

June 26, 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 PMRC 2020 Technical Report on the Exploration Results and Mineral Resource Estimation of Dinapigue Mining Corporation's Dinapigue Nickel Laterite Deposit under MPSA No. No.258-2007-II, Dinapigue, Province of Isabela, Philippines

Dear Atty. Baniqued-Garcia,

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 updated Exploration Results and Mineral Resource estimate of the Company following the stipulated outline of the TR-FORM 01 of Annex 1 of the draft IRR entitled "Outline of Technical Report for Exploration Results and/or Mineral Resource Estimation".

Respectfully yours,

# **DINAPIGUE MINING CORPORATION**

By:

/**Martin Antonio G. Zamora** President



## **Accredited Competent Person's Consent Form**

Pursuant to the requirements under the prevailing PSE Consolidated Listing and Disclosure Rules and Clause 10 of the PMRC 2020 Edition ("Consent Statement")

Report Name to be Publicly Released:

PMRC 2020 Technical Report on the Exploration Results and Mineral Resource Estimation of Dinapigue Mining Corporation's Dinapigue Nickel Laterite Deposit under MPSA No. No.258-2007-II, Dinapigue, Province of Isabela, Philippines

Name of the Company releasing the Report: **Dinapigue Mining Corporation** 

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

Data Cut-off Date: December 31, 2022

Report Date: June 26, 2024

## **Consent Statement**

I, <u>Kristine Grace C. Victoria</u> confirm that I am the Accredited Competent Person for the Report, and that:

- I am a Professional Regulation Commission (PRC)-registered Geologist, residing at
- 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)-Geologist as defined by the PMRC 2020 Edition, having a minimum of five (5) years relevant experience in the style of mineralization and type of mineral deposit described in the Report (i.e., nickel laterite deposit type) and the associated Mineral Resource estimation for which I am accepting responsibility.
- I am a Member of good standing of the Geological Society of the Philippines.

- I am a full-time employee of Nickel Asia Corporation, which fully owns Dinapigue Mining Corporation since June 15, 2010.
- I have held the position of Assistant Vice President Geology since March 10,2022 up to present. I do not own any shares, options and /or warrants in the said companies as certified by the Corporate Secretaries of NAC and DMC. Furthermore, 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 or 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 DMC 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 of the Report which I have prepared or prepared under my supervision.
- I have reviewed the Report to which this Consent Statement applies.
- I have disclosed to the reporting Company the full nature of the relationship between myself and the Company, including any issues that could be perceived by investors as a conflict of interest.
- I verify that the Report is based on, and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Exploration Results and Mineral Resources; and to the best of my knowledge, all technical information that are required to make the 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 Professional Regulation Commission (PRC) professional identification card (PIC), Accredited Competent Person identification card, Professional Tax Receipt, and the NAC and DMC Secretary's Certificates.

Consent

I consent to the release and public disclosure of the Report and this Consent Statement by the Board of Directors of Dinapigue Mining Corporation for the purpose of complying with the PMRC 2020 Edition and its draft Implementing Rules and Regulations. The use of the contents or parts of the contents of this Report for other purposes not stated herein would require my prior authorization and written consent.

Gomputan	June 26,2024
KRISTINE GRACE C. VICTORIA	Date
Accredited Competent Person	
Licensed Geologist	PRC Registration No. Valid Until <u>July 9,2026</u>
<u>Geological Society of the Philippines</u> Professional Representative Organization	ACP ID No Valid Until <u>July 9, 2026</u>
of the ACP	Professional Tax Receipt No. Issued at on <i>January 30,2024</i>

## ACKNOWLEDGEMENT

# REPUBLIC OF THE PHILIPPINES ) CITY OF TAGUIG ) SS.

**BEFORE ME**, this <u>26<sup>th</sup></u> day of <u>June</u> 2024, personally appeared before me MS. KEISTINE GRACE C. VICTORIA with PRC Professional Identification Card with Registration No. **Construction** valid until July 9, 2026, known to me to be the same person who executed this instrument which she acknowledged before me as 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. 200 Page No. 71 Book No. 2 Series of 200

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 PTP No A-6161135/16 January 1024/Taguig City MCLE Compliance No. VII-0010815, Until 14 April 2025 28th Floor NAC Tower, 32nd Street, BGC, Taguig City



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# PMRC 2020 TECHNICAL REPORT ON THE EXPLORATION RESULTS AND MINERAL RESOURCE ESTIMATION OF DINAPIGUE MINING CORPORATION'S DINAPIGUE NICKEL LATERITE DEPOSIT UNDER MPSA NO. NO.258-2007-II, DINAPIGUE, PROVINCE OF ISABELA, PHILIPPINES

Kristine Grace C. Victoria Accredited Competent Person - Geologist GSP ACP No. PRC Geologist Registration No

Data Cut-off Date: December 31, 2022 Report Date: June 26,2024

## **EXECUTIVE SUMMARY**

This PMRC 2020 Technical Report (the "Report") on Exploration Results and Mineral Resource Estimation of the Dinapigue Nickel Laterite Deposit (DNLD) was prepared by the author, Kristine Grace C. Victoria, an Accredited Competent Person-Geologist ("ACP-Geologist"), on behalf of the Dinapigue Mining Corporation (DMC). The Report aims to provide an update on Dinapigue Mining Corporation's (DMC or "Project") Exploration Results and Mineral Resource Estimate as of the Data Cut-off Date, December 31, 2022. Additionally, this report fulfills compliance obligations with the requirements of the Philippine Stock Exchange under PMRC 2020, in anticipation of the approval of its Implementing Rules and Regulations (IRR).

The DMC is under MPSA No. 258-2007-II granted to Platinum Group of Metals Corporation (PGMC) on July 30, 2007, with a total area of 2,391.804 hectares (has) and is valid for 25 years and renewable for another 25 years. A deed of assignment was signed by PGMC transferring the property to Geogen Corporation which was later registered and approved by Mines and Geosciences Bureau (MGB) on March 17, 2010. In August 2015, Nickel Asia Corporation (NAC) acquired the property from Geogen Corporation. The company was officially named Dinapigue Mining Corporation (DMC) in February 2018 and started its mining operations and shipment in 2021.

The Dinapigue Nickel Laterite Project lies on the northeastern part of Luzon in the Province of Isabela that is bounded by the Northern Sierra Madre to the west and the Philippine Sea to the east. Through the subduction events on its eastern side and extensive weathering of Early Cretaceous ultramafic rocks of the Isabela Ophiolite, the nickel-iron rich deposit was generated. Based on geologic mapping, drilling, and assay data interpretation, the DNLD exhibits a typical nickel laterite profile. From top to bottom, the distinct layers are iron-rich limonite, nickel-rich saprolite, and barren bedrock. The transitional zone between limonite and saprolite is less defined. The saprolite layer is further subdivided into an upper soft saprolite and a rocky saprolite near the bedrock.

Before conducting the Mineral Resource Estimation for the Dinapigue Nickel Laterite Deposit, all pertinent data underwent thorough review and validation. The methodologies followed in topographic surveying, drilling, sampling, sample preparation, laboratory analysis and database management were assessed as appropriate and compliant with standards for Mineral Resource Estimation. It was determined that the entire sample chain of custody was properly overseen to ensure that samples were not mishandled or subject to alteration at any stage. Geological interpretation and statistical analysis were carried out prior to domaining and grade interpolation.

A total of 1,715 drillholes with cumulative meterage of 26,569 m was used. The topographic survey, which had been updated at the end of December 2022, was utilized to reflect the mining operations within the tenement. The in-situ bulk density values applied are 1.153 DMT/m<sup>3</sup> and 1.400 DMT/m<sup>3</sup> for limonite and saprolite respectively.

The nickel and iron grades of the limonite and saprolite domain were estimated using inverse distance weighting, squared. The sample search was constrained using search ellipsoids with minimum of two samples was required. The resulting resource model was validated using statistical analysis, graphical comparisons and swath plot analysis.

The estimated limonite Mineral Resource (Measured and Indicated) of DMC is 87.7 million WMT with average grades of 1.02% Ni (nickel) and 43.70% Fe (iron) using Cut-off Grades of 0.80% Ni and 25% Fe. For saprolite, the estimated Mineral Resource (Measured and Indicated) is 41.3 million WMT at an average grade of 1.35% Ni and 16.80% Fe using a Cut-off Grade of 1.10% Ni.

NAC

	Limonite				Saprolite					
Mineral Resource Classification	mWMT	mDMT	%Ni	%Fe	Ni Content (Kt)	mWMT	mDMT	%Ni	%Fe	Ni Content (Kt)
Measured (stockpile)	0.1	0.1	1.1	44.28	1	0.1	0.1	1.48	23.26	1
Measured (in-situ)	65.9	39	1.03	43.83	400	19.6	11.6	1.38	16.79	161
Indicated	21.7	12.8	0.98	43.3	126	21.6	12.9	1.31	16.82	169
Measured + Indicated	87.7	51.9	1.02	43.7	527	41.3	24.6	1.35	16.8	331
Inferred	4	2	0.96	42.52	21	13	8	1.26	17.55	100

The Measured, Indicated, and Inferred Mineral Resource estimates of the Dinapigue Nickel Laterite Deposit are reported according to PMRC 2020 guidelines and are summarized below:

\*Note: mWMT is million wet metric tonne, mDMT is million dry metric tonne, and kT is kilo tonne.

Remaining areas within the DNLD with accumulation of nickel laterite have been identified. These areas will be subjected to further drilling at 50x50m intervals to delineate additional resources and upgrade Mineral Resources into higher categories. Drilling at closer intervals will be conducted if deemed necessary, based on the results of this drilling program.

To assure reliability and accuracy of future Mineral Resource Estimation, it is recommended to maintain the strict implementation of QA/QC protocols. Field duplicates and blanks should be introduced into the sample stream to evaluate sampling repeatability and monitor possible contamination.

Mine reconciliation should be conducted regularly. Excellent data capture of the actual tonnage and grades should be of primary importance. Adequacy and accuracy of sampling, volume calculation and recording of data should always be ensured.

It is also recommended to expand the testing for in-situ bulk density to areas currently lacking limonite and saprolite exposures. Likewise, it is recommended to include additional elements for analysis, specifically Rare Earth Elements (REEs) that may be present in significant amounts and may be deemed marketable in the future.

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## **1. INTRODUCTION**

## 1.1 Purpose and Scope of Work

The purpose of this Technical Report is to provide an update on the Exploration Results and Mineral Resource Estimate of Dinapigue Mining Corporation (DMC)'s Dinapigue Nickel Laterite Deposit for its reportorial compliance to the Philippine Stock Exchange (PSE) in preparation for the approval PMRC 2020's Implementing Rules and Regulations (IRR). A key transitory provision of the PMRC 2020 mandates that all publicly listed companies submit Technical Reports within two (2) years from the approval date of its IRR. All data obtained and updated as of December 31, 2022 are used to come up with the Mineral Resource stated in this report.

The scope of work includes the following:

- Verification and validation of relevant data on the Dinapigue Nickel Laterite Deposit, including exploration, Mineral Resource and production data, as well as material information on the aspects of environmental, social, and governance (ESG), safety and health.
- Review and assessment of all the data used for resource estimation and validation of the resulting Mineral Resource model and updated Mineral Resource estimate
- Preparation of a PMRC 2020 compliant Technical Report on Exploration Results and Mineral Resource Estimation in accordance with PSE reporting guidelines.

The ACP, having been employed by NAC was part of the technical team that conducted due diligence works prior to the acquisition of DMC and has been visiting the site since then. She is knowledgeable with the geology and mineralization of Dinapigue Nickel Laterite Deposit and has been familiarized with its drilling and mining operations.

The Report conforms with the guidelines and format of the PMRC 2020 and its draft Implementing Rules and Regulations (IRR) which emphasizes transparency, materiality, and competence. The detailed steps undertaken to produce the Mineral Resource estimate and relevant information are discussed in this Report. All the applicable sections of the PMRC 2020, especially its Table 1 bearing in mind the "If not, why not?" concept, have been considered in the Mineral Resource estimation.

## **1.2 Country Profile**

The Dinapigue Nickel Laterite Deposit is located in the Republic of the Philippines. The country is an archipelago consisting of roughly 7,100 islands and is divided into three (3) main island groups, namely, Luzon, Visayas and Mindanao.

The Philippines is the 5th most mineralized country in the world, with notable deposits of gold, copper, nickel, and chromite (Australian Trade and Investment Commission).

Mining in the Philippines is guided by Republic Act 7942 or the Philippine Mining Act of 1995. The Department of Environment and Natural Resources (DENR), with the Mines and Geosciences Bureau (MGB) as its main regulatory arm, oversees all mining activities in the country.



One of the types of agreements under the Philippine Mining Act which a mining company can enter with the government is the Mineral Production Sharing Agreement or MPSA. The MPSA grants the MPSA holder (or mining company) the exclusive right to conduct mining operations within a contract area. The share of the government is in the form of excise tax equivalent to a percentage of the gross output. The MPSA holder will provide the financing, technology, management, and personnel necessary for the implementation of the MPSA (bakermckenzie.com, 2015). The country continues to improve its mining-related legislation, particularly on environmental and financial aspects, to supplement its governing laws for mining.

## 1.3 Location and Accessibility

The Dinapigue Nickel Laterite Deposit is under a Mineral Production Sharing Agreement (MPSA) No.258-2007-II with the Philippine government. The MPSA is situated in Barangay Dimaluade, Municipality of Dinapigue in Isabela Province, Philippines. Dinapigue is located in the southeastern part of Isabela and is virtually isolated from the rest of the province. It is bounded by the Sierra Madre Mountain range to the west and Pacific Ocean to the east. The Project is centered at 1835813.522N and 425303.537E (PRS92 Zone IV).

The municipality of Dinapigue is approximately 425 road kilometers (km) from Manila. There are two possible land routes from Manila going to the area - one is via Santiago City, a major commercial city in the province of Isabela and the other is through the town of Baler, capital of Aurora province. Manila to Santiago City takes approximately 6 hours by four-wheeled vehicle through the North Luzon Expressway (NLEX) and Subic-Clark-Tarlac Expressway (SCTEX) passing through Nueva Ecija and Nueva Vizcaya via the Pan Philippine highway and Dalton Pass. The land route from Santiago City, to Dinapigue takes another 5 hours, with about 200 km of generally well-paved roads passing through Madella, Quirino, and the junction at Dinadiawan, Aurora. From Dinadiawan, the other major municipalities that will be passed are Casiguran and Dilasag (border town of Aurora with Dinapigue) and thence to Dinapigue.

The other route is from Manila to Baler, the capital of neighboring Aurora province south of the project site. From Baler, one will pass through the towns of Dipaculao, Casiguran and Dilasag and crossing the junction at Dinadiawan. The roads are generally concrete, and some portions are under improvements. This access to the project site from Manila via Baler usually takes 9 hours. From the town proper of Dinapigue, it takes another 45-minute drive of approximately 13 kilometers to the main camp of DMC (see Figure 1).

There is an airstrip in Dinapigue which recently accommodated small turboprop airplanes and with future charter flights from Cauayan, Isabela airport.



Figure 1. Map showing the location and accessibility of DMC

## **1.4 Property Description and Adjacent Properties**

A Mineral Production Sharing Agreement (MPSA), with No.258-2007-II, was signed between Platinum Group Metals Corporation (PGMC) and the Philippine government on July 30, 2007, valid for 25 years and renewable for another 25 years. The MPSA has a total area of 2,391.804 hectares (has). PGMC signed a deed of assignment with Geogen Corporation transferring the property to the latter. This deed of assignment was registered and approved by the Mines and Geosciences Bureau (MGB) on March 17, 2010. In August 2015, Nickel Asia Corporation (NAC) acquired the property from Geogen Corporation. In February 2018, the company name was officially changed from Geogen Corporation to Dinapigue Mining Corporation (DMC).

The Project is located within Dinapigue municipality in Isabela province. Its eastern boundaries are along the foothills grading down to the coastline facing the Philippine Sea. The whole MPSA is within the Sierra Madre Range (see Figure 2).



Figure 2. Map of DMC MPSA

The tenement boundaries consist of twenty-one (21) corners that are bounded Easting and Northing from 422620E to 427987E and from 1831359N to 1840215N respectively, projected in the coordinate system Philippine Reference System 1992 Zone 4 (EPSG:3124) (see Figure 3). The geographic coordinates of the corners of the MPSA as defined by the mining license for DMC is shown in Table 1.

Two (2) holders of Exploration Permits (EP) namely Goodearth Mining and Development, Inc. and Infiniti Resources Mining and Exploration Corporation and one (1) Application for Minahang Bayan (Alex Dy) are adjacent to the DMC's Project Area (see Figure 4). The EP of Goodearth Mining and Development, Inc. straddles the top northeast part of the MPSA while the EP of Infiniti Resources Mining and Exploration Corporation is at the western side of the MPSA boundary.







Figure 4. Map of MPSA with adjoining claims

PRS92 ZONE IV						
CORNER	NORTHING	EASTING				
1	1831366	422620				
2	1832288	422624				
3	1832282	424402				
4	1834126	424409				
5	1834129	423520				
6	1835051	423523				
7	1835048	424412				
8	1837815	424422				
9	1837818	423533				
10	1840215	423541				
11	1840262	427987				
12	1839647	427985				
13	1837802	427979				
14	1837805	427090				
15	1835961	427083				
16	1835042	426191				
17	1834120	426188				
18	1833201	425295				
19	1832279	425292				
20	1832282	424402				
21	1831359	424399				

Table 1.	DMC MPSA	corner	coordinates
TUDIC I.		conner	coordinates

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

Kristine Grace C. Victoria is an Accredited Competent Person in exploration and mineral reporting of nickel laterite deposits with 14 years of experience in Mineral Resource Estimation, drilling operations and data management. She is knowledgeable in all aspects of nickel laterites from grass roots exploration to production phase. She was employed as resource geologist by Nickel Asia Corporation in 2010 and has done numerous Mineral Resource Estimation and field validation works on the six (6) major nickel laterite deposits owned by NAC; namely the HMC-Taganaan, HMC-Manicani, CMC-Valencia, DMC-Dinapigue, RTNMC-Rio Tuba and TMC-Taganito deposits. She has also completed reviews and validations of resource data and resource estimation of several nickel laterite properties offered to NAC.

She has received training in geostatistical Mineral Resource evaluation and quality assurance and quality control (QAQC) implementation and evaluation. She is a graduate of BS Geology from the University of the Philippines, Diliman and is an active member of the Geological Society of the Philippines.



The ACP has relied on the data prepared, works and reports by DMC geologists and mining engineers for the primary resource data and mining considerations. Technical matters other than geological are also based on the opinions of other subject matter experts.

The following key contributors have ~5 years of experience in nickel laterite deposits and are active members of their accredited parent organizations:

- 1. Romulo C. Subong Geologist with PRC License No. 1083 and Dinapigue Mining Corporation's Geology Manager until his resignation in September 2023
- 2. Engr. Marc Dela Cruz Mining Engineer with PRC License No. 0003217 and Dinapigue Mining Corporation's Mine Engineering Manager until his resignation in February 2023
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## 1.6 Disclaimer

This Report is prepared using the data acquired by the operating company including results from past exploration programs and current drilling campaigns. The primary sources of information are in the form of digital files, database, maps, and reports prepared by or under the supervision of geologists and mining engineers of Dinapigue Mining Corporation. The undersigned Accredited Competent Person or the "Author" also relied on archived historical information prepared by previous employees or consultants hired by the company. All technical information deemed material to ensure that this Technical Report is not misleading, false or inaccurate to the best of knowledge of the Author has been included.

The Author conducted field visits, reviewed the data diligently and carried out reproducibility checks. However, it was not possible to independently confirm all the supplied information due to the limitation of time. While all due care is exercised in the validation process, the accuracy of the derived conclusions in this report relies entirely on the veracity and completeness of the supplied data.

The Author 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.

Professionals and other subject matter experts in their respective fields made significant contributions to this report. They are hereby acknowledged and mentioned in relevant sections of this report.

Reports and scientific research papers used as reference in this report are cited in the reference section.

#### 1.7 Units of Measure, Currency, and Exchange Rates

Units of measurement in this Report are all in metric system unless stated otherwise. Tonnages are reported as metric tonnes (wet and dry) and quality is expressed in percent (%). Survey data are based on Philippine Reference System of 1992 (PRS 92) Zone 4. Elevations are reported above mean sea level.

Philippine peso (Php) is used as the unit of cost. Exchange rates with the US Dollar (USD) applied per year are as follows:

#### Table 2. Foreign Exchange rate projected for 5 years

Year	2022	2023	2024	2025	2026
(Php/USD)	55.00	57.00	57.00	57.00	57.00

#### **1.8 Previous Works**

Early drilling activities at DMC were initiated by Queensland Nickel Pty Ltd. (QNI) and Verum Terra Geosciences Inc (VTGI). A total of 353 drillholes with a corresponding meterage of 5,110 meters were drilled by QNI from 2003 to 2004 on a 200 x 200-meter grid. VTGI has implemented their exploration drilling in two separate campaigns, Stage 1 in 2009 and Stage 2 in 2011. Two hundred (200) drillholes of Stage 1 drilling were infill with respect to the drillhole layout of QNI. Stage 2 drilling, which was mainly concentrated in the southern portion of MPSA, had drilled 405 infill drillholes with a cumulative length of 5,801 meters.

The drilling summary of QNI and VTGI campaigns are summarized in Table 3.

