: Size Distribution of Observed Free Gold Grains in Tails Samples.
Bar chart shows actual number of grains observed. Pie chart shows absolute Au distribution in g/t from all free gold grains.

- The distribution of Au in the Con favoured recovery of gold grains >7µm in size. In the Tails there is understandably a much greater proportion of the Au contributed by free grains in the slimes (which are below ideal size for flotation by mechanical cells). However, there are still free gold losses in the FFT which ideally should not be occurring (>7µm grains).

Free Gold: Surface Composition Affecting Flotation

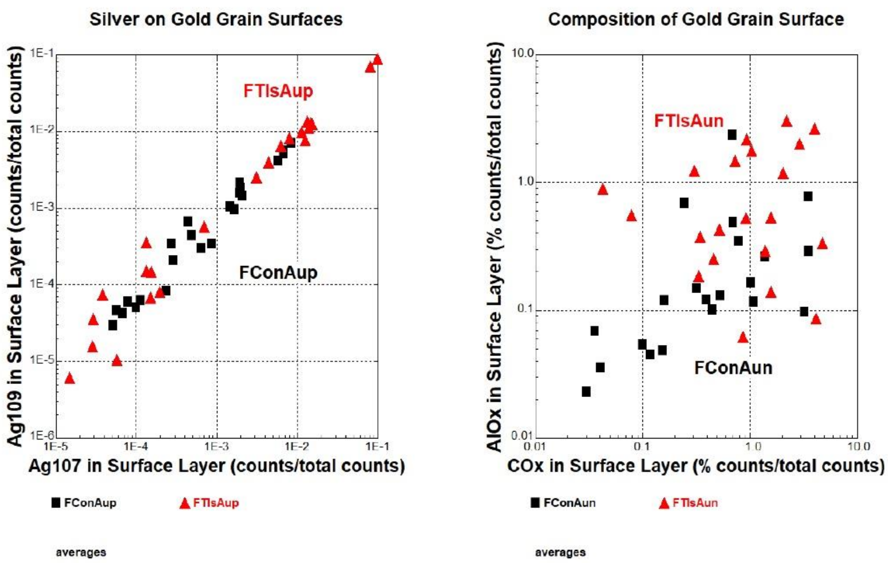


Figure 7: TOF-LIMS Surface Analysis of Gold Particles Floated in the Final Con and Rejected in the Final Tails.

- Rejected gold particles have 'dirtier' surfaces, contaminated with carbonate, Al oxide, phosphate species (see also Appendix A--).

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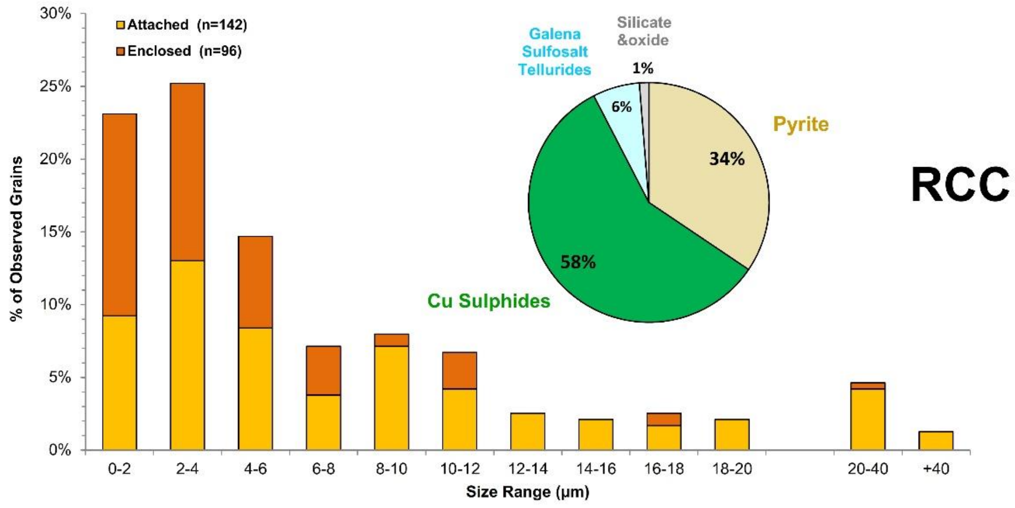
Associated Gold in Flotation Con & Tails



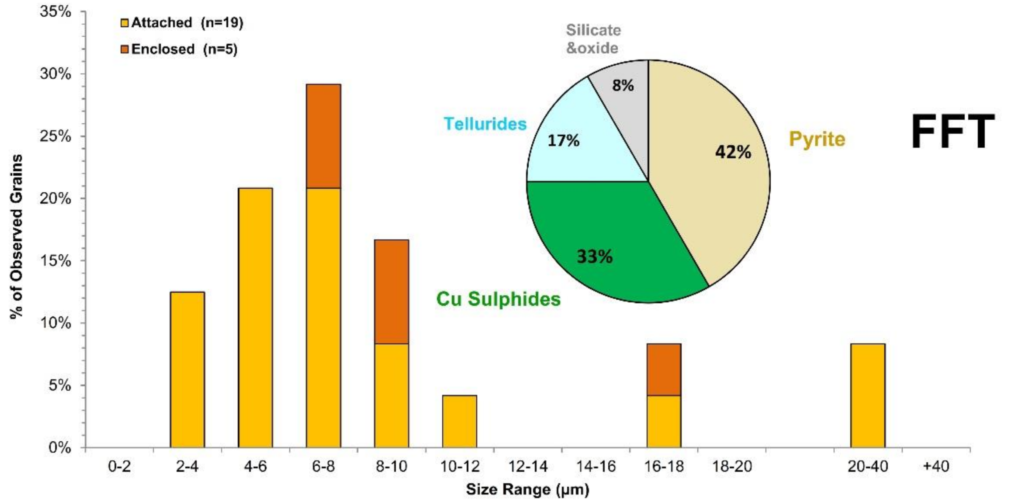


Figure 8: Size Distribution of Observed Associated Gold Grains in Tails Samples.
Bar chart shows actual number of grains observed. Pie chart shows host minerals for Au grains observed.

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Distribution of Gold in Sulphides of Re-Cleaner Concentrate

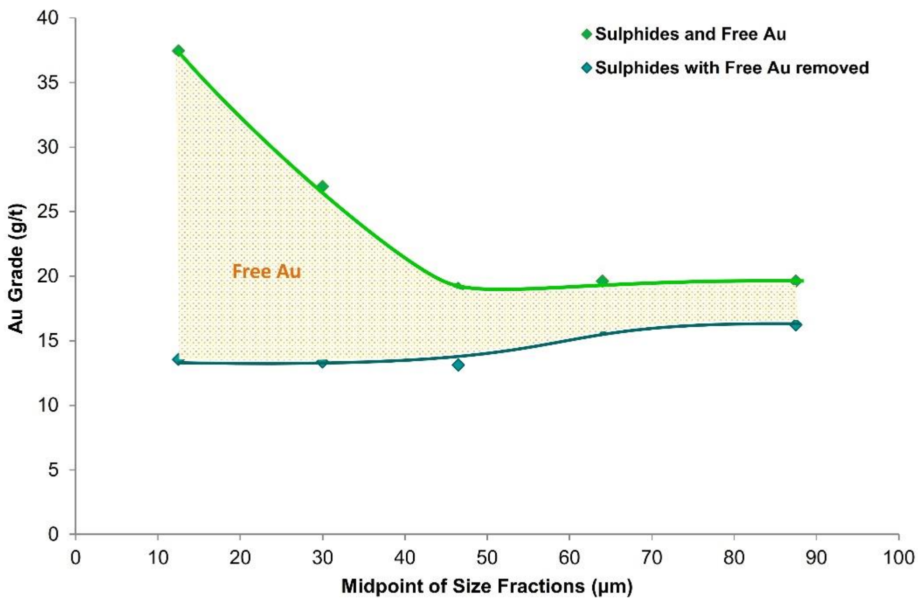


Figure 9: Size-by-Size Au Grade of Free Sulphide Particles.

- Only the concentrate samples contained enough sulphide material to allow size-by-size grade analysis.
- There is essentially no visible liberation of Au from sulphides with decreasing particle size: The darker blue-green line in the graph is essentially flat. This is due to a couple of factors: i) the size of associated gold grains is tiny (see figure 8 on preceding page) and these gold grains are not liberated even from small sulphide particles; ii) the Au mineralisation is strongly affiliated with Cu sulphides, which are enriched in the finer fractions (bornite and digenite in particular are finer-grinding).

