TAGANITO MINING

June 25, 2024

Atty. Marigel M. Baniqued-Garcia
Head
Issuer Regulation Division
Philippine Stock Exchange
PSE Tower, 5th Avenue cor. 28th Street,
Bonifacio Global City, Taguig City
1634, Metro Manila, Philippines

Re: Submission of Taganito Mining Corporation's Technical Report on the Economic Assessment and Mineral Reserves Estimation of the Taganito Mining Corporation's Nickel Laterite Property under MPSA No. 266-2008-XIII-SMR, Municipality of Claver, Surigao del Norte, Philippines

We are submitting to your good office the abovementioned Technical Report with Data Cut-off Date of December 31, 2022. Also submitted here is the required notarized Accredited Competent Person's Consent Form and Statement for the said Report.

The abovementioned Report is being submitted in anticipation of the approval of the Implementing Rules and Regulations (IRR) of the Philippine Mineral Reporting Code 2020 Edition (PMRC 2020 Edition) which stipulates that a Technical Report be submitted within two (2) years from the date of approval of the IRR. The Report discloses the full extent of the Company's detailed study on the Economic Assessment and Mineral Reserves Estimation following the stipulated outline of the TR-FORM 2 of Annex 1 of the draft IRR entitled "Outline of Technical Report for Economic Assessment and Mineral Reserves Estimation".

Respectfully yours,

TAGANITO MINING CORPORATION

By:

Martin Antonio G. Zamora
President

TAGANITO MINING

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 Philippine Mineral Reporting Code (PMRC) 2020 Edition **("Consent Statement")**

Technical Report Name to be Publicly Released :
PMRC 2020 Edition Compliant Technical Report on the Economic Assessment and Mineral Reserves Estimation of the Taganito Mining Corporation's Nickel Laterite Property under MPSA No. 266-2008-XIII-SMR, Municipality of Claver, Surigao del Norte, Philippines ("Report")

Name of Company releasing the Technical Report :
Taganito Mining Corporation ("Company")

Name of Mineral Deposit to which the Technical Report Refers to :
Taganito Mining Corporation's Nickel Laterite Property

Data Cut-off Date : **December 31,2022**

Report Date : **June 25, 2024**

Consent Statement

I, **Rolando R. Cruz**, confirm that I am the Accredited Competent Person for the Report, and that:

- I am a Professional Regulation Commission (PRC)-registered Mining Engineer, residing at [redacted]

- 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 the Report has been prepared in accordance with the PMRC 2020 Edition and its draft Implementing Rules and Regulations.

- I am an Accredited Competent Person (ACP)-Mining Engineer as defined by the PMRC 2020 Edition, with fifteen (15) years relevant experience in the economic assessment pertaining to the surface mining method applied, and Mineral Reserves estimation of nickeliferous lateritic deposits, as described in the Report, for which I am accepting responsibility.

- I am a member of good standing of the Philippine Society of Mining Engineers.

- I am a member of the Philippine Mineral Reporting Code Committee (PMRCC), which prepared the PMRC 2020 Edition. Also, I am one (1) of two (2) PMRCC representatives to the Committee for Mineral Reserves International Reporting Standards (CRIRSCO).

- I am a full-time employee of Nickel Asia Corporation (NAC), which owns 65% of the Taganito Mining Corporation (TMC).

- I am an incumbent Vice President-Nickel Mining Business at NAC. Concurrently, I am holding the position Senior Vice President and Chief Operating Officer of TMC. I own shares of stocks of NAC as certified by its Corporate Secretary. I do not own any shares of stocks of TMC, as certified by its Corporate Secretary. I am not a holder of tenement rights, nor do I have a landlord-lessee relationship of land and/or infrastructure within the mineral property nor other employment-related relationship which may have a bearing on the integrity of the Report.

- I have been engaged by NAC to prepare the documentation for TMC on which the Report is based to comply with the PMRC 2020 Edition, for the period ended December 31, 2022.

- I assume full responsibility for the whole 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 my role and responsibility in the preparation of the Report, 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 data and information in the supporting documentation related to the economic assessment and Mineral Reserves estimation. Furthermore, I attest to the best of my knowledge, that all technical data and information required to make this Report not misleading, false, inaccurate or incorrect, have been included.

- I have conducted Data Verification and Data Validation of the data disclosed in the Report.

- I have attached to this Consent Statement copies of my relevant Professional Regulation Commission (PRC) professional identification card (PIC), Accredited Competent Person accreditation certificate, Professional Tax Receipt, and the NAC and TMC Secretary's Certificates.

Consent

I consent to the release and public disclosure of the Report/Disclosure and this Consent Statement by the Board of Directors of Taganito Mining Corporation for the purpose of complying with the PMRC 2020 Edition and its draft Implementing Rules and Regulations.

ROLANDO R. CRUZ
Accredited Competent Person

JUN 25 2024
Date

Licensed Mining Engineer

PRC PIC Registration No [redacted]
/ Valid Until April 10, 2027

Philippine Society of Mining Engineers
Professional Representative
Organization of the ACP

ACP Certificate No. [redacted]
[redacted] / Valid Until November 20, 2024

Professional Tax Receipt No. [redacted] /
Issued at Taguig City on March 6, 2024

ACKNOWLEDGEMENT

REPUBLIC OF THE PHILIPPINES)
CITY OF TAGUIG) SS.

BEFORE ME, this _____ day of JUN 25 2024, 20__ personally appeared before me ENGR. ROLANDO R. CRUZ with PRC Professional Identification Card with Registration No [redacted] valid until April 10, 2027, known to me to be the same person who executed this instrument which he/she acknowledged before me as his/her 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. 257;
Page No. 72;
Book No. II;
Series of 2024.

NOTARY PUBLIC

CHARLENE MAE C. DACARA
Appointment No. 102
Notary Public for and in the City of Taguig
Until December 31, 2025
Roll No. 73631
PTR No. A-6161135/16 January 2024/Taguig City
MCLE Compliance No. VII-0010815, Until 14 April 202[illegible]
28th Floor NAC Tower, 32nd Street, BGC, Taguig C[illegible]

Republic of the Philippines
PROFESSIONAL REGULATION COMMISSION
PROFESSIONAL IDENTIFICATION CARD

LAST NAME ▶ CRUZ
FIRST NAME ▶ ROLANDO
MIDDLE NAME
REGISTRATION NO.
REGISTRATION DAT
VALID UNTIL

[redacted]

MINING ENGINEER

[redacted]

23

Professional Regulation Commission
www.prc.gov.ph

CERTIFICATION

23-7142847

This is to certify that the person whose name, photograph, and signature appear herein is a duly registered professional, legally authorized to practice his/her profession with all the rights and privileges appurtenant thereto.

This is to certify further that he/she is a professional in good standing and that his/her certificate of registration/professional license has not been suspended, revoked or withdrawn.

Signature of Professional

CHARITO A. ZAMORA
Chairperson

PHILIPPINE SOCIETY OF MINING ENGINEERS, INC.

CERTIFICATE

To All Men to Whom These Present May Come

GREETINGS!

Be it known that by virtue of the authority vested in the Philippine Society of Mining Engineers, Inc. (PSEM), and pursuant to the Provisions of the Philippine Mineral Reporting Code (PMRC), The PSEM Board of Directors hereby certifies

ENGR. ROLANDO R. CRUZ

as an

ACCREDITED COMPETENT PERSON
(Mining Engineering)
Accreditation Number [redacted]
by virtue of Board Resolution No. 2021-013 Series of 2021 dated November 21, 2021

Given this 21st day of November 2021

DONALD G. ESTRELLA
President

FELIZARDO A. GACAD JR.
Secretary

This Certificate supersedes any previous PSEM-Competent Person Certificate/s issued to the above-named professional and shall expire on November 20, 2024

REPUBLIC OF THE PHILIPPINES
TAGUIG CITY
City Treasurer's Office

Accountable Form No. 51
Revised August, 1994

ORIGINAL

OFFICIAL RECEIPT

Date 05/06/2024 01:56:27 pm

No. [redacted]

Payor CRUZ, ROLANDO ROXAS

NATURE OF COLLECTION	AMOUNT
PTR - MINING ENGINEER	300.00
PENALTY	97.50
TOTAL	397.50

AMOUNT IN WORDS:
THREE HUNDRED NINETY SEVEN PESOS & FIFTY CENTAVOS

Cash Cash
Check
Other

SUBJECT TO ADJUSTMENT IF WARRANTED

Received the Amount Stated Above:

Cashier

Atty. J. Voltaire L. Enriquez
City Treasurer

REPUBLIC OF THE PHILIPPINES)
TAGUIG CITY) S.S.

SECRETARY'S CERTIFICATE

I, **GEORGINA CAROLINA Y. MARTINEZ**, of legal age and with office address at 28th Floor NAC Tower 32nd Street, Bonifacio Global City, Taguig, do hereby depose and state that:

1. I am the duly appointed Assistant Corporate Secretary of **NICKEL ASIA CORPORATION** (the "Corporation"), a corporation organized and existing under the laws of the Philippines, with principal office address at 28th Floor NAC Tower 32nd Street, Bonifacio Global City, Taguig, and as such, I am in custody of corporate records.

2. Based on the records of the Corporation as of 31 December 2023, ENGR. ROLANDO R. CRUZ, Vice President -Nickel Mining Business of the Corporation, is a stockholder of the Corporation. As of 31 December 2023, his directly-held and indirectly held common (NIKL) shares of the Corporation are as follows:

Directly-Held NIKL shares	Indirectly-Held NIKL shares	Total Number of NIKL Shares held (Direct +Indirect)	Percentage to Total Number of Outstanding NIKL Shares
614,952	1,085,962	1,700,914	0.01%

Attached hereto as Annex "A" is a copy of the Corporation's Public Ownership Report as of 31 December 2023 indicating the NIKL shares owned by the Corporation's Directors, Officers (including Engr. Rolando R. Cruz), Substantial Shareholders, and publicly-owned shares.

3. The foregoing is in accordance with the records of the Corporation.

IN WITNESS WHEREOF, I hereby issue this certification this MAR 26 2024 at Taguig City.

GEORGINA CAROLINA Y. MARTINEZ
Assistant Corporate Secretary

SUBSCRIBED AND SWORN to before me this MAR 26 2024 at Taguig City, affiant exhibiting to me her to me her Philippine Passport No [redacted] issued on April 21, 2018 by the Department of Foreign Affairs, Manila; and valid until April 20, 2028.

Doc. No. 363;
Page No. 74;
Book No. I;
Series of 2024.

CARLO C. GUEVARA
Appointment No. 143
Notary Public for and in the City of Taguig
Until December 31, 2024
Roll No. 75204
PTR No. 0205747/ 16 January 2023 / Pasig City
MCLE Compliance No. VII-0007592, until 14 April 2025
28th Floor, NAC Tower, 32nd Street, BGC. Taguig City

REPUBLIC OF THE PHILIPPINES)
TAGUIG CITY) S.S.

SECRETARY'S CERTIFICATE

I, **KATHRYN ROSALIE F. DIONISIO**, of legal age, with office address at 28th Floor NAC Tower 32nd Street, Bonifacio Global City, Taguig, subscribing under oath, hereby certify that:

1. I am duly appointed and incumbent Assistant Corporate Secretary of **TAGANITO MINING CORPORATION**, (the "Corporation") a corporation organized and existing under and in accordance with the laws of the Philippines and with office at 29th Floor NAC Tower, 32nd Street, Bonifacio Global City, Taguig.

2. As such Assistant Corporate Secretary, I am one of those who has custody of the Corporation's corporate records.

3. I certify that based on the records of the Corporation, **ENGR. ROLANDO R. CRUZ,** Senior Vice President- Chief Operating Officer of the Corporation, does not own any shares of stock of the Corporation.

IN WITNESS WHEREOF, I have hereunto set my hand this MAR 26 2024 at Taguig City.

KATHRYN ROSALIE F. DIONISIO
Assistant Corporate Secretary

SUBSCRIBED AND SWORN to before me this MAR 26 2024 at Taguig City, affiant exhibiting to me her Philippine Passport No. [redacted] issued by the DFA Manila on 09 January 2018 and valid until 08 January 2028.

Doc. No. 362
Page No. 74
Book No. I
Series of 2024.

CARLO C. GUEVARA
Appointment No. 143
Notary Public for and in the City of Taguig
Until December 31, 2024
Roll No. 75204
PTR No. 0205747/ 16 January 2023 / Pasig City
MCLE Compliance No. VII-0007592, until 14 April 2025
28th Floor, NAC Tower, 32nd Street, BGC, Taguig City

Technical Report on the Economic Assessment and Mineral Reserves Estimation of Taganito Mining Corporation's Nickel Laterite Property under MPSA No. 266-2008-XIII-SMR, Municipality of Claver, Surigao del Norte, Philippines

by

Rolando R. Cruz
Accredited Competent Person – Mining Engineer
PSEM ACP No. 017-0001803
PRC Mining Engineer Registration No. 0001803

Data Cut-off Date: December 31, 2022
Report Date: June 25, 2024

Executive Summary

The Taganito Mining Corporation (TMC), a 65%-owned Nickel Asia Corporation (NAC) subsidiary, engaged Engr. Rolando R. Cruz, an Accredited Competent Person-Mining Engineer (ACP-Mining Engineer), to prepare the Philippine Mineral Reporting Code for Reporting of Exploration Results, Mineral Resources, and Mineral Reserves (PMRC 2020 Edition) Technical Report (Report) on the Economic Assessment and Mineral Reserves Estimation for the Taganito Nickel Laterite Property (Project), under Mineral Production and Sharing Agreement (MPSA) No. 266-2008-XIII-SMR, located in the Municipality of Claver, Surigao del Norte, Philippines. The Report discloses a PMRC 2020 Edition-compliant document on the updated Mineral Reserves estimates for public disclosure of the property as of Data Cut-off Date, December 31, 2022.

The purpose of this Report is to provide an update on the economic assessment and Mineral Reserves estimation for the Project over its Life-of-Mine Plan for the ongoing mining operations. Likewise, the Report is for the reportorial compliance to the requirements of the Philippine Stock Exchange with respect to the PMRC 2020 Edition in anticipation of the approval of its Implementing Rules and Regulations (IRR) where one of its transitory provisions is that all publicly listed companies are required to submit the appropriate Technical Reports within two (2) years from the date of the approval of the said IRR. This Report presents the latest economic assessment and Mineral Reserves estimate as of Data Cut-off Date, December 31, 2022.

The scope of work included the following activities:

- Gathering, review, and validation of technical data and information provided by TMC related to drill holes, mine production, economic, topography, geology, engineering, other technical and computerized block models;
- Review and validation of the Project's Mineral Resource computerized models which were originally prepared under the supervision of ACP-Geologist Kristine Grace Victoria;
- Review of relevant Modifying Factors pertaining to existing, as well as forecast conditions;
- Generation of the optimized final mine design;
- Generation of the corresponding mine production plans and schedule;
- Spreadsheeting of the attendant economic and financial model; and
- Preparation and completion of the Report on the Project's economic assessment and Mineral Reserves estimation in accordance with the PMRC 2020 Edition.

The Project is located within the municipality of Claver in the province of Surigao del Norte on the island of Mindanao. It is part of the Surigao Mineral Reservation in the northeastern region of Mindanao in the Philippines.

TMC was granted an exploration permit by the Philippine Government on March 13, 1986, for 5,447 hectares within the Surigao Mineral Reservation Parcel I in the municipality of Claver, Surigao del Norte. Test pitting, trenching, and exploration drilling were conducted with the assistance from Pacific Metals Co., Ltd., and NAC's operating companies Hinatuan

Mining Corporation, and Rio Tuba Nickel Mining Corporation. The delineation of substantial Mineral Reserves allowed the exploration permit to be converted to an operating contract on February 14, 1989 with the Government for continued exploration, development, and utilization of the nickel laterite deposits for a period of twenty-five (25) years.

On June 18, 2009, the operating contract was converted to MPSA 266-2008-XIII-SMR in accordance with the Philippine Mining Act of 1995. The MPSA has a term of twenty-five (25) years and covers a total area of 4,862.711 hectares. In the same year, TMC and its holding company NAC, and Sumitomo Metal Mining Co. Ltd (SMMC) established the Taganito HPAL Nickel Corporation (THPAL) and started the construction of the HPAL plant. The HPAL plant was commissioned in 2013, and TMC expanded the Project's limonite production to supply the plant.

The Project has been supplying nickel ore to Chinese and Japanese customers and to the THPAL. In the last ten (10) years, the Project has sold about 78.4 million wet metric tons (mWMT) of ore materials, with revenues of about PHP 76.8 billion (USD 1.6 billion equivalent), and net income of about PHP 27.2 billion (USD 0.5 billion equivalent). As of year-end 2022, the Project has sold over 92.2 mWMT of ore materials since it started its operations.

For this Report, TMC provided all available pertinent company data and results of exploration, development, and mining programs carried out over the years on the tenement area. A specific database has been compiled, containing such data and information pertaining to the mentioned programs, as well as relevant published technical data, and observation reports from the site visits made by the team of the ACP. The relevant contents of the database basically served as the Modifying Factors used in the Mineral Reserves estimation, from where the mine design, the annual mine production plans and schedules, and the financial model of the Project emanated.

As of December 31, 2022, the Project has a remaining Mineral Reserves of about 65 mWMT (or 41.6 mDMT) of limonite with grades of 1.01% nickel (Ni) and 46.89% iron (Fe), and about 88.3 mWMT (or 60 mDMT) of saprolite with grades of 1.45% Ni and 12.08% Fe.

The TMC's Mineral Reserves for the Project as of December 31, 2022 are as follows:

MINERAL RESERVES								
Material	**Reserve Category**	**mWMT**	**mDMT**	**%Ni**	**%Fe**	**% Mg**	**%Co**	**Contained Ni (kT)**
Limonite	Proved & Probable	65.0	41.6	1.01	46.89	0.95	0.10	420
Saprolite	Proved & Probable	88.3	60.0	1.45	12.08			871
	Total	**153.3**	**101.6**	**1.26**	**26.84**			**1,291**

Note: mWMT is million wet metric tons; mDMT is million dry metric tons; kT is kilo tonnes

The estimated remaining mine life is about nineteen (19) years, i.e., until 2041. Furthermore, the estimated Net Present Value (NPV) of the Project is about PHP 29.6 billion (USD 519 million equivalent) at a 10 % discount rate.

The ACP attests that the Report is compliant with the PMRC 2020 Edition, and the objectives of the Report have been met. The processes and procedures used to conduct the Project's economic assessment and Mineral Reserves estimation, as well as the format and substance of the Report, are compliant with the standards set forth in the PMRC 2020 Edition and its draft Implementing Rules and Regulations. The PMRC 2020 Edition was patterned from the International Reporting Template 2019 Edition of the Committee for Mineral Reserves International Reporting Standards (CRIRSCO) and the 2012 Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves of the Australasian Joint Ore Reserves Committee (JORC). Thus, the Project's compliance with the PMRC 2020 Edition presupposes its compliance with current international reporting standards.

The ACP strongly recommends that the yearly mine production plans and schedules, as stated in this Report, be followed and implemented closely and as practicable, to yield the projected technical and economic metrics. Also, a regimen of tonnage and grade reconciliation should be regularly undertaken, preferably on a yearly basis, to generate the critical data needed in ensuring a proper correlation between the Mineral Resources models and the Mineral Reserves estimation.

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1. Introduction

1.1 Purpose and Scope of Work

The Taganito Mining Corporation (TMC), a 65%-owned Nickel Asia Corporation (NAC) subsidiary, engaged Engr. Rolando R. Cruz, an Accredited Competent Person-Mining Engineer (ACP-Mining Engineer), to prepare the Philippine Mineral Reporting Code 2020 Edition for Reporting of Exploration Results, Mineral Resources, and Mineral Reserves (PMRC 2020 Edition) Technical Report (Report) on the Economic Assessment and Mineral Reserves Estimation of the Taganito Nickel Laterite Property (Project), under Mineral Production and Sharing Agreement (MPSA) No. 266-2008-XIII-SMR, located in the Municipality of Claver, Surigao del Norte, Philippines. The Report discloses a PMRC 2020 Edition-compliant document on the updated Mineral Reserves estimates for public disclosure of the Property as of Data Cut-off Date, December 31, 2022.

The purpose of this Report is to provide an update on the economic assessment and Mineral Reserves estimation for the Project over its Life-of-Mine Plan (LoMP) for the ongoing mining operations. Likewise, the Report is for the reportorial compliance to the requirements of the Philippine Stock Exchange (PSE) with respect to the PMRC 2020 Edition in anticipation of the approval of its Implementing Rules and Regulations (IRR) where one of its transitory provisions is that all publicly listed companies are required to submit the appropriate Technical Reports within two (2) years from the date of the approval of the said IRR. This Report presents the latest economic assessment and Mineral Reserves estimate as of Data Cut-off Date, December 31, 2022.

The scope of work included the following activities:

- Gathering, review, and validation of technical data provided by the Project Site Management, which include but not limited to, the assumptions and parameters related to revenues, costs, qualities, and quantities.
- Processing of those data to convert to useful information and inputs.
- Review, checking, and validation of the Project's Mineral Resource computerized model(s) which was originally prepared under the supervision of Accredited Competent Person (ACP)-Geologist Kristine Grace C. Victoria.
- Review of information sourced from other groups pertaining to existing and forecasted market, environmental, social, and governance conditions.
- Generation of optimized mine design, annual production plans, and annual production schedules using cutting-edge mining software packages.
- Spreadsheeting and economic modelling of the resultant outputs.
- Preparation and completion of the Report on the Project's economic assessment and mineral reserves estimation in accordance with the PMRC 2020 Edition.

The data gathering and preparation of this Report commenced in October 2022 and was made possible through the assistance of personnel from the TMC mine site and the NAC Head Office (HO). Periodic mine visits were made by the ACP in his capacity as a key officer of TMC for this Report.

This Report complies, specifically with the guidelines and format of the PMRC 2020 Edition and its draft IRR which emphasizes transparency, materiality, and competence. It documents the detailed steps undertaken to produce the Mineral Reserves estimate. All relevant information and/or details of significance necessary to arrive at the reserve estimates are considered, and all the applicable sections of the PMRC 2020 Edition, especially its *Checklist of Assessment and Reporting Criteria* (also referred to as *Table 1*), have been considered. Other relevant tests that are consistent with current best practices are mentioned in the Report, to provide any interested party with the opportunity to check the adequacy and acceptability of the estimates herein.

Other information deemed useful in understanding and further supporting the discussions in this Report are placed in the Appendices. Applicable provisions of *Table 1* of the PMRC 2020 Edition are provided in Appendix 1 to ensure that all criteria and required information by the PMRC 2020 Edition are met. For easy reference, Appendix 2 contain the list of acronyms used in this Report. Appendix 3 contain the various flowcharts such as sample preparation process, data validation, manual crushing process, and extraction process flow for limonite and saprolite. Appendix 4 contain the mine production plans and Section. Appendix 5 lists the location of files used in the Mineral Reserves estimation while Appendix 6 provides the Net Present Value (NPV) analysis spreadsheet. The Report also includes references to relevant sections of the Report to easily locate more detailed discussions.

1.2 Country Profile

Not discussed as this is optional when the Mineral Property is in the Philippines.

1.3 Location of the Mineral Property and Accessibility

The Project is located within the municipality of Claver in the province of Surigao del Norte on the island of Mindanao. It is covered by Mineral Production Sharing Agreement (MPSA) No. 266-2008-XIII-SMR, with an area of 4,862.71 hectares in size and is located within the geographical coordinates 9°29'00" – 9°33'00" north latitude and 125°47'00" – 125°53'00" east longitude. In the Philippine Reference System of 1992 (PRS92) at Zone 5, the property lies from 1048713 to 1056060 Northings and 585999 to 596997 Eastings.

The Project mine can be accessed from either Surigao City or Butuan City, both of which are serviced by commercial flights from Manila. From Surigao City, the Project can be reached by an hour and 20-minute drive on paved roads. The Project is a two-and-a-half-hour drive away from Butuan City. Figure 1 shows the location of the Project.

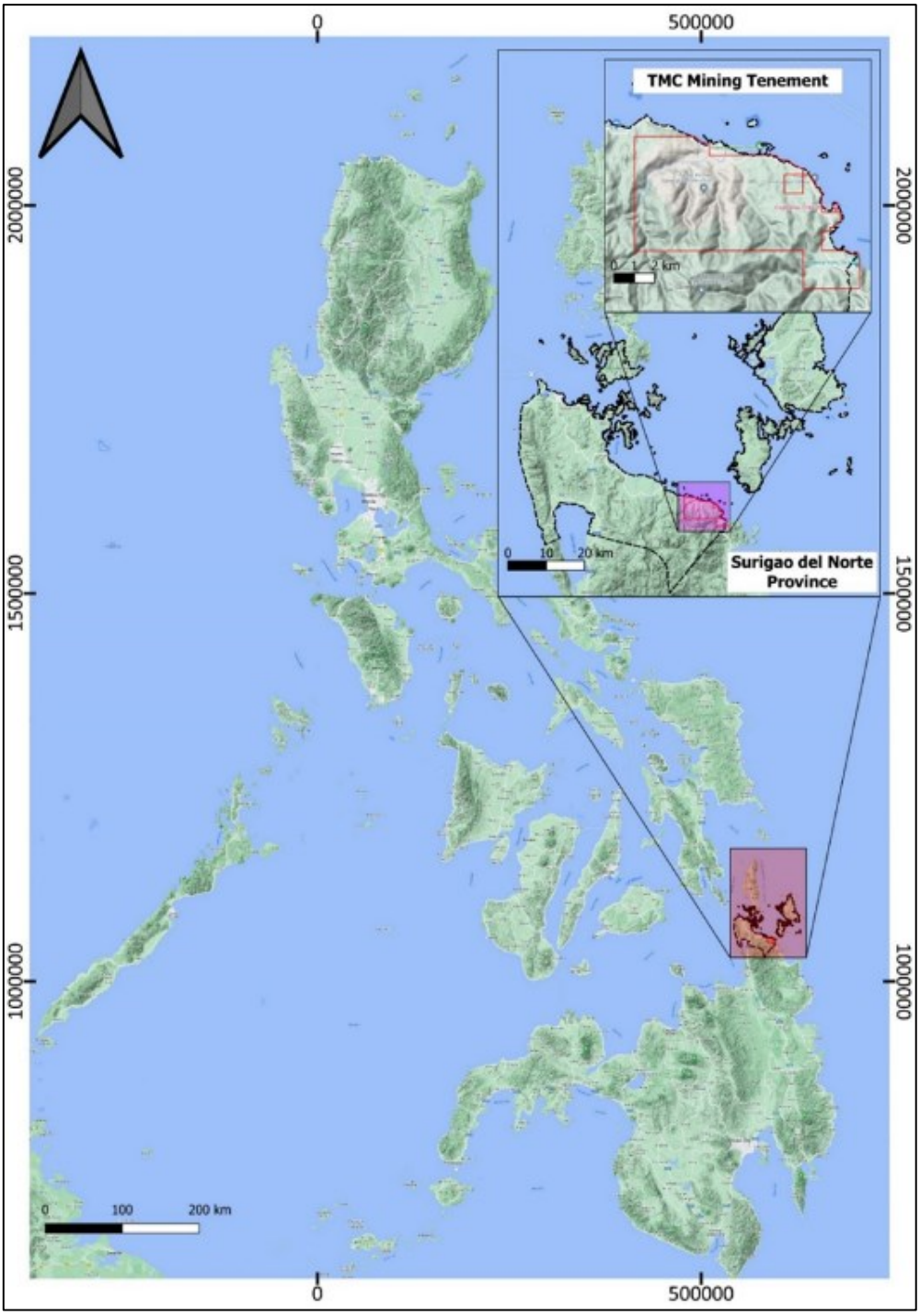


Figure 1. Location of Taganito Nickel Laterite Property

1.4 Property Description and Adjacent Properties

The Taganito Nickel Laterite Property is situated within the Surigao Mineral Reservation (SMR) Parcel 1, in the barangays of Taganito, Urbiztondo, Hayanggabon, and Cagdianao in the municipality of Claver, province of Surigao del Norte.

The technical description and the location of the Project's MPSA area are shown in Figure 2.

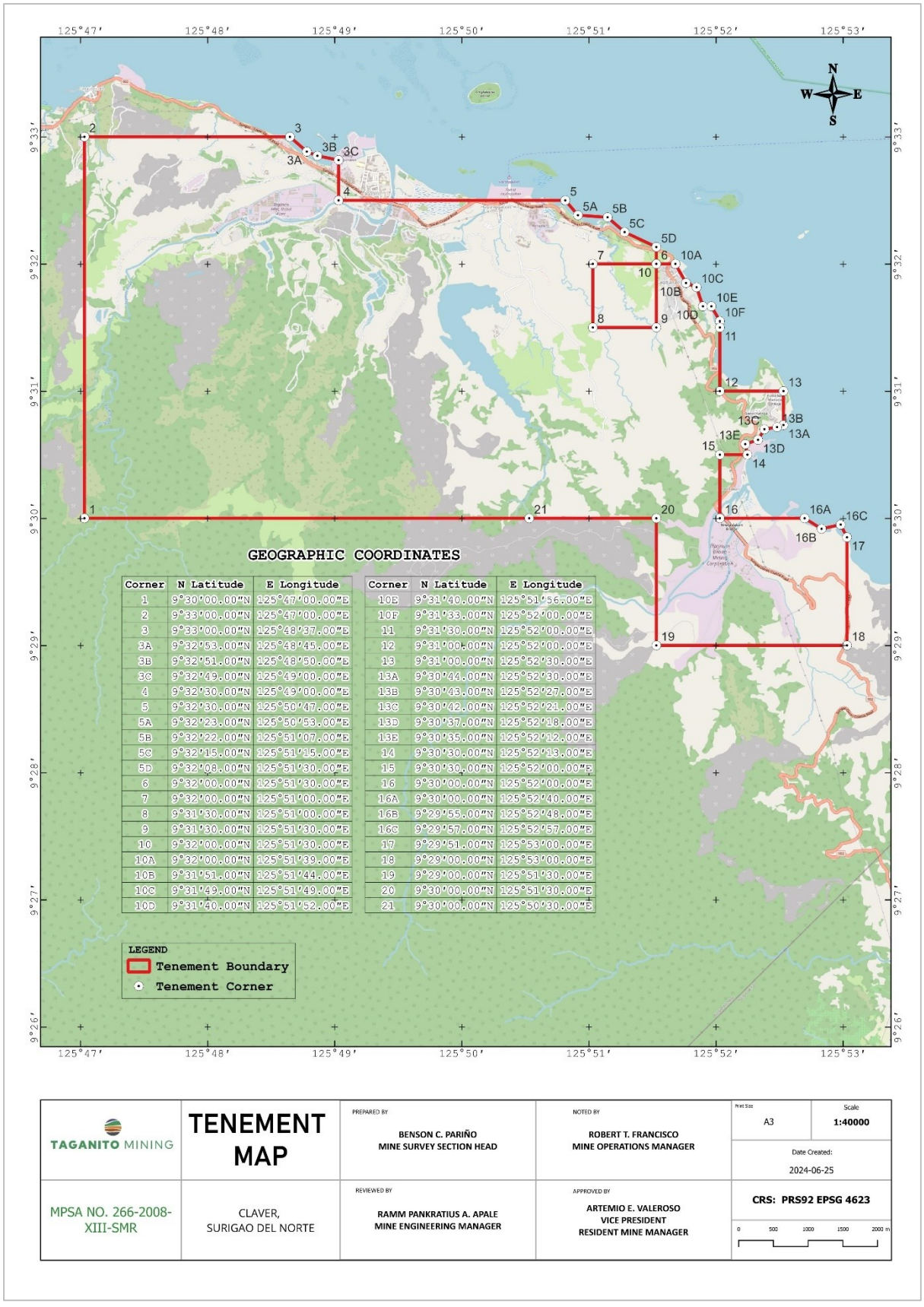


Figure 2. Geographical coordinates and MPSA 266-2008-XIII-SMR location map

The Project faces the Hinatuan Passage of the Philippine Sea in the north (refer to Figure 3). At the southeast is the town of Carrascal in Surigao del Sur while approximately ten (10) kilometers (kms) west-northwest is the commercial center and town of Claver. Further south of the property is the peak of Mt. Legaspi, with an elevation of 1170 meters above mean sea level (MASL). The mining area is approximately five (5) kms away from the nearest residential areas of the barangays which are concentrated on the coastal areas.

Adjacent to the Project are tenements with operating nickel laterite mines of Adnama Mining Resources, Inc (AMRI) in the west and Platinum Group of Metals Corporation (PGMC) in the south (refer to Figure 3). Southwest of the property is the tenement of Kepha Mining Exploration Limited Co. (KMELC).

TMC has been in commercial operation for the last thirty-three (33) years and is one of the largest nickel Direct Shipping Ore (DSO) producers in the country. TMC's recent Environmental Compliance Certificate (ECC) under reference no. ECC#1-CO-1304-0013 covers the ore extraction for existing and proposed expansion, conveyor system and additional wharf project. The ECC stipulates a maximum annual extraction rate of twelve (12) million wet metric tons (mWMT). In the thirty-seven (37) years of TMC's combined exploration and operations, the MPSA area has been mapped all throughout and 21,532 drill holes have been drilled covering almost all potential areas in the MPSA. The MPSA area is about 90% covered by ultramafic rocks and its derivatives with the remaining area covered by sedimentary rocks.

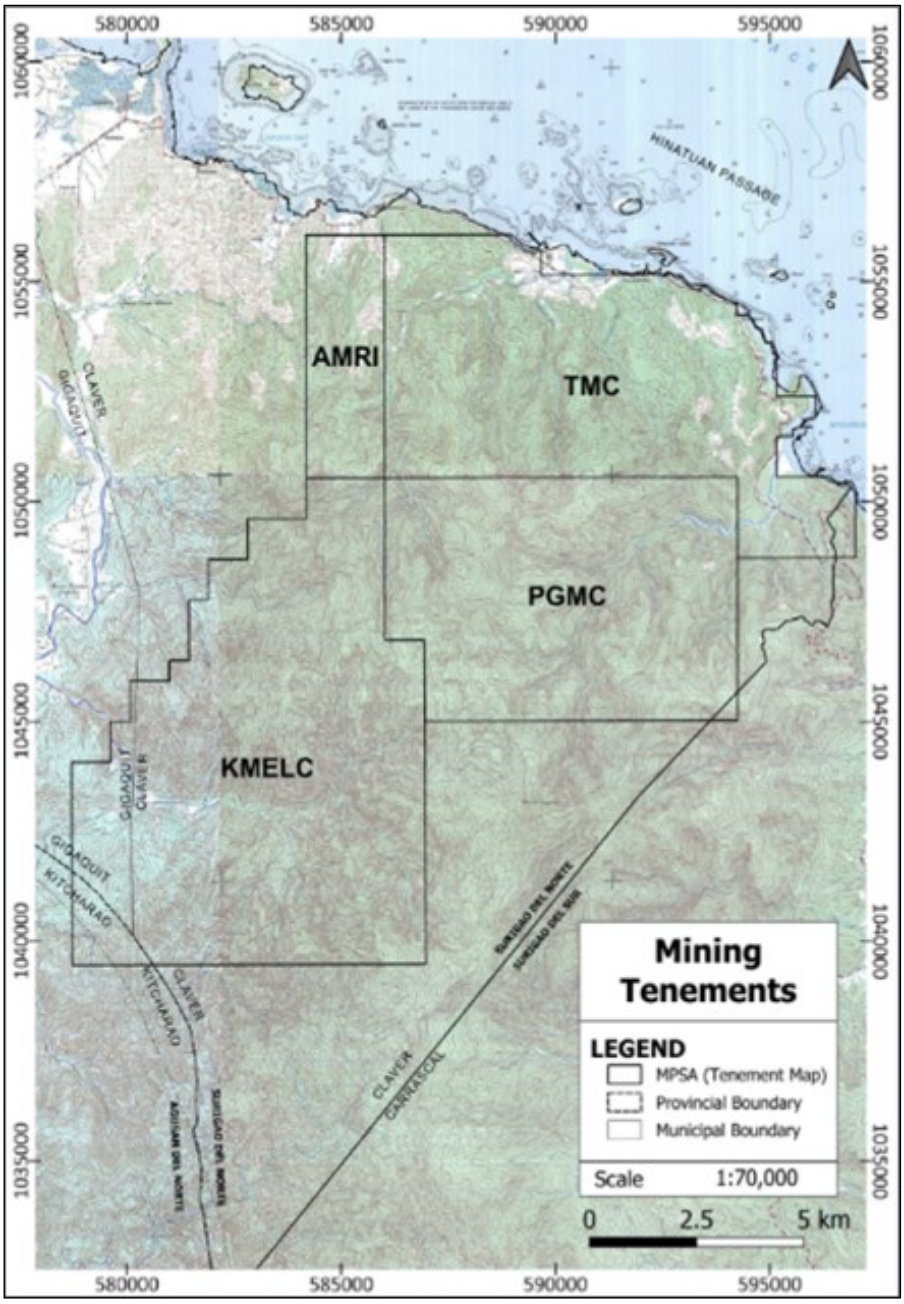


Figure 3. Mining tenements map of TMC and adjacent companies

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

1.5.1 The Accredited Competent Person

Engr. Rolando R. Cruz is a registered Mining Engineer with Professional Registration Commission (PRC) Registration No. 0001803 and an ACP-Mining Engineer with Philippine Society of Mining Engineers (PSEM) EM-ACP No. 018-0001803 as defined in the PMRC 2020 Edition and its draft IRR for Reporting Mineral Reserves. He is a member of the PSEM with forty (40) years of experience in the mining industry. He has fifteen (15) years of relevant experience in nickeliferous lateritic mining operations. He is a member of the Philippine

Mineral Reporting Code Committee (PMRCC) which prepared the PMRC 2020 Edition. He is one of two (2) PMRCC representatives to the Committee for Mineral Reserves International Reporting Standards (CRIRSCO), which is an international body whose members comprise National Reporting Organizations (NROs) that are responsible for developing mineral reporting codes, standards, and guidelines.

Engr. Cruz is presently the Vice President-Nickel Mining Business in NAC and is concurrently the Senior Vice President and Chief Operating Officer of both the Cagdianao Mining Corporation and the TMC.

1.5.2 Key Technical Staff and other Experts

This Report contains data, information, and other inputs from various sources and personalities who contributed essentially to its completion, namely:

1. Mr. Carlo A. Tac-an, is an independent consultant whose expertise is in using the generalized mining package, Geovia Surpac, and the open pit mine optimization software, Whittle. Mr. Tac-an performed multiple iteration of computer runs, leading to the generation of the optimum mine design with the attendant mine production yearly plans and schedules. Subsequently, the figures generated were used as bases in creating the spreadsheet of the economic model. His outputs basically served as the foundation of the more significant contents of the Report, among those are the tonnages, grades, revenues, costs, incomes, and cashflows.

2. Mr. Matthew F. Fabic, is a consultant whose main line of expertise is in computer programming and in using the generalized mining package, Geovia Surpac. He largely used Surpac to validate, check, and review the attributes of the computerized Mineral Resource block models to make sure that the information therein are appropriate for further use for purposes of Mineral Reserves estimation. Since the originally available Mineral Resource models of the Taganito deposits were organized separately per Ridge, Mr. Fabic created mega-block models, which consolidated all the individual models of each of the six (6) Ridges. Subsequently, Mr. Fabic created and prepared the single economic block model which was specifically used in the Whittle pit optimization.

3. Mr. Ciceron A. Angeles, Jr. is a PRC-registered geologist and an ACP-Geologist. Mr. Angeles is the past Chairperson of the PMRCC and is one of two (2) PMRCC representatives to the CRIRSCO. His efforts as the prime mover of the PMRC Committee contributed largely to the acceptance of the country's application for membership to the CRIRSCO. He has more than forty (40) years of work experience in the field of geology in the Philippines and abroad. Mr. Angeles is involved in the preparation, editing, and proofreading of the contents of this Report as an independent consultant.

4. Engr. Leonardo S. Marcelo, Jr. is PRC-registered geologist and mining engineer, and an ACP-GeologistMr. Marcelo has over thirty (30) years of experience working in the Philippine mining industry. He is presently an alternate member of the PMRCC. He

assisted Mr. Angeles in the preparation, editing, and proofreading of the contents of this Report, in his capacity as an independent consultant.

5. Mr. Samuel F. Declaro is a PRC-registered geologist and an ACP-Geologist. He has over forty (40) years of combined experience in the mining industry covering various facets of exploration, development, and mining geology. He has extensive experience in development and mining projects where he participated in the preparation of technical reports on Mineral Resources and Mineral Reserves compliant with the PMRC and Australia's JORC. He assisted Mr. Angeles in the preparation, editing, and proofreading of the contents of in this Report as an independent consultant.

6. Mr. Basil Eric Rabi, Data and Contracts Management Manager of TMC, provided the data and information from such functions as mine engineering, environmental management, social development, mechanical support, and other technical aspects which served as bases in the definition of the Modifying Factors used in the Mineral Reserve estimation.

7. TMC technical personnel Engr. Bea Angeli Tuazon-Malicay, Engr. Phillip Pacot Jr., and Engr. Herald Joy Dela Cruz, are all PRC-registered mining engineers who, together with Mr. Roy Boado, contributed to the operationalization and volumetrics of the LoMP. They also provided related technical write-ups.

8. Engr. Ramm Pankratius Apale is a PRC-registered mining engineer and is the Mine Engineering Manager of TMC. He was heavily involved in the review and double-checking of the calculations in the worksheets used in the Report.

9. Engr. Robert Francisco is a PRC-registered mining engineer and is the Operations Manager of TMC. He reviewed and subsequently supplied some additions to improve the write-up on the Mineral Reserves portion of the Report.

10. Mr. Mark Anthony Tuangco is a Certified Public Accountant and is the incumbent Finance Assistant Manager of TMC. He prepared and provided the balance sheet and cashflow statements which were used to cross check and review the NPV analysis spreadsheet of the Report.

11. Engr. Artemio Valeroso and Mr. Jessie Payuyo, Vice President-Resident Mine Manager of the Taganito mine site and Assistant Vice President-Mine Comptroller of TMC, respectively, who provided the necessary institutional knowledge in matters pertaining to historical production and economic performances. Likewise, they provided logistical, financial, and manpower support during the numerous site visits of various personnel in relation to the preparation of this Report.

12. Mr. Marcial E. Encina is a PRC-registered geologist and is the Geology Department Manager of TMC. He provided information and the raw data during data validation and data verification phases of this Report.

13. Ms. Kristine Grace C. Victoria is a PRC-registered geologist and an ACP-Geologist. She is the Assistant Vice President for Geology at NAC. Ms. Victoria signed off on the PMRC 2020 Technical Report on Exploration Results and Mineral Resources Estimation (Victoria, 2024), the computerized block models of which were used as one of the primary bases in the preparation of this Report.

14. Ms. Mary Lyndsy C. Bartolome and Ms. Renee M. Daza, are both employed at NAC as Senior Manager and Technical Assistant, respectively. They performed much of the formatting, reviewing, editing, and final proofreading of this Report to ensure its consistency and improve its readability.

1.6 Disclaimer

This Report was prepared using the data acquired from the Project which included results of previous exploration programs, current drilling campaigns, historical mine production and economic information, as well as present and projected assumptions and parameters. The primary sources of information were in the form of digital files, databases, maps, and reports prepared by or under the supervision of geologists and mining engineers of the Project. The undersigned ACP also relied on archived information and works conducted by previous employees and consultants hired for the Project.

The ACP reviewed the data diligently and carried out reproducibility checks. However, it was not possible to independently confirm all the supplied information due to time limitation. While all due care was exercised in the validation process, the accuracy of the formulated conclusions in the Report relied entirely on the veracity and completeness of the supplied and available data.

The ACP does not accept responsibility for any errors or omissions in the information provided and does not accept any consequential liability arising from commercial decisions or actions resulting from them.

The contributions of professionals or experts in their own fields are hereby acknowledged as mentioned in relevant sections of this Report.

Other information, such as market forecasts, was obtained from reputable sources (see Section 14. References). It should be noted, however, that forecasts made by such reputable sources were based on information available at the time of preparation. Variation from actual conditions is normal with forecasted data and could be attributed to numerous factors that are beyond the control of the proponent or the scope of the study.

The list of reports and scientific papers used in this Report is given in the References section.

1.7 Units of Measure, Currency, and Foreign Exchange Rates

The units of measurement used in this Report are all in the metric system, unless stated otherwise. Tonnages are reported as metric tons (wet and dry), and quality is expressed in

percentages (%). Survey data are based on the Philippine Reference System of 1992 (PRS92) in Zone 5. Elevations are reported in meters above mean sea level (MASL).

As for the currencies used in this Report, there are only two: the Philippine peso (PHP) and the US dollar (USD). The exchange rate used in this study — to better relay the value of the numbers to an international audience, from PHP to USD — is an assumption based on the fluctuating exchange rate from PHP 55.00/USD to PHP 58.00/USD at the time of writing. The exchange rate chosen for this Report is PHP 57.00/USD.

1.8 Previous Works

Refer to Section 1.8 of the PMRC 2020 Technical Report on the Exploration Results and Mineral Resources Estimation of TMC's Taganito Nickel Laterite Property by Victoria (2024) for this section.

1.9 Previous Mineral Reserve Estimates

Table 1 below shows the PMRC 2007-compliant Mineral Reserve estimates as reported in NAC's Annual Reports from 2017-2021.

Table 1. Mineral Reserves in TMC's Nickel Laterite Property from 2017-2021

TMC Mineral Reserve Estimates												
Year	Saprolite				Limonite				Total			
	mWMT	mDMT	%Ni	%Fe	mWMT	mDMT	%Ni	%Fe	mWMT	mDMT	%Ni	%Fe
2017	54.9	38.3	1.48	10.00	121.6	81.5	1.05	46.01	176.5	119.8	1.18	34.81
2018	53.0	37.0	1.48	10.18	109.0	73.0	1.06	45.70	162.0	110.0	1.20	34.07
2019	50.5	35.1	1.46	10.40	106.2	71.2	1.03	45.12	156.7	106.3	1.17	33.94
2020	36.8	25.6	1.47	11.70	88.3	59.1	1.03	45.75	125.1	84.7	1.16	35.74
2021	35.9	25.0	1.42	11.64	80.1	53.8	1.00	47.31	116.0	78.8	1.13	36.27

Note: mWMT is million wet metric tons; mDMT is million dry metric tons; kT is kilo tonnes

2. Tenement and Mineral Rights

Refer to Section 2 of the PMRC 2020 Technical Report on the Exploration Results and Mineral Resources Estimation of TMC's Taganito Nickel Laterite Property by Victoria (2024) for this section.

TMC's legal rights at the Project have evolved from an exploration permit to the latest operating contract, an MPSA. To date, TMC is 65% owned by NAC, a public company listed on the PSE, 33% by Pacific Metals Co., Ltd. (PAMCO), and 1.5% by Sojitz Corporation. The latter two (2) companies are Japanese companies. The remaining 0.5% is owned by various individual stockholders.

3. Geographical and Environmental Features

Refer to Section 3 of the PMRC 2020 Technical Report on the Exploration Results and Mineral Resources Estimation of TMC's Taganito Nickel Laterite Property by Victoria (2024) for this section.

4. History of Production

Refer to Section 4 of the PMRC 2020 Technical Report on the Exploration Results and Mineral Resources Estimation of TMC's Taganito Nickel Laterite Property by Victoria (2024) for this section.

5. Sustainability Considerations

Refer to Section 5 of the PMRC 2020 Technical Report on the Exploration Results and Mineral Resources Estimation of TMC's Taganito Nickel Laterite Property by Victoria (2024) for this section.

6. Geological Setting

The following discussions were extracted and summarized from Section 6 of the PMRC 2020 Technical Report on Exploration Results and Mineral Resources Estimation of TMC's Taganito Nickel Laterite Property by Victoria (2024).

6.1 Regional Geology

The Project is located within the Dinagat Ophiolite Complex (DOC) situated in the Eastern Bicol-Eastern Mindanao Ophiolite Belt. The DOC in the Dinagat group of Islands and Eastern Surigao comprises a suite of ultramafic rocks, namely: peridotite (harzburgite), lenses of dunite and chromitites, alternating layers of orthopyroxenites, harzburgites, and dunites, massive and isotropic to layered gabbro, sheeted diabase dike/sill complex, and pillow basalt lavas with basalt breccias (Louca, 1995; Dimalanta et al, 2020). It is believed to be of Late Cretaceous age. Numerous metallurgical grade podiform chromite and nickel laterite deposits are associated with the ophiolite, straddling the whole of the Dinagat Group of Islands, Hinatuan Island, the municipalities of Gigaquit and Claver of Surigao del Norte, the municipalities of Cantilan, Carrascal and Madrid, province of Surigao del Sur, and Jabonga and Tubay municipalities in Agusan del Norte. A detailed discussion of the regional geology was made by Ruelo (2022) in Victoria (2024).

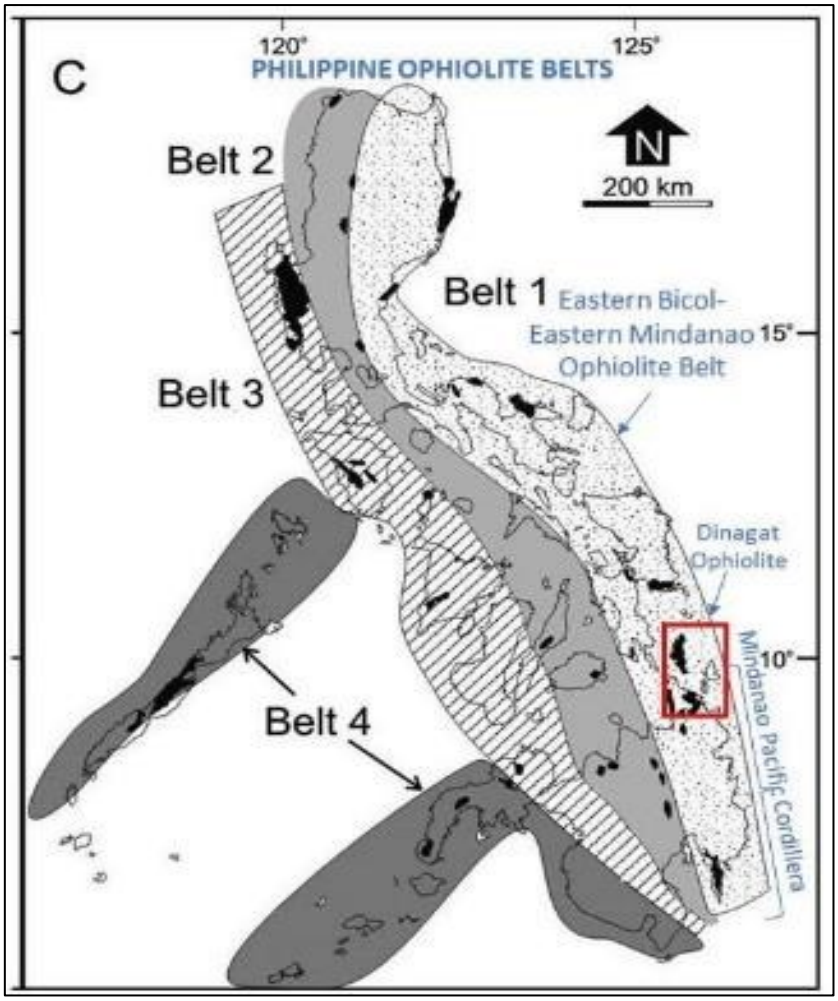


Figure 4. The Dinagat Ophiolite in the Eastern Bicol-Eastern Mindanao Ophiolite Belt

6.2 Mineral Property Geology

The area is predominantly underlain by the ultramafic rocks of the DOC and its supergene product, the nickel laterite, consisting of limonite, saprolite, and bedrock zones (see Figure 5. Geologic map). Sedimentary rocks occur at a portion of the Hayanggabon Ridge and near the coast at the northeast (NE) portion. Limestone has been observed at the southwestern margins of the property. Alluvium occurs proximal to rivers at low elevations near the coast.

The ultramafic rocks are exposed in the steeper slopes of ridges and creeks. They are exposed in the mining areas as the bedrock zone after the limonite and saprolite zones of the nickel laterite. The limonite of the nickel laterite is the most extremely weathered portion of the ultramafic rocks. It occurs in TMC within submeter of overburden and is predominantly clay to sand in size with occasional cobbles and boulders. It is grossly reddish to yellowish-brown in color betraying its high iron content. The thickness of the limonite at TMC ranges from one (1) to fifteen (15) m. The contact of the saprolite with the limonite is generally irregular with some depression/indentation penetrating the adjacent zone along the fractures and faults. The saprolite has a generally lighter brown color with tinges of green from the elevated nickel content. Size is variable in occurrence from clay- to sand-sized particles with typical soft decomposed cobbles and boulders with a harder core. The contact of the saprolite zone with

the underlying bedrock zone is, likewise, irregular. Photo 1 presents a slice along the nickel laterite with the overlying submeter overburden and the underlying ultramafic bedrock. The thickness of the saprolite at TMC ranges from one (1) to twelve (12) meters.

There are two (2) recognized faults in the Project (Figure 5). The Taga Fault is located at the northwest (NW) portion of the Property and defines the southeastern margins of the Urbiztondo Ridge. This structure is a high angle dextral strike slip fault trending N60°E and is traceable to the west by its topographic expression. Exposed at the bank of Taganito River, the fault scarp is observed to be highly serpentinized with extensive development of talc and chlorite. The second fault defines the boundary between the Taga Ridge and Hayanggabon Ridge at the central portion of the tenement. The strike is approximately N37°W dipping 45°E.

A detailed discussion of the geology of the Taganito Nickel Laterite Property is presented in Victoria (2024).

Photo 1. Nickel laterite exposure in TMC and its corresponding profile

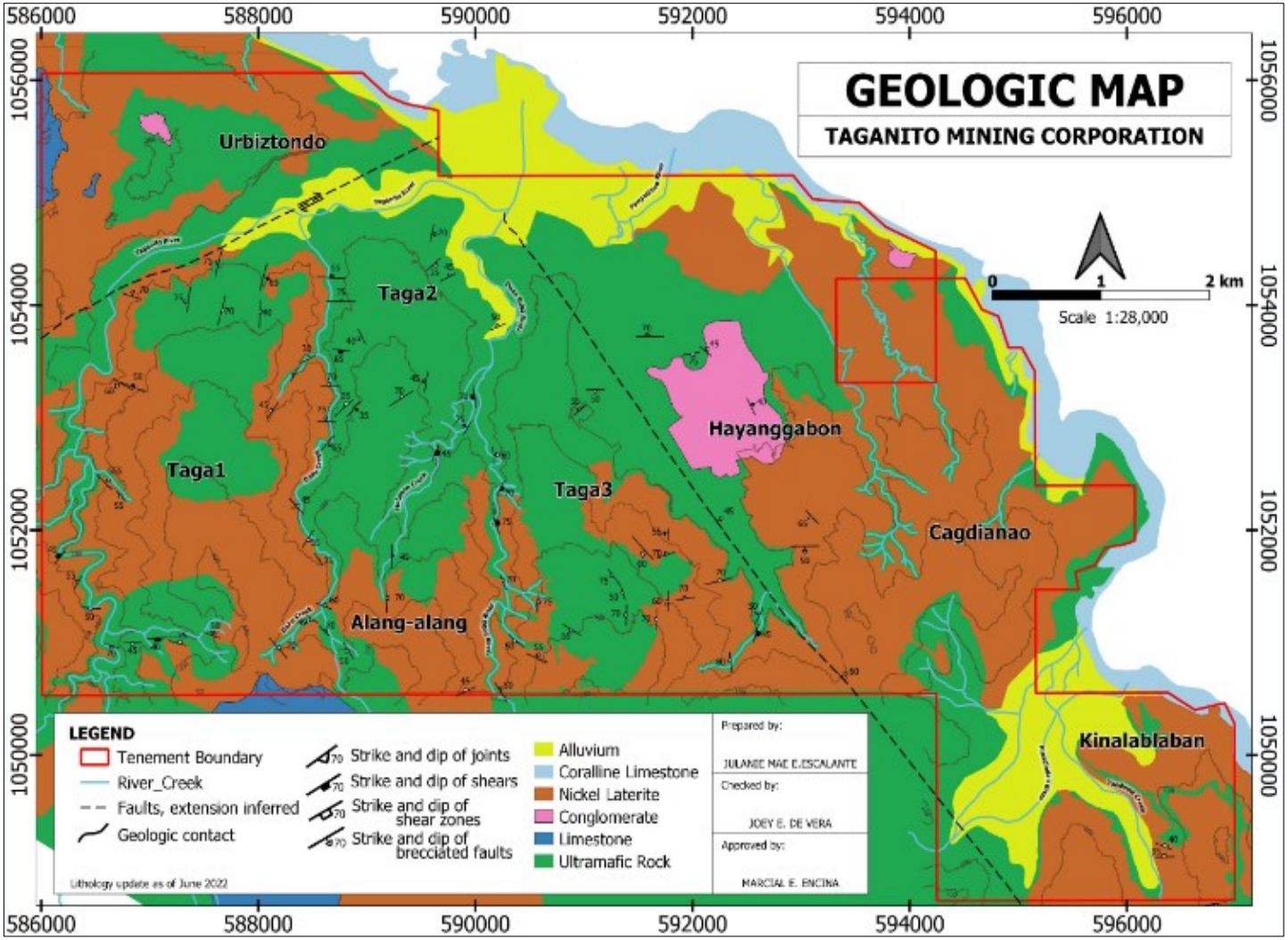


Figure 5. Geologic map of Taganito Nickel Laterite Property

7. Mineralization in the Mineral Property

The discussions under this section were extracted and summarized from Section 7 of Technical Report on Exploration Results and Mineral Resources Estimation of TMC's Taganito Nickel Laterite Property by Victoria (2024).

7.1 Mineral Deposit Type

The mineral deposits at the Project are typical nickel laterite deposits. They belong to the class of mineral deposits related to weathering including supergene enrichment (Guilbert & Park, 1986). The ultramafic rocks which carried sub-economic nickel and iron contents—mainly as ionic replacements of magnesium (Mg) and iron (Fe) in the olivine and pyroxene minerals—were subjected to supergene processes related to the laterization (soil development under a tropical climate) on relatively flat to gently sloping terrain over a long period of time producing supergene enrichment of Ni and Fe up to economic grades under the existing metallurgical processing technologies. Figure 6 presents a schematic laterite profile with approximate analysis of Ni, Co, Fe, and MgO.