Table 3. QNI and VTGI Drilling Campaign Summary

Program	Number of Drillholes	U	Total Meterage (m)	Average thickness (m), Limonite	Average thickness (m), Saprolite
2003 QNI Drilling and Test Pitting	353	14.48	5,110	- 7.23	
2009 VTGI Stage 1 Drilling Campaign	200	15.97	3,194		6.43
2011 VTGI Stage 2 Drilling Campaign	405	14.32	5,801		0.45
TOTAL	958	14.92	14,105		

Before the purchase of the MPSA from Geogen Corporation by Nickel Asia Corporation (NAC), thirty (30) drillholes were identified from previous drilling data and were subjected to twin drilling. The twin drillhole is spaced about 1 m apart from the existing drillhole. After the acquisition of the MPSA by NAC in 2015, drilling activities have been concentrated in the northern part of the MPSA at Area 1, having taken place from 2015 to 2017. In addition to drilling activities in 2015 at the northern portion of MPSA, ten (10) drillholes were allocated for confirmatory drilling. In 2019, a 77-hole confirmatory drilling program was undertaken by DMC with MacroAsia Mining Corporation as drilling contractor to verify majority of the high-grade areas which were previously identified in earlier drilling campaigns. In 2021, the drilling targets identified in Area 1, 2, 4 and 5 were again drilled by DMC with Mega Philippines, Inc. as the contractor to increase the limonite and saprolite resource both vertically and laterally for the DMC MPSA area. In 2022, a 98-hole drilling program was undertaken by Dinapigue Mining Corporation. A drillhole spacing of 20m x 20m was implemented in this drilling campaign.

Drilling data from 2015 to 2022 campaigns is presented in Table 4.

Program	Number of Drillholes	Average Depth (m)	Total Meterage	Average thickness (m) Limonite	Average thickness (m) Saprolite
2015-2017 NAC Drilling Campaign	279	17.56	4,898.17	6.65	8.21
2019 Drilling Campaign	77	20.96	1,614.10	7.82	10.91
2021 Drilling Campaign	361	13.86	5,003.78	6.89	4.46
2022 Drilling Campaign	98	13.61	1,333.63	7.68	5.06
Total	815	15.77	12,849.68	6.99	6.42

Table 4. 2015 to 2022 Drilling Campaign Summary

A simplified table of the drilling activities in the DMC MPSA area is shown below:

Table 5. Summary of drilling activities

Period	Company	Work Completed
2003-2004	Queensland Nickel Pty Ltd. (QNI)	353 drillholes completed
2009	Verum Terra Geosciences Inc. (VTGI)	Conducted Stage 1 exploration drilling
2011	Verum Terra Geosciences Inc. (VTGI)	Conducted Stage 2 exploration drilling
Aug - Sep 2012	Nickel Asia Corporation (NAC)	Twin drilling of 30 drillholes
2015	Nickel Asia Corporation (NAC)	Confirmatory drilling of 10 drillholes
2015-2017	Nickel Asia Corporation (NAC)	Drilling concentrated on the northern portion of Area 1 MPSA
2019	Dinapigue Mining Corporation (DMC)	Verification of previously drilled high grade areas through drilling at Area 1, Area 2, and Area 4
2021	Dinapigue Mining Corporation (DMC)	Drilling Program concentrated at Areas 1, 2, 4, and 5 to increase the laterite resource laterally and vertically
2022	Dinapigue Mining Corporation (DMC)	Drilling Program concentrated at Area 1 and Area 5; 20m x 20m drillhole spacing is implemented

VTGI conducted a Mineral Resource Estimation in December 2010. The parameters used are the following:

- A total of 553 drillholes with a total length of 8,303.86 m;
- Limonite and saprolite thicknesses of 7.25 m and 5.75 m, respectively;
- Block models with block size of 12.5 x 12.5 x 3 for Area I and 25 x 25 x 3 for the other three areas;
- An Inverse Distance Weighted ("IDW") algorithm was used for the grade interpolation at the following search radii:

Area I: 75 m x 75 m x 6 m, Area 2: 150 m x 150 m x 6 m, Area 3 150 m x 150 m x 6 m, and Area 4: 200 m x 200 m x 6 m.



- Dry densities of 1.1 t/m3 and 1.35 t/m3 for limonite and saprolite, respectively, were reported and used, based on the results of the density test conducted by QNI;
- A 3 m contour interval topographic map was used for the resource estimate based on a 20 m interval topographic map conducted by the Philippine National Mapping and Resource Information Authority ("NAMRIA"); and
- Cut-off Grades of 0.8% Ni for limonite ore and 1.2% Ni for saprolite ore were used for the resource estimate. (SRK Report, 2013)

The Mineral Resources Estimation of VTGI is shown in Table 6.

Area	Mineral Type	Mineral Resource Classification	DMT x 1,000,000	%Ni	%Fe	%Co
Area 1		Measured	5.15	1.12	43.22	0.10
Area 2		Indicated	19.66	1.09	43.69	0.10
Area 3	Limonite	Indicated	0.51	1.56	57.66	0.11
Area 4		Indicated		1.07	41.68	0.08
		Total Resource	32.70	1.10	43.38	0.10
Area 1		Indicated	2.73	1.56	14.09	0.03
Area 2		Inferred	7.12	1.48	14.19	0.03
Area 3	Saprolite	Inferred	0.84	1.57	13.82	0.03
Area 4		Inferred	2.90	1.38	13.13	0.03
	]	Total Resource	13.60	1.48	13.92	0.03
Cut_off G	radac	In situ bu	lk density (t/cum)			

Table 6. Mineral Resource Estimation of VTGI as of 2010 (Adapted from SRK Report, 2013)

Cut-off Grades Limonite: ≥0.80 Ni% Saprolite: ≥1.2 Ni% In-situ bulk density (t/cu.m.) Limonite: 1.1 Saprolite: 1.35

## **1.9 Previous Mineral Resource Estimate**

In 2013, Nihao Mineral Resources International commissioned SRK Consulting Limited to prepare a Mineral Resources Estimate for the Isabela Nickel Project. The result is shown in Table 7.

			,	/	
Mineral Type	Mineral Resource Classification	DMT x 1,000,000	%Ni	%Fe	%Co
	Measured	5.97	1.46	43.87	0.10
Limonite	Indicated	33.58	1.19	43.22	0.09
Limonite	Total Resource	39.54	1.23	43.32	0.09
	Inferred	5.72	1.06	42.33	0.08
	Measured	0	0	0	0
Saprolita	Indicated	28.35	1.20	13.78	0.03
Saprolite	Total Resource	28.35	1.20	13.78	0.03
	Inferred	16.28	1.14	13.95	0.02

 Table 7. Mineral Resources Estimate as of 2013 (Adapted from SRK Report, 2013)

Cut-off Grades Limonite: 30 Fe% Saprolite: 0.6 Ni% In-situ bulk density Limonite: 1.100 Saprolite: 1.350

DMC released an updated Mineral Resource Estimate beginning in 2019. The summary of Mineral Resource until year 2021 is tabulated in Table 8.

Year	Mineral Type	Resource Classification	mWMT	mDMT	%Ni	%Fe	Nickel Content (kT)
	Saprolite	Measured & Indicated	43.62	28.35	1.20	13.78	340
2019	Limonite	Measured & Indicated	60.83	39.54	1.23	43.32	486
2019	Saprolite	Inferred	25.05	16.28	1.14	13.95	186
	Limonite	Inferred	8.80	5.72	1.06	42.33	61
	Saprolite	Measured & Indicated	28.34	18.42	1.35	15.55	340
2020	Limonite	Measured & Indicated	45.41	29.52	1.03	44.15	486
2020	Saprolite	Inferred	4.92	3.20	14.84	15.21	475
	Limonite	Inferred	0.78	0.51	39.70	41.95	508
	Saprolite	Measured & Indicated	39.17	25.46	1.35	15.88	343
2021	Limonite	Measured & Indicated	69.05	44.88	1.02	43.65	459
2021	Saprolite	Inferred	13.81	8.98	1.28	15.65	115
	Limonite	Inferred	4.28	2.78	1.00	39.68	28

Table 8. Mineral Resource Estimate of DMC as of 2021

The observed decrease from 2019 to 2020 can be attributed to the completely different resource estimation parameters used in the estimates. The Cut-off Grades and density for limonite and saprolite are also updated using current data. From 2020 to 2021, the increase in Mineral Resource is due to the expansion of area covered by resource model as a result of the 2021 drilling campaign.

## 2. TENEMENT AND MINERAL RIGHTS

## 2.1 Description of Mineral Rights

A Mineral Production Sharing Agreement (MPSA), with No.258-2007-II, was signed between Platinum Group Metals Corporation (PGMC) and the Philippine government on July 30, 2007, valid for 25 years and renewable for another 25 years. The MPSA has a total area of 2,391.804 hectares (has).

PGMC signed a deed of assignment with Geogen Corporation transferring the property to the latter. This deed of assignment was registered and approved by the Mines and Geosciences Bureau (MGB) on March 17, 2010. In August 2015, Nickel Asia Corporation (NAC) acquired the property from Geogen Corporation. In February 2018, the company name was officially changed from Geogen Corporation to Dinapigue Mining Corporation (DMC).

## 2.2 History and Current Status of Mineral Rights

The MPSA defines the southern part of the whole Isabela prospect of what was once the Mine Consultants and Management Corporation (MCMC), which spans the Dinapigue – Palanan area covering 16,256 hectares. Mining leases were obtained by MCMC in the late 1960s to explore and develop the mining areas.

In the early 1970s, New Frontier Mines, Inc. explored the Isabela prospect of MCMC under a joint venture agreement. The collapse of the nickel market in the mid-1970s led to the stoppage of the exploration program and eventual relinquishment of the mining claims.

Between 1982 and 1985, a group represented by Andres E. Soriano, was able to locate and register several mining claims (covering a total of 3,290.31 hectares) in Dinapigue under the existing mining law (Presidential Decree No. 463). The claims were eventually assigned to Cashchrome, Inc. in 1987 through a Deed of Assignment and Memorandum of Agreement (MOA). It was then executed on March 19, 1990.

Cashchrome, Inc. filed an Application for Mineral Production Sharing Agreement (APSA-000078) over its mining claims on November 20, 1996 as required under the Philippine Mining Act of 1995.

On December 11, 1996, a MOA between Cashchrome, Inc. and Eagle Crest Resource Group, Inc., a Philippine

exploration company with 40% Canadian interest, was entered and executed wherein the latter was granted an exclusive right to explore, develop and utilize several mining claims of Cashcrome Inc. in Isabela. Eagle Crest covered the mining claims of Cashchrome, Inc. and those of Pacific Timber Export Corporation (PATECO) by filing for an exploration permit on December 13, 1996 at the Department of Environment and Natural Resources – Mines and Geosciences Bureau (DENR-MGB).

Eagle Crest complied and submitted all the mandatory requirements and secured the necessary area clearances from the Environmental Management and Protected Areas Sector (EMPAS) and Regional Forestry. The Protected Areas and Wildlife Bureau (PAWB) on March 4, 1997 objected on the issuance of the exploration permit to Eagle Crest by invoking certain provisions of R.A. 7586 otherwise known as the National Integrated Protected Areas System (NIPAS) Act of 1992 which established the so-called Protected Areas in Northern Sierra Madre National Park (NSMNP) and the Presidential Proclamation No. 978 (10 March 1997) which expanded the Wilderness Park. This resulted in the exclusion of a part of the Cashchrome claims which was within the wilderness area. No final decision has been made on this issue prior to the termination of the MOA between Eagle Crest and Cashchrome, Inc.

Cashchrome, Inc. used the above procedures conducted by Eagle Crest on its behalf in securing their preferential right to pursue the approval of the MPSA application. Based on the review of the documents gathered and verified at the DENR-MGB, the DENR Secretary approved and awarded the MPSA to Platinum Group Metals Corporation or PGMC (formerly as Cashchrome, Inc.) on July 30, 2007. PGMC then assigned the MPSA to Geogen Corporation in January 2009.

By February 2009, Geogen Corporation entered into an operating agreement granting Geograce Resources Philippines, Inc. the right to develop 45 hectares of the property, superseding the PGMC-Geograce Agreement. It was by June of the same year, Geogen terminated the said agreement and entered into a new operating agreement – this time with Oriental Vision, Inc. (ORVI). In July 2010, the mining operations of Geogen was suspended by MGB due to non-registration of the Operating Agreement. In September 2011, it resumed its mining and loading operations after the lifting of suspension order.

Geogen then entered into an agreement with NiHAO Mineral Resources International, Inc. in June 2012. For years 2012 to 2014, the company was able to ship nickel laterite ore to China through Direct Shipping Ore (DSO). However, in January 2015, MGB again suspended the operations due to non-registration of mining contractors and citing also certain violations on the environmental and social aspects of the operations.

On August 2015, NiHAO had agreed to a buyout with Nickel Asia Corporation (NAC). It was also this time when NAC purchased Geogen Corporation. NAC then started confirmatory and exploration drilling works by the 4<sup>th</sup> quarter of 2015 but were eventually terminated due to insurgency. In 2016 to 2017, Geogen Corporation, through NAC management, worked on developing the mine site by building offices and accommodations at the northernmost part of the tenement. During these years, the company started its Care and Maintenance Program (CMP) wherein re-greening and temporary rehabilitation of open areas from previous operations were prioritized. Existing roads to and from the site and the causeway were also repaired and improved. Apart from it, social commitments were re-instituted.

On March 2018, Geogen Corporation was renamed to Dinapigue Mining Corporation (DMC). By the end of the year, it has acquired its ISO 14001:2015 certification. Through the continued efforts to address previous operator's shortcomings, its suspension dated January 2015 was lifted by MGB – Region II last July 2019. In August of the same year, Special Land Use Permit (SLUP) for the causeway was acquired. It was then followed by the acquisition of different permits such as Permit to Develop, Permit to Construct and Permit to Operate the Causeway as required by the Philippine Ports Authority (PPA). DMC started its trial mining and shipment in July 2021 – about a year after the emergence of COVID-19 pandemic. A total of 71,497 WMT Run-of-Mine ores were mined as of end October 2021 and 20,807 WMT of which were shipped to Coral Bay Nickel Corporation



(CBNC), Palawan as proof of concept on the viability of limonitic ore to the High-Pressure Acid Leach (HPAL) Plant.

## 2.3 Royalties, Receivables, and Liabilities

The MPSA is covered by the ancestral domain of the Indigenous Peoples (IP) or locally known as the Agta Tribe. Under the Indigenous People's Rights Act of 1997 or IPRA, the IPs are entitled to 1% royalty of the gross output. The IPs are receiving advance royalty from the company.

There is a Final Mine Rehabilitation and/or Decommissioning Plan of DMC and this was approved last October 28, 2020. The total allocated Final Mine Rehabilitation and/or Decommissioning Fund (FMRDF) is PHP170,193,289. This total amount is broken down to an annual required deposit by DMC. The company deposits that yearly amount in an account with the MGB in Land Bank of the Philippines, Tuguegarao for the FMRDF.

#### **3. GEOGRAPHICAL AND ENVIRONMENTAL FEATURES**

#### 3.1 Physiography, Climate, and Vegetation

#### 3.1.1 Physiography

Most of the MPSA area of Dinapigue Mining Corporation (DMC) is located 400m above sea level, in some areas as high as 600m especially in the northernmost parts of the MPSA, with a few peaks reaching almost 700m. In general, elevation increases northwards in the MPSA. Steep slopes characterize the western and eastern edges of the MPSA and form a wide and generally flat plateau near the center. This elevated plateau is commonly seen among ultramafic terranes situated in tropical areas, which is favorable for weathering of the ultramafic bedrock to form wide laterite profiles. The area is dissected by numerous streams, and their accompanying tributaries, and mostly drain westward and eastward from the MPSA. From the moderate terrain in the generally central plateau area, there are abrupt elevation differences exhibited by steep canyon walls and waterfalls towards the western and eastern parts of the MPSA boundaries.



Figure 5. DMC topographic map

## 3.1.2 Climate

The MPSA is in the northeast coast of Luzon Island facing the Pacific Ocean on its eastern side. The monsoonal rains affect the area, classified as the Northeast and Southwest Monsoons. As the area faces the Philippine Sea, typhoons usually greatly affect the mine site due to the heavy rains and big waves impacting the causeway.

The northeastern coastline of Luzon including the MPSA in Dinapigue is under Type II on the Climate Map of the Philippines, which is based on the Modified Coronas' Climate Classification (Figure 6). Type II experiences no dry month with a pronounced maximum rain from December to February and minimum rain from March to May. Like the rest of the country, humidity is high, ranging from 80% to 85%. Due to the generally high elevation in most parts of the MPSA, cool weather is experienced year-round, with low temperatures being recorded from November to February, with the lowest temperatures in the month of February, usually below 20°C.

Similar to the description of the Philippine Climate Type II, the local weather at site shows no dry season, generally with minimum rainfall during April to May, and with moderate to heavy rains noted from October to February.





Figure 6. Climate Map of the Philippines

Table 9 shows the rainfall data for the year 2022 obtained from the rain gauges within the MPSA.

## Table 9. DMC Rainfall data for 2022

DMC Rainfall Data for the year 2022 (in millimeters)												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Days	31	28	31	30	31	30	31	31	30	31	30	31
1	29.13	67.38	0.70	19.58	1.33	19.53	8.57	11.47	0.87	12.40	38.03	2.23
2	4.45	1.30	0.00	16.80	4.30	0.07	0.00	11.47	1.13	27.27	2.13	1.47
3	0.95	0.15	2.70	18.00	1.27	5.07	0.17	21.20	0.00	25.97	0.50	23.63
4	0.15	0.00	0.98	8.15	0.10	6.70	2.13	43.97	0.00	33.40	0.07	8.80
5	6.70	0.00	1.98	45.75	0.07	8.53	5.00	57.07	0.00	0.60	0.07	18.67
6	23.15	51.33	1.70	39.35	0.07	6.20	0.13	78.57	0.07	5.67	20.27	2.40
7	0.30	69.33	0.05	57.70	0.00	0.30	7.07	3.07	0.93	3.20	31.27	11.23
8	0.00	50.80	0.23	7.00	3.70	11.73	22.47	6.67	8.33	0.20	49.20	10.43
9	6.48	7.98	0.28	24.40	4.47	0.00	18.33	10.90	26.00	0.00	7.73	4.23
10	0.10	0.10	0.00	15.00	0.80	0.17	18.77	4.93	0.00	2.67	7.20	7.33
11	0.05	8.80	8.05	2.93	9.20	3.77	0.40	0.67	0.00	0.80	15.07	3.73
12	0.93	35.15	13.73	0.27	0.00	3.13	56.37	0.00	0.00	1.27	8.73	0.50
13	1.95	24.45	106.40	0.07	1.33	4.00	67.23	0.00	0.00	4.80	17.47	19.73
14	2.85	82.15	23.35	0.00	81.37	1.13	0.00	4.17	0.00	1.07	74.20	66.00
15	2.25	30.90	1.43	5.37	7.13	1.33	0.00	29.63	0.00	0.00	39.67	81.57
16	5.38	0.13	2.65	7.37	0.07	1.43	0.00	0.13	8.00	0.00	4.97	74.17
17	15.03	2.03	2.20	0.60	7.33	1.20	2.77	8.20	32.63	0.00	35.50	12.90
18	0.13	0.00	3.55	28.63	56.13	1.00	5.10	18.73	17.20	0.00	32.63	16.07
19	0.00	0.00	13.40	4.80	13.90	1.13	12.43	36.47	19.47	35.33	13.13	45.47
20	18.95	0.40	2.08	9.73	6.20	0.07	4.53	0.73	54.80	1.93	95.80	26.60
21	50.73	110.55	16.80	5.93	3.37	0.13	31.73	2.00	6.60	6.33	92.40	45.83
22	58.40	148.40	5.93	2.43	3.27	2.13	12.67	22.60	1.20	1.57	55.77	6.57
23	27.68	16.20	3.10	1.40	29.60	39.53	0.13	110.47	0.13	3.93	165.07	2.47
24	5.85	10.04	1.73	3.00	0.13	7.10	8.20	18.40	20.71	32.57	10.57	1.70
25	8.30	64.88	7.95	12.80	0.00	0.67	5.20	10.20	111.87	30.47	4.77	1.43
26	29.63	45.70	0.35	14.80	0.00	0.30	0.80	0.00	35.37	4.53	0.33	3.57
27	64.95	5.50	0.78	15.23	0.00	15.00	2.07	1.27	81.57	12.60	0.33	8.73
28	31.70	8.98	3.90	8.17	0.97	31.87	4.73	3.43	25.00	44.13	0.00	12.33
29	3.50		9.55	0.73	8.97	83.13	7.20	0.80	10.87	82.47	0.33	20.13
30	1.48		12.05	2.87	21.13	20.57	0.47	2.47	2.10	177.60	0.07	50.40
31	2.33		16.78		12.07		0.07	1.93		35.53		23.20

Monthly Total Rainfall	403.43	842.59	264.33	378.86	278.27	276.93	304.73	521.6	464.85	588.3	823.27	613.53
Cumulative Rainfall	403.43	1246.02	1510.34	1889.2	2167.47	2444.4	2749.13	3270.73	3735.59	4323.89	5147.15	5760.69
Mean Daily Rainfall	13.01	30.09	8.53	12.63	8.98	9.23	9.83	16.83	15.5	18.98	27.44	19.79
Maximum Daily Rainfall	64.95	148.4	106.4	57.7	81.37	83.13	67.23	110.47	111.87	177.6	165.07	81.57
Minimum Daily Rainfall	0.05	0.1	0.05	0.07	0.07	0.07	0.07	0.13	0.07	0.2	0.07	0.5
% of Annual Rainfall	7.00%	14.63%	4.59%	6.58%	4.83%	4.81%	5.29%	9.05%	8.07%	10.21%	14.29%	10.65%
Number of Days at 4 mm												
above rainfall (heavy	16	18	11	20	13	12	17	18	14	16	21	22
rain)												

## Table 9. DMC Rainfall data for 2022 (continued)

#### 3.1.3 Vegetation

Identified hardwood species of important ecological uses within the MPSA were grouped into three kinds: the common hardwood species; the construction and furniture species; and the light hardwood and matchwood species.