Sub-Microscopic Gold with Sulphides

Table 6: Quantification of Submicroscopic Au Contribution to Re-Cleaner Concentrate Grade

FF Tls	Abundance Wt.%	Au Conc ppm	Contribution Au g/t
Pyrite	0.032	0.94	0.0003
Chalcopyrite	0.108	0.37	0.0004
Bornite	0.008	10.36	0.0008
Chalcocite/Digenite	0.001	-	-
			0.002
	(Proportion of tails grade)		(9.2%)
RC Con	**Abundance Wt.%**	**Au Conc ppm**	**Contribution Au g/t**
Pyrite	13.9	0.94	0.131
Chalcopyrite	42.2	0.37	0.156
Bornite	7.2	10.36	0.746
Chalcocite/Digenite	0.3	-	
			1.033
	(Proportion of con grade)		(4.6%)

- Sub-microscopic Au was found to be only a minor contributor to gold balances.
- Submicroscopic Au concentrations are elevated in bornite due to tiny colloidal Au.
- Submicroscopic Au is insignificant to Au grade even when sulphide mineral abundances are at their highest (in RC Con)

Relative Importance of Cu Sulphides versus Pyrite as Carriers of Au

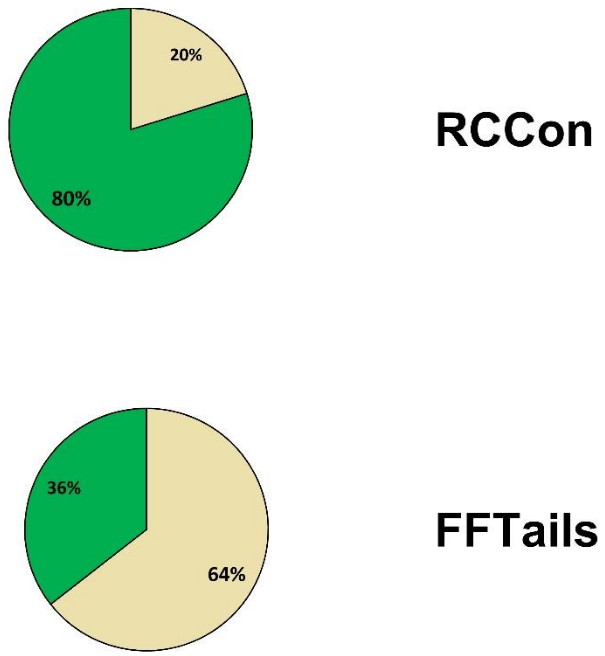


Figure 10: Calculated Importance (Au Carried) by Cu Sulphides versus Pyrite as Carriers of Au
The pie charts were calculated from a combination of mineral abundance (wt.%) with the observed area of Au (g/t) carried by associated gold grains, and in submicroscopic form.

- These graphs indicate that chalcopyrite (+bornite) is understandably the principal sulphide carrying Au in the Concentrate; this is primarily due to mineral abundance. The calculated grade of pyrite and Cu sulphides was almost identical but the higher abundance of Cu sulphides skews the importance towards these carriers.
  - It should be noted that Au mineralisation appears strongly affiliated with bornite ahead of chalcopyrite. Therefore, an increase in bornite abundance in the ore should result in a higher Au grade of the float concentrate.

- Pyrite is the principal carrier of gold in regards to Au losses with free sulphides in the FFT. Pyrite has a lower mineral abundance than chalcopyrite, but the observed associated gold grains were larger and more commonly seen than with chalcopyrite.

Associated Gold with Rejected Rock-Sulphide Composites in Final Flotation Tails

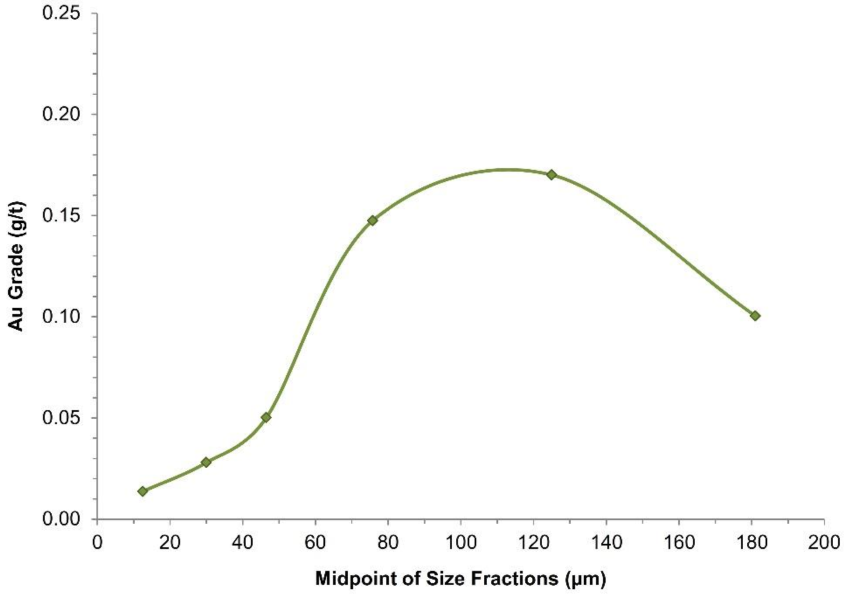


Figure 11: Size-by-Size Au Grade of Rock-Sulphide Particles.

- These particles are separated by a number of density-based techniques: The particles can comprise heavy S.G. rock (e.g., carbonates, phosphates, amphiboles etc..) and lower S.G. silicates intergrown with > ~3% sulphides (by mass).
-
- The drop in grade in the coarsest particles is likely due to dilution with high SG rock particles which have no Au values.
- Gold liberates rapidly from the binary particles below approximately 70µm in size.

Associated Gold with Rejected 'Clean' Rock Particles in Final Flotation Tails

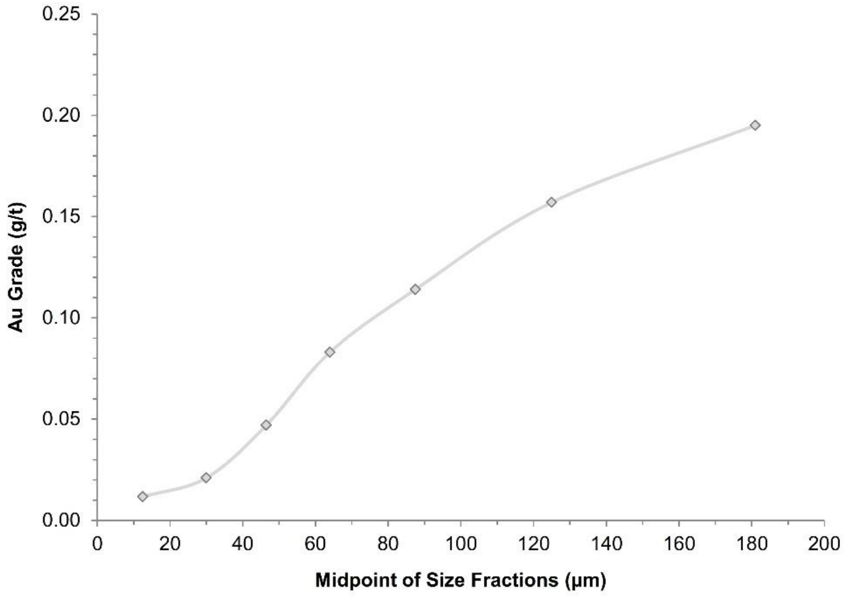


Figure 12: Size-by-Size Au Grade of Free Rock Particles.

- These rock particles contain less than ~2.5% sulphides by mass.
- There is systematic liberation of Au values until about 30µm, below which liberation of gold grains flattens out.
- The lack of a specific liberation point offers no evidence for improving Au recovery by modifying primary or re-grind size.