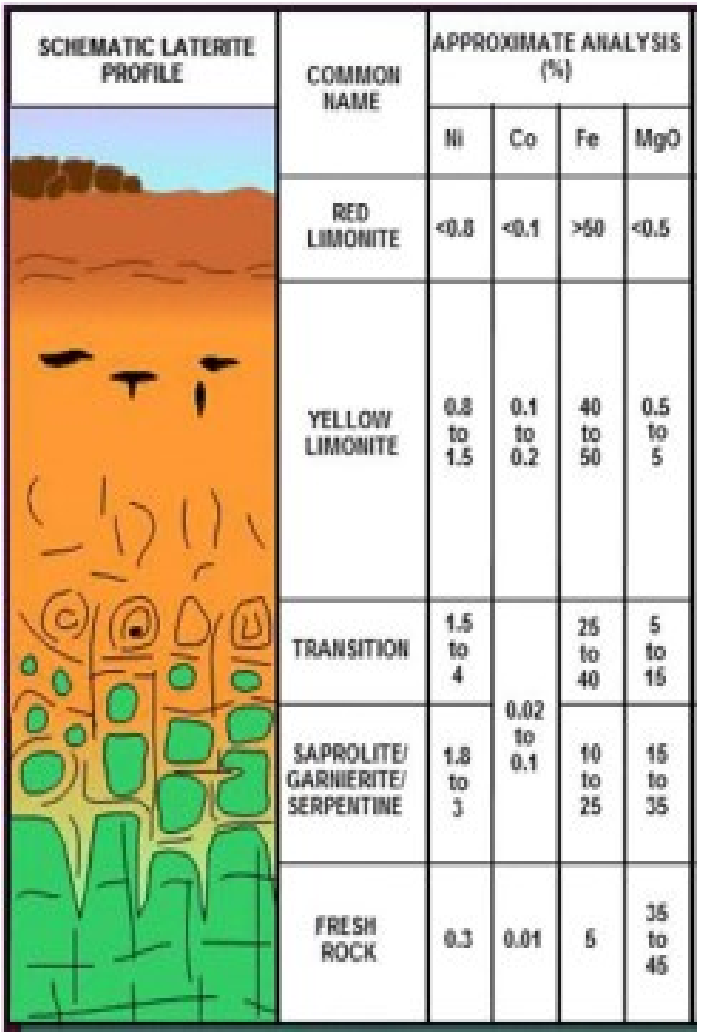


Figure 6. Schematic laterite profile
(Elias, 2002)

The supergene processes involved in laterization are hydrolysis, hydration, and oxidation and the type of weathering product is determined by the pH[1] and soil redox potential (Eh)[2] of the environment. Eluviation—where elements or materials are removed from a certain horizon—occurs at the upper level of the laterite profile and illuviation—where materials or elements are accumulated—occurs usually at a lower level.

In the laterization process, nickel exhibits an intermediate solubility that lies between the highly mobile Mg and silicon (Si) and the relatively immobile Fe (Figure 7).

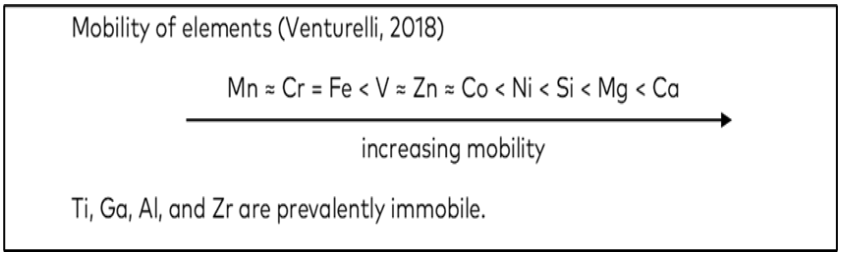


Figure 7. Mobility of elements

Where laterization is complete, the original olivine and pyroxene minerals of the ultramafic rocks are destroyed. Moreover, Si, calcium Ca), and Mg are almost totally removed at the upper portion of the soil profile (i.e., limonite) and they increase markedly where nickel also increases at the lower portion (i.e., Rocky Saprolite), the locus of garnierite deposition (Guilbert & Parks, 1986). Garnierite, $(Mg>>Fe, Ni)_3Si_2O_5(OH)_5$, is a nickeliferous serpentine, which contains up to 20% nickel (Photo 2). In the upper lateritic portion, nickel is adsorbed onto and is included in the goethite, FeO(OH), and other hydrous iron oxides common in laterites.

Photo 2. Garnierite fracture fillings in saprolite in the Project

[1] *pH is a measure of acidity/basicity of an aqueous solution*
[2] *Eh is the oxidation-reduction potential*

7.2 Style of Mineralization

The typical physical appearance of THE PROJECT's nickel deposits as exemplified in drill cores and mine pits is presented in the vertical profile as three (3) distinct principal zones. In descending order, these are: 1. Limonite Zone, 2. Saprolite Zone, and 3. Bedrock. The contact between them is irregular with some depression/indentation penetrating the adjacent zone along the fractures and faults. Figure 8 presents the graph of Ni, Fe, and Co grade per zone.

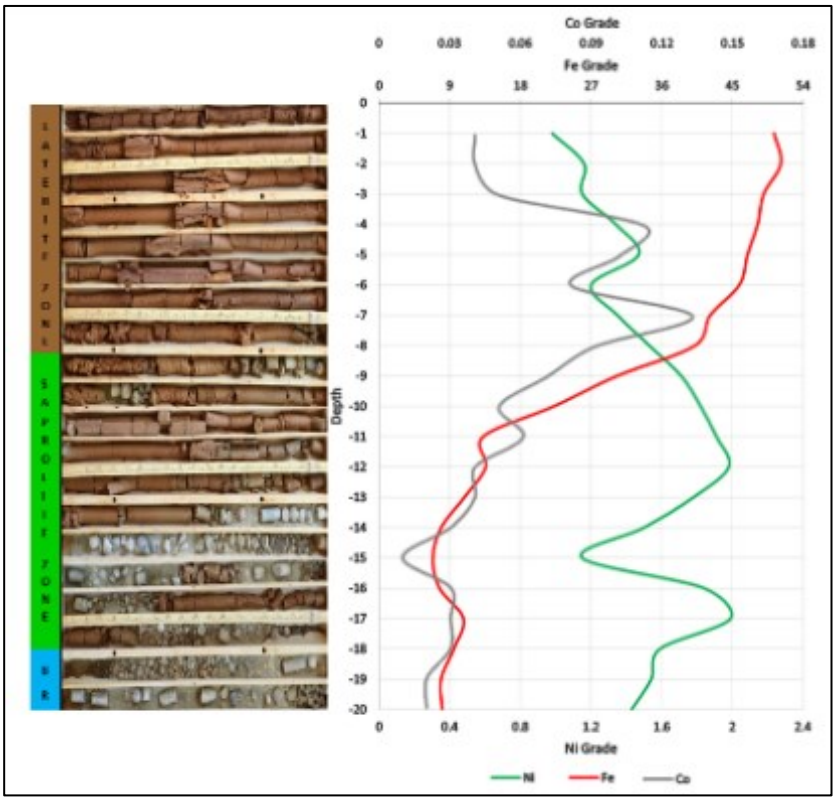


Figure 8. Graph of Ni, Fe, and Co grade per nickel laterite zone

Minor zones are sometimes identified. The irregular contact between the limonite and saprolite zones may be recognized as the Transition Material (TM) zone. There is also a lower saprolite zone that contains 30-80% rock relicts and is distinguished as the Rocky saprolite (RSAP) portion near the bedrock.

7.2.1 Mineral Deposit Model

The mineral deposit model for the PROJECT is based on an ultramafic bedrock with blanket-type laterite accumulations, composed of an upper saprolite and a lower limonite layer, on favorable flat to gently sloping elevated topography over a long period of time in a tropical climate (Guilbert & Park,1986). This is shown in Figure 9.

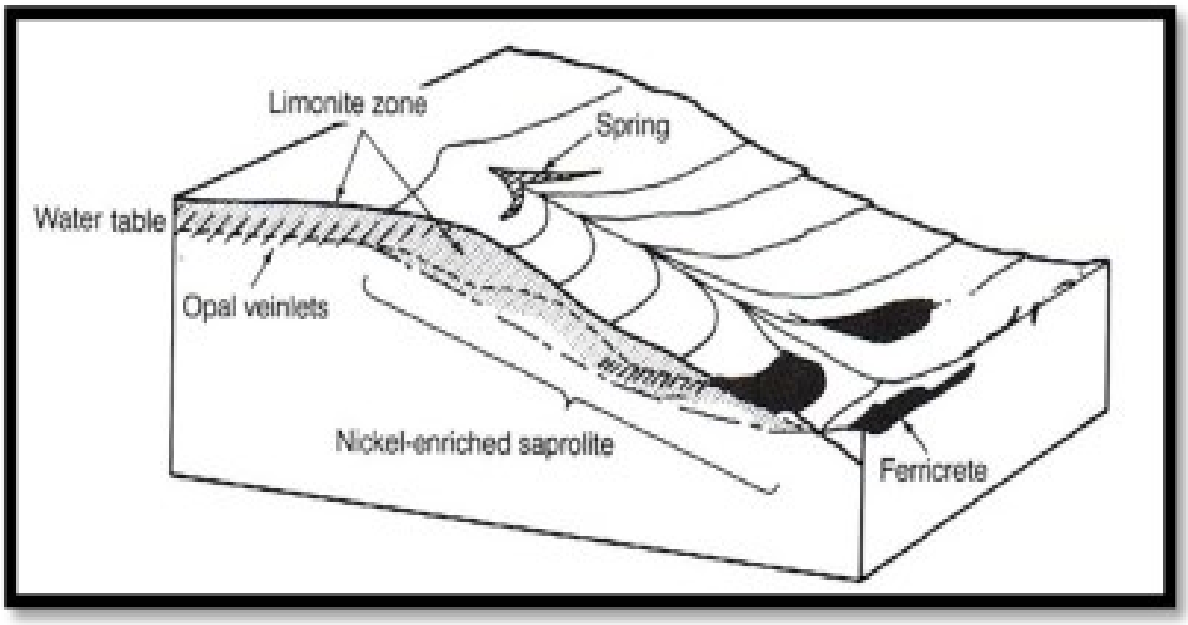


Figure 9. Mineral deposit model for Ni laterite after Guilbert & Park (1986)

7.3 Wall Rock Alteration, Zoning, and Paragenesis

Wall rock alteration, zoning, and paragenesis are significant to hypogene deposits. They are not applicable to supergene enrichment deposits like that of TMC's Project.

7.4 Localization of the Deposit and Continuity of Mineralization

7.4.1 Ore Mineralization Controls

From the preceding discussions, the ore mineralization controls for the Project are as follows:

1) Lithological Control – The bedrock should be ultramafic rocks. These provide the source of Ni, Co, and Fe and likewise, the by-products scandium (Sc) and chromite (Cr_2O_3). Nickel laterites underlain by olivine-rich ultramafic rocks such as dunite and olivine peridotite provide the highest grades of Ni.

2) Favorable Topography – Topography with flat to gentle slopes enables the creation of a mature laterite profile compared to steep slopes and flanks where erosion dominates over laterization.

3) Tropical Climate – Alternating wet and dry conditions enable differential leaching and deposition/concentration of Ni, Co, and Fe and the by-products Sc and Cr_2O_3, thereby creating limonite and saprolite ore zones.

4) Structural Control – Major discontinuities such as faults and joint systems have subdivided the Project into spatial mineralization domains (or Ridges), as presented in the succeeding discussions. Rock joints and fractures serve as pathways for the migration of dissolved materials and as openings for oxygen and groundwater to

penetrate. Thus, fracturing intensity of the ultramafic rocks is believed to affect the thickness and rate of development of the nickel laterite zones.

7.4.2 Nickel Laterite Deposits

The Project contains six (6) distinct nickel laterite deposits (or Ridges), namely: Urbiztondo Ridge, Taga1 Ridge, Taga2 Ridge, Taga3 Ridge, Hayanggabon-Cagdianao Ridges, and Kinalablaban Ridge as shown in the geologic map in Figure 5.

7.4.2.1 Taga1 Ridge

The Taga1 Ridge lies south of the Urbiztondo ridge across the Taganito River and measures about four (4) kms long from north to south and about two (2) kms across. It is bounded by the two (2) major branches of the Taganito River. On this Ridge, the pyroxene-rich peridotite is thicker compared to the interlayered olivine-rich peridotite and the lenses of dunite. They constitute a great bulk of ultramafic rocks.

The layering between the different ultramafic rocks is oftentimes well defined but, in some portions, it is crude and gradational. Generally, the strike of the layering is north-south, and it dips gently to the east.

The typical pyroxene-rich peridotite is easily recognizable on a macroscopic scale. It is recognizable on hand specimen due to the presence of large euhedral pyroxene crystals that protrude out on the fine olivine groundmass. This gives the rock a pseudo-porphyritic texture on a rock surface that has been subjected to weathering. On fresh cut samples, the cleavage of the pyroxene crystal easily reflects light that emits its identifying characteristics.

The limonite thickness varies from one (1) to four (4) meters overlying the saprolite which has a thickness ranging from one (1) to eight (8) meters.

7.4.2.2 Taga2 Ridge

Based on lithology, Taga2 Ridge differs from the adjacent areas in that the dunite and the olivine-rich peridotite layers are thicker than the pyroxene-rich peridotite. Taga2 is a north-south trending ridge about four (4) kms long and about one to one and a half (1- 1.5) km across bounded by Daang Suba and Hemogawon Creeks, both tributaries of the Taganito River. The elevation varies from the flood plains of the river at 10 MASL to about 540 MASL at the south end of the Property, with localized mounds at 362 meters and 534 MASL.

Limonite mantles the Ridge from 20 to 54 MASL. It is thickest along the crest and along the gentle slope. It varies from a few meters to as much as fifteen (15) m and averages to about eight (8) m at the mine pits, while the thickness of the underlying saprolite can reach twelve (12) m locally along fractures and covers a limited area. Thicknesses of less than seven (7) m are common and more widespread. Toward the steeper slopes, the limonite rapidly thins out and only in few cases caps saprolite of limited size and lower nickel grade.

Of all spatial mineralization domains or deposits, Taga2 Ridge contains the biggest in volume and the highest in grade of limonite and saprolite ores in the Project. This is attributable to the composition of the underlying ultramafic rocks.

7.4.2.3 Taga3 Ridge

Taga3 is an asymmetrical ridge with a steeper western slope compared to the eastern slope. It is bounded by the deeply incised north-south trending Subangdaku River and on the east by the Panganiban River whose northwest flow swerves to the north as it meanders into the Hinatuan Passage. Taga3 covers an area of seven (7) square kilometers (km^2).

Limonite derived from the underlying serpentinized rocks are characteristically dark brownish to reddish brown in color. They are generally thinner compared to the other ridges and are commonly associated with surface iron concretions, slag-like crust, and other forms. The occurrences are in clusters and somewhat widespread.

As a general statistical observation, the iron and nickel concentrations are higher toward the west which seems to correlate with the degree of serpentinization of the underlying rocks—highly serpentinized and unserpentinized bedrock does not yield high nickel grade while moderately serpentinized rock gives better nickel values.

In the Taga3 ridge, the limonite thickness varies from one (1) to six (6) meters overlying the saprolite which has a thickness ranging from one (1) to five (5) meters.

7.4.2.4 Urbiztondo Ridge

On plan view, Urbiztondo is triangular in shape. It is bounded on the west by the Urbiztondo Creek and on the east by the Taganito River where its course is structurally controlled by the Taga Fault. This structure is a high-angle dextral strike slip fault trending N60°E and is traceable to the west by its topographic expression. Exposed at the bank of the Taganito River, the fault scarp is highly serpentinized with extensive development of talc and chlorite.

Emanating from its southern boundary at sea level, the slope of the ridge rises rapidly to 100 MASL in altitude and tapers off to assumed broad undulating terrain that reaches a peak elevation of 242 MASL covering an area of four (4) km^2. Limonite, derived from weathering of the underlying predominantly peridotite rocks, varies from six to nine (6-9) m, capping several saprolite lenses that are three to six (3-6) m thick.

7.4.2.5 Hayanggabon and Cagdianao Ridges

Across the Taga3 Ridge to the west, the Hayanggabon-Cagdianao ridges have a recognizably different vegetative cover. The Taga3 Ridge is vegetated by secondary growth trees with few patches of barren ground or limited ground cover while the Hayanggabon-Cagdianao ridges are basically grassland with cogon grass and “agsam”, a fern family-like ground plant dominating other species. Few “payuspos” shrubs are sparsely scattered along the area and limited endemic species grow along creeks.

The Hayanggabon-Cagdianao Ridges exhibit a relatively more subdued topography with several mounds and peaks that do not rise significantly above the surroundings. Many small mounds with pronounced northwesterly trends dominate the landscape. Elevations with thin laterite capping vary from five (5) MASL at the national highway level to a maximum elevation of 250 MASL at the drainage divide of Cagdianao Creek—where the Cagdianao and Hayanggabon Ridges merge. This merger forms an elongated ridge crest that gradually rises and arcs to the south to join the Taga3 and Taga2 Ridges.

The Hayanggabon-Cagdianao area covers about eighteen (18) km^2 and is underlain mostly by pyroxene-rich peridotite to gabbro in composition which are inherently lower in Ni contents. These rocks are generally coarse-grained. The limonite in these Ridges, compared to the Taga2 and Taga3 Ridges, are generally thinner, lighter in color—usually pale yellowish to reddish color to various light brown, —less plastic, and less associated with surface iron. Saprolite occurrences of economic significance, comparatively, are in smaller bodies and are of lower nickel grade.

In the Hayanggabon and Cagdianao ridges, the limonite thickness varies from one (1) to six (6) m overlying the saprolite which has a thickness ranging from one (1) to four (4) m. These two (2) Ridges will collectively be referred to as Hayanggabon from here on to simplify the discussions.

7.4.2.6 Kinalablaban Ridge

To the east of the Hayanggabon Ridge is Kinalablaban Ridge. The Kinalablaban Ridge is separated from the Hayanggabon Ridge by the Kinalablaban River which flows from its head waters in an east-northeast direction and drains into the Hinadkaban Bay. The vegetative cover of the Kinalablaban Ridge is similar to the Taga3 Ridge. Secondary growth trees with few patches of barren ground are observed. A local shrub called “payuspos” is sparsely scattered along the area and limited endemic species grow along the creeks.

The Kinalablaban Ridge exhibits a relatively subdued topography with several mounds and peaks that do not rise significantly above the surroundings. The two (2) main ridges in Kinalablaban show a southeast trend as the elevation increases and do not connect to the Hayanggabon Ridges. Thin laterite capping can be observed from roadcuts to elevations of up to 210 MASL at an average of four (4) meters thick.

The Kinalablaban area covers about two (2) km^2 and is underlain mostly by serpentinized peridotite. These rocks are observed along roadcuts. Limonite thickness varies from one (1) to five (5) m overlying Saprolite thickness ranging from one (1) to two (2) m.

7.5 Supergene Effects

Nickel laterite deposits are products of supergene enrichment. These have been elaborated in the preceding discussions.

8. Exploration Results

The following discussions were mostly extracted and summarized from Section 8 of the PMRC 2020 Technical Report on Exploration Results and Mineral Resources Estimation of TMC's Taganito Nickel Laterite Property by Victoria (2024).

8.1 Geological Work

TMC has been in operation for thirty-three (33) years. Geological mapping is being undertaken by the geologists at the active mining areas and roadcuts in support of mine production.

8.2 Field Sampling Results

Limited sampling along with detailed mapping is being undertaken by the geologists at the active mining areas in support of mine production. Limonite sampling requires removing the overburden through digging about fifteen (15) cm. Subsurface mapping and sampling used to be undertaken in test pits with walls channel sampled at opposite faces from top to bottom every m. Test pitting is no longer being done. Instead, drilling is utilized for subsurface information and sampling.

8.3 Drilling and Sampling

TMC uses the man-portable YBM YHP-1 drill machines (Photo 3) to take subsurface samples using conventional dry drilling. The drilling accessories used are "B" size core bit, core barrel, and rods. Drilling is vertical and at depths of, usually, fifteen (15) m. The drill machine is powered by a 7.5 hp robin EY28 gasoline engine using a single core barrel. The drill is manned by a crew of four (4) personnel.

Before drilling, the survey team locates the proposed location on the ground. The drill pad is then prepared for mobilization of the drill rig. Preparation of the drill pad involves the removal of vegetation and leveling the ground. A level bar is used to ensure that the drill rig is leveled to the ground. Figure 10 shows the areas in the MPSA that were drilled.

Drilling through the substrate is at every one (1) m. The material that enters the core barrel is the sample produced. The sample is extracted by using a core pusher and placed in a core tray from left to right, then top to bottom (Photo 4). Each drill hole is declared complete and terminated when drilling has penetrated three (3) m into moderately hard rock.

To date, a total of 21,532 drill holes have been made at an aggregate meterage of 329,512 m.

Photo 3. YBM YHP-1 drill machine.

Photo 4. Placing of extracted core sample to the core tray at the foreground. Preparing to resume core drilling in the background.

8.3.1 Type of Drilling Program

The drilling programs in TMC are classified as exploration, development, infill, production, and condemnation drilling. Table 2 shows the types of drilling programs relative to their drilling distances.

Table 2. Classification of drilling programs in TMC

Drilling Program	Grid Spacing
Exploration	100 m x 100 m to 200 m x 200 m
Development	50 m x 50 m
Infill	20 m x 20 m
Production	10 m x 10 m
Condemnation	no set grid spacing, at random intervals

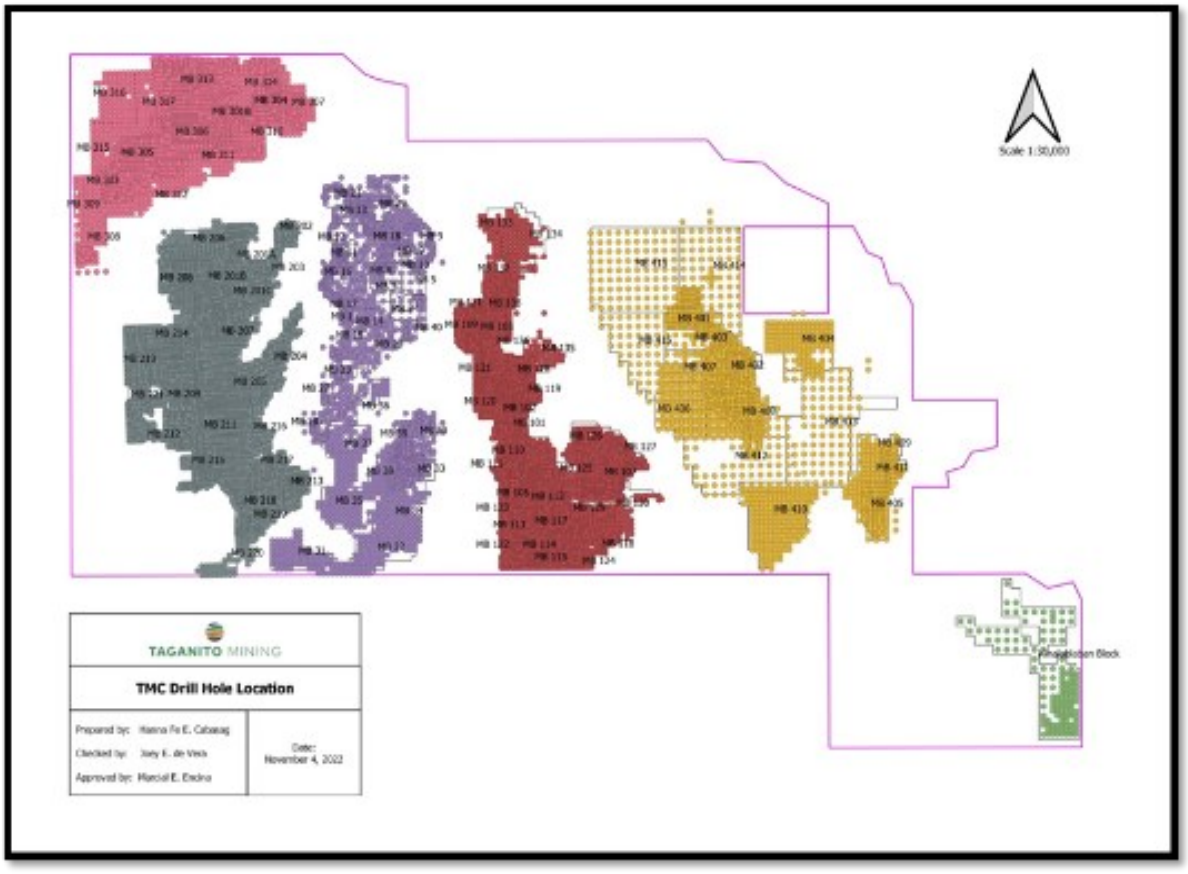


Figure 10. Map showing drill hole locations in TMC. The colors correspond to ridge locations

At the current state of the mine operations, only production and condemnation drilling programs are undertaken. The production drilling program is initiated prior to mining an area. Information from the closely spaced holes (at 10 m x 10 m intervals) is utilized to update the block model primarily for dig map planning done by the Mine Engineering group. The condemnation drilling program, on the other hand, is undertaken in areas that have been

mined up to the limits set by the final mine design. The hole locations are selected, and the results can determine if an area can be declared to be mined out and ready for rehabilitation. In some instances, the results can also identify remaining pockets of ore that can still be mined economically.

8.3.2 Drill Core Logging

Drill core logging is performed by a geologist at the drill site after hole completion to assure the documentation of the core sample in its original position in the core tray. A standard operating procedure (SOP), along with a core logging code (Table 4), is followed to ensure consistency in the core logging.

The geologist records all observations in a drill hole in the Geologic Log Form (Figure 11). Each drilled hole corresponds to one log form. General information includes the Hole ID, YBM Drill Unit ID, Area, Project, Location, Elevation, Date, and Total Depth. The recorded details of the core sample include From, To, Drill Run Length, Core Recovery, Weight, Description, Lithology, and Remarks columns. All columns are to be filled out on the drill site except the Weight which will be done at the core shed of the Geology Office. The core recovery recorded per hole is the percentage of the recovered core with respect to the total drill run.

Table 3. Drilling in the Taganito Nickel Laterite property from 2018 to 2022

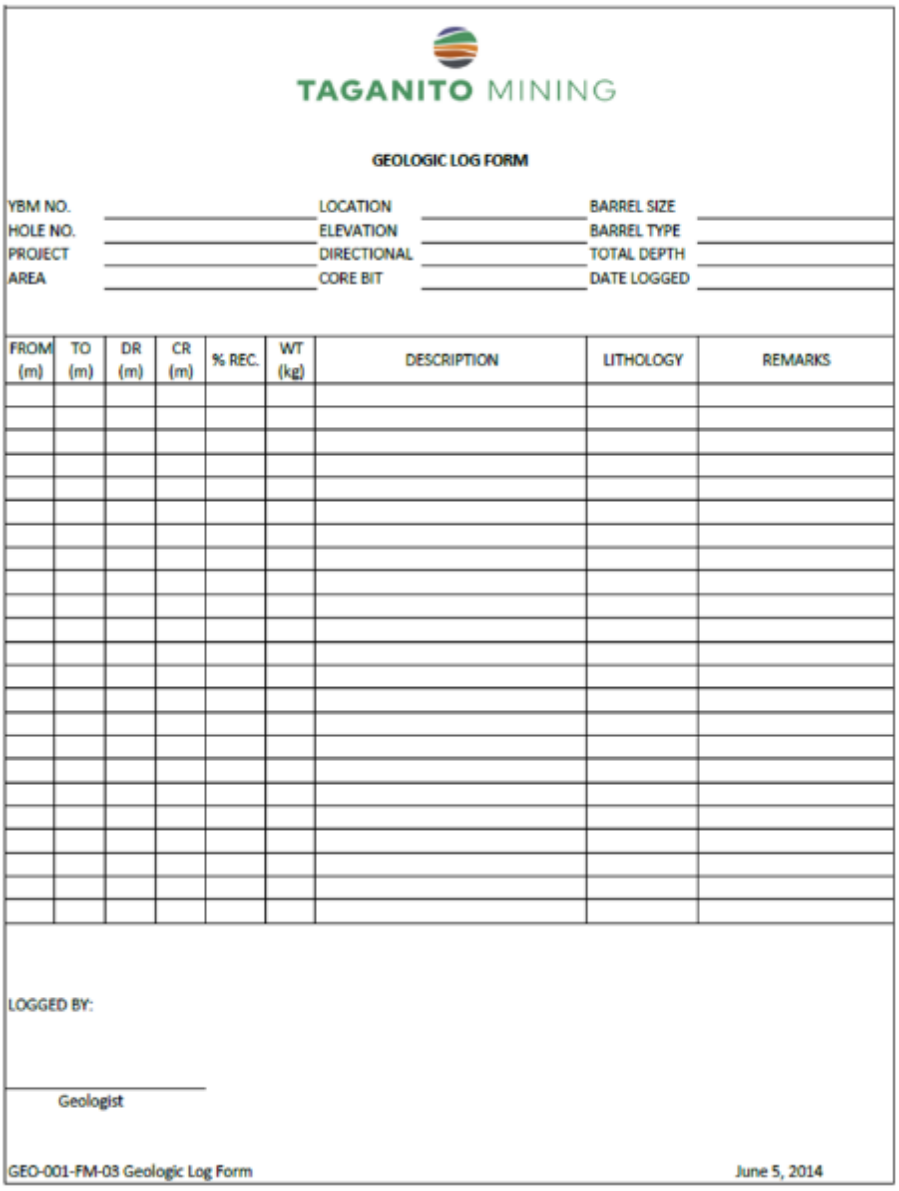
Parameter	2018	2019	2020	2021	2022
No. of holes	N/A	205	800	567	583
Total meterage	N/A	2,203.59	6,280.61	6,942.02	6,624.43
Average depth	N/A	9.87	7.85	12.24	11.36

After logging, the drilling personnel stack the core boxes properly and put an extra empty core box at the top to avoid spilling out of samples and contamination. The core boxes are then securely transported to the core shed of the Geology Office situated within eight (8) km of the drill sites.

Table 4. Core logging codes used in TMC

CORE LOGGING CODE							
Geology Department							
COLOR 1 (DESCRIPTOR)		COLOR 2 (PRIMARY)		SAP_TEXTURE		ROCK NAME	
CODE	MEANING	CODE	MEANING	CODE	MEANING	CODE	MEANING
BL	Bluish	BL	Blue	CL	Clay-ey	IEA	Igneous/extrusive andesite
BK	Black	BK	Black	CS	Crumbly soft	IEB	Igneous/extrusive basalt
BR	Brownish	BR	Brown	FS	Firmly soft	IIG	Igneous/intrusive gabbro
CR	Creamish	GN	Green	BX	Brecciated	IID	Igneous/intrusive diabase
GN	Greenish	GY	Grey			UPE	Ultramafic peridotite
GY	Greyish	OR	Orange	MATERIAL TYPE_LITHOLOGY		UDU	Ultramafic dunite
OL	Olive	PI	Pink	CODE	MEANING	UHZ	Ultramafic harzburgite
OR	Orange-ish	PU	Purple	***Description***		USE	Ultramafic serpentinite
PA	Pale	RE	Red	LAT	Laterite	UPX	Ultramafic pyroxenite
PI	Pinkish	WH	White	SP	Saprolite	ULE	Ultramafic lherzolite
PU	Purplish	YE	Yellow	MHR	Moderately hard rock	UWH	Ultramafic wehrlite
RE	Reddish			HR	Hard rock	WER	Weathered rock
WH	White-ish			***Lithology***		PIA	Pyroclastic igneous agglomerate
YE	Yellowish			LAT	Laterite	SGW	Sedimentary graywacke
				SAP	Soft saprolite	SCY	Sedimentary claystone

		SFL	Surface float	SSS	Sedimentary sandstone
			Backfill, matting, etc.	SSL	Sedimentary siltstone
		RSAP	Rocky saprolite	SSH	Sedimentary shale
		IFL	In-situ float	SMD	Sedimentary mudstone
		BR	Bedrock	SCO	Sedimentary coal
			Bedrock plus rock name	SLS	Sedimentary limestone
		NC	No core	SCG	Sedimentary conglomerate



TAGANITO MINING

GEOLOGIC LOG FORM

YBM NO. _____ LOCATION _____ BARREL SIZE _____
HOLE NO. _____ ELEVATION _____ BARREL TYPE _____
PROJECT _____ DIRECTIONAL _____ TOTAL DEPTH _____
AREA _____ CORE BIT _____ DATE LOGGED _____

FROM (m)	TO (m)	DR (m)	CR (m)	% REC.	WT (kg)	DESCRIPTION	LITHOLOGY	REMARKS

LOGGED BY:

Geologist

GEO-001-FM-03 Geologic Log Form June 5, 2014

Figure 11. Geologic Log Form

Drill Core Photography

The core boxes from the drill site are laid out carefully in the core shed of the Geology Office for photography. The drill core digital photographs of the core boxes are important as these are the remaining records of the appearance of the cores as entire whole cores are sampled. The photographs include details of the cores, which are as follows: Site, Project, Hole No., Elevation, Depth, and Date Logged (Photo 5 and Photo 6).

Photo 5. Drill core photography in TMC

Photo 6. Photograph documentation of a limonite core box in TMC

8.3.3 Drill Core Recovery

According to an independent evaluation undertaken by SRK Consulting in 2010, core recovery of limonite and saprolite in NAC nickel laterite deposits ranged between 80% and 100%. Almost 100% of the limonite samples were retrieved whereas within the saprolite zone which consists of soft upper layer and rocky lower layer, the recoveries varied from 80% to 85%. In zones with mixed hard rock and soft material, lower recoveries ranging from 20% to 30% were observed.

The stated recovery values by SRK Consulting cannot be verified due to the lack of records prior to 2019. The assurance that high quality cores were recovered during the period without logged recoveries was based on the visual assessment of geologists and supervisors in charge of the drilling activity. Moreover, 50% of the affected holes were drilled using double-tube NQ barrels which consistently yielded high quality core samples.

Starting in 2019, core recovery is logged per meter of sample drilled. It is calculated using the formula below after recording the depth drilled and length of core recovered:

$$Core\ Recovery = \frac{Length\ of\ core\ recovered}{Total\ depth\ drilled}\ x100$$

The average core recovery of TMC for the past five (5) years is tabulated below:

Table 5. Average core recovery of TMC drillholes per year

Year	Number of Holes	Core Recovered (m)	Depth Drilled (m)	% Recovery
2019	205	1,767.20	2,021.32	87.43%
2020	798	5,230.49	6,341.18	82.48%
2021	566	6,106.54	6,980.15	87.48%
2022	583	5,431.54	6,131.50	88.58%
2023	1,434	12,949.90	14,417.45	89.82%
TOTAL	**3,586**	**31,485.66**	**35,891.60**	**87.72%**

Although the yearly core recovery average exceeded 80%, 3,456 samples with less than 80% core recoveries are observed resulting to the low average recoveries of 340 drillholes. This is equivalent to 1% of the total number of samples and 2% of the drillholes in the database used for this Report.

Considering the disseminated nature of nickel and iron mineralization in the limonite and saprolite zones, the observed and recorded core recovery in TMC is deemed acceptable. It is also confirmed that the inclusion of low-recovery holes has no significant impact on the Mineral Resource declared in this Report, as their removal did not cause any material change in the estimated values. However, to ensure that only high-quality samples are utilized in future estimation of Mineral Resource, samples from holes that do not meet the minimum 80% average core recovery should be discarded outright and that in their stead, holes should be drilled proximate to the original collar locations. Drilling of twinned holes --- drilling of a new hole or “twin” next to an earlier drill hole --- is a traditional technique used in both exploration and mining geology for verification of grade values and other characteristics.

8.3.4 Drill Sampling Method, Collection, Capture, and Storage

Core drilling in TMC used the small “B” size bit, shallow at around fifteen (15) meters deep, vertical, and perpendicular to nearly perpendicular to the deposit. Conventional coring is undertaken wherein the entire drill string is pulled out to retrieve the core. The whole B-sized drill core sample is used for analysis except for duplicate samples where the core is split into two (2) halves. Sampling is done every meter. If the decimal from the collar elevation is greater

than or equal 0.5 m, the sample corresponding to the decimal is treated as one sample. For decimals that are less than 0.5 m, the samples are combined with the sample of the next meterage. No composite samples are taken.

The drill core samples are placed in sample bags and labelled accordingly for proper recording using the Core Sample Preparation Form (Figure 12). Each sample is weighed and documented by the geologist in the Geologic Log Form. A second form, the Sample Delivery Form (Figure 13) is prepared and submitted upon delivery of the core samples to the sample preparation facility.

The retention policy for assay rejects is as follows: three (3) months for coarse assay rejects stored in the sample preparation facility and one (1) month for fine rejects stored in the Assay Laboratory.

TAGANITO MINING

CORE SAMPLE PREPARATION FORM

	YBM NO.	HOLE NO.	LOCATION	ELEV. (m)	DEPTH (m)	NO. OF SAMPLES	SAMPLE ID	BAG LABELED BY:	SAMPLE PREP. BY:	DATE PREPARED	REMARKS
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											

CHECKED BY: _____ PAGE _____

GEO-001-FM-04 Core Sample Preparation Form March 7, 2017

Figure 12. Core Sample Preparation Form

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Sample Delivery Form

Project Name _____ Cost Code _____

Area _____ Date _____

Type of Sample _____ Total Sample Delivered _____

No.	Hole No.	YBM No.	From	To	Depth of Hole	No. of Sample
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
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45						

Prepared by:_____ Checked by:_____ Received by:_____

GEO-001-FM-04_REV01 Sample Delivery Form February 14, 2020

Figure 13. Sample Delivery Form

8.4 Sample Preparation, Analyses and Security

8.4.1 Sample Preparation and Analysis

Sample preparation and analysis are undertaken at the Project's facilities situated approximately 0.5 km away from its core shed.

Individual samples are crushed in the sample preparation facility using the roller crusher which produces materials ≤20 mm in size. The materials are then mixed five (5) times by the coning method using a shovel. Volume reduction is done by 6 x 6 increments. All thirty-six (36) divisions are scooped using a 30R JIS scoop. The collected samples are then dried at 105°C for four (4) to six (6) hours. After drying, the samples are crushed using the top grinder which produces materials ≤2 mm in size. The resulting samples are then reduced in volume to around 80-100 grams using the riffle splitter. The samples are then pulverized using the disc mill and then sieved using 100 mesh screens. The resulting fine samples are then packed and delivered to the adjoining assay laboratory for analysis. Figure 14 presents a flowchart of the sample preparation process, while Table 6 presents the list of equipment used in the facility.

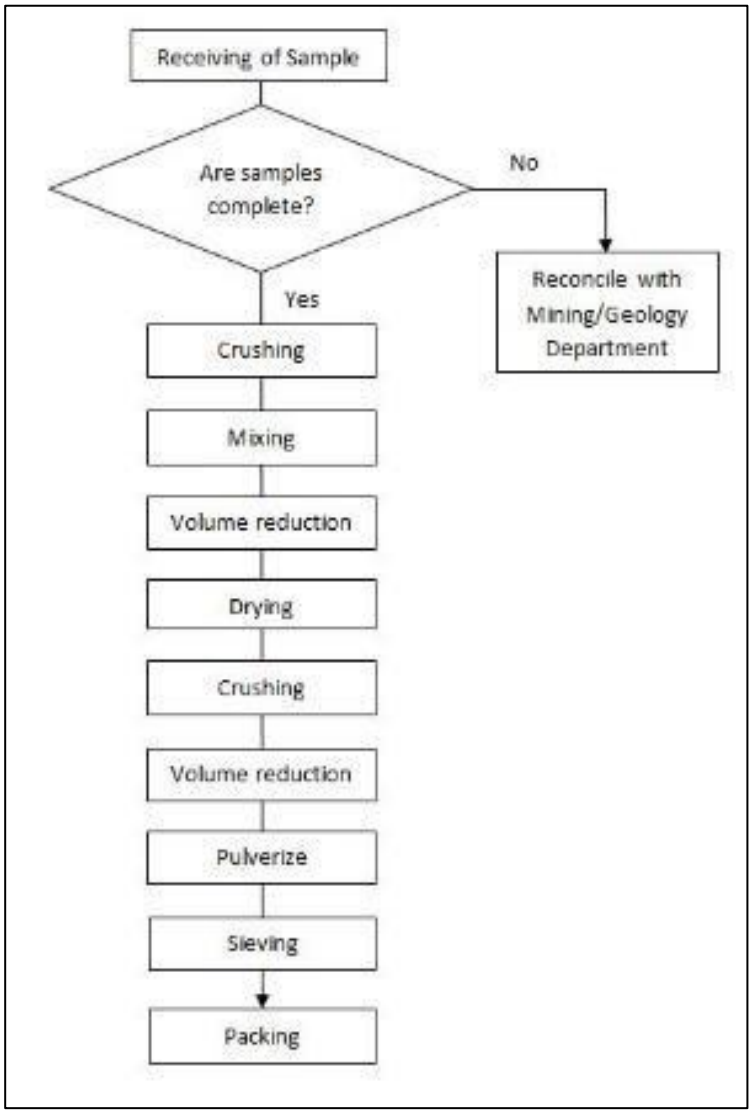


Figure 14. Sample preparation process flow

Table 6. List of equipment used in sample preparation

No.	Equipment	Brand/Model/Serial Number	No. of Units
1	Top Loading Balance	Brand/Model: Shimadzu BX32KH-D442100930	2
2	Drying Oven #1	Brand/Model: Memmert UF1060	7
3	Grinder	Brand: Yoshida Seisakusho; MFG: 8620	1
4	Pulverizer #1	Brand: Fritsch; S/N: 13 1050/01010	3
5	Jaw Crusher #1	No data	2
6	Roller Crusher #1	Fabricated	6
7	Rotap Sieve Shaker #1	No data	2

In the Assay Laboratory, exploration drilling samples are analyzed using an atomic absorption spectrometer (AAS). The elements analyzed are %Ni, %Fe, and %Co. For production drilling samples and ore shipment samples, X-ray Fluorescence (XRF) machines are utilized. The samples analyzed are in pellet form and tested for %Ni, %Fe, %Co, %MgO, %Mg, %SiO_2, %Si, %Cr_2O_3, and %Al.

Analytical quality is measured through the insertion of one in-house standard sample in every run of XRF machine. The TMC Assay Laboratory currently has three (3) in-house standard samples which are analyzed using three (3) different methods of analysis, namely: AAS, titration, and XRF.

The equipment utilized for analysis in the TMC assay laboratory is listed in Table 7.

Table 7. Analytical equipment in the TMC Assay Laboratory

No.	Equipment	Brand/Model/Serial Number
1	Top Loading Balance	Brand: JM Electronic Scale
2	Analytical Balance	Brand/Model: Shimadzu AUW120
3	Drying Oven	Brand: Memmert
4	XRF Machine: Xepos 03	Model: XEPOS XEP03 S/N: 12003767
5	AAS Equipment	Model: Shimadzu AA-7000 System ID: A30664801205
6	XRF Machine: EDX-7000	Model: Shimadzu EDX-7000; S/N: Q245456
7	XRF Machine: XRF-1800	Model: Shimadzu XRF-1800; S/N: Q21545300461
8	XRF Machine: Xepos 05	Model: XEPOS XEP05; S/N: 20005882
9	Digital Thermometer	Brand: Lutron 4 Channels Thermometer
10	Fume Hood	Brand: WEG
11	Digital Burette	Brand: Titrette

Coarse assay rejects are retained for three (3) months in the sample preparation facility while fine assay rejects are retained for one (1) month in the adjoining assay laboratory.

8.4.2 Sample Governance

TMC strictly adheres to standardized operating procedures in the handling, logging, and sampling of drill samples. This is documented in TMC-IMS-GEO_PF-001 (Core Logging and Sampling Process).

The geologist conducts core logging at the drill site. Together with the drilling supervisor and the drilling crew, they ensure that the core boxes are hauled to the core shed after logging and that the core boxes are labeled, properly piled, securely tied, and covered before transport to avoid contamination and disorientation. The average core recoveries ranged from 83% to 88% for the last five (5) years. At the core shed, digital core photography by the geologist/field technician records the appearance of the drill cores prior to sampling. Together with a sampler, they conduct the sampling, labeling, and documentation in the Core Sample Preparation Form (Figure 12). They likewise complete the Sample Delivery Form (Figure 13) to record the delivery of samples to the sample preparation facility. Samples belonging to the same drillhole are packed in one (1) big bag to avoid mix-up with other samples. The big bag is labelled with the Drilling Machine Number, Hole ID, Depth Interval, and the number of samples.

The Sample Delivery Form is transmitted with the samples by the geologist, drill supervisor, and/or field technician to the sample preparation facility within the TMC complex, located approximately 0.5 km away from the core shed. In their presence, the Sample Preparation supervisor checks the samples with the Sample Delivery Form. By signing the Sample Delivery Form, the Sample Preparation supervisor acknowledges that the delivery of the batch of samples is complete and in order.

Laboratory audits of the Project's Sample Preparation facility and the Assay Laboratory are conducted annually by the PRC Board of Chemistry. A separate internal Laboratory Audit was undertaken in October 2023. The samples subject to this audit were from mining and shipment. The period covered was from January to October 2022 with sixty-one (61) saprolite ore shipments loaded and shipped. Of the sixty-one (61) shipments, 947 samples were analyzed and 219 of these were QA/QC insertions consisting of fine and coarse duplicates.

For the laboratory accuracy insertions, there were 27,350 samples analyzed and 2,270 of these were for equipment accuracy insertions. All samples analyzed were in replicates using the XRF equipment.

Initial validation protocols are conducted at the TMC mine site by the site geologists with checking of assay data, survey results, and core logs. All data are in Microsoft Excel format. Another round of data validation is made by the Geology Group at the NAC Head Office. The data is subjected to an Excel-based macro program to ensure drillhole ID uniqueness, proper data type per field, correct lithological codes, and valid numerical inputs. Section 9.3 presents the discussion on database integrity, verification, and validation.

8.4.3 Quality Assurance and Quality Control (QA/QC)

Quality Assurance and Quality Control (QA/QC) measures in TMC are employed in the laboratory through the use of standard, check, and duplicate samples. The standard reference materials (SRM) used are usually nickel laterite ores of known grades as analyzed by several laboratories. Check samples are in the form of pulped shipment samples exchanged between the seller (TMC) and the buyer and analyzed independently by each laboratory. No substantial flaws regarding this methodology were raised during the independent review by SRK (2010) and it was deemed acceptable to support the Mineral Resources estimation and grade control; however, it was advised that QA/QC practices are enhanced.

TMC has adopted the use of coarse duplicates and fine duplicates, as well as internal standards, to check sample preparation repeatability and laboratory precision and accuracy. Sampling precision is deemed excellent if more than 90% of the analyzed samples have less than 10% Half Absolute Relative Difference (HARD). Repeatability of 20% and even up to 25% HARD in 90% of the data is deemed acceptable. The summary of QA/QC samples is tabulated in Table 8 and the analysis is discussed in the succeeding sections.

Table 8. Summary of QAQC samples for 2022

Sample Type	Control Aspect	No. of Samples	Insertion Rate
Coarse Duplicate	Sample Preparation Repeatability	100	0.44%
Fine Duplicate	Laboratory Precision	119	0.37%
Standard	Laboratory Accuracy	2,270	8.30%
Total		2,489	9.10%

8.4.3.1 Analysis for Laboratory Precision

A total of 13% of the 947 saprolite ore shipment samples have undergone XRF analysis to check for laboratory precision. These fine duplicates are delivered to the laboratory for final sample preparation and are treated in the same manner as the original samples. As can be seen in Table 9 and Figure 15, the samples show very high laboratory precision as 100% of the fine duplicate samples yielded less than 5% HARD.

Table 9. Percentage of fine duplicate samples within %HARD Threshold

%HARD Threshold	Count Below Threshold	% of Total Samples
5%	119	100%
10%	119	100%
20%	119	100%

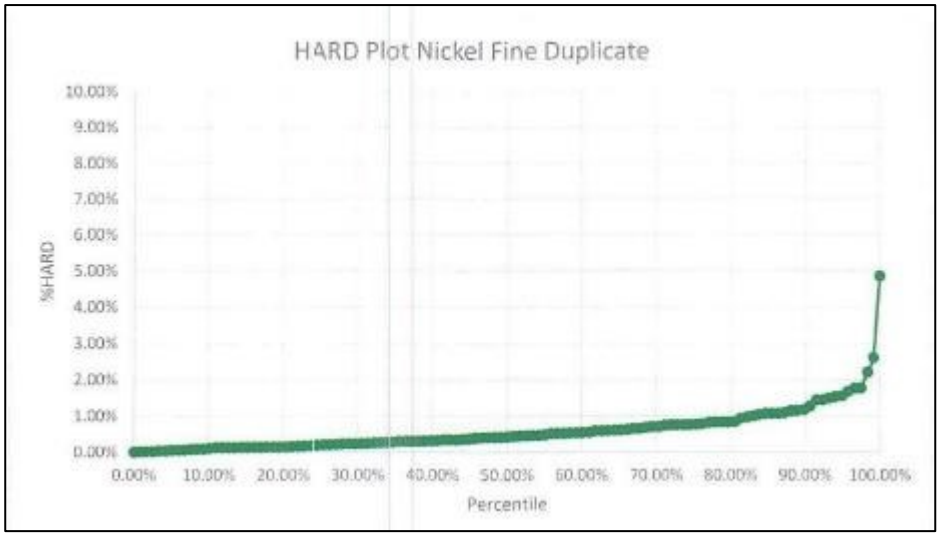


Figure 15. %HARD plot for nickel fine duplicates

8.4.3.2 Analysis for Sample Preparation Repeatability

A total of 11% of the 947 saprolite ore shipment samples are inserted to the sample stream as coarse duplicates. The duplicates are obtained from splitting the samples after crushing. Table 10 and Figure 16 show the summary and HARD plot of the coarse duplicates results. As can be observed, 100% of the samples assayed yielded less than 5% HARD which indicates excellent sample preparation repeatability.

Table 10. Percentage of coarse duplicate samples within %HARD threshold

%HARD Threshold	Count Below Threshold	% of Total samples
5%	100	100%
10%	100	100%
20%	100	100%

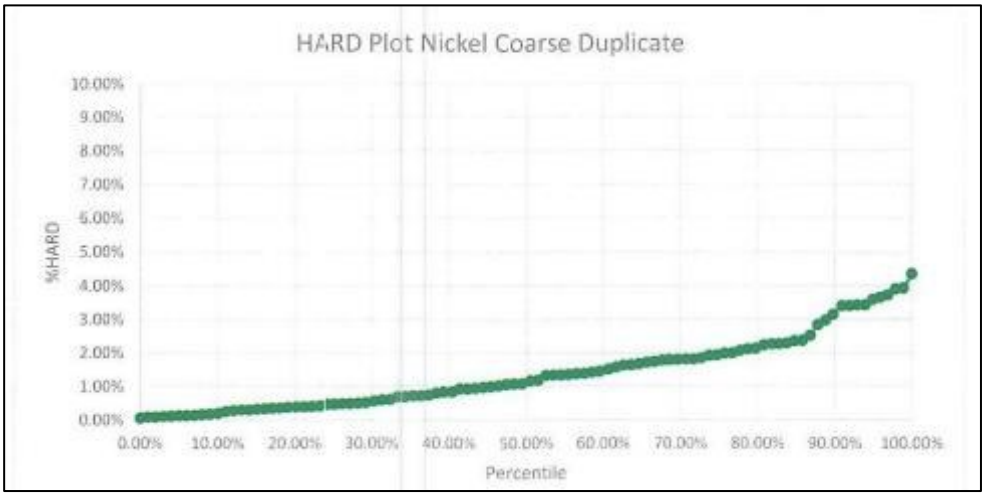


Figure 16. %HARD plot for nickel coarse duplicates

8.4.3.3 Analysis for Laboratory Accuracy

The laboratory accuracy is measured by inserting internal standards. These standards are materials of known grades which are prepared in-house by the laboratory and used for the regular calibration of the XRF equipment. As almost all of the analyses conducted in the laboratory are through XRF, its accuracy must be monitored at all times.

The laboratory inserts one (1) internal standard in every batch of analysis which consists of twelve (12) samples. The accepted differences of the standard should be within +/- 0.03 for the equipment to be deemed accurate. Shown below in Table 11 is the summary of the XRF performance every month from January to October 2022. The results are deemed within acceptable limits; however, a drop in accuracy in June and September is notable. This indicates the need to check the equipment for preventive maintenance or recalibration.

Table 11. Percentage of internal standard samples within acceptable difference

Month	Total Samples	Count within Acceptable Difference	Percentage
March	244	234	96%
April	181	176	97%
May	219	212	97%
June	359	323	90%
July	347	323	93%
August	339	323	95%
September	325	293	90%
October	256	234	91%

8.4.4 Statement of the ACP-Geologist on the Quality of Sample Security, Preparation, Analysis, and Data Validation

The samples obtained through drilling by TMC are handled and managed according to the standard procedures. The entire sample handling process from acquisition, transport and delivery, and to sample preparation and analysis are supervised and monitored by the respective TMC personnel. There is no identified area in the sample chain of custody which can result to mishandling or altering of samples.

The accuracy of the laboratory analysis can be assessed by the results of standard samples while the fine or quality duplicates can be used to measure the quality of sample preparation in the aspect of pulverization and homogenization. Both measures yielded excellent results that are deemed suitable for Mineral Resources estimation; however, the frequency of insertion, specifically, for duplicates is too few considering the total amount of samples handled by the laboratory. The insertion rate should be increased and should cover all the samples being analyzed by the laboratory.

Some aspects of the QA/QC must be improved immediately to cover measures for subsampling precision and the presence of contamination, both in the sample preparation and in the laboratory. Adding check samples is highly recommended to compare the TMC Laboratory's performance with an umpire laboratory. The use of commercially available standard reference materials is also highly recommended. Coarse and fine blanks should be included in the sample stream to detect possible contamination in the sample preparation and laboratory. Twinning of holes and/or analyzing half of core samples is also recommended to check for the repeatability of sample acquisition. Though halving the cores is recommended only upon completing the shift to a larger core size.

The recommended sample insertion rates for each QA/QC sample type are summarized in Table 12.

Table 12. Recommended insertion rates for QA/QC (Mendez, 2011)

QAQC Sample Type	Insertion Rate (%)
Coarse Duplicate	2
Fine Duplicate	2
Twin Sample	2
SRM	6
Coarse Blank	2
Fine Blank	2
Check Sample	4
Total	20

The Project's Geology Department should oversee the implementation of the entire QA/QC program. The anonymity of the QA/QC samples should always be maintained. QA/QC results should be monitored and reported in a timely manner to immediately resolve any untoward incidents that may result in accuracy and precision issues.

8.5 Bulk Density Measurements

Historically, TMC had been using density values adopted from one of its sister companies under NAC with the saprolite density similar to the reported measured test mining samples in 1987 (Rabi, 2018). The density values used were 1.11 g/cm^3 both for saprolite and limonite material with iron grades of 8% and above. For saprolite and hard rock materials with less than 8% iron, the density value used was 1.46 g/cm^3. Unfortunately, no documentation on the supporting details of the density measurements had been found.

In recent years, TMC conducted and documented limonite and saprolite density measurements. The bulk density test conducted in 2015 was done in-house in three (3) Ridges through large-scale excavations, volumetric survey, and truck scale. In 2022, material density tests using the sand cone method in accordance with the American Society for Testing and Materials (ASTM) standards were undertaken with a contractor in five (5) Ridges. Water immersion method was also conducted to determine the density of the bedrock.

For the Mineral Resources estimation utilized in this Report, the density results from the determination method of large-scale excavations, volumetric survey, and truck scale were utilized for limonite, saprolite, and old laterite stockpiles. This is reproduced in Table 13.

Material density tests using the sand cone method were too few to be significant considering the variability of the nickel laterite, especially the saprolite, with depth. For bedrock densities, average values of water immersion results were utilized. The density values will be reviewed with results of the block model reconciliation with production study. Continuous testing for bulk densities will be conducted in TMC to obtain more sampling locations as more areas are exposed by the mining operations.

Table 13. Density values used in the estimation of Mineral Resources

Material	Dry Density (g/cm^3)
Limonite	1.22
Saprolite	1.28
Old Laterite Stockyard	1.16
Bedrock	2.38

8.6 Bulk Sampling and/or Trial Mining

Commercial mining operations have been on-going at TMC for over three (3) decades. Bulk sampling and trial mining activities during the advanced stages of its Feasibility Study were made in 1987.

8.7 Geodetic and Topographical Surveys

Geodetic and topographical surveys are done in-house based on the PPCS-TM/PRS92 coordinate system and using modern and updated equipment and software.

TMC adopted the Philippine Plane Coordinate System-Transverse Mercator/Philippine Reference System of 1992 (PPCS-TM/PRS92) coordinate system, which is used in all the surveys and mapping in the country pursuant to DAO 2007-29.

The PPCS-TM/PRS92 has the following descriptions as outlined in the Table 14 below.

Table 14. PPCS-TM/PRS92 coordinate system descriptions.

Parameter	Description
Coordinate Reference System (CRS)	EPSG:3125 - PRS92 / Philippines zone 5
Units	meters
Method	Transverse Mercator
Ellipsoid	Clarke 1866
Datum	Philippine Reference System 1992
Prime Meridian	Greenwich

Area of use	Philippines - approximately between 124°E and 126°E, onshore and offshore - east Mindanao (east of 124°E); Bohol; Samar.
Projection	Philippine Transverse Mercator (PTM) Zone V
Central Meridian	125°E
Latitude of Origin	0° (Equator)
Scale Factor	0.99995
False Easting	500,000
False Northing	0
Geoid- *Ellipsoid separation*	0.34 meters
Datum Origin	Latitude 13°33'41" N Longitude 121°52'03" E

8.7.1 Established Survey Control Points

Survey control points have been established for durable and sustainable reference points in surveys. Their location in the Project are as follows:

Table 15. List of established control points in TMC

Name	Northing	Easting	Elevation	Location	Order
SRN75	1056191.716	585436.138	5.968	Capandan Bridge	3rd
SRN79	1054086.835	594359.801	19.584	Brgy Cagdianao	3rd
SRN80	1053834.434	594536.611	21.167	Brgy Cagdianao	3rd
SRN106	1050161.811	595536.878	8.064	Kinalablaban Bridge	3rd
SRN8	1055331.433	592124.442	2.054	Hayanggabon Port	2nd

8.7.2 Topographic Surveys

Topographic surveys are conducted using Real Time Kinematic Global Navigation Satellite System or RTK GNSS receivers, survey-grade VTOL drones, and total stations. For the survey, the horizontal accuracy is three (3) cm while the vertical accuracy is five (5) cm. Data processing utilizes the Agisoft Metashape Professional, Geovia Surpac, and QGIS software.

8.7.3 Drillhole Location

Drill hole collar locations are laid out using RTK GNSS receivers and Total Station and marked on the ground with wooden stakes tagged with blue ribbon with written Drillhole ID and Actual Elevation. A Drillhole Layout map and drillhole coordinates in comma separated values (.csv) format are provided to the Geology Department.

8.7.4 Volume Survey

Volume surveys are conducted using RTK GNSS receivers, Survey-Grade VTOL Drones and Total Station (at three (3) cm horizontal and five (5) cm vertical accuracy). Data processing utilizes the Agisoft Metashape Professional and Geovia Surpac software.

8.7.5 Survey Equipment and Software

Table 16 below shows the list of equipment and data processing software utilized in the survey activities.

Table 16. List of survey equipment and software used

Equipment	Brand	Model	Quantity
Modular Receiver	Trimble	SPS855	1
Modular Receiver	Trimble	MPS865	1
GNSS Smart Antenna	Trimble	SPS986	3
GNSS Smart Antenna	Trimble	Sps785	1
Total Station	Trimble	M3	1
VTOL Drone	DJI	Phantom 4 RTK	3
Base Station	DJI	DRTK2	3
Echosounder	Sonarmite	BTX	1
Level	Sokkia	SDL50	1
Image Processing	Agisoft	Metashape Professional	2
Digital Terrain modelling	Geovia	Surpac	1
Geographic information System	QGIS	v3.26	9

9. Estimation of Mineral Resources

This whole section is the same as Section 10 of PMRC 2020 Technical Report on Exploration Results and Mineral Resources Estimation for TMC's Taganito Nickel Laterite Property by Victoria (2024).