Grasses are the temporary rehabilitation material used in the Project. The common hard wood species consist of Tanguile (Shorea polysperma) and Mayapis (Shorea palosapis). Under the construction and furniture species were the Agoho (Casuarina equisetifolia), Manggachapui (Hopea acuminata), Yakal (Shorea astylosa), Palosapis (Anisoptera costata), Balong eta (Diospyros pilosanthera), Malabayabas (Tristaniopsis dicorticata), Igem (Podocarpus costalis), Bitanghol (Calophyllum laticostatum), Makaasim (Syzygium nitidium), Malakmalak (Palaquium montanum) and Batikuling (Litsea leytensis). Most of the species found within the MPSA belong to this type. The last group is the light hardwood and matchwood species which comprise of Manoring, Malabunot (Sterculia rubiginosa), Kulipapa (Vitex parviflora), Buntot-Pusa (Acalypha hispida), Palomaria (Calophyllum inophyllum), Panglomboien (Syzygium simile) and the other miscellaneous trees (See Table 10).

## 3.1.4 Hydrology and Hydrogeology

The creeks and tributaries flowing from the property are generally draining towards the west and eastsoutheast. The plateau covering the central portion of the MPSA and roughly oriented north-south serves as the natural barrier for the drainage system in the area. Those creeks draining east-southeastward flow towards the Philippine Sea and are covered in Areas 1, 2 and 4. Those that drain westward are in Areas 1, 2, 3 and 5 toward the main creek named Jericho Creek. Jericho Creek is outside of the MPSA area and flows generally in the north-south direction. The creeks draining the northern part of the MPSA flow roughly to the northnortheast before emptying to the Philippine Sea. Figure 7 shows the drainage system within the MPSA. Table 10. List of hardwood species within the Project

Common Names	Terrestrial Vegetation in the MF Scientific Names	Uses/Ecological importance				
1. COMMON HARDWOOD SP	1 22 Advance of a second se	8				
Mayapis	Shorea palosapis	For the construction of houses.				
Palosapis	Anisoptera thurifera	For the construction of houses and big boats				
Tanguile	Shorea polysperma	For the construction of houses.				
2. CONSTRUCTION OF FURNITU	JRE SPECIES					
Agoho	Casuarina equisetifolia	Its appearance resembles a pine tree and is planted to check erosion. The wood is used for fuel, poles and rafters. The bark yields tannin (used for tanning sand dyeing) and is also used as diuretic and astringent.				
Batikuling	Litsea leytensis	For the construction of houses, boats, and posts.				
Bitanghol	Calophyllum blancoi	It is sited at seacoasts.				
Kulipapa	Vitex parviflora	It is considered as a superior timber that is usually used in construction of houses.				
Makaasim	Syzygium nitidium	For construction of houses and posts.				
Malabayabas	Tristaniopsis decorticata	For the construction of houses and posts.				
Malakmalak	Palaquium montanum	For the construction of houses, big boats.				
Manggachapui	Hopea acuminata	For the construction of houses.				
Yakal	Shorea astylosa	For high grade construction, bridges and wharves, mine timber and other installation requiring high strength and durability; wood extractives have tumor-inhibiting capacity.				
3. LIGHT HARDWOOD AND MA	TCHWOOD SPECIES					
Buntot-pusa	Acalypha hispida	Wood used for light construction.				
Malabunot	Sterculia rubiginosa	Wood used for light construction.				
Palomaria	Calophyllum inophyllum	The tree can be used for windbreak, as ornamental, for shade and for diverse uses (carabao cart wheels, large canoes, stern posts for boats, etc.). In addition, it is highly typhoon resistant.				
Panglomboien	Syzygium simile	It is considered as forest vegetation; wood used for light construction.				



Figure 7. DMC map showing the drainage system in the Project

# 3.2 Land Use and Infrastructure

Dinapigue is classified as a first-class municipality, although the municipality only has two (2) small hardware stores, four (4) small general merchandise stores, 2 small stores for industrial materials, three (3) small gadgets, electronics, and accessories shops and without a bank or a microfinancing business. Generally, the local infrastructure in Dinapigue is poorly developed. The roads to and from the municipality are partially paved – passing through gravel riverbeds and steep zigzagging mountain roads and cliffs. Driving over this road requires extra attention and effort and is only suitable for 4×4 vehicles. Occasionally, rains may cause the roads to be washed away or blocked. Road widening and concreting works from Aurora Province boundary to Dinapigue as part of the Department of Public Works and Highways (DPWH) road developments was completed in September 2023.

At the Project site, existing infrastructure consists of the following: an Assay Laboratory, Sample Preparation Area, Core House, Warehouse, Motor Pool, Power House, Fuel Depot, barracks for employees and contractors, nurseries, Agro Farm, Material Recovery and Hazardous Waste Facility, Water Impoundment Area, Water Refilling Station, recreational facilities, Worship House, rockfill Causeway, Pier Yard, administration offices and staff accommodation container vans. The road within the mine is in relatively good condition and suitable for mine transportation. Safety signs are frequently visible in the mine providing directions and speed warnings. The means of communication is through satellite internet as there are certain areas only within the MPSA that have cellular signal.

#### **3.3 Socio-Economic Environment**

Dinapigue has six (6) barangays (Brgy). Brgy. Dimaluade is the host community and the remaining barangays; namely Brgy. Ayod, Brgy. Bucal Norte, Brgy. Bucal Sur, Brgy. Digumased, and Brgy. Dibulo are all neighboring communities. In the 2021 census of the barangays, the population of Dinapigue is 6,037.

Dinapigue is considered as one of the multicultural municipalities of Isabela due to its rich and varied cultures. 7% of the population is composed of Agtas. There are three Agta tribes in Dinapigue: Salulog Tribe in Sitio Salulog, Brgy. Dibulo, Anggo Tribe in Sitio Anggo, Brgy. Ayod and Digumased Tribe in Brgy. Digumased. 5% are Igorots who reside mostly in Brgy. Bucal Norte, Brgy. Ayod and Sitio Didin of Brgy. Dibulo. The rest are composed of Ilocanos and Tagalogs.

Economic activities of Dinapigue include agriculture, fishery, mining, and industrial, among others. Fishing and farming continue to be the major sources of living of majority of the households.

With reference to the 2020 Socio-economic Profiling conducted by DMC Community Relations Department, the LGU job order employees have an estimated monthly income ranging from Php 4,000 – Php 6,000 whilst the permanent employees earn around Php 8,000 – Php 30,000. The construction workers' group depending on skill sets, can vary from Php 6,000 – Php 10,000 per month. Farmers with vast farms to till earn as much as Php 15,000 to Php 60,000 per cropping whilst those with smaller farms earn as much as Php 5,000 to Php 10,000 per month.

The monthly earnings of employees as well as the earnings of farmers were based on personal interviews, and it could be noted that some were being modest in the declaration of their monthly average income.

The main source of water in the municipality is through spring development, except for Brgy. Digumased which is still using water pumps. The remaining barangays have their respective spring developments that can supply some households, but all of these are under Level I category.

Dinapigue is a coastal town and one of the farthest municipalities of Isabela. Since Aurora Province is the nearest access area, the Aurora Electric Cooperative Inc. (AURELCO) extended their services to Dinapigue. However, because of shortening of supply and distance of the main electric plant to Dinapigue, brownouts and blackouts are common. Solar panels and generator sets are the options of the households whenever electric supply is cut or not provided by Aurelco. Others who cannot afford the cost are still using traditional lamps and candles or rechargeable solar lights.

There are various health facilities of the municipality; 1 Hospital, 1 Main Health Center, 1 Birthing Home, 6 Barangay Health Stations and its additional 2 Temporary Treatment and Monitoring Facility. Non-communicable diseases account for more prevalent cases than infectious diseases. Fortunately, notifiable diseases seen do not possess any threat and have low significance in terms of its impact in epidemiology.

Non-communicable diseases that are lifestyle-related remain the leading cause of mortality in the municipality. Most death occurred among elderly and infants. The number of deaths occurred more among female patients than the males (DMC 5-Year Social Development and Management Program, 2022-2026).

#### **3.4 Environmental Features**

The project is located at the southeastern foothills of Sierra Madre Mountain Range. It is also outside of the Wilderness Park that was declared on September 7, 1979, through the Letter of Instruction (LOI) No. 917A. It also lies outside the Northern Sierra Madre Natural Park (NSMNP) that was declared by the Philippine Government in 1997 as the edge of the MPSA northern boundary is about 1.1 km aerial distance from the southern boundary of the NSMNP. Figure 8 shows the geographical location of the mineral property with respect to the NSMNP.

The distance of the Project's causeway facility from Sitio Dimatatno, where the DENR reported to be the natural habitat or nesting ground of marine reptile species like the green sea turtle and hawksbill sea turtle, is approximately 25 kilometers (Figure 9). The Project Area is also distant from other critical areas like Nangayuman Falls and the identified bat habitat in NSMNP. And to further reduce the impacts of mining and protect the environment where the company operates, DMC as mandated by DAO 2018-19 established a 20-meter buffer zone inward from the MPSA boundary and outward from the edges of creeks within the tenement.



Figure 8. Map of MPSA with respect to the NSMNP



Figure 9. Map of MPSA with respect to the turtle sanctuary

## 4. HISTORY OF PRODUCTION

## 4.1 Production History of District and Mineral Property

Before the issuance of the MPSA in 2007, the tenement was once a chromite mining area where numerous small-scale chromite miners abound. However, no data is available for DMC regarding their chromite production figures.

The previous operators of the MPSA were able to ship around 686 kWMT of laterite ore for the period covering 2011 to 2014. No data on the grades of the ores they shipped were available. Their operation took a halt in January 2015 when the MGB issued a suspension order citing the non-registration of the mining contractors (sub-contractors) in the area and certain violations on the environmental and social aspects of the operations. This left the project nonoperational until NAC took measures to work on the lifting of the suspension. This was settled in 2019.

Working only on previously disturbed areas, DMC, under NAC's guidance, started its trial mining and loading by July 2021 when the Covid-19 pandemic eased up. A total of 92,305 WMT Run-of-Mine ore were mined of as end October 2021. There were 2 barge shipments with a total of 20,807 WMT of limonite ore shipped to Coral Bay Nickel Corporation (CBNC), Palawan as proof of concept on the viability of low-grade limonitic ore to the High-Pressure Acid Leach (HPAL) Plant. All the ore material was sourced from the stockpiles in the pier yard.

For the year 2022, DMC started mining in May at Area 1 and Area 4. All these mining areas were previously opened. Typical nickel laterite mining process was employed, and products were sold to buyers via Direct Shipping Ore (DSO). Barge loading for CBNC commenced in April 2022 while the first international vessel arrived on site by the last week of June 2022. DMC completed its first foreign shipment in July 2022. Table 11 shows the tonnages and grades DMC managed to mine and ship from July 2021 to August 2022.

Extraction		Limonite		Saprolite			
EXITACTION	WMT	%Ni	%Fe	WMT	%Ni	%Fe	
2021	67,285	1.14	45.85	25,020	1.54	38.33	
2022	200,725	1.06	44.45	222,993	1.50	26.75	
Total	268,010	1.08	44.80	248,013	1.50	27.92	
Chinmont		Limonite		Saprolite			
Shipment	WMT	%Ni	%Fe	WMT	%Ni	%Fe	
2021	20,807	1.07	47.32	0	0.00	0.00	
2022	176,163	1.02	46.98	165,300	1.44	27.50	
Total	196,970	1.03	47.01	165,300	1.44	27.50	

Table 11. DMC extraction and shipment tonnages

## 4.2 Production Statistics

Below is the data for the shipments conducted in 2022. There were twelve (12) barge shipments sent to CBNC and four (4) foreign vessel shipments to China.

Table 12. Shipment data for 2022

BARGE/VESSEL NAME	Date	Unloading Port				Difference				
BARGE/VESSEL NAIVIE	Date	%Ni	%Fe	%Mg	Tonnage	%Ni	%Fe	%Mg	Tonnage	
Big Grace	May 6 - 7	1.10	48.00	0.90	10,383.99	0.04	2.53	- 0.24	- 63.12	
Big Ger	May 10 - 11	1.10	48.00	1.00	10,148.44	0.02	2.85	- 0.31	- 25.43	
Big Ger	June 3 - 5	1.10	46.90	1.05	10,726.76	0.02	1.48	- 0.36	- 12.46	
Big Grace	June 30 - July 2	1.07	46.40	1.20	10,323.36	- 0.01	2.40	- 0.78	3.46	
Big Glory	July 3 - 6	1.04	47.10	1.12	10,620.21	- 0.01	2.13	- 0.43	- 28.21	
Big Erin	July 6 - July 12	0.99	48.00	1.01	10,506.96	-	1.82	- 0.33	- 50.98	
Big Grace	August 6 - 10	1.12	47.90	1.15	10,431.73	0.02	2.97	- 0.57	- 20.72	
Big Glory	August 10 - 12	1.01	47.70	1.45	10,208.48	0.01	2.42	- 0.28	- 41.26	
Big Erin	September 7 - 9	0.96	49.20	0.96	10,544.34	0.02	2.92	- 0.29	- 42.67	
Big Grace	September 12 - 14	0.99	48.70	0.91	11,108.84	0.02	2.75	- 0.21	- 19.07	
Big Glory	September 14 - 16	1.05	47.50	1.26	10,496.58	0.01	2.84	- 0.26	- 43.25	
Big Erin	October 6 - 9	0.88	50.50	0.49	5,213.64	0.02	3.54	- 0.22	16.11	
MV Jin Ji	June 30 - July 17	0.96	47.43	-	55,455.00	0.04	0.57	-	- 5.00	
MV Chang Shun II	July 30 - August 21	1.40	30.38	-	55,134.00	0.03	1.65	-	- 4.00	
MV Jin Hong	August 26 - September 11	1.45	23.20	-	59,362.00	0.05	3.22	-	- 12.00	
MV Jin Feng	September 17 - October 6	1.40	25.69	-	50,822.00	0.04	1.84	-	- 2.00	
# 5. ENVIRONMENT, SOCIAL, AND GOVERNANCE (ESG)

DMC, one of Nickel Asia Corporation's latest subsidiaries, adheres to the NAC Vision which is to "Achieve the highest standards for responsible and sustainable development of our country's natural resources". The Environmental, Social and Governance (ESG) goals of NAC are incorporated in its One NAC Vision which states that "We strive to contribute to sustainable national development by adopting our ESG Roadmap in order to achieve the highest standards in the responsible utilization of our country's natural resources".

NAC, together with its subsidiaries and projects, pledge to protect its employees, the communities, the customers, and the environment beyond what is deemed as compliance. This is performed by the establishment of responsible, sustainable, and profitable mining practices. To make a determined effort to be transparent in all aspects of its business, NAC made a huge effort on its reporting of ESG activities. Each project is aligned with the most updated and ideal reporting standards and practices as much as possibly can. These projects include the Towards Sustainable Mining (TSM) standard, the Global Reporting Initiative (GRI) standards, and PMRC 2020.

Through the several honors presented by the Philippine Mine Safety and Environment Association (PMSEA) each year during the Annual National Mine Safety and Environment Conference (ANMSEC), NAC's commitment to the environment, communities, and employee safety is well acknowledged. The Philippine Society of Mining Engineers (PSEM), the Chamber of Mines of the Philippines (COMP), and the Department of Environment and Natural Resources' (DENR) Mines and Geosciences Bureau (MGB) collaborate annually to organize the ANMSEC.

DMC is committed to the responsible stewardship of the environment. It is ISO 14001:2015 (Environmental Management System) certified on April 16, 2019, and passed the recertification audit on July 14,2023.

DMC goes to great lengths to protect the welfare of its employees, being its chief assets, through the strict implementation of its safety and health programs to ensure that incidents are minimized and mitigated. As a testament to its commitment to safety and health, DMC reached its two million safe manhours without lost time accident (LTA) in February 2023.

# 5.1 Environmental Aspects

# 5.1.1. Environmental Policy of Nickel Asia Corporation (NAC)

With the utilization of the best global environmental industry practices, NAC is committed to the implementation of the following:

- Comply with all the Philippine environmental laws, regulations, standards, and other applicable regulatory requirements for environmental management;
- Adhere to the principles of environmental protection, progressive rehabilitation, climate change mitigation and adaptation, sustainable resource use, and biodiversity conservation;
- Promote environmental awareness among workers, contractors, and stakeholders at all levels;
- Disclose and consult with stakeholders all environmental concerns including, but not limited to, pollution mitigation, rehabilitation, land closure, and water use reduction;
- Ensure the competency and integrity of all company personnel designated to handle environmental management;
- And consistently strive for continual improvement of the environmental management system.



# 5.1.2. Environmental Policy of Dinapigue Mining Corporation (DMC)

In accordance with the NAC Environmental Policy, DMC pledged to uphold its best environmental practices and achieve the highest standard for responsible mining operations in compliance with the Philippine Environmental Laws, Regulations, and Standards. The company is committed to:

- Pollution prevention and minimization of adverse environmental impacts;
- Promote environmental awareness among workers, contractors, and stakeholders at all levels;
- Continual improvement of its operations through research and development, thus creating better working environmental enhancement strategies/program; and
- Provide appropriate training and ensure competence among our personnel.

# 5.1.3. ISO/EMS Certifications

Dinapigue Mining Corporation is ISO 14001:2015 (Environmental Management System) certified on April 16, 2019, by NQA and passed the recertification audit on July 14, 2023. The applicability of the ISO 14001:2015 certification is for the mining of lateritic nickel ore.

# 5.1.4. Compliance

DMC firmly adheres to environmental compliances and go beyond the regulations set forth by the government and other compliance regulatory bodies. DMC aligns itself with the policies and laws as prescribed by the Department of Environment and Natural Resources (DENR) and its agencies: the Mines and Geosciences Bureau (MGB), the Environmental Management Bureau (EMB), and the Biodiversity Management Bureau (BMB). In relation to other government agencies, DMC also complies with the policies and laws mandated by the Department of Labor and Employment (DOLE), the Department of Health (DOH), the National Commission on Indigenous Peoples (NCIP), and the local government units (LGUs).

DMC abides by commitments stipulated in its Environmental Compliance Certificate (ECC) and specified in the approved Work Program. DMC respects and follows all pertinent rules and requirements for responsible mining operations, which also includes the following in Table 13.

LAW	COMPLIANCE		
Republic Act No. 7942 (Philippine Mining Act of 1995), Consolidated DENR Administrative Order 2010-21	<ul> <li>Preparation of an Annual Environmental Protection and Enhancement Plan (AEPEP) for each mine site</li> <li>Submission of annual AEPEP reports for each mine site</li> <li>Progressive rehabilitation of mined-out areas</li> </ul>		
Executive Order No.26 (National Greening Program)	<ul> <li>Integration of biodiversity management to the Mining Forest and National Greening Program</li> <li>Establishment of more than 650 hectares of tree plantations including mangroves</li> <li>Maintenance of a biodiversity area where different tree species are earth-balled and propagated</li> <li>Reforestation with indigenous species to preserve the natural flora biodiversity of the affected sites</li> </ul>		

Table 13.	Mining	Laws and	NAC	Compliance
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Republic Act No. 9003 (Ecological Solid Waste Management Program)	<ul> <li>Upcycling projects</li> <li>No-to-plastic policy</li> <li>Integrated waste management program that includes waste diversion of biodegradable and recyclable wastes</li> <li>Replacing steel-belted tires with a more recyclable alternative; nylon-belted tires</li> <li>Bioreactor processing, vermicomposting, and mulching of biodegradable wastes</li> <li>Sanitary landfill for disposable of residual wastes</li> </ul>
Republic Act No. 6969 (Toxic Substances and Hazardous and Nuclear Waste Control Act), DENR Administrative Order 2013-22	<ul> <li>Regular maintenance of equipment that extends its life and delays its disposal</li> <li>Partnership with DENR-accredited haulers and TSD facilities specific to each hazardous waste generated</li> <li>Recharging of batteries</li> <li>Shifting to energy-saving and eco-friendly devices and equipment</li> <li>Monitoring of hazardous wastes from cradle to grave</li> </ul>
Republic Act No. 8749 (Philippine Clean Air Act)	<ul> <li>Regular monitoring of sources of Scope 1, 2, and 3 emissions</li> <li>Use of mercury-free LED and inverter appliances</li> <li>Fuel consumption reduction program</li> <li>Efficient management of activities with high carbon footprint</li> <li>Use of conveyor belt system to reduce fuel consumption by dump trucks</li> <li>Regular measurement of dust emissions</li> <li>Stack emission sampling of new air pollutant sources</li> <li>Air quality management program to continuously ensure good air quality conditions</li> <li>Deployment of water lorries to designated strategic areas to address dust exceedances</li> </ul>
Republic Act No. 9275 (Philippine Clean Water Act)	<ul> <li>Periodic monitoring of water sources</li> <li>Establishment of water treatment facility that generates potable water</li> </ul>
Republic Act No. 8371 (Indigenous People's Rights Act)	<ul> <li>Sharing of 1% of revenue to IPs in the form of royalties, amounting to P115 million for 2019</li> <li>Provision of housing and other benefits to IP communities</li> </ul>



Republic Act No. 9729 (Climate Change Act)	<ul> <li>Regular monitoring of greenhouse gases (GHG) emissions</li> <li>Usage of renewable energy for perimeter lighting</li> <li>Implementation of fuel consumption and reduction programs</li> <li>Conduct of emergency and disaster preparedness programs for local communities</li> </ul>
DENR Department Administrative Order 2004-52 (The Revised Guidelines in the Issuance of Cutting/Harvesting Permits in Private Titled Lands)	• Strict implementation of proper handling of cleared vegetation
DENR Department Administrative Order 2015-07 (mandating Mining Contractors to Secure ISO 14001 Certification)	• All of NAC's mine sites are ISO 14001 certified
DENR Department Administrative Order 2016-01 (Audit of all Operating Mines and Moratorium on new Mining Projects)	• DENR conducted an audit of NAC's mine sites which consisted of an examination of all applicable permits, adherence to the conditions of the Environmental Management Certificates (ECC), observation of actual operations, and interviews with various stakeholders
Republic Act No. 10173 (Data Privacy Act)	<ul> <li>Appointed a data protection officer</li> <li>Implementing measures to protect systems from inbound and outbound attacks or DDOS</li> <li>Deploying cloud-based email protection to prevent spam, phishing, and malware</li> </ul>

DMC allocates a significant number of resources for the implementation of its programs, specifically in environmental protection. The company's annual EPEP budget is equivalent to 3-5% of the site's direct mining cost. The DMC annual expenditures from 2018 to 2022 for its EPEP, SDMP, and SHP is shown in Table 14.