COPPER DEPORTMENTS

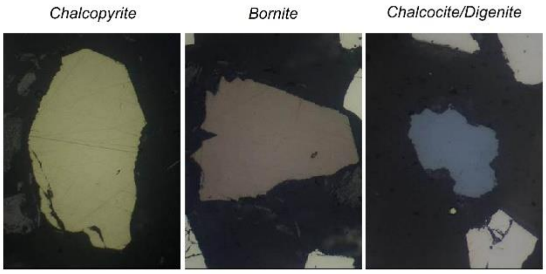
Plate 2: *Forms* and *Carriers* of Copper

Copper Minerals

<u>Chalcopyrite</u>
- Principal Cu sulphide

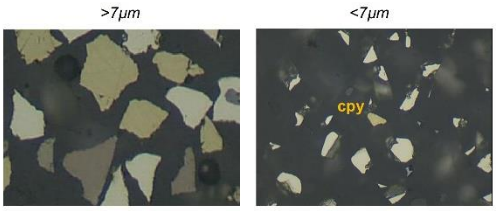
<u>Bornite</u>
- Second-most important Cu sulphide; approximately 1/2 to 1/3 abundance of cpy

<u>Chalcocite>Covellite>>Tetrahedrite</u>
- Uncommon to rare abundance

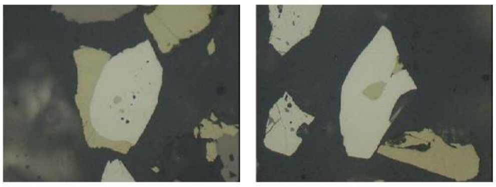


Carriers of Cu

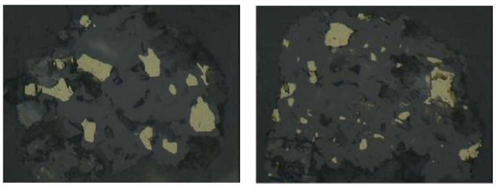
<u>Free Grains</u>
- >7µm grains should be readily floatable
- <7µm grains are less easily floated and require specialized flotation cells



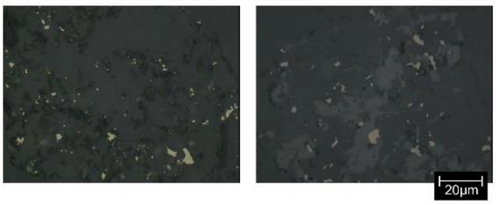
<u>Cu Sulphide- Pyrite Composites</u>
- Potentially floatable, if quantity and exposure of copper sulphide component is great enough



<u>Cu Sulphide-Rock Composites</u>
- Potentially floatable, if quantity and exposure of copper sulphide component is great enough



<u>'Clean' Rock Particles</u>
- Tiny Cu sulphide grains disseminated through rock particles. Even when the sulphide is very abundant it may not be enough for bubble attachment during flotation



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Deportment of Copper

Table 7: Deportment of Copper in Final Flotation Products

Form & Carrier of Cu	Final Tails Cu (ppm)	ReCl Con Cu (%)
Assayed Grade	**430.5ppm**	**19.40%**
Free/liberated Cu sulphides		
• Chalcopyrite >7µm	20.7	10.88
• Chalcopyrite <7µm	180.8	3.97
• Bornite >7µm	2.9	3.39
• Bornite <7µm	25.0	1.24
• Covellite (+Chalcocite) >7µm	0.3	0.16
• Covellite (+Chalcocite) <7µm	2.5	0.06
Associated Cu Sulphides		
• With pyrite	-	-
• With magnetite	5.2	-
• With silicate (floatable)	55.4	0.41
• With silicate (not floatable)	133.2	0.15
Total (mineralogically accounted)	**425.9**	**20.24**
% of assayed grade	(98.9%)	(104.4%)

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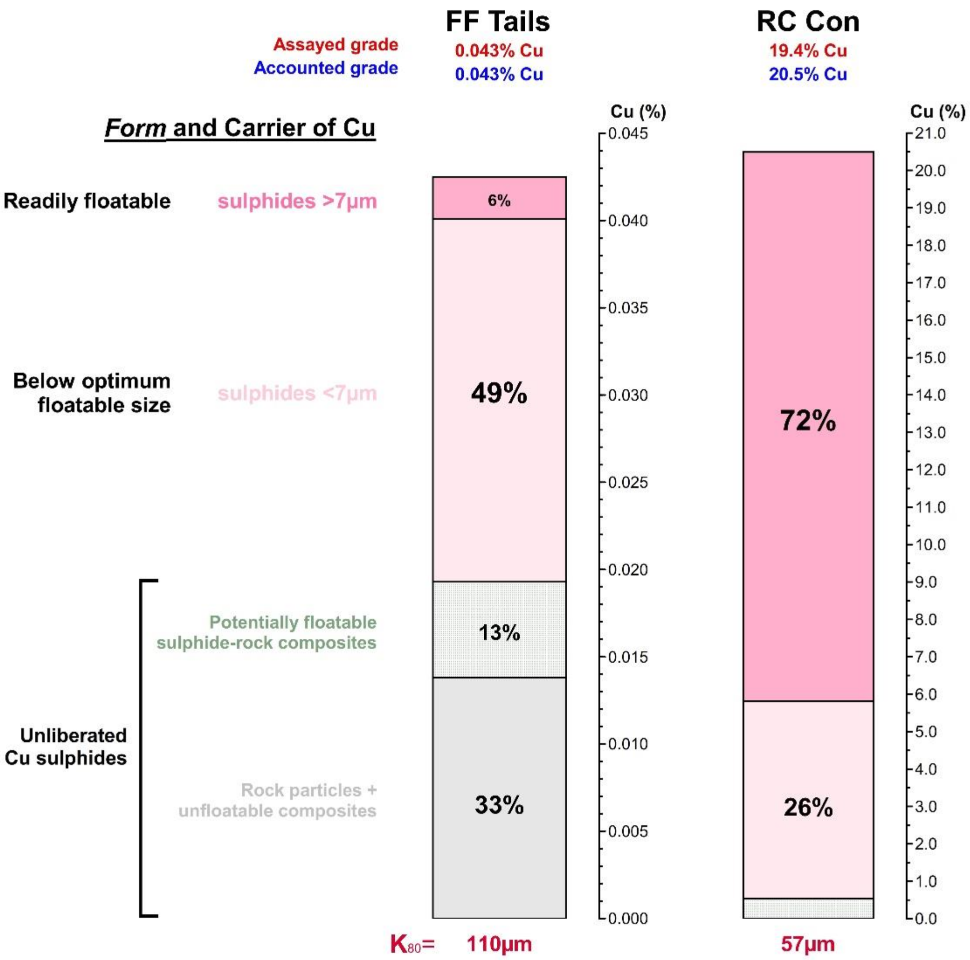
Figure 13: **Deportment of Copper by Response to Flotation**



- There is some room to lower Cu losses to the FFT:
  - Complete recovery of all free Cu sulphides >7µm would lower grade by ~25ppm Cu
  - The biggest opportunity in lowering Cu losses is in improved recovery of Cu sulphides <7µm – likely only achievable by use of better non-mechanical flotation cells.
- Concentrate Cu grade is overwhelmingly from free sulphide grains. A significant portion of the FFC grade is already contributed by slimes sized particles.

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Free Chalcopyrite Losses: Surface Composition (1)

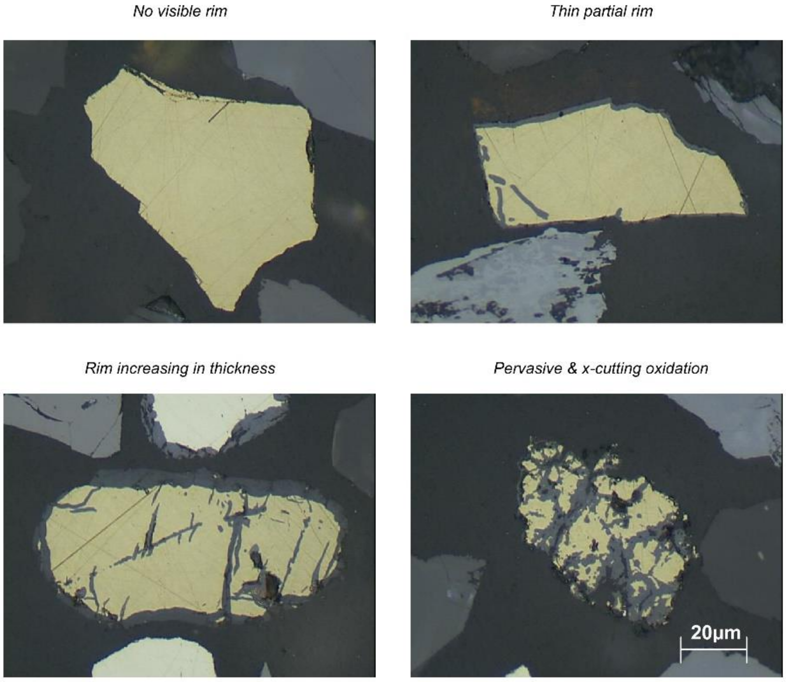


Plate 3: Illustration of Observed Chalcopyrite Grains Rejected in the Final Flotation Tails.