10. Economic Assessment of the Mining Project

10.1 Brief Description of the Mining Project

TMC produces direct shipping ore of limonite and saprolite from the nickel laterite that occurs as a shallow and blanket-like deposit present in six (6) Ridges in the MPSA. The planned annual contour mining production rates are 5.91 mWMT for limonite and 4.65 mWMT for saprolite. Despite mining operations going on for over three (3) decades, the remaining limonite and saprolite Mineral Resources are still extensive. Furthermore, after the application of Modifying Factors, the derived Mineral Reserves are projected to last up to the year 2041. The THPAL within TMC's MPSA limits is the captive market for its limonite Mineral Reserves with a Cut-off Grade of 0.65% Ni and 40% Fe. The expected Ni grade for the limonite is 1.00% Ni. On the other hand, the saprolite Mineral Reserves, with a Cut-off Grade of 0.95% Ni and <40% Fe, are shipped to Chinese and Japanese smelters. The blending of the material allows for the maximization of the Mineral Reserves within the Mineral Resources.

10.2 Description of Mineral Resources Estimates used as basis for conversion to Mineral Reserves

The consolidated Mineral Resources of TMC as of December 31, 2022 is reported in PMRC 2020 Technical Report on Exploration Results and Mineral Resources Estimation for TMC's Taganito Nickel Laterite Property by Victoria (2024).

In this exercise, Mineral Reserves estimates were derived using the Whittle pit optimization software. The optimization process involves the creation of the final mine design and the corresponding periodic, in this case annual, Life-of-Mine production Plans and schedules. This optimization process is designed to maximize the Net Present Value (NPV) of the deposits. Since the Taganito deposits are situated in six (6) Ridges, a consolidated and unified mega block model is created to facilitate a meaningful mine optimization process.

In contrast, the Mineral Resources estimation is done on a per Ridge basis, with each Ridge having its own specific block model. Something which is not appropriate in the Mineral Reserves estimation.

The consolidation of the Mineral Resource models of the 6 Ridges into a single mega model allows for the creation of an optimal mine design with the corresponding LoMP and production schedules, which consider all mining areas simultaneously during the optimization process, rather than devising separate LoMPs and schedules for each Ridge. Moreover, this optimization strategy considers the specific geographic, physical and geologic characteristics of planned mining activities in each area. By adopting this approach, the Company aims to fine-tune production schedules within distinct geographical regions, considering crucial factors affecting the economics of the operations, such as grade distribution, topography, location, manpower distribution, and equipment schedules, among others.

10.3 Level of Economic Assessment

TMC has been producing limonite and saprolite ore for over three (3) decades. With the historical knowledge and the technical experience gained over this course, the parameters for the economic assessment have been well established and are known. This economic assessment can be categorized as an on-going Life-of-Mine Plan (LoMP) study.

10.4 Technical Aspects

10.4.1 Mining Plans

10.4.1.1 Mining Method

TMC employs contour mining as its method of ore extraction. It is the most economical method to exploit blanket type, surface to near-surface deposits such as nickel laterites. Through its approved Environmental Compliance Certificate (ECC) No. ECC-CO-1304-0013 (Amended), the Company is allowed to extract nickel ore materials at a maximum extraction rate of 12 mWMT per year. Currently, TMC has an ongoing ECC amendment application to extract an additional

2 mWMT of materials. At this new extraction rate, the maximum ore production rate is projected at 11 mWMT.

TMC produces Direct Shipping Ore (DSO) of nickel laterite consisting of limonite and saprolite. Except for limited sizing and sorting, no mineral processing is undertaken by the Company. The limonite is transported by conveyors to the THPAL plant within the Company's MPSA tenement for further processing. THPAL is owned by Sumitomo Metal Mining Co. Ltd. (SMMC) (75%), Mitsui & Co. Ltd. (15%), and NAC (10%). The saprolite is shipped to foreign smelters abroad. The estimated annual production is as follows: limonite – 5.91 mWMT and saprolite - 4.65 mWMT.

The major mining activities and/or processes of TMC are enumerated below:

Limonite Mining

After the overburden is removed and initial benches are formed, the limonite layer is then exposed for mining. Limonite mining is performed using a combination of backhoe and dump trucks in a load-haul-dump cycle. The backhoes directly excavate the bench face and then load the materials onto waiting dump trucks, as shown in Photo 7. Afterwards, the excavated ore is transported to limonite stockyards, conveyor grizzly, and/or the THPAL ore shelter area depending on the production schedule.

Photo 7. Limonite mining operations

Limonite ore materials which are stockpiled in designated stockyards undergo initial beneficiation process using gravity segregation, wherein, hydraulic excavators repeatedly roll down and agitate the stockpiled loose materials, allowing the large particle sizes to be liberated from the smaller particles through the action of gravity. The oversized materials refer to rock, or any loose material with a particle size of larger than 300 mm. The oversized materials are retrieved by using a combination of hydraulic excavator and dump trucks, for transport and disposal to environmental rehabilitation areas, to roads for matting and surfacing, or to designated waste dump sites. The undersized materials are transported to the

THPAL ore shelter for feeding. In some cases, where limonite is exported to China, the undersized materials are transported directly to landing craft tanks (LCT) and then loaded to mother marine vessels.

Photo 8. Limonite stockpiling

Considering safety and quality control, the finalized benches are kept at dimensions of three (3) m high and five to ten (5-10) m wide. During active excavation, the benches are always monitored for undercuts or overcuts and the three (3) m standard bench height is maintained.

Saprolite Mining

Saprolite mining is usually confined during the dry months (i.e., from April to September). As with limonite mining, the same load-haul-dump method is used with a combination of backhoe and dump trucks. The backhoes directly excavate the bench face and then load the materials straight onto dump trucks.

Photo 9. Saprolite mining operations

The ore materials are hauled to transition stockpiles. There, samples are taken for every dump truck load. The collected samples are then delivered for sample preparation and assaying. The results of the analysis are used for re-classification of the saprolite ore piles prior to hauling to the shippable stockpile areas.

Hard Ore Production

Production of hard ore in the stockpiles is carried out throughout the year. Even during the wet months, hard ore boulders present as “floats” in the stripping operations are gathered. All hard ore boulders mined from the blocks undergo beneficiation prior to shipment to separate the oversize (for further size reduction) and to ensure that the products are within the buyer’s standards. Old stockpiles (previously unmarketable material) that have been scheduled for shipment also undergo beneficiation prior to shipment loading.

Photo 10. Crushed rock ore

Ore Retrieving and Transferring

Reclassified piles in the stockpiles of shippable materials are loaded by a wheel loader, track loader, and/or hydraulic excavator onto dump trucks and then hauled directly to the shippable stockpiles, which are located normally near the causeways. During this ore hauling operation, the piles are again sampled through truck sampling every other truck trip. The assay results and the volume for each pier yard stockpile are recorded to monitor the tonnage and grade inventories. These records are then used for ore blending prior to ore shipment.

Photo 11. Ore retrieving and transferring operation.

The remaining low-grade ore materials that do not pass the shippable grade requirement are transferred to their respective low-grade stockyards. Some low-grade materials with very low nickel content are occasionally used for matting.

Screening and Sorting

It is estimated that the about 25% of extracted in-situ ore is hard material. The process of separating the hard from the soft ore materials is normally done by taking advantage of gravity. A wheel loader/track excavator scoops a bucketful of ore and hauls this to the top of a ramp. The unsorted ore materials are intentionally pushed to roll down the slopes to stockpiles. The oversized materials roll down and accumulate at the base of the stockpile, where they are collected for further physical processing. Presently, a mobile screening machine is also utilized in this process to increase production efficiency and cost-effectivity.

Photo 12. Mechanical screening using mobile screener

Photo 13. Sizing and sorting using track excavator (TX)

Scraping and Stockpiling

As soon as a considerable amount of the oversized materials accumulate along the base of the stockpile, a front-end wheel loader gathers the materials and stockpiles those temporarily.

Photo 14. Scraping and stockpiling using wheel loader (WL)

Crushing

The oversized materials are then hauled to the crushing area. A mobile crusher is used to crush the oversized materials into a maximum size of -20 mm.

Photo 15. Mechanical crushing using mobile crusher (MC)

Beneficiation

Beneficiation is normally applied to high-grade saprolite ore materials, with grade values greater than 1.70% Ni. These materials are normally intended for shipment to PAMCO smelters in Japan. The retrieved piles are screened to separate the oversized material (+75 mm to -300 mm) from the undersized materials. Materials that are +300 mm in size are hauled and used for environmental protection activities or disposed in waste dumps. Materials of +75 mm to -300 mm size are then subjected to further size reduction by crushing to attain the desired shippable size of -75 mm.

Afterwards, the beneficiated hard ore materials are either transferred to their designated shippable stockpiles or delivered directly to LCTs. Due to moisture content restrictions, shippable stockpiles are covered with canvas sheets to protect them from rain.

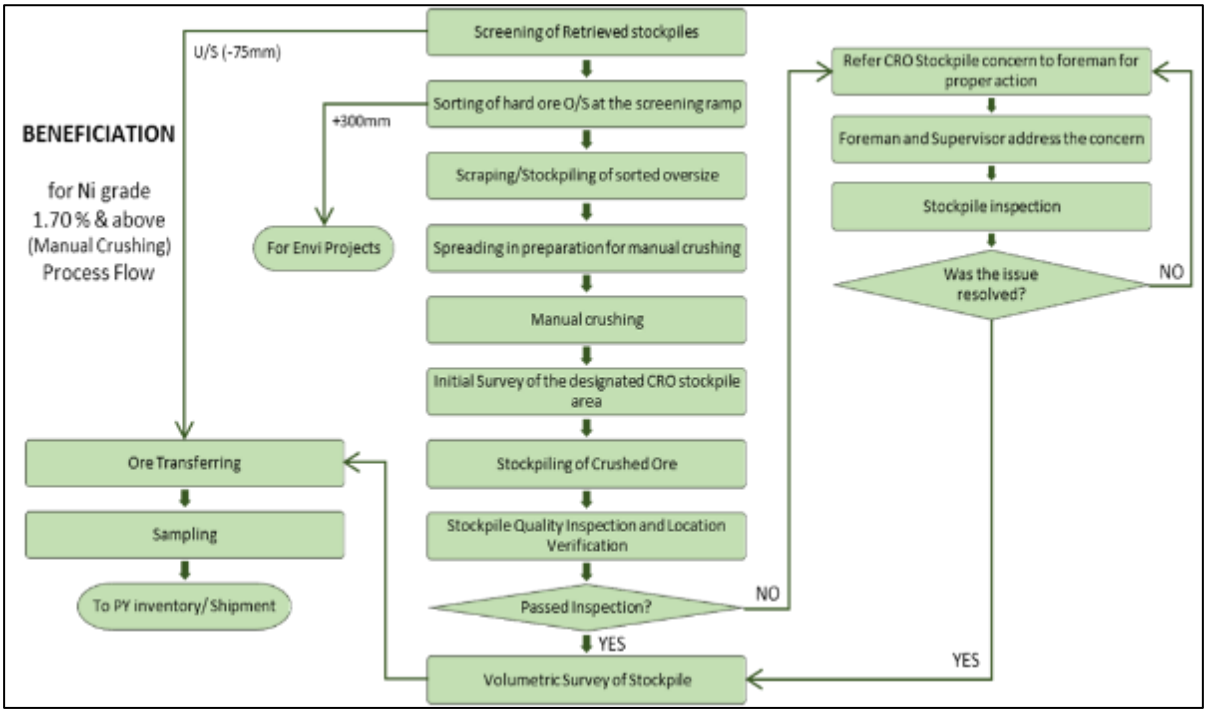


Figure 17. Manual crushing process flow

Ore Loading/Shipping

The location of the shippable ore stockpiles is preferably a short distance away from the causeway. Barges and/or LCTs with capacities between 600 to 4,000 tonnes are docked at the causeway's landing platform. Beneficiated shippable ore materials are unloaded by dump trucks inside the barges or LCTs, as shown in Photo 16 and 17, respectively. Front-end wheel loaders or backhoes are stationed in the LCT for trimming and stacking the loaded ore materials inside the LCT. Panamax and Supramax-sized mother vessels, with self-loading cranes and grabs, anchored in reasonable distance away from the causeway, receive the materials from the barges and/or LCTs. One shipment involves a targeted tonnage that varies from 44,000 to 65,000 WMT. The ship-side loading activity normally takes an average of five (5) to ten (10) weather- permitting days to complete.

Photo 16. LCT loading

Photo 17. Marine vessel loading

Ore material load of each truck unloading inside the barge or LCT is sampled for proper monitoring of the ore quality being loaded. Likewise, quick assay method is done by a handheld AAS instrument to determine rough grade values during the progress of shipment.

Loaded barges and/or LCTs position alongside the mother vessels to have their loads transferred. The mother vessels unload the materials from the barges and/or LCT using self-

contained cranes and grabs. The materials are placed in the hatches of the mother vessels until the target cargo weight is attained.

Buffer Zone Management

In consideration of DAO 2018-19, 20-meter buffer zones are established inward from TMC's mining tenement boundary and outward from the edges of the normal high waterline of rivers and streams found within the mining tenement area. The buffer zones are established and identified on the map (Figure 18). These are surveyed and communicated to the relevant mining personnel to ensure that no mining activities take place within the buffer zones.

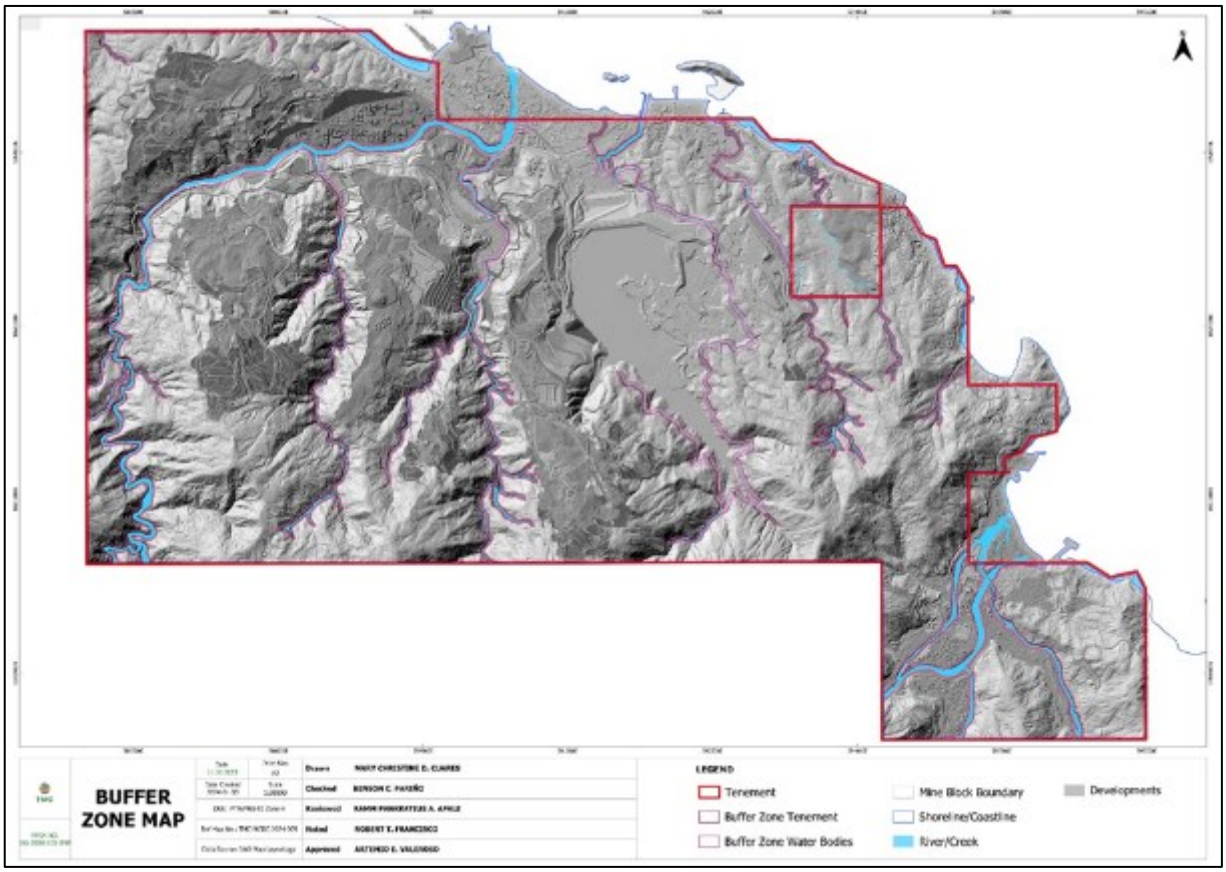


Figure 18. Tenement buffer zone map

Pier Stockyard as Temporary Stockpile Area for Ore Shipment

TMC pier yards, PY 01 and PY 02, are utilized as temporary stockpile areas for ore prior to loading operations for shipment. They have a capacity of more than 100,000 WMT of shippable ore materials. These stockpiles are designed to ensure that shippable ore materials are available for loading to barges and/or LCTs, even in cases when there are no deliveries of ore materials from the active mining areas due to poor weather and other operational issues. To ensure that these stockpiles do not adversely impact the environment, berms are constructed and maintained. Regular inspections are also conducted to manage and monitor the condition of these berms.

Grade Control

Ore grade control is strictly employed in order to meet the market specifications of ore materials. Grade control starts with detailed drilling, also referred to as production drilling, with a grid pattern of 10 m × 10 m, and with cores sampled for every meter intercept. The assay results from the production drilling are incorporated into the drilling database of the Mineral Resource model. Thereafter, an updated Mineral Resource model is generated, wherein areas of production drilling activities receiving an increased level of confidence. The updated Mineral Resource model becomes the basis for the dig maps and other short-range mine production plans.

During mine production activities, dig maps take into account the groupings or clustering of grade ranges. This practice helps to optimize the grade blending of materials within the planned area of extraction. Stakes with ribbons are placed by the Survey group in the active mining areas to represent the limits set by the dig maps and mine production plans. The stakes serve as guide for the operators of heavy equipment engaged in the mine production activities (Table 17).

Ore is then hauled and dumped to the designated grade piles at the lay-down areas (LDAs). Each pile consists of ten (10) dump truck (DT) loads. Again, sampling is done through mechanized sampling using mini-TX (MTX) depending on the material classifications:

- For Material Class F and E:
  - Dump truck (DT)
    80 trips = 10 sacks = 2 series number
    Increment of samples will be every 4th truck trip.

  - Articulated Dump truck (ADT)
    40 trips = 10 sacks = 2 series number
    Increment of samples will be every 2nd truck trip.

- For Material Class A, B, C and D:
  - Dump truck (DT)
    40 trips = 5 sacks = 1 series number
    Increment of samples will be every 4th truck trip.

  - Articulated Dump truck (ADT)
    20 trips = 5 sacks = 1 series number
    Increment of samples will be every 2nd truck trip.

Table 17. Material classification guide stakes

Material	Grade Range (%Ni)	Class	Ribbon
Saprolite	1.19 and below	Waste	Grey
	1.20 - 1.29	F	Black
	1.30 - 1.39	E	White
	1.40 - 1.49	D	Orange
	1.50 - 1.59	C	Blue
	1.60 - 1.69	B	Yellow
	1.70 and above	A	Red
Limonite	0.65	HPAL	
	0.64 and below	Waste	

Saprolite material re-classification happens once the grade results from truck load samples are available.

During ship loading, the beneficiated ore is sampled for each truckload using MTX, same as in LDA sampling. A total of 24 truckloads are made into one sub-sublot sample, 10 sub-sublot samples are made into one sub-lot sample, and 10 sub-lot samples are made into one (1) lot sample until the loading of the whole shipment is completed. A total of “n” lot samples is collected.

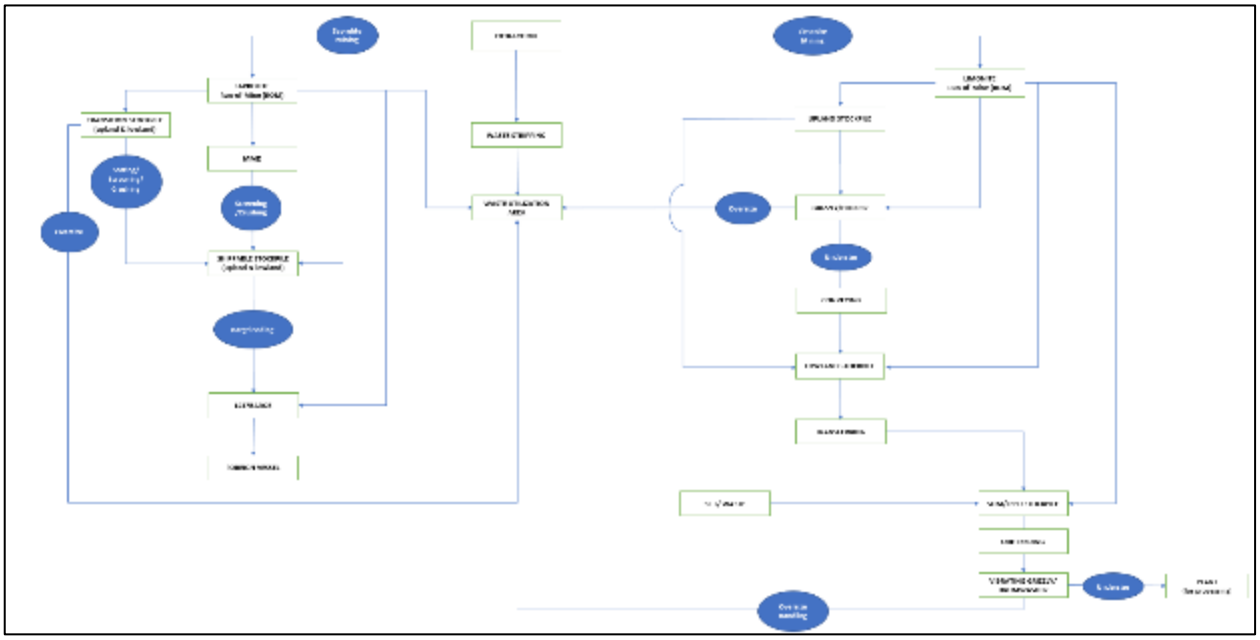


Figure 19. Process flow of extraction in limonite and saprolite

10.4.1.2 Mine Design, Mining Parameters and Geotechnical Parameters

Table 18 shows the design parameters utilized in mining the deposits in the Project.

Table 18. Mine production plan design parameters used in the Project

Parameter	Description
Maximum road gradient, %	10
Bench slope, degrees	65
Minimum bench width, meters	3
Overall pit slope, degrees	34
Berm width, meters	3
Height of safety berm along haul roads, meters	0.9m or ≥ height of wheel hub (DAO 2000-98)
Haul road width, meters	10

The design parameters for the bench slope are a function of the orientation of the laterite deposit with some adjustment for safety and practicality. Since the deposit is shallow-occurring and blanket-type, the terracing or benching will follow the contour. The overall pit slope is the angle between the uppermost crest line and the lowermost toe line.

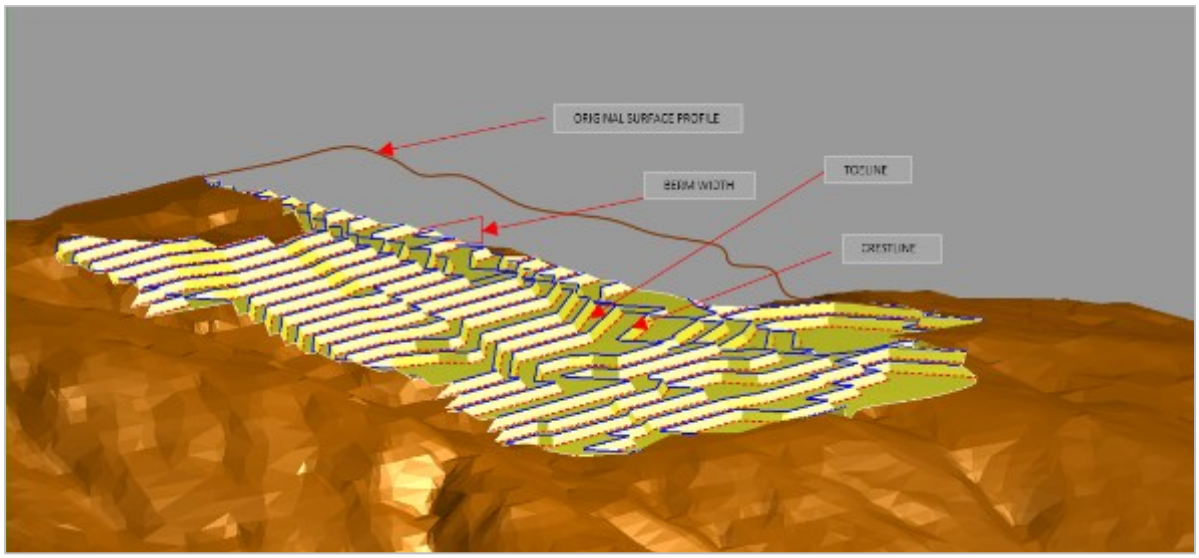


Figure 20. Contour mining diagram in TMC

10.4.1.3 Mining Recovery, Dilution and Losses

TMC has yet to conduct tonnage and grade reconciliation; thus, no mine call factor (e.g., mining recovery, dilution) was applied during the estimation of Mineral Reserves at the time of writing of this Report.

A new grade and tonnage reconciliation procedure was drafted by the NAC Geology Group. This reconciliation procedure will be reviewed and applied by TMC in 2023 to derive the mine call factors for future iterations of the Mineral Reserves estimate.

10.4.1.4 Planned Production Rate, Annual Production Schedule, and Estimated Life of Mine

The Mineral Reserves are estimated to be about 65 mWMT for limonite, with an average grade of 1.01% Ni, 46.89% Fe, 0.95% Mg, and 0.10% Co, along with a Cut-off Grade of 0.65% Ni and usually 40% Fe and above. Additionally, there are about 88.3 mWMT for saprolite, with an average grade of 1.45% Ni and 12.08% Fe, and a Cut-off Grade of 0.95% Ni and containing less than 40% Fe.

The planned annual production rate for limonite is approximately 5.9 mWMT over an 11-year mine life, extending up to the year 2033. As of this writing, the Mg requirement for the processing plant is not more than 2.2%. However, the calculation for the optimal Mg grade requirement still depends on the TMC's annual budget for limonite extraction.

For saprolite, the planned annual production rate is approximately 4.6 mWMT over a 19-year mine life, extending up to the year 2041. The planned peak production period extends until the year 2033, with a combined production rate of 9.5 to 10.5 mWMT for limonite and saprolite, as detailed in Table 19.

The planned annual shipment rate for limonite and saprolite is 4.9 mWMT and 4.7 mWMT, respectively. This is tabulated in Table 20.

Table 19. Projected mine production schedule

Year	LIMONITE						SAPROLITE			
	mWMT	mDMT	%Ni	%Fe	%Mg	%Co	mWMT	mDMT	%Ni	%Fe
2023	5.7	3.7	1.05	45.78	2.09	0.08	3.9	2.7	1.64	12.95
2024	5.6	3.6	1.01	46.87	1.29	0.10	3.8	2.6	1.40	12.26
2025	5.6	3.6	0.99	47.59	1.19	0.11	4.1	2.8	1.40	13.19
2026	5.9	3.8	1.00	47.37	0.62	0.11	4.4	3.0	1.40	12.58
2027	5.9	3.8	1.00	47.80	0.41	0.12	4.0	2.7	1.40	12.35
2028	6.2	4.0	0.99	48.16	0.36	0.11	4.3	2.9	1.40	12.74
2029	6.3	4.0	1.00	46.95	0.58	0.10	4.1	2.8	1.41	13.68
2030	6.2	4.0	1.00	46.32	0.58	0.06	4.3	2.9	1.40	13.28
2031	6.2	4.0	1.01	47.38	0.39	0.10	4.1	2.8	1.40	12.89
2032	5.8	3.7	1.00	46.76	0.59	0.09	4.7	3.2	1.41	13.93
2033	5.6	3.6	1.04	44.60	2.61	0.08	4.5	3.1	1.41	12.69
2034							4.8	3.3	1.62	11.17
2035							6.3	4.3	1.41	10.98
2036							5.8	3.9	1.55	11.46
2037							5.8	3.9	1.40	10.93
2038							6.2	4.2	1.40	11.46
2039							6.0	4.1	1.40	10.89
2040							6.2	4.2	1.64	10.24
2041							0.8	0.6	1.43	15.04
Total	*65.0*	*41.8*					*88.1*	*60.0*		
Average	**5.9**	**3.8**	**1.01**	**46.89**	**0.95**	**0.10**	**4.6**	**3.3**	**1.45**	**12.08**

Note: mWMT is million wet metric tons; mDMT is million dry metric tons

Table 20. Planned mine production and shipment tonnages until the end of mine life, in mWMT

Production Tonnage	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Saprolite	3.9	3.8	4.1	4.4	4.0	4.3	4.1	4.3	4.1	4.7	4.5
Limonite	5.7	5.6	5.6	5.9	5.9	6.2	6.3	6.2	6.2	5.8	5.6
Total Production	***9.6***	***9.4***	***9.7***	***10.3***	***9.9***	***10.5***	***10.4***	***10.5***	***10.3***	***10.5***	***10.1***
Total Waste	0.2	1.3	2.6	3.2	2.2	2.6	3.6	2.0	3.0	3.5	4.5
Total Materials Moved	**9.8**	**10.7**	**12.3**	**13.6**	**12.1**	**13.1**	**14.0**	**12.5**	**13.3**	**14.0**	**14.6**

Production Tonnage	2034	2035	2036	2037	2038	2039	2040	2041	Total	Average/year
Saprolite	4.8	6.3	5.8	5.8	6.2	6.0	6.2	0.8	88.3	4.6
Limonite	–	–	–	–	–	–	–	–	65.0	5.9
Total Production	***4.8***	***6.3***	***5.8***	***5.8***	***6.2***	***6.0***	***6.2***	***0.8***	***153.3***	*8.1*
Total Waste	<0.1	–	–	<0.1	<0.1	0.3	–	0.2	29.1	1.5
Total Materials Moved	**4.8**	**6.3**	**5.8**	**5.8**	**6.3**	**6.3**	**6.2**	**1.0**	**182.4**	9.6

Shipment Tonnage	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Saprolite	3.9	3.8	4.1	4.4	4.0	4.3	4.1	4.3	4.1	4.7	4.5
Limonite	4.7	4.7	4.6	4.9	4.9	5.1	5.2	5.2	5.1	4.8	4.7
Total	**8.7**	**8.4**	**8.8**	**9.3**	**8.9**	**9.4**	**9.3**	**9.5**	**9.3**	**9.5**	**9.2**

Shipment Tonnage	2034	2035	2036	2037	2038	2039	2040	2041	Total	Average/year
Saprolite	4.8	6.3	5.8	5.8	6.2	6.0	6.2	0.8	88.3	4.7
Limonite	–	–	–	–	–	–	–	<0.1	54.0	4.9
Total	**4.8**	**6.3**	**5.8**	**5.8**	**6.2**	**6.0**	**6.2**	**0.8**	**142.2**	7.5

Note: mWMT is million wet metric tons

10.4.1.5 Work Schedules at the Mine Site

TMC has two (2) forms of operational activities, namely, production and non-production. This is strongly influenced by the weather as presented in Figure 21. The production activities refer to the long-term operations and maintenance work conducted during the dry season — usually called the production season. TMC's production months usually start in late March and end in October. In these months, several activities are conducted to generate revenue. These activities are (1) limonite and saprolite mining, (2) ore beneficiation, and (3) pit bench and road construction and maintenance work.

On the other hand, the non-production months usually start in November and end in early March. During these months, environmentally relevant activities are carried out, such as (1) catch drainage and drainage/canal maintenance, (2) settling ponds maintenance, (3) stockpile management, and (4) slope reshaping and planting activities.

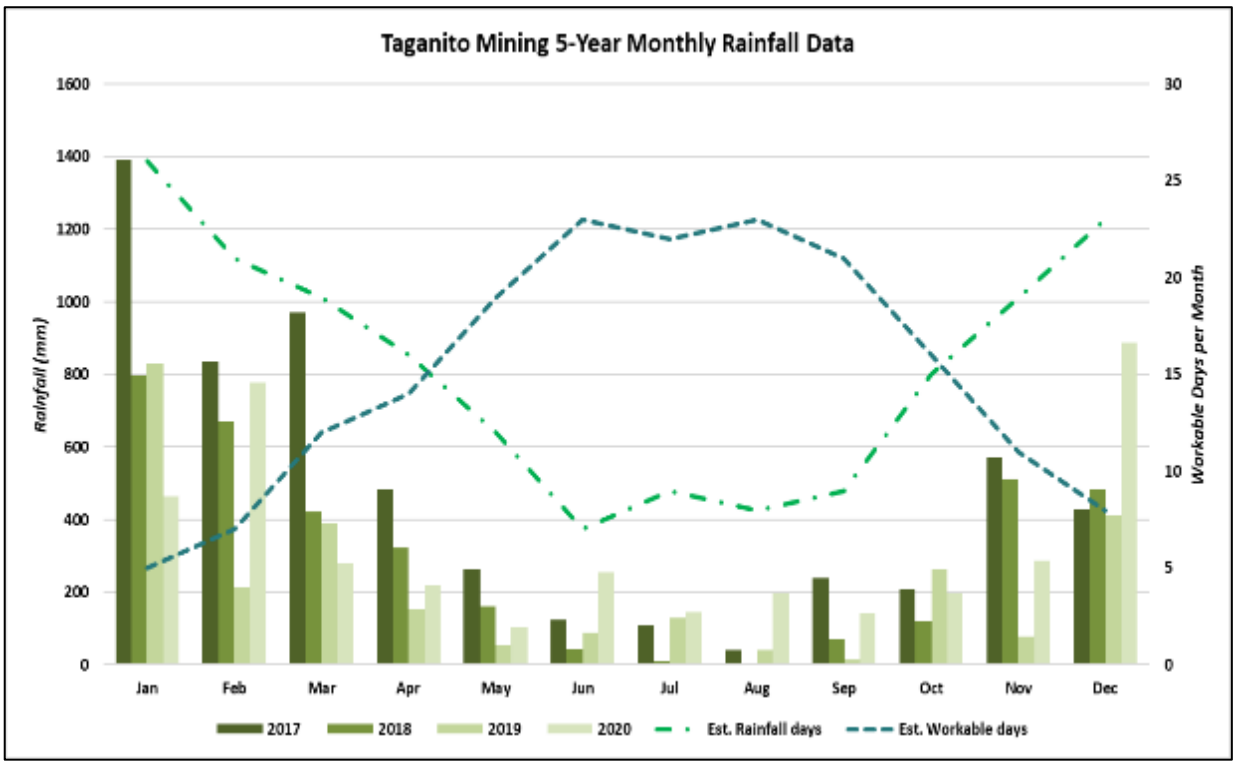


Figure 21. Estimated days with rainfall and workable days from 2017-2020

The planned implementation schedules of major projects are listed in Table 21 below.

Table 21. Planned implementation schedules of major projects.

Project	Schedule
MMD Replacement	2024
SMCC General Admin Building at SMCC	2024
TAGA-3 Grizzly Air Blasting System – Piping Installation and Testing	2025

10.4.1.6 List of Mining Equipment and Auxiliary Machinery

Shown in Tables 22 to 26 below are the lists of mining equipment and auxiliary machines used in various operations and activities in the mine.

Table 22. List of equipment used in mining, feeding, and road maintenance operations

Equipment Type	Maker	Model	No. of Units	Capacity
1. Dump Truck	Howo	A7	12	20 tons
	Sinotruk	6X6	44	20 tons
	Volvo	FMX440	29	20 tons
	Volvo	FMX370	1	20 tons
	Volvo	FMX460 6X6	31	20 tons
	Volvo	FMX400	2	20 tons
2. Articulated Dump Truck	Komatsu	HM400-6R	6	40 tons
	Volvo	A40G	4	40 tons
3. Track Excavator	Caterpillar	320D2L	1	0.964 m^3
	Caterpillar	329D	2	1.15 m^3
	Caterpillar	330D2L	2	1.54 m^3
	Kobelco	SK520	3	2.5 m^3
	Komatsu	PC200LC-8MO	2	0.93 m^3
	Komatsu	PC350-8MO	22	1.4 m^3
	Komatsu	HB365LC-1	2	1.96 m^3
	Volvo	EC210DLC	3	1.2 m^3
	Volvo	EC290BLC	5	1.7 m^3
	Volvo	EC480DL	5	3.3 m^3
	Komatsu	PC500LC-10R	14	3.3 m^3
	Volvo	EC750DL	2	4.6 m^3
4. Wheel Loader	Caterpillar	972H	2	4.5 m^3
	Caterpillar	972L	2	9.9 m^3
	Komatsu	WA470	1	4.2 m^3
	Komatsu	WA470-5	1	4.0 m^3
	Komatsu	WA470-6R	6	2.676 m^3
	Komatsu	WA500-6R	13	5.3 m^3
	Volvo	150L	1	4.5 m^3
	Volvo	L150H	4	4.0 m^3
	Volvo	L180H	1	4.6 m^3
5. Bulldozer	Caterpillar	D7R LGP	2	5.89 m^3
	Caterpillar	D8R	2	3.169 m^3
	Komatsu	D155A-6R	4	9.4 m^3
	Komatsu	D155A-6	3	9.4 m^3
	Komatsu	D85EX-15R	1	7 m^3
	Komatsu	D85PX-15R	4	5.2 m^3
6. Mobile Crusher	Sandvik	QJ241	1	5 m^3
	Terex		1	5 m^3
7. Mobile Screener	Metso	LOKOTRACK ST2.8	1	4.5 m^3
8. Road Grader	Caterpillar	140K	1	1 m^3
	Komatsu	GD555-5	3	1 m^3
	Komatsu	GD663A-2	3	1 m^3
9. Fuel Truck	Isuzu	CYZ	2	20 tons
	Volvo	FMX380	1	20 tons

10. Maintenance Truck	Isuzu	CYZ	1	20 tons
	Volvo	FMX380	2	20 tons
11. Water Truck	Isuzu	A40G	1	40 tons
	Isuzu	CYZ	4	20 tons
	Sinotruk	A7	11	20 tons
12. Water Tank	–	–	6	
13. Trailer Truck	–	–	10	
14. Vibratory Roller	Bomag	BW211D-40	4	
	Caterpillar	CS533E	1	
	Volvo	SD100B	1	
	Volvo	SD110B	1	
15. Wheel Excavator	Caterpillar	-	1	
16. Wheel Crane	Kato	KYC-300E11	1	30 tons
17. Mini Dump Truck	Isuzu	NP575H	2	
	Isuzu	NPS	2	
18. Mini Wheel Loader	Caterpillar	CAT 906H2	2	0.9 m^3
19. Mini Excavator	Caterpillar	CAT 306E2	1	0.25 m^3
	Komatsu	KOMPC4CMRNHY	8	0.25 m^3
	Volvo	VOLVO EC55B PRO	1	0.25 m^3
20. Tower Light	Doosan	LSCK4	9	
	Pramac	LSW5Y	1	
	Pramac	LSW5Y 4X2 40W	3	
	Pramac	YANMAR	5	
	Terex	RL4	5	
	WIP, INC.	–	1	
	Yanmar	KDE6700T	1	

Table 23. List of Service Vehicles

Equipment Type	Maker	Model	No. Of Units	Capacity
1. Service Vehicles	Mitsubishi	L200	3	-
	Mitsubishi	L300	1	-
	Nissan	NAVARA	1	-
	Nissan	URBAN	1	-
	Suzuki	APV GA-MT	1	-
	Suzuki	JIMNY 4X4	4	-
	Toyota	FORTUNER	1	-
	Toyota	FORTUNER GUN156L	1	-
	Toyota	FORTUNER GUN165L	1	-
	Toyota	HI-ACE GL GRANDIA	1	-
	Toyota	HI-ACE GL GRANDIA D4D AT	1	-
	Toyota	HILUX	22	-
	Mahindra	ENFORCER	2	-
	Toyota	HILUX CONQUEST	7	-
	Toyota	HILUX 2.4 4x4	5	-
	Toyota	HILUX 2.8L 4X4 G MT	7	-
	Toyota	HILUX FX TYPE 4X2	1	-
	Toyota	GUN126LDTFHXM011	2	-
	Toyota	INNOVA 2.8 V DIESEL	1	-
2. Service Trucks	Mitsubishi	4WD DROPSIDE	1	-
	Isuzu	FRR90	1	-
	Isuzu	FTS	3	-

	Isuzu	NKR	1	-
	Isuzu	NPR	2	-
	Isuzu	NPS	3	-
	Isuzu	NPS CAB TYPE	8	-
	Isuzu	NPS DOUBLE CAB	1	-
	Isuzu	NPS75	5	-
	Isuzu	NPS75H	2	-
3. Service Bus	Isuzu	FVR	4	-
	Kinglong	–	3	-
4. Farm Tractor	Kubota	L4630D	1	-
	Kubota	L4630DT	1	-
5. Fire Truck	Isuzu	FTS	1	-
	Isuzu	FGZ6MV	1	-
6. Pump Boat	–	–	5	-
7. Rubber Boat	–	–	2	-
8. Fast Craft	Suzuki	SUZUKI OUTBOARD DF 150	2	-
9. Motorcycle	Honda	HONDA TMX 155	2	-
	Honda	HONDA 125 XRM	1	-

Table 24. List of auxiliary equipment for mining

Equipment Type	Maker	Model	No. Of Units	Capacity
1. Boulder Truck	Volvo	FMX400	2	-
	Volvo	FMX440	1	-
2. Forklift	TCM	TCM	2	-
3. Hydraulic Hammer	–	–	1	-
4. Manlift	Terex	GENIE	1	-
	Homan	4X4 EURO 5		-
5. Prime Mover	UD	EM1164T	1	-
6. Wheel Crane	Kato	–	1	-
7. Air Compressor	Kobelco	–	1	-
8. Generator Set	Caterpillar	–	7	-
	Cummins	4BTA3.9-G2	1	-
	Daiden	DDG700ES	2	-
	Denyo	DCA-10-ESX-DA	1	-
	Denyo	DA-60055	3	-
	Denyo	–	5	-
	Honda	–	1	-
	Kete	H-10ST	1	-
	Kete	KETE HG-245	1	-
	Kipor	–	3	-
	Komatsu	EGS300-3	1	-
	Komatsu	–	4	-
	Kubota	–	3	-
	Mitsubishi	–	1	-
	Sun Dynamac	–	1	-
	Yanmar	–	7	-
	–	–	10	-
9. CHAIN SAW	–	STIHL 070	2	-
10. CONCRETE MIXER	–	–	2	-
11. WATER PUMP	–	–	17	-
	Kirloskar	–	1	-

	Promate	SC-460	1	-
	Robin	PTD-306	1	-
	Robin	PTG-305	2	-
	Shinmaywa	DP-40E	6	-
	Yamasaki	188FA BYK 100CL	1	-
12. Water Cleaner	–	K-195-TS-T	1	-
	–	KYC-300E11	1	-
	–	KYC-300E-2	1	-
	–	TA-5H	1	-
13. Welding Machine	–	–	1	-
	Daiden	COPPER ARC WELDER	5	-
	Denyo	DLW-400LSW	3	-
	Lincoln Electric	IDEAL ARC 250	1	-
	Lincoln Electric	–	1	-
	Miller	BIG BLUE ECOPRO500X	1	-
	Miller	WELDCRAFT	1	-
	OTC Daihen	–	2	-
	WIP INC.	–	1	-

Table 25. Additional equipment planned for purchase in 2023

Equipment Type	Units	Remarks
1. Dump Truck	20	TSD re-fleeting program
2. Dump Truck (Boulder)	4	for road maintenance
3. Articulated Dump Truck	3	for saprolite mining
4. Track Excavator	37	12 for limonite mining
		5 for saprolite rehandling
		7 for LDA receiving
		3 for road maintenance
		10 TSD re-fleeting program
5. Wheel Loader	13	3 for scaling and stockpiling at LDA stockyards
		2 for scaling and stockpiling at MMD stockyard
		1 for Allu-bucket attachment
		7 TSD re-fleeting program
6. Bulldozer	7	3 for mine operation including pit preparation
		2 for mine civil works
		2 TSD re-fleeting program
7. Road Grader	3	2 for mine civil works
		1 TSD re-fleeting program

8. Compactor	5	4 for mine civil works
		1 TSD re-fleeting program
9. Wheel Excavator	3	2 for mine civil works
		1 TSD re-fleeting program
10. Hydraulic Hammer	1	for oversize prod. intended for road maintenance
11. Water Truck	1	TSD re-fleeting program
12. Service Truck	1	TSD re-fleeting program
13. Service Vehicle	4	1 for mine supervision in Hayanggabon Ridge
		3 TSD re-fleeting program
14. Tower Lights	8	for mine block illumination

Table 26. List of drilling machines

Equipment Type	Maker	Model	No. Of Units	Remarks
1. Drilling Machine	YBM	YBM YSO-1H	3	Junked
	YBM	YBM-1WA	4	For Evaluation and Repair
	YBM	YHP-1	53	Operational - 15 units Breakdown/Ongoing Repair - 25 units Junked - 9 units Donated - 4 units

10.4.1.7 Mine Infrastructures

A general arrangement map showing the TMC mine infrastructures is presented in Figure 22. The northwestern portion of this map is presented in Figure 23 showing the relative locations of the assay laboratory, offices, fire station, fuel station, medical clinic, power house, recreation/religious facilities, sample preparation facility, security facility, staff houses, training center, wash rack, water treatment, and wharf. The pier ore stockpile yards (PY 01 and PY 02) in the wharf area are presented in Figure 24. Figure 25 presents the southeast corner of the TMC campsite map showing the relative locations of mechanical services, warehouse, more staff houses, more offices, another fuel station, another security station, and another wash rack.

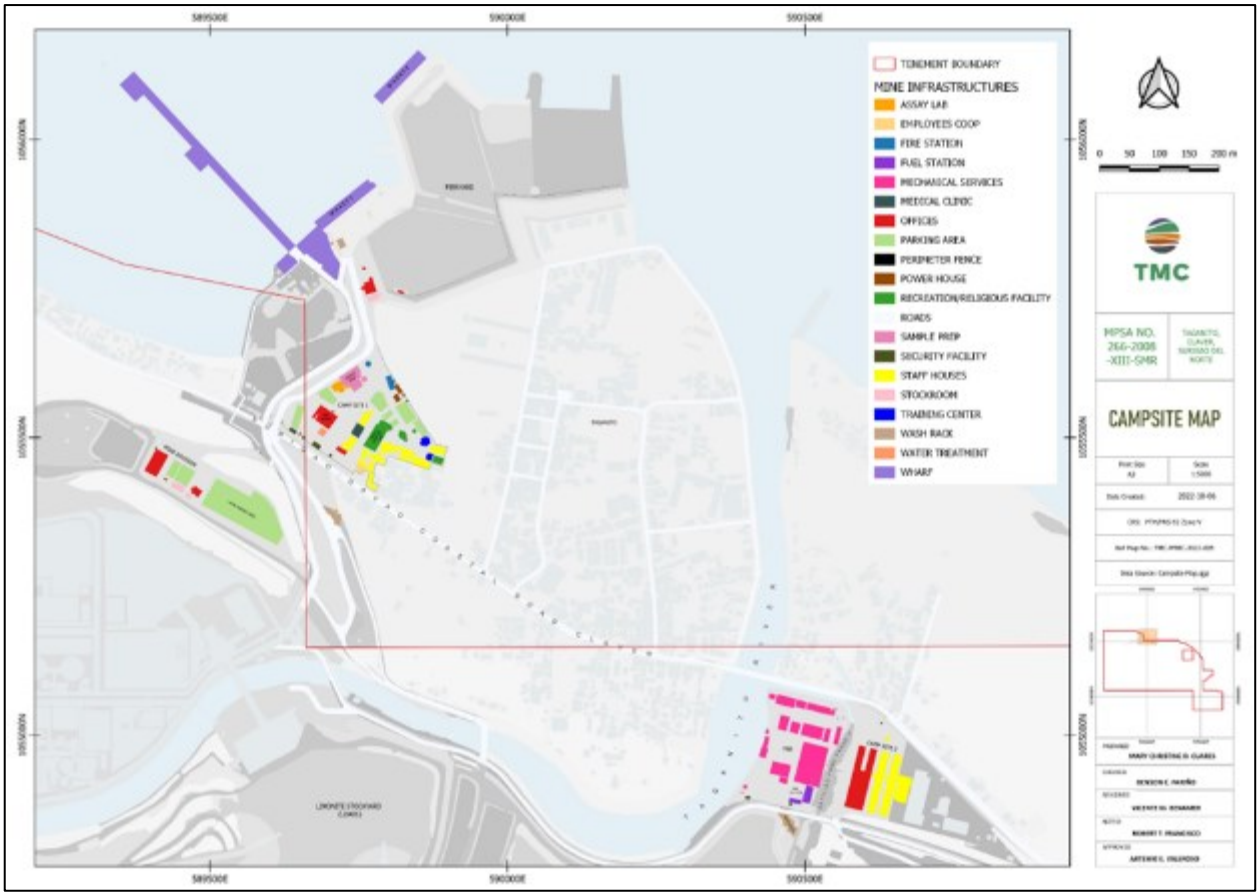


Figure 22. Mine infrastructures in TMC mine site

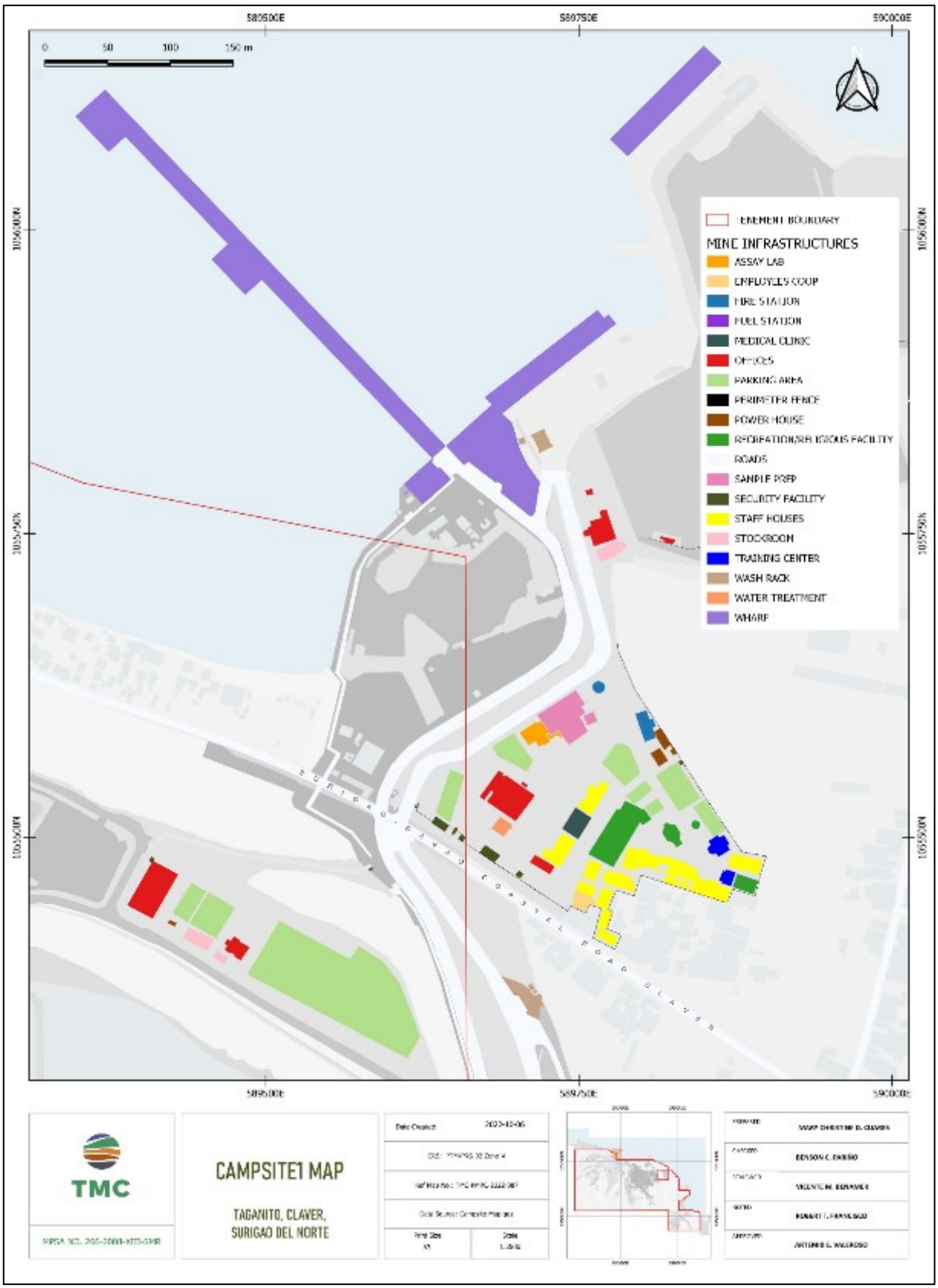


Figure 23. Mine infrastructures in the northwestern portion of the TMC campsite

Figure 24. Pier yards PY 01 and PY 02 in the TMC wharf area

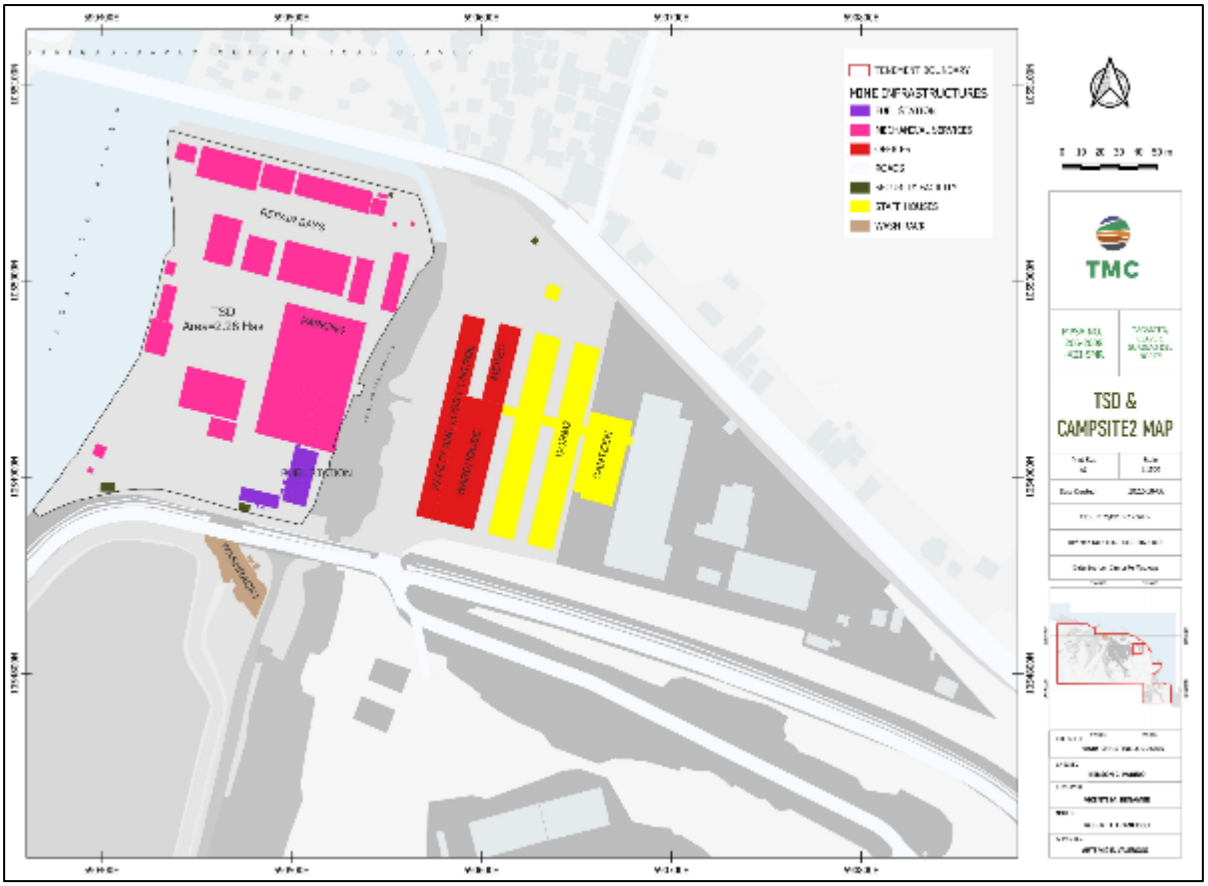


Figure 25. Mine infrastructures in the southeastern corner of the TMC campsite

10.4.1.8 Mine Development Plans and Schedules

Mine development activities consist of the carrying out feasibility assessments, construction of facilities, planning for innovation, and mining area development. Development starts with the preparation of feasibility studies to ascertain that the planned activities will increase or enhance the economic value of the Project. The construction of facilities describes the ancillary properties of the Company, which will be constructed or improved, while the planned innovation refers to equipment, systems, procedures and processes which increase competitiveness and efficiencies. Mining area development refers to stripping and access road expansion in the planned mining areas.

Construction of facilities: Extension of Taga1 Conveyor Belt

As TMC's mining operation progresses, the sources for limonite ore also extend farther from the THPAL plant. To improve the capability of handling the annual feed requirement of the THPAL plant, the Company plans to extend the conveyor belt in Taga1 with the proposed Taga 1.2 line. Refer to Figures 26 to 29.