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Year	EPEP	SDMP	SHP
2018	7.31	2.25	2.12
2019	8.88	1.14	1.08
2020	9.23	4.06	1.42
2021	5.7	6.84	1.85
2022	8.74	7.05	3.47

Table 14	FPFP	SDMP	and SHP	expenditures	, in million Php
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# 5.1.5. Environmental Manual of NAC

As approved by senior management of NAC and its subsidiaries in 2019, the Mines Environmental Protection and Enhancement Department (MEPED) of the NAC Group adheres to the environmental procedures manual in relation to Land Development and Management (Mine Rehabilitation, Land Use and Waste), Air Quality Monitoring (Emissions), and Water Quality Monitoring (Water Management). The procedures stipulated therein comply with all the mandated standards and environmental programs of the Department of Natural Resources (DENR) and its attached agency, the Mines and Geosciences Bureau (MGB). The manual can be accessed via this link: <u>https://nickelasia.com/assets/documents/Envi-Procedures-Manual\_052913.pdf</u>.

# 5.1.6. Land and Biodiversity Protection

NAC is making a huge effort to protect biodiversity in its areas of operation, recognizing the importance of natural habitats to various flora and fauna species, some of which are included in the IUCN Red List and national conservation list. The Company, therefore, implements consistent practices as mitigating measures, such as:

- Proper handling of cleared vegetation, including topsoil management
- Acquisition of Special Tree Cutting and Earth-balling Permit (STCEP) for earth-balling projects and strict compliance with the requirement
- Progressive rehabilitation of mined-out areas and reforestation with indigenous species to preserve the natural floral biodiversity of the affected sites.

As for DMC, revegetation activities of open and degraded areas within the MPSA area are confined on temporary revegetation/rehabilitation and progressive rehabilitation.

# 5.1.7. Energy Consumption and Management

Efficient use of resources combined with practical resource management plans implemented with care was the approach NAC used as it aimed to reduce overall energy consumption across the organization.

DMC currently utilizes three generator sets that are categorized according to kilovolt-ampere (kVA) measurement output for its energy consumption management system: 569 kVA, 225kVA, and 125 kVA. During mining season, the 569 kVA generator is usually being operated during daytime. The operating genset switches to 225 kVA on nighttime. However, during off-season, the 569 kVA generator is not utilized. Instead, 225 kVA and 125 kVA generators are being used on daytime and nighttime, respectively.

# 5.1.8. Water Use and Discharge

Facilities and activities that could pose a threat to groundwater quality and condition are being identified by NAC. Each mine site has a water management plan, together with several policies and practices on water conservation. Among the processes that are being performed are the following:

- Monthly and quarterly physical and chemical monitoring of Total Suspended Solids (TSS)
- Establishment of activated carbon gabions
- Regular dredging of sumps and ponds
- Planting of slopes to reduce exposed areas
- Vetiver grass planting in ponds for phytoremediation
- Using oil-water separator to prevent contamination
- Covering of ore stockpiles to minimize silted water
- Generation from stockpile areas
- In-house water sampling
- Emergency response procedures for accidental releases of contaminated water
- Construction of a drainage system that directs water/leakages to designated areas of treatment

Water use and discharge are regularly monitored, and proper mitigation measures are implemented for known risks. Wastewater undergoes filtration through silt containment ponds and was then reused for dust suppression activities and product washing.

DMC conducts maintenance on settling ponds by desilting. After desilting, the collected silt will be utilized for berms, backfilling, and stockpiling.

# 5.1.9. Air Protection

NAC's operating mines conduct regular emission testing and measurement of dust emissions to ensure compliance with all air quality regulations. In addition, the company has also acquired necessary permits for pollutant- emitting devices and provided monitoring reports to DENR agencies that assured emissions are well within the regulatory limits.

During sunny weather, DMC regularly conducts dust suppression activities along mine haul roads to minimize the level of Total Suspended Particulates (TSP) and Particulate Matter (PM10) in the air.

Air sampling for greenhouse gases (GHG) and other gases generated by the powerhouse is sampled quarterly/semi-annually by a 3<sup>rd</sup> party laboratory. In-house ambient air quality monitoring is being done periodically. The following mitigating measures are being implemented in the improvement of air quality:

- Ensure that the emission level of equipment (i.e., loader, dump trucks) is within permissible limits.
- All vehicles and mechanical devices employed in the works should be equipped with an effective exhaust muffler.
- Periodic air quality monitoring thru an accredited laboratory (3rd party) and regular monitoring of emission estimates.
- Conduct regular maintenance of vehicles/equipment used in the mining operations and service vehicles to prevent deleterious emissions of gases.



#### 5.1.10. Waste Management

As a responsible corporate citizen concerned not only for the environment but also for the health and safety of its people, NAC fully supports the global campaign on reducing waste. Accordingly, the company conscientiously implemented an effective solid waste management plan.

NAC supports the principle of upcycling, seeing great value in technologies that help the company manage wastes effectively, such as DOST's bioreactor, vermicomposting, and mulching for biodegradable wastes; the use of Materials Recovery Facility (MRF) for recyclable and reusable wastes; and the use of sanitary landfill for residual wastes.

In DMC, all types of solid wastes from all area sources within the mine site are being collected twice a week. Glass and hard plastic wastes are also collected from the mine site and as well as from the community to be granulated and shredded for eco-bricks production. Diverted wastes, which include wastes stored in the MRF and composted wastes, are being recycled and reused.

#### 5.1.11. Mineral Waste Management

In compliance with DENR Memorandum Order No. 99-32 Series of 1999, the operating mining companies of the NAC Group implement the management of mine waste guided by current best practices for control of its impacts and efficient protection of the environment.

In DMC, mine waste is utilized as backfill material for road maintenance, and berm construction in mine roads and some mine areas which are situated along cliffs and ravines having moderate to sleep slope gradients.

#### 5.1.12. Climate-related Risks and Opportunities

NAC is aware that concerns about dangers and difficulties associated with climate change are inseparably connected to issues about resource management. The NAC Board of Directors and Management Team takes this issue seriously and closely monitor it; and as a result, an Enterprise Risk Management (ERM) system was built that enables the business to appropriately detect, assess, and manage such risks.

In order to manage the business' operations or reduced operations during potential interruptions, NAC's risk management approach addresses climate-related risks with action plans, people that are responsible for relevant duties, and anticipated deadlines. The risks are identified based on how they would impact our people's safety, the supply chain, the steady supply of electricity and the smooth flow of logistics in and out of mine sites.

Essential to the ERM is preparing both people and facilities for emergencies, the training of emergency responders, the provision of equipment and technology, and the physical security and redundancy of back-up systems.

NAC collaborates with other industry players, its host communities, and nearby communities, as well as government agencies and regulatory bodies in the creation of resilient and sustainable communities. In addition, the company is proactively working to safeguard shared natural resources for the benefit of future generations.

# 5.2 Social Aspects

DMC's interests are consistent with stakeholders and NAC. Its decisions and actions reflect values that are held by both its employees and the communities in which they operate. These consist of integrity, honesty, and transparency.

# 5.2.1. Community Programs

The Social Development and Management (SDMP) and Corporate Social Responsibility (CSR) are part of DMC's community programs. The CSR programs are solely through the company's initiative to elevate the communities in their areas of operations, whereas the SDMP is mandated by law.

As for the DMC's social support, the SDMP projects and the CSR programs amounted to an expenditure of Php 7.05 million in 2022 and Php 1.15 million, respectively.

For SDMP, the law provides for 1.5% of annual operating costs to fund the SDMPs for the host communities. The NAC's operating subsidiaries undertake initiatives that have a positive impact on host communities, particularly in education, health, housing, and livelihood, and frequently go beyond their SDMP requirements.

NAC keeps making every effort to create SDMP and programs that truly address the needs of the communities and seek to have a positive long-term impact. Specific SDMP initiatives that span five-year periods are chosen by the local communities themselves as responsive to their most pressing needs through a series of consultations with multi-stakeholder groups to assure continuity and maximize benefits. The Community Relations associates in each of the Company's subsidiaries are responsible for carrying out and overseeing approved programs, and they are required to submit reports to the Multipartite Monitoring Team on a regular basis.

# 5.2.2. Promoting Inclusive Development for Indigenous People (IP)

NAC believes that the rights to Ancestral Domains (ADs) of Indigenous Peoples (IPs) deserve to be recognized and respected. DMC's Isabela Nickel Project site is covered by such rights. Hence, DMC is subjected to the imposition of 1% royalty on gross revenue for indigenous peoples, as stated in the Indigenous People's Rights Act of 1997, also known as the IPRA Law.

One of DMC's initiatives to promote the welfare of the Indigenous Peoples of Dinapigue is the provision of Advance Royalties to the three Agta Tribes namely the Anggo Tribe in Barangay Ayod, Salulog Tribe in Barangay Dibulo and the Digumased Tribe in Barangay Digumased. This initiative was adopted since 2015 and is being implemented to date pending the signing of the Memorandum of Agreement with the Agta-IPs of Dinapugue.

A total of PHP 10,660,985.34 was spent for advance royalties' assistance to the three Agta Tribes as of 2022.

# 5.2.3. Empowering the Communities' Hope through Educational Support

NAC makes it a priority to invest in education-related projects that support youth development and provide them the information and self-assurance they need as they work with communities to achieve economic freedom. NAC continues to monitor the needs of the education sector in its host communities and surrounding areas as it maintained its support through scholarships, grants, and the provision of tools and equipment, despite the impact of community quarantine restrictions caused by the pandemic on the nation's school system.



DMC launched and implemented a program for the qualified community members to have access to education as follows:

Table 15. SDMP Access to Education I	Program
--------------------------------------	---------

Project / Program Name	Access to Education and Educational Support Program
Description of the program	<ul> <li>Support a college scholar taking up Bachelor of Science in Mining Engineering. This includes tuition fees, board and lodging and allowances.</li> <li>Subsidy to volunteer teachers and daycare workers</li> </ul>
Expenditure	• Php 160,024.50
Impact/Expected impact	Access to education, educational opportunities to members of the community

Four (4) Child Development Centers (CDC) were given improvements and renovations throughout the years being in Barangays Ayod, Bucal Sur, and Digumased. Among the repairs and improvements include the construction of fences, ceiling repairs, and purchase of additional materials.

In partnership with TESDA, DMC provided NCII training for masonry. The beneficiaries include five (5) community members from Barangays Dimaluade and Ayod.

#### 5.2.4. Fueling Entrepreneurial Spirit in the Community

The foundation of a sustainable social development strategy is equipping community members with the knowledge and tools they need to improve themselves. NAC believes that acquiring practical livelihood skills and knowledge will help people reach financial security and economic freedom.

Other livelihood projects include provision of capital assistance to three (3) farmers association and Bucal Sur fisherfolk to buy and sell fertilizers, piglets and fish, and sardines processing.

#### 5.2.5. Promoting Health and Wellness in the Community

NAC has built complete medical facilities in each of the active mines out of concern for the wellbeing of the local communities. The Company arranges medical missions for other local areas in addition to offering medical services through these facilities.

To raise knowledge of Covid-19 prevention policies and methods across the mine sites and host communities, the operating mines conducted information and education dissemination campaigns. NAC subsidiaries offer benefit packages that go beyond simple compliance, from giving transportation reimbursement, vitamins, personal protective equipment (PPE), COVID-19 testing, and free flu shots to safeguard employees' health, to offering of free accommodations for crucial workers during the pandemic.

To provide access to healthcare, DMC provided a total of PHP 1,309,202.18 for the year 2022. Various medical apparatuses were turned over to Barangays Ayod, Dimaluade, and Dibulo; and sanitary toilet bowls were also delivered and provided to Barangays Dimaluade and Ayod.

Because prevention is better than cure, the company also conducted Preventive Healthcare Programs for the different Barangays; wherein the company, in partnership with the Municipal Health Office (MHO), conducted an IEC on Communicable and Non-Communicable Diseases and Reproductive Health.

Additionally, the company also conducts medical missions to bring much-needed medical care to the residents of Dinapigue and the IP stakeholders and partners with organizations such as the Southern Isabela Medical Center (SIMC) and Unciano College of Dentistry to provide access to medical and dental practitioners.

# 5.2.6. Welfare of NAC Employees

The welfare of the Company's own people is the second critical element of the Company's approach to sustainable development. We believe that happy workers produce more efficiently which leads to higher productivity. We strive to continuously improve the employees' welfare thru the adoption and effective implementation of the Family Welfare Program (FWP) to promote well-being of the family through reproductive health and responsible parenthood; education and gender equality; spirituality or value formation; income generation and livelihood and cooperative; medical health care; nutrition; environment protection, hygiene, and sanitation; sports and leisure; housing and transportation.

# 5.2.6.1. Employee Diversity

DMC demonstrates its commitment to the welfare and well-being of its people by offering a stable and reliable source of gainful employment as it focused on inclusive and sustainable growth even through challenging times brought about by the global pandemic.

Steadfast in supporting the principles of human rights, fair compensation, the practice of non-discrimination and equal employment, and development through continuous learning, DMC promotes diversity and inclusion in all its subsidiaries.

This is made possible through the Company's Impact Sourcing practice, where local hires are prioritized to be provide with opportunities. DMC welcomes IPs in the workforce and recognizes that their successful careers enable the Company to fulfill part of our commitment to their forefather who also welcomed the company onto their ancestral land.

The Company places the best available person fit for the role. Recruitment decisions are based on assessment criteria that identify candidates' knowledge, technical and professional skills, potential for growth and leadership, and attitude and character that fits the Company's culture and shared values.

# 5.2.6.2. Employee Training and Benefits

Aside from hiring policies and practices, DMC implements employee engagement programs and initiatives to ensure that people are aware that their contributions are recognized and valued. Among these programs are regular pep talks before and after work shifts, and continuous training opportunities (covering health and safety, quality, environmental, technical, Continuing Professional Development (CPD), leadership, among others.

Training and skills development programs for the employees based on periodic training needs analysis is also an integral component to enhance the welfare of the Company's employees. The Company provides yearly training and development opportunities for all employees to enhance their knowledge, skills, and competencies towards the achievement of their individual performance targets, as well as their career goals. The trainings cover a variety of aspects aimed at further enriching their technical competency, as well as their intangible or "soft skills" that would help them perform their roles more effectively.

The Company also supported the creation of the TESDA Assessment Center which aims to upgrade the skills of drivers and operators through the issuance of NC2 certifications. Scholarships are granted to employees and their dependents who want to pursue a degree in Mining Engineering.

Employee development does not stop at the provision of training as performance evaluations are an essential factor in employee retention strategies. Through effective and timely assessments, leaders can provide commendations as well as coaching and interventions for those who need improvement.

Employee performance is tracked using an established Performance Evaluation and Development Sheet with key performance indicators. Employees who delivered excellent service throughout the year are recognized during the Service Awards program and are given promotions, bonuses and/or salary increases. Seeking to also improve on the process for the benefit of its employees, DMC is developing a new performance evaluation system for 2022.

# 5.2.7 Creating a Safe and Healthy Workplace

NAC is safety-conscious and alert to potential dangers. Since keeping people safe is top priority, the company has ensured that everyone has the proper knowledge and training, provided with appropriate Personal Protective Equipment (PPE), and supported by policies, standards, and processes.

During the 1st quarter of 2020, the DMC Health Department implemented its control and services in the prevention and control of COVID-19 in the workplace. Guidelines being issued by the Department of Health and Department of Labor and Employment were disseminated to all DMC Employees, including contractors. DMC Health Department strengthen its monitoring and continuously maintain communication protocols to Dinapigue Municipal Health Office in the reporting of potential COVID-19 cases at the workplace.

DMC has established its Quarantine Facility located at the Mine Site to help municipal LGU decongest the designated quarantine areas considering the influx of arrivals of locally stranded Individuals coming from other provinces. To ensure that DMC has established the minimum requirements needed to operate the quarantine facility, it communicated with Dinapigue Municipal Health Office to conduct inspection at the area to identify other needs and improvements.

To ensure early detection of COVID-19 infected personnel, DMC has established its COVID-19 Consultation and Contact Tracing Team. This team will ensure subsequent collection of further information about the individuals contact to interrupt the ongoing transmission and reduce the spread of infection at the workplace. The Health Department ensures that all incoming DMC Employee, Contractors, and Visitors were communicated to Dinapigue COVID-19 Triage with requirements readily available.

As part of DMCs' Covid-19 Program, purchasing of essential COVID-19 supplies and medicines was done to ensure that resources are readily available in case of emergency. Installation of hand-washing stations, alcohol dispensers and foot baths in strategic areas was being done. Disinfecting solutions needed for sanitation of DMC Facility was made available.

The Health and Safety Department implemented programs such as daily temperature monitoring of workers, proper used of PPE and Travel Declaration monitoring of all incoming visitors to maintain DMC as a COVID-19 Free Workplace. Review and updating of Covid-19 protocols in line with the community procedures was being done as needs arises.

DMC, in coordination with the Municipal Health Office, had participated in the COVID-19 vaccination program. The company sets a target at least 90% of the total population to be vaccinated. Regular DMC Employees were 100% fully vaccinated at the end of 2022. Contractors of DMC also participated in the said vaccination program.

# 5.2.7.1. Safety Policy

The Safety Policy in the Code of Business Conduct and Ethics of NAC is as follows:



- Comply strictly and consistently with health and safety standards. Compliance with safety standards is the responsibility of each one in the Company.
- Safety is an individual as well as a collective responsibility. Make it a responsibility to assist other employees and visitors to understand and conform to our health and safety standards. Report potential risks so that appropriate corrective action may be taken.
- Provide the necessary knowledge, organization, tools, systems resources, and training required to achieve our safety objectives.
- Seek and adopt new and innovative ways to ensure that our workplaces are free of occupational hazards.
- Come to work or attend to Company business free from the influence of any alcohol and/or illegal or controlled substances.

#### 5.2.7.2. Safety and Health Program

Dinapigue Mining Corporation takes its commitment to promote and develop a safe working environment seriously for its workforce through the implementation of a sound Occupational Safety and Health program adherent towards responsible mining in accordance and compliance to DENR CDAO No. 2010-21, Sec.144. Below are some of the policies and programs to support DMC's goal towards a safe working environment:

- Equip all employees with the information of Safety and Health policy as well as awareness of hazards and risks on their workplace through Safety Orientation and toolbox talks.
- Increase competencies and develop skills of our employees for emergency preparedness and response through trainings, seminars, and drills.
- Monitors good housekeeping at work areas which is also a basic part of incident and fire prevention.
- Regular field roving inspections / CSHEC inspections
- Provision of prescribed Personal Protective Equipment (PPE) based on their nature of work along with Safety Devices, as needed.
- Supply first aid kit and other emergency equipment
- Health care and services of every employee
- Close monitoring on work-related injuries (first aid/medical cases) and lost time injuries, and so with accidents (e.g., property damage) and risks findings
- Thorough investigations of incidents and accidents to understand the root causes and to provide necessary control measures and implement corrective actions to prevent its reoccurrence.
- Employee engagement on safety activities through promotions and incentives and among the management through meetings.

DMC invests in proper safety equipment for every employee and visitor. Standard personal protection equipment (PPE) includes hard hats, reflectorized vest, raincoats, safety shoes and boots, eye goggles/spectacles, dust/chemical respirators/ masks, earmuffs, hand gloves, as well as special PPEs for a specific work activity (assay, motor pool). DMC not only invests in the above but also on management and employee trainings to increase their competencies and to be effective in their role especially on emergency preparedness and response.



# 5.2.7.3. Safety Performance

DMC encountered its first lost time accident on June 24, 2020, during tree cutting activities where the chainsaw operator was struck by a branch of tree directly to his face which caused fracture, comminuted nasal bone that prevented him to report back to his duty.

During the investigation, it was found out that there are some safety work procedures that were not executed (e.g., incomplete PPE - no face protection). Involved person was immediately brought to the clinic for first aid care and eventually transported to the hospital for further medical treatment and examinations. The involved person was not able to report back to his work as he needed time for recovery due to the injury that he suffered which took 7 days. Safe manhours record was then reverted to zero.

As a learning experience, DMC worked through a thorough planning and implementation of safety programs in preventing incidents as well as to implement corrective actions and control measures to maintain safe, healthy, and accident-free workplace.

DMC applies NAC's Total Loss Control Management (TLCM) Program which focuses in controlling losses before exposures eventuated. Yearly, all NAC Operating Companies are being audited by a team composing of Safety Personnel from different operating companies.

The primary objective of the Audit is to determine the loss control effectiveness of the company's safety activities.

- 1. To carry out a systematic critical evaluation of all twenty-one (21) elements of the health and safety program;
- 2. To analyze and appraise critically the company's efforts to identify, evaluate, and control all potential accident losses;
- 3. To critically evaluate the level of occupational safety and health standard compliance to legal requirements as well as those established by the individual company.