- Rejected chalcopyrite particles are highly oxidized; the oxidation layer varying from <0.5µm to >10µm.
- The oxidation layer is composed primarily of carbonate and Fe oxide species (Fig. 14 on following page)
  - The carbonate composition of the rim suggests oxidation in an alkaline environment

Free Chalcopyrite Losses: Surface Composition

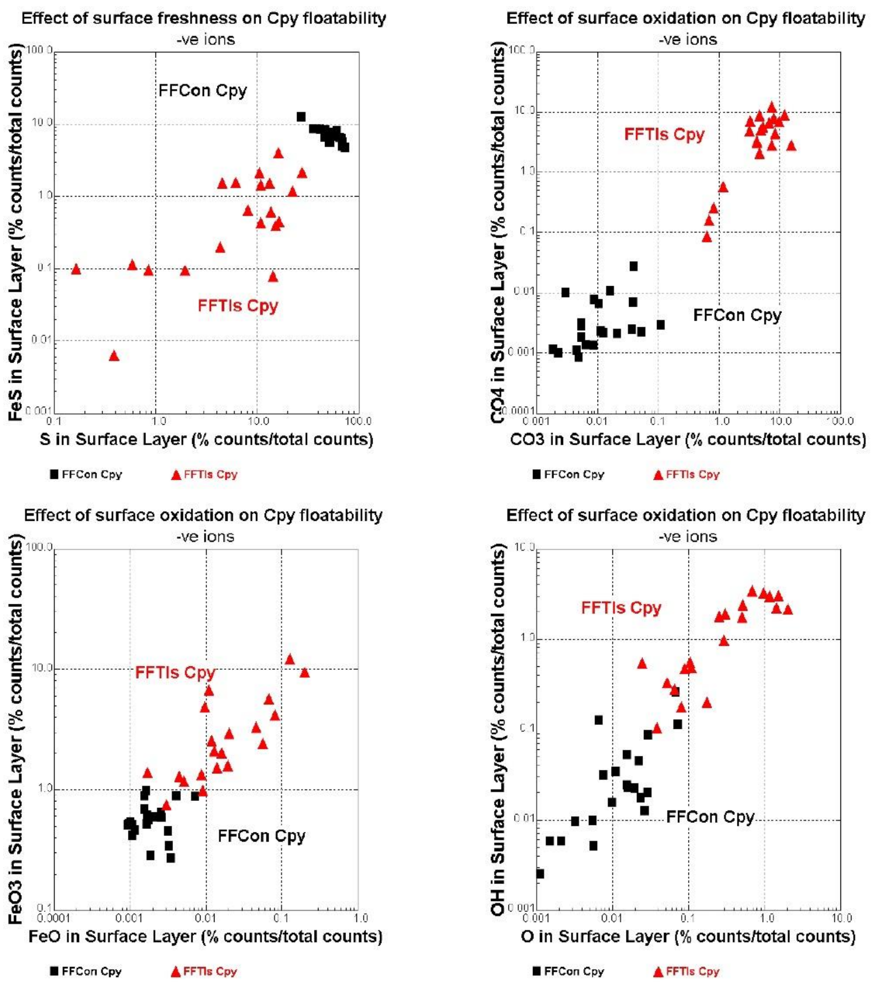


Figure 14: TOF-LIMS Surface Analysis of Chalcopyrite Floated in the Final Con and Rejected in the Final Tails.

- Floated chalcopyrite has cleaner surfaces, shown as higher S, FeS (& Cu – not shown).
- Rejected chalcopyrite shows significant oxidation. Species such as carbonate (CO_3, CO_4), Fe oxide (FeO, FeO_3), FeO-CO_4, O, OH are strongly enriched on grains from the final flotation tails. Phosphate and Al oxide were also measured on rejected chalcopyrite particles (Appendix A--).
- The large separation in the surface composition of floated and rejected chalcopyrite particles is a measure of the thickness of the oxidation layer on rejected particles; the oxidation layer completely covers rejected particles.

Copper Grade of Rejected Rock & Particles

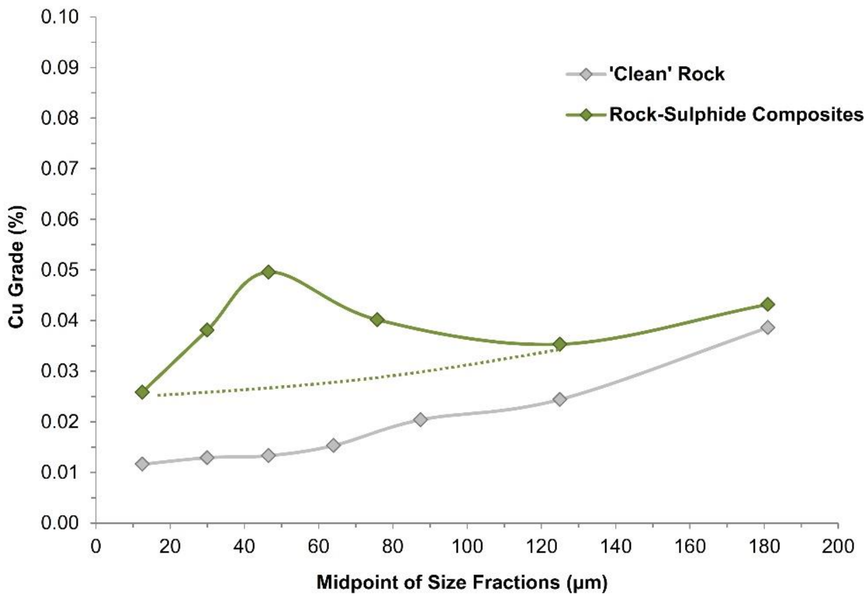


Figure 15: Size-by-Size Cu Grade of Rock Particles with Tiny (Clean) and Larger (Composite) Sulphide Associations

- Copper liberates sequentially from rock particles, with decreasing grain size. This indicates no specific benefit from modifying primary or re-grind size.
- Copper from the higher-sulphide 'composite' particles shows a hump in grade centered in particles around 40µm in size. There is an underlying trend of Cu liberation (dashed line). The grade profile of Au in the composites also had a humped profile, although with a coarser centre point.
  - AMTEL has found similar grade humps in final tails from other ore deposits, where the rejected particles are being sourced from 2 separate streams, i.e., rougher + cleaner tails. The cleaners tend to reject finer, but higher-grade rock-sulphide grains.

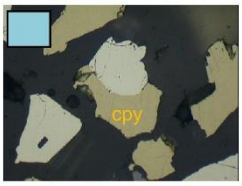
Grade Dilutants of Final Flotation Concentrate

Plate 4: Forms and Associations of Grade Dilutants

Pyrite

- High – Cu sulphide binary

Not rejectable
Uncommon; not a preferred assocn.

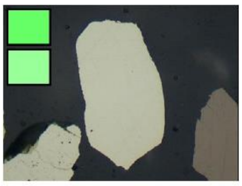


- Low – Cu sulphide binary

Potentially rejectable, but with loss of Cu values

- Free Pyrite particles

Should be readily rejectable
Likely reported to Con due to surface activation (by Cu ions)



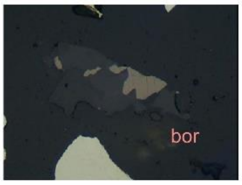
Gangue

- High – Cu sulphide binary

Not rejectable

- Low – Cu sulphide binary

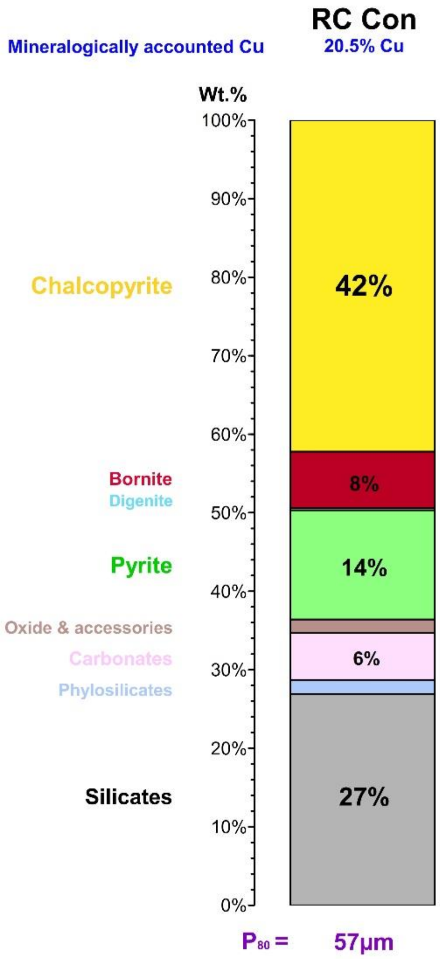
Potentially rejectable, but with the loss of Cu values