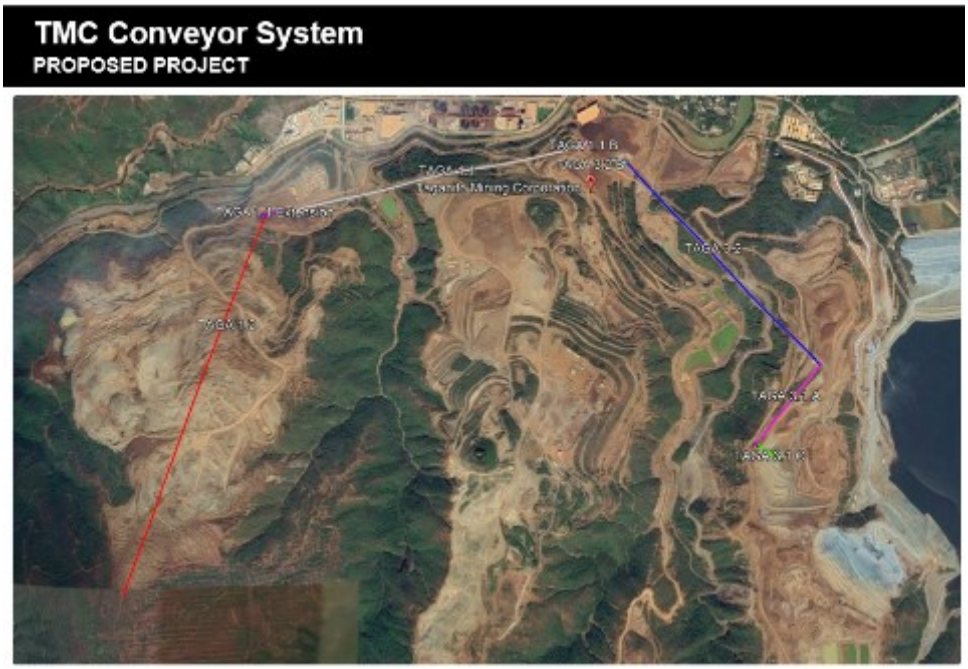
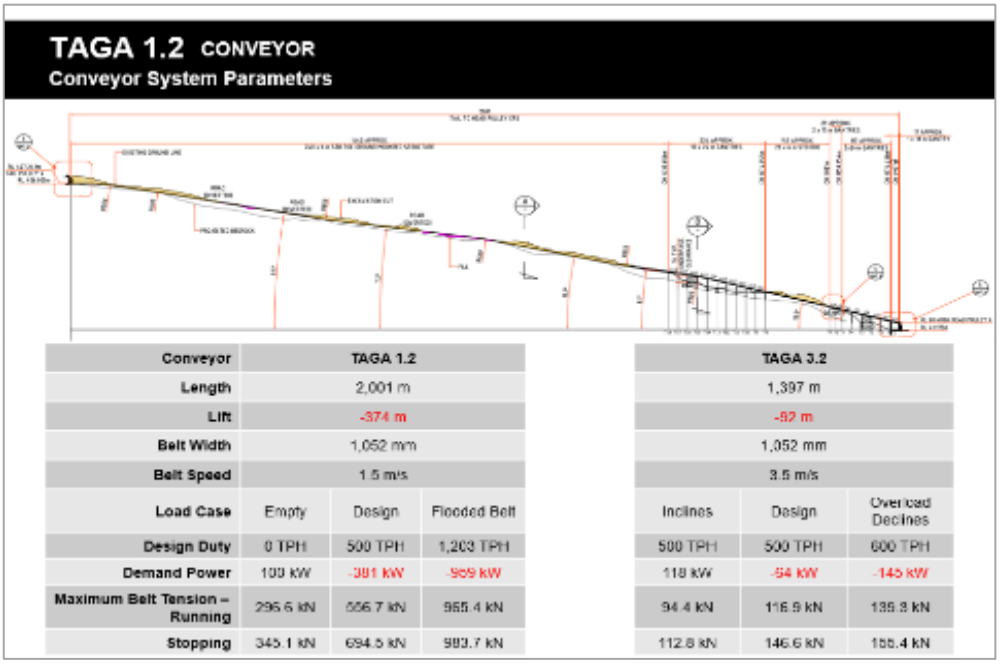


Figure 26. Illustration of the TMC conveyor system (aerial view)

Figure 27. Illustration of Taga1.2 proposed conveyor



Conveyor	TAGA 1.2			TAGA 3.2		
Length	2,001 m			1,397 m		
Lift	-374 m			-92 m		
Belt Width	1,052 mm			1,052 mm		
Belt Speed	1.5 m/s			3.5 m/s		
Load Case	Empty	Design	Flooded Belt	Inclines	Design	Overload Declines
Design Duty	0 TPH	500 TPH	1,203 TPH	500 TPH	500 TPH	600 TPH
Demand Power	100 kW	-381 kW	-969 kW	118 kW	-54 kW	-145 kW
Maximum Belt Tension – Running	296.6 kN	556.7 kN	955.4 kN	94.4 kN	116.9 kN	135.3 kN
Stopping	345.1 kN	694.5 kN	983.7 kN	112.8 kN	146.6 kN	155.4 kN

Conveyor	TAGA 1.2			TAGA 3.2		
Installed Power	2 x 400 kW			1 x 200 kW		
Installed Brakes	2 x 550 kN.m (closed loop control)			1 x 25kNm (fixed bleed profile)		
Proposed Belt Specification	ST4000			PN1000/5		
Condition	Running	Start / Stop		Running	Start / Stop	
Belt Safety Factor	6.67	4.5		8.0	6.67	
Belt Rating	631 kN	935 kN		131.5	157.7	
Load Case	Empty	Design	Flooded Belt	Inclines	Design	Overload Declines
Demand Power (% Install)	13%	-48%	-120%	59%	-32%	-72%
Maximum Belt Tension – Running (% Rating)	47%	88%	153%	72%	93%	106%
Stopping (% Rating)	37%	74%	105%	72%	93%	99%

Figure 28. Illustration of Taga1.2 conveyor parameters

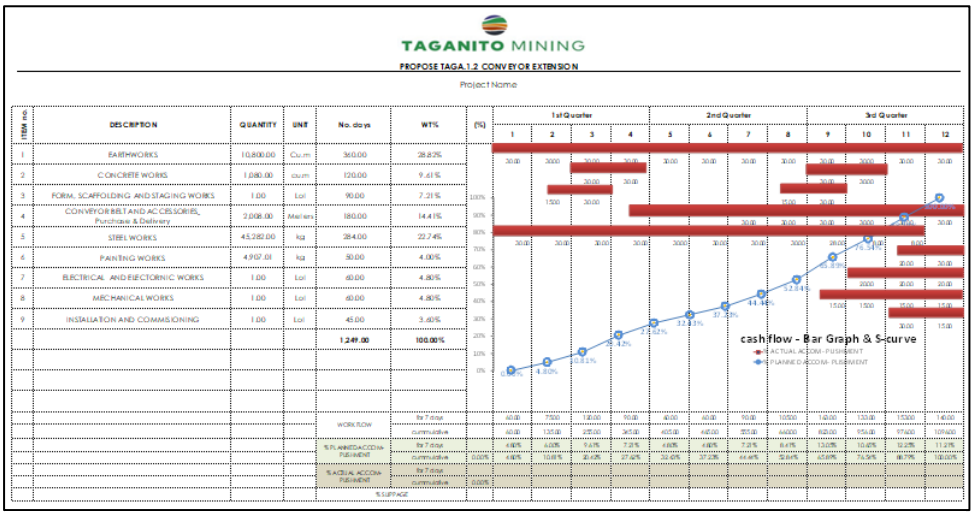


Figure 29. Illustration of Taga1.2 conveyor Gantt chart

In addition, the Project plans to construct a conveyor warehouse worth PHP 1.5 million to house the tools and materials used in the conveyor operations.

Construction of Facilities: Settling Pond Construction

To ensure that siltation within the mine area is managed well, the TMC is planning to construct additional settling ponds in compliance with Republic Act 9275, also known as The Philippine Clean Water Act of 2004.

The additional settling ponds are to be constructed near open areas of mine development and connected to the four (4) main settling ponds (Phase I, III, IV, and VI) whose clear runoffs drain the bodies nearby of water. Moreover, a series of sumps are constructed to reduce the runoff velocity to lessen the impact on the foundations of the drainage structures, and the generation of silted water through scouring/soil dislodging.

Construction of Facilities: Study on Acquiring a MMD Sizer with Vibrating Grizzly

The MMD Sizer is a modern approach to crushing, producing an accurate well-shaped product, minimal fines and methodically efficient breaking (Figures 30 and 31).

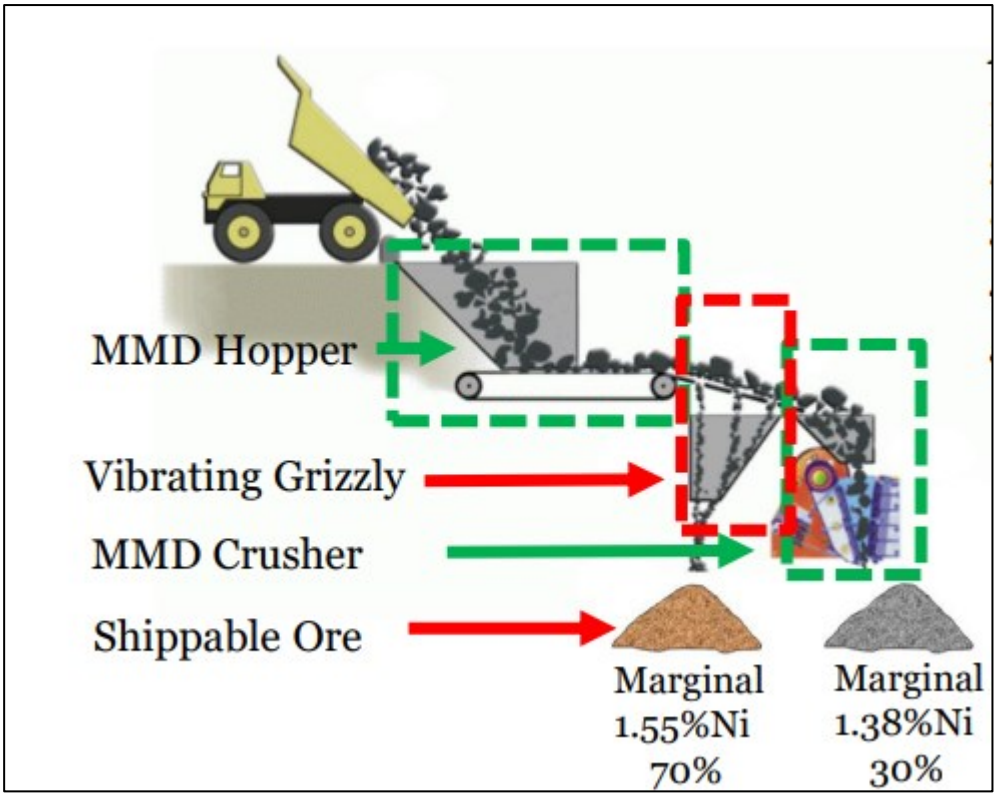


Figure 30. Illustration of MMD-Grizzly process flow

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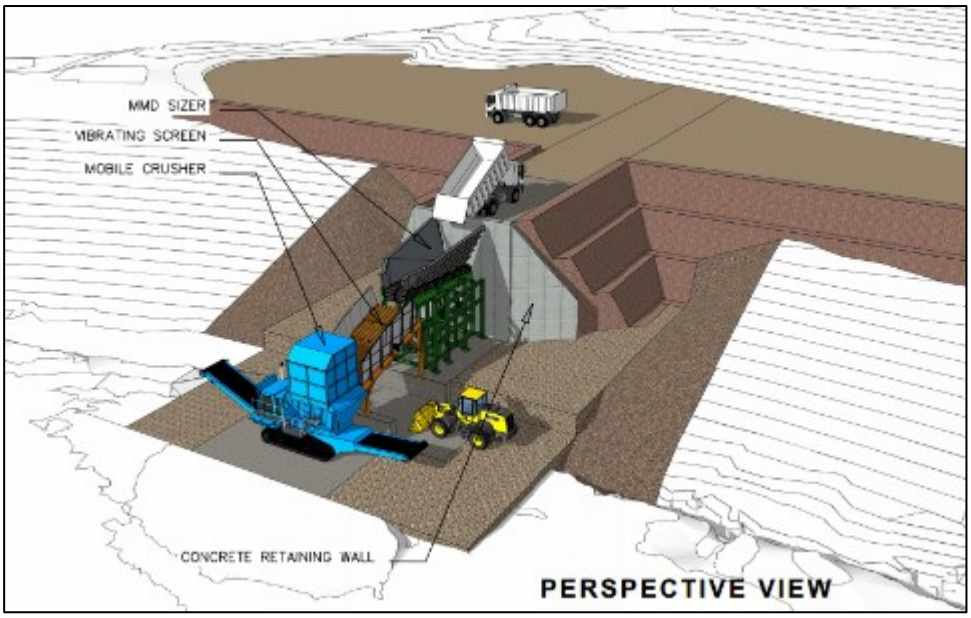


Figure 31. Illustration of MMD-Vibrating Grizzly (perspective view)

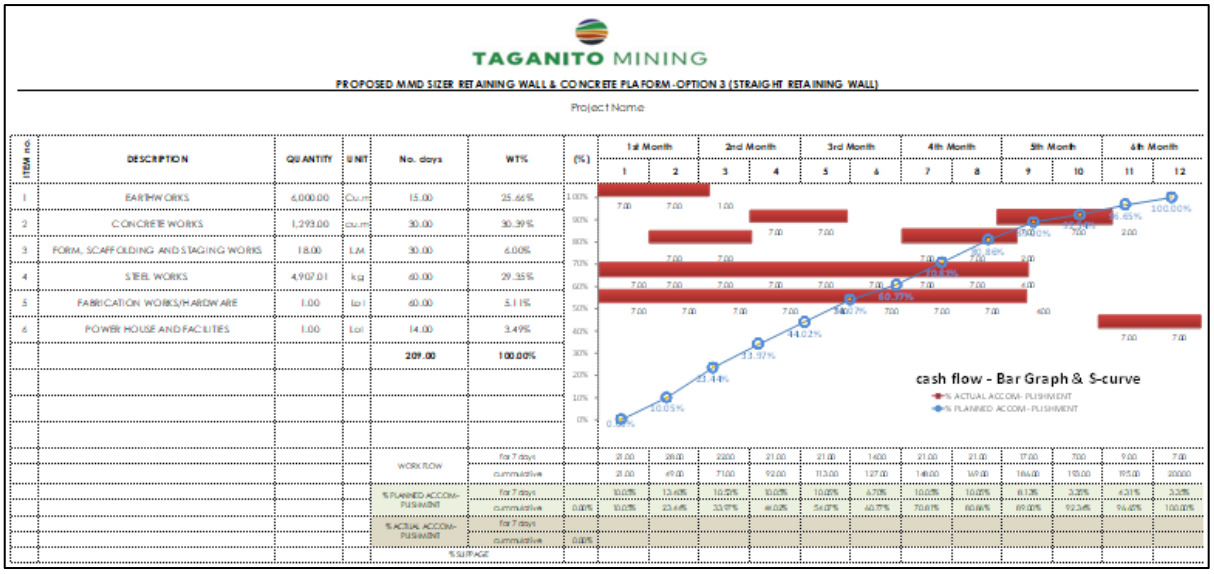


Figure 32. Illustration of MMD-Vibrating Grizzly Gantt chart

Planned Innovation: Acquiring GPS Gadgets for all Mobile Mining Equipment

The Project will be investing in GPS gadgets in 2023. The purpose of the plan is to provide positioning, navigation and timing information to Mine Operations personnel through sending impulses to land-based machines and equipment with the appropriate receiver. The use of the GPS is projected to increase efficiency by timely identification and monitoring inefficient, dangerous and wasteful usage of machines and equipment.

Mining Area Development

Mine development activities, specifically waste stripping, will persist until 2033, concluding with the completion of limonite mining. Saprolite mining will continue until the end of operations in 2041, with development activities limited to essential infrastructure such as road networks, drainage canals, and additional stockyards. However, there are some operational improvements such as the extension of Taga1, Hayanggabon Settling Pond Construction, and MMD Vibrating Grizzly.

Following the cessation of mining activities, a comprehensive review and decommissioning process will be undertaken. The proposed final land use map, depicted in Figure 33, delineates various land use areas, including ecotourism zones, grazing and livestock areas, agroforestry zones, permanent protection forests, wildlife habitats, integrated community villages, aquaculture areas, and coastal resource management zones.

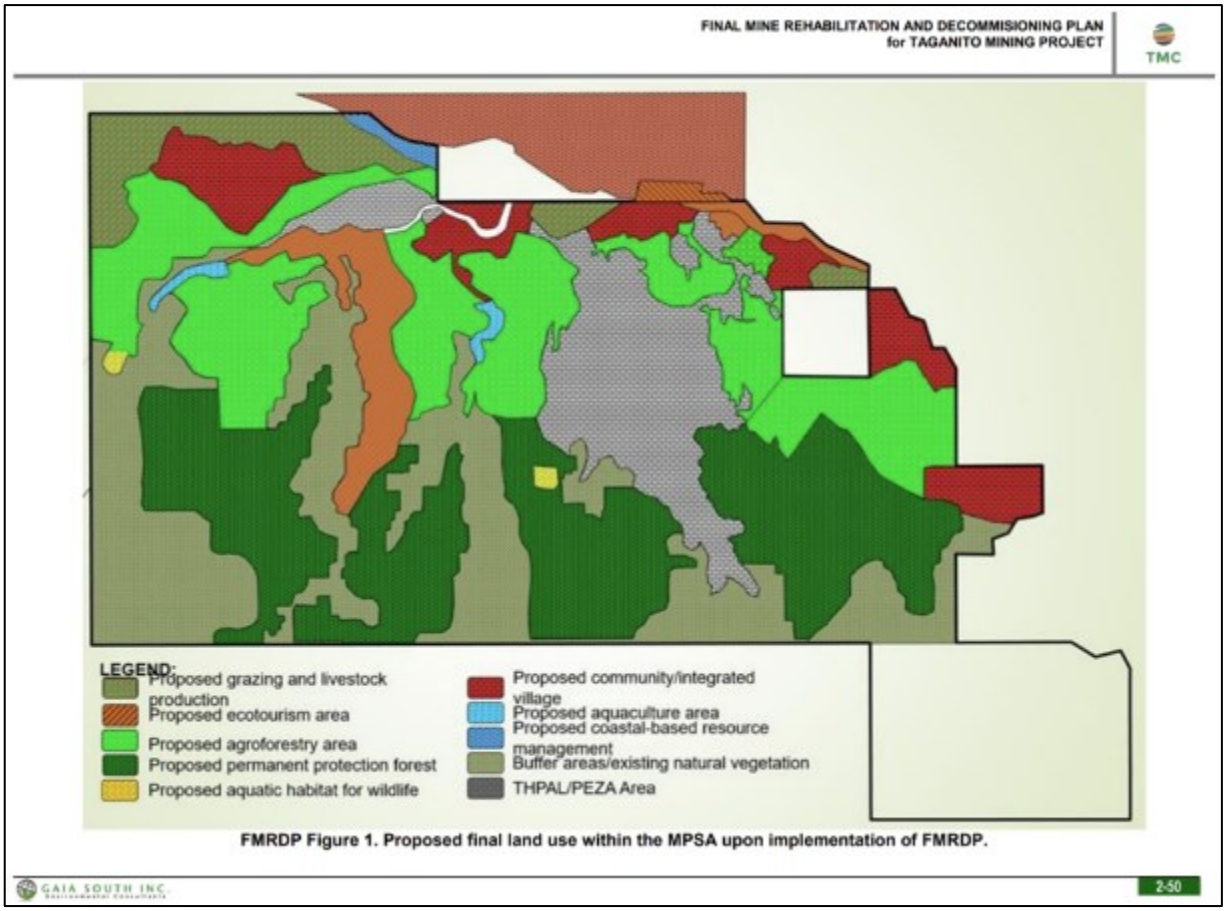


Figure 33. Proposed final land use within the MPSA upon implementation of the FMR/DP

	Activity	Years Before and After Closure											
		Closure Planning			Decommissioning, Rehabilitation and Socio-economic Plans					Maintenance and Monitoring			Relinquishment
		2031	2032	2033	2034	2035	2036	2036	2037	2038	2039	2040	2041	2042
Mine Closure Plan														
1	Review of the FMRDP													
2	Formation of the Closure Team													
3	Inventory of all equipment and facilities													
4	Planning/review of decommissioning procedures													
5	Assessment of the conditions of equipment and facilities													
6	Preparation of maintenance and monitoring plan and team													
7	IEC campaign on the status of the operation													
8	Consultation with LGU on the social asset and services to be maintained for the benefit of the community													
Social Plan														
1	Establishment of Mine Closure Comrel Team													
2	Evaluation of last 5 Year SDMP													
3	Retrenchment													
4	Labor Support policies and programs													
5	Capability building of interested retrenched employees													
6	Cross matching of personnel to decommissioning task													
7	Implementation of monitoring and feedback mechanism activity including processing of feedback and complaints													
Decommissioning Stage														
1	Turn-over of useful infrastructures and buildings to LGU													
2	Removal of fixed facilities													
3	Demolish buildings not useful to the LGU													
4	Removal of infrastructures/equipment incl. conveyor systems													
5	Decommissioning of equipment													
Site Rehabilitation														
1	Site clearing/cleaning													
2	Re-contouring/reshaping													
3	Spreading of topsoil													
4	Re-vegetation													
Final Land Use Specific Activities														
1	Proposed grazing and livestock production													
	Grass and herbage planting													
2	Proposed ecotourism area													
	Planting and landscaping													
	Concrete roads and sidewalks construction													
	Ziplines and related structures installation													
	Buildings construction													
	Slope protection installation													
3	Proposed agroforestry area													
	Saturation planting													
4	Proposed permanent protection forest													
	Saturation planting													

	Activity	Years Before and After Closure											
		Closure Planning			Decommissioning, Rehabilitation and Socio-economic Plans					Maintenance and Monitoring			Relinquishment
		2031	2032	2033	2034	2035	2036	2036	2037	2038	2039	2040	2041	2042
5	Proposed aquatic habitat for wildlife													
	Riparian habitat improvement and planting													
6	Proposed community/integrated village													
	Buildings retrofitting (GK style labor)													
	Slope protection installation													
	Landscaping													
7	Proposed aquaculture area													
	Silt pond conversion to fishponds													
8	Proposed coastal-based resource management													
	Establishment of monitoring office													
Maintenance and Monitoring														
1	Monitor FMRDP implementation													
2	Evaluate success of rehabilitation													
Final Relinquishment														
1	Submission of Final Mine Rehabilitation Report with results and request for environmental audit													
2	Environmental Audit by stakeholders													
3	Preparation of Final FMRDP Report including result of Envi. Audit													
4	Issuance of Certificate of Final Relinquishment													

Figure 34. Gantt chart of the approved FMR/DP

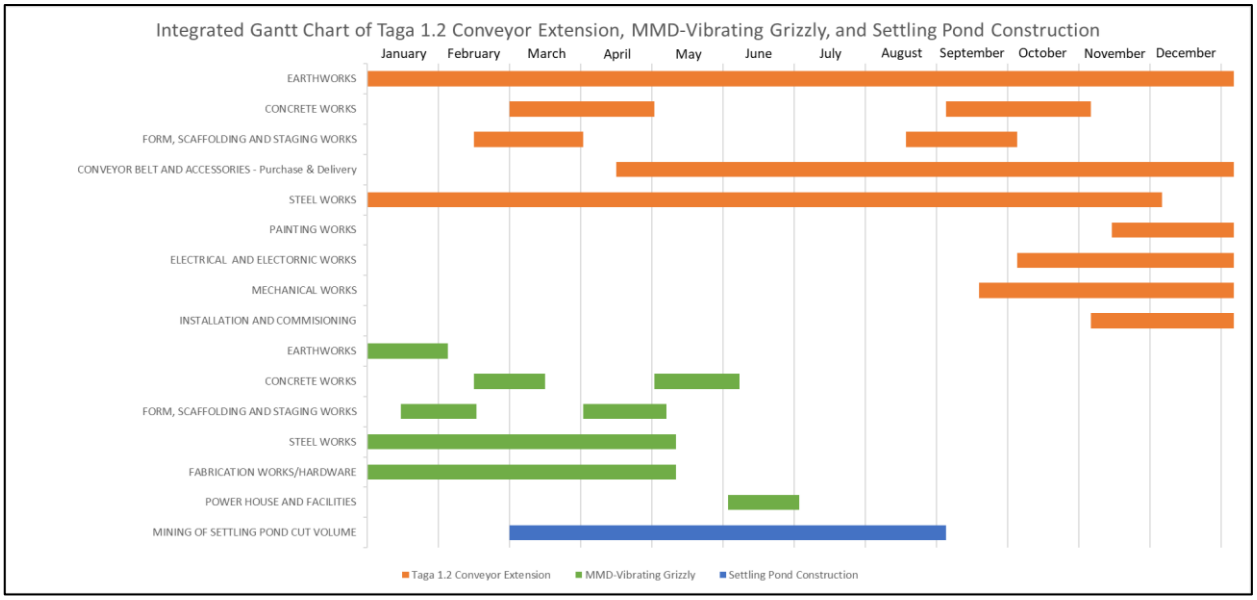


Figure 35. Integrated Gantt chart of the construction of facilities

10.4.2 Processing Plans

The Project produces limonite ore which is supplied directly to the HPAL plant of the Taganito THPAL Nickel Corporation (THPAL), a joint venture between NAC and SMMC, and located inside the TMC tenement. Saprolite ore is directly shipped to Chinese and Japanese smelters. TMC has no processing plant.

The limonite ore specification set by the THPAL. For CY 2024, the specification is as follows: 1.00% Ni, 40.00% Fe, and 2.20% Mg. The THPAL employs high-pressure acid leach technology to extract Ni and Co from the limonite ore. Chromite is also extracted from the limonite via physical separation using hydrocyclones, while scandium is extracted after the Ni and Co extraction from the leaching process.

Meanwhile, the saprolite ore specification have a range. For CY 2024, The ranges are as follows: 1.30% Ni and 1.40% Ni at 35% moisture content. At the TMC mine yard stockpile area, sizing, sorting, and blending activities are undertaken to meet the smelter customer specifications.

10.4.3 Mine Support Services

10.4.3.1 Power Sources

The power requirements of the Project are mostly sourced from and supplied by SURNECO, the provincial electric cooperative, at around 95% of total need. The balance of 5% is sourced from in-house electricity generating sets. The power requirements and its sources for the next three (3) years are presented in the table below.

Table 27. Power requirements from 2023 to 2025

Requirement (kilowatt-hours)	2023	2024	2025
SURNECO (est. kwH)	3,036,735	3,391,157	3,865,919
Additional Air Blasting System	50,915	126,727	126,727
Additional Load - MMD Crusher		673,920	673,920

10.4.3.2 Mechanical and Electrical Shop

The Project mine site has its own mechanical shop, under the Technical Services Division. On the other hand, the electrical shop provides the necessary maintenance and repair of electrical systems and of components critical to the electrical functionality of various equipment and infrastructure.

10.4.3.3 Assay Laboratory

The Assay Department is composed of two sections: the Assay Laboratory and the Sample Preparation. Its main function is to provide the assay results of the analyses of the samples from the Mining Operations and Geology Department. The processes and standards being followed for the sample preparation is the Japan Industrial Standards (JIS). The Assay Laboratory conducts analyses using two (2) methods: gravimetric and spectroscopic. For spectroscopic methods, X-ray Fluorescence (XRF) machines are used with pressed pellets as samples. Atomic Absorption Spectrometer (AAS) is also used using four-acid digestion. The gravimetric method only uses the titration method using the four-acid digestion. Calibration is done using Ore Research and Exploration Australia Standards (OREAS) and in-house samples established from the titration and AAS methods.

10.4.3.4 Domestic Water Supply

The provision of water for domestic consumption purposes within the Project plays a critical role in maintaining a robust support system for the entire site. Water management and consumption are well-documented to properly monitor this important resource. In the calendar years (CY) 2023-2025, the projected water consumption is listed below.

Table 28. Domestic water supply for mining operations

Supplier	CY 2023	CY 2024	CY 2025
Consumption (gal./day)	65,200	65,200	65,200

Note: Figures sourced from Camp Construction and Maintenance Section

10.4.3.5 Industrial Water Supply

The industrial demand for water in the Project site is met by extracting water from both groundwater and creeks located within the MPSA area. This industrial water demand arises from various activities, including but not limited to dust suppression, equipment cooling, rehabilitation, construction, and other operational tasks.

Table 29. Water source and alternatives

Water Source	Diverting Water by Means of	Diversion Point Location	Purpose	Permit No.
Deep well # 1	Pump	Place: Brgy. Taganito, Claver, SDN Latitude: SA SDN 1-2535 Longitude: 09° 32' 14.79" 125°48' 10.17"	Industrial	023434
Deep well # 2	Pump	Place: Brgy. Taganito, Claver, SDN Latitude: SA SDN 1-2535 Longitude: 09° 32' 14.09" 125°48' 9.48"	Industrial	023433
Deep well # 3	Pump	Place: Brgy. Taganito, Claver, SDN Latitude: SA SDN 1-2535 Longitude: 09° 32' 12.43" 125°48' 7.92"	Industrial	023432
-Deep well # 4	Pump	Place: Brgy. Taganito, Claver, SDN Latitude: SA SDN 1-2535 Longitude: 09° 32' 11.14" 125°48' 7.92"	Industrial	023431
Deep well # 5	Pump	Place: Brgy. Taganito, Claver, SDN Latitude: SA SDN 1-2535 Longitude: 09° 32' 10.63" 125°48' 5.06"	Industrial	023430
Deep well # 6	Pump	Place: Brgy. Taganito, Claver, SDN Latitude: SA SDN 1-2535 Longitude: 09° 32' 10.58" 125°48' 3.67"	Industrial	023429
Deep well # 7	Pump	Place: Brgy. Taganito, Claver, SDN Latitude: SA SDN 1-2535 Longitude: 09° 32' 13.44" 125°48' 6.36"	Industrial	023428
Deep well # 8	Pump	Place: Brgy. Taganito, Claver, SDN Latitude: SA SDN 1-2535 Longitude: 09° 32' 11.77" 125°48' 4.79"	Industrial	023427
Deep well # 9	Pump	Place: Brgy. Taganito, Claver, SDN Latitude: SA SDN 1-2535 Longitude: 09° 32' 10.8" 125°48' 2.44"	Industrial	023435

10.4.3.6 Availability of Alternative Sources of Mine Support Services

Power Generation

SURNECO, located in Surigao City, Surigao del Norte, has been the Company's partner in providing the necessary energy requirements for all equipment, offices, and infrastructure. This is especially crucial for the two (2) conveyor belt systems, which are connected to the SURNECO power grid.

Equipment Maintenance

The Company has established a contractual arrangement with Maxima under its Technical Services Division. This contract is specifically intended for the maintenance of Komatsu and Howo units. Maxima, through this agreement, is entrusted with ensuring the upkeep, repair, and overall well-being of the mentioned equipment brands. Also, TMC enlisted the services of Civic for maintenance activities concerning Volvo units. Rather than a comprehensive contract, Civic is engaged based on a job order setup. This means that specific maintenance tasks related to Volvo units are assigned to Civic on a per-need basis.

Sample Preparation and Assaying

Third-party outside support is only established when TMC Management and the buyer agree to have a neutral third-party laboratory conduct the grade analysis of a specific shipment for confirmation purposes. On the other hand, the TMC Risk Management Section has already determined that when the laboratory cannot function due to natural calamities and/or crisis, the Assay Laboratory should ask the support of other nearby NAC operating companies (OpCos) for assaying purposes.

Water Supply

The Project has a water treatment facility located at its campsite, supplying potable water to all departments, sections, and sometimes the community. Various environmental mitigating measures, including dust spraying activities and the water used in the wash racks to remove excess dirt from all the Company vehicles, are sourced from the Company's deep well and the Hubasan Tank located in the Settling Pond Phase 1 facility.

10.4.3.7 Logistics

The Taganito Project is currently accessible both by land and sea. TMC utilizes its fleet of service vehicles, including vans, buses, and pickup trucks, to transport personnel and necessary supplies. Additionally, three (3) LCTs, owned and operated by TMC are employed for tasks such as barge loading activities and the occasional sea transport of heavy equipment, service vehicles, and other bulk items.

While a significant portion of the Project's logistical needs is managed internally, some are outsourced to suppliers. The economic evaluation to determine which is to outsource and which is to do in-house takes into consideration resources availability and the time-bound schedule, among other things.

10.5 Legal, Government, Permitting and Licensing, and Statutory Aspects

TMC has been in operation for over thirty (30) years. All legal, Government, permitting and licensing, and statutory requirements of such regularity are in place and all issues of material significance are normally addressed on time.

10.6 Environment and Social Aspects

10.6.1 Environmental Protection and Management Plan

TMC aligns its environmental stewardship to the conditions of its approved Environmental Compliance Certificate (ECC#1-CO-1304-0013), ensuring that all significant impacts are identified and addressed correspondingly.

TMC also adheres to its approved integrated Environmental Protection and Enhancement Program (EPEP) and Final Mine Rehabilitation and/or Decommissioning Plan (FMR/DP) with COA no. 187-2021-12.

Mined-out areas are reshaped into terrain with gentle slopes and backfilled before they are progressively rehabilitated with fast growing trees that provide immediate green cover in six (6) months to one (1) years' time. The planted areas are then interplanted with endemic species. These plantations are maintained through the application of fertilizer and brushing in the span of three (3) years, depending on the growth performance. Other mined out areas are also transformed and converted to other land uses according to the FMR/DP of the Project.

Catch drainage canals surround the perimeter of the Project's Ridges to ensure that all runoffs are redirected and pass through a series of sumps prior to going to large settling ponds. The settling ponds give time for the silt carried by the runoff to settle. The settling ponds are maintained throughout the year. Around 300,000 to 400,000 cubic meters of silt materials are removed from the settling pond annually.

During the mining season, haulage and access roads are regularly sprayed by water lorries to prevent dust inflight. Water lorries are equipped with atomizer nozzles to increase their effectiveness. Loose materials on the road that can potentially become airborne dust when passed through by trucks are removed using road graders. Dust mitigation efforts are also extended to the community through the deployment of street sweepers and a sweeper truck.

The water and air quality parameters enumerated in TMC's Environmental Performance Report and Management Plan are regularly monitored by in-house, independent third party, and various regulatory bodies.

Noise is periodically monitored quarterly in the motor pool in Purok 3, while noise and vibration are monitored in the quarry area during blasting activities.

The FMR/DP identifies the closure plans and the activities to be implemented once the Project reaches its completion. The decommissioning phase will be followed by a passive phase that will focus on monitoring, care, and maintenance.

The LoM EPEP budget allocation is PHP 4.03 billion, with an average AEPEP budget of around PHP 212 million for nineteen (19) years.

Table 30. Projected Annual Environmental Protection and Enhancement Program (AEPEP) cost

Year	Amount (in million PHP)
2023	220
2024	214
2025	225
2026	241
2027	225
2028	241
2029	235
2030	240
2031	234
2032	248
2033	238
2034	168
2035	221
2036	202
2037	203
2038	218
2039	209
2040	216
2041	29
Total	**4,026**

10.6.2 Mine Safety and Health Plan

TMC is committed to providing safe and healthy working conditions to protect its employees from injuries and to prevent damage to properties and equipment. Health and safety are integral parts of the Project's personnel policies. The Project's comprehensive safety program is designed to minimize the health risks arising out of work activities and to assure compliance with the occupational health and safety standards as well as the rules and regulations that apply to the Project's operations.

In addition, emergency preparedness in TMC consists of the following:

1. Emergency Response Team (ERT)

An effective emergency response program includes plans and procedures, which are complemented by an organized team which is trained to execute and perform such tasks in case of emergencies. The Emergency Response Team (ERT) of TMC has been organized and the emergency response program is continually being reviewed and improved.

2. Crisis Management Team (CMT)

TMC has established a Crisis Management Team, known as CMT, which focuses on preparing the organization for responding to potential emergencies. It executes and coordinates the

response in the event of an actual disaster and other high-risk emergencies. The CMT is chaired overall by the Resident Mine Manager (RMM) and is comprised of corresponding sub-teams (each with its own leader) which focus on their specific work function or on their assigned responsibilities, such as Operations, Logistics, and Emergency Response Team. Depending on the severity and type of crisis, it may not need to activate all roles in every situation.

The Crisis Management Team exists to help the organization minimize or possibly avoid a calamity and, if disaster strikes, to recover as quickly as possible with minimal negative impacts.

3. Emergency Drills

Emergency drills are planned and implemented in an effort to educate TMC employees, service contractors, and manpower agencies, as well as host communities, on the appropriate responses in the event of a real emergency or in the event of disasters. Drills and exercises are used to rehearse the anticipated emergency scenarios. These are designed to provide training, reduce confusion, and verify the adequacy of the emergency response activities and equipment.

Presented in Table 31 below are the components of the Mine Safety and Health Plan of TMC and the corresponding budgets from the years 2022-2024.

Table 31. 2022-2024 Annual Safety and Health Program cost projection

Component	2022 Budget, PHP	2023 Budget, PHP	2024 Budget, PHP	Total
Leadership and Administration	400,000	25,000	25,000	450,000
Organizational Rules	-	-	-	-
Management and Employee Training	1,617,400	1,779,140	1,957,054	5,353,594
Good Housekeeping	2,000	2,000	2,000	6,000
Health Control and Services	2,100,000	2,100,000	2,100,000	6,300,000
Personal Protective Equipment	7,746,855	8,521,540	9,373,694	25,642,090
Monitoring and Reporting	-	-	-	-
Emergency Preparedness and Response Program	4,040,000	3,140,000	3,140,000	10,320,000
Occupational Safety and Health Management	100,000	100,000	100,000	300,000
Others				
A. Group Meetings	123,000	135,300	148,830	407,130
B. Planned Inspection	84,908	93,398	102,738	281,045
C. Program Evaluation	112,500	123,750	136,125	372,375
D. General Promotion	3,693,000	4,062,300	4,468,530	12,223,830
E. Purchasing & Engineering Control	100,000	110,000	121,000	331,000
Total	**20,119,663**	**20,192,429**	**21,674,972**	**61,987,064**

For 2024 up to the end of mine life, the Safety and Health Program has an allotment of around PHP 1.1 billion with an annual average budget of PHP 62 million.

10.6.3 Employment/Management

10.6.3.1 Number, Nationalities (Local & Expatriate), Key Personnel and Annual Budgeted Payroll

For a 4.6 mWMT average annual production schedule, the Project needs more than 1,058 workers of combined regular, seasonal, and outsourced hiring employment (Table 32). This number is further complemented by the manpower requirements of the mining contractors, which roughly translate to about 1,765 employees. 100% of the Project's current manpower force is of Filipino nationality.

Table 32. Manpower count and annual payroll

Department / Group	Mancount	Annual Payroll, PHP million
Admin	109	71.5
Envi, ComRel, Safety & Health	98	62.2
Geology	87	13.8
Mine Engineering	74	15.2
Mine Production	448	197.2
Office of the Resident Mine Manager	4	6.2
Technical Services	238	96.1
Grand Total	**1,058**	**462.1**

Source: 2022 Manpower count provided by TMC site Human Resources Dept., and 2022 payroll figures provided by TMC site Accounting Dept.

The Project's Operations are headed by the following personnel with diverse backgrounds and adequate work experience in nickel laterite mining operations:

Engr. Artemio E. Valeroso – Mining Engineer with PRC License No. 0002641 and the TMC's Vice President and Resident Mine Manager. In his current designation, Engr. Valeroso oversees the overall operations of the Project and is involved in the planning and implementation of the Project's programs. As an ACP-Mining Engineer under the Philippine Society of Mining Engineers, he oversees the estimation of the Project's Mineral Reserves.

Engr. Robert T. Francisco – Mining Engineer with PRC License No 0002645 and the Taganito Mining Corporation's Mine Division Manager. He handles the following sections: Mine Productions, Road Maintenance and Civil Works Section, Limonite Feeding and Conveyor System, Mine Planning (planning, data management, contracts management) Section, Grade Control Section, and Survey Section. Prior to his current designation, he was the Mine and Environment Protection and Enhancement Office (MEPEO) Manager. He previously served as the Project's Management Representative for its Quality Management System (ISO 9001:2015). With ten (10) years' experience in nickel laterite operations, he is directly involved in the preparation of the Project's short- and long-term plans, the conduct of engineering studies and implementation of measures to maximize productivity and profitability, the monitoring of the Project's financial status, the monitoring and submission of the Project's reportorial requirements, and overseeing contract-related operations.

Engr. Vicente M. Benamer – Mine Engineering Department Manager with PRC License No. 0002597. He handles the Mine Planning, Grade Control Section, Barge-loading, and Ship-loading Operations of the Company. He has over twenty (20) years of experience in mining operations, of which are all in nickel laterite deposits.

Engr. Ramm Pankratius A. Apale – Mining Engineer with PRC License No. 0002901 and the TMC's Mine Operations Department Manager. Prior to his employment in TMC, he also handled mine planning works at TVI Resource Development. With his over ten (10)-year experience, he is now carrying out all instructions with regards to the proper implementation of the mining plans. He is responsible for disseminating work programs/activities to mining personnel and he implements standard methods in the operation of production equipment/machines.

Engr. Garry D. Ababao – Mining Engineer with PRC License No. 0003594 and TMC's Mine Operations Department Manager and has over ten (10) years of experience in nickel laterite operation in the Company. He is responsible for mine ore production and monitors the availability of mining equipment and its personnel to ensure smooth and economical operations. He also carries out the dissemination of work programs/activities to mining personnel and implements standard methods in the operation of production equipment.

10.6.3.2 Human Resources Policies

TMC has a salaries and benefits structure that is competitive with the rest of the Philippine mining industry. In addition to providing salaries/wages that meets the minimum wage rate as mandated by the prevailing and existing Minimum Wage Order of the Department of Labor and Employment (DOLE), each of the Project's regular employees are entitled to the following benefits:

- One (1) sack of 50 kg of rice per month
- Free toiletries if living inside the campsite
- Free meals if living inside the campsite, otherwise, monthly food allowance
- Free accommodation, if living inside the campsite, otherwise, a monthly housing allowance
- With monthly lighting allowance if living outside the campsite
- Life insurance
- Free hospitalization on top of HMO coverage
- Free medicine
- 13th month pay
- Provision for annual salary increase
- Provision for mid-year and year-end bonuses
- Retirement benefits

Fly In – Fly Out (FIFO) benefit is also provided by the Company to supervisory and managerial employees with residences outside CARAGA. Typical roster breaks are forty-two (42) days on-site and seven (7) days off-site vacation and fifty-six (56) days on-site and seven (7) days off-site vacation.

People in the local communities, including Indigenous People, are preferentially hired. Approximately 95% of the male and 84% of the female employees are locals.

10.6.3.3 Table of Organization

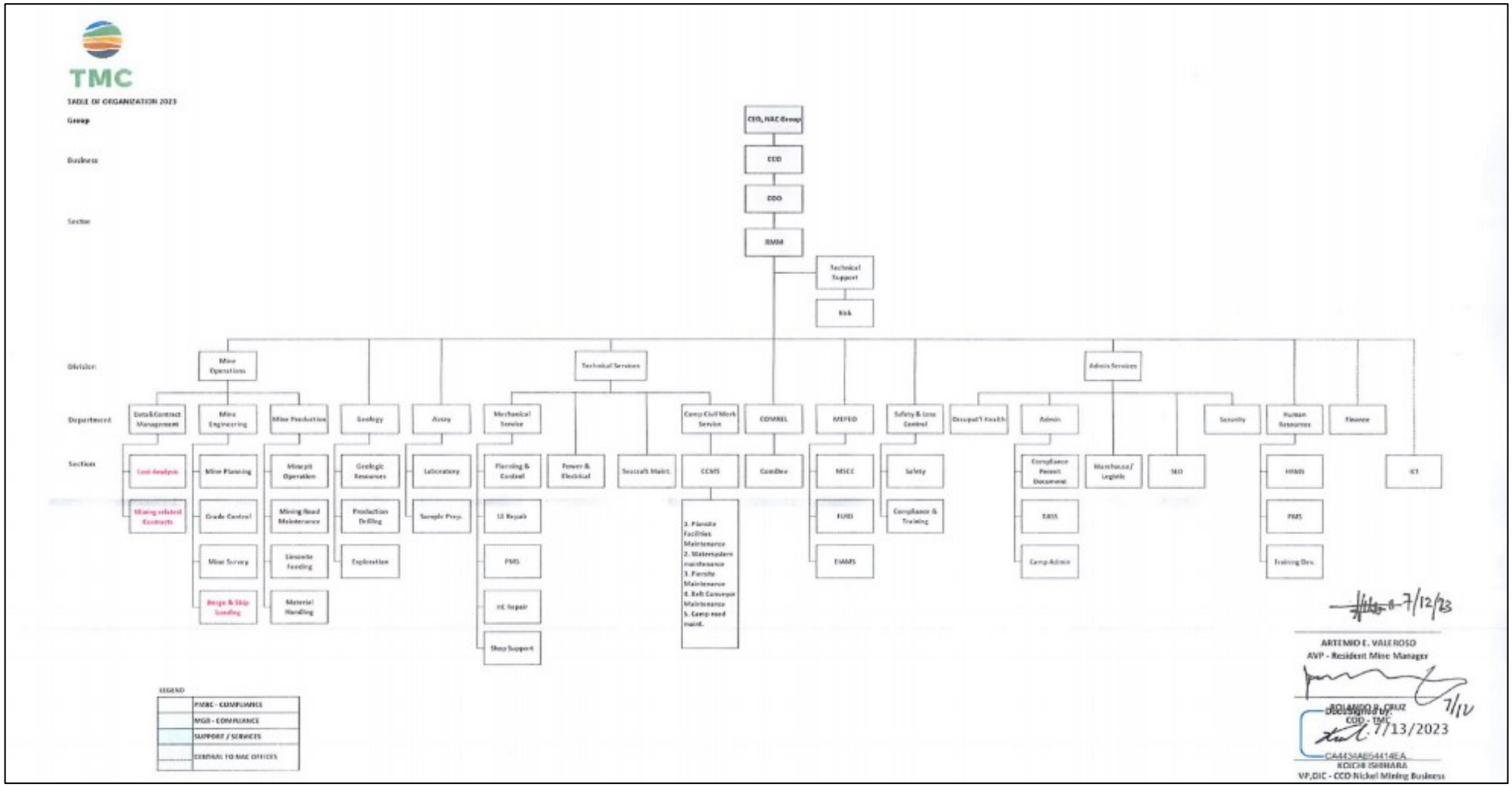


Figure 36. TMC Project's Table of Organization

10.6.3.4 Availability of Technical and Skilled Labor

Training programs implemented throughout the operating years of the mine, both in-house and outsourced, have enabled TMC to develop a skilled manpower pool that supplies not only its needs but also those of its service providers.

10.6.3.5 Township/Housing

The Project mine site has its own housing facilities for supervisory and managerial staff members and guests on bachelor status. Likewise, bunkhouses have been constructed for rank-and-file employees hired outside of Claver, Surigao del Norte. Table 33 below shows the capacities of each housing facility in the Project mine site.

Table 33. Capacities and floor areas of all housing facilities in TMC's Nickel Laterite Property

Accommodation	No. of Rooms	Area (m^2)
Executive House	8	326
Guest House	16	475
Sr. Staff House	11	440
Jr. Staff House	10	228
Supervisor's Quarter	16	402
Ladies Dormitory	7	106
Seasonal Dormitory	40	2,285
SupTech Dormitory	20	2,285
Total	**128**	**6,547**

10.6.4 Community Development Plan

The Project has completed the implementation of four (4) cycles of the Social Development and Management Program (SDMP) in its host and neighboring communities, thus bringing reliable and sustained projects, programs, and activities in recent years.

The new five-year SDMP (2021-2025) is the fifth cycle plan of the Project. Its primary aim is to address the necessities of the host and neighboring communities in accordance with the accredited program components stipulated in the Mining Act and the DAO 2010-21. To determine this, relevant data were gathered. These data include (1) site profile which explains the geographical location, physiography, drainage system, climate type, and rainfall pattern; (2) description of the environment which is specifically described with the land-use pattern, availability and source of water supply, and natural calamities and disasters; (3) socio-economic conditions which includes the demographic information, income sources of the stakeholders, existing facilities, social services, and support programs in the community; and (4) cultural condition which includes the history of the areas, migration, situation, customs and beliefs of the community stakeholders, and peace and order situation.

To attain the SDMP's main goal, development strategies are formulated in partnership with the stakeholders and the representatives of the host and neighboring communities. This

indicates the strong adherence of TMC to the principles of participatory and multi–sectoral approach for the development of communities. The implementation of these Programs, Projects, and Activities (PPAs) aims to nurture stakeholders into being independent and empowered people considering the Project's Life-of-Mine (LoM).

The cycle's thrust is steered by the Company's directive which is geared towards achieving sustainable projects—especially livelihood—that create significant impacts on the communities. The livelihood component will be focused on enterprise development to prepare the community–based industries for local and national manufacturing, commercialization, and trading.

Furthermore, the community-based ecotourism projects are set to showcase the co–existence of mining and tourism in Claver. These projects are in partnership with the municipal tourism plan which will not only generate livelihood and employment, but also sustain their industry after the end-of-mine life.

The sustained partnership of TMC and the Department of Health (DOH), through the barangay health centers, will continue to flourish in providing access to health care services to the communities. Likewise, the collaboration of TMC and the Department of Education will carry on in the next five (5) years as projects, programs, and activities for education are given much importance. On the other hand, assistance to various infrastructure development is given to ensure the physical improvement of the communities. Moreover, the established and institutionalized PPAs from the previous cycle, such as manpower services, are to be continued to assist in the delivery of community services.

The Information, Education, and Communication (IEC) programs play a significant role in creatively impacting the communities regarding the Company's unyielding environmental and social commitments. TMC actively participates in Government and non–government activities; thus, new and longstanding partnerships and linkages are established in these activities. Moreover, publications to national and local daily broadsheets and the use of social media — through TMC's official Facebook page, Taganito Miners—are effective tools of company information. These provide readers and followers with updates on recent happenings regarding the Company's activities—from job opportunities to SDMP project turnovers to environmental feats.

Mine tours are open to organizations and groups — both from the Government and the private sector — who want to observe and experience how TMC carries out its operations and implements its environmental and social commitments.

The Mining Technology and Geosciences Research - Full Academic Grant will remain to provide opportunities for deserving students. Research and other geosciences initiatives will be supported to ensure the continuity of the mining industry.

The 5th cycle of the SDMP implementation will be more challenging for TMC especially since new guidelines have been set to achieve sustainable planned programs and to create a larger impact to the communities beyond the Life-of-Mine. The years to come will be more inclusive for all stakeholders. Hence, TMC and the communities will continuously work together in the

spirit of transparency, accountability, and participation to achieve greater impact and sustainable growth.

A total amount of PHP 1.73 billion is allotted for the LoM SDMP with an annual average of PHP 91 million.

Table 34. Life-of-Mine annual SDMP costs

Year	Amount (in million PHP)
2023	95
2024	92
2025	97
2026	104
2027	97
2028	104
2029	101
2030	103
2031	101
2032	107
2033	103
2034	72
2035	95
2036	87
2037	87
2038	94
2039	90
2040	93
2041	13
Total	**1,734**

10.7 Marketing Aspects

10.7.1 World Supply and Demand Situation

Supply

Shown in Figure 37 is the world supply of nickel metal in tonnes.

	Mine production		Reserves[6]
	2021	2022[e]	
United States	18,400	18,000	[7]370,000
Australia	151,000	160,000	[8]21,000,000
Brazil	76,000	83,000	16,000,000
Canada	134,000	130,000	2,200,000
China	109,000	110,000	2,100,000
Indonesia	1,040,000	1,600,000	21,000,000
New Caledonia[9]	186,000	190,000	7,100,000
Philippines	387,000	330,000	4,800,000
Russia	205,000	220,000	7,500,000
Other countries	429,000	440,000	20,000,000
World total (rounded)	2,730,000	3,300,000	>100,000,000

Figure 37. World supply of nickel (https://pubs.usgs.gov/periodicals/mcs2023/mcs2023-nickel.pdf)

Indonesia, Australia, and Brazil account for over half of the world's nickel reserves. In 2021 and 2022, approximately 6 million tonnes of nickel have been produced, with the Philippines next to Indonesia in production.

The world's nickel resources are currently estimated at almost 300 million tonnes. Australia, Indonesia, South Africa, Russia, and Canada account for more than 50% of the global nickel resources (horizonteminerals.com, 2023).

Demand

The nickel market is a USD 20+ billion per year industry. Today's market is dominated by stainless steel with over two-thirds of the total production of nickel used in its production. However, nickel is a critical component in the new battery technology used in electric vehicles. This section of the market is forecasted to grow significantly over the coming years and will reshape the nickel industry over the coming decades.

According to the World Bank report "Minerals for Climate Action: The Mineral Intensity for the Clean Energy Transition" the production of minerals such as nickel and cobalt, could increase by nearly 500% by 2050, to meet the growing demand for clean energy technologies. As the world moves to realize a lower-carbon future there will be a substantial increase in demand for several key minerals and metals to manufacture cleaner energy technologies. The clean energy transition will be significantly mineral intensive, with nickel forecasted to play a major role.

In 2022, the annual average London Metal Exchange (LME) nickel cash price was estimated to have increased by 35% compared with that in 2021 which was attributed to the increasing use of nickel in electric vehicle batteries and the continued strong demand for stainless steel. Nickel prices were particularly volatile early in the year. In March, after the onset of the conflict between Russia and Ukraine, prices surged, which disrupted nickel trading on the LME for approximately two (2) weeks. The monthly average prices peaked in March but began to decline through July and stabilized for the remainder of the year.

10.7.2 Prospective Markets and/or Buyers

THPAL provides the captive market for the Project's limonite ore. On 1 February 2013, TMC and THPAL Nickel Corporation entered into an ore supply agreement wherein TMC shall supply

the limonite ore feed to THPAL with a maximum particle size of 1.4 mm. As per this agreement, the ore supplied to THPAL was paid at 6% of the (LME) value for contained nickel and at 2% of the LME value for contained cobalt. The ore supply agreement was amended on 9 November 2022 to increase the amount payable to TMC for contained nickel to 9% of the LME value starting 1 January 2023.

A scandium recovery facility was constructed by THPAL in 2017 and in January 2018, the ore supply agreement was amended to include TMC's 2.5% revenue share of the scandium oxalate shipments of THPAL to Sumitomo Metal Mining Co. Ltd. (SMMC).

THPAL completed the commissioning of the chromite recovery facility in 2020 while on February 1, 2021, TMC's 4% revenue share of THPAL's chromite shipments was added in the agreement.

The saprolite DSO is expected to be sold continually to Japanese and Chinese smelters.

Medium-term contracts have been solidified with Japanese smelters, notably PAMCO, under a 5-year agreement spanning the years 2019 to 2024. Conversely, the Chinese smelters engage in sales contracts on a short-term basis, usually structured annually and per vessel.

A comprehensive overview of the historical contract prices spanning from 2015 to 2022 is provided in Table 35 for reference.

Table 35. Historical contract prices for limonite (HPAL) and saprolite (DSO) from 2015-2022, in USD/WMT

Customer	Ore Type	%Ni	%Fe	2015	2016	2017	2018	2019	2020	2021	2022
THPAL	Limonite -Nickel			5.37	4.35	4.72	4.95	6.31	6.25	8.38	11.63
	Limonite -Cobalt			12.99	11.77	26.52	31.50	16.56	15.62	24.26	30.81
Japan	Saprolite (Type 1)										
	Saprolite (Type 2)	1.80	15.00	57.93	42.93	42.00	44.86	51.13			
	Saprolite (Type 4-A)	1.60	15.00		32.00			28.17			
	Saprolite (Type 4-B)	1.50	15.00	25.50	23.50	27.60	21.50	19.50	45.00	55.43	
	Saprolite (Type 4-C)	1.40	15.00			23.50	15.88			53.00	52.00
	Saprolite (Type 4-D)	1.35	18.00								42.13
	Crushed Ore (LGCRO)	1.70	15.00	60.00	34.00	44.25	38.20				
	Crushed Ore (LGCRO)	1.60	15.00					26.75	42.50		
	Crushed Ore (LGCRO-B)	1.50	15.00							61.00	
	Crushed Ore (LGCRO-B)	1.30	15.00							46.00	
China	Saprolite (Type 1)										
	Saprolite (Type 2)	1.80	15.00								
	Saprolite (Type 4-A)	1.60	15.00		31.95			27.53	58.63		
	Saprolite (Type 4-B)	1.50	15.00	25.94	23.31	25.48	20.46	21.43	39.97	51.82	
	Saprolite (Type 4-C')	1.45	15.00								42.20
	Saprolite (Type 4-C)	1.40	15.00	20.79	20.38	21.71	15.63		22.75	41.28	49.58
	Saprolite (Type 4-D)	1.35	15.00				12.88			39.00	39.65
	Saprolite (Type 4-D')	1.30	15.00			14.00					43.50
	Crushed Ore (LGCRO)	1.60	15.00								
	Crushed Ore (LGCRO-B)	1.50	15.00								
	Limonite	0.90	49.00	12.47	12.33			12.00			
	Limonite	0.80	49.00		11.56		11.00				

10.7.3 Product(s) to be Produced and Specifications

The Project produces limonite ore for the THPAL with specifications for CY 2024 being at 1.00% Ni, 40.00% Fe, and 2.20% Mg. Saprolite ore is directly shipped to Chinese and Japanese smelters with specification ranges for CY 2024 being at 1.30% - 1.40% Ni and at 35% moisture content. Materials scheduled for shipment undergo beneficiation processes like sorting, crushing, and segregation. It is also important prior to shipment that the scheduled ore materials for harvest are subjected to the flow table test to determine the Transportable Moisture Limit (TML). TML is defined as 90% of the cargo's flow moisture point (FMP), incorporating a safety margin of 10% of the FMP for safe carriage onboard ships.

10.7.4 Commodity Price and Volume Forecasts

Nickel metal price forecasts are the basis of the commodity price estimates. Data on metal prices from entities such as the LME and the World Bank are used as a guide on the commodity prices used by mining companies. Furthermore, factors such as geopolitics and market supply and demand dictate the derived commodity prices in exchanges.

Forecasts have shown that a downward trend will continue in the market price of nickel. In 2023, the prices were down around 45% and this underperformance is likely to continue, at least in the near future (Manthey, 2023).

The nickel price surged in early 2022 due to the nickel market deficit in 2021, along with logistical bottlenecks and the geopolitical tension between Russia and Ukraine, and the short squeeze by one of the Chinese top nickel producers. However, LME nickel prices went into a constant downtrend after its price swings, accompanied by a demand slowdown across base metals (Nornickel 2022 Annual Report, 2022). Following a surplus of Indonesia and China-produced nickel, a nominal LME price drop of 17% and a price hike of 5.6% is forecasted for years 2024 and 2025, respectively (Handley, 2023, p. 127).

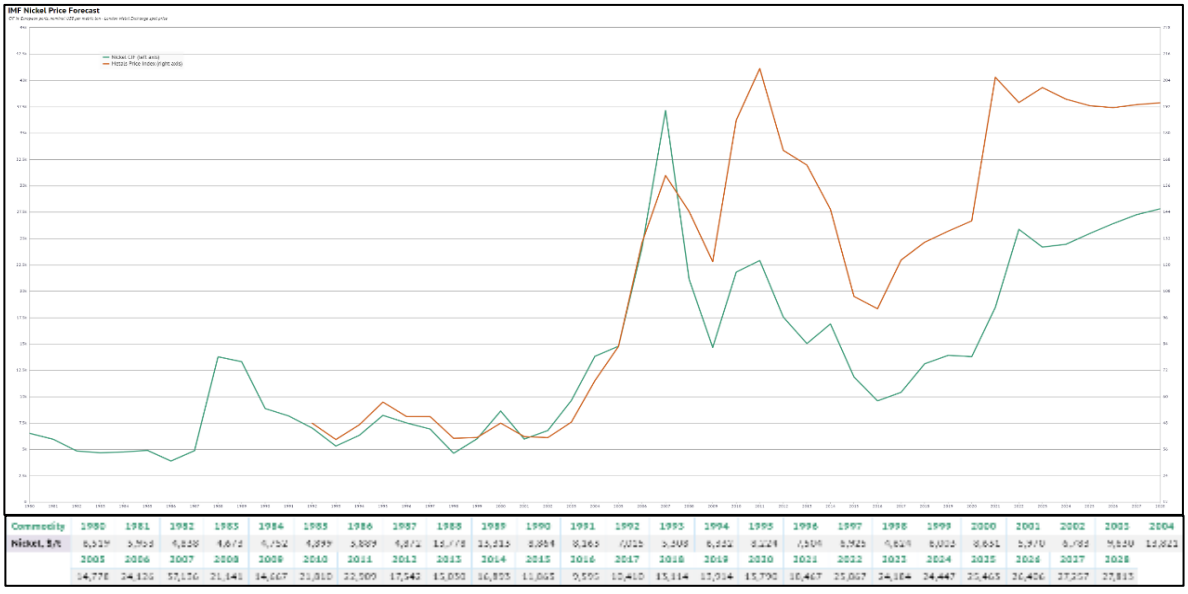


Figure 38. IMF nickel price forecast(Nickel Price Forecasts: Long-Term 2021 to 2030 | Data and Charts)

10.7.5 Sales Contract/Off-take Agreement/Smelter Contract

Existing sales contracts have provisions for the imposition of ore price premiums and penalties (Table 36) depending on the resulting final grade of the shipment, which is taken as the average of the seller's final grade at the loading port and the buyer's final grade at the discharging port.