The rating system shall be used by all operating companies of Nickel Asia Corporation as an evaluative tool for designated personnel. It encompasses the latest thinking in safety and is designed to prevent and control the following:

- 1. On-the-job injuries and illnesses;
- 2. Off-the-job injuries;
- 3. Fire and Explosion;
- 4. Accidental damage to tools, equipment, materials, and buildings;
- 5. Production delays and interruptions due to all types of accidents; and
- 6. Wastage of materials and efforts.

On August 11, 2022, DMC had its first TLCM Audit conducted by eleven (11) safety representatives from different NAC operating companies and was awarded the Level 1 NAC TLCM System Level 1 Audit with Rating of 89.4%.

Since the June 2022 Lost Time Accident, DMC had improved its safety statistics and had zero (0) lost time incident and a zero (0) frequency and severity rates as of May 29, 2023.

DMC had also noted a 59% decrease in the Incident Rate (IR) recorded with 25.98 IR in 2021 to 10.54 IR in 2022.

An incidence rate of injuries and illnesses may be computed from the following formula: Incidence rate = (Number of injuries and illnesses X 1,000,000) / Employee hours worked

MGB Region 2 also commended DMC last June 28, 2022, for attaining 1,057,723 man-hours without lost time accident (LTA) from June 25, 2020, to May 31, 2022. Just recently, on February 28, 2023, DMC achieved 2,020,739 man-hours without LTA.

DMC was also awarded with a plaque of recognition for continuing implementation of the Environmental Protection Program, Social Development - Host and Neighboring Communities, and Safety and Health of the Workers last June 28, 2022.

DMC also coordinates with the other operating companies of NAC to ensure that incidents in other sites will not happen in DMC. In 2019, a total of four (4) work-related fatalities were recorded in other operating companies of NAC. This caused the organization to take a serious review and a thorough evaluation of its processes to address the weaknesses revealed by the investigations of these incidents. A general safety stand-down of mining operations was implemented during the investigations, until all the hazards were corrected, and recommendations were complied with.

To prevent such incidents in the future, the Central Safety and Health Committee (CSHEC) of all mine sites have stepped up their drive to always ensure the consistent execution of the safety programs in every situation.

DMC also established a team to audit its night shift operations to ensure that all necessary controls are in place. These include installation of additional tower lights for night shift operations, stricter evaluation of hauling manpower and revision of necessary procedures in dumping and spotting in stockpile areas to ensure that personnel are visible during these activities at night.

The DMC Central Safety, Health, and Environment Committee (CSHEC) is composed of the Resident Mine Manager, at least one safety engineer, and representatives across Divisions, Departments, Sections and Contractor Representatives. The CSHEC implements standard processes and constantly monitors issues and employee concerns relating to health, safety, and environment. DMC CSHEC conduct regular inspections to ensure compliance to the Company's safety rules and regulations. Department Managers are assigned as inspection team leaders with supervisors and contractor representatives as members.

Seeking to ensure that employees have a voice in these Health and Safety Committees, employees are proactively sought for inputs and suggestions. In these Committees, DMC has 36 employee representatives while RTN has 45, TMC has 55, HMC has 28, and CMC has 35.

From a 1.40 Lost Time Injury Frequency Rate (LTFIR) last 2019 due to struck-by and run-over accidents in two of the NAC Group's operating sites to a 0.10 LTFIR last 2020 due to a struck-by accident in one of the operating sites, NAC Group has now maintained a ZERO LTIFR since 2021, which serves as an evidence that the Group places a high focus on safety and makes safety its top priority. The figures reported also included service contractors. The formula used in the calculation of LTFIR is stated below.

LTFIR = ([Number of lost time injuries in the reporting period] x 1,000,000) / (Total hours worked in the reporting period).

NAC Group's Total Recordable Incident Rate (TRIR) has continued to decrease from a TRIR of 1.99 last 2019 to a TRIR of 0.63 in 2022. Included in the computation of TRIR (formula shown below) are man-hours likewise worked by all service contractors.

TRIR = Number of incidents x 200,000 / total number of employee hours worked in a year

# 5.2.7.4. Hazard Identification Risk Assessment and Risk Control (HIRARC)

The NAC Group of Companies follow a hazard identification risk assessment and risk control (HIRARC) process to ensure that occupational health and safety hazards, the risks posed by their presence, and the controls in place to avoid or mitigate them are systematically identified, documented, analyzed, prioritized, and monitored. The risks and controls are listed in DMC's Aspect and Hazard Register (AHR) and Risk Register (RR) and reviewed by DMC's Risk Management Committee (RMC).

The DMC Risk Management Committee (RMC) is composed of the Resident Mine Manager as the Site Lead, Interim Risk Officer, RMC Chairman and Members from different departments, Section / Department / Division Heads with supervisors as alternate members. Review and audit of DMC Risk Register and HIRARC controls are done either on an annual or as-needed basis depending on the severity of hazards and risks being managed. A third-party auditor is also engaged to ensure transparency of the processes being undertaken.

# 5.2.7.5. Contractor's Safety and Health Program

DMC as part of NAC's operating companies not only ensures a safe and healthy workplace for its employees but also requires all its subcontractors providing services to observe safety as a top priority. Contractors must have their own respective Safety and Health Programs (SHP) with the following protocols in place:

- Organizational Structure and Safety Committee
- Safety Meetings, Promotions and Trainings
- General Safety Inspection and Monitoring
- Accident and Near-miss Incident Reporting, Investigation and Analysis
- Emergency Response and Preparedness
- Health Hazards Control and Implementation
- Provision of Personal Protective Equipment
- Good Housekeeping

The NAC Group believes that every employee is responsible for the safety and well-being of each individual in its operating sites.

#### 5.3 Governance Aspects

#### 5.3.1. Governance Statement of Nickel Asia Corporation (NAC)

NAC is committed to the highest standards of corporate governance as articulated in its Articles of Incorporation, By-Laws, Manual on Corporate Governance (CG Manual), Code of Business Conduct and Ethics (Code), and pertinent laws, rules, and regulations.

The Board, Officers and employees of the Company commit themselves to the principles of sound corporate governance provided in the CG Manual and acknowledge that the same shall serve as a guide in the attainment of the Company's corporate goals, the creation of value for all its shareholders, and in sustaining the Company's long-term viability.

The Board likewise approved and adopted the Code in furtherance of its commitment to good and effective corporate governance. The Code applies to Directors, Officers and employees of Nickel Asia Corporation and its subsidiaries, who are all expected to maintain high ethical standards of conduct and to comply fully with applicable laws and governmental regulations. It is designed to ensure consistency in how they conduct themselves within the Company, and outside of the Company in their dealings with all stakeholders.



Manual on Corporate Governance (CG Manual) and Code of Business Conduct and Ethics (Code) can be accessed at <u>https://nickelasia.com/corporate-governance/policies-processes-and-practices</u>.

5.3.2. Vision, Mission, and Core Values of NAC

# 5.3.2.1. Vision

Nickel Asia Corporation's Vision statement is:

"We strive to contribute to sustainable national development by adopting our ESG Roadmap in order to achieve the highest standards in the responsible utilization of our country's natural resources".

# 5.3.2.2. Mission

Nickel Asia Corporation's Mission statement is:

"We exist to responsibly and sustainably develop our country's natural resources to meet society's needs, contributing to a brighter future for our people, our communities, and our other stakeholders, always conscious of being stewards of the environment where we operate".

# 5.3.2.3. Core Values

Nickel Asia Corporation's Core Values are as follows:

- Responsibility
- Leadership
- Financial Growth
- Integrity
- Respect
- Safety
- Teamwork

#### 5.3.3. Governance Structure



Figure 10. Governance structure of NAC

The Board of Directors is primarily responsible for the governance of the Company and shall provide the policies for the accomplishment of corporate objectives, including the means by which to effectively monitor Management's performance. It is the Board's responsibility to foster the long-term success of the Company and to sustain its competitiveness and profitability in a manner consistent with its corporate objectives and the best interest of its stockholders.

NAC has a Chief Governance Officer who is tasked with ensuring that corporate governance policies are disseminated, adopted throughout the organization, and become an integral part of the Company's culture. In addition, this officer ensures that the necessary systems are in place to monitor compliance.

The Chief Risk Officer supervises the Company's Enterprise Risk Management System and spearheads its implementation, review, and continuous improvement. He takes the lead in identifying key risks exposure relating to economic, environmental, social and governance factors that may affect the achievement of the Company's strategic objectives and developing risk mitigation plans for such risks. He communicates the top risks and the status of implementation of the Company's risk management strategies and action plans to the Board Risk Oversight Committee and works with the President and CEO in updating and making recommendations to the Board Risk Oversight Committee.

The complete governance structure of NAC can be accessed through this link: <u>https://nickelasia.com/corporate-governance</u>

# 5.3.4. Annual Corporate Governance Reports

NAC commits to good governance and continues to raise the bar by implementing programs and measures aimed at value creation and long-term growth.

In compliance with the Securities and Exchange Commission (SEC) Memorandum No. 05 Series of 2013 as updated and amended, the Company regularly updates its Annual Corporate Governance Report (ACGR).

The ACGRs of NAC can be accessed through <u>https://nickelasia.com/corporate-governance/annual-corporate-</u>

governance-report.

# 5.3.5. Corporate Governance Policies

The Company's corporate governance principles, structures and processes are established and articulated in two fundamental policies: The Manual on Corporate Governance and the Code of Business Conduct and Ethics. These policies are responsive to the Company's operations, business environment and laws, rules, and regulations applicable to the Company. Pursuant to the principles embodied in the CG Manual and the Code of Business Conduct and Ethics, the Company has adopted the following Corporate Governance Standards/ Policies:

- Integrity
- Anti-bribery and Anti-corruption Policy
- Compliance with Laws, Regulations and Standards
- Safety Policy
- Environmental Policy
- Risk Management Policy
- Insider Trading Policy
- Conflict of Interest Policy
- Procurement Governance Policy
- Gifts, Hospitality and Sponsored Travel Policy
- Whistle Blowing Policy
- Policy on Related Party Transactions
- Policy on Third Party Advisors
- Renumeration Policy
- Policy on Cash Dividends
- Policy on Sustainability
- Policy and Data Relating to Health, Safety and Welfare
- Training and Development Programs
- Proper Communication: Disclosure
- Confidentiality of Certain Information

NAC has established its Anti-Bribery and Anti-Corruption Policy which states that "Integrity and Honesty are one of core values of Nickel Asia Corporation (the "Company") that guide the work and conduct of business of the Company and its dealings with its stakeholders. The purpose of this Anti-Bribery and Anti-Corruption Policy ("Policy") is to confirm the commitment of the Company to (1) adhere to the highest norms of ethical conduct, not only in words, but more importantly, in its actions, (2) conduct its business honestly, equitably, and fairly, (3) strive for consistency in the Company's actions, and (4) comply with all laws and regulations applicable to its business activities in all communities it operates in." The full text of the Anti-Bribery and Anti-Corruption Policy of NAC can be accessed through this link:

https://nickelasia.com/assets/documents/NAC-Anti-Bribery-Policy.pdf



# 5.3.6. "Toward Sustainable Mining" (TSM)" Initiative

NAC maintains an active participation in organizations that shares its values, principles, and advocacies. The Company believes that it has a role in being a responsible corporate citizen and is part of an industry supporting national progress.

NAC actively supports the initiatives of the Chamber of Mines of the Philippines (COMP); particularly its decision to mandate the adoption of Canadian mining standards, or "Toward Sustainable Mining" (TSM), of its member mining companies.

The TSM will ensure that the COMP's member mining companies are accountable, transparent, and credible, with respect to their mining practices. The TSM standard covers key areas, including tailings management, community outreach, safety and health, biodiversity conservation, crisis management, energy use, and greenhouse gas emissions.

#### 5.3.7. "Baguio Declaration" Initiative

NAC also fully supports the COMP's adoption of the Declaration of Commitment to Responsible Minerals Development in the Philippines, otherwise known as "The Baguio Declaration".

The Company's management approach is fully aligned with the five (5) main principles of the Baguio Declaration, and its five (5) elements of Responsible Minerals Development, all of which are listed below as follows:

- People Orientation
- Protection and enhancement of the environment
- Respect for the rights and welfare of indigenous peoples
- Fair contribution to the National Economy
- Efficient, competitive, and compliant with international standards

# 5.3.8. Alignment to United Nations Sustainable Development Goals (UN SDGs)

NAC's environment, social, and governance initiatives work in consonance with the company's overall objective to support the United Nations Sustainable Development Goals (UN SDGs) shown below:



Figure 11. United Nations Sustainable Development Goals (UN SDGs)

NAC's Sustainability Framework is focused on five (5) key pillars to drive significant and meaningful impact for its stakeholders and aligns its various efforts towards the world's shared goal of enabling long-term positive change.





# SUSTAINABILITY FRAMEWORK



# **Good Governance**

Leadership and Commitment Environmental, Social, and Economic Risk Management Governance Policies Stakeholder Management

citizen and lend our expertise to help engage in constructive public dialogue and informed debate on issues of importance to us as a company, the mining industry and in the communities we operate.

We strive to act as a responsible corporate





#### Welfare of Our Employees

Employee Relations and Management Collective Bargaining Agreement Communities' Skills and Competency Development Human Rights and Equal Opportunities



Each of our employees is respected and valued and we fully observe human rights, occupational safety and non-discrimination in the workplace. We do our utmost to develop employee potential, compensate fairly and commensurately to performance and provide growth opportunities

We promote a strong culture of safety

control loss.

embedded in operational excellence and robust

risk management. We approach safety with a multi-level focus to empower our personnel to embrace the value of accident prevention and



#### Safe Workplace

Safety and Health Progress and Procedures Education and Training on Health and Safety Topics Emergency Response and Crisis Management Security of Mine Sites and Maintenance of Equipment





#### **Protecting the Environment**

Energy Consumption and Management Rehabilitation and Reforestation Water Consumption and Discharge Waste Management Dust and Noise Control



We acknowledge our responsibility to protect, reclaim, and enhance the environment in which we operate through able management and steadfast environmental stewardship. Our companies address environmental impacts through their respective Environmental Protection and Enhancement Program (EPEP).



#### **Empowering Communities**

Social Development Management Programs Health, Education, Livelihood and Infrastructure Programs Indigenous Peoples' Rights



Through our Social Development Management Programs (SDMPs), which are mandated social expenditures, and Corporate Social Responsibility (CSR) programs, which are voluntary and go beyond SDMP requirements, we aim to empower our shared communities. These projects are done in collaboration and with the support of local government units/organizations. Each SDMP is made in consultation with stakeholders in consideration of theimportant social, cultural, environmental, and economic factors affecting them.

Figure 13. Sustainability framework of NAC

# 6. GEOLOGICAL SETTING

# 6.1 Regional Geology

The Isabela ultramafic complex of Aurelio and Billedo (1987) is extensively exposed along the coast northward from Dinapigue Point to Divilacan Bay. It is dominantly composed of peridotite and subordinated by dunite and pyroxenite. Most of the ultramafic complex had been serpentinized and intruded by diabasic dikes (Peña, 2008). The peridotites are found in contact with basalt and gabbro in the coastlines of Palanan. The contact of the pillow basalts and other mafic rocks sequence that was found in contact with the overlying pelagic chert are exposed in Bicobian, Isabela. The pelagic chert is the sedimentary carapace of the ultramafic complex that consists of indurated alternating brownish and reddish chert. Limestone and Calcareous sediments dated Miocene in age unconformably overlie the ophiolite and are located in Palanan (Andal et al., 2005).

# 6.1.1 Tectonic Setting

The province of Isabela is in the northeastern portion of Luzon. The municipality of Dinapigue is separated from the rest of Isabela province by the Northern Sierra Madre Mountain Range (NSMMR). The NSMMR parallels the east coast of North Luzon then converges with northwest-southeast trending Caraballo Range. The MPSA area of DMC geologically belongs to the Northern Sierra Madre Group and is dominantly underlain by the Isabela Ophiolite. Isabela Ophiolite is dated Early to Late Cretaceous. This ophiolite terrane is believed to have been generated and formed in the Philippine Sea (JICA, 1989).

Ophiolites are oceanic crust material that are thrusted onto continental crust. A complete sequence of ophiolite is composed of ultramafic rocks; primarily peridotites, pyroxenites and dunites at the bottom then grading to mafic rocks composed of gabbro and diabase dikes in the middle, and in the upper layer are pillow basalts and pelagic sediments. The Isabela Ophiolite is a complete ophiolite sequence consisting of an ultramafic complex (Isabela Ultramafic Complex), massive and layered gabbros, sheeted dikes, pillow basalts (Bicobian Basalt), and pelagic sedimentary rocks (Dikinamaran Chert) (Peña, R.E., 2008). This ophiolite complex is bounded to the west by the Northern Sierra Madre Mountain range. The boundary of the Isabela Ophiolite to the west is thrust fault (Divilacan Fault) (see Figure 14).

# 6.1.2 Regional Structures

The evolution of the geological structures of the Northern Sierra Madre are associated with the subduction events along its eastern coast. The Northeastern part of Luzon is divided into two tectonic areas, the western and eastern part that is bounded by the Divilacan Fault. In JICA (1989), a N-S trending thrust is present along the east side of the mountain range. This thrust extends about 90 km from Dinapigue Point to the Divilacan Bay of the eastern coast. In Figure 14, the broken lines represent the approximate trace of Divilacan Fault. The Eastern part belongs to East Tectonic Terrane (JICA,1989), composed of the ophiolite suite known as the Isabela Ophiolite. The Western part belongs to the Central Tectonic Terrane (JICA,1989) which is composed of the Northern Sierra Madre and the Cagayan Basin.

# 6.1.3 Regional Stratigraphy

The Isabela Ophiolite is a complete ophiolite sequence consisting of an ultramafic complex (Isabela Ultramafic Complex), massive and layered gabbro, sheeted dikes, pillow basalts (Bicobian Basalt), and pelagic sedimentary rocks (Dikinamaran Chert), dated Early Cretaceous age (Peña, R.E., 2008). The ultramafic complex is identified as the basement of this area, is extensively exposed along the eastern coast (JICA, 1989). A large portion of the

Isabela Ophiolite is made up of the Isabela ultramafic complex. It is dominantly composed of peridotite and subordinated by dunite and pyroxenite. In Palanan, the peridotites, together with basalt and gabbro, have limited exposure along coastlines. Along the southern coast of Palanan Bay, mantle peridotites, gabbro and pillow basalts are found side by side in fault contact with each other (see Figure 14) (Andal et al., 2005). The pillow basalts are dark, massive, and fine grained. And other mafic rocks sequence was found in contact with the overlying pelagic chert) are exposed in Bicobian, Isabela. They are deposited unconformably over the ultramafic complex. The pelagic sedimentary rocks (Dikinamaran Chert) consist of alternating brownish and light reddish chert beds that comprise the sedimentary carapace of the ultramafic complex (Peña, R.E., 2008). Kanaipang Limestone and calcareous sediments dated Miocene in age unconformably overlie the ophiolite and are exposed in Palanan.



Figure 14. Regional geologic map of Eastern Isabela (modified from Andal et al, 2005)

# 6.1.4 Prospects and/or Deposits in the Region

There are two (2) large scale mines in the region. One is OceanaGold Corporation which operates the Didipio porphyry gold-copper deposit. It is located in barangay Didipio, municipality of Kasibu, Nueva Vizcaya (taken from <a href="https://oceanagold.com/operation/didipo-mine">https://oceanagold.com/operation/didipo-mine</a>). The other is the epithermal gold molybdenum deposit of FCF Corporation located in barangay Runruno, Quezon in Nueva Vizcaya (taken from <a href="https://metalsexploration.com">https://metalsexploration.com</a>).

#### 6.2 Mineral Property Geology

#### 6.2.1 Local Rock Units

The project area is in Barangay Dimaluade, Municipality of Dinapigue, Isabela Province, Philippines. It is underlain by the ultramafic rocks that is attributed to the Isabela Ophiolite. Andal *et al.* (2005) reported that peridotites in Dinapigue is divided into two varieties, the homogeneous lherzolites and layered peridotites.

Lithologies in the MPSA are predominantly peridotites, dunites and pyroxenite. Patches and lenses of dunites and pyroxenites are scattered within the MPSA. A dunite body in Area 4 hosts chromite which is already mined out. Serpentinites are observed within the joint planes of the host ultramafic rocks. No mafic rocks like gabbro have been mapped in the MPSA, although there are gabbros identified adjacent to the MPSA in Area 5 and in Area 3. Figure 15 shows the generalized local geologic map within the MPSA based on the internal geologic mapping report done in 2018. An idealized geologic section of DMC is shown as well in Figure 16.



Figure 15. Map showing the generalized geology of the area

Weathering of these ultramafic rocks produced the laterite ores being mined. The laterite has elevation ranges from 300 to 600 m above sea level. The limonite which is iron (Fe) rich lies on top of the saprolite which is nickel (Ni) rich. The laterite occupies the plateau area and roughly oriented north-south within the property.



Figure 16. Idealized Geologic cross section of DMC Nickel Laterite Deposit

The geological model of Dinapigue Nickel Laterite Deposit as confirmed from geologic mapping, drilling and assay data interpretation is based on the ideal nickel laterite profile composed of distinct conformable layers of the weathered zone overlying the parent rock (see Figure 17).



Figure 17. Schematic laterite profile (M.Elias, 2002)

The primary zones are limonite, saprolite and bedrock. The transition zone is poorly developed and not distinct Saprolite zone can be further divided into an upper soft saprolite zone and rocky saprolite portion near the bedrock. Photo 1 shows roughly the Limonite and Saprolite horizons in Area 1.



Photo 1. Area 4 limonite, saprolite and bedrock profile

6.2.2 Local Structures

There are no major structures like faults mapped within the MPSA. However, there are shear zones identified along Boyong Road, Dinapigue Isabela. This area is outside of DMC MPSA and used as an access road from the town proper to the main camp. Rock type and structures such as shear zone were identified during the assessment. Shear zones are dominantly harzburgite with serpentinite that appears as irregular shaped rectangular blocks. The orientation is generally northeast trending with moderate to steep slopes or dips 40° to 60°. It has a total of about 1.2-kilometer road distance going northeast (see Photo 2).