- Free rock mineral particles

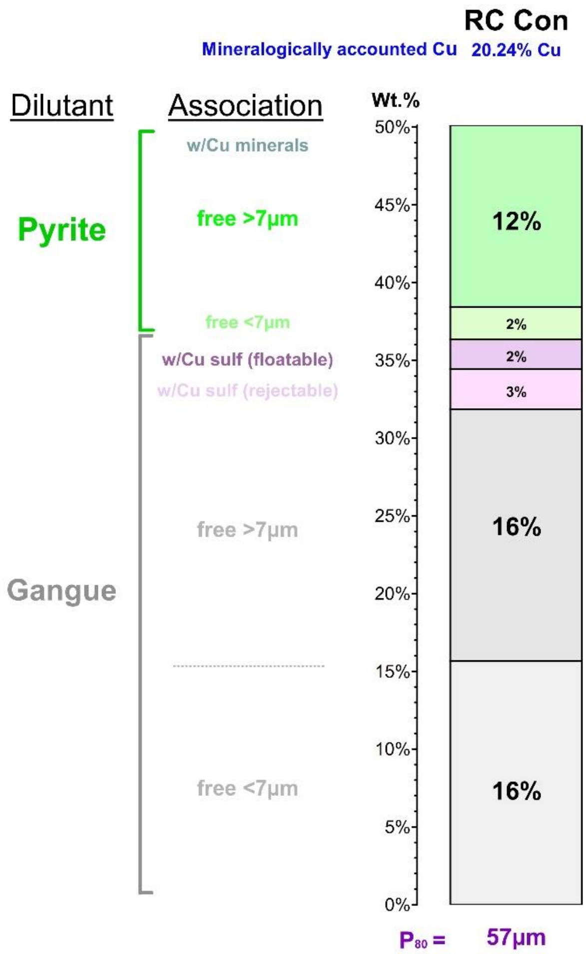
Reporting to con. by entrainment
Easiest target for rejection

Figure 16: Simplified Mineralogy of Flotation Concentrate



- In the Re-Cleaner Con, the principal dilutant particles are silicate rock and pyrite.
- Pyrite constitutes 14wt.% of the Con mass.
- Rock particles account for 36% of the FC mass
  - The silicate gangue is predominantly of the harder-grinding variety, i.e., feldspars, quartz, and amphiboles. This is rather than fine-grinding phyllosilicates – which tend to report to float Cons due to entrainment of slimes sized particles within froth bubbles.

Figure 17: **Association of Grade Dilutants in Re-Cleaner Concentrate**



- In the Re-Cleaner Con, the dilutant particles (pyrite and rock) are largely liberated and did not float due to association with Cu sulphides.
  - Only 5% of the mass of the Final Con constitutes Cu sulphide-binary particles, where their presence in the RCC may be due to the copper sulphide component.
- Free pyrite contributes 14wt.% to the mass balance. These pyrite particles are largely >7µm in size (i.e., not entrained in the slimes). It should be suspected that surface Cu ion activation is the principal cause for pyrite flotation.
- Free rock particles account for 32% of the RCC mass, and are the principal grade dilutant. These particles must be being entrained to the concentrate. Optimised froth washing should help to reduce the quantity of free rock reporting to the Con.

MINERCON VENTURES INC.

APPENDIX 4.
GENERAL METALLURGICAL ACCOUNTING PROCEDURE (DID-459-PRO-064-5)

OCEANAGOLD

Standard Operating Procedure

General Metallurgical Accounting Procedure

Approved date: April 2023

Document ID: DID-459-PRO-064-5

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Department	**Processing**
Location/Site	Didipio

Approval table

	Position title	Name	Date
Authored by	Superintendent - Metallurgy	Jenalyn Paredes	23 Mar 2023
Checked by	Document and Record Custodian	Cindy Napadao	29 Mar 2023
Reviewed by	Manager - Processing	Raymond Setiagani	30 Mar 2023
Approved by	General Manager	David Bickerton	01 APRIL 23

Document issuance and revision history

Document name: General Metallurgical Accounting Procedure

Document id: DID-459-PRO-064-5

Revision number	Revision date	Section	Page	Description	Effective Date
0	01-Jan-15			First Issuance	
1	17-Jan-15			Update daily and weekly reporting	
2	25-Oct-15			Review all information, reformatting	
3	11-Sep-18			Supercon and poured adjustment	19-Sep-18
4	13-Nov-18			Reconciliation and adjustment, added section 5.5	13-Nov-18
5	23-Mar-23			Removal of sections 5.3 to 5.7 to be transferred to a separate procedure. Renaming of the procedure title to "General Metallurgical Accounting Procedure"	05-Apr-23

Table of Contents

1 PURPOSE

The metallurgical accounting system serves as a production and metallurgical database. This procedure aims to provide the standard process of generating the daily production report only.

2 SCOPE

This procedure aims to maintain the database, retrieve the data, and generate daily production report. Making the End-of-Week (EOW) and End-of-Month (EOM) reconciliations for weekly and monthly production reports is discussed in a separate procedure.

If at any time this procedure becomes out of date, or needs changing, record the changes to be made on the procedure and contact the Metallurgical Superintendent.

3 REFERENCE AND COMPLIANCE

Level	Source
Site	• Filtered Concentrate Consignment and Inventory Determination Sampling Procedure (OGPI-MT-PRO-14)

4 RISK ASSESSMENT

The risk of operational data loss and inaccurate reporting that will lead to poor forecasting and process-related decisions was identified and steered the implementation of this procedure.

5 PROCEDURE

5.1 Preparation

1. The data required to do metallurgical accounting are:
   - Year budget data, 3 monthly forecast data, weekly forecast data
   - PI data historian
   - Met PI Daily Input (CV001 moisture, Filter Feed tank %solid)
   - Ops PI Daily Input (BM scat recycle, electronic log sheet data, Supercon dry weight)
   - Downtime data
   - Environment PI Daily Input (WTP TSS)
   - Load test data
   - Daily truck consignment
   - Concentrate shipment data
   - Bullion shipment data
   - SGS Assay data (Shift assay, Supercon assay, bullion assay, truck consignment assay, Filter Feed tank assay)
2. Ensure the data, especially the PI daily input data, are updated and correct

5.2 Daily Reports

1. The Daily Reports (reports made and sent out daily) are the following:
   - Preliminary Summary Report
   - Process Parameter Report
   - Complete Summary Report
   - Concentrate Movement Report

   The Preliminary Summary and Process Parameter Reports should be sent out before 8:00am, while the Complete Summary and Concentrate Movement Reports should be finished and sent out before 6:00 pm.
2. Obtain the budget, 3 monthly forecast, and weekly forecast data from the Process Manager or Metallurgical Superintendent. Input the monthly budget and 3 monthly forecast figures under the corresponding month in the "Budget" and "3 months forecast" tabs, respectively. Note that the 3 monthly forecast is also entered on "Quarterly Forecast" tab at the start of every quarter. Copy the weekly forecast values and paste them under the corresponding week in the "Daily Forecast" tab.
3. Enter the report in cell B1 of the "Daily Inputs" tab. Check that the daily values are correct.
4. Input Crushing and Milling downtime data in the "Downtime" tab. The exact duration of each downtime is recorded on PI System Management Tools application.
   - "Category" classifies the downtime depending on the responsible section (e.g., Operations, Mechanical, and Electrical).
   - The downtime "Type" is either planned or unplanned.
   - "Equipment" lists the equipment that caused the downtime. This should be broken down to the least equipment category. For example, if CV-006 tripped due to BN-002 high level alarm, then the downtime equipment is BN-002, not CV-006.
   - "Circuit" is the specific area where the downtime equipment is located (e.g., Mine Ore Supply, Crusher circuit, Milling circuit, Pebble circuit, Downstream, Miscellaneous).
   - "Crusher downtime causes lost tonnages: Yes/No input": put "Yes" if the crusher circuit downtime stopped the continuous feeding the SAG Mill (or stopped the Mills totally), i.e. EFO is empty yet the crusher circuit is down; put "No" if otherwise.
   - Compare the downtime data in the operations log sheet with that of PI. PI records a milling downtime when the mill feed rate is below 100 tph for 1 minute or more. Record the downtime not listed in the control room log sheet but is listed in the PI database and put "Not in SS log sheet" in the remarks column corresponding to that downtime. Confirm with the shift supervisor the reason for this un-recorded downtime.
5. Enter load test data in the "Load Cell test" tab. If there was no load test performed on the report day, use the average of the load cell factors for the last seven days. The load cell factor is used to correct the Filter Press load cell reading based on the weighbridge reading.
6. Encode concentrate trucking data in the "Daily Consignment" tab. Select the "Record Daily Consignment" button to automatically write the data of trucks. If for any reason this approach fails, copy the data from the Outward Truck Manifest (OTM) sent by the concentrate logistics team and paste it to the corresponding columns. Make sure the trucks lot and sub-lot are correct by referring to the truck sampling monitoring sheets in the concentrate shed. Enter moisture and assay values of the trucked concentrate if they are already available from SGS; otherwise, the default assays (columns N to S, row 2) will be used.
7. In the "Conc Shipment" tab, fill Shipment data under columns BI to BO and update OTP formula in columns BP to BR only when new OTP is released. Put adjustments of Concentrate Produced (for the weekly reconciliation) under columns N to T and adjustment of Returned Concentrate under columns BB to BH, if there are any concentrate returned from Poro.