Table 36. Sales contract bonus and penalty provisions

Commodity	Controlling Attribute	Price Premium	Price Penalty
Saprolite	Nickel (%Ni)	USD 0.05 for every 0.001% Ni above target	USD 0.07 for every 0.001% Ni below target
Limonite	Iron (%Fe)	USD 0.01 for every 0.01% Fe above target	USD 0.01 for every 0.01% Fe below target
All	Moisture	N/A	Moisture in excess of 35% shall be deducted from the weight, pro-rata

To better illustrate the bonus and penalty provisions, sample computations are provided below wherein the target grade is 1.50% Ni and the base price is USD 25.00. The grades are 1.55% Ni for an example of a price premium and 1.45% Ni for an example of a price penalty.

Sample Computation of Price Premium

Premium Formula: (USD 0.05*excess Ni%)/0.001% = ***Premium or Bonus***
Sample Computation: USD 25.00 + (USD 0.05 *0.05% / 0.001% = ***USD 2.50***) = USD 27.50

Sample Computation of Price Penalty

Penalty Formula: (USD 0.07 * below Ni%)/0.001% = ***Penalty***
Sample Computation: USD 25.00 − (USD 0.05 *0.05% / 0.001% = ***USD 3.50***) = USD 21.50

10.8 Material Risks

10.8.1 Nickel Price in the World Market

The breakeven nickel price is USD 16.99/WMT for saprolite and USD 10.89/WMT for limonite. Low metal prices in the short term can be mitigated by higher grade of ore deliveries to maintain positive cashflows. This would require updating of the production plans and developing access roads to areas with higher grades.

10.8.2 Seismic Risk

The Project is situated in Surigao del Norte, considered as one of the more seismically active areas in the country, due to the Philippine Fault and Philippine Trench (Figure 39).

There have been 4,405 earthquakes with a magnitude of 4.0 and above whose epicenters are found within 200 km radius of the Project area from 1920 up to the present time, as per records of the United States Geological Survey (USGS). Seventy-eight (78) of these have had a

magnitude greater than 6.0 but less than 7.0 while seven (7) have had ≥7.0 magnitude as presented in Figure 40 (Geoinnovative Specialists Inc., 2022).

Seismic risk can be mitigated through building safer structures following the building code, identifying potential hazards, through periodic exercises of earthquake preparedness procedures, and by providing continuing education on earthquake safety.

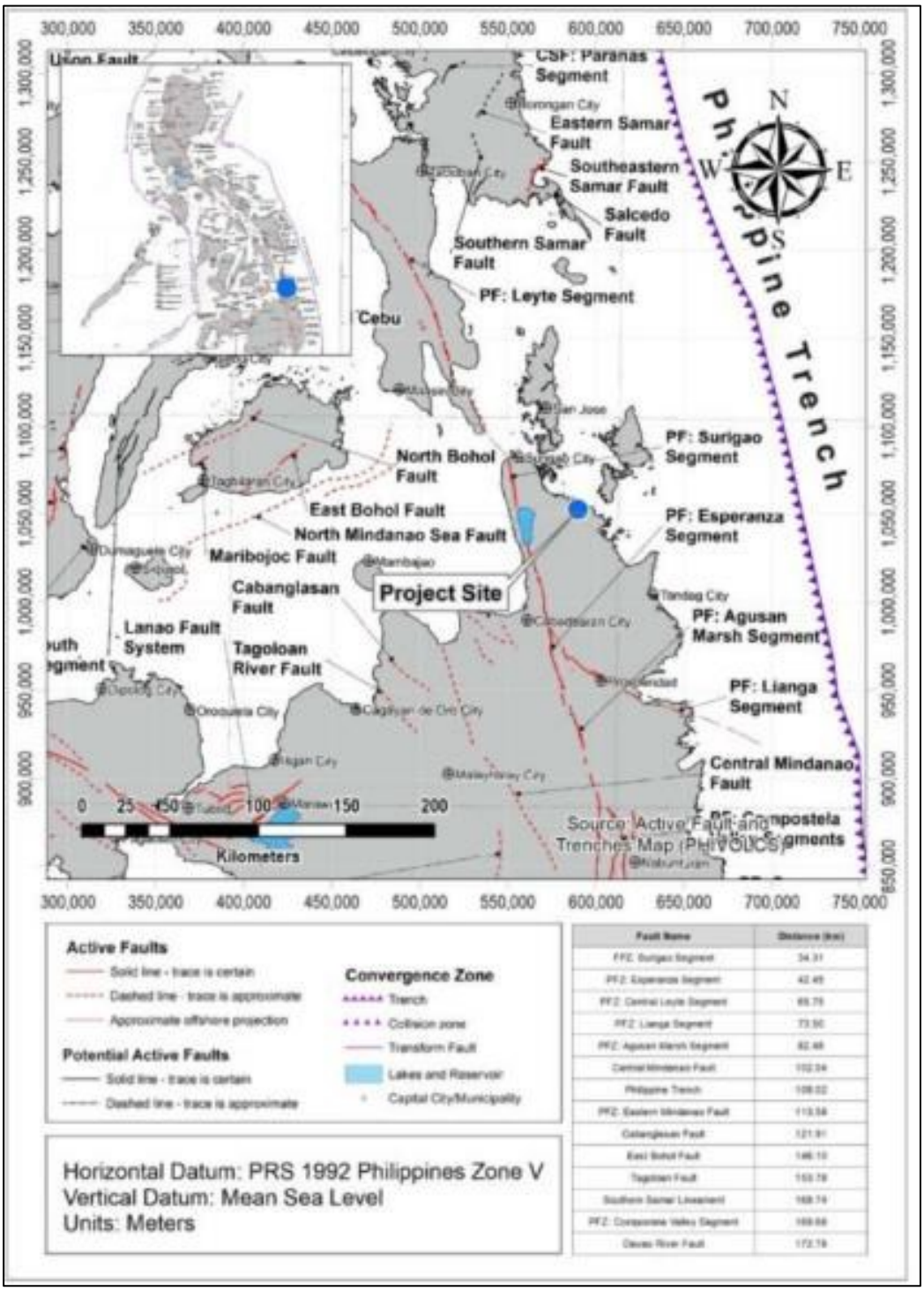


Figure 39. Seismically active areas in the country
(as retrieved from https://www.phivolcs.dost.gov.ph)

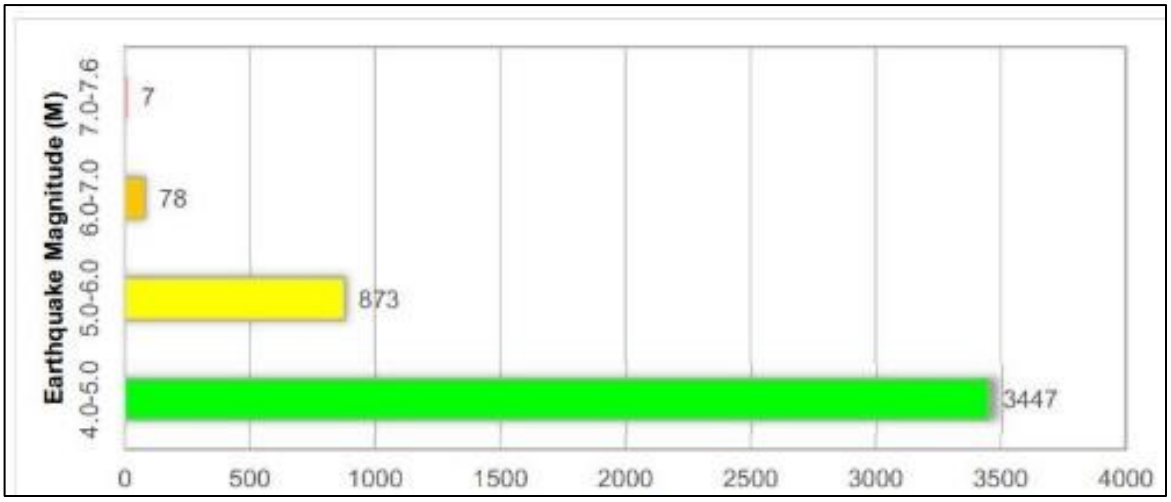


Figure 40. Number of recorded earthquakes vs. earthquake magnitude
(Geoinnovative Specialists Inc., 2022)

10.8.3 Geohazards Risk

Volcanic Hazards

The Project is located approximately ninety-five (95) kms from the Cabalian volcano in Southern Leyte province and 140 kms from the Hibok-hibok volcano in Camiguin Island province in northern Mindanao (Figure 41). These are classified as active volcanoes by PHIVOLCS (2023) that have erupted in the last 600 years.

The aerial distance of the volcanoes from the Project site suggests low volcanic hazard risk.

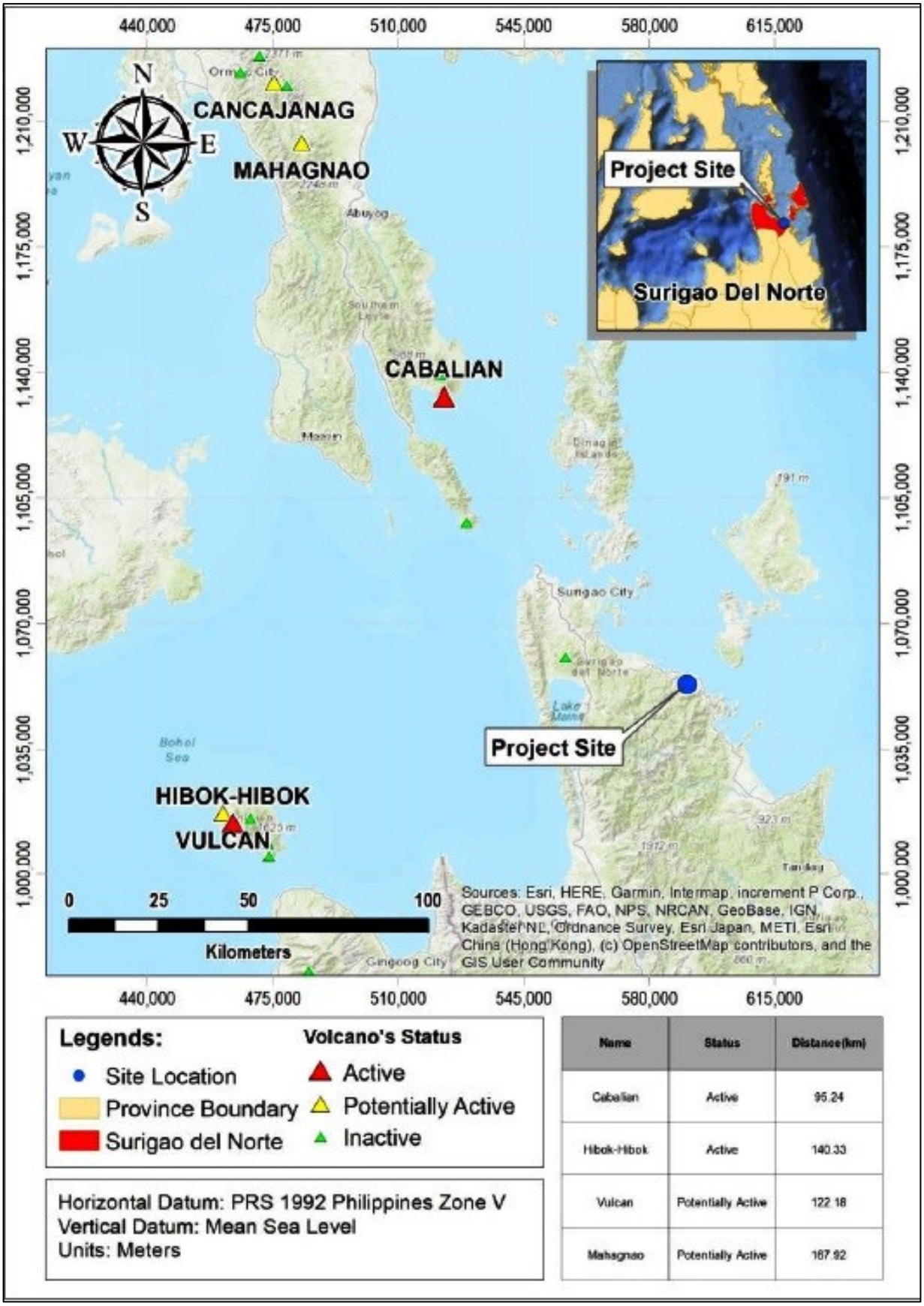
Landslide Hazards

The landslide susceptibility map from the Mines and Geosciences Bureau (2022) shows low to high susceptibility to rain-induced landslides in the Project area (Figure 42). For earthquake-triggered landslides, the susceptibility is low to medium as per Figure 43 from the Philippine Institute of Volcanology and Seismology (PHIVOLCS) studies.

The risks of rain-induced landslides in the mineralized Ridges can be mitigated with a system of properly maintained canals draining towards the adjoining creeks and rivers.

Liquefaction and Flood Hazards

In general, the Project site is classified as not susceptible to liquefaction nor floods as per the liquefaction and flood susceptibility maps of UP Project NOAH (2012) (Geoinnovative Specialists Inc., 2022). There are, however, limited areas near the coast and riverbanks that have the possibility of liquefaction.



Name	Status	Distance(km)
Cabalian	Active	95.24
Hibok-Hibok	Active	140.33
Vulcan	Potentially Active	122.18
Mahagnao	Potentially Active	167.92

Figure 41. Location of volcanoes vis-à-vis TMC Project site
from https://noah.up.edu.ph/ (Geoinnovative Specialists Inc., 2022)

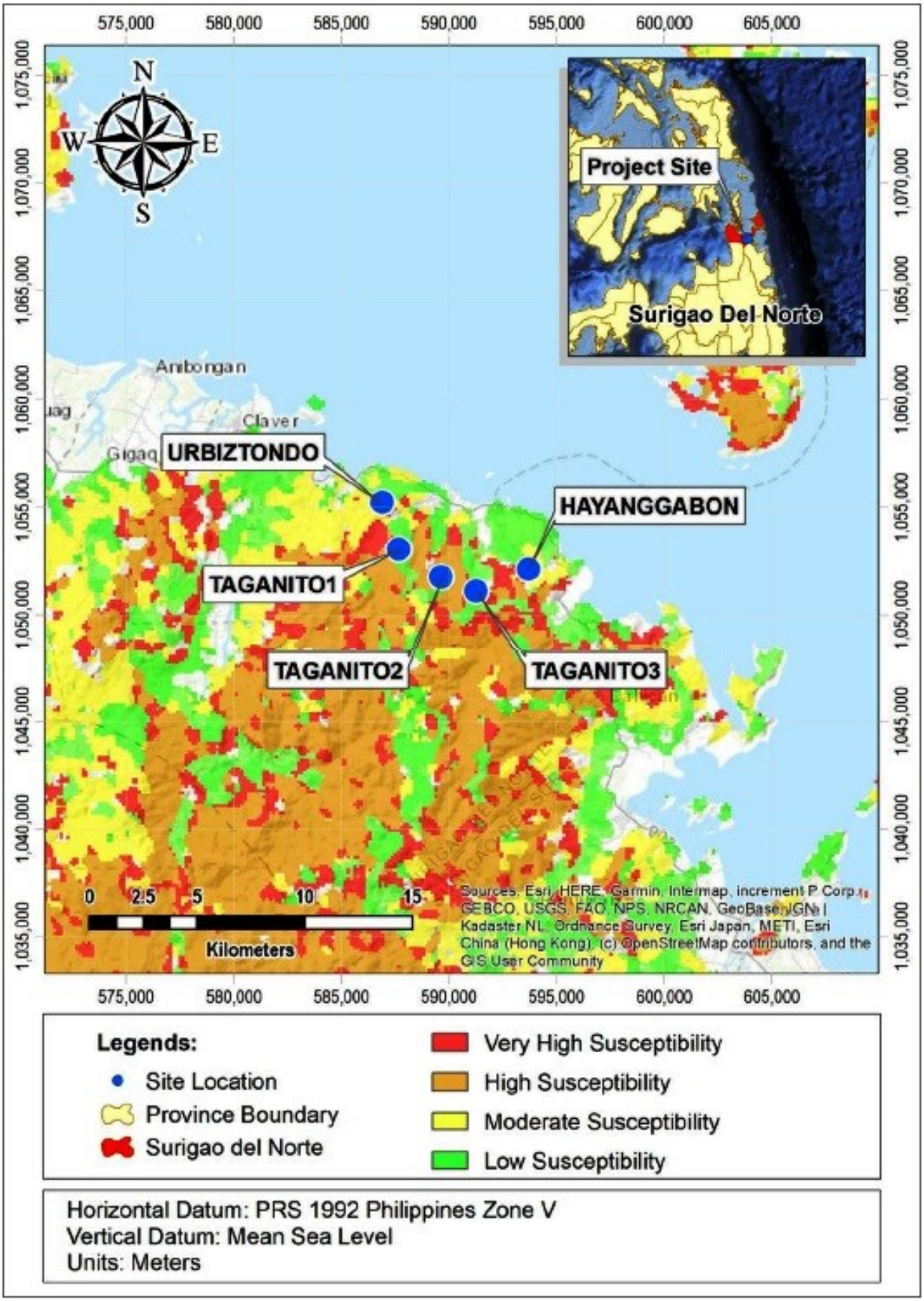


Figure 42. Rainfall-induced landslide susceptibility map
from https://noah.up.edu.ph/ (Geoinnovative Specialists Inc., 2022)

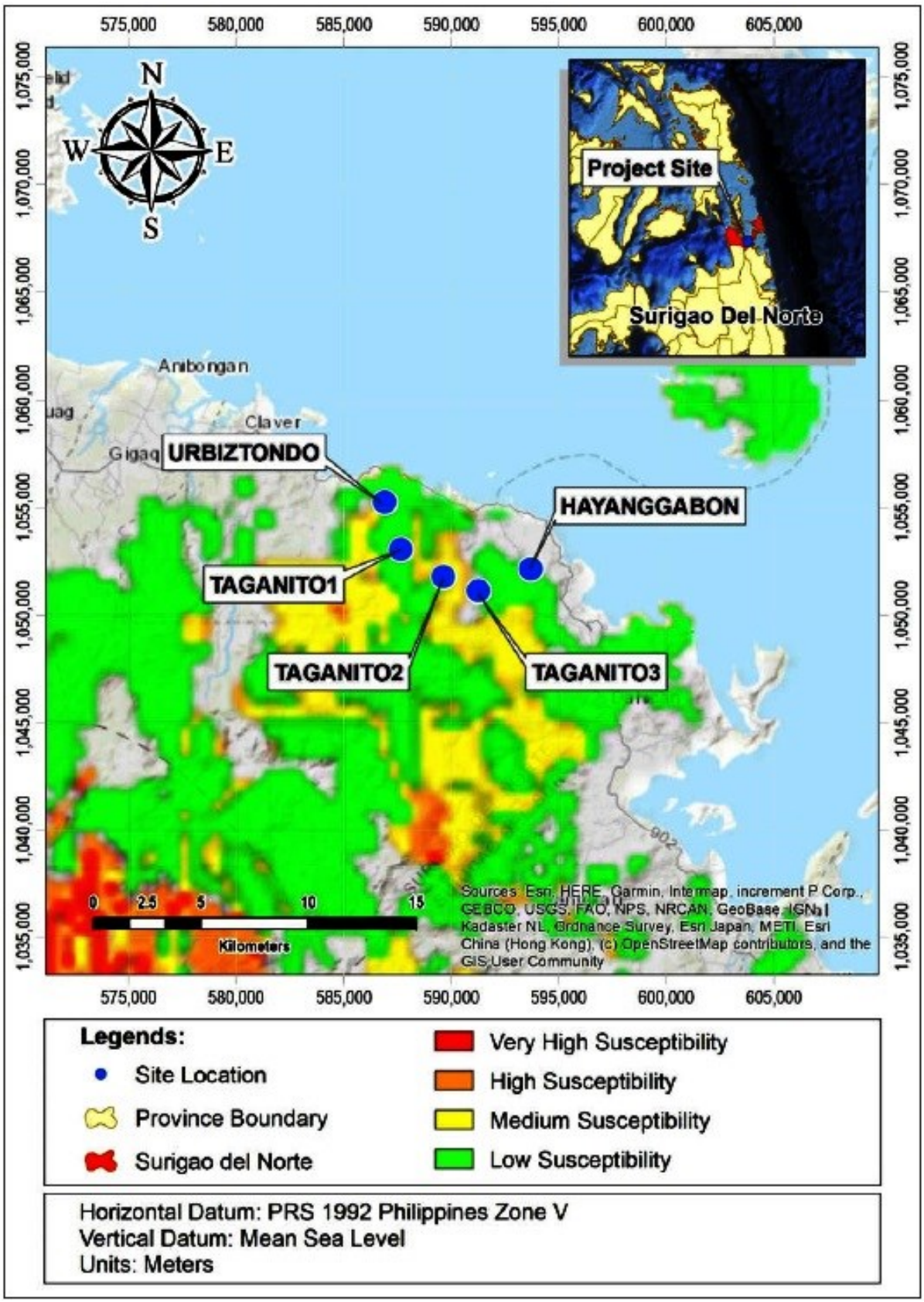


Figure 43. Earthquake-triggered landslide susceptibility map
from https://noah.up.edu.ph (Geoinnovative Specialists Inc., 2022)

10.8.4 Other Material Risks

Table 37. Other material risks

Risk Category	Remarks	Mitigation Objectives
Political	Failure to handle adverse business conditions created by political forces in the Philippines and in countries in which the Company has significant business interests may create challenges for conducting business. (Strategic)	To determine root causes of risk and develop specific risk management strategies and action steps to address risks related to compliance.
Environment	Failure to identify and mitigate legal exposures to the Company due to non-compliance with local and international environmental laws and regulations may result in litigations leading to reputational damage, erosion of market value, and loss of business operations. (Compliance)	Compliance with all local and international environmental laws and regulations; sustain status of being a Presidential Mineral Industry Environmental Award (PMIEA) awardee; improve and continually adopt best mining environmental practices.
Business Interruption	Failure to undertake the appropriate planning related to critical processes to ensure the ability to recover and maintain business operations in the event of a disruption due to physical or natural circumstances may cause operational disruptions and substantial losses. This, in turn, may adversely affect the Company's short- and long-term profitability. (Operational)	Consider the effect of physical or natural circumstances on budgeting parameters, timelines, and accomplishments for the 100% implementation of mine production, shipment, drilling, and equipment maintenance schedules.
Succession Planning	Failure to create and implement a succession plan for key positions and employees in the Company may result in widening talent gaps, low employee satisfaction and morale, and high employee turnover, leading to operational insufficiencies/disruptions and higher operating costs. (Operational)	Identify and develop at least one employee in each department who can assume a leadership position.
Regulatory Compliance	Failure to comply with established laws and regulations or changes thereafter may lead to business opportunity loss, decreased market share, erosion of shareholder value, significant delay in operations, penalties for non-compliance, exposure to litigations, reputational damage, and loss of business operations. (Compliance)	To determine root causes of risks and develop specific risk management strategies and action steps to address risks related to compliance.
Social License to Operate	Failure to gain and maintain positive acceptance or permission to exploit natural resources or meet expectations from the community (i.e., Indigenous people, local environmental groups) may lead to disruption, suspension, or termination of operations, and may negatively impact the Company's reputation. (Strategic)	Maintain good relationships with all stakeholders; 100% implementation of SDMP and EPEP.
Employee Communications	Failure to identify, understand, and respond to the communication needs of employees at all levels of the organization may lead to labor unrest, low employee morale, decreased employee productivity, and high turnover of key employees, which may undermine the achievement of the Company's goals and objectives. (Strategic)	Building an effective communication framework and strategy that will ensure mutual understanding between management and staff and engaging line managers to develop two-way dialogue.
Terror and Malicious Acts	Failure to have a disaster and recovery plan in response to threats of business disruptions due to terrorists and malicious acts may adversely affect the	Maintain a disaster and recovery plan.

	Company's short- and long-term profitability. (Operational)	
Labor	Failure to identify and mitigate legal exposures to the company due to non-compliance with local and international labor rules and regulations that include employee taxes, wages, benefits, and other employee protection rights may result in litigations.	To determine root causes of risks and develop specific risk management strategies and action steps to address risks related to recruitment and retention, pay programs, etc.

10.9 Financial Aspects

10.9.1 Total Project Cost Estimates and Assumptions

10.9.1.1 Engineering Study Cost

The Project has been in commercial production since 1989. Through the years, collected data and information are regularly reviewed to serve as basis in updating the assumptions and parameters for planning purposes. For this Report, updated set of Modifying Factors, based on updated information are used in determining the optimized LoMP and production schedules.

10.9.1.2 Exploration Cost

Minimal exploration works were considered for this Project since it is already in commercial operations stage.

10.9.1.3 Development Cost

No major mine development projects will be done since the Project is already in commercial production stage.

10.9.1.4 Pre-operating Overhead Costs

Not applicable since the Project is already in its operating stage.

10.9.1.5 Cost of capital Equipment and machinery

In line with the continual improvement of TMC's mining operations, the Company will invest and purchase additional equipment to replace old equipment and to augment the current in-house equipment fleet used in mine production, road repairs, construction, and maintenance. This additional set of equipment is listed in Table 38.

Table 38. List of equipment to be purchased

Equipment	Quantity
Track Excavator	2
Road Grader	1
Compactor	2
Crawler track	1
Backhoe with Breaker	1

The equipment list above is planned to be purchased under the capital expenses for CY 2023 amounting to about PHP 82.7 million with inclusion of freight and handling cost for mobilization.

Moreover, to build long-term, as well as temporary, access roads in active mining areas, the Company plans to use bog mats. Bog mats are mats typically made of hardwood, steel, or other materials to create a stable and safe surface for the heavy equipment and vehicles to traverse over. Furthermore, bog mats help to reduce negative environmental effects and give equipment access to challenging locations as commonly experienced by the Company. This project is part of the Project's operational improvement which amounts to about PHP 3 million.

10.9.1.6 Cost of Allied Mine Facilities and Infrastructures

Taga-3 Grizzly Air Blasting System

TMC invested about PHP 15 million in capital expenditures for the Taga-3 Grizzly Air Blasting System. This system aims to remove hang-up or clogged-up materials which cause delays in the Taga-3.1A conveyor line operations. The system works by spraying, or blasting, compressed air into the said clogged portions of the grizzly. The cost includes the air compressor shed construction, the grizzly chute air blasting supply and its installation, and the Taga 3 grizzly bar air sprayer and the electrical works.

Presently, hang-up or clogged-up materials contribute up to about 8% of the operation's total delays for the Taga-3 conveyor line. In addition, this improvement will lower the maintenance cost on the repair of the hopper grizzly bars.

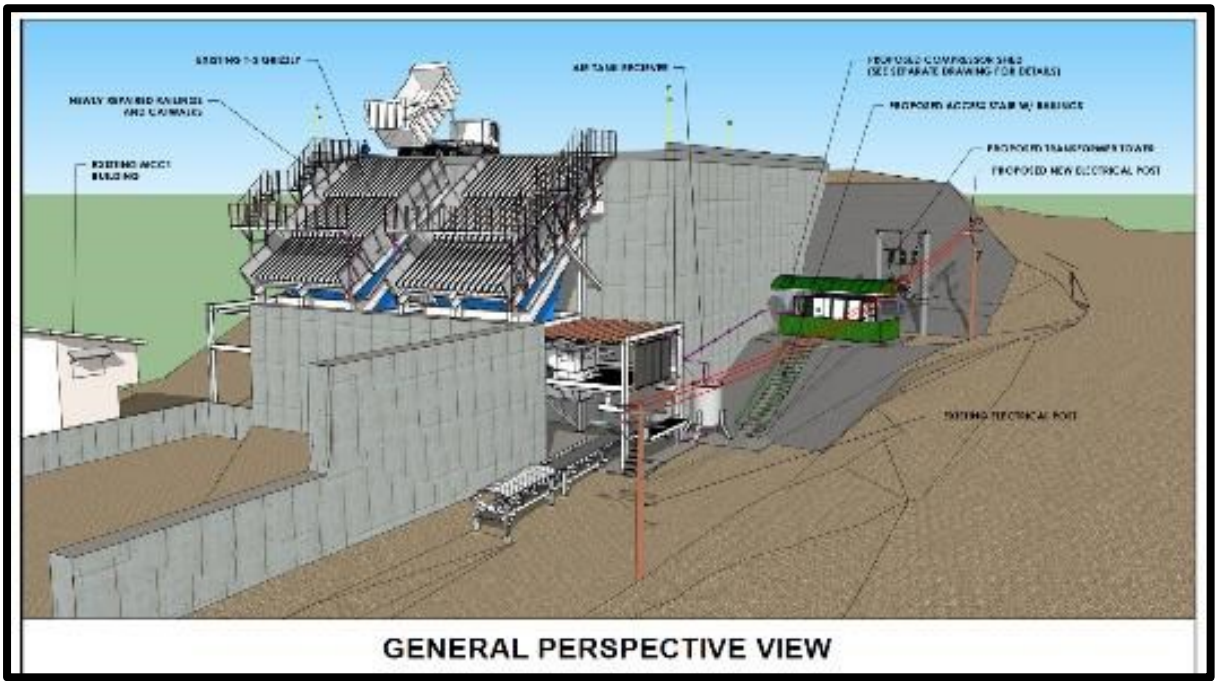


Figure 44. Perspective view of Taga-3 Grizzly Air Blasting System

10.9.1.7 Cost of the Environmental Structures, Facilities, and Equipment

Outlined in the table below are the environmental structures, facilities, and equipment along with their associated construction costs for the Project.

Table 39. Environmental structures, facilities, and equipment construction costs

Items/Particulars	Amount (in PHP)
Botanic Garden Falls/Misting	400,000
BT 45 Planting Auger (STIHL)	65,000
Chocolate Hills Covered Deck	400,000
Construction mangrove bagging area	150,000
Goat and Chicken Perimeter Fence	150,000
Gulayan Perimeter Fence	250,000
Gulayan sa Minahan Comfort Room	150,000
Greenhouse	100,000
Hardening Shed	400,000
Hobbit House and CR	600,000
Metallophytes Nursery Perimeter Fen	400,000
Mayon Covered Deck	400,000
RCPC Molder (0.9m)	100,000
RCPC Molder (1.2m)	120,000
Rock Garden covered Deck	400,000
Repair of landfill perimeter fence	7,730
Seedbed Shed	400,000
Water tank w/ Intake tank	250,000
Total Cost	**4,742,730**

10.9.1.8 Interest Cost during Construction

TMC normally finances all capital expenses internally and does not resort to getting loans. Therefore, the interest cost is not applicable for this Project.

10.9.1.9 Working Capital

As the Project is in its operating phase, the working capital is already included in the Capital Expenses. Stockpiled ore, which form part of the inventory materials, were assumed to be carried over in the ore materials for shipment in the last year of the mine life for limonite, and saprolite, respectively.

10.9.1.10 Contingencies

There are no contingencies allotted in the study. Contingency costs will be sourced from the income generated from previous and current mining operations, as necessary.

10.9.2 List of Capital Equipment and Infrastructures

Shown in Table 40 below is the list of capital equipment and infrastructures for the LoMP of the Project.

Table 40. List of capital equipment and infrastructure

Items/Particulars	Quantity	Total Acquisition Cost (PHP million)
Additional Illumination Project	11	1.2
ADT Engine	11	48.0
Air Compressor	40	48.9
Air Sampler Motor (Freight)	11	0.3
Aircon	521	19.9
Allu Hydraulic Motor Mat470hda/4	22	4.5
Allubucket Attachment	27	86.2
Android Tablet	33	1.0
Application Server	4	1.9
Arm Cylinder	44	20.4
Articulated Dump truck	6	14.0
Assay Sample Prep Mechanization	4	0.0
Autoclave/Steam Sterilizer	11	0.6
Automatic Tire Air Inflator	11	0.6
Automatic XRF/FTIR Presses	5	28.0
Axle Casing	11	5.3
Backhoe	30	300.9
Backhoe With Breaker	6	40.1
Bagger Mixer	11	0.6
Base Radio	55	6.5
Base Radio for TX	440	7.0
Boom Cylinder	44	11.2
Boom Cylinder Assy	11	2.8
Boom Truck - 5 Ton	5	24.0
Botanic Garden Falls/Misting	1	0.4
Boyd Crusher	5	15.3
Brake Drum	330	12.9
BT 45 Planting Auger (Stihl)	11	0.1
Bucket	11	4.8
Bucket Assy	11	9.2
Bucket Cylinder	33	11.0
Bucket Link	22	6.5
CAA II Communication Equipment	11	11.8
Cabinet	88	1.5
Camera	44	3.1
Camp Site Landscape in Front of TMC Main Gate and Fence	1	0.2
Campsite Water System	4	0.0
Canopy	5	6.0
Canvass Sheet	330	8.1
CCTV	44	171.8
Center Axle Casing (Volvo)	11	12.4
Center Propeller Assy (Volvo)	11	11.5
Chain Link Fence at Cagdianao	1	1.5
Chain Link Fence at Urbiztondo	1	1.5
Chest Freezer	11	0.4

Chocolate Hills Covered Deck	1	0.3
Circulation Pump	10	0.5
Club House Phase 2	1	4.5
Compactor	16	58.6
Concrete Comfort Room	4	0.3
Concrete Mixer 1 Bagger	22	0.9
Concrete Vibrator	11	0.1
Concreting At Sample Delivery Area	5	1.5
Conference Chairs	11	1.6
Construction Of Additional PMS Bay	1	0.3
Construction Of Ambulance Garage	1	0.2
Construction Of Mangrove Bagging Area	1	0.2
Construction Of New Powerhouse - Py-4, Assembly Area	1	1.0
Construction Of OWS @ Oil and Lubes Storage	1	0.2
Construction Of Pedestrian Walkway	1	0.5
Construction Of Re-Hosing Facility W/ Fitting Racks	11	2.4
Construction Of TSD Canal and Road Concreting	1	2.5
Container Van	50	4.8
Control Valve	22	25.1
Control Valve Assy	22	10.9
Construction Of Concrete Flooring and Provision of Drainage System at ADT Shop	1	0.8
Convert Old Powerhouse-1 Control Room to Storage	1	0.3
Conveyor	14	260.0
Conveyor Belt	14	54.6
Conveyor Belt - Taga 3.1	7	3.6
Conveyor Belt - Taga 3.2	7	6.6
Conveyor Belt at Taga 3	7	65.5
Conveyor For Sample Prep Waste	4	0.4
Conveyor Grizzly Bar Repair and Conveyor Infra Maintenance	11	1.7
Conveyor Insurance for Taga-1	7	0.4
Core House and Equipment Storage	1	0.2
Corrugated Sheet Fence at Py-2 Near Wash Rack	5	2.3
Crawler Track	36	520.1
Crocodile Jack	44	4.8
Ct-15 (Caterpillar D7r) (Reman)	11	18.2
Ct-21 Engine D8r)	5	13.3
Cummins Engine	11	3.2
Cushion Assy	22	2.5
Customized Ambulance (Vehicle) 4x4	5	15.8
Data Management Office Renovation	1	0.2
Dell 75" 4k Touch Monitor	11	2.4
Dental Chair	4	0.7
Desktop	876	45.1
Differential Carrier	132	77.8
Dipper Cylinder	11	16.9
Dji Matrice 350 RTK with Zenmuse L1 Lidar + Drtk2 Base Station	5	5.2
Done	11	3.8
Drill Press Zj4113	11	0.1
Drive ASM	44	8.4
Drone	22	3.4
Drum Lifter	11	1.7
Dt-262 To Dt-268-Freidt-268-Freight	30	4.8
Dump Truck	40	294.3

Dump Cylinder Assy	22	10.7
Dump Truck	412	1726.5
Dust Collector System	5	6.0
Ec480 Idler Assy0	11	5.7
Ec480 Idler Cushion Assy	10	5.7
Ec480 Swing Machinery with Motor	11	10.4
Electrical Panels for Control Room At Py-4 Area	5	1.5
Electrical Wiring Installation @ Taga-3 & Som PMS Satellite Shop	1	0.1
Energy Meters	4	0.4
Engine	11	13.0
Engine Assembly	26	79.8
Engine Control	22	4.0
Engine Overhauling	22	1.4
Ert Equipment & Rescue Materials	33	7.1
Ert Station Renovation	1	1.5
Excavator	12	96.6
Extension Geology Office 40sqm Floor Area. Design Includes Office, Document Storage and Welfare Facilities	1	0.8
Eye Wash Installation@ Depot Area (Py-8)	1	0.1
Fabrication And Installation of Cobrahead Foundation	11	1.6
Fabrication Area Extension Floor Concreting	1	0.3
Fan GP	11	1.7
Fan Motor	22	5.6
FDAS	22	95.4
FDAS Installation	11	28.0
Fiber Optic Project	5	24.0
Fire Detection and Alarm System	6	12.0
Fire Hydrant	11	3.0
Fire Truck with Complete Accessories	4	30.0
First Aid Equipment	33	5.4
Fitness Gym Equipment	11	1.5
Flap Wheel	11	0.0
Folding Table	11	0.0
Forklift	10	23.1
Front Axle Casing (Volvo)	11	9.5
Front Spring	198	20.4
Fuel Meter Register	11	2.6
Fuel Truck	5	27.5
Fully Automatic Incubator 500 Eggs	11	0.5
Gabion	4	0.8
Garbage Truck	4	0.2
General Admin Building @ SMCC	1	30.0
Genset	62	43.0
Genset Repairs and Modification	28	11.8
GNSS Base Station	4	3.3
Goat And Chicken Perimeter Fence	11	0.9
Goulds Submersible Deep Well Pump	11	1.1
GPS	1,342	12.9
Grease Pump	66	1.0
Greenhouse	1	0.1
Grizzly Bar	187	10.9
Gulayan Perimeter Fence	1	0.2
Gulayan sa Minahan Comfort Room	2	0.1
Handheld GPS	2	0.1

Handheld Pressurized Water Sprayer Hose with Foot Valve	33	1.5
Handheld Radio	1,045	9.5
Hardening Shed	1	0.2
He Tools	11	1.3
Heavy Duty Grinder	11	0.0
Hobbit House and CR	2	0.6
Hoist Cylinder	33	5.7
Hoist Cylinder Binotto (Mfb3#L033830rp1580bglanh1)	22	8.0
Honda Engine	22	0.8
Hopper At Taga 1.1a	7	98.5
HR Renovation & Window Repair	1	0.1
Hub	176	16.6
Hydraulic Cylinder	99	28.2
Hydraulic Press 50 Ton Capacity	11	2.0
Hydraulic Pump	154	53.1
Hyva Cylinder	22	4.2
ICT Office Renovation	1	0.3
Idler	22	3.1
Idler Assembly	22	7.7
Idler Cushion	22	3.9
IMS Statistics Board	22	4.0
Infrastructure (Office Renovation	1	5.2
Installation Of Lighting Arresters for Building Structures and MCCs	11	4.0
Installation Of St37 Roofing	8	0.6
Isuzu Double Cab Elf Type Unit (Back Order)	4	7.8
Isuzu Road Washing Sweeping Truck	4	12.0
Jack Hammer	11	0.3
Komatsu D155-6r Of Engine	5	14.8
Laptop	266	17.4
LCT Drydocking	58	361.3
LDA 1 Reinforced Road Concrete Pavement with Open Line Canal	350	18.5
Le Tools	11	0.5
Leaf Spring Rear	44	7.3
Led Digital Billboard Outdoor	11	10.4
Liaison Offices Physical Storage	1	0.5
License Trimble Sketchup 2020 Pro	11	0.3
Lidar Data Processing Dji Terra	1	0.3
Lidar Data Processing Software, Lidar 360 + Terrain module + Forestry Module	1	0.4
Lift Cylinder Assy Lh/Rh	11	5.2
Lightning Arrester	44	0.8
Link Assy	33	33.8
Lube Shed Extension	1	0.3
Lube Truck: Isuzu 4 Wheel Drive & Refer to Plan/Estimate	5	22.1
Liaison Offices Physical Storage	1	0.5
License Trimble Sketchup 2020 Pro	11	0.3
Lidar Data Processing Dji Terra	1	0.3
Lidar Data Processing Software, Lidar 360 + Terrain module + Forestry Module	1	0.4
Lift Cylinder Assy Lh/Rh	11	5.2
Lightning Arrester	44	0.8
Link Assy	33	33.8
Lube Shed Extension	1	0.3
Lube Truck: Isuzu 4 Wheel Drive & Refer to Plan/Estimate	5	22.1

Main Kitchen Renovation	1	0.1
Main Pump	11	10.7
Maint. Truck-10 Wheelers with Front Drive	4	10.9
Managed Switch Sg350-28-K9-Eu 28-Port Gb	12	30.7
Mangrove Perimeter Fence	11	1.2
Mangrove View Deck	1	0.5
Manlift Truck	5	16.8
Marine Navigational GPS	33	0.8
Mayon Covered Deck	1	0.4
Mcc-5 Conveyor Warehouse Improvement	1	0.7
Mechanize Off Machine	11	0.1
Meraki Access Point and Switches Phase II	5	21.0
Metallophytes Nursery Perimeter Fence	11	3.2
Microsoft Windows Server 2019	3	0.2
Miller Genset Driven Welding Machine	11	3.6
Mine Management Components	5	40.0
Mine Planning Office Improvement	1	0.2
Mini Dump Truck	5	13.7
Mini Wheel Loader	12	23.5
Mini-Backhoe	40	81.1
Minor Construction Project	1	0.1
MMD Replacement	5	40.0
Mobile A Frame, Platform Ladders	11	0.1
Mobile Sampling Stand	11	0.8
Modification Of Container Field Office	15	1.8
Motorcycle Parking Shed Renovation	1	0.8
Motorcycle Unit for Messenger Service	4	0.4
MTX-3 To MTX-4	10	1.9
MTX-5 To MTX-10	30	5.6
New Ambulance	4	6.3
New Office Internet Connection	5	4.8
Off Rigid Boulder Dump Truck	42	150.9
Office Chairs	110	0.4
Off-Road Dump Truck (Freight)	20	2.9
OHSMS	11	0.1
Old Conference Room Roof Improvement	1	0.4
ORMM Panel Board Relocation Including Devices Replacement	11	1.6
Other Services	27	15.8
Painting And Signage Equipment/Tools	11	3.2
Painting Works at Grizzly Dumping Area Taga 3	11	0.4
Pallet Jack 5 Tons	22	0.7
Paper Shredder	11	0.4
Paperless Deur System (Inhouse Development)	5	15.0
Pc200lc-8mo Control Valve/20y-25-21123; Tube	11	2.8
Pc350-8mo Engine Overhauling	5	13.8
Pc350-8mo Idler Cushion Assy	22	12.8
Perimeter Fence Construction	11	0.4
Plastic Melter Densifier	11	14.3
Platform-Mini Backhoe at Edge Dumping AR	66	20.8
Plotter Printer	11	2.1
PMS Tools And Lubrication Accessories	11	6.9
Polycarbonate Greenhouse Roofing	2	0.3
Portable Pressure Washer	33	0.4
Portalet	33	2.4

Pressure Vessel	11	0.2
Pressurize Blower Gun	11	0.4
Preventive Maintenance for Radio Equipment	8	1.8
Printer	22	2.8
Propeller Shaft	176	35.1
Pump Master 35 Grease Pump For 185 Kg W/ 60:1 Air Pressure Ration	11	0.3
Pump boat	5	2.0
Radiator	44	2.9
Radiator Assembly	11	16.8
Radiator Core Assembly	11	1.7
Ramp Modification at Wharf 1	1	0.3
RCPC Molder	44	1.8
Recoil Spring Assembly	11	1.6
Refacing Machine	11	0.2
Relocation Of Transformer Pad at Powerhouse-2, TSD	1	0.3
Reman Engine Fmx-460	11	21.2
Remanufactured Engine	44	119.1
Renovation & Extension Of MDC	1	0.2
Renovation Of Communal Comfort Room at SMCC Dorm site 2	1	1.0
Renovation: Rice Storage Van Repainting & Canopy	1	0.1
Repair And Maintenance of CCTV, Replacement of CCTV Units	11	12.0
Repair Of (4) Bundwall and Tender Shed	1	0.8
Repair Of Feeder Yard	1	0.9
Repair Of Guard Tower & Houses at TSD and Campsite	1	0.8
Repair Of Landfill Perimeter Fence	11	0.1
Retaining Wall Taga-1 Feeder	5	12.0
Rice Storage Van & Railings	1	0.0
Rice Storage Van Roofing Installation	1	0.1
Rim 29.5-25 For Komatsu ADT	22	4.0
Riso Electric Paper Cutter	5	0.9
Riso Graph Machine	5	1.1
Road Grader	28	157.1
Robin Engines	220	3.7
Rock Garden Covered Deck	1	0.4
Roofing Extension and Office Improvement	1	0.7
RTK GNSS Receivers	13	9.7
Rice Storage Van & Railings	1	0.0
Rice Storage Van Roofing Installation	1	0.1
Samoa Heavy Duty Double Pedest	11	0.3
Samoa Heavy Duty Oil Ho	11	0.7
Samoa Oil Pump 3:1 Air Pressure	11	0.7
Sample Stand Shed	6	0.4
Samyung Marine Radar Complete Accessories	11	1.6
Sap Success Factor	1	5.4
Sap Success Factor Storage	1	0.2
Seedbed Shed	1	0.2
Service Bus	19	97.8
Service Pick Up Cab Fabrication	1	0.2
Service Pick-Up Bed Fabrication for Passenger Accommodation	1	0.2
Service Pick-Up-Freight	12	0.9
Service Truck Major Repair	11	0.6
Service Trucks	31	67.4
Service Vehicle	99	142.1

Settling Pond	1	5.0
Shaft, Drive	176	38.2
Shipment Road Rectification Project (Rdc2 Revived 2023 Budget)	600	1.9
Shop Tools	11	3.2
Sofa/Couch Leather Set for Executive House	6	0.3
Som Container Van Rectification	11	0.0
Som Dispensing and PMS	22	6.4
Som Street / Haulage Road Lightings	22	5.0
Sophos Access Point Project	5	20.0
Sophos Poe Manage Switch	66	7.2
Sound System	2	0.4
Sound System Set for Multi-Purpose Gymnasium	6	1.1
Sound System Set with Microphone	2	0.4
ST 17 Rear Area Improvement	1	0.1
ST-3 Major Rehab Including Hydraulic Boom Repair	4	0.8
Staff House 7 Fixtures and Other Accessories	8	2.6
Stake Truck with Boom	8	12.5
Steering Geer	88	18.6
Swing Circle Assembly	22	11.1
Swing Circle Gear	11	2.0
Swing Motor	22	6.6
Swivel Joint Assembly	33	8.8
Synology Ds1621xs+ 6bay	11	0.7
Synology Rack Station Rs3617rpxs	5	3.0
Taga 1 Capex - Conv MCC Rehab & Fab Building	11	0.4
Taga 1 Capex - Insurance Spare-Taga 1	7	4.6
Taga 3 Capex - Conv MCC Rehab & Fab Building	11	0.6
Taga 1 Capex - Insurance Spare-Taga 1	7	4.6
Taga 3 Capex - Conv MCC Rehab & Fab Building	11	0.6
Taga 3 Capex - Conveyor Belt - Taga 3.1	7	6.8
Taga 3 Capex - Conveyor Belt - Taga 3.2	7	62.6
Taga 3 Capex - Insurance Spare-Taga 3.1	11	6.8
Taga 3 Capex Grizzly Bar	11	1.8
Taga-3 Grizzly Air Blasting System - Piping Installation and Testing	4	45.0
Taga3 Grizzly Field Office and Taga 3.2 Line	11	0.4
Technical Tools (Troubleshooting ST & SP)	11	1.3
Television	110	3.6
Tire Changer	33	4.7
Tire Inflator, Automatic, High Pressure	11	0.6
TLU Office Repair	1	0.1
Torque Converter Assembly	11	45.9
Tower Light	220	117.8
Tower Maintenance	1	0.2
Track Excavator	138	1733.9
Track Excavator-Long Arm	6	54.1
Track Roller	176	2.6
Track Shoe Assembly	22	11.8
Tracklink Assembly	44	19.8
Tract Excavator	18	118.7
Transfer Case	11	25.1
Transformer, Dry Type,15kva,3phase	11	0.4
Transmission (Reman)- Dt Fmx440	25	34.4
Transmission Assy	55	125.4
Trimble Sps785 GNSS Receiver (1 Set)	4	2.3

Truck Bodies	2	15.4
TSD Main Perimeter Fence	5	6.0
TSD Office Improvement, Extension of TSD Manager's Offices, Including Planning Cr	1	1.1
TSD Perimeter Lighting Installation	1	0.5
TSD Washrack Powerline Upgrade	11	1.2
Tyler Ro-Tap Sieve Shaker Rx-219-16	11	3.1
Uhf Data Radio Set	22	4.8
Upgrade Power Source Banking Capacity	5	3.0
Ups	22	2.0
Vacuum Cleaner, Wet/Dry, 15-20L	11	0.0
Vertical Tank 500kl (1 Unit)	1	33.5
Vertiv Liebert	11	2.8
Vibrator Roller	12	48.0
Voe 14681250; Idler	22	5.6
Wa470-5 Assy Wl-34	5	15.4
Water Distiller Machine	11	2.4
Water Pump	264	30.4
Water Truck Lorry	25	97.8
Welding Machine	44	3.8
Wem Equipment & Calibration	33	5.0
Wharf Tower W/ Solar Blinker	4	0.7
Wheel Excavator	12	63.6
Wheel Excavator/Wheel Excavator Volvo Ew145b(Mm)	12	51.1
Wheel Loader	107	1110.2
Whirlwind Ventilation	1	0.3
Wide Screen TSD Conferences (Virtual) (65")	11	0.5
Wooden Locker	330	1.2
Working Capital	1	300.0
Xc8286057 (VTS); Bucket	11	4.4
XDS-50 Portable Line Boring & Auto Weld	11	4.6
Xray Tube (Shimadzu EDX 7000)	5	3.4
XRF (Xepos)	4	0.5
Xrfuse6 Automated Electric Fusion Machine	5	15.6
Zinc Anode	550	1.4
Total	14,841	11,420.6

10.9.3 Financial Plans/Sources of Funds

Funds will be sourced internally and from retained earnings.

10.9.4 Production Cost Estimates and Assumptions

The production costs utilized in the Whittle pit optimization exercise are presented in Table 41. To account the differences in the costs among the different Ridges of the Taganito mine in the optimization exercise, separate cost sets were made for each Ridge.

Table 41. Production costs components utilized in pit optimization

Cost component	Costs, in PHP/WMT Ore Extracted					
	LIMONITE					
	Taga 1	Taga 2	Taga 3	Urbiztondo	Hayanggabon	Kinalablaban
Admin	39.69	39.69	39.69	39.69	39.69	39.69
Regulatory	20.86	20.86	20.86	20.86	20.86	20.86
Production Overhead	50.63	50.63	50.63	50.63	50.63	50.63
Barge/Shiploading/Feeding	13.86	13.86	13.86	13.86	13.86	13.86
Rehandling	32.76	32.76	32.76	32.76	32.76	32.76
Rehandling – Conveying	36.68	0.00	36.68	0.00	36.68	0.00
Mining – Fixed	29.15	29.15	29.15	29.15	29.15	29.15
Mining – Variable	58.47	88.05	60.94	91.17	102.30	214.48
Waste	117.22	117.22	117.22	117.22	117.22	117.22
Additional cost per additional hauling distance, PHP/WMT-km	*14.32*					
Cost component	**SAPROLITE**					
	Taga 1	**Taga 2**	**Taga 3**	**Urbiztondo**	**Hayanggabon**	**Kinalablaban**
Admin	94.94	94.94	94.94	94.94	94.94	94.94
Regulatory	49.89	49.89	49.89	49.89	49.89	49.89
Production Overhead	121.11	121.11	121.11	121.11	121.11	121.11
Barge/Shiploading/Feeding	113.48	113.48	113.48	113.48	113.48	113.48
Rehandling	24.74	24.74	24.74	24.74	24.74	24.74
Rehandling – Conveying	0.00	0.00	0.00	0.00	0.00	0.00
Mining – Fixed	76.23	76.23	76.23	76.23	76.23	76.23
Mining – Variable	107.91	90.62	102.90	74.29	93.95	60.14
Waste	117.22	117.22	117.22	117.22	117.22	117.22
Additional cost per additional hauling distance, PHP/WMT-km	*13.82*					

10.9.4.1 Mining Costs

Mining cost is comprised of the mining-variable, mining-fixed, waste moving, conveying, and rehandling costs in the table of production cost components above (Table 41).

10.9.4.2 Milling Costs

Not applicable for this Project as it does not have a milling/processing plant.

10.9.4.3 Marketing Costs

The marketing costs are part of the barge/shiploading/feeding and administrative costs in the table of production cost components above (Table 41).

10.9.4.4 Mine Overhead Cost

Mine overhead costs are included in the mining fixed and production overhead costs in the table of production cost components above (Table 41).

The projected mine-site overhead costs from 2023 to end of mine life are as follows:

Table 42. Mine-site overhead costs

Particulars	Amount (in PHP million)
General Administration	47.2
Assay Laboratory/ Ore Analysis	20.4
Community Relations	16.8
Drilling	23.4
Electrical	69.4
Environment General	130.5
EPEP	234.4
Finance	18.9
Geology	20.1
Grade Control	87.7
Health	28.3
Human Resources	35.2
Mine Engineering	36.6
Management Information Systems	23.0
Mine General	174.3
Office of the Resident Mine Manager	104.5
Road Maintenance	239.0
Safety	61.8
Sample Preparation	32.5
SDMP	95.1
Seacraft	18.7
Security	69.5
Stockpile Maintenance	205.8
Survey	23.6
Transportation	44.9
Technical Services	40.4
Warehouse	43.6

10.9.4.5 Environmental Cost

These costs are part of regulatory costs in the table of production cost components above (Table 41). The projected environmental costs from 2023 to the end of mine life are as shown in Table 30.

10.9.4.6 Community Development Cost

These costs are part of regulatory and administrative costs in the table of production cost components above (Table 41). The projected community development costs from 2023 to the end of mine life are already discussed in Table 34.

10.9.4.7 Excise Tax

The excise tax on mineral products is the total Government share in the MPSA and equivalent to 4% of the actual market value of the gross output at the time of removal. Excise taxes are part of the administrative costs of the production cost components above (Table 41). The projected excise taxes from 2023 to the end of mine life are shown in Table 43 below.

Table 43. Projected excise taxes

Year	Amount (in PHP million)
2023	437
2024	419
2025	444
2026	477
2027	442
2028	471
2029	460
2030	463
2031	459
2032	487
2033	471
2034	360
2035	476
2036	435
2037	435
2038	468
2039	449
2040	463
2041	63
Total	**8,180**

10.9.4.8 Business Tax

These costs are part of the regulatory and administrative costs in the table of production cost components above (Table 41). The projected LGU's business taxes and associated fees from 2023 to the end of mine life are shown in Table 44.

Table 44. Projected business taxes

Year	Amount (in PHP million)
2023	120
2024	115
2025	122
2026	131
2027	122
2028	129
2029	126
2030	127
2031	126
2032	134
2033	130
2034	99
2035	131
2036	120
2037	120
2038	129
2039	124
2040	127
2041	17
Total	**2,250**

10.9.4.9 Mineral Reservation Tax

As the Project is within the Surigao Mineral Reservation (SAR) Parcel 1, a royalty of 5% of the market value of the gross output of the minerals produced is payable to the MGB. The royalty is part of regulatory costs in the table of production cost components above (Table 41). The projected mineral reservation taxes from 2023 to end of mine life are shown in Table 45 below.

Table 45. Mineral reservation tax/royalty

Year	Amount (in PHP million)
2023	547
2024	523
2025	555
2026	596
2027	553
2028	588
2029	574
2030	579
2031	574
2032	609
2033	589
2034	450
2035	595

2036	543
2037	544
2038	585
2039	561
2040	579
2041	79
Total	**10,225**

10.9.4.10 Head Office Overhead Cost

The Head Office overhead costs consist of management, marketing fees, and other head office general administration expenses. The projected allocated head office overhead costs up to end of mine life are shown in Table 46 below.

Table 46. Projected head office overhead costs

Year	Amount (in PHP million)
2023	717
2024	687
2025	729
2026	782
2027	726
2028	772
2029	754
2030	760
2031	753
2032	799
2033	773
2034	591
2035	781
2036	713
2037	714
2038	767
2039	737
2040	760
2041	101
Total	**13,413**

10.9.4.11 Royalties and Streaming Agreements

TMC has an agreement with the AMPANTRIMTU IP, holders of Certificate of Ancestral Domain Title (CADT) 048, within the Taganito Nickel Laterite Property for royalties amounting to 1% of the gross revenue of the mine. The royalties are part of the administrative costs in the table of production cost components above (Table 41). The projected royalties due to AMPANTRIMTU IP from 2023 to end of mine life are shown in Table 47.

Table 47. Projected royalties

Year	Amount (in PHP million)
2023	109
2024	105
2025	111
2026	119
2027	111
2028	118
2029	115
2030	116
2031	115
2032	122
2033	118
2034	90
2035	119
2036	109
2037	109
2038	117
2039	112
2040	116
2041	16
Total	**2,045**

10.9.4.12 Income Tax

Table 48 presents the projected income taxes to be paid by TMC up to the end of mine life amounting to 25% of the income.

Table 48. Projected income tax

Year	Amount (in PHP million)
2023	1,170
2024	1,019
2025	1,055
2026	1,113
2027	1,031
2028	1,096
2029	1,031
2030	1,078
2031	1,050
2032	1,136
2033	1,073
2034	1,013
2035	1,395

2036	1,258
2037	1,261
2038	1,367
2039	1,387
2040	1,482
2041	170
Total	**21,184**

10.9.5 Government Financial Incentives

10.9.5.1 Board of Investments

Under Memorandum No. 60, the 2022 Strategic Investment Priority Plan, incentives on a business enterprise depend on tier classification, location, and industry priority. These incentives include Income Tax Holiday (ITH), Special Corporate Income Tax (SCIT), Enhanced Deductions (ED), and many others.

10.9.5.2 Philippine Economic Zone Authority

Registered business enterprises (RBEs) with Special Economic Zones (ECOZONEs) are given two (2) incentives — fiscal and non-fiscal incentives — by the Philippine Economic Zone Authority (PEZA). The fiscal incentive is similar to what the BOI offers, depending on tier classification, location, and industry priority.