Photo 2. Extent of shear zone (Geohazard Assessment, 2019)

# 7. MINERALIZATION IN THE MINERAL PROPERTY

# 7.1 Mineral Deposit Type

Nickel deposits are formed from the chemical and mechanical weathering of ultramafic rocks. These rocks are present in ophiolite complexes as harzburgite and dunite. Pervasive weathering disintegrates the susceptible minerals. Their chemical components are being diffused and transported in groundwater that may result to new minerals that is much stable in a new environment. The Ni-Fe Laterites have been classified based on their weathering profile and their mineralogical characteristics (USGS – Marsh et.al, 2013). Three major types of Ni-Fe Laterite deposits – hydrous MG-silicate, clay, and oxide.

The nickel laterite deposit within the tenement of DMC can be classified under the oxide subtype. It is formed through the weathering of the minerals harzburgite and dunite. In an environment of low relief and heavy rainfall, the olivine, clinopyroxene, and antigorite of the partially serpentinized ultramafic rocks were gradually leached of their most soluble elements, Mg and silicon (Si), whereas the less-soluble components, Fe, Ni, Co, Al and Cr, were enriched (USGS – Marsh et.al, 2013).

# 7.2 Style of Mineralization

# 7.2.1 Mineral Deposit Model

The deposit is classified as laterite which is divided into 2 domains- limonite which is Fe-rich and saprolite which is Ni-rich. The laterite is the product of the weathering of ultramafic rocks and usually follows the topography of the area.

# 7.3 Wall Rock Alteration, Zoning, and Paragenesis

Wall Rock Alteration, Zoning, and Paragenesis are not applicable in nickel laterite deposit since these features are usually observed on base metal deposits such as gold and copper.

# 7.4 Localization of the Deposit and Continuity of Mineralization

The deposit is developed within the weathered soil horizon and the continuity of the mineralization is confined within this layer. This zone is usually located within the plateau and on tops of ridges (see Figure 15).

The ore controls for the Dinapigue Nickel Laterite Deposit are the following :

- Lithological Control the bedrock should be ultramafic, otherwise the weathered profile will not develop high nickel and iron grades
- Favorable Topography gentle to flat elevated topography allows for the significant accumulation of limonite and saprolite. Areas with very steep
- Structural Control wide zones of highly fractured zone associated with faults in a favorable topography can increase the thickness of the nickel laterite. However, this has not been observed in the Valencia deposit; and
- Tropical Climate alternating wet and dry conditions enable differential leaching and concentration of mobile elements such as Ni, Co, Si, and Mg, and immobile elements such as Fe, Cr, and Mn thereby creating limonite and saprolite zones.

# 7.5 Supergene Effects

Nickel laterite deposit is a supergene deposit. This has been elaborated adequately in other sections of this Report.

#### 8. EXPLORATION RESULTS

#### 8.1 Geological Work

#### 8.2 Field Sampling Results

Drilling is the usual field sampling method for laterites. Since the MPSA is wholly underlain by ultramafic rocks, all possible areas with soil horizon are drilled and sampled. Once the bedrock is reached, the drilling is completed with the complete sequence of limonite then saprolite then bedrock exposed.

No outcrop surface sampling was done and recorded as data, such as assays, rock-soil descriptions, for the laterite- limonite and saprolite, were acquired from drillholes.

#### 8.3 Geochemical Survey

Geochemical survey was not undertaken since there are existing exposed nickel laterite deposits in the MPSA area and sufficient previous drilling assay data are available to identify the extent of the nickel laterite deposit.

#### 8.4 Geophysical Survey

Geophysical survey was not undertaken since there are sufficient previous drilling data available to work with and due to the expensive cost of conducting geophysical surveys.

#### 8.5 Remote Sensing Work

Remote sensing was not undertaken as it is not applicable to the exploration or delineation of the deposit.

# 8.6 Drilling and Sampling

# 8.6.1 Type of Drilling Program

The initial MPSA holders of the mineral property did grid drilling with 200m spacing between drillholes oriented east-west. Infill and confirmatory holes that are strategically located are then drilled 100 meters apart and are further decreased to 50 meters. To increase confidence in the continuity of the deposit, these drill distances was decreased to 20 or 25 meters.

As the area is heavily forested, the drilling rigs usually employed are man-portable rigs which are assembled, disassembled and transported from drill site to drill site (Photo *3*). The most common drill rigs used are YBM rigs and more recently starting 2019 onwards, Andy type rigs are used. These drilling machines are capable of drilling to a depth of 50 m with tungsten carbide bit. It is equipped with NQ-sized single tube barrel. Generally, dry drilling is employed. The hole is terminated only after reaching the fresh bedrock as advised by the supervising geologist. The drill rods, other drilling accessories and NQ-sized cores placed in core boxes are manually ferried by local laborers. The drill sites are cleared and leveled with the spindle of the drill rig placed



on top of the location of the stake. This stake is the collar of the drillhole. After each hole is completed, a wooden stake is used to seal and mark the collar. Selected holes were plugged with PVC pipes for future reference and verification purposes.

All drillholes are drilled vertically with NQ size cores retrieved. After each drill run or advance, which is measured by the drill operator, the cores are recovered from the core tube and placed in a half-cut PVC pipe to compress the core and measured. This is then placed in the core box. Once a 1-meter drill run is reached, the total recovered core within that drill run is measured. The proportion of the material retrieved compared to the drill run or the core recovery is recorded as a percentage. A core tag, made from a GI sheet measuring about 5 cm. by 10 cm. is placed in the core box showing the drill run meterage as well as the core recovery per meter. The drillhole ID is also shown in the core tag as shown in Photo 6. Moreover, the drill operator submits a summary of the daily drilling accomplishment needed for monitoring the productivity of the drilling operations, and this is encoded in a spreadsheet titled "Daily Drilling Accomplishment Form" as shown below (Figure 18).



Photo 3. Man-portable rig being set up onsite

				Document	DMC-EMS-FO-GEO-002	FOI	MA					
			-	Number:	DMC-EM3-PO-GEO-002							
		DIN		Revision Number:	1	Daily Drilling Ao Rep	•					
				Effectivity Date:	JUNE 1, 2019	DINAPIGUE MININ	G CORPORATION					
	Rig No.:	2		Total Depth:	6.40	)	Breakdown (hrs):			Diesel (liters):	2.5	
	Hole ID:	22-A1D048		Drilling Time (hrs)	3.33	3	Toolbox Meeting (hrs):			Drilled Today:	6.40	
	Date:	Oct27Mob		Mobilization (hrs)	1.67	1	Housekeeping (hrs):			Core Recovery (m):	6.40	
	Location:	MA1		Maintenance (hrs	:		Break (hrs):	1.00		Core Recovery (%):	100	
	Elevation:	619.303		Set-up Time (hrs):	2.50	)	No. of Personnel:	6	i	STATUS:	Completed	
	Easting:			Idle Time (hrs):			Manhours:	54	ł.			
	Northing:			Demobilization:	0.5	5	TOTAL TIME	9.00				
					Note: Only	<mark>y cells that are highlighted</mark>	in yellow should be edi	ted.			Editable drop-dow	n boxes
No.	From (m)	To (m)	Core Run (m)	Core Rec (m)	Drilling Time (Rod In)	Drilling Time (Rod Out)	Hours Elapsed	Activity (Code)	Activity	Lithology	Remarks	
1					7:50	9:30	1.67	2	Mobilization			
2					9:30	10:10	0.67	3	Set-up			
3					10:10	12:00	1.83	3	Set-up		Fetching Water	
4					12:00	13:00	1.00	10	Lunch Break			
5	0.00	0.30	0.3	0.30	13:00	13:09	0.15	4	Drilling	Limonite		
6	0.30	0.80	0.5	0.50	13:09	13:21	0.20	4	Drilling	Limonite		
7	0.80	1.30	0.5	0.50	13:21	13:34	0.22	4	Drilling	Limonite		
8	1.30	2.30	1	1.00	13:34	13:51	0.28	4	Drilling	Saprolite		
9	2.30	3.30	1	1.00	13:51	14:19	0.47	4	Drilling	Saprolite		
10	3.30	4.30	1	1.00	14:19	14:38	0.32	4	Drilling	Saprolite		
11	4.30	4.80	0.5	0.50	14:38	14:56	0.30	4	Drilling	Rocky Saprolite		
12	4.80	5.30	0.5	0.50	14:56	15:13	0.28	4	Drilling	Rocky Saprolite		
13	5.30	5.60	0.3	0.30	15:13	15:29	0.27	4	Drilling	Bedrock		1
14	5.60	5.80	0.2	0.20	15:29	15:41	0.20	4	Drilling	Bedrock		1
15	5.80	6.10	0.3	0.30	15:41	16:02	0.35	4	Drilling	Bedrock		
16	6.10	6.40	0.3	0.30	16:02	16:20	0.30	4	Drilling	Bedrock	EOH	1
17					16:20	16:50	0.50	13	Demobilization			

Figure 18. Daily drilling accomplishment report form



# Photo 4. Measurement of core recovery

The core recoveries from the drilling campaigns from 2015 -2021 are shown in Table 16. These are the drillholes with recorded core recovery data. The results are significantly very good for all the drill holes with average total drillhole recovery of 98.94%. The minimum value recorded for percent recovery is 5 due to an occurrence of a cavity. Core recoveries included herein are only those of NAC and DMC campaigns. No records of core recoveries preceding the NAC campaigns are available.

# Table 16. Core recovery information

Item/Field	Record			
Number of Holes	717			
Total Meterage (m.)	11,533.15			
Number of Core Recovery Samples	28,826			
Minimum Value (%)	5*			
Maximum Value (%)	148			
Mean (%)	98.94			
*-The low recovery is due to the occurrence of a 95% cavity.				

Table 17 shows the summary of drillhole database from 2003 to 2021 showing the different campaigns of NiHAO (2003-2011), NAC (2015-2017), MacroAsia (2019), Mega Philippines (2021), and DMC (2022). There are total of 1,715 drilled holes, 15.49 meters average depth, and 26,568.78 total meterage.

# Table 17. Summary of drill hole data

Program	Number of Drillholes	Average Depth (m)	Total Meterage	Drillhole Spacing
2003-2011 NiHAO Drilling Campaign	900	15.24	13,719.10	200m x 200m; 100m x 100m; 50m x 50m
2015-2017 NAC Drilling Campaign (Area 1)	279	17.56	4,898.17	10m x 10m; 50m x 50m; 100m x 100m
2019 Drilling Campaign	77	20.96	1,614.10	Irregular spacing; drillholes positioned near old drillholes with high Ni and Fe grades
2021 Drilling Campaign	361	13.86	5,003.78	Irregular spacing; drillholes positioned in areas with



				low drillhole density laterally and vertically
2022 Drilling Campaign	98	13.61	1,333.63	20m x 20m
TOTAL	1,715	15.49	26,568.78	

# 8.6.2 Drill Logging Method

The drill cores which are retrieved from the drilling are placed in labeled core boxes. These drill cores are then logged on a per meter basis and the lithologies identified and divided into limonite, saprolite and bedrock. The characteristics of the lithologies are recorded in the description section in the core log sheet.

The drilling advance is measured as the drill run and the material recovered is the drill core. After each drill run, the drill core is transferred to the core box. After 1 meter of drill run, the drill core recovered is measured and recorded.

Ideally, the drill hole is terminated after hitting approximately three (3) meters of continuous bedrock. This is to ensure that the encountered rock is not just a bedrock float which often occurs within the rocky saprolite zone and can reach up to 3m. However, as there have been cases where less than 2 meters of bedrock core are retrieved due to difficulty of penetration, the supervising geologist can decide to terminate the drillholes earlier. The filled-up core boxes are then secured with core box covers and transported to the core house.

Logging of drill cores is performed by the geologists in the core house, noting the physical characteristics of the intercepted lithologies (see Photo 5). A typical complete sequence of drilled cores of a drillhole is shown in Photo 6. Log entries are recorded in the Core Log Sheet (see Figure 19) showing every one meter of core run per lithology. The lithology entries included in the core logs are limonite, saprolite, and bedrock. Moreover, the presence of bedrock floats, cavities, nodules, and minerals are incorporated in the core logs as well.

Each core box is labeled with the drillhole ID, core box number, and the start (from) and end (to) of the meterage drilled. If the core box has the last core from the drillhole in it, the core box has a label of end of hole (EOH) written in the lower right end of the core box to show that the hole is already terminated.

The cores are usually cut parallel to the core axis at the drill site for easier logging of the laterite before it hardens. The core logs are encoded in a spreadsheet with the following information – drillhole ID, coordinates, date, the name of the geologist, and each interval with the rock ID, description, and core recovery. The rig number and name of the drill contractor is encoded as well, if applicable. These core logs are encoded and stored electronically in the Geology server folder.



Photo 5. Core logging activity



Photo 6. Core boxes containing a typical complete sequence of a drillhole

	Document Number: DMC-EMS-FO-GEO-001								Environmental Management System					
			Revision No: 1 Department Group: Geology								Core Log Sheet			
DIN	APIGUE	Number of Pages : 1 of 1						Dinapigue Mining Corporation						
			-											
Hole ID :	ID: 21-A1C021										Drilling Unit : Rig 5			
Location :	on: Area 1									Date Started : 20-Feb-2021				
Northing :	1839576										Date Co	omplet	24-Feb-2021	
Easting:														
Elevation :	Elevation : 527.72													
Inhouse	Contractor	Contractor MEGA PHILIPPINES INC. Drilling Camp 2021												
From	То		Core log Description	Rock Type	Lithology	Recovery (cm)	Ni	Fe	Со	MgO	SiO2	AI2O3	Remarks	
0.00	0.40	Yellowish Brown LIM with plant roots		LIM		40								
0.40	1.40	Reddish Brown to Orange Brown LIM		LIM		100								
1.40	2.40	Yellowish Orange Brown LIM		LIM		100								
2.40	3.40	Orange Brown LIM		LIM		100								
3.40	4.40	Orange Brown LIM		LIM		100								
4.40	5.40	Orange Brown LIM		LIM		100								
5.40	6.40	Orange Brown to Yellowish Orange Brown LIM		LIM		100								
6.40	7.40	Yellowish Orange Brown LIM		LIM		100								
7.40	8.40	Yellowish Orange Brown LIM		LIM		100					<u> </u>			
8.40	9.40	Yellowish Orange Brown LIM		LIM		100								
9.40	10.40	Yellowish Orange Brown LIM		LIM		100								
10.40	11.40	Yellowish Orange to Orange Brown LIM		LIM		100								
11.40	12.40	Yellowish Brown LIM with plant roots		LIM		100								
12.40	13.40	Orange Brown LIM		LIM		100								
13.40	14.40	Yellowish Orange Brown LIM (	30); Yellowish Orange Brown earthy SAP (70)	SAP		100								
14.40	15.40	Orange Brown SAP (60); White	Powdery BR (10); Harz Br, fracture 7-12cm fragments, moderately serpentinize	SAP		100								
15.40	16.40	Harz Br, Mesh texture, whitish	n scales at fracture planes, 5-15cm fragments	BR		100								
16.40	17.40	Harz Br, Mesh texture, 5-20cm	nfragments	BR		100								
17.40	18.10	Harz Br, Mesh texture, 5-20cm	n fragments	BR		70								
			ЕОН											
Remarks: EOH at 18.10m, with 3m Bedrock														

Figure 19. Core log sheet

8.6.3 Drill Sampling Method, Collection, Capture, and Storage

The core boxes are sent to the core house after a drillhole is terminated by the geologist. The first run is sampled together with the next meterage if the length is <50cm. Intercepts ≥50 cm is treated as separate samples. Each meter of core is cut in half vertically and one half is placed in a plastic bag. This activity is carried out by the Sample Preparation team which is under the jurisdiction of the Geology Department of DMC. Each plastic bag has a sample ticket showing the sample number. The details of the samples are kept in the other half of the sample ticket showing the drillhole name, the interval sampled, the sampler and type of sample. These sample

tickets are kept in the core house as records of the samples. The plastic bags are labeled with the sample number for redundancy.

The remaining portion of the halved cores are retained in the core boxes or stored as coarse rejects or duplicates. The core boxes are placed in the core racks for future reference (see Photo 7. Core racks containing filled up core boxes). Additionally, DMC has an archive of pulp rejects from 2017 to 2021.



Photo 7. Core racks containing filled up core boxes

A photograph is taken from each core box with the information displaying the drillhole ID, core box number, the interval of the core drilled, as well as the core tag showing the core run and the core recovery. The core photograph is recorded with a file name with a format "drillhole ID\_from(m.)- to(m.)," and 'EOH' to indicate the termination depth (Photo 8**Error! Reference source not found.**). The photographs of the cores are taken before they are sampled. These are then compiled in a folder with the drillhole name. These folders with the core photos are stored electronically as well.



Photo 8. Core photograph of a fille up core box



Figure 20. File naming format of the core photographs

# 8.7 Sample Preparation, Analysis, and Security

8.7.1 Sample Preparation and Analysis

# 8.7.1.1 Sample Preparation

The flowchart for the preparation of drilling samples is listed in Figure 21.







Figure 21. Sample preparation flow chart

Drilling samples from the field are received by the DMC Core House and prepared by the in-house Sample Preparation team and equipment for drying, crushing, splitting, pulverizing, and assaying and reduction of pulps weights for transmittal to assay laboratory.

Sample pans are arranged in sequence and readied for the assigned core samples. These pans have the corresponding plastic bags and sample ticket numbers (Photo 9). The sample tickets have the drillhole information-hole ID, the interval sampled and name of the sampler. The cores are cut in half, weighed and are placed in their assigned pans (Photo 10). Once the pans are filled up, they are placed in order in the sample trolley rack for oven drying (Photo 11).



Photo 9. Cores and sample pans with corresponding sample bags and ticket number



Photo 10. Drill samples transferred to sample pans


Photo 11. Pans with the samples are arranged in the sample rack



Photo 12. Samples are placed in the oven for drying

The trolley rack with the sample pans will then be pushed into the Essa FLSmidth 4500L Double-Trolley Convection Oven (Photo 12). After drying, which usually takes 10 hours, the dry weight of the samples will be recorded.

After recording the weight of the oven-dried samples, these are subjected to crushing by using the Boyd Crusher with rotating sample divider. A duplicate sample is taken from the sample from random batches for QA/QC. Pulverization of the samples follows using the BICO pulverizing machine (Photo 13).





Photo 13. Crushing and pulverizing of samples



Photo 14. Sieving of samples

Samples undergo a 200-mesh screening for 2 minutes in a Ro-Tap sieve shaker. Oversize samples (>200 mesh) are then further pulverized in a Rocklabs ring mill pulverizing machine (see Photo 14 and Photo 15).



Photo 15. Sieving and pulverizing of oversized samples



Each pulverized sample is divided into a 2x5 increment grid, creating 10 areas. One subsample, using a plastic spoon, is taken per area, and placed in a kraft envelope (Photo 16). Another set, using the same procedure from the same sample, is taken to be retained at the Sample Preparation section. This is called the retention sample. The weight of the pulverized sample in the kraft envelope is approximately 30-35 grams. The sample ticket no. is written in request for analysis form and the pulp samples are transmitted to the Assay Laboratory for elemental analysis (Photo 17), while the retention samples are stored in the Sample Preparation section for future reference.



Photo 16. Subsampling of samples



Photo 17. Pulp samples to be sent to assay laboratory

The pulp samples, weighing approximately 35 g., are received by the Assay Laboratory with the corresponding Request for Analysis Form (Document number F-QAS-010, see

Figure 22).

	DINAPIGUE MINING														
							REQ	UE	ST F	OR	ANA	LY	SIS		
Req	Requestor Sample Prep Assay Laboratory JO No: D22-275														
Req	uested	by:	Ivan Jo			idato					and	Τ	L.G Sinday		
Dat	•	_	Dec 1	2021	,				Rec Dat		d by:	+	Dec 1, 2022 @	12-40	
	e. al Numi	ber	7 Sam					_			mber		7 Samples	13.49	
	amples									amp					
			m Requ		22-A	5D075	5	Dril	lling S	amp	oles				
		-	Analyze	-	/	100	/	1.1		_	6- (	_	Ca	Si 🗸	
Ni_	<u> </u>	Fe_	<u> </u>	Mg	<u>×</u>	Co_	¥	M	in	_	Cr	_	<u> </u>	Si_∕_	AI _
										_					
			SAN	IPLE	NAME	6							SAMPLE	NAME	
1 2	12965	-							36	-					
3	12960	-							38	-					
4	12968							_	39			_			
5	12969	,							40			_			
6	12970								41						
7	12971	1							42						
8									43						
9 10									44 45	-		_			
11								-	46	-		_			
12								_	47			_			
13									48			_			
14									49						
15									50						
16 17									51 52	-					
18								_	53	-		_			
19									54			_			
20									55			_			
21									56			_			
22									57	-					
23 24									58 59	-					
25								-	60	-		_			
26									61			_			
27									62			_			
28									63			_			
29									64						
30 31									65 66	-					
31								_	67	-					
33								_	68			_			
34									69			_			
35									70			_			
Nhit	e – Orig	ginal (	Copy –	Assay	1					Yello	w – Du	upli	cate Copy – Re	equestor	

Figure 22. Request for analysis form

# 8.7.1.2 Analytical Methods

Assaying of drilling samples are done at the in-house assay laboratory. These are received as pulp samples from the Sample Preparation section. One batch of pulp samples were also sent to Intertek Laboratory Services (ITS) in 2022 for QAQC. The samples are only received and assigned with a job code after ensuring that all the necessary information on the form matches the data on the pulp envelope and everything is in order.