Also put the shipment BOL and name of the ship on the "Budget" tab.

8. In the "Supercon+Bullion" tab, refresh the PI data on Column B and G and enter the gold room fine Supercon, coarse Supercon, and bullion data under columns C to F, H to L and M to T. Note that the pouring date for each Supercon should be inputted under column M, and the bar details are entered under columns N to T. Bullion weight and shipment date are also entered under columns U and V.
   Before the EOM, please put in **red** the estimated pouring date of the super concentrates saved in the vault and estimated shipment date for saved bullion.
   If the shipment weight, settlement weight, and Perth Mint assay are not yet available, use the weight data available and site assay data. When the said data become available, input them in their respective columns (from U to Y).
9. SGS should have reported all the mill assay results to PI thru CCLAS. On the "Assay" tab, select the "Copy SGS Assay" button to retrieve the data. If CCLAS is not working, the results may be manually copied and pasted on this tab from the assay report emailed or saved by SGS in the network. For the preliminary report, use day shift assays for the night shift and choose "Preliminary" in the drop-down list in cell B22. When the night shift assays become available, copy-paste them for the night shift and then choose "Complete" in the said cell.
   Always send the original day and night shift assays to PI before doing the balancing.
10. Go to the "Pivot" tab and click "Copy Original Assay Data" to upload assays entered in the previous step. Click "Run Day Shift Solver for Copper and Gold" and "Run Night Shift Solver for Copper and Gold" to do metal balance from the assays.
    - Values under columns O and P are the variances between the SGS assays and the solver assays. During its first run, the solver is constrained to limit these errors to a maximum of 10% for Cu assay.
    - If the values in cells H18 & N18 (day shift) or H40 & N40 (night shift) are not set to zero during the first round while the variance for Cu assay is already at max 10%, run the solver again. During this second run, the solver will be released from the variance error constraint but will still minimize the error in calculating the assays.
    - If, after the second run, cells H18, N18, H40 or N40 are still not set to 0, look for the stream's assay with the highest variance and confirm if the said stream/s is/are under the un-balanced block recovery calculation, as this is most likely the reason why the calculations do not balance. Adjust the assay of that stream in the "Assays" tab, and then run the solver again. The difference between the SGS and calculated assays from the previous run is a good indicator of whether to increase or decrease the assay of the said stream. Run the solver until cells H18, N18, H40 and N40 are all set to zero.
    - Note that even the if the error message "Solver could not find a feasible solution" is shown after the run, if all the said cells are set to zero, the metals in the streams are already balanced and the next step can now be done.
11. Click "Run Size by Size Solver for Copper & Gold" to compute the size distribution of copper and gold.
12. On the "Database" tab, click "Record Production Data to database" to upload production values to this tab. Ensure that the date inputted on the "Daily Inputs" tab and the date of assays balanced in the "Pivot" tab are the same.
13. In the "Executive Summary" tab, make sure that the week and quarterly start dates in Row 39 are correct.
14. Update the ore blending on the remarks section in cell O128. Use the last ore blend of the night shift.

15. Check the production figures if they are correct before releasing the report. If there is a warning in the "Executive Summary" tab that the FFC and FPC do not balance, that means the FFC produced is not equal with FPC produced + Δ Filter Feed tank inventory.
    Most likely, this error happens if the filter feed tank densities of the previous day and that of the report day are not equal. Fix this error first before releasing the report. Re-balance the assay again because the FFC tonnage will change.
16. The daily production report can now be printed. In the morning, click "Print Preliminary Summary Report" and "Print Process Report" macros in the Executive Summary tab then send once approved by the Metallurgical Superintendent or the Senior Metallurgist.
17. When a copper concentrate shipment loading is completed and the vessel has departed, obtain the provisional weights and assays from the Senior Metallurgist, and enter the details on "Conc Shipment" tab columns BI to BO. The final weights and assays from the smelter must also be entered against the corresponding shipment on columns DQ to DV, though this will not affect the calculated Poro Point inventory but for recording purposes only.
18. When the final report is ready (i.e., night shift assay is final), click "Print Complete Summary Report" and "Print Commercial Report" macros then send once approved.
19. Also, click "Send Met Data to PI" macro once final report is done to send daily production to PI.

5.3 Database Retrieval

1. The data base may be retrieved at any time.
2. Daily raw data, i.e., un-adjusted and un-reconciled data are located on "Database" tab.
3. Daily data on "Conc Shipment" tab (stockpile inventory at site and in Poro, filtered concentrate produced, final concentrate produced, and feed to the mill) are adjusted but un-reconciled to sales and inventory changes.
4. Monthly figures on "Reconciled" tab are adjusted and reconciled to sales and inventory changes.

6 RESPONSIBILITIES AND ACCOUNTABILITIES

Role	Responsibility
Metallurgist	Understand and follow this SOP
Senior Metallurgist/ Metallurgical Superintendent	Ensure that this SOP is strictly followed and updating this procedure as needed.

7 RECORDS AND DOCUMENTATION

1. Records must be filed and kept well to avoid data loss.
2. Back up file of the Metallurgical Accounting file should be saved daily after the complete report produced.
3. Any changes to the Metallurgical Accounting system should be recorded on the version history.
4. Any small changes to the Metallurgical Accounting system (like adjustment of the formula for certain day) should be highlighted in yellow to enable identification of the un-standard formula

8 AUDIT AND REVIEW

This procedure shall be reviewed every 2 years as a minimum and/or in any of the following circumstances:

- Following any event or investigation that impacts on this procedure
- Any amendments to the site risk register
- Any amendments to legislation
- When significant change in the process is introduced

APPENDIX 5.
METALLURGICAL RECONCILIATION PROCEDURE (DID-459-PRO-082-0)

Standard Operating Procedure

Metallurgical Reconciliation Procedure

Approved date: April 2023

Document ID: DID-459-PRO-082-0

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Department	**Processing**
Location/Site	Didipio

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Authored by	Superintendent - Metallurgy	For Jenalyn Paredes	23 Mar 2022
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Reviewed by	Manager - Process	Raymond Setiagani	30 Mar 2022
Approved by	General Manager	David Bickerton	01 April 22

Document issuance and revision history

Document name: Metallurgical Reconciliation Procedure

Document id: DID-459-PRO-082-0

Revision number	Revision date	Section	Page	Description	Effective Date
0	23-Mar-23			First Issuance	April 7, 2023

Table of Contents

1 PURPOSE

The metallurgical accounting system serves as a production and metallurgical database. This procedure aims to provide the standard process of weekly and monthly production reconciliation and to generate the weekly, monthly, and quarterly reports.

2 SCOPE

This procedure discusses the End-of-Week (EOW) and End-of-Month (EOM) reconciliations for weekly, monthly, and quarterly production reports.

If at any time this procedure becomes out of date, or needs changing, record the changes to be made on the procedure and contact the Metallurgical Superintendent.

3 REFERENCE AND COMPLIANCE

Level	Source
Legislation or Guidelines	• N/A
	•
Corporate	• N/A
	•
Site	• Filtered Concentrate Consignment and Inventory Determination Sampling Procedure (OGPI-MT-PRO-14)
	•

4 RISK ASSESSMENT

The risk of operational data loss and inaccurate reporting that will lead to poor forecasting and process-related decisions and the financial risk due to significant production and sales disparity were identified and steered the implementation of this procedure.