The Taganito Special Economic Zone (TSEZ) is classified as Tier I — an RBE with activity listed in the 2020 Investment Priority Plan under "Export Activities". Export-oriented activities under Tier I outside the National Capital Region (NCR), or not in metropolitan areas contiguous or adjacent to the NCR, may avail six (6) years of ITH and ten (10) years of ED or SCIT, totaling to sixteen (16) years of incentive availment.

On the other hand, the non-fiscal incentives include the following:

- Tax- and duty-free importation of capital equipment, raw materials, spare parts, or accessories.
- Domestic sales allowance of up to 30% of total sales.
- VAT exemption on importation and VAT zero-rating on local purchases for goods and directly related to its registered activity to include telecommunications, power, and water bills.
- Exemption from payment of national and local government taxes and fees for the period of availment of the 5% SCIT incentive.
- Employment of foreign nationals.
- Long-term land lease of up to seventy-five (75) years.
- Issuance of a two (2)-year PEZA Visa for foreign nationals employed by PEZA-registered companies and their dependents.

TMC manages the TSEZ and benefits from these incentives. These incentives have helped TMC in reducing its operational costs, thus, increasing profitability.

10.9.6 Basis of Revenue Collection

The Project is expected to generate a total revenue of PHP 204.5 billion (USD 3.6 billion), over the course of its remaining mine life as seen in Table 49 and Figure 45 below.

Table 49. Projected revenue until the end of mine life

Commodity	Unit	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Saprolite	PHP, billion	7.4	7.1	7.7	8.3	7.4	8.1	7.7	8.0	7.7	8.8
	USD, billion	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Limonite	PHP, billion	3.6	3.4	3.4	3.6	3.6	3.7	3.8	3.6	3.7	3.4
	USD, billion	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total	**PHP, billion**	**10.9**	**10.5**	**11.1**	**11.9**	**11.1**	**11.8**	**11.5**	**11.6**	**11.5**	**12.2**
	USD, billion	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**
Commodity	**Unit**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**Total**
Saprolite	PHP, billion	8.4	9.0	11.9	10.9	10.9	11.7	11.2	11.6	1.6	165.4
	USD, billion	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	2.9
Limonite	PHP, billion	3.4	-	-	-	-	-	-	-	-	39.1
	USD, billion	0.1	-	-	-	-	-	-	-	-	0.7
Total	**PHP, billion**	**11.8**	**9.0**	**11.9**	**10.9**	**10.9**	**11.7**	**11.2**	**11.6**	**1.6**	**204.5**
	USD, billion	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.0**	**3.6**

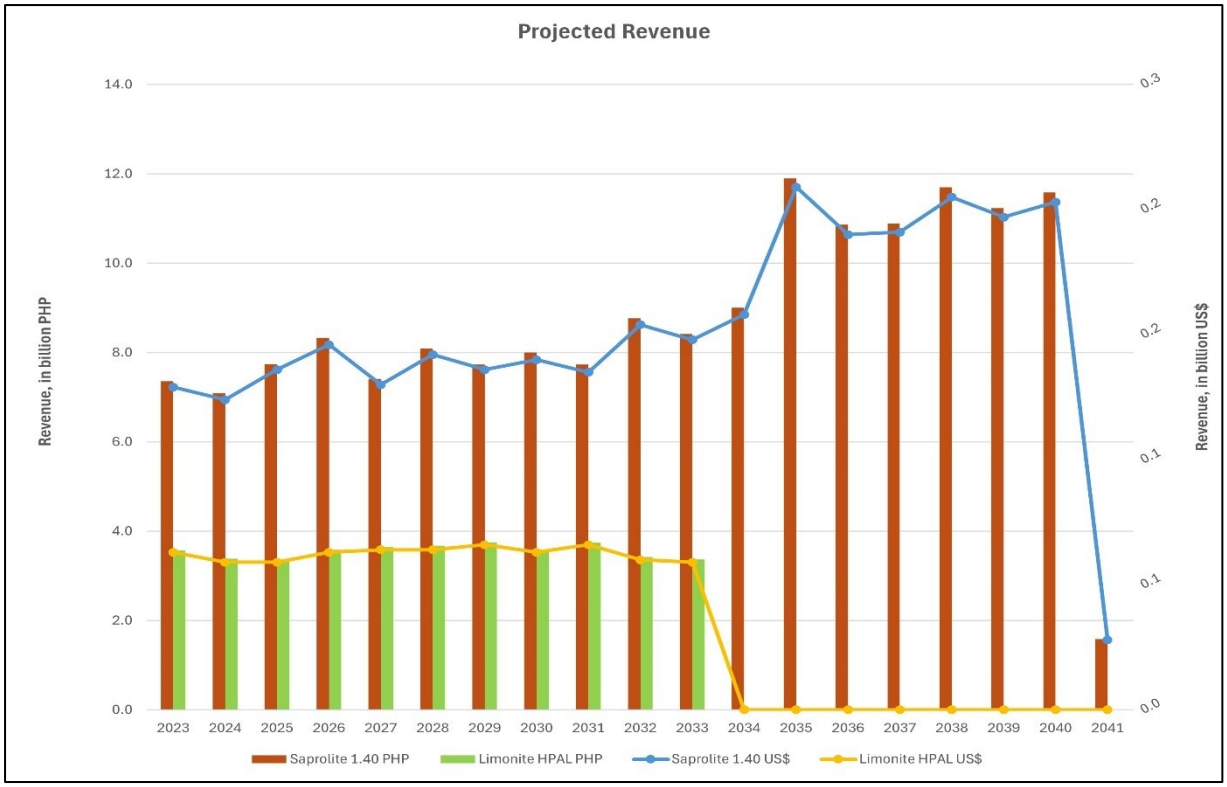


Figure 45. TMC projected revenue for limonite and saprolite

10.9.6.1 Main Valuable Product(s) and By-Product(s) with their Specifications

TMC produces limonite ore directly supplied to THPAL. The limonite ore specifications set by the THPAL as of CY 2024 are 1.00% Ni, 40.00% Fe, and 2.20% Mg. The THPAL employs high-pressure acid leach technology to extract Ni and Co from the limonite ore. The amount payable to TMC for the contained nickel is 9% of the LME value while the amount payable for contained cobalt is 2% of the LME value starting January 1, 2023. The by-products of THPAL are scandium and chromite. TMC has a 2.5% and 4% revenue share of the scandium oxalate and chromite shipments of THPAL to Sumitomo Metal Mining Co. Ltd. (SMMC).

Saprolite ore is directly shipped to Chinese and Japanese smelters. Japanese smelters, particularly PAMCO, have secured a medium-term contract with TMC spanning over five (5) years, initiated in 2019 and set to conclude in 2024. PAMCO, being a co-owner of the Project, consistently renews its sales contract with the Company. The contract outlines nickel prices, distinguishing it from Chinese smelters which typically rely on spot prices for pricing nickel. The Chinese contracts typically operate on short-range terms, often per vessel or per shipment. The saprolite ore specification range for CY 2024 is 1.30% - 1.40% Ni at 35% moisture content. At the TMC mine yard stockpile area, sizing, sorting, and blending are undertaken with limited crushing and screening in some saprolite materials to meet the smelter customer specifications.

10.9.6.2 Metallurgical Recovery

Not applicable for this Project as it does not have a milling/processing plant.

10.9.6.3 Selling Price

In the table below, the selling prices per ore product type are outlined.

Table 50. Selling price per ore product type, in USD/WMT (saprolite) and USD/lb (limonite HPAL)

Product	Unit	Price
Saprolite 1.40[3]	USD/WMT	32.88
Limonite HPAL - Nickel	USD/lb	8.26
Limonite HPAL - Cobalt	USD/lb	25

10.9.6.4 Foreign Exchange Rate

The exchange rate utilized in this study is PHP 57 to USD 1.

10.9.6.5 Smelter/Freight/Treatment Charges

Not applicable to this Project since ore products are of DSO type and HPAL deliveries.

10.9.6.6 Bonuses and Penalties

For this exercise, bonus and penalty assumptions were not considered in the calculation of the Project's projected revenue. However, as per sales contract, the bonus and penalties calculations are shown in Table 36.

10.9.6.7 Other Receivables and Payables

The Project's other receivables and payables primarily consist of demurrage and despatch, alongside various penalties and premiums not factored into the projected revenue, such as oversized materials penalties. Demurrage typically arises when the actual mother vessel laytime exceeds the computed laytime; otherwise, it is considered despatch. Demurrage payments are reimbursed by the Company to the buyer. Despatch rate is commonly set at half the demurrage rate.

10.9.7 Pro-forma Financial Statements

The pro-forma financial statements are tabulated in Tables 51 to 53.

[3] *Saprolite 1.40 means Saprolite ore containing 1.40% Ni*

10.9.7.1 Pro-forma Balance Sheet

Table 51. TMC Project balance sheet, in PHP million

Category	Components	2023	2024	2025	2026	2027
Current Assets	Cash and cash equivalents	1,910.86	1,511.57	1,562.85	1,600.81	1,601.87
	Trade and other receivables – net	390.16	281.76	280.25	298.31	303.89
	Inventories - at net realizable value (NRV)	1,542.94	1,493.55	1,615.64	1,676.28	1,661.73
	Available-for-sale (AFS) investments					
	Other current assets	937.21	937.21	937.21	937.21	937.21
	Total Current Assets	4,781.16	4,224.09	4,395.94	4,512.61	4,504.71
Non-current Assets	Property and equipment – net	3,233	3,390	3,124	2,945	3,451
	Other non-current assets	1,587	1,657	1,730	1,808	1,891
	Total Non-current Assets	4,820	5,047	4,853	4,753	5,342
TOTAL ASSETS		9,601	9,271	9,249	9,266	9,846
Liabilities	Current Liabilities	799	590	595	609	588
	Non-Current Liabilities	1,063.16	905.66	822.97	741.12	660.15
TOTAL LIABILITIES		1,862.41	1,495.40	1,417.89	1,350.46	1,248.44
Equity	Capital stock	4,000	4,000	4,000	4,000	4,000
	Retained earnings	3,703	3,740	3,796	3,880	4,562
	Other Equity Accounts	36	36	36	36	36
	TOTAL EQUITY	7,738	7,775	7,832	7,915	8,598
TOTAL LIABILITIES AND EQUITY		9,601	9,271	9,249	9,266	9,846
Category	**Components**	**2028**	**2029**	**2030**	**2031**	**2032**
Current Assets	Cash and cash equivalents	1,633.57	1,651.25	1,639.09	1,640.31	1,745.25
	Trade and other receivables – net	306.27	312.86	297.87	311.74	284.89
	Inventories - at net realizable value (NRV)	1,659.15	1,681.97	1,640.52	1,664.24	1,698.99
	Available-for-sale (AFS) investments					
	Other current assets	937.21	937.21	937.21	937.21	937.21
	Total Current Assets	4,536.20	4,583.30	4,514.69	4,553.50	4,666.34
Non-current Assets	Property and equipment – net	3,368	3,061	2,889	3,407	3,196
	Other non-current assets	1,968	2,051	2,131	2,212	2,293
	Total Non-current Assets	5,336	5,112	5,020	5,619	5,488
TOTAL ASSETS		9,872	9,695	9,535	10,173	10,155

Liabilities	Current Liabilities	595	584	552	501	519
	Non-Current Liabilities	595.09	517.68	485.36	506.59	537.29
TOTAL LIABILITIES		1,189.97	1,101.82	1,037.31	1,007.40	1,056.55
Equity	Capital stock	4,000	4,000	4,000	4,000	4,000
	Retained earnings	4,647	4,558	4,462	5,129	5,062
	Other Equity Accounts	36	36	36	36	36
	TOTAL EQUITY	8,682	8,593	8,498	9,165	9,098
TOTAL LIABILITIES AND EQUITY		9,872	9,695	9,535	10,173	10,155

Category	Components	2033	2034	2035	2036	2037
Current Assets	Cash and cash equivalents	1,790.51	1,710.60	1,683.38	1,697.54	1,737.53
	Trade and other receivables – net	280.68	-	-	-	-
	Inventories - at net realizable value (NRV)	1,739.12	1,966.19	1,993.55	2,026.05	2,038.10
	Available-for-sale (AFS) investments					
	Other current assets	937.21	937.21	937.21	937.21	937.21
	Total Current Assets	4,747.52	4,613.99	4,614.14	4,660.80	4,712.84
Non-current Assets	Property and equipment – net	2,992	2,872	3,284	3,177	2,876
	Other non-current assets	2,378	2,460	2,523	2,607	2,683
	Total Non-current Assets	5,370	5,332	5,807	5,784	5,559
TOTAL ASSETS		10,117	9,946	10,421	10,445	10,272
Liabilities	Current Liabilities	488	484	567	533	529
	Non-Current Liabilities	582.13	505.62	393.03	252.01	192.33
TOTAL LIABILITIES		1,070.37	990.11	960.23	785.41	721.28
Equity	Capital stock	4,000	4,000	4,000	4,000	4,000
	Retained earnings	5,011	4,921	5,425	5,624	5,515
	Other Equity Accounts	36	36	36	36	36
	TOTAL EQUITY	9,047	8,956	9,461	9,660	9,551
TOTAL LIABILITIES AND EQUITY		10,117	9,946	10,421	10,445	10,272

Category	Components	2038	2039	2040	2041
Current Assets	Cash and cash equivalents	1,765.63	1,792.27	1,773.65	1,299.40
	Trade and other receivables – net	-	-	-	-
	Inventories - at net realizable value (NRV)	2,025.19	1,910.96	1,794.10	1,885.42
	Available-for-sale (AFS) investments				
	Other current assets	937.21	937.21	937.21	937.21

	Total Current Assets	4,728.03	4,640.44	4,504.96	4,122.03	
Non-current Assets	Property and equipment – net	2,760	2,413	2,225	2,089	
	Other non-current assets	2,759	2,841	2,919	3,082	
	Total Non-current Assets	5,519	5,254	5,145	5,171	
TOTAL ASSETS		10,247	9,895	9,650	9,293	
Liabilities	Current Liabilities	538	536	560	655	
	Non-Current Liabilities	166.48	141.61	114.54	84.16	
TOTAL LIABILITIES		704.77	677.98	674.38	738.68	
Equity	Capital stock	4,000	4,000	4,000	4,000	
	Retained earnings	5,507	5,181	4,940	4,518	
	Other Equity Accounts	36	36	36	36	
	TOTAL EQUITY	9,542	9,217	8,975	8,554	
TOTAL LIABILITIES AND EQUITY		10,247	9,895	9,650	9,293	

10.9.7.2 Pro-forma Profit and Loss

Table 52. Projected profit and loss statement, in PHP million

Parameter	Year 0	Year 1	Year 2	Year 3	Year 4
	2023	2024	2025	2026	2027
Gross Revenue	10,932	10,468	11,106	11,914	11,062
Production Cost	(3,913)	(4,150)	(4,497)	(4,899)	(4,569)
Marketing Cost	(527)	(510)	(551)	(591)	(536)
Other Expenses	(574)	(550)	(583)	(625)	(581)
Taxes, Licenses, & Royalties	(1,093)	(1,047)	(1,111)	(1,191)	(1,106)
Head Office, General, & Admin	(143)	(137)	(145)	(156)	(145)
Gross Income	4,682	4,074	4,220	4,451	4,125
Less Income Tax	(1,170)	(1,019)	(1,055)	(1,113)	(1,031)
Net Income After Tax (NIAT)	3,511	3,056	3,165	3,338	3,094

Parameter	Year 5	Year 6	Year 7	Year 8	Year 9
	2028	2029	2030	2031	2032
Gross Revenue	11,767	11,489	11,579	11,472	12,185
Production Cost	(4,853)	(4,899)	(4,769)	(4,811)	(5,006)
Marketing Cost	(584)	(563)	(579)	(562)	(619)
Other Expenses	(618)	(603)	(608)	(602)	(640)
Taxes, Licenses, & Royalties	(1,177)	(1,149)	(1,158)	(1,147)	(1,218)
Head Office, General, & Admin	(154)	(151)	(152)	(150)	(160)
Gross Income	4,382	4,125	4,314	4,200	4,542
Less Income Tax	(1,096)	(1,031)	(1,078)	(1,050)	(1,136)
Net Income After Tax (NIAT)	3,287	3,094	3,235	3,150	3,407

Parameter	Year 10	Year 11	Year 12	Year 13	Year 14
	2033	2034	2035	2036	2037
Gross Revenue	11,785	9,006	11,898	10,864	10,885
Production Cost	(4,947)	(2,910)	(3,621)	(3,367)	(3,373)
Marketing Cost	(595)	(553)	(728)	(665)	(667)
Other Expenses	(619)	(473)	(625)	(570)	(571)
Taxes, Licenses, & Royalties	(1,179)	(901)	(1,190)	(1,086)	(1,089)
Head Office, General, & Admin	(154)	(118)	(156)	(142)	(143)
Gross Income	4,291	4,052	5,579	5,032	5,043
Less Income Tax	(1,073)	(1,013)	(1,395)	(1,258)	(1,261)
Net Income After Tax (NIAT)	3,219	3,039	4,184	3,774	3,782

Parameter	Year 15	Year 16	Year 17	Year 18	Total
	2038	2039	2040	2041	
Gross Revenue	11,697	11,229	11,585	1,581	**204,504**
Production Cost	(3,576)	(3,136)	(3,032)	(543)	**(74,870)**
Marketing Cost	(716)	(686)	(706)	(99)	**(11,035)**
Other Expenses	(614)	(590)	(608)	(83)	**(10,736)**
Taxes, Licenses, & Royalties	(1,170)	(1,123)	(1,159)	(158)	**(20,450)**
Head Office, General, & Admin	(153)	(147)	(152)	(18)	**(2,676)**
Gross Income	5,468	5,547	5,929	680	**84,736**
Less Income Tax	(1,367)	(1,387)	(1,482)	(170)	**(21,184)**
Net Income After Tax (NIAT)	4,101	4,160	4,446	510	**63,552**

10.9.7.3 Cash Flows

Table 53. Projected cash flow statement, in PHP million

Parameter	Year 0	Year 1	Year 2	Year 3	Year 4
	2023	2024	2025	2026	2027
Net Income/(Loss) After Tax	3,511	3,056	3,165	3,338	3,094
Add Back: Non-cash Charges					
Depreciation/Amortization/Depletion	363	572	615	703	712
Salvage Value	–	–	–	–	–
Working Capital	–	–	–	–	–
Capital Expenditures	(1,542)	(729)	(348)	(525)	(1,217)
Projected Net Cash Inflow/(Outflow)	2,332	2,898	3,431	3,516	2,588
Financing					
Proceeds from loan	–	–	–	–	–
Principal payment	–	–	–	–	–
PROJECTED NET CASH INFLOW/(OUTFLOW)	2,332	2,898	3,431	3,516	2,588

Parameter	Year 5	Year 6	Year 7	Year 8	Year 9
	2028	2029	2030	2031	2032
Net Income/(Loss) After Tax	3,287	3,094	3,235	3,150	3,407
Add Back: Non-cash Charges					
Depreciation/Amortization/Depletion	713	705	705	705	705
Salvage Value	–	–	–	–	–
Working Capital	–	–	–	–	–
Capital Expenditures	(630)	(398)	(532)	(1,222)	(494)
Projected Net Cash Inflow/(Outflow)	3,369	3,400	3,407	2,632	3,618
Financing					
Proceeds from loan	–	–	–	–	–
Principal payment	–	–	–	–	–
PROJECTED NET CASH INFLOW/(OUTFLOW)	3,369	3,400	3,407	2,632	3,618

Parameter	Year 10	Year 11	Year 12	Year 13	Year 14
	2033	2034	2035	2036	2037
Net Income/(Loss) After Tax	3,219	3,039	4,184	3,774	3,782
Add Back: Non-cash Charges					
Depreciation/Amortization/Depletion	704	703	703	703	703
Salvage Value	–	–	–	–	–
Working Capital	–	–	–	–	–
Capital Expenditures	(500)	(583)	(1,114)	(597)	(402)
Projected Net Cash Inflow/(Outflow)	3,423	3,159	3,773	3,880	4,083
Financing					
Proceeds from loan	–	–	–	–	–
Principal payment	–	–	–	–	–
PROJECTED NET CASH INFLOW/(OUTFLOW)	3,423	3,159	3,773	3,880	4,083

Parameter	Year 15	Year 16	Year 17	Year 18	Total
	2038	2039	2040	2041	
Net Income/(Loss) After Tax	4,101	4,160	4,446	510	**63,552**
Add Back: Non-cash Charges					
Depreciation/Amortization/Depletion	703	347	188	136	**11,385**
Salvage Value	–	–	–	36	**36**
Working Capital	–	–	–	–	**–**
Capital Expenditures	(586)	–	–	–	**(11,421)**
Projected Net Cash Inflow/(Outflow)	4,218	4,507	4,634	682	**63,552**
Financing					
Proceeds from loan	–	–	–	–	–
Principal payment	–	–	–	–	–
PROJECTED NET CASH INFLOW/(OUTFLOW)	4,218	4,507	4,634	682	**63,552**

10.9.8 Profitability Analyses

10.9.8.1 Breakeven Analyses

Based on the projected tonnages to be handled for the entire remaining mine life and the corresponding costs, the breakeven prices of the ore materials are at USD 16.99/WMT for saprolite ore and USD 10.89/WMT for limonite ore.

Table 54. Breakeven cost analysis per material type

Cost Component	Limonite	Saprolite	Unit
Production Cost	334.05	463.59	PHP/WMT Ore Extracted
Marketing Expenses	-	102.62	PHP/WMT Ore Extracted
Other Expenses	12.80	50.19	PHP/WMT Ore Extracted
Head Office General and Admin	50.31	89.40	PHP/WMT Ore Extracted
Other Taxes, Licenses, and Royalties	26.48	47.05	PHP/WMT Ore Extracted
Breakeven Price	620.73	968.43	PHP/WMT Ore Extracted
	10.89	16.99	USD/WMT Ore Extracted

With the ore price assumptions set at USD 32.88/WMT for saprolite ore and USD 12.70/WMT for limonite ore, respectively, the Project is expected to yield income from its operations.

10.9.8.2 Sensitivity Analyses

The economic viability of the Project is most sensitive to changes in ore prices, followed by the foreign exchange rate between the Philippine Peso and the US Dollar. It should be noted, however, that during the past year, fluctuations have been observed in ore selling prices between USD 8.00 to USD 16.00 per WMT for limonite and USD 26.00 to USD 36.00 per WMT for saprolite. The foreign exchange rate fluctuated between PHP 55.00 to PHP 58.00 per USD. The unit production cost for limonite and saprolite is USD 5.86 and USD 8.13 per WMT mined, respectively. Assuming that future fluctuations are within similar ranges, the fluctuation of ore prices effectively has the largest impact in NPV swings.

Table 55. TMC Project's NPV at different discount rates

Discount Rate	PHP, million	USD, million
6%	38,666	678
8%	33,631	590
10%	29,592	519
12%	26,319	462
15%	22,477	394

For the net income sensitivity analysis for both the saprolite and limonite production of the Project, the variables and considered values are shown in the table below. The commodity prices considered in this study are based on the lowest to the highest prices in the historical contract prices for saprolite (Type 4-C) within the 2015–2022 data in Table 35.

This analysis aims to illustrate the impact of changes in the ore price on the resulting net income and NPV. The saprolite and limonite ore prices that yielded the maximum income in

these analyses are not necessarily the ore prices used as assumptions in the Mineral Reserves estimation exercise. This is because the Company aims to be conservative in the reporting of its estimates owing to the fluctuations in ore prices and foreign exchange rates.

Table 56. TMC Project's net income sensitivity analysis variables

Variable	Values	
	Limonite	Saprolite
Ore Price (USD/WMT)	4.00	15.63
	6.25	20.38
	6.31	22.75
	8.38	30.00
	11.63	38.87
	11.66	41.28
	12.70	49.58
Foreign Exchange (PHP to 1 USD)	40.00	
	44.00	
	50.00	
	54.00	
	62.00	
	64.00	

For saprolite, Figure 46 shows the impact on net income (in PHP billion) after changes in the key variables (ore price and forex). Both variables significantly affect the financial outcome of the project. The results in net income show growing behavior as ore prices and forex increase. The highest net income reached with an ore price of USD 49.58 per WMT and forex at PHP 64.00 is PHP 149.35 billion, and the lowest at an ore price of USD15.63 per WMT and PHP 60.00 Forex is PHP 1.36 billion. However, the varying scenarios between the ore price and forex show that the ore price has the biggest influence, regardless of how high the forex rate is, but when there is a drastic change in the ore price, our net income is greatly impacted.

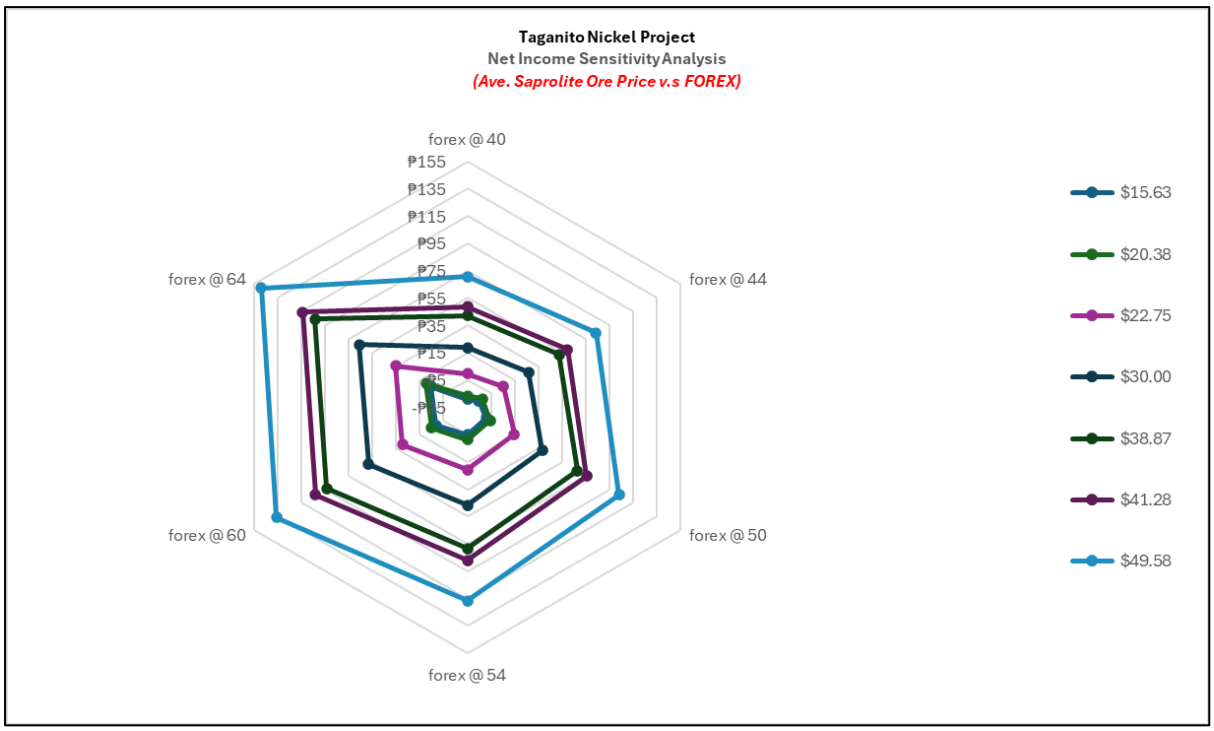


Figure 46. Net income sensitivity (in PHP billion) to saprolite ore price and foreign exchange rates

For limonite, the highest net income reached with an ore price of USD 17.00 per WMT and forex at PHP 64.00 is PHP 20.24 billion, and lowest at an ore price of USD 14.00 per WMT and PHP 42.00 forex is PHP 6.2 million (refer to Figure 47). All the ore prices exhibit the same behavior when varying the forex.

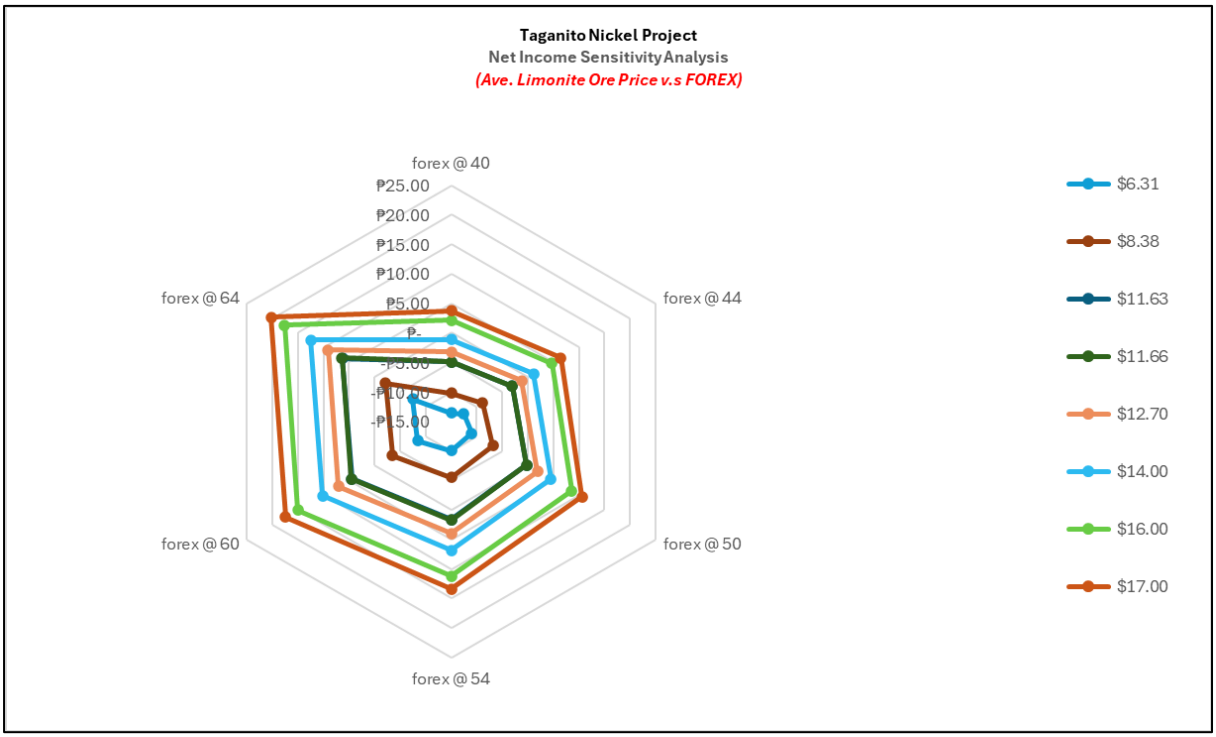


Figure 47. Net income sensitivity (in PHP billion) to limonite ore price and foreign exchange rates

10.9.8.3 Investment Analysis

Based on the Modifying Factors and the other parameters used, the Project is expected to generate a net income of PHP 63.6 billion (USD 1.1 billion equivalent) over its remaining productive mine life.

Using a discount rate of 10%, the Project's NPV is estimated to be at PHP 29.6 billion (USD 519 million equivalent).

10.10 Project Schedule and Implementation

Not applicable since the Project is already in its operating phase.

11. Estimation of Mineral Reserves

A 'Mineral Reserve' is defined as the economically mineable part of a Measured and/or Indicated Mineral Resources after the application of Modifying Factors. Once these factors are considered, the Measured and/or Indicated Mineral Resources declaration may become Mineral Reserves.

In the case of TMC, there are two (2) reference points where the Mineral Reserve is defined: (1) at the point where the ore is fed to the THPAL processing plant, and (2) at the hatches of mother vessels which transport direct shipment ore to foreign buyers. TMC does not process the ore.

11.1 Data Verification and Validation

All raw data used in modeling are generated and sourced on site. The Geology Department serves as the onsite repository of drill hole data and subsequent relevant data generated that includes assay results, summaries of which are provided to the NAC HO for further processing. This includes the development of resource block models and the Mineral Resources estimation reports.

About 21,532 drillholes with a total meterage of 329,512.47m were used to generate the block models and the ensuing Mineral Resources estimation report. These drill holes are spread across six (6) identified deposits within the TMC MPSA --- Taga1, Taga2, Taga3, Hayanggabon, Urbiztondo, and Kinalablaban. Drill hole spacing varies as prescribed under the drilling program (Table 2). This standard was followed until the Data Cut-off Date. In succeeding years, drill spacing is more randomly spaced following such geology consideration as ore deposition trends, structures and/or profiles.

For data and record keeping, specific procedures are defined and adhered to by the Project following the Company's Quality Management System. The procedures are audited internally and externally, as per ISO 9001:2015 standard requirements.

The review, verification, and validation of the Mineral Resource block models consist of separate confirmatory procedures discussed below.

11.1.1 Correctness of Drill Hole Collar Elevation

The drill hole collars are displayed with the topographic surface or digital terrain model (DTM) in cross sections to determine how the collars relate to the surface. It is essential that block models are based on accurate topographic data and drill hole collar coordinates, which provide for the correct three-dimensional (3D) spatial location of each dataset. If the drill hole collars appear to be too high and appear to be floating in the air, or too low and appear to be buried on the ground, corrections must be made before the data can be used in preparing the Mineral Reserves data to ensure the accuracy of the estimation.

Apart from the drilling data base and the topographic surface, other significant data used in the Mineral Resource estimation is bulk density of the materials, and land-use data.

11.1.2 Correctness of Percentages of Block Domain Attributes

This is checked either through visual inspection of blocks using GEMS/Surpac (either manually or through having the software display the blocks that meet the criteria) or by reviewing the exported block model data, typically in .csv format or in other software such as in Microsoft Excel. Omission of this process may result to over-declaration of tonnage. Only a thorough and diligent review of the combined percentage of the limonite and saprolite percent attribute per block can intercept this potential problem. While values below 100% could be validly explained in areas where there is contact between the domains and the air or bedrock zones, exceedance over the 100% threshold could only indicate issues in the resource modelling phase.

11.1.3 Validation of the Correlation between Block Model Attributes and Solids of Rock Type Domains

To ensure that all domains are categorized and attributed as air, limonite, saprolite, bedrock or any other assigned geologic lithology, and to prevent discrepancies and calculation errors in determining the economic value of each block, checking by visual inspection of the block model attributes and the solids models in cross sectional view is done.

11.1.4 Validation of the Volumetrics of the Computerized Block Model

Based on the Cut-off Grades declared in the Mineral Resource report, cursory runs on Geovia Surpac to determine repeatability of tonnages and grades estimates are done. This exercise is to ascertain that the computerized models used in the Mineral Resource estimation are similar to the ones used in the Mineral Reserves estimation.

11.2 Mineral Reserves Estimation Methodology

A Mineral Reserve is the valuable portion of a mineral deposit that has been assessed to be both technically and economically feasible to extract under current market conditions. Mineral

Reserve estimation involves the evaluation of the characteristics of the deposit, including its size, shape, depth, and quality, as well as the costs of extraction and the demand for the metal/ mineral in the market. In addition, legal, environmental, governmental, and other Modifying Factors are considered and applied to the resource block model to generate the Mineral Reserves. Mineral Reserves are considered the most reliable estimate of how much of a metal/mineral can be extracted and are used to evaluate the profitability and viability of a mining project by mining companies and investors.

For this Project, the Mineral Resource models were originally done on a per Ridge basis, with each Ridge having its own specific block models. To accomplish the proper Reserve estimation requirement, the Mineral Resource block models of the six (6) Ridges in the Project were consolidated into one set of mega-models. This to facilitate the proper optimization of the mine design, LoMPs and mine production schedules. This allowed the Whittle optimization software to consider the location and other physical attributes which impact the economics of extracting the grade values of the deposit.

A brief overview in the steps involved in estimating Mineral Reserves, particularly done in this Project, are explained as follows:

11.2.1 Consolidation of Up-to-date Data and Mine Design Parameters

To start the pit optimization process, it is essential to have a comprehensive consolidated dataset, as well as well-defined Modifying Factors as inputs in the optimization activity.

With the validation and checking of the block models completed and the Modifying Factors defined, the Mineral Reserve Estimation process can begin. For this Project, the GEOVIA Whittle Software 7.4.4 was used as the generalized mining package where all calculations, 3D modeling, and report generation were done.

Table 18 details the mine design parameters generally used in TMC's operations. It includes bench height, bench width, bench slope, overall pit slope, deposit area regions, maximum road gradient, haul road width, and berm height. The parameters serve as the bases in the preparation of the final mine design, and the annual mine production plans.

11.2.2 Definition of Major Assumptions and Parameters

With the Mineral Reserves being considered as a pivotal point in a project profitability, it is imperative to have clearly defined Modifying Factors before proceeding with the estimation of Mineral Reserves. In this Project, the constant parameter approach is employed. This approach assumes that elements such as selling prices, operational costs, target grades, tonnage constraints, and other assumptions remain constant throughout the life of the Project.

The Mineral Reserve estimation parameters used are as follows:

1. Bulk Density

The bulk densities for both in-situ and loose materials used in the Mineral Reserve estimate were obtained from the density measurements using the bulk mining method conducted by Rabi (2015) as presented in Table 13.

The relevant bulk densities extracted from this are as follows:

Table 57. Relevant bulk densities for Mineral Reserve estimation exercise

Material	In-situ Dry Bulk Density (g/cm^3)
Limonite	1.22
Saprolite	1.28
Old Limonite Stockpile	1.16

2. Geotechnical Considerations

The geotechnical mine design parameters have been presented in Table 18 in Section 10.4.1.2 Mine Design, Mining Parameters, and Geotechnical Parameters.

3. Mine Production Plans

Optimized pit shells, derived from the pit optimization using Geovia Whittle version 7.4.4, form the basis for the annual development and production schedules. Each of the annual pit shells are operationalized through delineation of bench crestlines, toe lines, access roads, ramps, and other ancillary structures to arrive at practical mine production plans. These are presented in Appendices 14.1 to 14.5.

4. Mining Recovery, Dilution Factor, Mining Losses

As explained in Section 10.4.1.3 Mining Recovery, Dilution, and Losses, no mine call factor (e.g., mining recovery, dilution) was applied during estimation of Mineral Reserves. At the time of the writing of the Report, data and information relevant to the subject are not yet complete to afford a rational and structured way of determination.

5. Relevant Production Costs Considered

In conducting the pit optimization via Geovia Whittle, appropriate mine site costs were considered as inputs in the conversion of the resource model blocks into economic blocks. These costs, along with the revenue values of each block, yield the economic value of each block and form the basis of a block's extraction feasibility based on the Lerchs-Grossmann algorithm.

The relevant production costs utilized have been presented in Table 41 in Section 10.9.4 Production Cost Estimates and Assumptions.

6. Basis of Revenue Calculation

These have been discussed in Section 10.9.6 Basis of Revenue Collection. Total Revenue assumptions used pertain to the sum of revenues derived from the sale of ore containing nickel, cobalt, and iron. (see Figure 45 - TMC projected revenue for limonite and saprolite).

7. Cut-off Grades

In the pit optimization process, no specific cut-off grade was utilized in generating the optimized pit. The economic values of the blocks determine the limits of the final mine design, as determined by optimization software which uses the Lerchs-Grossman algorithm. The Lerch-Grossman algorithm is a mathematical optimization method used in pit optimization for determining the ultimate pit limit of a mine. It takes into account the mineral deposit geometry, the production costs, and the revenues to determine the most profitable pit shape that can be excavated.

Costs include fixed and variable expenses pertaining to administrative, regulatory, production overhead, barge/shiploading/feeding, rehandling, rehandling-conveying, mining, and wastes related cost, details of which are discussed extensively in Section 10.9.

11.2.3 Pit Optimization and Mineral Reserves Estimation

The optimization process for maximizing the NPV of a mining project begins after inputting the economic net value of each block and the mine design parameters into the Whittle Optimization Package software. The goal is to derive a series of surfaces using the Lerchs-Grossman algorithm to determine the ultimate mine pit design. This design is represented by a series of pit shells that act as yearly boundaries, which are subject to volumetric calculations using the Geovia Surpac software to generate material inventories of tonnage and grade.

To achieve the best combination of target grades, tonnages, operational constraints, and Modifying Factors, multiple optimization runs are necessary. The Mineral Reserves for the Project are estimated based on the ultimate mine pit design and the initial topographic surface, with ore and waste materials between the two (2) surfaces being calculated to generate material inventories. These inventories represent the Mineral Reserves of the Project. Similarly, the subsequent tonnages and grades inventory based on the periodic mine production plans are used as basis to create the corresponding mine production schedules.

11.2.4 Economic Modeling and Analyses

The tonnage and grade inventories of the resultant Mineral Reserves, mine production plans and mine production schedules are utilized as primary inputs in the preparation of spreadsheets for the economic and/or financial modeling of the Project.

Using the spreadsheet enables a closer assessment of the Project's viability when numerous sets of more detailed parameters are introduced. Likewise, the spreadsheet provides a quick means of determining the sensitivities and cost-benefits of the various Modifying Factors used. While the Modifying Factors used in the mine optimization phase should be the same as those

used in the economic modeling, some differences are oftentimes introduced. Some costs pertaining to doing business, which do not add value to the deposit on the ground, like those for overhead and some regulatory purposes—which are not included in the mine design and mine production optimization runs — are included in the spreadsheet.

In short, while the final pit design, the Mineral Reserves estimate and mine production schedules provide recognition of economic viability, the economic and/or financial model spreadsheet will provide a tangible representation of the Project's commercial business viability. The Report provides numbers for the NPV and the Internal Rate of Return (IRR) of the Project, wherein all the inherent costs, both directly related to mining the deposit and those pertaining to doing business, are included.

Table 58 shows the set of Modifying Factors which are normally given attention in the analysis of the economic and/or financial model.

Table 58. Summary of Modifying Factors

Modifying Factor	Components	Remarks
Mining costs	Cost to extract materials from the ground	Based on 2023 projected unit costs, current contract rates (see Table 41 Production costs components utilized in pit optimization in Section 10.9.4 Production Cost Estimates and Assumptions)
Marketing (ship loading) costs	Barge- and ship-loading costs	Based on 2023 projected unit costs, current contract rate costs as well as current costs (see Table 41 Production costs components utilized in pit optimization in Section 10.9.4 Production Cost Estimates and Assumptions)
Taxes and royalties	Government royalty tax, excise tax, and other smaller taxes (e.g., local business tax)	Based on existing tax rates and royalty taxes such as Indigenous Peoples (IP) Royalty and Claim-owner Royalty (see Table 43 to 45 in Sections 10.9.4.7 Excise Tax to Section 10.9.4.9 Mineral Reservation Tax)
Mining parameters	Mining recovery, dilution, mining area design criteria, working schedule	see Table 18 Mine design parameters and geotechnical considerations in Section 10.4.1.2 Mine Design, Mining Parameters, and Geotechnical Parameters
Economic factor	Sales revenue; Internal revenue-sharing scheme	Based on current sales agreement with buyers, with provision for adjustments based on 2023-2024 forecasts; no provision for metal bonuses or penalties were considered in the calculation of the projected revenue (see Table 50 Selling price per ore product type, in USD/WMT (saprolite) and USD/lb (limonite HPAL) in Section 10.9.6.3 Selling price and bonus and penalty assumptions in Section 10.9.6.6 Bonuses and penalties)

Infrastructure	Costs to develop and maintain critical infrastructure	Current infrastructure, as well as those for development for future operations (see Table 40 List of capital equipment and infrastructure in Section 10.9.2 List of capital equipment and infrastructure)
Social factors	Costs related to the implementation of social programs (SDMP) and safety and health programs (SHP)	SDMP based on 1.5% of preceding year's operating costs (under Regulatory cost component in Table 41 Production costs components utilized in pit optimization in Section 10.9.4 Production Cost Estimates and Assumptions)
Environmental factors	Costs related to the implementation of the Project's environmental programs (EPEP)	EPEP based on 5% of current year's Projected direct mining cost (under Regulatory cost component in Table 41 Production costs components utilized in pit optimization in Section 10.9.4 Production Cost Estimates and Assumptions)
Legal requirements	Permits required prior to the conduct of operations	Based on prevailing laws as of the time of writing.

11.3 Mineral Reserves Categories

Mineral Reserves classification for limonite and saprolite presented below is based on: (1) the Mineral Resources classification, (2) material type, and (3) the distance of the nearest drill intercept from a block centroid.

The distances used for the Mineral Reserves classification have been proven with time to be suitable for the deposits of TMC.

To arrive at a Mineral Reserves classification, an understanding of the Mineral Resources classification is helpful.

Measured Mineral Resources are classified as Proved Mineral Reserves for a maximum distance between the block centroid and the nearest intercept of twenty (25) m and fifty (50) m, in the saprolite and limonite domains, respectively.

Indicated Mineral Resources, are classified as Probable Mineral Reserves, for a maximum distance between the block centroid and the nearest intercept of fifty (50) m and 100 m, in the saprolite and limonite domains, respectively.

The Inferred Mineral Resources are automatically treated as waste (given a negative economic block value) and excluded from estimation of ore materials in the Mineral Reserves.

Table 59. Mineral Reserves classification

Mineral Resources Category	Material	Maximum Distance from Nearest Intercept	Mineral Reserves Classification
Measured	Limonite	50 m	**Proved**
	Saprolite	25 m	**Proved**
Indicated	Limonite	100 m	**Probable**
	Saprolite	50 m	**Probable**

11.4 Mineral Reserves Estimates

As of the Data Cut-off Date, December 31, 2022, TMC's remaining Mineral Reserves are estimated at 65 mWMT of limonite, with average grades of 1.01% Ni, 46.89% Fe, 0.95% Mg, and 0.10% Co and about 88.3 mWMT of saprolite, with average grades of 1.45% Ni and 12.08% Fe. This is presented in Table 60.

Likewise, the attendant waste materials are estimated to be about 29 mWMT, resulting in a waste:ore ratio of 0.2:1.

Table 60. TMC Mineral Reserves as of December 31, 2022

MINERAL RESERVES								
Material	**Reserve Category**	**mWMT**	**mDMT**	**%Ni**	**%Fe**	**% Mg**	**%Co**	**Contained Ni (kT)**
Limonite	Proved & Probable	65.0	41.6	1.01	46.89	0.95	0.10	420
Saprolite	Proved & Probable	88.3	60.0	1.45	12.08			871
	Total	**153.3**	**101.6**	**1.26**	**26.84**			**1,291**

Note: mWMT is million wet metric tons; mDMT is million dry metric tons; kT is kilo tonnes

11.4.1 Cut-off Grade Determination

In this Report, the cut-off grades for Mineral Reserves vary depending on such factors as market requirements, distribution of grade values both in-situ and in stockpiles, as well as the timing of the extraction for both Direct Shipping Ore (DSO) and plant deliveries.

Unlike gold and copper, payments for nickeliferous laterite ore are based on meeting specific grade requirements rather than incremental pricing for each grade level. To achieve the desired grades, ore blending is largely employed. The desired grade values are confined within changeable and adjustable ranges of grade values. Blending options vary depending on the location and distribution of grades and the schedule of extracting the materials. Therefore, the Cut-off Grade, representing the lower limit within a range, is not fixed and may vary within active mining areas, the ore materials inventory and production schedules.

The selection of the target product mix specification undergoes an iterative optimization process to maximize economic value while considering the risk tolerance of each option.

Additionally, one of the parameters in determining the Project's Mineral Reserves is the treatment of Inferred Mineral Resources in the pit optimization process. In this Report, all Inferred Mineral Resource blocks are considered as waste and are automatically assigned negative economic values in the economic block model.

11.4.2 Comparison of Current Mineral Reserves Estimates with Previous Estimates (2017-2021)

Table 61 shows the Mineral Reserves estimates from the last five (5) years. The Mineral Reserves previously estimated was at 116 mWMT for both limonite and saprolite. Comparing this with the total reserve from Table 60, an increase in tonnage (shown graphically in Figure 48) and increase in Ni grades may be observed.

Table 61. Previous Mineral Reserves estimates from 2017-2021

TMC Previous Mineral Reserve Estimates												
Year	Saprolite				Limonite				Total			
	mWMT	mDMT	%Ni	%Fe	mWMT	mDMT	%Ni	%Fe	mWMT	mDMT	%Ni	%Fe
2017	54.9	38.3	1.48	10.00	121.6	81.5	1.05	46.01	176.5	119.8	1.18	34.81
2018	53.0	37.0	1.48	10.18	109.0	73.0	1.06	45.70	162.0	110	1.20	34.07
2019	50.5	35.1	1.46	10.40	106.2	71.2	1.03	45.12	156.7	106.3	1.17	33.94
2020	36.8	25.6	1.47	11.70	88.3	59.1	1.03	45.75	125.1	84.7	1.16	35.74
2021	35.9	25.0	1.42	11.64	80.1	53.8	1.00	47.31	116.0	78.8	1.13	36.27

Note: mWMT is million wet metric tons; mDMT is million dry metric tons

With the adoption of a new and computerized method in the Mineral Reserves estimation process, the change in limonite and saprolite reserves underscores the sensitivity of the Mineral Reserves estimates to economic variables such as nickel ore prices and foreign exchange rates—both of which are crucial inputs in the optimization process. This shift to computerized method also acknowledges that the Mineral Reserves reporting provides a better estimation result, compared to prior methodologies, which solely relied on mineralization data without accounting for the influence of the spatial location of grade values and the effect of proper tonnage and grades scheduling in the NPV of the deposit, among others.

Furthermore, the new estimation approach incorporates additional drillhole data, enhancing confidence levels in these assessments. Employing detailed production drilling activities with a 10 x10 m spacing further strengthens the estimation accuracy. As a result, the Mineral Reserves estimation showcases a decrease in limonite Mineral Reserves while witnessing a significant increase in saprolite Mineral Reserves.

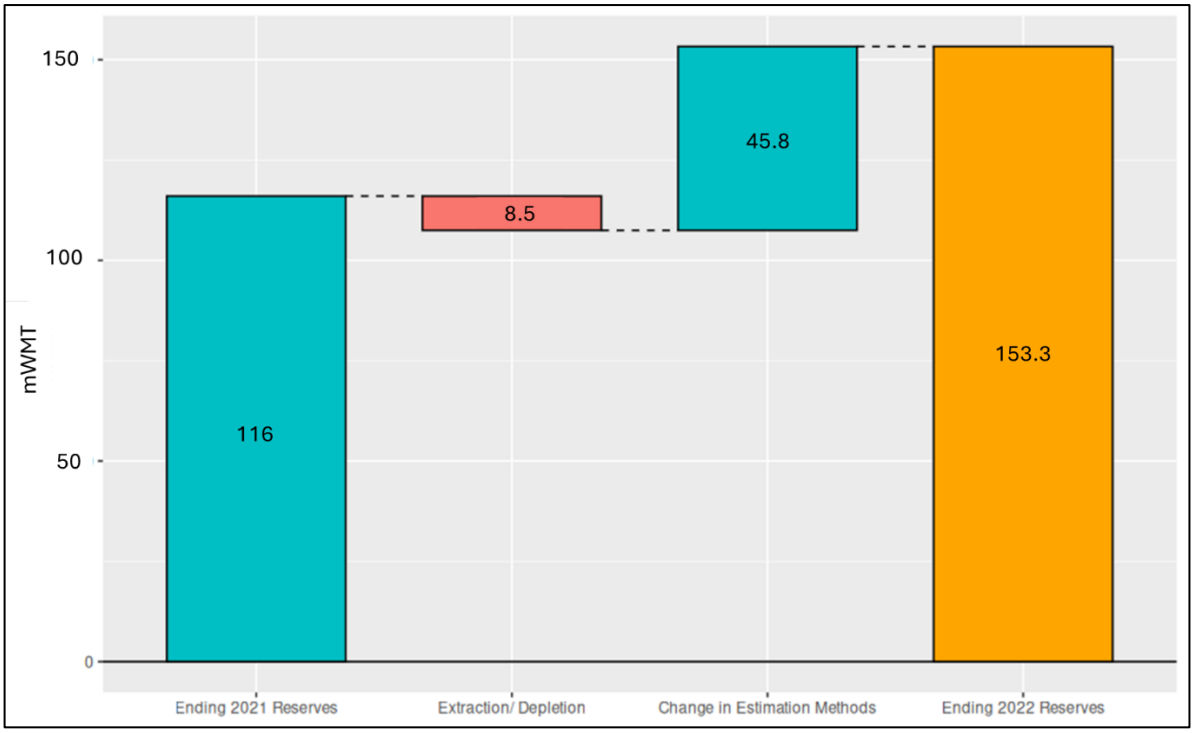


Figure 48. Comparison of Mineral Reserves

Two notable factors contributed to this overall change: depletion and changes in estimation methods.

1. **Depletion.** A total of 8.5 mWMT were extracted and shipped out during the 2022 mining season and were deducted from the 2021 year-end reported Mineral Reserves, as seen in the Figure 48.

2. **Changes in Estimation Method.** The estimation method utilized for reporting the Mineral Reserves at the end of 2021 relied on established conversion factors, including volume and grade recoveries. Spreadsheets were employed as a key tool for converting Mineral Resources into Mineral Reserves. A significant change in the estimation procedure involved using an optimization software by Whittle. This change in approach incorporated economic variables such as production costs, selling prices, and ore source distances. Whittle generates final mine design and optimized annual pit shells, forming the basis for the reporting of Mineral Reserves. This methodological shift yielded a substantial increase in the Mineral Reserves estimates, totaling 45.8 million WMT (as seen in Figure 48).

   Prior to 2022, Mineral Reserves reporting relied heavily on the use of conversion factors. This involved introducing factors to Mineral Resource tonnages and grades, which were enumerated in worksheets. Those factors were derived from historical observations and empirical means. The resultant spreadsheet figures after the introduction of factors would then be considered as the Mineral Reserves, notwithstanding the noticeable disregard of the spatial location of the tonnages and grades, as well as the absence of a final mine design. In 2023, the Whittle optimization software was finally used in conjunction with the new Mineral Resource computerized mega-block models. The

optimization software produced the optimized final mine design and the periodic mine production pit shells, which were then used for the Mineral Reserves estimation and reporting.

The recorded increase is largely contributed by saprolite Mineral Reserves. On the other hand, limonite Mineral Reserves registered a decrease in tonnage, owing to the better economic modeling of the new methodology. Inherent in the process of producing limonite is the stockpiling part. In preparation for the rainy season which normally runs from November to March, stockpiling is resorted primarily to continuously supply feed to the conveyor operations of the THPAL. During off-season, the operation of the processing plant continues, whereas the mine's in-situ production stops, necessitating the sourcing of ore feed from the stockpile. This practice means multiple rehandling of the ore feed materials, resulting to added production expenses. The use of computerized models, combined with the updated Modifying Factors, could have rendered some of the limonite blocks uneconomical to mine.

Meanwhile, the saprolite process flow, because it is simpler, was made more efficient by improved procedures in grade controlling (less stockpiling/rehandling), resulted to more positive blocks. Hence, the addition to the Mineral Reserves.

12. Discussion and Conclusions

The Project is located within the municipality of Claver in the province of Surigao del Norte on the island of Mindanao. It is part of the Surigao Mineral Reservation in the northeastern region of Mindanao in the Philippines. On June 18, 2009, its MPSA 266-2008-XIII-SMR was awarded in accordance with the Philippine Mining Act of 1995. The MPSA has a term of twenty-five (25) years and covers a total area of 4,862.711 hectares.

Engr. Rolando R. Cruz, in his capacity as an ACP accredited by the Philippine Society of Mining Engineers, as Vice President-Nickel Mining Business of NAC, and as the Senior Vice President for Operations and Chief Operating Officer of both the Cagdianao Mining Corporation and the Taganito Mining Corporation, supervised the preparation of this Report on the Taganito Mining Corporation's economic evaluation and Mineral Reserves Estimation.

The input parameters used in Mineral Reserve estimation mainly consist of the information coming from the Mineral Resource report prepared by the ACP-Geologist (Victoria, 2024) and the Modifying Factors adopted by the ACP-Mining Engineer, both based on his professional experience and from the recommendations made by the various resource persons. All the inputs underwent extensive data validation and data verification prior to final use.

After integrating all necessary data and coming up with the attendant final mine design, mine LoMPs and production schedules, the ACP was able to derive an estimate, for the Project's combined Proved and Probable Mineral Reserves, of about 65 mWMT (41.6 mDMT) grading 1.01%Ni and 46.89% Fe for limonite, and 88.3 mWMT (60 mDMT) with grades of 1.45% Ni and 12.08% Fe for saprolite.

The Project's NPV is about PHP 29.6 billion (USD 519 million equivalent), using a discount rate of 10%. Based on the foregoing figures, the ACP deems the Project to be economically viable. The declared Mineral Reserves are projected to be able to support the Project's operations for nineteen (19) years or up to the year 2041.

The results and findings of the Report rely on currently available data and assumptions deemed reasonable at the time of preparation. Risks, defined by the ISO 31000 as the effect of uncertainty, are inherent in any business and could influence the outcome of the Project's activities, leading to results that differ from those presented in this Report. The Project has an Enterprise Risk Management plan to mitigate the negative effects caused by uncertainties.

13. Recommendations

The production plans and the production schedules derived for this Report should be followed and implemented as closely as possible to yield the expected profitability metrics. In following these, the acquisition of required permits and the implementation of development activities must be closely monitored to avoid plan implementation setbacks.

Significant changes in the assumptions and parameters, which could possibly be encountered during the course of the life of the mine, shall warrant a review of this Report. The sensitivity analysis of the Project's economic model shows that ore price variations yield the largest impact on the Project. There are also recent discussions in the Philippine Congress regarding the possibility of introducing new mining taxation schemes, which, if approved, will have a negative impact on the Project's bottom line. The Project's management team should stay abreast of developments in the mining industry and incorporate changes as necessary into the study to confirm the continued viability of the Project.

Double core barrel drilling, preferably with at least NQ-sized drill bit, to further increase the confidence level relevant to the Mineral Resource grade models, should be undertaken with renewed interest. While BQ-sized drilling can still be an option for grade control block modeling purposes, the samples from NQ-sized drilling will provide added assurance in elevating the ore classification of Inferred and Indicated Resource blocks.

Lastly, tonnage and grade reconciliation exercises should be implemented regularly and consistently. In addition to providing valuable information on deviations that could occur during actual mining activities, the results of such exercises are helpful in appraising the reliability of the Project's computerized block models, so that necessary adjustments could be made in the modeling procedure and the mining program should conditions warrant. Recent reconciliation, done after the Data cut-off Date for this Report, indicates that limonite production exhibits higher actual numbers in both tonnage (14%) and Ni grade (6.8%), compared with those in the block models. Saprolite production on the other hand, exhibits lower tonnage figures (-5%) than the block models' and higher actual Ni grade (8.5%) than the block models'. With those results, it is imperative that reconciliation exercises be conducted attentively to enable the Project to operate optimally in terms of tonnages and grades.