About 5-6 grams portion from the original 35 grams of drill samples are transferred into the upcycled envelopes. A batch of these pulp samples are then ready for drying in the oven (Photo 18). A U450 Memmert convection oven is used to dry the samples at 105°C. (Photo 19). After drying, the samples are cooled at room temperature using a Sanplatec dry keeper cabinet with self-indicating silica desiccants (Photo 20). A 0.30-gram sample content from the upcycled envelopes is then collected and weighed using Sartorius Practum 224-1S analytical balance (Photo 21), then added with a 5.7-gram fusion flux component (Photo 22 and Photo 23) and mixed to

homogeneity using a DL-SI05 Mini Vortex shaker (Photo 24) The mixture is then transferred into a platinum crucible (Photo 25) and placed in a XRFuse6 Electric Fusion Machine (Photo 26) at a temperature of 1050°C. This process is composed of preheating, melting, shaking, injection of NH<sub>4</sub>I, and cooling stages.



Photo 18. Pulp sampling of drilling samples



Photo 19. Oven drying of pulp samples



# Photo 20. Cooling of pulp samples



Photo 21. Collection of 0.30 g sample



Photo 22. Xray fusion flux



Photo 23. Mixing of pulp sample and fusion flux



Photo 24. DL-SI05 Mini Vortex shaker



Photo 25. Platinum crucibles



Photo 26. XRFuse6 electric fusion machine



Quantitation of the samples by WDXRF involves producing a fused-bead (Photo 27 and Photo 28) that is analyzed using Shimadzu XRF-1800 Sequential X-Ray Fluorescence Spectrometer (Photo 29). The data from WDXRF are extracted and tabulated to the profile spreadsheet. Certified reference materials (OREAS) and matrix matched reference material from established NAC-Operating Companies, such as Taganito Mining Corp. (TMC), Hinatuan Mining Corp. (HMC), and Cagdianao Mining Corp. (CMC) are used as calibration standards of DMC's XRF-1800.



Photo 27. Fused beads ready for XRF analysis



Photo 28. Fused beads in the XRF machine.



Photo 29. Shimadzu XRF-1800 Sequential X-Ray Fluorescence spectrometer

Quality Assurance and Quality Control of DMC's Assay Laboratory involves inserting a control standard, either an OREAS (Photo 30) or a matrix-matched reference material from CMC, HMC, Rio Tuba Nickel (RTN), and TMC, which is treated as an unknown sample and is selected in every batch of 10 samples. The actual value and true value of control standard are compared. Duplicate samples are generated as well and assayed. Accepted precision variance values of duplicate samples for Ni is  $\pm 0.03\%$ , and  $\pm 0.30\%$  for Fe with added acceptable accuracy variance values of  $\pm 0.05\%$  for Ni and Fe  $\pm 0.50\%$  for Fe. Results of the analytical process is finalized in an MS Excel or Portable Document Format (pdf) file signed by a Registered Chemist or Chemical Technician along with the Certificate of Analysis. The final Assay results are sent to the Geology department. The Geology department will link the assay results to the respective drillhole, and a drillhole database is created in MS excel for record. These records are stored electronically in the Geology server folder.

The Assay Laboratory stores received samples and fused beads for a period of two weeks in its sample library. Samples are then discarded while fused beads are turned over to the Environment Department for disposal.



Photo 30. OREAS control standards are inserted in every job code generated by assay.

## 8.7.2 Sample Governance

8.7.2.1 Sample dispatch, Security, and Chain of Custody.

It is ensured that core boxes have covers when being transported from the drill sites to the core house for logging. If the drill sites are far from the service vehicles waiting at the pick-up point, the core boxes are secured by plastic twines and carried by 2 persons. This is to ensure that the contents (cores) of the core boxes will not spill out. The core boxes are then loaded onto the service vehicles for transport to the core house. This activity is directly/indirectly supervised by the geologist or the drilling operator. The Core house, Sample Preparation and Assay Laboratory are all located inside the MPSA. The core samples are not sent out to any third (3<sup>rd</sup>) party assay laboratory except for QAQC purposes.

The filled-up core boxes are received in the Core house/Sample Preparation (the Sample Preparation section is under the jurisdiction of the Geology Department). The geologist is the one doing the core logging and after the core logging, the geologist supervises the core photography and the cutting of the cores into halves of further processing. The sampling procedure from drying, crushing, splitting, pulverizing and reduction to 30-gram samples for delivery to the Assay laboratory is supervised by the Sample Preparation supervisor.

# 8.7.2.2 Laboratory Audits

The Assay Laboratory has been ISO 14001 certified. In 2022, a batch of pulp samples was sent to Intertek Testing Services to serve as part of the Laboratory Audit for DMC. Sending of pulp samples to a third-party laboratory is usually done quarterly. The results are discussed below in the QAQC Section.

## 8.7.3 Quality Assurance / Quality Control (QAQC)

Quality Assurance and Quality Control (QAQC) is a procedure to check on the accuracy, repeatability and precision of the procedures and results of the entire process of sample acquisition, preparation and analysis. The various sample types used that are inserted with the primary batch of samples are: coarse duplicates-samples generated after the crushing stage of the primary sample; fine duplicates - samples that have undergone crushing and pulverizing; blanks - samples that have no or negligible amounts of elements that are assayed for ; check samples – pulp samples sent to other laboratory and SRM or Standard Reference Material samples.

DMC is making use of four (4) types of QAQC samples for now. These include check samples, coarse and fine duplicates and SRMs. Blank samples were not included in the QAQC due to unavailability of rock samples that can act as blanks within the MPSA. Commercially available blanks or other alternatives, as well as field duplicates are set to be introduced in the next drilling campaign.

From 2019-2022, the total number of QAQC samples analyzed is 1,875 which is equivalent to 7.4% insertion rate. The number of samples and insertion rate per sample type is summarized in Table 18.

In analyzing the QAQC results, the half absolute relative difference (%HARD) is calculated and illustrated in HARD plots, Q-Q plots, and precision plots. As a general rule for duplicates, 90% of all samples within the 20% HARD threshold is deemed acceptable. Evaluation of standard control charts and regression analysis are carried out to determine accuracy.

Sample Type	Control Aspect	No. of Samples	Insertion Rate (%)
Check Sample	Accuracy with respect to Another Laboratory	30	0.11
Coarse Blank	Sample Preparation Contamination	0	0
Coarse Duplicate	Sample Preparation Repeatability	482	1.9
Fine Blank	Laboratory Contamination	0	0
Fine Duplicate	Laboratory Precision	1104	4.4
SRM	Laboratory Accuracy	259	1.02
TOTAL		1,875	7.40%

Table 18. Summary of various sample types used for QAQC

8.7.3.1 QA/QC with Third Party Assay Laboratory (Intertek Testing Services)

Thirty (30) pulp samples were split to two batches for third party testing. One batch is retained and assayed at the DMC Assay Laboratory and the other batch is sent to Intertek Testing Services (ITS). Table 19 shows the statistics of the samples analyzed.

Table 19. Descriptive statistics for %	Ni and %Fe – DMC vs ITS data

Parameters	% Ni DMC	% Ni ITS	% Fe DMC	% Fe ITS
Mean	1.57	1.54	36.97	36.51
Standard Error	0.05	0.04	1.99	2.08
Median	1.52	1.49	43.07	42.81
Standard Deviation	0.26	0.24	10.92	11.38
Sample Variance	0.07	0.06	119.19	129.47
Kurtosis	-0.04	0.05	-1.77	-1.81
Skewness	0.64	0.66	-0.25	-0.23
Range	1.03	0.94	29.75	30.5
Minimum	1.13	1.14	20.04	19.35
Maximum	2.16	2.08	49.79	49.85
Sum	47.23	46.14	1108.98	1095.38
Count	30	30	30	30
Confidence Level (95.05%)	0.1	0.09	40.77	4.25



Figure 23. Histogram, cumulative distribution, Q-Q Plot of %Ni and %Fe – DMC vs ITS data



Figure 23 consists of the histograms, cumulative distribution pots and Q-Q plots of DMC and ITS. The results from the two laboratories closely resemble a normal curve as they are superimposed with the Normal Curve and Normal Cumulative Distribution. This shows that the assay results from DMC are reproducible within the accepted variance based on the results from ITS.

The regression graphs and confidence bands for %Ni and %Fe are shown in Figure 24. For %Ni, its  $R^2 = 0.9925$  and r = 0.99624294, these are very close to 1, showing strong positive regression pairing for %Ni.



Figure 24. Regression & confidence bands for %Ni and % Fe – DMC vs ITS Data

Table 20 and graphs (Figure 25) below show the %HARD analysis plots for Ni and Fe for the comparison of results of samples sent to ITS and assayed in DMC Assay Laboratory.

%HARD	%Ni – DN	AC vs ITS		%Fe – DMC vs ITS	
Threshold	Count below threshold	% Total Samples	%HARD Threshold	Count below threshold	% Total Samples
1.00	9.00	30.00	2.00	22.00	73.33
2.00	26.00	86.67	4.00	29.00	96.67
3.00	30.00	100.00	6.00	30.00	100.00

The DMC Assay Laboratory showed high precision in the XRF analysis for both Ni and Fe values. All the samples have Ni %HARD values of 3% and below, while 100% of the samples have Fe %HARD value of 6% and below.



Figure 25. Graphs showing %HARD Ni and % HARD Fe – DMC vs ITS

# 8.7.3.2 SRM

The Standard Reference Materials (SRM) are inserted per job code. The type of SRM is chosen at random. There were 236 SRM samples for nickel for comparison while there were 259 samples of SRM for iron including OREAS 401,402,403 and 404, which have no nickel values for comparison. The true assay values are compared with the actual assays recorded in the Assay Laboratory. Table 21 shows the summary of descriptive statistics for Ni.

Parameter	%Ni True	%Ni Actual	%Ni HARD
Mean	1.24	1.26	0.99
Standard Error	0.03	0.03	0.04
Median	1.14	1.17	0.91
Mode	1.23	1.01	0.8
Standard Deviation	0.44	0.44	0.68
Sample Variance	0.19	0.2	0.46
Kurtosis	4.99	4.81	10.97
Skewness	1.98	1.94	2
Range	2.23	2.36	5.89
Minimum	0.71	0.69	0.01
Maximum	2.94	3.04	5.91
Sum	292.68	298.02	233.44
Count	236	236	236
Largest (1)	2.94	3.04	5.91
Smallest (1)	0.71	0.69	0.01
Confidence Level (95.0%)	0.06	0.06	0.09

Table 21. Descriptive statistics of SRM samples

The paired true and actual values of Ni have  $R^2=0.9971$  and have a correlation coefficient of r = 0.998549, which demonstrates a very good regression relationship. For Fe, the paired true vs actual samples have  $R^2=0.9993$  and have r = 0.999650 also shows a very good regression relationship (see Figure 26).





Table 21 and 22, and Figures Figure 27 and Figure 28 are the data and graphs showing %HARD Plots for %Ni and %Fe. The 100% total population for Ni was reached at only 6% HARD threshold, which indicates that the paired samples (true vs actual) are very similar in values. Similar case is shown in the %HARD plot for %Fe. The total number of %Fe samples reached the 100% mark at only 3% HARD threshold.

%HARD	%Ni HARD Count	%Ni HARD
Threshold	below threshold	% total samples
1.00	132	55.93
2.00	220	93.22
3.00	234	99.15
4.00	235	99.58
5.00	235	99.58
6.00	236	100.00

Table 22	SRM %HARD for %Ni





%HARD	%Fe HARD Count	%Fe HARD
Threshold	below threshold	% total samples
1.00	144	56
2.00	244	94
3.00	258	100
4.00	258	100
5.00	258	100
6.00	259	100





Figure 28. Fe %HARD plot for SRM samples

## 8.7.3.3 Fine Duplicates

There were 1,104 fine duplicate samples generated from original samples in the Assay Laboratory and these were inserted in the batches for assaying. The basic statistics data is shown below:

DMC Assay Laboratory	%Ni Original	%Ni Duplicate	%Fe Original	%Fe Duplicate
Mean	1.13	1.12	30.70	30.66
Standard Error	0.01	0.01	0.50	0.50
Median	1.13	1.13	35.41	35.46
Mode	1.28	1.46	46.04	46.34
Standard Deviation	0.44	0.44	16.50	16.48
Sample Variance	0.19	0.19	272.15	271.43
Kurtosis	0.48	0.48	-1.57	-1.57
Skewness	0.27	0.26	-0.29	-0.30
Range	3.27	3.25	54.35	53.46
Minimum	0.02	0.02	0.92	0.92
Maximum	3.29	3.26	55.26	54.37
Sum	1242.89	1239.91	1242.89	1239.91
Count	1104	1104	1104	1104
Largest (1)	3.29	3.26	3.29	3.26
Smallest (1)	0.02	0.02	0.02	0.02
Confidence Level (95.0%)	0.03	0.03	0.03	0.03

Table 24. Assay laboratory basic statistics for original vs fine duplicates

Only four (4) %Ni original and five (5) %Ni duplicate samples exceeded the +/- 3 std control limits out of the total 1,104 data samples. On the other hand, the %Fe values are all within the +/- 2 std control limits. The results for both nickel and iron values are considered very good and reflects good accuracy of the laboratory analysis.



Figure 29. QAQC control limits for %Ni and %Fe of DMC assay laboratory data

Table 25 shows the distribution of samples per Ni %HARD thresholds (original vs duplicate fine samples) while Figure 30 displays the %HARD and Q-Q plots for Ni for fine duplicates. Both indicates very good proximity of Ni values between original and the QAQC control sample as 100% of the samples are within 20% HARD threshold. This means that the nickel analysis is accurate, and the homogenization process of samples is very good and highly repeatable.

%Ni HA	%Ni HARD – DMC Assay Laboratory						
%Ni HARD	%Ni HARD %Ni Count below						
Threshold	Threshold	Samples					
5.00	1101	99.73					
10.00	1102	99.82					
15.00	1103	99.91					
20.00	1104	100.00					

Table 25. %HARD for %Ni- original vs duplicates



Figure 31. %HARD plots – DMC assay laboratory data for fine duplicates

%Fe HARD - DMC Assay Laboratory					
%Fe Hard %Fe Count %Fe %total Threshold below threshold samples					
2.00	1086	98.370			
4.00	1100	99.638			
6.00	1103	99.909			
8.00	1104	100.000			
10.00	1104	100.000			

Table 26. %HARD for %Fe- original vs duplicates



Figure 32. %HARD plots for Fe – DMC assay laboratory data, fine duplicate samples

For the %Fe, the calculated %HARD values are all within the 8% threshold as can be seen in Table 26. Similar to the nickel fine duplicate results, this indicates very good sample pulverization and homogenization and high accuracy of analysis of iron content.

The graph in Figure 33 shows the regression and control bands for %Ni and %Fe. Both Ni and Fe have almost perfect correlation at r = 0.9969, so most of the data samples are hugging their respective regression lines. This is the visual and statistical representation of the %HARD analysis previously discussed.



Figure 33. Regression lines and control bands – DMC assay laboratory data for original and fine duplicates

# 8.7.3.4 Coarse Duplicates

Duplicate coarse samples of random drilling samples were sent from the Sample Preparation, after the crushing stage, to the Assay Laboratory. There were 482 samples in total. Table 27-28 show the descriptive statistics table for %Ni and %Fe.

Descriptive Statistics	%Ni Original	%Ni Duplicate
Mean	1.0394	1.0390
Standard Error	0.0221	0.0221
Median	1.0099	1.0086
Mode	0.3000	0.2900
Standard Deviation	0.4851	0.4861
Sample Variance	0.2353	0.2363
Kurtosis	-0.1494	-0.1058
Skewness	0.4531	0.4656
Range	2.3207	2.2840
Minimum	0.1983	0.2230
Maximum	2.5190	2.5070
Count	482	482
Largest(1)	2.5190	2.5070
Smallest(1)	0.1983	0.2230
Confidence Level(95.0%)	0.0434	0.0435

Table 27. Descriptive statistics for- Ni original vs coarse duplicate

Table 28. Descriptive statistics for Fe- original vs coarse duplicates

Descriptive Statistics	%Fe Original	%Fe Duplicate
Mean	27.7780	27.7759
Standard Error	0.7765	0.7759
Median	24.2189	23.9900
Mode	46.0704	6.3100
Standard Deviation	17.0475	17.0335
Sample Variance	290.6175	290.1386
Kurtosis	-1.6827	-1.6830
Skewness	0.1126	0.1114
Range	47.5671	47.6363
Minimum	5.0529	5.0737
Maximum	52.6200	52.7100
Count	482	482
Largest(1)	52.6200	52.7100
Smallest(1)	5.0529	5.0737
Confidence Level(95.0%)	1.5257	1.5245

Table 29. %HARD analysis for Ni and Fe original vs coarse duplicates

	Ni %HARD			Fe %HARD	
%Hard Threshold	%Ni Count below Threshold	Ni %total samples	%Hard Threshold	Fe Count below Threshold	Fe %Total samples
			1	377	78.22
3	456	94.61	2	436	90.46
6	475	98.55	3	465	96.47
9	481	99.79	4	477	98.96
12	481	99.79	5	481	99.79
15	482	100.00	6	482	100.00

From Table 29, the Ni %HARD threshold reached its 100% total samples at the 15% mark while Fe %HARD threshold reached its 100% total samples at only 6% mark (see also Figure 34).



Figure 34 . Graphical representation of Ni and Fe %HARD plots

The Regression analysis and control bands graphs for the original vs coarse duplicates are shown in the figures below.



Figure 35. Regression & confidence bands for %Ni

The Ni original vs duplicates' R<sup>2</sup> is 0.9981. Because of their proximity with each other (original and duplicates), their variance and standard deviation are also very minimal. Hence their confidence bands are also almost adjoining each other for Ni (Figure 35).



Figure 36. Regression and confidence bands for %Fe

For the Fe original and duplicates comparison, their  $R^2 = 0.9996$  is slightly lower, but still can be considered as very high correlation. It could be noticed that the values are a little more dispersed, so their variance and standard deviation are slightly higher, thus making the confidence bands more spaced out.

8.7.4 Statement of the ACP on the Quality of Sample Security, Preparation, Analysis and Data Validation

The QAQC results of DMC demonstrates high precision and accuracy in the sampling acquisition, sample preparation and laboratory analysis. The ACP deems that the QAQC procedures are being followed thoroughly and results are acceptable and fit for use in Mineral Resource estimation. Inclusion of field duplicates and fine and coarse blanks as intended for the next drilling campaigns will further enhance the QAQC protocol of DMC. Field duplicate will enable assessment of sampling repeatability while blank samples will help identify presence of contamination within the sample preparation and laboratory.

Calibrating measurement tools, proper execution of sample preparation and ensuring the reliability of laboratory analysis equipment are also crucial aspects of Quality Assurance and Quality Control (QAQC). By ensuring that instruments are calibrated correctly as per its required frequency, errors arising from measurement issues can be minimized.

The calibration of main instruments and equipment used in surveying, sample preparation and laboratory analysis of DMC are reviewed. The up-to-date calibration certificates are shown in Appendix C to E of this Report.

# 8.8 Bulk Density Measurements

DMC commissioned Geoinnovative Specialists Inc (GSI) to conduct field density tests (FDT) of the two ore materials, limonite and saprolite. GSI did their fieldwork from May 17, 2022 to May 20, 2022. Field density, specific gravity and moisture were determined and presented in their report.

The scope of work of GSI is in-situ testing and sampling of 50 samples from identified limonite and saprolite materials and laboratory tests conforming to ASTM standards. Laboratory tests were also conducted on selected samples to come up with natural moisture content (ASTM D2216) and Specific Gravity (SG) of soil (ASTM D854). The results were presented in the GSI final factual report.

Field density test (FDT) is the replacement of soil excavated materials by the calibrated sand. The apparatus is calibrated to determine the density of the test sand and weight of the sand occupying the cone of the sand-pouring equipment. The calibrated sand should have a maximum particle size passing through 2.0  $\mu$ m sieve size and less than 3% by weight passing through 250  $\mu$ m. The hole will be excavated in the center of the metal tray to the required depth and the material from the hole will be removed and weighed. Then the sand cone apparatus will be placed at the center of the hole and sand poured until it fills the hole and the cone, the weight of the remaining sand will be weighed. The moisture content of the excavated material is determined by taking a sample of the material then weighing it, after which the sample will be dried at a temperature of 110°C and the dried sample will be weighed. (Field Density Test in an Existing Laterite Mine in Barangay Dimaluade, Municipality of Dinapigue, Isabela Province, 2022).

The 50 samples taken for the density measurements are divided into two. Twenty-five (25) samples were taken from limonite areas and the other 25 samples were taken from saprolite areas. These areas are from the open areas in Areas 1, 2 and 4.



Figures 37 to 40 are the maps showing the locations of the sampling points.

Figure 37. Field density set-up







Figure 39. Map showing FDT sampling points in Area 1



Figure 40. Map showing FDT sampling points in Area 2



Figure 41. Map showing FDT sampling points in Area 4

Table 30 shows the calculated average values for field wet and dry densities of the 50 sampling points distributed in Area 1, 2, and 4 of the DMC MPSA for limonite and saprolite. The dry density for limonite is 1.153 g/cm<sup>3</sup> and for saprolite the dry density is 1.400 g/cm<sup>3</sup>.

Material	Test Point	Average Natural	Field Density Test (Average Density)	
Туре	ID Number	Moisture Content (%)	Wet Density (g/cm³)	Dry Density (g/cm³)
Limonite	L1-L25	40.92	1.626	1.153
Saprolite	S1-S25	40.48	1.967	1.400

Table 30. Average field dry and wet densities and moisture content for limonite and saprolite

# 8.9 Bulk Sampling and/or Trial Mining

DMC started trial shipment last 2021, with 2 barges of limonite ore shipped to CBNC with a total of 20,807 WMT. DMC started foreign vessel shipment this year, 2022. Table 31 presents the data from the shipment operations conducted in 2021.