5 PROCEDURE

5.1 Preparation

1. The data required to do the weekly and monthly reconciliation are the following:
    - Complete unreconciled production data from the metallurgical database
    - SGS assay data for Filter Feed tank and site concentrate stockpile closing inventory
    - Outturn results for copper concentrate and bullion shipment (if available)
    - Trucking intake sample weights and assay results
    - Reweigh data for copper concentrate closing stock at site and at Poro Point (if applicable)
2. Ensure the data, especially the PI daily input data, are updated and correct

5.2 Weekly Reconciliation and Weekly Report

1. The production week starts at the day shift of Friday and ends at the night shift of Thursday the following week.
2. Ensure that the moisture and assay values of the daily truck consignments are complete and updated.
3. On the running Wednesday, coordinate with the Concentrate Logistics team to have at least two trucks to re-weigh the concentrate stockpile on Thursday morning.
4. On the first hour of Friday morning, a Met Technician needs to a take sample of the filter feed tank slurry content. Send the sample to SGS for Au, Cu, Fe, and S analysis.
5. During the re-weighing of the concentrate stockpile, a sample from each bucket of the loader should be taken to ensure homogenous sampling of the stockpile (refer to OGPI-MT-PRO-014 Filtered Concentrate Consignment and Inventory Determination Sampling Procedure and OGPI-MT-PRO-008 Sample Collection from the Plant Procedure).
6. When the concentrate inventory and filter feed tank & concentrate inventory sample assays are available, weekly reconciliation may already be started.
7. Enter the filter feed tank assay in the "Assay" tab. Open the "Database" tab, the last week date Filter Feed tank assay and inventory should be updated manually (column IL to IU and IZ to JI).
8. Using the EOW recon file, update the "Stockpile" tab by entering the tons and metal content of the total reweighed concentrate and the trucked concentrate before and after the cut-off date.
   On "(1) FFC vs FPC weight" tab, balance the FFC and FPC produced during the week first, since inventory is calculated using the FPC produced, yet the production is calculated using FFC produced. The mass and metal content of FFC should be equal to the FPC produced + Δ Filter Feed tank inventory.
   Weight discrepancy of FPC and FFC will be distributed to FPC weight.
9. Next step is to reconcile the reported stockpile inventory and the actual re-weighing data on "(2) FPC vs stockpile weight" tab.
   Calculate the error between calculated concentrate inventory and the actual reweighed inventory.
   Weight discrepancy of reweighed conc and FPC will be distributed to FPC weight and finally back to FFC weight.
10. Metal content of FPC is then reconciled with FFC on "(3) FFC vs FPC metal" tab by entering the details of FPC Produced, Filter Tank Inventory, and FFC Produced from the "Conc Shipment" tab of the met database. The error must then be entered on the latter tab by distributing it over the week.
    Metal content discrepancies of FPC and FFC will be distributed to FPC metals.

11. Reconcile the reported metal content of stockpile inventory and the actual stockpile metal content based on reweighed sampling on "(4) FPC vs stockpile metal" tab.
    Metal discrepancies of reweighed conc and FPC will be distributed to FPC metal and finally back to FFC metal.
12. In the "Supercon+Bullion" tab, put Superconc vs poured adjustment directly after each pouring. The only exception for this is for the leftover Superconc during EOM (Superconc produced previous month but poured on next month). Do not put Superconc vs poured adjustment for leftover superconc to avoid changing superconc figures that have been released on previous EOM report.
13. Before printing the Weekly Reconciliation and Summary report, change the date in the "Daily Inputs" tab to the last day of the intended weekly report.
    Change the week start date in the "Executive Summary" tab to reflect the week intended for reporting.
    Change the first week date of the month in the "Weekly Report" tab.
14. Check the production figures if they are correct before releasing the report.
15. Run "Print Weekly Report" macro on "Executive Summary" tab and send the report for approval. The deadline for the Weekly Report is at 13:00 on the next Saturday after the week-end date.

5.3 End of Month Reconciliation and Reporting

1. The cut-off date for monthly production is the last day of the month.
2. One day before the end of the month, organize the re-weighing of the concentrate inventory, check the calibration of the weigh bridge, separation of the new month filtered concentrate produced from the rest of the inventory. Follow the principally same step 2 – 11 of section 5.2.
   The difference of the calculated inventory and the re-weighed inventory will be applied and distributed to the day after the last weekly reconciliation to the month-end date.
3. After reconciliation of the daily production and the inventory, reconcile the production, inventory change, and sales.
4. Enter the updated settlement weight and smelter assay on "Supercon+Bullion" tab. Calculate the discrepancy of the gold and silver for the weight and assay assumption used for the previous month end report.
   This will be used to reconcile back the bullion based on the smelter data, last month end assumption will be adjusted on current month end report.
5. Put the estimated pouring date and shipment date in **red** for the super concentrate and bullion saved in the vault.
6. On the "Reconcile" tab, put the calculated adjustment for the previous month bar sales and previous month gravity concentrate produced.
   The adjustment for the bar/bullion sales is the difference between the smelter gold amount and the reported site assay data gold amount for the bullion that was shipped previously but during the reporting month was still using site assay data.
   The adjustment for the previous month gravity concentrate produced is the difference between the Supercon saved in the vault previously in the EOM cut-off date and reported as Supercon stock during previous EOM report with the smelter gold amount when that Supercon was poured and shipped.
   Note that for the month-end report, gravity concentrate is not calculated from Supercon produced but from the actual bullion produced during the month, bullion inventory change, and un-poured Supercon inventory change.
7. Check for copper concentrate smelter finalization results and calculate its variance against the corresponding shipment provisional data. If Poro stocktake was also completed after a particular shipment, compute also its variance with the calculated Poro inventory. Refer to section 4.5 for the adjustment procedure.

8. If the Weekly Reconciliation was correctly done during the month and FFC vs FFC was properly balanced, the un-accounted/discrepancy figures for concentrate mass and Cu should be zero during EOM reconciliation. The Au and Ag could be not zero because of the adjustment of the bullion and Supercon you've made at the EOM.
   On the "Reconcile" tab, set the error distribution setting. This set should be permanent for reconciliation consistency. The default set is error will be distributed to 100% to feed grade, 0% to tail grade and 0% to feed tonnages.
9. Run "Reconcile" macro for the corresponding month to zero the discrepancy.
10. Run "Rebalance Stream" macro to re-balance the balance of each stream after the tonnages, feed grade and concentrate grade are adjusted during the reconciliation.
11. Check that the balances are all 0, meaning all stream are balanced.
12. Change the date in the "Daily Inputs" tab to the month-end date. If you do not change the date to the month end date, you may report the wrong inventory.
13. Check if the production figures in the "Reconciled Monthend" tab are correct before releasing the report. The deadline for the Monthly Report is at 13:00 on the third day of next consecutive month.
14. The EOM graphs on the "Executive Summary tab" need to be adjusted to reflect the EOM reconciliation just made. On the "Graph Data" tab, put the difference between the total Cu and Au of the un-reconciled and reconciled figures. And then click the "Make EOM graph" button. After copying the graph, remove the graph adjustment by clicking on "Remove actual- recon factor" button.

5.4 External Reconciliation (Production Adjustment from Poro Trucking, Shipment Finalization and Poro Stocktake)

1. On the first day of the succeeding month, coordinate with Concentrate Logistics team to have all the remaining trucking intake samples (covered by the EOM report) delivered to site. Advise SGS laboratory manager or OIC to prioritize these samples.
2. Update the "Didipio vs Poro Point Trucking Data" file when all the site and intake sample results are available. You will then be able to calculate the variance of WMT, DMT, and metal contents between the two on "(5) Site vs Poro Trucking" tab of the EOW/EOM recon file.
   Discrepancies of weight and metal between Didipio trucking and Poro Point truck data will be distributed to Didipio trucking weight and metal and finally back to FPC and FFC.
   Enter these variances on the "Conc Shipment" tab columns EK to EQ. This will affect the site produced, the trucking data and Poro inventory.
3. When the smelter data for a particular shipment is received, compare it with the provisional data using the "<Year> Provisional and Final Assays by Lot" file to be saved here *N:\Didipio\10. Processing\10.4 Metallurgy\1. Met Data Base\Concentrate Shipping\Shipment Provisional and Final Assays by Lot.*
4. Discrepancies of smelter out-turn and provisional data will be distributed to Didipio trucking, FPC and FFC. Please note that this adjustment does not change Poro inventory and conc shed inventory.
   On "(6) Provisional vs Outturn" tab of EOW/EOM file, calculate the variance between the shipment out-turn and provisional results on "Conc Shipment" tab of the MetAcc file columns DW to EC. This is incorporated in the production adjustment formulas and will affect the site produced and the trucking data. To check this, ensure that the original site inventory without the sales adjustment data is not changed.
5. Make sure to enter a comment at least on the first cell where the sales adjustment factor was recorded for the information of other users. The comment should have the following information: Shipment number, vessel name, date of adjustment.
6. When Poro stocktake is completed after a shipment, gather the tons and assays, and calculate the difference with the database on "(7) Poro Reweigh vs Database" tab of the EOW/EOM

recon file. The variance must be entered on "Conc Shipment" tab of the MetAcc file columns ED to EJ. This is incorporated in the production adjustment formulas and will affect the site produced, the trucking data and Poro inventory.
Discrepancies of weight and metal between actual reweighed Poro inventory and Poro inventory database will be distributed to Didipio trucking, FPC and FFC to match Poro inventory database with actual reweighed Poro inventory. Please note that this adjustment does not change concentrate shed inventory.