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15. Appendices

Appendix 1. PMRC 2020 Edition Table 1 – Checklist for Assessment and Reporting Criteria

Introduction				
			PMRC 2020 Edition Reporting Criterion	**Commentary (found in)**
	General	*(i)*	*The scope of work or terms of reference*	Executive Summary Purpose and scope of work
		(ii)	*The Accredited Competent Person's relationship to the issuer of the Public Report if any.*	Consent Statement
		(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*	Accredited Competent Person's Consent Form Consent Statement
		(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*	Executive Summary Disclaimer References
		(v)	*A title page and a table of contents that includes figures and tables*	Title Page and Table of Contents
		(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*	Executive Summary
		(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*	Executive Summary Consent Statement 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. The mine production plans for the entire life of mine are included in Appendix 4. Maps.
		(ix)	*The units of measure, currency, and relevant exchange rates*	Units of measure, currency, and foreign exchange rates
		(x)	*The details of the personal inspection on the mineral property by each Accredited Competent Person or, if applicable, the reason a personal inspection has not been completed.*	The ACP has conducted numerous site visits on the mineral property as a full-time employee of Nickel Asia Corporation, which is the holdings company of TMC. The latest visit was conducted last February 2024.
		(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 Competent Person took to verify the information provided.*	Qualifications of Accredited Competent Person(s), key technical staff, and other experts
Section 1: Project Outline				
			PMRC 2020 Edition Reporting Criterion	**Commentary (found in)**
1.1	***Location***	*1.1.1*	*Description of location and map (country, province, and closest town/city, coordinate systems and ranges, etc.)*	Location of the mineral property and accessibility Property description and adjacent properties
		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*	Optional, since the Mineral Property is in the Philippines.

		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*	TR1-Physiography, climate, and vegetation
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)*	Executive Summary Purpose and scope of work Level of economic assessment
		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)*	Location of the mineral property and accessibility Property description and adjacent properties TR1-Physiography, climate, and vegetation TR1-Land use and infrastructures Material risks (under Seismic Risk)
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.*	Property description and adjacent properties
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*	Previous works
		1.4.2	*Previous successes or failures referred to transparently with reasons why the project should now be considered potentially economic*	Previous works
		1.4.3	*Known or existing historical Mineral Resource estimates and performance statistics from actual production in the past and in current operations*	Previous works TR1-Previous Mineral Resource estimates
		1.4.4	*Known or existing historical Mineral Reserve estimates and performance statistics from actual production in the past and in current operations*	Previous works Previous Mineral Reserve estimates

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*	Description of mineral rights TR1-History and current status of mineral rights
		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)*	Description of mineral rights TR1-Royalties, receivables, and liabilities
		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*	Description of mineral rights
		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*	None that is known as of this writing.
		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 expected to be obtained. A review of risks that permits will not be received as expected and impact of delays to the project*	Description of mineral rights TR1-Royalties, receivables, and liabilities
1.6	***Royalties***	*1.6.1*	*The royalties or streaming agreements that are payable in respect of each mineral property*	TR1-Royalties, receivables, and liabilities
1.7	***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*	TR1-Royalties, receivables, and liabilities

Section 2: Geological Setting, Mineral Deposit, Mineralization				
			PMRC 2020 Edition Reporting Criterion	**Commentary (found in)**
2.1	***Geological Setting, Mineral Deposit, Mineralization***	*2.1.1*	*The regional geology*	Regional geology
		2.1.2	*The project geology including mineral deposit type, geological setting, and style of mineralization*	Mineral property geology Mineral deposit type Mineralization style
		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*	Localization of the deposit and continuity of mineralization TR1-Mineral deposit model and interpretation
		2.1.4	*Data density, distribution, and reliability and whether the quality and quantity of information are sufficient to support statements, made or inferred, concerning the mineral deposit*	Localization of the deposit and continuity of mineralization Drilling and sampling Type of drilling program Drill core logging Drill sampling method, collection, capture, and storage
		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*	Executive Summary TR1-Mineral deposit model and interpretation
		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*	Localization of the deposit and continuity of mineralization
		2.1.7	*The existence of reliable geological models and/or maps and cross sections that support interpretations*	TR1-Mineral deposit model and interpretation

Section 3: Exploration and Drilling, Sampling Techniques, and Data				
			PMRC 2020 Edition Reporting Criterion	**Commentary (found in)**
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, collection date, spatial location, etc.*	Drilling and sampling Sample preparation, analysis, and security
		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*	TR1-Database and software used in the estimation of Mineral Resources TR1-Database integrity, verification, and validation
		3.1.3	*Acknowledgment and appraisal of data from other parties, and reference to all data and information used from other sources*	Disclaimer
		3.1.4	*Distinction between data / information from the mineral property under discussion and that derived from surrounding properties*	Disclaimer
		3.1.5	*The methods for collar and down-hole survey, techniques, and expected accuracies of data as well as the grid system used*	Topographical and geodetic surveys TR1-Database and software used in the estimation of Mineral Resources
		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*	Type of drilling program TR1-Mineral deposit model and interpretation TR1-Mineral resource estimation and modeling methodology (under Block Model Limits and Grade Interpolation) TR1-Mineral resource categories Discussion and conclusions

		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 geological data, etc.*	Drilling and sampling TR1-Mineral deposit model and interpretation
		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*	Drilling and sampling TR1-Mineral deposit model and interpretation
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.)*	Drilling and sampling
		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*	Drill core logging
		3.2.3	*The nature of logging (qualitative or quantitative) and the use of core photography (or costean, channel, etc.)*	Drill core logging Sample preparation and analysis
		3.2.4	*The total length and percentage of the relevant intersections logged*	Drill core logging
		3.2.5	*Results of any down-hole surveys of the drill hole*	Downhole surveys are not deemed necessary as the vertical angle deviation, if there is any, is expected to be negligible.
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 meaning of sampling*	Drill sampling method, collection, capture, and storage
		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*	Drill sampling method, collection, capture, and storage
		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*	Drill core logging Drill sampling method, collection, capture, and storage

		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*	TR1-Mineral deposit model and interpretation
		3.3.5	*A description of retention policy and storage of physical samples (e.g., core, sample reject, etc.)*	The retention policy for assay rejects is as follows: 3 months for coarse assay rejects stored in the sample preparation facility and 1 month for fine rejects stored in the assay laboratory.
		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*	Drill core logging
		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, 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*	The whole B-sized drill core sample is used for analysis except for duplicate samples where the core is split into two (2) halves.
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*	Sample preparation and assaying are done in-house, with the facility and laboratory. In Quality Assurance and Quality Control (QAQC), under Analysis for Laboratory Accuracy
		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*	Sample preparation and analysis Quality Assurance and Quality Control (QAQC)
		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.)*	Sample preparation and analysis

3.5	***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*	Sample governance Quality Assurance and Quality Control (QAQC)
		3.5.2	*The measures taken to ensure sample security and the Chain of Custody*	Sample governance
		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.)*	TR1-Database integrity, verification, and validation
		3.5.4	*The audit process and frequency (including dates of these audits) and disclose any material risks identified*	Sample governance
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*	Quality Assurance and Quality Control (QAQC)
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*	Bulk density measurements
		3.7.2	*Preliminary estimates or basis of assumptions made for bulk density*	Bulk density measurements
		3.7.3	*The representativeness of bulk density samples*	Bulk density measurements
		3.7.4	*The measurement of bulk density for bulk material using methods that adequately account for void spaces (vugs, porosity, etc.), moisture, and differences between rock and alteration zones within the mineral deposit*	Bulk density measurements
3.8	***Bulk Sampling and/or Trial-mining***	*3.8.1*	*The location of individual samples (including map)*	TR1-Bulk Sampling/Trial Mining

		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*	Drilling and Sampling Statement of the ACP-Geologist of TMC on the Quality of Sample Security, Preparation, Analysis, and Data Validation
		3.8.3	*The method of mining and treatment*	Mining Method
		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*	Limonite, saprolite and bedrock following the nickel laterite mineralization model: Mineral Deposit Type, Style of Mineralization
Section 4: Estimation and Reporting of Exploration Results and Mineral Resources				
			PMRC 2020 Edition Reporting Criterion	**Commentary (found in)**
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*	Drill core logging Drill sampling method, collection, capture, and storage
		4.1.2	*The geological model, construction technique, and assumptions 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*	Drillhole spacing ranging from 10 – 50 meters provide an adequate basis for the applied estimation and classification procedures. DDH intercepts are the basis for construction of the limonite and saprolite domain solids.
		4.1.3	*Any obvious geological, mining, metallurgical, processing, environmental, social, infrastructural, legal, and economic factors that could have a significant effect on the prospects of any possible Exploration Target or mineral deposit*	NA
		4.1.4	*Geological data that could materially influence the estimated quantity and quality of the Mineral Resource or Mineral Reserve*	The resource classification of saprolite and limonite are based on the continuity of grades within the domain zones. *The transition zone of limonite to saprolite is well developed in some areas but absent in some. Since*

				it is not continuous, transition materials are considered as part of the limonite domain.
		4.1.5	*Consideration given to alternative interpretations or models and their possible effect (or potential risk), if any, on the Mineral Resource estimate*	The boundaries of each geology solid are interpreted and modeled using the drillholes' lithology and assay data.
		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.)*	None applied.
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*	TR1-Basic Statistical Parameters TR1-Mineral Resource Estimation and Modeling Methodology, under Grade Interpolation
		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*	In TR1-Mineral Resource Estimation and Modeling Methodology, under Compositing, Grade Interpolation, Block Model Limits, Domaining, and Top cut and cut-off grades.
		4.2.3	*Assumptions and justification of correlations made between variables*	Fe and Mg correlation to target Mg range for consistent blend of HPAL feed as discussed in TR1 Section 10.8.10 Geological Parameters
		4.2.4	*Any relevant specialized computer program (software) used (with the version number) together with the parameters used*	TR1-Database and Software used in the Estimation of Mineral Resources Geovia Surpac v. 2022
		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*	TR1-Block Model Validation
		4.2.6	*The assumptions made regarding the estimation of any co-products, by-products, or deleterious elements*	Mg estimate from Fe value derived from Fe-Mg correlation to target Mg Rage for consistent blend of HPAL feed as discussed in TR1 Section 10.8.10 Geological Parameters

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*	The cut-off grades utilized in the estimation of the Mineral Resource are the minimum grades for ore blending to meet the product specifications which as reported in TR1-Mineral Resource Estimates
		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*	In Technical Aspects, under Mining Plans
		4.3.3	*The infrastructure including, but not limited to, power, water, and site access*	In Technical Aspects, under Mining Plans
		4.3.4	*The legal, governmental, permitting, and statutory parameters*	TMC and its mother company NAC are above compliant in these parameters.
		4.3.5	*The environmental and social (or community) parameters*	TMC and its mother company NAC are resolutely environmentally compliant. TMC complies with and often exceeds their SDMP commitments.
		4.3.6	*The marketing parameters*	Limonite ore is sold exclusively to THPAL as HPAL feed. Saprolite products are sold as direct shipping ore (DSO).
		4.3.7	*The economic assumptions and parameters, including, but not limited to, commodity prices, sales volumes, and potential capital and operating costs*	Marketing Aspects
		4.3.8	*Material risks, e.g., legal, environmental, climatic, etc.*	Material Risks
		4.3.9	*The parameters used to support the concept of 'eventual' in the case of Mineral Resources*	TMC has been in the production and operation stage for over three (3) decades thus the economic extraction of the deposit has already been confirmed. The RPEEE parameters discussed suggest the continued economic extraction of the remaining Mineral Resources.
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*	TR1-Mineral Resource Categories

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.*	TR1-Mineral Resource Categories The true distance of the nearest sample used in the grade interpolation serves as the basis for categorizing the global limonite and saprolite materials into Measured, Indicated, and Inferred classes. The Mineral Resource categories have been proven with time to be suitable for the mining operations of TMC. TR1-Block Model Validation
4.6	***Reporting***	*4.6.1*	*Specific grades / qualities and widths.*	TR1-Mineral Resource Estimates
		4.6.2	*The reporting of low- and high-grade intersections and corresponding widths, together with their spatial location to avoid misleading reporting of Exploration Results*	NA Reporting is focused on Mineral Reserves.
		4.6.3	*A statement on whether grades are regional averages or if these are selected individual samples taken from the mineral property under discussion*	NA Reporting is focused on Mineral Reserves.
		4.6.4	*The detail of the surface or underground mine, residue stockpile, remnants, tailings, and existing pillars or other sources in a Mineral Resource statement*	In Technical Aspects, under Mining Plans (i.e., Mining Method, Mine Infrastructures, and Mine Development Plans and Schedules)
		4.6.5	*A comparison with the previous Mineral Resource estimates, with an explanation of the reason for material changes. A comment on any historical trends (e.g., global bias)*	TR1-Previous Mineral Resource Estimates
		4.6.6	*The basis for the estimate and if not 100%, the attributable percentage relevant to the entity commissioning the Public Report*	All Mineral Resources are attributed to TMC, the entity commissioning this technical report.
		4.6.7	*The basis of the Metal Equivalent formulae, if relevant*	NA
Section 5: Technical Studies				
			PMRC 2020 Edition Reporting Criterion	**Commentary (found in)**
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

		5.1.2	*A summary table of the Modifying Factors used to convert the Mineral Resource to Mineral Reserve*	Mineral Reserves Estimation Methodology Table 58. Summary of Modifying Factors
5.2	***Mining Design***	*5.2.1*	*Assumptions regarding mining methods and parameters when estimating Mineral Resources*	In Mining Plans, under Mining Method and Mine Design, Mining Parameters, and Geotechnical Parameters.
		5.2.2	*All Modifying Factors and assumptions made regarding mining methods, minimum mining dimensions (or pit shell) and internal and, if applicable, external planned and unplanned mining dilution and mining losses used for the techno-economic study and signed- off, such as mining method, mine design criteria, infrastructure, capacities, production schedule, mining efficiencies, grade control, geotechnical and hydrological considerations, closure plans, and personnel requirements*	In Mining Plans, under Mining Method, Mine Design, Mining Parameters, and Geotechnical Parameters, and Mining Recovery, Dilution, and Losses. Mineral Reserves Categories
		5.2.3	*Mineral Resource models used in the study*	TR1-Mineral deposit model and interpretation
		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*	In Mineral Reserves Estimation Methodology In the pit optimization process, no specific cut-off grade was utilized in generating the optimized pit. The economic values of the blocks determine the limits of the final mine design, as determined by optimization software which uses the Lerchs-Grossman algorithm.
		5.2.5	*The mining method(s) to be used*	In Mining Plans, under Mining Method.
		5.2.6	*For open cut mines, a discussion of pit slopes, slope stability, and strip ratio*	In Mining Plans, under Mine Design, Mining Parameters, and Geotechnical Parameters (Table 18 and Figure 20)
		5.2.7	*For underground mines, a discussion of mining method, geotechnical considerations, mine design characteristics, and ventilation/cooling requirements*	NA
		5.2.8	*Discussion of mining rate, equipment selected, grade control methods, geotechnical and hydrogeological considerations, health, and safety of the workforce, staffing requirements, dilution, and recovery*	In Technical Aspects, under Mining Plans
		5.2.9	*Optimization methods and software used in planning, including a discussion of the constraints*	Mineral Reserves Estimation Methodology Geovia Surpac v. 2022 and Geovia Whittle v. 7.4.4

5.3	***Metallurgical Test Works***	*5.3.1*	*The source of the samples, the representativeness of the potential feed and the techniques used to obtain the samples, laboratory and metallurgical testing techniques*	Not applicable for this Project as it does not have a milling/processing plant.
		5.3.2	*The basis for assumptions or predictions regarding metallurgical amenability and any preliminary mineralogical test work should already be carried out*	Not applicable for this Project as it does not have a milling/processing plant.
		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*	Not applicable for this Project as it does not have a milling/processing plant. TMC's limonite is sent to the THPAL while saprolite is direct shipping ore sent to smelters.
		5.3.4	*The nature, amount, and representativeness of metallurgical test works undertaken, and the recovery factors used. A detailed flow sheet / diagram and a mass balance, especially for multi-product operations from which the saleable materials are priced for different chemical and physical characteristics*	Not applicable for this Project as it does not have a milling/processing plant.
		5.3.5	*Assumptions or allowances made for deleterious elements and the existence of any bulk-sample or pilot-scale test work and the degree to which such samples are representative of the ore body as a whole*	Not applicable for this Project as it does not have a milling/processing plant.
		5.3.6	*Disclosure of whether metallurgical process is well-tested technology or novel in nature and if novel, justification of its use in Mineral Reserve estimation*	Not applicable for this Project as it does not have a milling/processing plant.
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*	As TMC is an operating mine, the required infrastructures already exist. The construction of additional needed infrastructures is discussed in Mine Development Plans and Schedules.
		5.4.2	*Demonstration that the necessary facilities have been allowed for (which may include, but not be limited to, processing plant, tailings dam, leaching facilities, waste dumps, road, pipeline, rail or port facilities, water and power supply, offices, housing, security, resource sterilization testing, etc.). Provision of detailed maps showing locations of facilities*	Mine Infrastructures Mine Development Plans and Schedules
		5.4.3	*Statement showing that all necessary logistics have been considered*	In Mine Support Services, under Logistics

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*	Legal, Government, Permitting and Licensing, and Statutory Aspects
		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 TMC is an operating mine, all the permits required for operations already exist.
		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 are known as of this writing.
		5.5.4	*Legislated social management programs that may be required and content and status of these*	No additional social management programs that may be required are known as of this writing.
		5.5.5	*Material socio-economic and cultural impacts that need to be managed, and where appropriate the associated costs*	No additional socio-economic and cultural impacts that need to be managed are known as of this writing.
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*	Product(s) to be Produced and Specifications
		5.6.2	*Product to be sold, customer specifications, testing, and acceptance requirements. Existence of a ready market for the product and whether contracts for the sale of the product are in place or expected to be readily obtained. Price and volume forecasts and the basis for the forecast.*	Product(s) to be Produced and Specifications Commodity Price and Volume Forecasts Sales Contract/Off-take Agreement/Smelter Contract
		5.6.3	*Economic criteria used for the study, such as capital and operating costs, exchange rates, revenue / price curves, royalties, and streaming agreements, cut-off grades, reserve pay limits*	Total Project Cost Estimates and Assumptions Production Cost Estimates and Assumptions
		5.6.4	*Summary description, source, and confidence of method used to estimate the commodity price/value profiles used for cut-off grade calculation, economic analysis and project valuation, including applicable taxes, inflation indices, discount rate, and exchange rates*	Total Project Cost Estimates and Assumptions Production Cost Estimates and Assumptions

		5.6.5	*Assumptions made concerning production cost including transportation, treatment, penalties, exchange rates, marketing, and other costs. Allowances should be made for the content of deleterious elements and the cost of penalties*	Production Cost Estimates and Assumptions Basis of Revenue Collection
		5.6.6	*Allowances made for royalties and streaming agreements payable, both to Government and private entities*	Royalties and Streaming Agreements
		5.6.7	*Ownership, type, extent, and condition of plant and equipment that is significant to the existing operation(s)*	List of Mining Equipment and Auxiliary Machinery
		5.6.8	*Environmental, social, and labor costs*	Production Cost Estimates and Assumptions
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*	Material Risks
5.8	***Economic Analysis***	*5.8.1*	***For Mineral Resources:*** *The basis on which RPEEE has been determined. Any material assumptions made in determining the 'RPEEE' /* ***For Mineral Reserves:*** *The inclusion of any Inferred Mineral Resources is not allowed in the Pre-Feasibility and Feasibility Studies economic analysis*	The Mineral Reserves estimation exercise did not include Inferred Mineral Resources in the conversion of Mineral Resource to Mineral Reserve as shown in Table 59. Mineral reserves classification under Mineral Reserves Categories and discussed in Mineral Reserves Estimates, under Cut-off grade determination.
		5.8.2	*An economic analysis for the project that includes after tax Cash Flow forecast on an annual basis using Mineral Reserves or Mineral Resources or an annual production schedule for the life of the project, which has been used at the relevant level Pre-Feasibility or Feasibility Study*	Pro-forma Financial Statements Profitability Analyses
		5.8.3	*Accounting for royalties and streaming agreements. A discussion of net present value (NPV), internal rate of return (IRR) and payback period of capital*	Investment Analysis
		5.8.4	*Sensitivity or other analysis using variants in commodity price, grade, capital and operating costs, or other significant parameters, as appropriate and discuss the impact of the results*	Sensitivity Analyses

Section 6. Estimation and Reporting of Mineral Reserves				
			PMRC 2020 Edition Reporting Criterion	**Commentary (found in)**
6.1	***Estimation and Modeling Techniques***	*6.1.1*	*A description of the Mineral Resource estimate used as a basis for the conversion to a Mineral Reserve*	Description of Mineral Resource Estimates used as the basis for conversion to Mineral Reserves
		6.1.2	*A Mineral Reserve Statement in sufficient detail indicating if the mining is by surface or underground method plus the source and type of mineralization, domain or orebody, surface dumps, stockpiles, and all other sources*	Mineral Reserves Estimates
		6.1.3	*Reconciliation of historical reliability and reconciliation of the performance parameters, assumptions and Modifying Factors. A comparison with the previous Reserve quantity and qualities, if available. Where appropriate, any historical trends (e.g., global bias).*	Comparison of Current Mineral Reserves Estimates with Previous Estimates
		6.1.4	*Criteria and methods used as the basis for the classification of the Mineral Reserves into varying confidence categories, which should be based on the Mineral Resource category, and include consideration of the confidence in all the Modifying Factors*	Mineral Reserves Estimation Methodology
6.2	***Classification Criteria***	*6.2.1*	*Criteria and methods used as the basis for the classification of the Mineral Reserves into varying confidence categories, which should be based on the Mineral Resource category, and include consideration of the confidence in all the Modifying Factors*	Mineral Reserves Categories
6.3	***Reporting***	*6.3.1*	*The proportion of Probable Mineral Reserves, which have been derived from Measured Mineral Resources (if any), including the reason(s) thereof*	Mineral Reserves Categories
		6.3.2	*The inclusion in a Mineral Reserve statement of the detail of the surface or underground mine, residue stockpile, remnants, tailings, and existing pillars or other sources*	N/A
		6.3.3	*A comparison with the previous Mineral Reserve estimates. Any historical trends (e.g., global bias)*	Comparison of Current Mineral Reserves Estimates with Previous Estimates
		6.3.4	*The inclusion or exclusion of Mineral Resources in Mineral Reserves*	Mineral Reserves Estimates

Section 8. Other Relevant Information				
			PMRC 2020 Edition Reporting Criterion	**Commentary (found in)**
8.1	***Other Relevant Information***	*8.1.1*	*Other relevant and material information not discussed elsewhere*	None
Section 9: Accredited Competent Person				
			PMRC 2020 Edition Reporting Criterion	**Commentary (found in)**
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*	Accredited Competent Person's Certificates, Consent Form and Statement
	Relationship to the issuer	*9.1.2*	*The Accredited Competent Person's relationship to the issuer of the Public Report if any*	Consent Statement
		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.*	Accredited Competent Person's Consent Form

Appendix 2. List of Acronyms

Terms and Abbreviations	Meaning
AAS	Atomic Absorption Spectrometer
ADT	Articulated Dump Truck
ACP	Accredited Competent Person
AEPEP	Annual Environmental Protection and Enhancement Program
Al	aluminum
AMPANTRIMTU	Asosasyon sa Madazaw na Panagkaisa nan mga Tribong Mamanwa sa Taganito ug Urbiztondo
ASTM	American Society for Testing and Materials
^{o}C	degrees Celsius
Ca	calcium
CADT	Certificate of Ancestral Domain Title
CAPEX/Capex	Capital Expenditure
cm	centimeter
CMC	Cagdianao Mining Corporation
CMT	Crisis Management Team
Co	cobalt
CRIRSCO	Committee for Mineral Reserves International Reporting Standards
CV	Coefficient of Variation, a statistical term
CY	calendar year
DAO	Department Administrative Order
DENR	Department of Environment and Natural Resources
DMC	Dinapigue Mining Corporation
DMT	dry metric ton
DOC	Dinagat Ophiolite Complex
DOH	Department of Health
DOLE	Department of Labor and Employment
DSO	Direct Shipping Ore
DT	dump truck
DTM	digital terrain model
E	east
ECC	Environmental Compliance Certificate
ECOZONE	Special Economic Zone
ED	Enhanced Deductions
EM	Mining Engineer
EPEP	Environmental Protection and Enhancement Program
Fe	iron
FMP	Flow Moisture Point
FMR	farm-to-market road
FMR/DP	Final Mine Rehabilitation and/or Decommissioning Plan
g	gram
GNSS	Global Navigation Satellite System

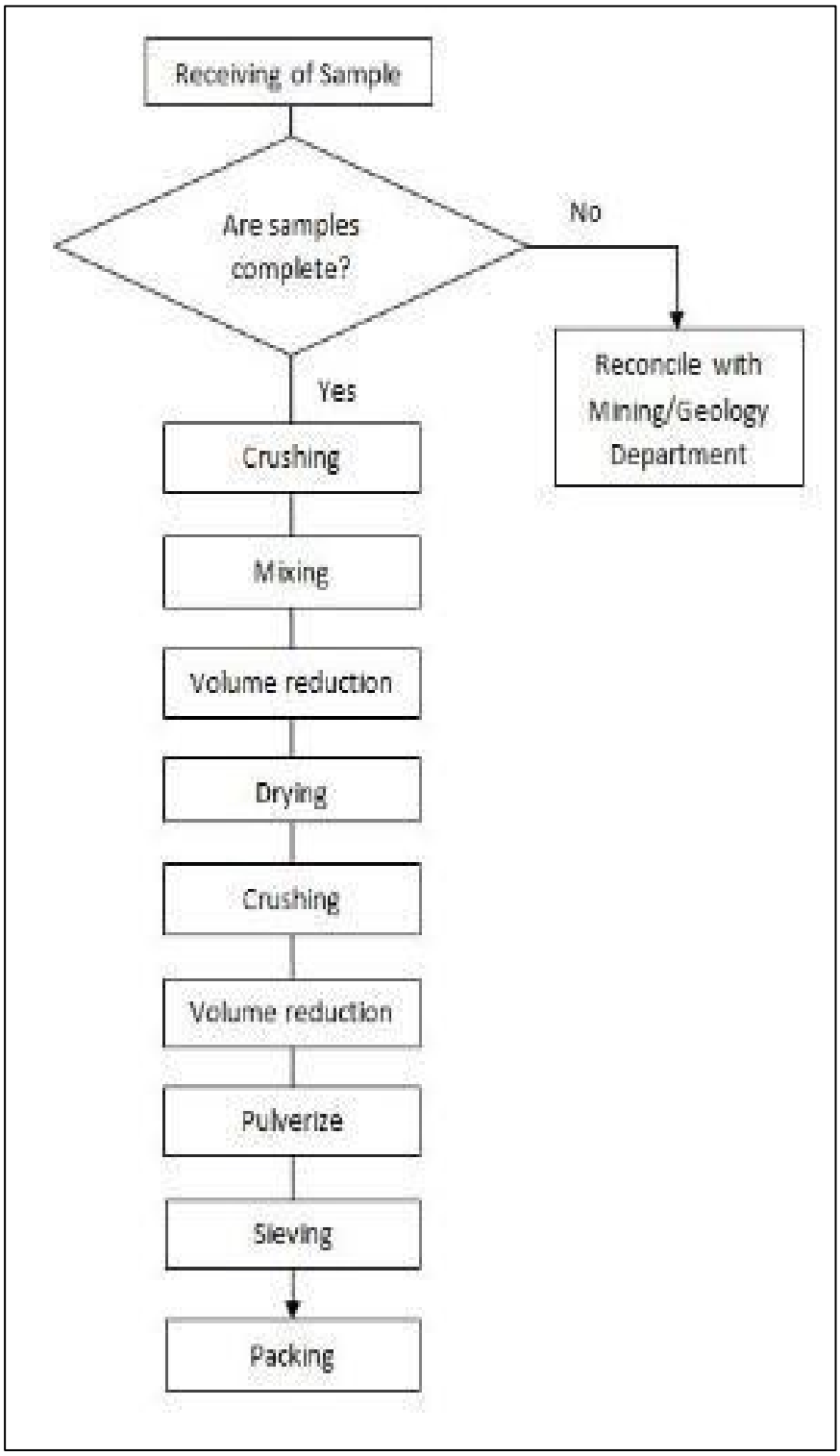
GPS	Global Positioning System
HARD	Half Absolute Relative Difference
HMC	Hinatuan Mining Corporation
HMO	Health Maintenance Organization
HO	Head Office
HPAL	high-pressure acid leach
ID	identification
IDS method	inverse distance squared method
IEC	Information, Education, and Communication
IMS	Integrated Management System
IRR	Implementing Rules and Regulations of the PMRC 2020
ISO	International Organization for Standardization
ITH	Income Tax Holiday
JORC	Australasian Joint Ore Reserves Committee
JIS	Japan Industrial Standards
kg	kilogram
km(s)	kilometer(s)
kT	kilo tonne
kwH	kilowatt-hour
lb	pound
LCT	Landing Craft Tank
LDA	lay-down area
LGU	local government unit
LME	London Metal Exchange
LoM	Life-of-Mine
LoMP	Life-of-Mine Plan
M	million
m	meter
Mg	magnesium
mm	millimeter
MASL	meters above mean sea level
MC	Mobile crusher
mDMT	million dry metric tons
MEPEO	Mine and Environment Protection and Enhancement Office
MGB	Mines and Geosciences Bureau
MgO	magnesia
MMD	Mining Machinery Developments, a mining equipment manufacturer
Mining Act	Philippine Mining Act of 1995 (or Republic Act No. 7942)
MMIC	Marinduque Mining Industrial Corporation
MPSA	Mineral Production and Sharing Agreement
MTX	Mini Track Excavator
mWMT	million wet metric tons
N	north
NAC	Nickel Asia Corporation

NCR	National Capital Region
NE	northeast
Ni	nickel
NN	Nearest Neighbor, a statistical term
NPV	Net Present Value, a financial metric
NRO	National Reporting Organization, a CRIRSCO Member
NW	northwest
OK	Ordinary Kriging, a statistical term
OpCo	Operating Company
OREAS	Ore Research and Exploration Australia Standards
OWS	Oil and Water Separators
PAGASA	Philippine Atmospheric and Geophysical Services Administration
PAMCO	Pacific Metals Co., Ltd.
PBM	Philippine Bureau of Mines
PEZA	Philippine Economic Zone Authority
PGMC	Platinum Group Metals Corporation
PHIVOLCS	Philippine Institute of Volcanology and Seismology
PHP	Philippine Peso
PMIEA	Presidential Mineral Industry Environmental Award
PMRC	Philippine Mineral Reporting Code
PMRCC	Philippine Mineral Reporting Code Committee
PPAs	Programs, Projects, and Activities
PPCS-TM	Philippine Plane Coordinate System-Transverse Mercator
PRC	Professional Regulation Commission
PRS92	Philippine Reference System of 1992
PSE	Philippine Stock Exchange
PSEM	Philippine Society of Mining Engineers
PTM	Philippine Transverse Mercator
PY	pier yard
QA/QC	Quality Assurance and Quality Control
QNI	Queensland Nickel Incorporated
RBE	Registered Business Enterprise
RMM	Resident Mine Manager
RSAP	Rocky Saprolite
RTK GNSS	Real Time Kinematic Global Navigation Satellite System
SCIT	Special Corporate Income Tax
SDMP	Social Development and Management Program
SEC	Securities and Exchange Commission
SHP	Safety and Health Program
Si	silicon
SIRC	Surigao Integrated Resources Corporation
SMMC	Sumitomo Metal Mining Co. Ltd
SMR	Surigao Mineral Reservation
SOP	Standard Operating Procedure
SRM	Standard Reference Material

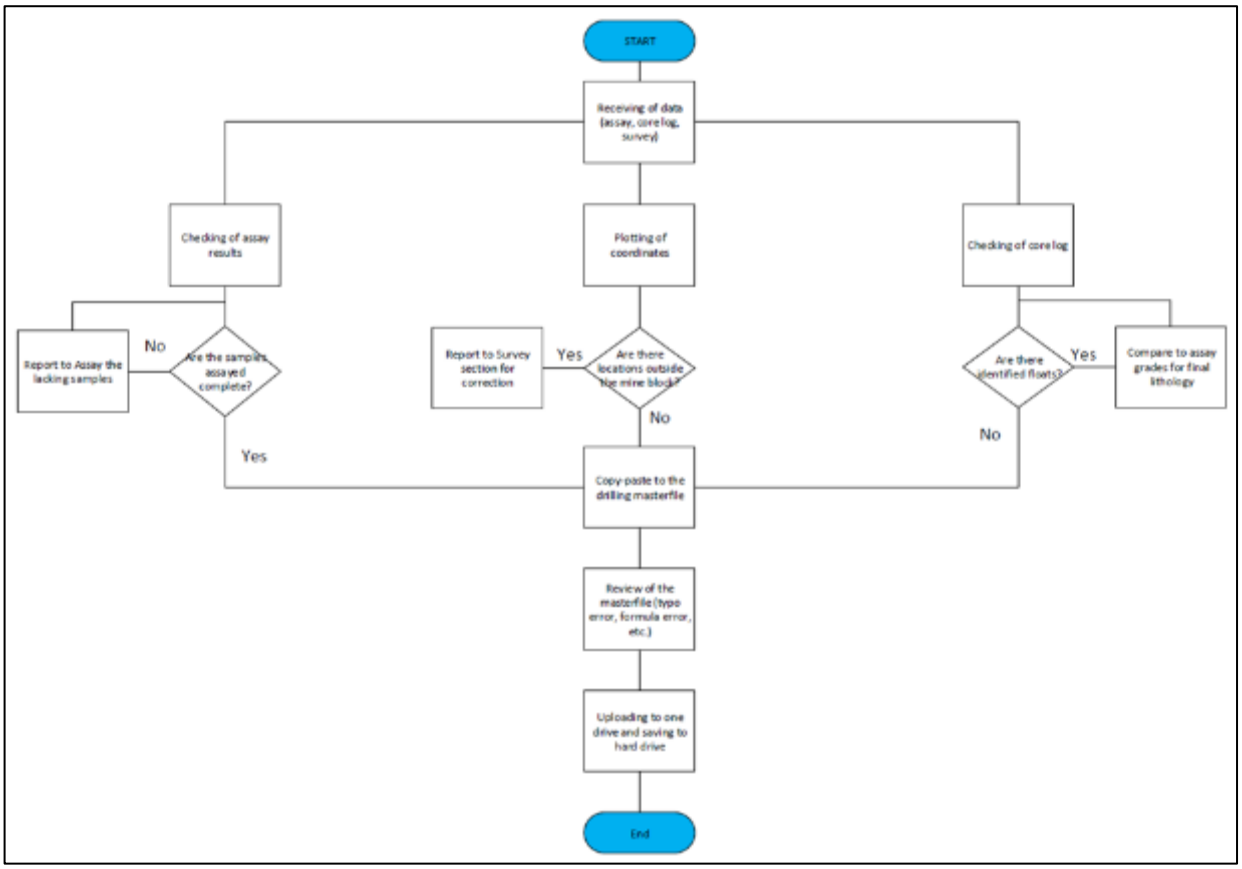
SURNECO	Surigao del Norte Electric Cooperative
THPAL	Taganito HPAL Nickel Corporation
TM	transition material
TMC	Taganito Mining Corporation
TML	Transportable Moisture Limit
TSD	Technical Services Division
TSEZ	Taganito Special Economic Zone
TX	Track Excavator
USD	United States Dollar
USGS	United States Geological Survey
v.	version
VTOL	Vertical Take-off and Landing
XRF	X-ray Fluorescence, an analytical method
WL	Wheel loader
WMT	wet metric ton
XRF	X-Ray Fluorescence
.csv	comma-separated value, an output format for any spreadsheet program
g/cm^3	grams per cubic centimeter, measure of bulk density
>	greater than
≥	greater than or equal
<	less than
%	percent or percentage
3D	three-dimensional

Appendix 3. Flowcharts

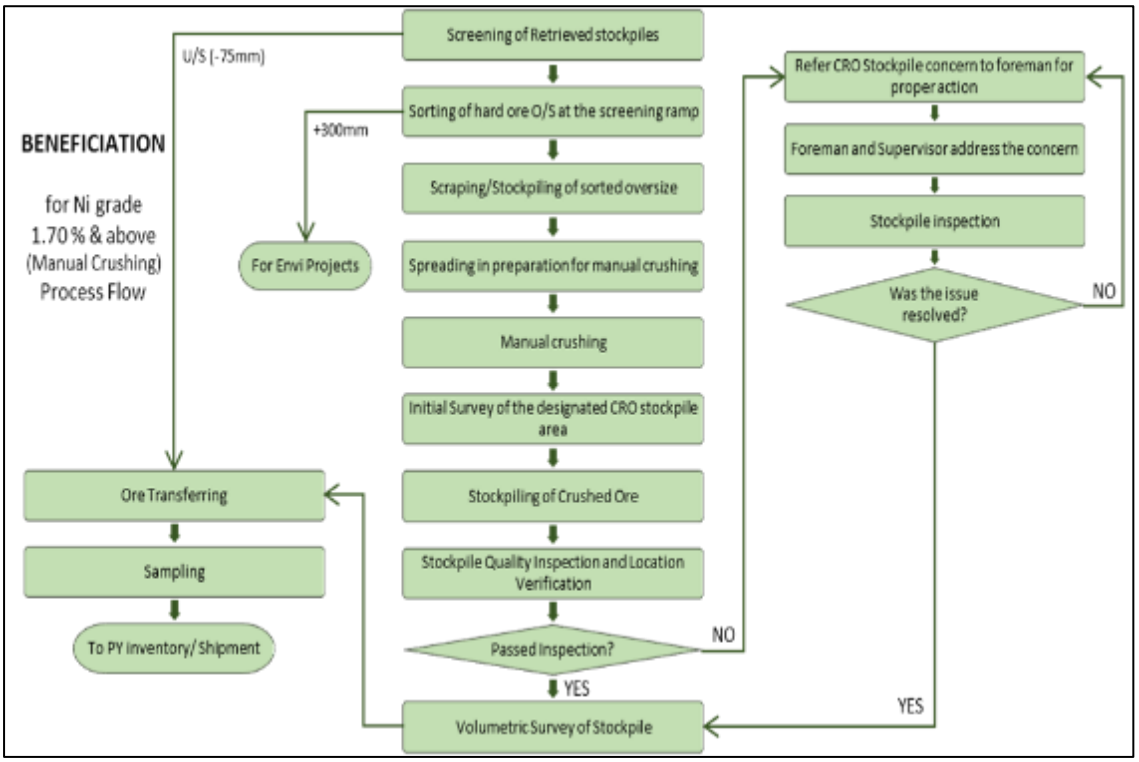
Appendix 3.1 Sample Preparation Process Flowchart



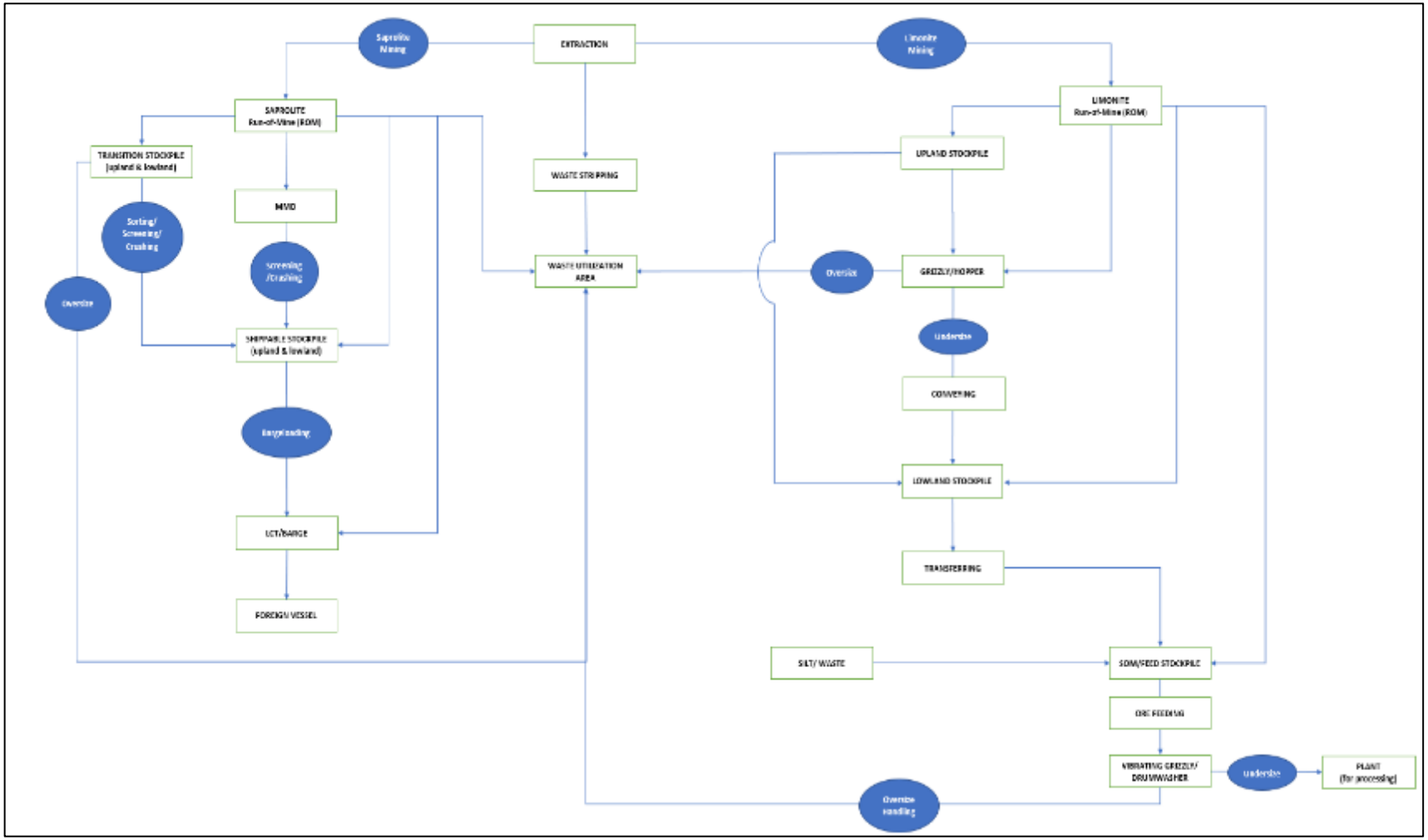
Appendix 3.2 Data Validation Procedures



Appendix 3.3 Manual Crushing Process Flowchart

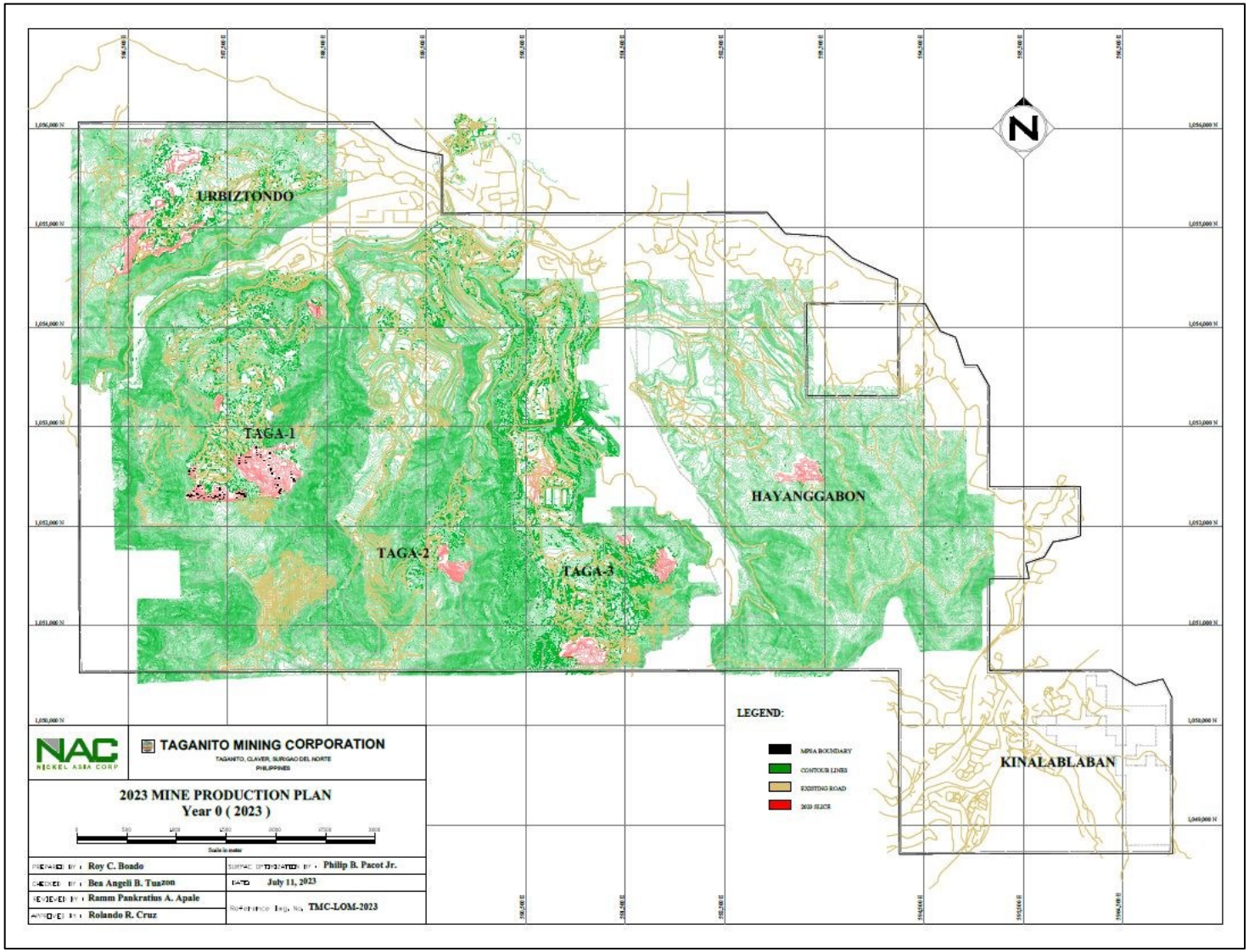


Appendix 3.4 Extraction Process Flow for limonite and saprolite

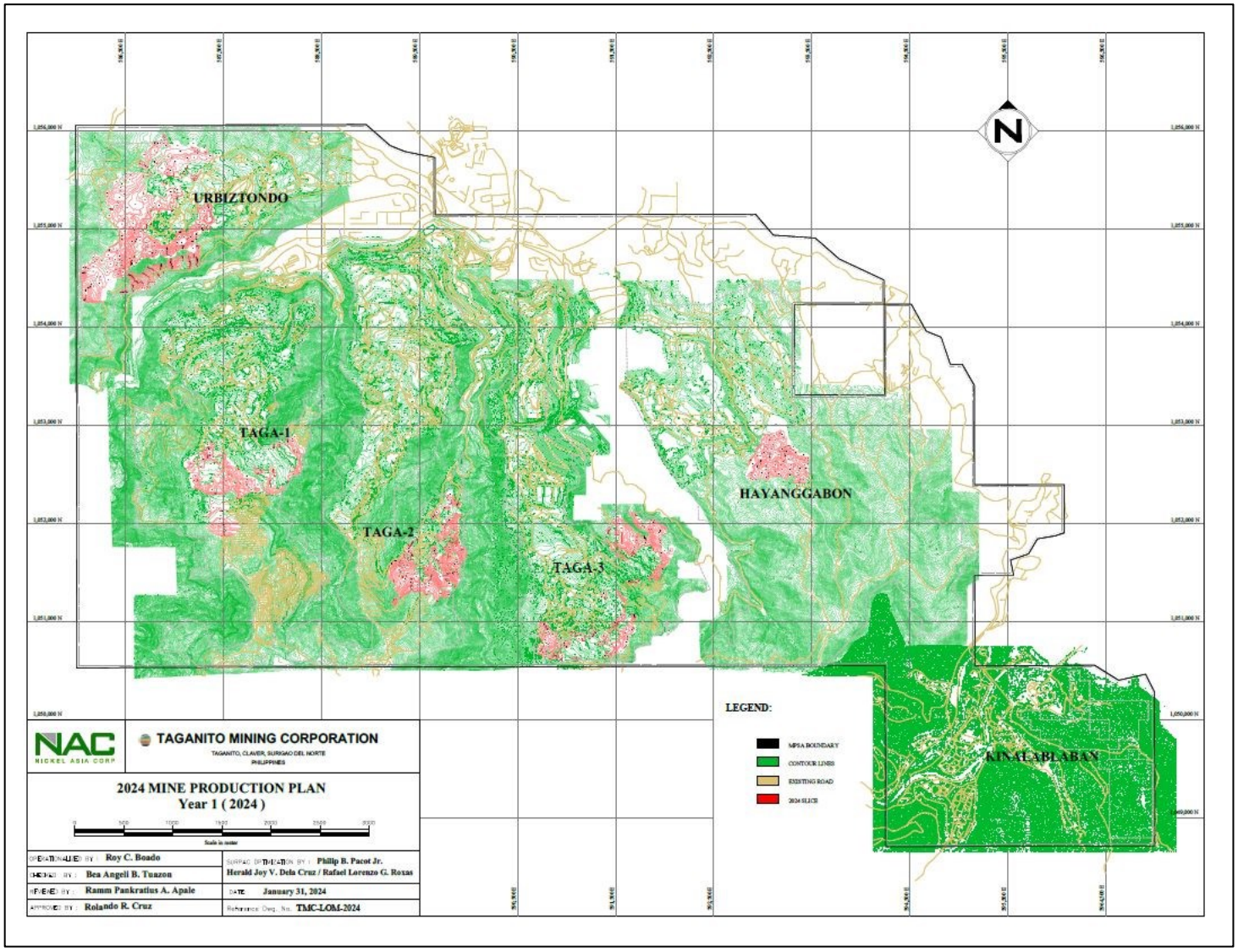


Appendix 4. Maps

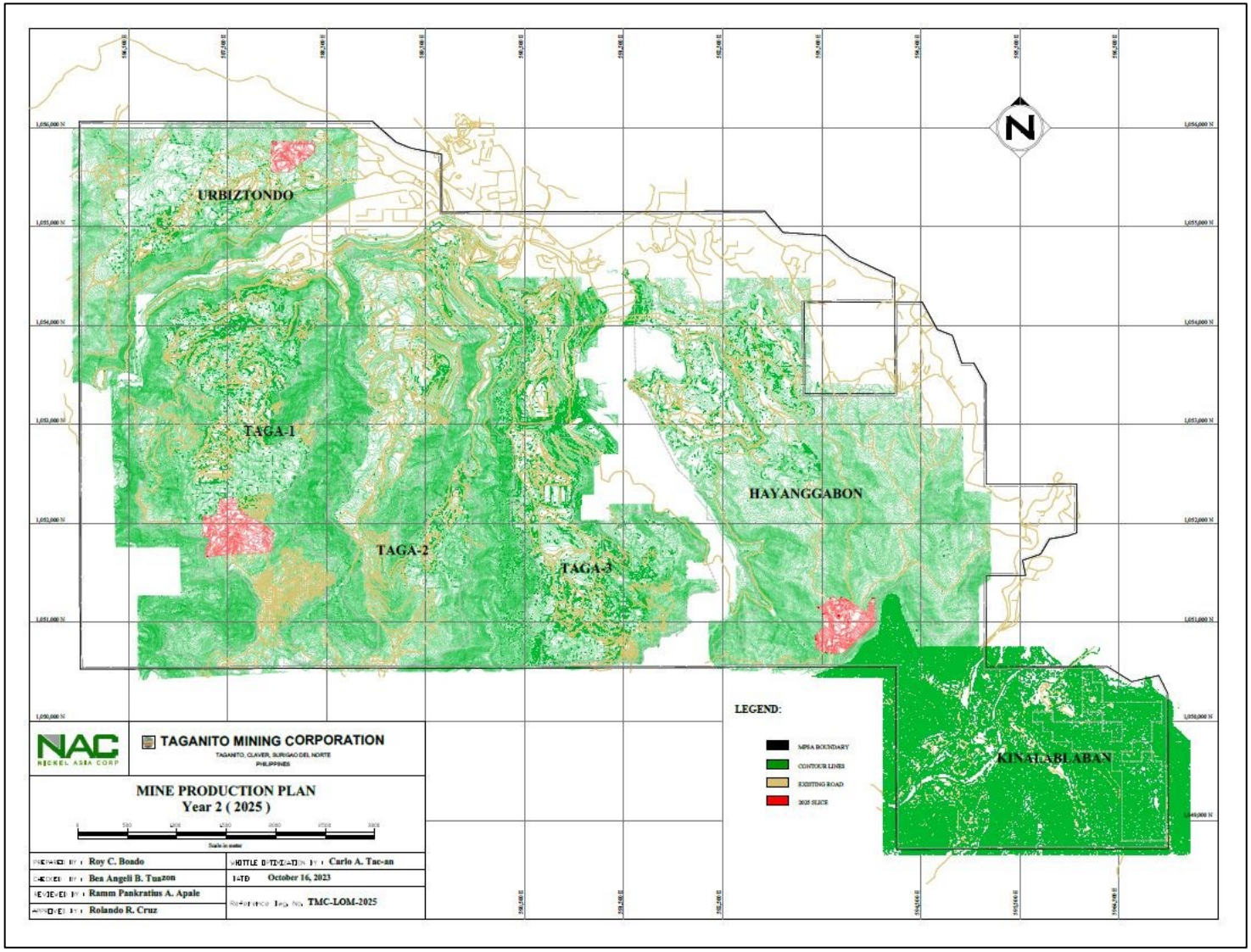
Appendix 4.1 Mine Production Plan Year 0 (2023)



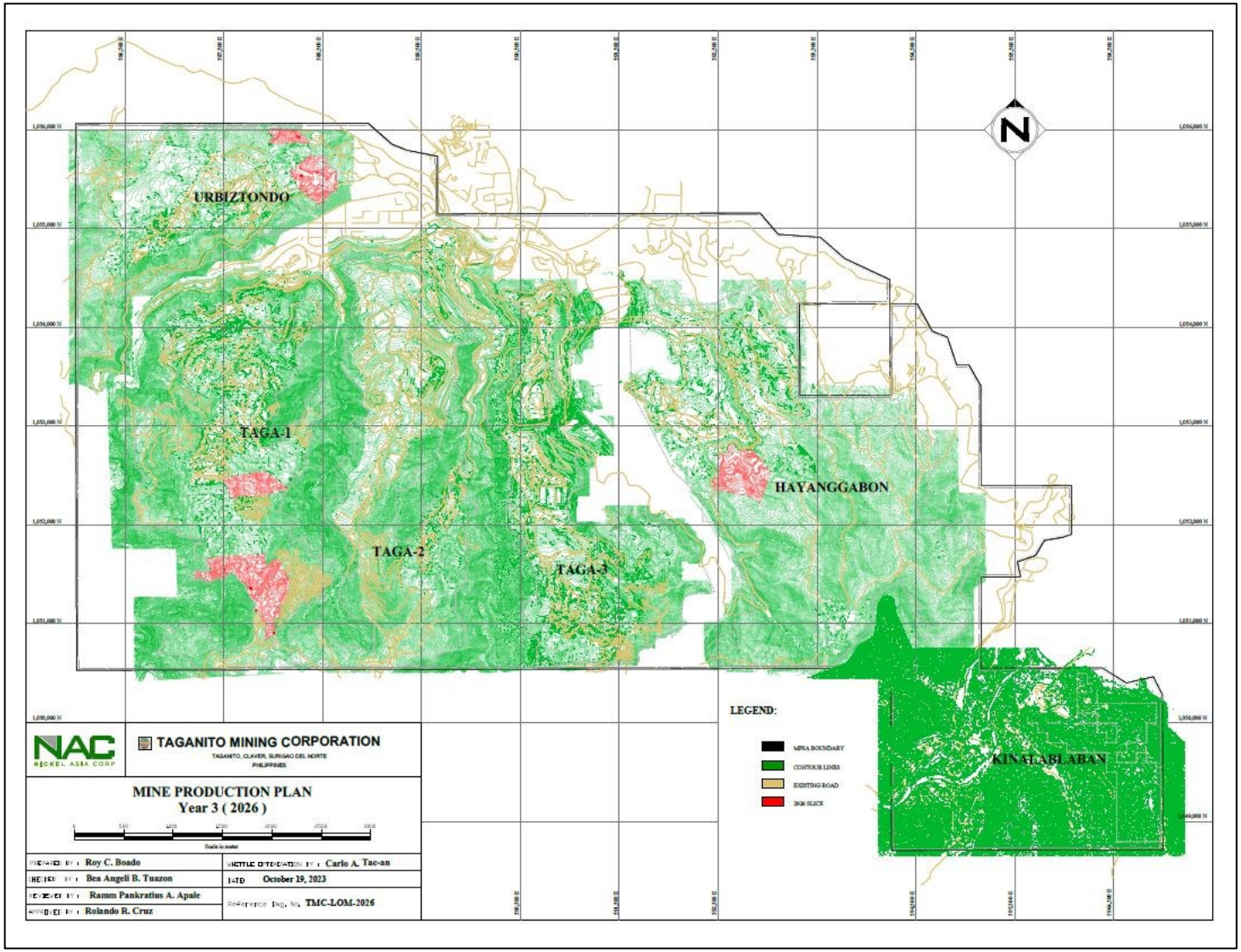
Appendix 4.2 Mine Production Plan Year 1 (2024)



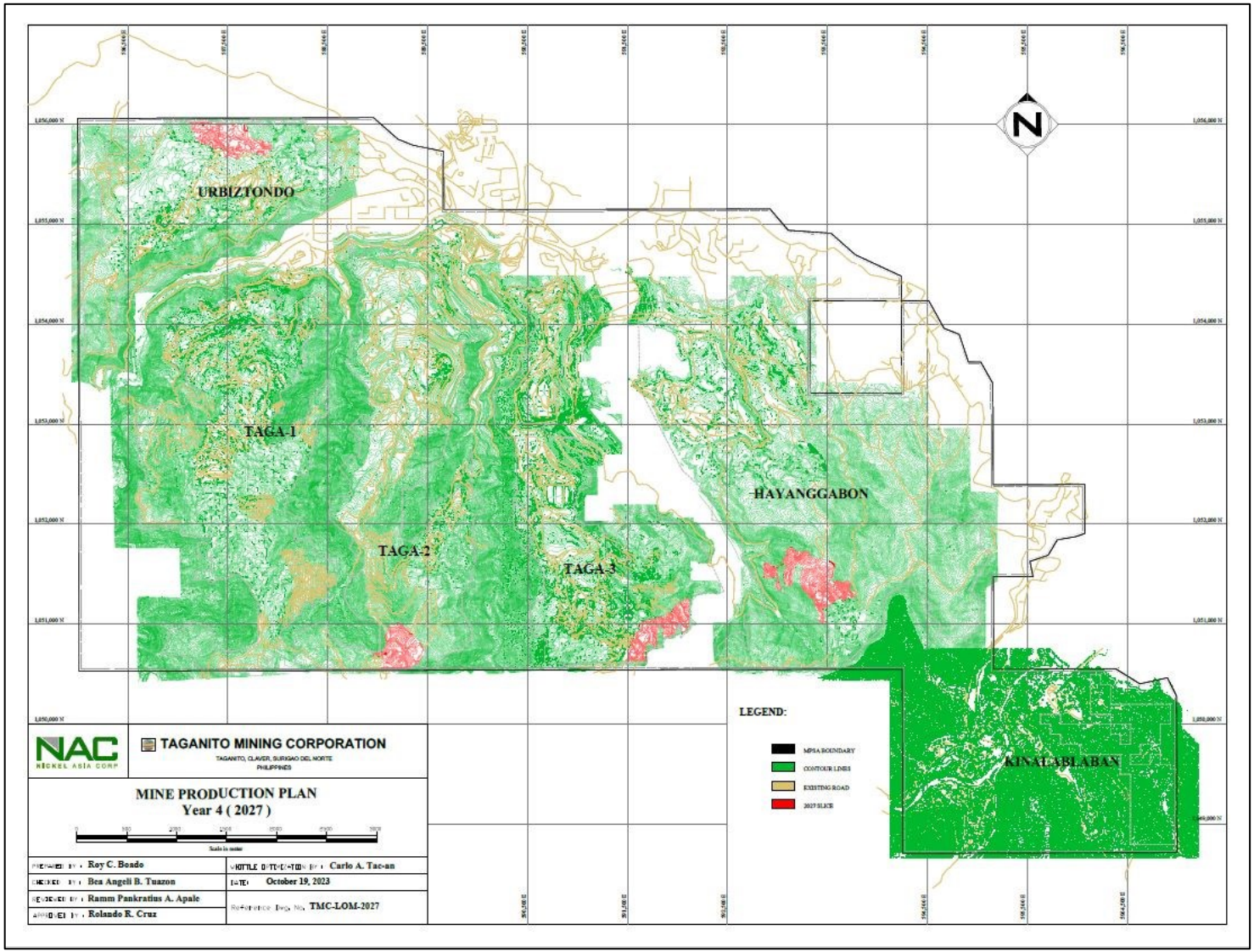
Appendix 4.3 Mine Production Plan Year 2 (2025)



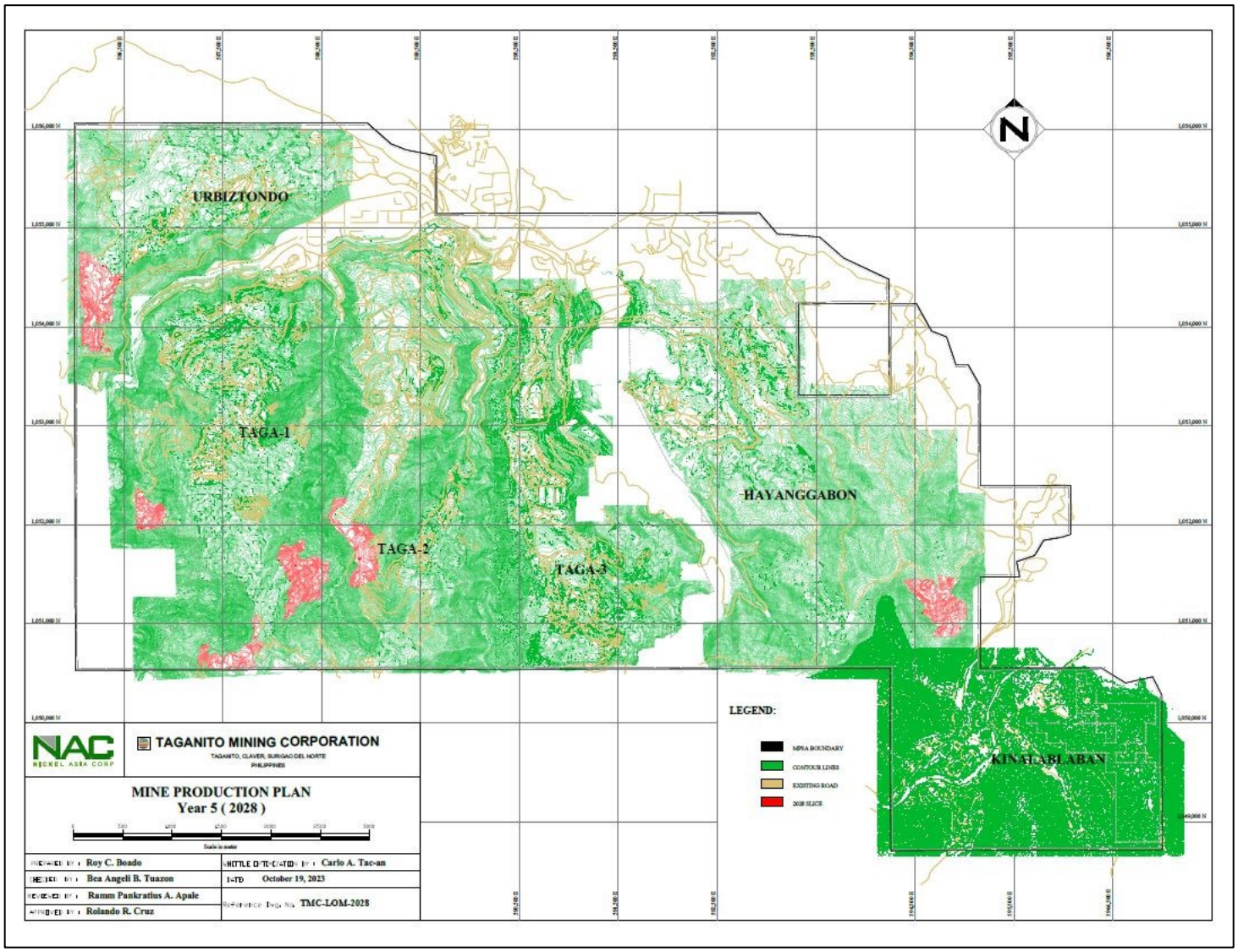
Appendix 4.4 Mine Production Plan Year 3 (2026)



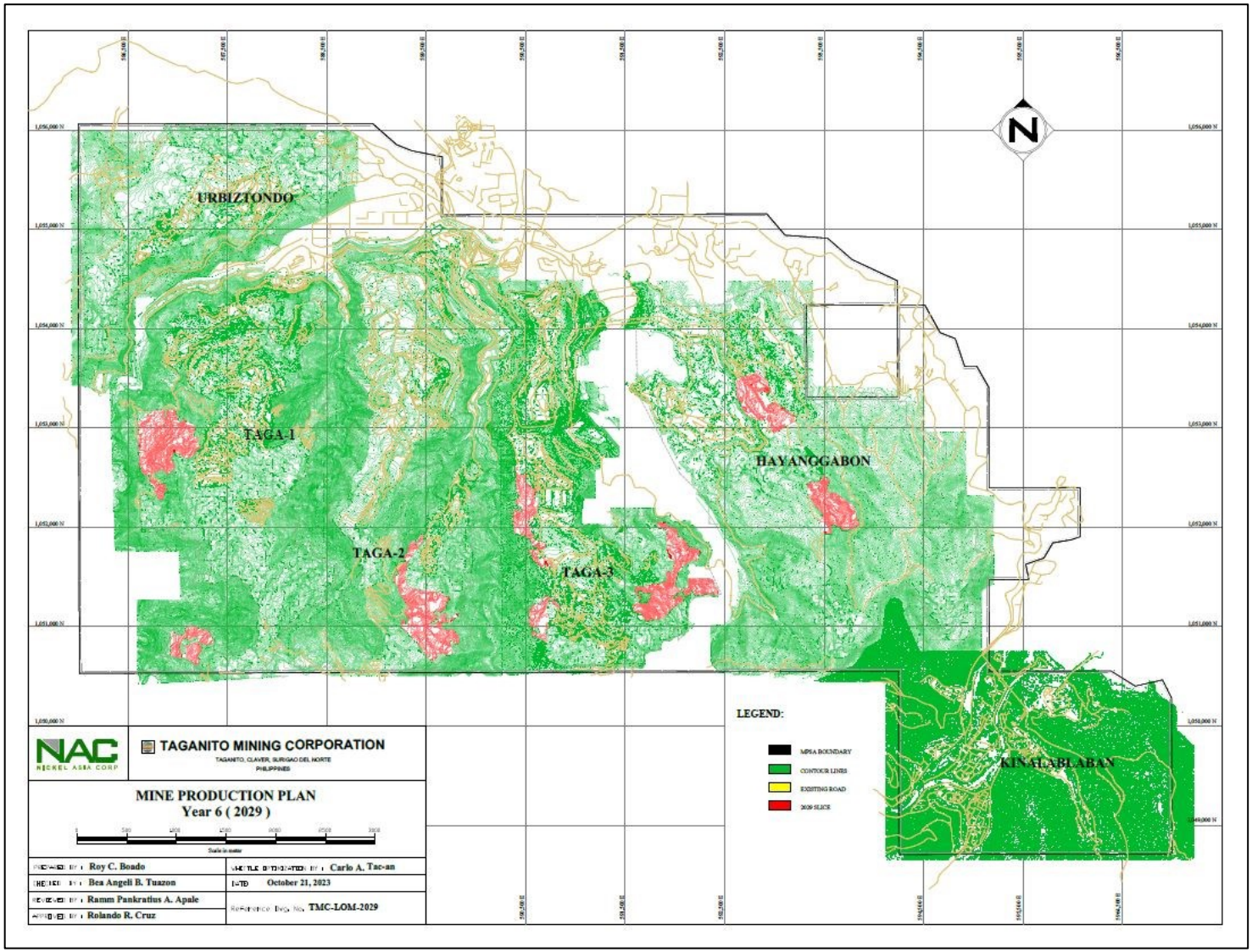
Appendix 4.5 Mine Production Plan Year 4 (2027)



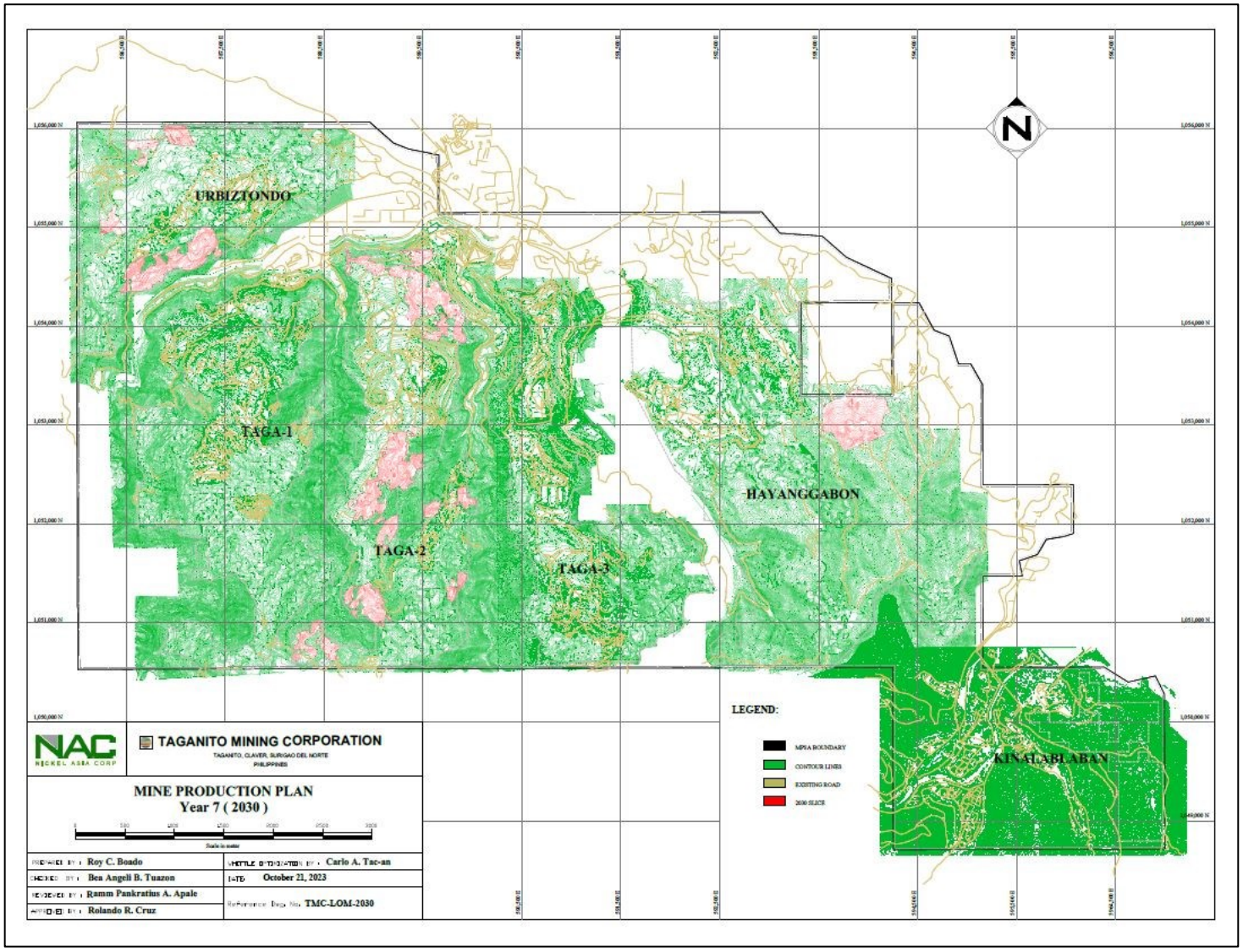
Appendix 4.6 Mine Production Plan Year 5 (2028)



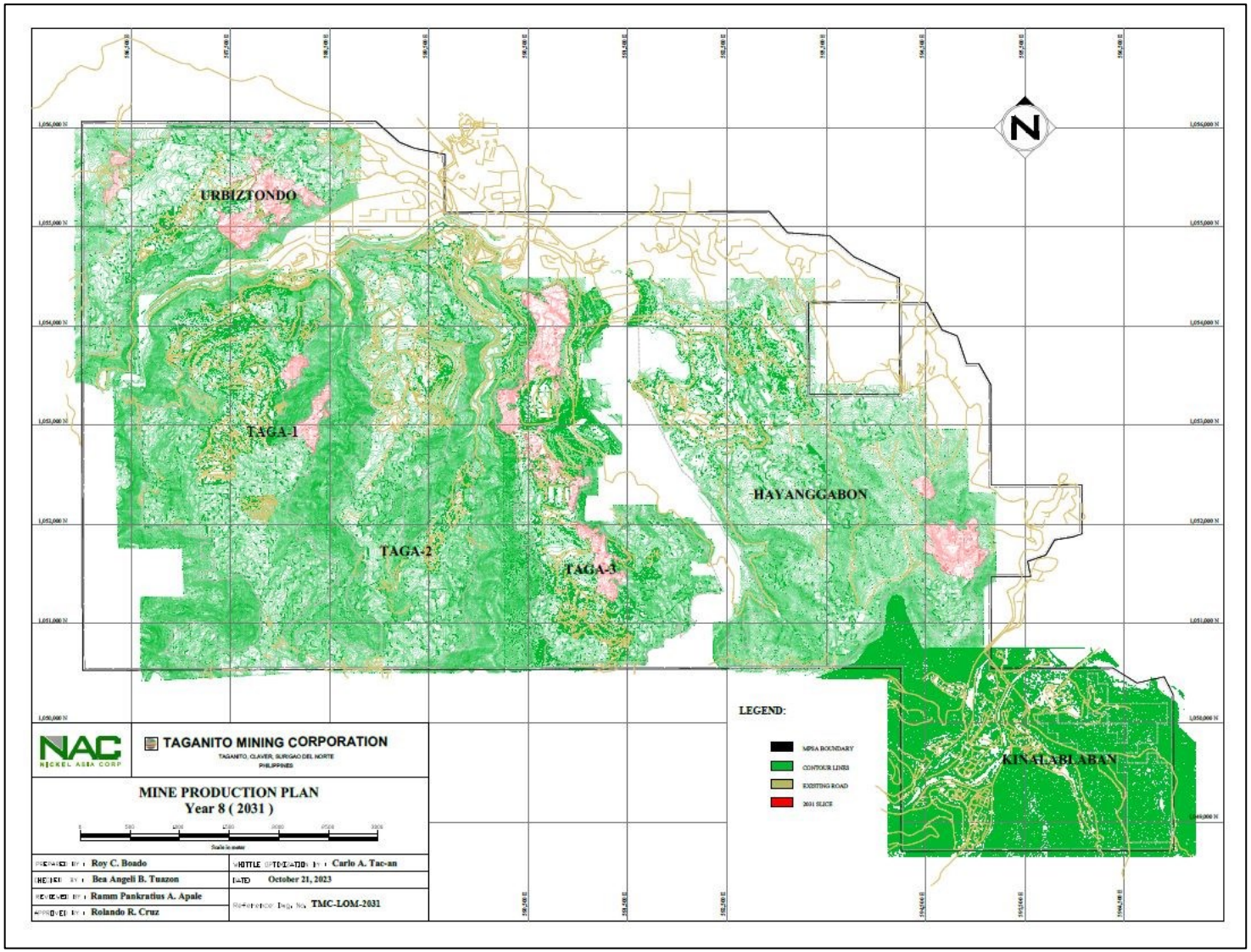
Appendix 4.7 Mine Production Plan Year 6 (2029)



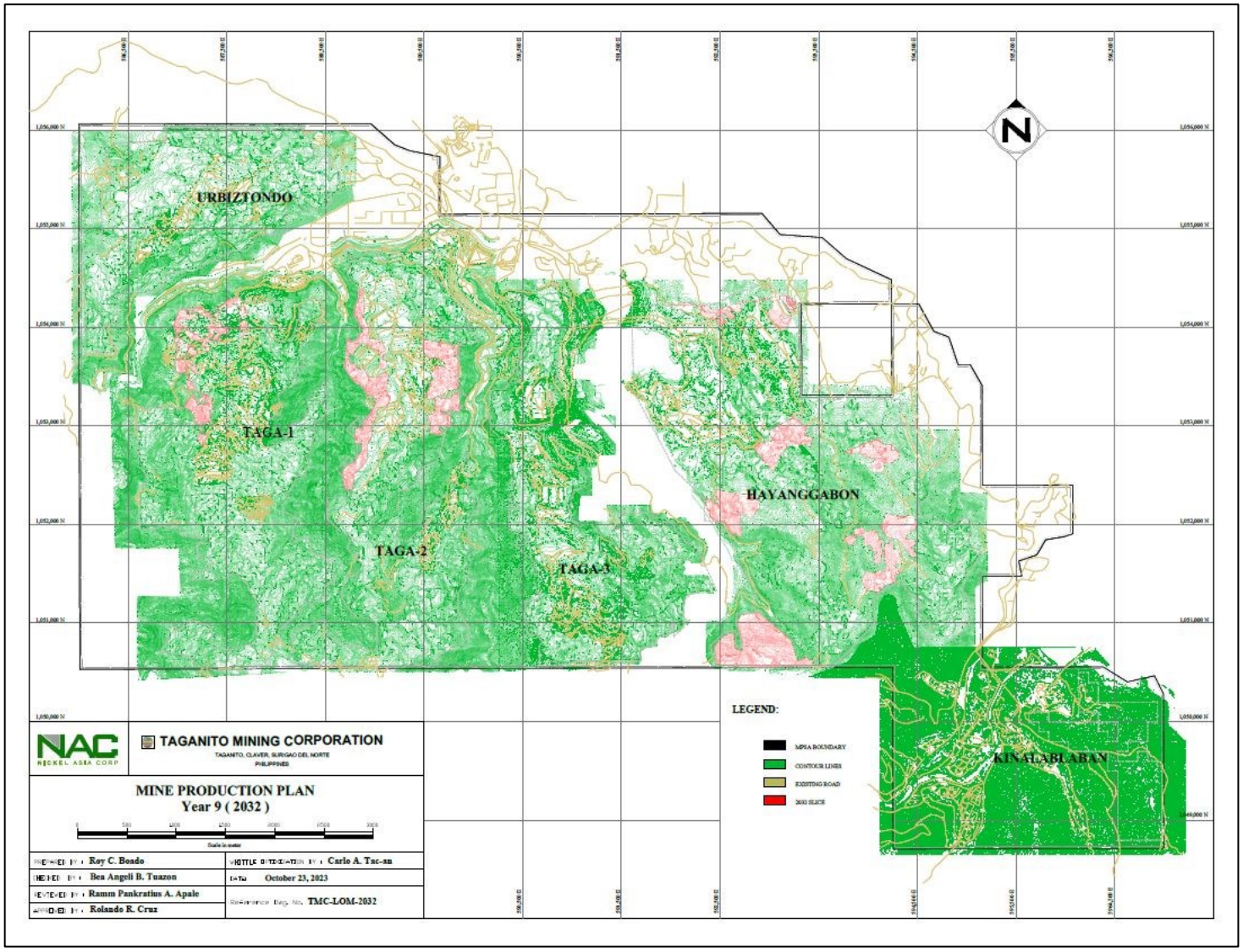
Appendix 4.8 Mine Production Plan Year 7 (2030)



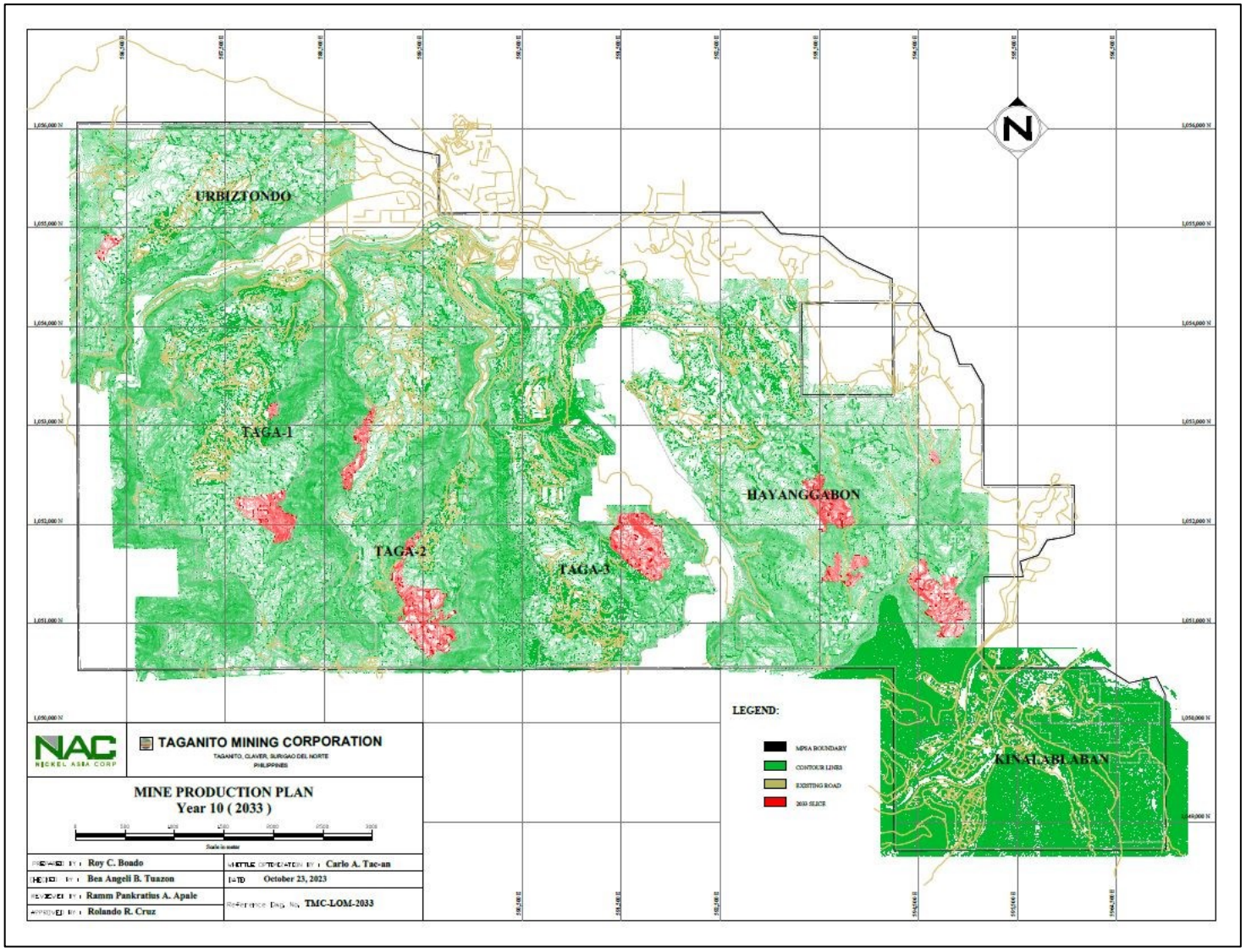
Appendix 4.9 Mine Production Plan Year 8 (2031)



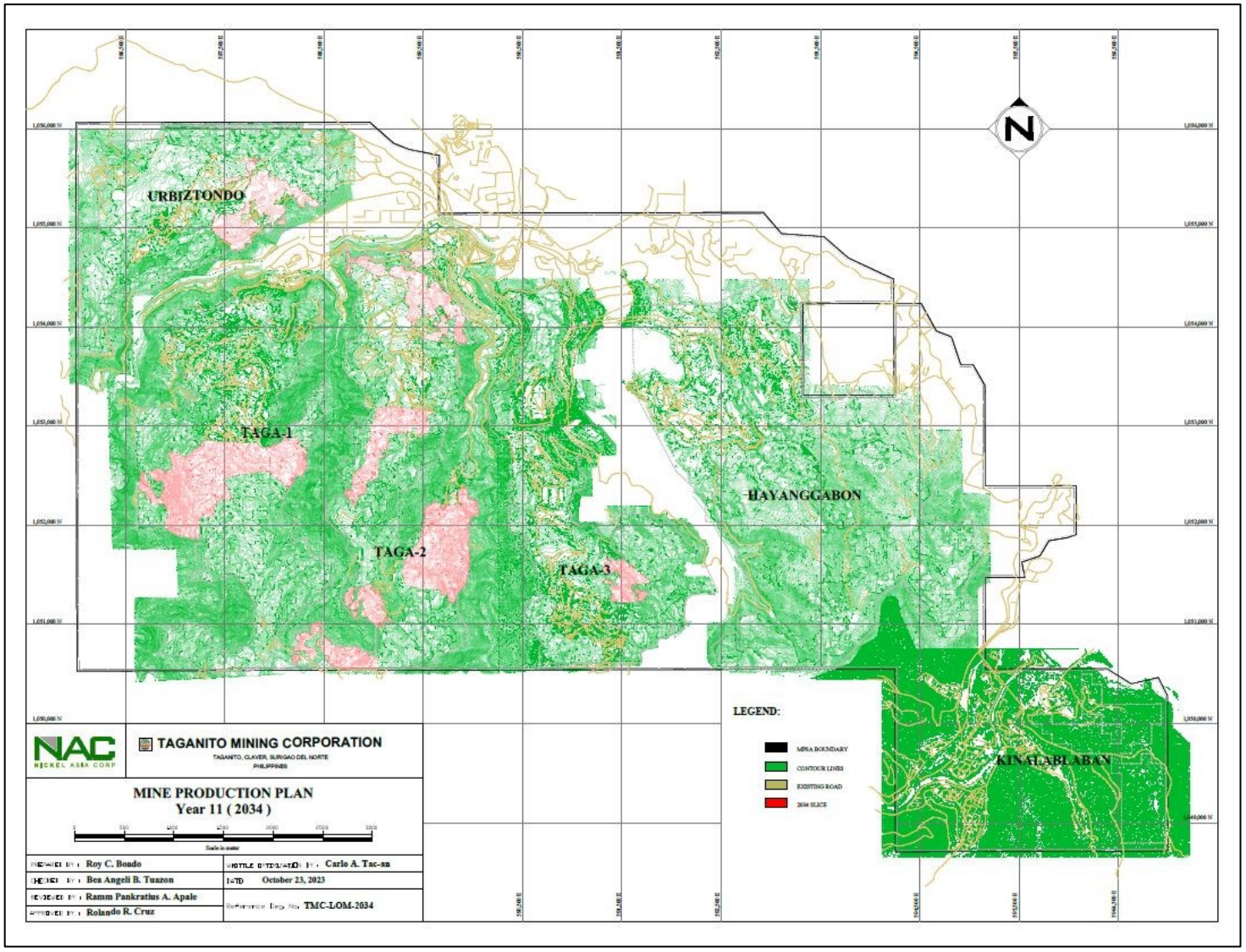
Appendix 4.10 Mine Production Plan Year 9 (2032)



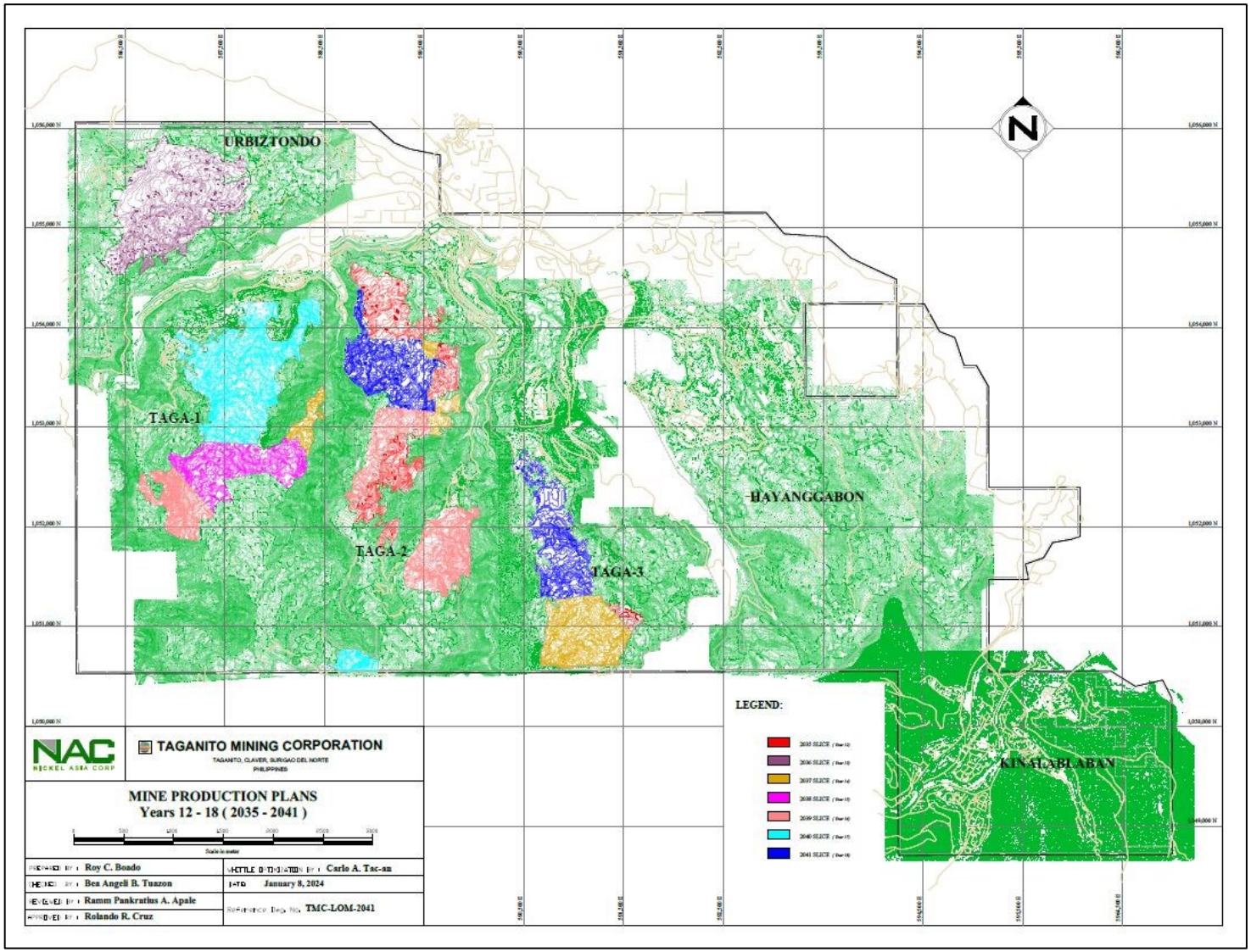
Appendix 4.11 Mine Production Plan Year 10 (2033)



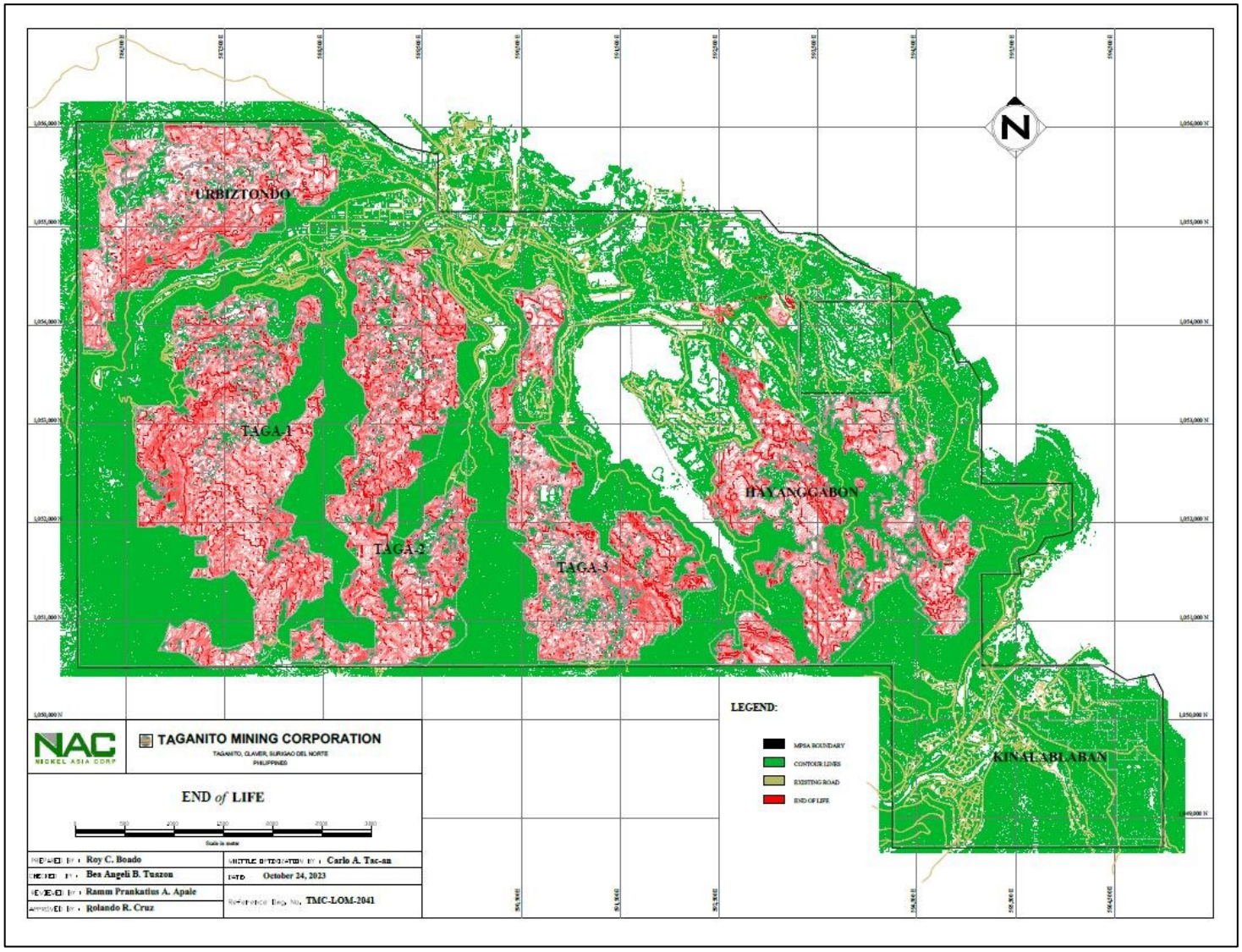
Appendix 4.12 Mine Production Plan Year 11 (2034)



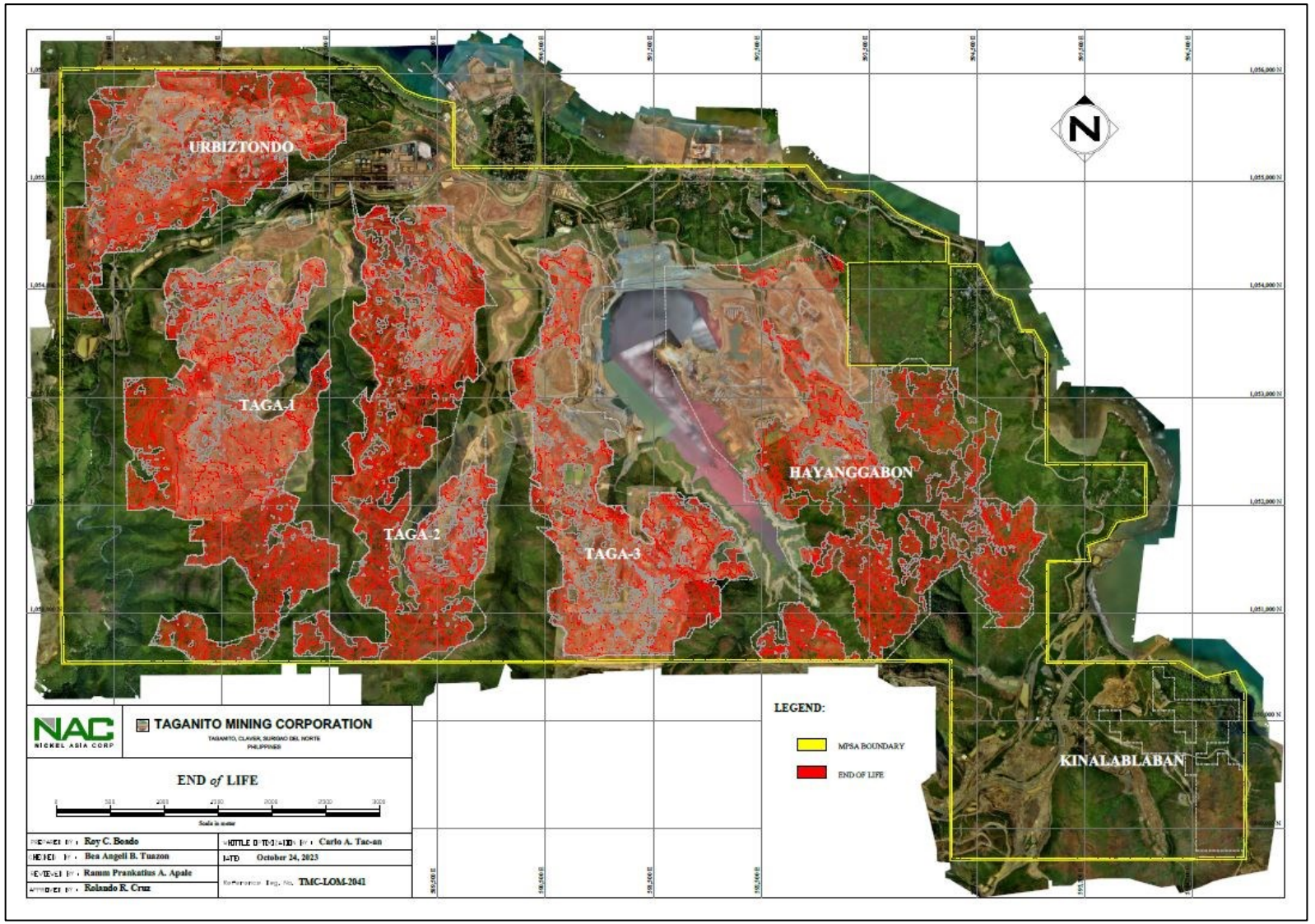
Appendix 4.13 Mine Production Plan Year 12-41 (2035-2041)



Appendix 4.14 End of Mine Life Plan



Appendix 4.15 End of Mine Life Plan (orthographic view)



Appendix 5. Location of Files used in Mineral Reserves Estimation and Economic Assessment

- Electronic files of Production Plans/Maps -https://drive.google.com/file/d/1RYozw4X-42vjgbJu_Sv5FjrXQoE-bksM/view?usp=sharing
- Surpac-generated raw report files - https://drive.google.com/drive/folders/1w6j31hPV9nt2Wr0C6zGNvP1jgBI4dA5w?usp=sharing
- Densities used:
    - Wet In-situ Density
        - Saprolite - 1.81
        - Limonite - 1.79
        - Waste - 2.00
- Volumetric Report Files File Folder:
    - PC: 32-002398-CU177
    - Surpac generated folder (yearly slice reporting): Reports: D:\Herald De La Cruz/01_Mine Planning/000_LOM/03_Reports/Yearly Slice v5
- Block model file folder: Block model:
    - D:\Herald De La Cruz/01_Mine Planning/01_Block Model
    - File name: mbm_tmc_20230727.mdl
    - User block size: 10x10x3;
- Spreadsheet for NPV analysis: https://nickelasiacorporation-my.sharepoint.com/:x:/g/personal/lyndsy_bartolome_nickelasia_com/EXUUwutmHo9BvsCCWx3aNY8BENbSWXnjCQbjkuD8_VEnXQ?e=9jCLpj

Appendix 6. NPV Analysis Spreadsheet

NICKEL ASIA CORPORATION

Taganito Mining Corporation (TMC)
NPV ANALYSIS

Date: 2/28/2024
Time:
Revision No:
Product/Service Mix:

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Total
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Material Movement																				
Production, in WMT																				
Saprolite	3,927,539	3,781,513	4,131,551	4,446,898	3,956,502	4,317,461	4,127,072	4,270,966	4,125,171	4,677,198	4,491,017	4,805,550	6,348,417	5,796,661	5,808,064	6,241,174	5,991,258	6,181,580	843,395	88,268,987
Limonite	5,718,037	5,602,902	5,572,248	5,895,320	5,936,334	6,174,493	6,270,818	6,243,968	6,191,744	5,801,278	5,614,583	0	0	0	0	0	0	0	0	65,021,725
Total Production	**9,645,576**	**9,384,415**	**9,703,799**	**10,342,218**	**9,892,836**	**10,491,954**	**10,397,890**	**10,514,934**	**10,316,915**	**10,478,476**	**10,105,600**	**4,805,550**	**6,348,417**	**5,796,661**	**5,808,064**	**6,241,174**	**5,991,258**	**6,181,580**	**843,395**	**153,290,713**
Waste	190,446	1,312,756	2,613,934	3,238,300	2,174,373	2,596,128	3,559,028	1,956,010	3,018,080	3,485,929	4,463,742	747	0	0	11,267	38,553	296,682	0	176,882	29,132,857
Total Materials Movement	**9,836,022**	**10,697,171**	**12,317,733**	**13,580,518**	**12,067,209**	**13,088,082**	**13,956,918**	**12,470,944**	**13,334,995**	**13,964,405**	**14,569,342**	**4,806,297**	**6,348,417**	**5,796,661**	**5,819,331**	**6,279,727**	**6,287,940**	**6,181,580**	**1,020,277**	**182,423,570**
Shipment																				
Nickel Ore, in WMT																				
Saprolite	3,927,539	3,781,513	4,131,551	4,446,898	3,956,502	4,317,461	4,127,072	4,270,966	4,125,171	4,677,198	4,491,017	4,805,550	6,348,417	5,796,661	5,808,064	6,241,174	5,991,258	6,181,580	843,395	88,268,987
Limonite	4,745,971	4,650,409	4,624,966	4,893,116	4,927,157	5,124,829	5,204,779	5,182,493	5,139,148	4,815,061	4,660,104	0	0	0	0	0	0	0	0	53,968,032
Total Ore Shipment	**8,673,510**	**8,431,922**	**8,756,517**	**9,340,014**	**8,883,659**	**9,442,290**	**9,331,851**	**9,453,459**	**9,264,319**	**9,492,259**	**9,151,121**	**4,805,550**	**6,348,417**	**5,796,661**	**5,808,064**	**6,241,174**	**5,991,258**	**6,181,580**	**843,395**	**142,237,019**
Processed Ore, in MT																				
Ni-Co	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Processed Ore Shipment	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Projected Revenue																				
Saprolite	7,360,836,492	7,087,160,404	7,743,187,622	8,334,198,356	7,415,117,788	8,091,612,708	7,734,793,260	8,004,473,639	7,731,230,481	8,765,817,404	8,416,884,421	9,006,369,588	11,897,949,205	10,863,870,180	10,885,241,226	11,696,958,664	11,228,576,093	11,585,269,973	1,580,657,773	165,430,205,276
Limonite	3,571,140,742	3,381,068,600	3,362,967,799	3,579,727,900	3,646,735,361	3,675,261,582	3,754,365,457	3,574,435,695	3,740,912,427	3,418,705,234	3,368,207,201	0	0	0	0	0	0	0	0	39,073,547,999
Ni-Co	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Projected Revenue	**10,931,977,235**	**10,468,229,004**	**11,106,175,421**	**11,913,926,256**	**11,061,853,149**	**11,766,874,290**	**11,489,158,716**	**11,578,909,333**	**11,472,142,908**	**12,184,522,638**	**11,785,091,622**	**9,006,369,588**	**11,897,949,205**	**10,863,870,180**	**10,885,241,226**	**11,696,958,664**	**11,228,576,093**	**11,585,269,973**	**1,580,657,773**	**204,503,753,274**
Projected Cost																				
Production																				
Ore Mining	1,293,504,744	1,256,068,103	1,312,280,646	1,401,264,340	1,322,300,536	1,409,761,887	1,387,896,032	1,409,446,074	1,378,927,061	1,430,171,243	1,378,077,742	817,734,445	1,080,275,776	986,386,442	988,326,829	1,062,026,815	1,019,499,961	1,051,886,026	143,516,019	22,129,350,721
Production Overhead	765,159,058	741,645,054	782,484,527	837,032,386	779,719,329	835,491,785	817,311,702	833,378,604	813,077,850	860,161,502	828,161,344	581,978,563	768,828,252	702,007,562	703,388,528	755,840,534	725,574,330	748,623,372	102,139,817	13,982,004,100
Admin	599,849,672	581,415,769	613,432,046	656,195,071	611,264,257	654,987,309	640,734,957	653,330,672	637,415,811	674,327,239	649,240,580	456,244,550	602,726,152	550,341,790	551,424,404	592,544,375	568,817,057	586,886,451	80,072,940	10,961,251,104
Rehandling	410,369,069	400,450,032	407,430,415	432,928,031	423,042,854	445,017,716	445,583,980	447,673,006	441,205,651	433,474,162	418,642,651	118,882,769	157,051,199	143,401,506	143,683,601	154,398,153	148,215,572	152,923,879	20,864,453	5,745,238,100
Regulatory	315,220,197	305,533,206	322,357,716	344,829,628	321,218,546	344,194,951	336,705,359	343,324,391	334,961,152	354,358,058	341,175,052	239,755,898	316,731,783	289,203,871	289,772,784	311,381,273	298,912,599	308,408,042	42,078,223	5,760,122,728
EPEP	*220,338,917*	*213,567,711*	*225,328,044*	*241,035,910*	*224,531,764*	*240,592,271*	*235,357,046*	*239,983,749*	*234,137,845*	*247,696,282*	*238,481,362*	*167,589,373*	*221,395,516*	*202,153,506*	*202,551,176*	*217,655,510*	*208,939,907*	*215,577,221*	*29,412,678*	*4,026,325,787*
SDMP	*94,881,279*	*91,965,495*	*97,029,673*	*103,793,718*	*96,686,782*	*103,602,680*	*101,348,313*	*103,340,642*	*100,823,307*	*106,661,775*	*102,693,691*	*72,166,525*	*95,336,267*	*87,050,365*	*87,221,608*	*93,725,763*	*89,972,692*	*92,830,821*	*12,665,545*	*1,733,796,941*
FMRDP	31,646,857	31,270,109	31,270,109	31,270,109	31,270,109	31,270,109	31,270,109	31,270,109	31,270,109	31,270,109	0	0	0	0	0	0	0	0	0	313,077,837
Waste Moving Cost	22,324,682	153,885,409	306,413,609	379,603,765	254,886,878	304,326,333	417,200,516	229,289,677	353,788,881	408,631,620	523,253,951	87,566	0	0	1,320,753	4,519,305	34,778,002	0	20,734,667	3,415,045,613
Cost of Oversize of HPAL Deliveries	113,948,684	111,654,281	111,043,410	117,481,569	118,298,893	123,044,911	124,964,469	124,429,404	123,388,688	115,607,506	111,887,068	0	0	0	0	0	0	0	0	1,295,748,883
Depreciation / Amortization	361,399,086	568,239,045	610,068,834	698,170,258	707,010,895	704,617,892	696,919,529	696,919,529	696,919,529	697,519,529	696,516,759	695,116,759	695,116,759	695,716,759	695,116,759	695,116,759	340,691,279	183,277,635	133,403,795	11,267,857,391
Total Production Cost	**3,913,422,049**	**4,150,161,008**	**4,496,781,312**	**4,898,775,156**	**4,569,012,298**	**4,852,712,893**	**4,898,586,654**	**4,769,061,465**	**4,810,954,731**	**5,005,520,968**	**4,946,954,548**	**2,909,800,550**	**3,620,729,920**	**3,367,857,932**	**3,373,033,659**	**3,575,827,214**	**3,136,488,801**	**3,032,005,405**	**542,809,914**	**74,869,696,476**
Processing																				
Processing Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Depreciation / Amortization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Processing Cost	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Marketing Expenses																				
Shiploading and Bargeloading	524,972,635	506,805,215	546,103,340	586,368,227	531,285,588	575,549,506	555,279,067	571,236,259	553,967,164	611,199,501	587,483,201	545,344,223	728,432,113	657,817,647	659,111,684	708,261,945	679,900,936	701,499,088	95,710,328	10,918,327,665
Depreciation / Amortization	1,566,919	3,476,021	4,593,530	4,904,379	4,939,947	7,964,094	7,584,094	7,584,094	7,584,094	7,584,094	7,584,094	7,584,094	7,584,094	7,584,094	7,584,094	7,584,094	6,020,873	4,638,073	3,059,716	117,004,494
Total Marketing Expenses	**526,539,554**	**510,281,236**	**550,696,871**	**591,272,606**	**536,225,535**	**583,513,601**	**562,863,161**	**578,820,353**	**561,551,259**	**618,783,595**	**595,067,295**	**552,928,317**	**728,016,207**	**665,401,741**	**666,695,778**	**715,846,039**	**685,921,809**	**706,137,162**	**98,770,043**	**11,035,332,159**
Other Taxes, Licenses, and Royalties																				
Excise Tax	437,279,089	418,729,160	444,247,017	476,557,050	442,474,126	476,674,972	459,566,349	463,156,373	458,885,716	487,380,906	471,403,665	360,254,784	475,917,968	434,554,807	435,409,649	467,878,347	449,143,044	463,410,799	63,226,311	8,180,150,131
Royalty Tax (IP)	109,319,772	104,682,290	111,061,754	119,139,263	110,618,531	117,668,743	114,891,587	115,789,093	114,721,429	121,845,226	117,850,916	90,063,696	118,979,492	108,638,702	108,852,412	116,969,587	112,285,761	115,852,700	15,806,578	2,045,037,533
Royalty Tax (Govt)	546,598,862	523,411,450	555,308,771	595,696,313	553,092,657	588,343,714	574,457,936	578,945,467	573,607,145	609,226,132	589,254,581	450,318,479	594,897,460	543,193,509	544,262,061	584,847,933	561,428,805	579,263,499	79,032,889	10,225,187,664
Total Other Taxes, Licenses, and Royalties	**1,093,197,723**	**1,046,822,900**	**1,110,617,542**	**1,191,392,626**	**1,106,185,315**	**1,176,687,429**	**1,148,915,872**	**1,157,890,933**	**1,147,214,291**	**1,218,452,264**	**1,178,509,162**	**900,636,959**	**1,189,794,920**	**1,086,387,018**	**1,088,524,123**	**1,169,695,866**	**1,122,857,609**	**1,158,526,997**	**158,065,777**	**20,450,375,327**
Other Expenses																				
Management Fee	546,598,862	523,411,450	555,308,771	595,696,313	553,092,657	588,343,714	574,457,936	578,945,467	573,607,145	609,226,132	589,254,581	450,318,479	594,897,460	543,193,509	544,262,061	584,847,933	561,428,805	579,263,499	79,032,889	10,225,187,664
Marketing Fee	27,329,943	26,170,573	27,765,439	29,784,816	27,654,633	29,417,186	28,722,897	28,947,273	28,680,357	30,461,307	29,462,729	22,515,924	29,744,873	27,159,675	27,213,103	29,242,397	28,071,440	28,963,175	3,951,644	511,259,383
Total Other Expenses	**573,928,805**	**549,582,023**	**583,074,210**	**625,481,128**	**580,747,290**	**617,760,900**	**603,180,833**	**607,892,740**	**602,287,503**	**639,687,439**	**618,717,310**	**472,834,403**	**624,642,333**	**570,353,184**	**571,475,164**	**614,090,330**	**589,500,245**	**608,226,674**	82,984,533	**10,736,447,047**
Head Office General and Admin																				
General and Admin Expenses (1.31%)	143,208,902	137,133,800	145,490,898	156,072,434	144,910,276	154,146,053	150,507,979	151,683,712	150,285,072	159,617,247	154,384,700	117,983,442	155,863,135	142,316,699	142,596,660	153,230,158	147,094,347	151,767,037	18,019,499	2,676,312,050
Total Head Office General and Admin	**143,208,902**	**137,133,800**	**145,490,898**	**156,072,434**	**144,910,276**	**154,146,053**	**150,507,979**	**151,683,712**	**150,285,072**	**159,617,247**	**154,384,700**	**117,983,442**	**155,863,135**	**142,316,699**	**142,596,660**	**153,230,158**	**147,094,347**	**151,767,037**	18,019,499	**2,676,312,050**
Depreciation from PPE Balance from Previous Years																				
Depreciation / Amortization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Depreciation from PPE Balance from Previous Years	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	**0**
Total Cost	**6,250,297,033**	**6,393,980,967**	**6,886,660,832**	**7,462,993,950**	**6,937,080,715**	**7,384,820,876**	**7,364,054,498**	**7,265,349,203**	**7,272,292,856**	**7,642,061,511**	**7,493,633,015**	**4,954,183,672**	**6,319,046,515**	**5,831,516,574**	**5,842,325,384**	**6,228,689,608**	**5,681,862,811**	**5,656,663,274**	**900,649,766**	**119,768,163,059**

EBITDA	5,044,646,207	4,645,963,104	4,834,176,953	5,154,006,943	4,836,723,277	5,094,635,401	4,829,607,841	5,018,063,753	4,904,353,676	5,247,564,750	4,995,559,460	4,754,886,770	6,281,603,543	5,735,654,459	5,745,616,696	6,170,969,909	5,893,425,435	6,116,522,407	816,471,518	**96,120,452,100**
EBITDA Margin (%)	*46%*	*44%*	*44%*	*43%*	*44%*	*43%*	*42%*	*43%*	*43%*	*43%*	*42%*	*53%*	*53%*	*53%*	*53%*	*53%*	*52%*	*53%*	*52%*	*47%*
Net Income before interest and taxes (EBIT)	4,681,680,202	4,074,248,037	4,219,514,589	4,450,932,306	4,124,772,434	4,382,053,414	4,125,104,218	4,313,560,130	4,199,850,053	4,542,461,127	4,291,458,607	4,052,185,916	5,578,902,689	5,032,353,606	5,042,915,842	5,468,269,056	5,546,713,282	5,928,606,699	680,008,007	84,735,590,215
Interest expense on finance loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Income before taxes	4,681,680,202	4,074,248,037	4,219,514,589	4,450,932,306	4,124,772,434	4,382,053,414	4,125,104,218	4,313,560,130	4,199,850,053	4,542,461,127	4,291,458,607	4,052,185,916	5,578,902,689	5,032,353,606	5,042,915,842	5,468,269,056	5,546,713,282	5,928,606,699	680,008,007	84,735,590,215
Regular Corporate Income Tax	1,170,420,050	1,018,562,009	1,054,878,647	1,112,733,077	1,031,193,109	1,095,513,354	1,031,276,055	1,078,390,033	1,049,962,513	1,135,615,282	1,072,864,652	1,013,046,479	1,394,725,672	1,258,088,401	1,260,728,961	1,367,067,264	1,386,678,321	1,482,151,675	170,002,002	21,183,897,554
Minimum Corporate Income Tax	218,639,545	209,364,580	222,123,508	238,278,525	221,237,063	235,337,486	229,783,174	231,578,187	229,442,858	243,690,453	235,701,832	180,127,392	237,958,984	217,277,404	217,704,825	233,939,173	224,571,522	231,705,399	31,613,155	4,090,075,065
Net income After Tax	**3,511,260,151**	**3,055,686,028**	**3,164,635,942**	**3,338,199,230**	**3,093,579,326**	**3,286,540,061**	**3,093,828,164**	**3,235,170,098**	**3,149,887,540**	**3,406,845,845**	**3,218,593,955**	**3,039,139,437**	**4,184,177,017**	**3,774,265,204**	**3,782,186,882**	**4,101,201,792**	**4,160,034,962**	**4,446,455,024**	**510,006,005**	**63,551,692,661**
CASH FLOW STATEMENT:																				
Add back: Non-cash charges																				
Depreciation/Amortization/Depletion	362,966,006	571,715,066	614,662,364	703,074,636	711,950,842	712,581,987	704,503,623	704,503,623	704,503,623	705,103,623	704,100,853	702,700,853	702,700,853	703,300,853	702,700,853	702,700,853	346,712,152	187,915,708	136,463,511	11,384,861,885
Salvage Value																			35,757,489	35,757,489
Total	**362,966,006**	**571,715,066**	**614,662,364**	**703,074,636**	**711,950,842**	**712,581,987**	**704,503,623**	**704,503,623**	**704,503,623**	**705,103,623**	**704,100,853**	**702,700,853**	**702,700,853**	**703,300,853**	**702,700,853**	**702,700,853**	**346,712,152**	**187,915,708**	**172,221,000**	**11,420,619,374**
Interest Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital Expenditures																				
Total Capex	-1,542,328,181	-729,166,667	-348,209,328	-524,916,506	-1,217,111,094	-629,782,022	-397,836,096	-532,257,406	-1,222,407,517	-494,013,846	-500,143,654	-582,911,812	-1,114,333,126	-597,173,863	-401,700,117	-586,328,139	0	0	0	-11,420,619,374
Projected Net Cash Inflow (Outflow) before financing	**2,331,897,976**	**2,898,234,427**	**3,431,088,978**	**3,516,357,360**	**2,588,419,074**	**3,369,340,026**	**3,400,495,691**	**3,407,416,315**	**2,631,983,646**	**3,617,935,622**	**3,422,551,154**	**3,158,928,478**	**3,772,544,745**	**3,880,392,195**	**4,083,187,618**	**4,217,574,506**	**4,506,747,114**	**4,634,370,732**	**682,227,005**	**63,551,692,661**
IRR % (before financing)																				
Cash flow from financing																				
Proceeds from loan	0																			0
Interest and Principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Projected Net Cash Inflow (Outflow) after financing	**2,331,897,976**	**2,898,234,427**	**3,431,088,978**	**3,516,357,360**	**2,588,419,074**	**3,369,340,026**	**3,400,495,691**	**3,407,416,315**	**2,631,983,646**	**3,617,935,622**	**3,422,551,154**	**3,158,928,478**	**3,772,544,745**	**3,880,392,195**	**4,083,187,618**	**4,217,574,506**	**4,506,747,114**	**4,634,370,732**	**682,227,005**	**63,551,692,661**

Net Present Value	**%**	**in PHP**
	6%	38,665,608,604
	8%	33,630,571,347
	10%	29,592,472,384
	12%	26,318,943,190
	15%	22,477,161,292
Net Present Value	**%**	**in US$**
	6%	678,344,011
	8%	590,010,024
	10%	519,166,182
	12%	461,735,845
	15%	394,336,163