5.5 Quarterly Report

1. After the last month of the quarter reconciliation performed, quarterly report is ready to be produced.
2. On the "Quarterly Report" tab, pick the date of the end of the quarter from the drop-down list on cell O4.
3. Check the production figures if they are correct before releasing the report.

6 RESPONSIBILITIES AND ACCOUNTABILITIES

Role	Responsibility
Metallurgist	Understand and follow this SOP
Senior Metallurgist/ Metallurgical Superintendent	Ensure that this SOP is strictly followed and updating this procedure as needed. Review and approve internal metal reconciliation, review external metal reconciliation.
Process Manager	Review and approve all external metal reconciliation.
Commercial Manager	Review and approve shipment provisional vs smelter out-turn and Poro stocktake reconciliation
General Manager	Review external reconciliation process and communicate to Corporate when required

7 RECORDS AND DOCUMENTATION

1. Records must be filed and kept well to avoid data loss.
2. Back-up of the Metallurgical Accounting file should be saved after the reconciled report is produced.
3. Any changes to the Metallurgical Accounting system should be recorded on the version history.
4. Any small changes to the Metallurgical Accounting system (like adjustment of the formula for certain day) should be highlighted in yellow to enable identification of the un-standard formula.

8 AUDIT AND REVIEW

This procedure shall be reviewed every 2 years as a minimum and/or in any of the following circumstances:

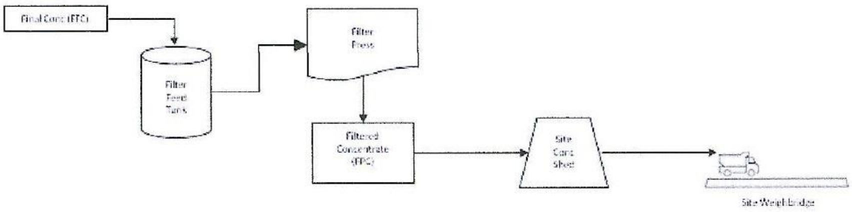
- Following any event or investigation that impacts on this procedure
- Any amendments to the site risk register
- Any amendments to legislation
- When significant change in the process is introduced

9 DEFINITIONS

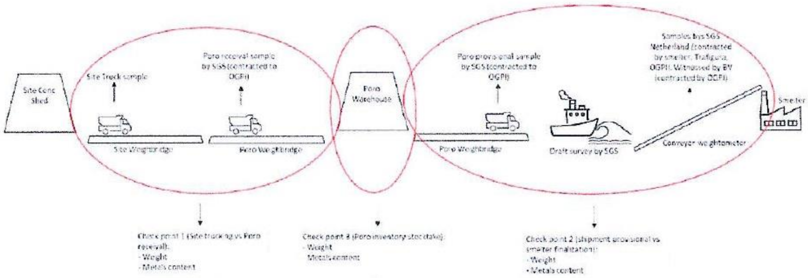
Term	Definition
FFC	Final Flotation Concentrate – final copper concentrate produced
FPC	Filtered Production Concentrate – final concentrate in solid form

10 APPENDIX

10.1 Initial Mass Balancing and Reconciliation Flow Sheet (FFC to FPC to Trucked Copper Concentrate)



10.2 External Reconciliation Flow Sheet (Copper concentrate from Site to the Smelter)



APPENDIX 6.
PROCESS PLANT RISK ANALYSIS

Didipio Process Plant is a plant with medium sized SAG and Ball Mills with single pinion drives. There is a reasonably good condition monitoring performed on the mills and major electrical equipment (e.g., transformers). The temperature differential at both mills' pinion/girth gears were previously higher than normal (especially at the SAG mill), however the situation has improved following maintenance work. The plant has a single process line from the primary crusher to the SAG mill, with a small capacity ore stockpile separating them. There is only one filter press as a final stage in the process, with fire detection and protection above the filter. Concentrate tanks capacity (feeding the filter press) has been increased to two weeks production. The layout of the plant provides good access for the Emergency Response Team.

Corrosion Issues

Corrosion damage amongst the structures and tanks is very unlikely to be a source of loss in the near future.

Conveyor System

The three conveyors CV01, CV06 and CV03 are a critical link at Didipio for all production and are vulnerable to destruction by fire from hot work or a seized bearing event. Good hot work procedure and permitting system are in place, as well with firefighting equipment along the conveyors.

Machinery Breakdown

During normal operation the management of the machinery risks appears good. Generally, the critical spares level appears good, and has significantly improved over the last two years. The exception are the mills girth gear spares. There is no spare girth gears for the SAG and Ball mill, however, OceanaGold has purchased a blank/billet fit for all their girth gears in Philippines and New Zealand. The billet is stored at a reputable manufacturer in Perth, Australia. This would still require minimum six to eight months to be manufactured in case of a major girth gear failure at any of the two mills. 100% teeth Eddy Current crack testing have been carried out in 2019 at both girth gears and a partial testing in 2022-2023. Also, partial magnetic particles cracks testing is being carried out regularly with in-house resources. There are no girth gears teeth cracks, and only small spalling and indentations have been identified so far during condition monitoring testing.

Energy Concentration

As in typical in modern process plants, during normal operation there is a large concentration of energy and risk in the key power plant Motor Control Center (MCC) substation. The switchgear is modern and presents a low level of risk. Cables below and inside surface critical substations have recently been coated with intumescent paint. All critical electrical substations have been also recently fitted with automatic fire suppression systems. A spare for the critical 25MVA incomer transformer has been recently purchased, together with other critical electrical spares.

Fire/Explosion Prevention

The condition of the electrical equipment was good to very good in the substation during observation, where modern switchgears are adopted. The MCC condition and housekeeping is clean. An in-house documented IR thermography program has been implemented. This is an important fire prevention measure and should be done every six months. Smoking is forbidden in the substations and other rooms. No breaches to this policy were observed.

Hot work permits are used as part of the Permit to Work procedures that also include lock-out, confined space and buried services. It was reported that there is good awareness of the use of the permits with JSA being done prior to commencing the less usual tasks. A hot work form has been developed. This form contains sections emphasizing hazards present, personal protection relayed, and isolation required.

Fire Protection

There is a good level of fire protection at the Didipio process plant. Automatic fire suppression has been recently installed inside most of the critical electrical substations on site. However, there is a significant vulnerability to large loss from a fire in the incomer/power station substations, milling area substation, tailings substation and filter press.

APPENDIX 7.
COPPER CONCENTRATE FULL ELEMENTAL COMPOSITION

Element	Unit	Typical	Range
Cu	%	22	21 - 25
Au	g/t	35	25 - 90
Ag	g/t	80	50 - 120
Fe	%	24	22 - 29
S	%	28	24 - 34
SiO_2	%	12	4 - 20
Al_2O3	%	2	0.5 - 5.0
CaO	%	2	0.5 - 3.0
MgO	%	0.9	0.2 - 1.5
Na_2O	%	0.9	0.5 - 1.2
K_2O	%	0.9	0.5 - 1.2
TiO_2	%	0.1	0.05 - 0.2
P_2O_5	%	0.1	0.05 - 0.2
As	ppm	170	50 - 300
Bi	ppm	40	0 - 50
F	ppm	100	0 - 300
Cl	ppm	100	0 - 1000
Hg	ppm	0.8	0.0 - 1.0
Cd	ppm	3	0 - 7
Co	ppm	90	0 - 100
Ni	ppm	4	0 - 100
Mn	ppm	210	150 - 300
Mo	ppm	210	150 - 300
Sn	ppm	0.9	0.0 - 2.0
Sb	ppm	16	0 - 30
Pb	ppm	450	250 - 1000
Zn	ppm	360	300 - 900
Te	ppm	36	0 -100
In	ppm	1	0 - 2
Ga	ppm	5	0 - 20
Cr	ppm	240	0 - 300
Ba	ppm	100	0 - 150
Se	ppm	450	0 - 1000