## Table 31. 2021 Trial shipment

Barge/			Loa	ding Po	rt		Unlo	ading P	ort		Dif	ference	
Vessel	Date	%Ni	%Fe	%Mg	Tonnage	%Ni	%Fe	%Mg	Tonnage	%Ni	%Fe	%Mg	Tonnage
Name													
Big	July 9,	1.10	45.66	1.18	9,293.14	1.10	47.50	0.90	9,270.13	-	1.84	-0.28	23.01
Space	2021												
Big	August	1.09	47.12	1.02	11,573.14	1.00	48.70	0.75	11,536.88	-0.09	1.58	-0.27	36.90
Space	9, 2021												

## 8.10 Topographical and Geodetic Survey

## 8.10.1 Topographical Survey

The Project falls under Zone IV of the Philippine Reference System (PRS) of 1992. In 2018, a verification survey of the control points used in the Project was made. These control points were set up previously by the Padigos contracted surveyor. The locations of the drillhole collars were tied up to these control points. Table 32 shows the list of their coordinates. Station DPG-02 cannot be located anymore so a new control point CW-02 was used as replacement in the same location.

ID	Northing	Easting	MSL
DPG-01	1835348.596	426968.82	51.929
DPG-02	1835491.42	426779.39	154.331
DPG-03	1835753.77	425336.4	459.525
DPG-04	1836454.46	425414.11	484.778
DPG-05	1837471.6	425351.42	532.288
DPG-06	1837531.26	425282.53	538.478
DPG-07	1839365.3	425448.67	600.136
DPG-08	1839369	425897.12	603.880
SB-371	1828712.97	421025.94	17.315

## Table 32. Padigos survey control points

These control points were verified by the survey team of DMC using the RTK or Real Time Kinematic observations by using the NAMRIA control point, ARA-3454, as base point, as well as the NAMRIA certified SB-371 point, which has an elevation datum. ARA-3454 is in Baler, Aurora. Since there was no clear line of sight between ARA-3454 and SB-371, 2 substations were established. The coordinates of these points were located using the RTK survey instrument (see Photo 31**Error! Reference source not found.**).

AB Surveying, commissioned by DMC on 2018, established 4 more control points ABSD-149, AB-150 (which were located outside the MPSA) and ABSD-150 and ABSD-152 (which were located inside the MPSA). These two control points inside the MPSA were used as additional base points to get new the coordinates of the control points of Padigos. These coordinates were then compared with the original Padigos survey control data. The results are shown in Table 33. AB Surveying generated coordinates of Padigos control points.



Figure 42. Map showing the locations of control stations used as base controls (modified capture from Google Earth Pro)

ABSURVEY-DMC					
ID	Northing	Easting	Elevation		
DPG-01	1835339.565	426982.151	51.500		
CW-02	1835486.283	426796.474	154.753		
DPG-03	1835744.778	425349.773	459.436		
DPG-04	1836445.453	425427.437	484.681		
DPG 05	1837462.585	425364.748	532.316		
DPG 06	1837522.238	425295.837	538.485		
DPG-07	1839356.306	425461.996	600.349		
DPG-08	1839359.995	425910.455	604.005		
SB-371	1828703.898	421039.250	17.315		

Table 33. AB Surveying generated coordinates of Padigos control points

The difference in the original coordinates data of the Padigos control points and the AB Surveying results are shown in Table 34

ID	Difference in Northing	Difference in Easting	Difference in Elevation
DPG-01	-9.036	13.420	-0.561
DPG-02/CW-02	-5.141	17.168	0.277
DPG-03	-9.006	13.479	-0.253
DPG-04	-9.023	13.424	-0.210
DPG-05	-9.035	13.405	-0.043
DPG-06	-9.036	13.400	-0.036
DPG-07	-9.049	13.430	0.090
DPG-08	-9.039	13.422	0.058
SB-371	-9.106	13.383	0.000

Table 34. Result of comparison between Padigos and AB Surveying data

There is roughly -9.04 meters adjustment in Northing, and +13.40m in Easting in the control points coordinates. With this data, all pre 2019 drillhole coordinates have been adjusted accordingly. The Northing have -9.04m and the Easting have + 13.42m adjustments of the drillhole collars before 2019 in the drillhole collar database. The elevation used is the topographic data from the Lidar (Light Detection and Ranging) output.

A Lidar map was produced by AB Surveying and Development. The objective of the survey is to produce accurate maps of the DMC tenement and adjacent area (roughly an additional 179.1 has) covering from 100 m. to 600 meters beyond the MPSA boundary.

The comparison for the actual ground survey vs the Lidar points were done automatically using Global Mapper software. The method of Global Mapper in comparing the points is by acquiring the nearest nine (9) ground points to be averaged and compared with the elevation obtained from the ground conventional survey. The maximum difference is 17.7 cm which is located at ABSD-150. The maps produced from the Lidar data showed the different aspects of the site, i.e., rough roads, open areas (no trees/vegetation), fills, etc. in a very detailed and accurate survey (AB Surveying and Development, 2018).

AB Survey started its mobilization on September 29, 2018 for the Lidar mapping. Its GPS team established control points for the survey. The actual Lidar Survey for the 2570.90 ha was performed on October 1, 2018. Two of the control points were outside the MPSA of DMC and the other two is located within the MPSA. The survey was done using the VP-1 Lidar by Reigl mounted on a helicopter. The processing of the data gathered from the survey took 6 to 7 days.

Figure 43 shows the resulting topographic and orthophotographic maps produced from the Lidar survey covering the DMC tenement. Figure 44 shows the Lidar tenement map.



Figure 43. Topographic and orthophotographic maps generated from LIDAR



Figure 44. DMC LIDAR tenement map

#### 8.10.2 Drillhole Survey Validation

The drillholes within the Dinapigue Mining Corporation (DMC) MPSA area were surveyed with the use of a Topcon DS101AC Total Station and GR5 GNSS RTK Base and Rover GPS system. The RTK GPS is commonly applied on open areas such as mine pits, whereas Total Station is used on both densely forested and open areas. Surveyed drillhole coordinates, which is composed of northing (X), easting (Y), and elevation (Z), are tied up with Philippine Reference System (PRS) 1992 Zone 4 coordinate system. The RTK GPS has a vertical accuracy of 5mm, and horizontal accuracy of 3mm.

Once the points that will be staked were provided by the drilling team, the location of the nearest control point on the field with respect to the drillhole collar is identified. A total station will be set-up on top of the control point and the rod is placed such that the tip of the rod is configured directly to the point. Backsight and foresight measurements are determined to ensure accuracy of the traverse. The allowable vertical and horizontal error should be less than 0.10 m. If the drillhole collar is clearly seen within the line of sight of the total station, the coordinates of the drillhole as displayed by the total station will be recorded and stakes will be installed on the identified exact location of the drillhole. Otherwise, if the drillhole location is still not visible along the line of sight of the total station, a sub-station will eventually be created. The position of total station is transferred to the designated sub-station until it reaches a position wherein the drillhole location is already visible. A flagging tape is attached to the stake and labels such as proposed drillhole name, northing, easting, and elevation is written on the tape (see Photo 32).

Downhole surveys are not conducted as the depths reached by drillholes are shallow (<20m). No significant deviation from the vertical is expected.



Photo 31. Survey team using the RTK GPS to check coordinates of station



Photo 32. A stake showing the drill hole ID with elevation at the drill site location

# 8.10.3 Survey Instrument Calibration

There are 3 Topcon DS101AC Total Stations used in the Project. These were sent to Siccion Marketing Inc. for calibration. See Appendix C for the most recent certificates of calibration.

# 9. DECLARATION OF EXPLORATION TARGET(S)

There are no Exploration Targets to declare.

# **10. ESTIMATION OF EXPLORATION RESULTS AND MINERAL RESOURCES**

## **10.1 Mineral Deposit Model and Interpretation**

The delineation and interpretation of major geological zones as surfaces is possible by using the data from drill holes as shown in Figure 47. The Dinapigue Nickel Laterite Deposit is composed of the limonite and saprolite estimation domains. These domains or geology solids are defined based on its physical characteristics, mineralization, stratigraphic position, and geochemical signature. Geological modeling and related procedures are carried out using Geovia Surpac software (2023 Refresh 2).

The boundaries of each geology solid are interpreted and modeled using the drillholes' lithology and validated using the assay data and its spatial location. The geologic contacts at the bottom of each lithology are automatically identified based on extracted points. To ensure that the limonite and saprolite layers will be conformable and not intersecting each other during creation of layers, the lithological identification of each sample is reviewed meticulously and overridden by the geologist when necessary. The stratigraphic position

and assay data are also considered during this process. The resulting lithology is saved in another database and is only used for the purpose of modeling. The original lithological data based on core logging is retained in the drilling database.

After extraction of the last intercepts of each domain, it was triangulated to produce geological Digital Terrain Model (DTM) surfaces. Two (2) bottom surfaces were generated: limonite, and saprolite. Solid model of limonite is generated through combining bottom limonite DTM surface and the topographic surface DTM. Saprolite solid, on the other hand, is created by combining bottom limonite DTM surface and bottom saprolite DTM surface. The limonite and saprolite solid models are displayed in Figure 45 and Figure 46, respectively. The solids are then intersected with the geological database containing the drillholes to come up with limonite and saprolite samples for grade interpolation.



Figure 45. Plan view of the limonite solid model



Figure 46. Plan view of the Saprolite solid model

#### 10.2 Database and Software Used in the Estimation of Mineral Resources

Seven drilling campaigns since the beginning of the exploration for the tenement – NiHAO Mineral Resources International, Inc. (NI), Nickel Asia Corporation (NAC), DMC with MacroAsia Mining Corporation as contractor, and DMC with MEGA Philippines, Inc. as contractor – are contained in the DMC geological database dispersed throughout its MPSA. The drilling data of Queensland Nickel Pty Ltd. (QNI) and Verum Terra Geosciences Inc. (VTGI) are included in the NiHAO Mineral Resources International, Inc. (NI) drilling database. The incorporation of data in the database and resource estimation is based only on the drill holes of the mineral deposit.

The creation of geological database of DMC stems from information incorporated in MS Excel such as hole ID, coordinates, collar elevation, intervals, depth, lithology, sample analyses, etc. Four mandatory tables are established from these data: collar/header, assay, litho (geology), and survey.

The collar/header table must contain the Hole ID, Coordinates, Elevation, Depth, Area, and Campaign. The table for survey must contain the Hole ID, Depth, Dip, Azimuth, Area, and Campaign. Meanwhile, the table for litho (geology) contains the Hole ID, depth-From, depth-To, Litho, Area, and Campaign. The assay table contains the following data: Hole ID, depth-From, depth-To, assays of Ni, Fe, Co, MgO, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, Area, and Campaign. These tables are necessary in generating and calculating Mineral Resources. The fields were then reformatted to the MS Access database and imported into the GEOVIA Surpac database.

Upon data verification of drilling data, a total of 1,715 drillholes containing 27,980 samples are utilized in the Surpac software for Mineral Resource computation. Below shown in Figure 47 and Table 35 the location and distribution of drillholes inside the MPSA.

Number of Drillholes	1,715
Number of Samples	27,980
Total Meterage	26,568.78

Table 35. Summary of DMC drillhole database



Figure 47. Location map showing the distribution of drillholes in the MPSA

# 10.3 Database Integrity, Verification, and Validation

# 10.3.1 Integrity of Database

The validation of the data was performed to check on the integrity of the database which is discussed below.
# 10.3.2 Data Verification and Validation

The following sanitation of data are carried out by DMC to ensure the accuracy of the drilling database:

- Detection and omission of erroneous data and duplicate entries
- Checking of drillhole location with respect to the topographic surface. All the drillholes are oriented vertically at 90 degrees. To check for occurrences of floating or submerged collars, all the drillhole collars are draped onto the actual topographic survey. The elevations from the topographic surface are then compared with the surveyed collar elevation. Any significant difference observed is brought to the attention of the Survey Team for correction.

After the first level of data validation at the mine site, a macro-based checking upon uploading of the database to the centralized online platform of NAC (OneDrive) is carried out.

The process of validation and verification of data yield the following results:

- Detection and omission of erroneous data and duplicate entries;
- One drillhole was omitted from the database because it was located southeast outside of Area 1 at a stream and 56 drillholes from the combined campaigns of QNI and VTGI was removed because these holes are located outside the MPSA;
- Possible existence of orphan samples can occur if there is insufficient sample information such as collar data. The drillhole database is plotted to spot erroneous information such as typographical errors in the drill holes and samples tables. These minor errors are detected and corrected accordingly.

All the locations of the drill holes from 2019 onwards are triangulated from the actual collar surveys with the use of a Topcon DS101AC Total Station and GR5 GNSS RTK Base and Rover GPS System. Previous campaigns with annual regular calibrations by Siccion Marketing, Inc., from the National Mapping Resource Information Administration (NAMRIA).

**Error! Reference source not found.**7 presents the summary of all data verification activities conducted at Dinapigue.

After the first level of data validation at the mine site, a macro-based checking upon uploading of the database to the centralized online platform of NAC (OneDrive) is carried out.

The macro-based validation ensures that proper data type per field is used, lithological codes are correct, ranges for depths, assay and other numerical inputs are acceptable, uniformity of data format practiced and all drillhole IDs in the database are unique.

Locations of drillholes are validated against the updated topographic surface of DMC as of December 2022 by visual inspection through cross sections. Actual collar and pressed collar elevations are also compared. Any anomalous difference in the surveyed collar elevations and topographic map is subject to further verification.

All data verification activities conducted at Dinapigue are summarized in Table 36.



Table 36. Summary of data verification

	Verification Activities Conducted								
Period	Company	Work Completed	Findings						
2012	SRK Consulting China Ltd	Twin drilling of 30 drillholes	Samples with >0.6Ni% deemed comparable within ±20% margin of error						
2012	SRK Consulting China Ltd	Re-analysis of pulp and coarse rejects	Results are deemed acceptable, within ±15% margin of error						
2015	Nickel Asia Corporation (NAC)	Confirmatory drilling of 10 drillholes	Generally comparable with longer depths for confirmatory drillholes						
2015- 2017	Nickel Asia Corporation (NAC)	Drilling concentrated on the northern portion of Area 1 MPSA	Generally comparable with average grades within ±10% for limonite Fe% and saprolite Ni% and Fe%; and -15% for limonite Ni%						
2019	Dinapigue Mining Corporation (DMC) with MacroAsia Mining Corporation (MMC) as Drilling Contractor	Verification of previously- drilled high grades areas through drilling at Area 1, Area 2, and Area 4	Confirmatory holes are generally comparable with Ni and Fe grades of drillholes belonging to QNI, VTGI, and NAC drillholes						
2021	Dinapigue Mining Corporation (DMC) with Mega Philippines Inc. (MPI) as Drilling Contractor	Drilling activities intended for lateral and vertical Mineral Resource expansion conducted at Area 1, Area 2, Area 4, and Area 5	Confirmatory holes are generally comparable with Ni and Fe grades of previous drilling campaigns; Mineral Resource increase laterally and vertical increase in resource is minimal						
2022	Dinapigue Mining Corporation (DMC)	Drilling activities concentrated on Mine Area 1 and Mine Area 5	Drillhole grades are generally comparable with the Ni and Fe grades of the previous drilholes; Minimal increase in limonite resource and minimal decrease in saprolite resource						

### **10.4 Basic Statistical Parameters**

# 10.4.1 Compositing

Generation of limonite and saprolite composites have been done by intersecting both limonite and saprolite domains with drillhole data. A composite length of 1 meter is applied since the common sampling interval that is employed per drillhole is on a per meter basis; hence, fixed length method is used for compositing limonite and saprolite drillhole samples. Aside from 1 meter sampling interval, the value for the minimum percentage of sample to be included is set to 50%. There was no top cutting done.

### 10.4.2 Basic Statistics

Tables 38 to 42 show the summary of basic statistical data for samples of limonite, saprolite, and bedrock.

Limonite Composite Basic Statistics									
Variable	Ni	Fe	Со	MgO	SiO2	Al2O3			
Number of Samples	12,503	12,503	5 <i>,</i> 885	5,885	5,885	5,885			
Minimum Value	0.07	4.10	0.00	0.00	0.00	0.00			
Maximum Value	3.29	59.09	1.75	28.62	38.44	33.82			
Mean	1.00	44.54	0.11	2.24	6.03	5.73			
Median	1.00	45.74	0.10	1.46	4.01	6.17			
Variance	0.10	68.75	0.01	6.93	27.30	18.76			
Standard Deviation	0.32	8.29	0.11	2.63	5.22	4.33			
Coefficient of Variation	0.31	0.19	0.92	1.17	0.87	0.76			
Skewness	-0.22	-2.76	5.86	3.25	1.98	0.47			
Kurtosis	3.56	11.00	56.19	18.95	7.87	4.17			

Table 37. Basic statistics of limonite sam	bles
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Saprolite Composite Basic Statistics								
Variable	Ni	Fe	Со	MgO	SiO2	Al2O3		
Number of Samples	11,308	11,308	5,230	5,230	5,230	5,230		
Minimum Value	0.06	0.02	0.00	0.00	0.00	0.00		
Maximum Value	2.87	49.07	1.30	39.45	50.06	32.96		
Mean	1.12	13.40	0.03	16.65	29.32	1.42		
Median	1.09	11.31	0.02	18.64	34.04	0.76		
Variance	0.29	48.08	0.00	119.34	138.37	4.69		
Standard Deviation	0.54	6.93	0.03	10.92	11.76	2.17		
Coefficient of Variation	0.48	0.52	1.15	0.66	0.40	1.52		
Skewness	0.08	1.11	20.80	-0.33	-1.29	4.11		
Kurtosis	2.32	4.60	765.43	1.78	3.74	36.26		

Table 39. Limonite and saprolite sample basic statistics

Limonite and Saprolite Composite Basic Statistics								
Variable	Ni	Fe	Со	MgO	SiO2	Al2O3		
Number of Samples	23,811	23,811	11,115	11,115	11,115	11,115		
Minimum Value	0.06	0.02	0	0	0	0		
Maximum Value	3.29	59.09	1.75	39.45	50.06	33.82		
Mean	1.06	29.76	0.07	9.13	17.16	3.67		
Median	1.03	20.39	0.06	2.52	11.59	2.18		
Variance	0.19	286.97	0.01	111.44	215.18	16.36		
Standard Deviation	0.44	16.94	0.09	10.56	14.67	4.05		
Coefficient of Variation	0.41	0.57	1.23	1.16	0.86	1.10		
Skewness	0.22	-0.24	6.38	0.88	0.35	1.27		
Kurtosis	3.15	1.33	72.20	2.27	1.49	5.52		

Bedrock Composite Basic Statistics								
Variable	Ni	Fe	Со	MgO	SiO2	Al2O3		
Number of Samples	3,683	3,683	2,042	2,042	2,042	2,042		
Minimum Value	0.01	2.89	0	0	0	0		
Maximum Value	2.22	46.85	0.54	40.59	48.15	17.39		
Mean	0.39	6.76	0.01	22.34	33.25	0.61		
Median	0.30	6.33	0.00	30.93	38.46	0.32		
Variance	0.06	8.32	0.00	185.63	136.98	0.99		
Standard Deviation	0.25	2.88	0.02	13.62	11.70	1.00		
Coefficient of Variation	0.65	0.43	1.47	0.61	0.35	1.62		
Skewness	1.72	4.40	18.81	-0.75	-1.64	5.84		
Kurtosis	8.18	56.17	498.97	1.82	4.10	68.79		

Table 40. Bedrock sample basic statistics

Table 41. Limonite, saprolite and bedrock basic statistics

Limonite, Saprolite, and Bedrock Composite Basic Statistics								
Variable	Ni	Fe	Со	MgO	SiO2	Al2O3		
Number of Samples	27,494	27,494	13,157	13,157	13,157	13,157		
Minimum Value	0.01	0.02	0	0	0	0		
Maximum Value	3.29	59.09	1.75	40.59	50.06	33.82		
Mean	0.98	26.86	0.06	11.10	19.56	3.22		
Median	0.96	22.47	0.04	4.02	18.11	1.36		
Variance	0.23	310.18	0.01	141.54	229.49	15.18		
Standard Deviation	0.48	17.61	0.09	11.90	15.15	3.90		
Coefficient of Variation	0.49	0.66	1.34	1.07	0.77	1.21		
Skewness	0.14	-0.01	6.48	0.67	0.08	1.47		
Kurtosis	2.80	1.28	76.42	1.93	1.35	6.13		

Table 42. Drillhole composite summary

Parameters	Value
Average Depth (m)	15.49
Number of Drillholes	1,715
Meterage (m)	26,568.78
Number of Composite Samples	27,494
Limonite Composite Samples	12,503
Saprolite Composite Samples	11,308
Bedrock Composite Samples	3,683

# 10.5 Mineral Resource Estimation and Modeling Methodology

# 10.5.1 Grade Interpolation

The method applied in the interpolation of Ni and Fe grades of the DMC Resource Block Model is Inverse Distance Squared (IDS). This method calculates the weights of grades based on the inverse of the squared distance of samples to the centroid of the block being estimated. The minimum number of samples used per block is 2 and the maximum is 12. The parameters used in the interpolation of Ni and Fe grades are shown in Table 43.

This method of interpolation was selected as it was generally deemed suitable in interpolating grades in nickel laterite deposits. It has been proven applicable on other nickel laterite deposits owned by NAC that have been economically mined for decades.

Partial percentage is also calculated for each block in the resource model to accurately account the % of limonite and saprolite solids per block. The blocks are assigned with the lithology from the interpreted geology solids (see Figure 48. Block model of DMC

Domain	Resource Class	True Distance	Search Radius	Major/Semi- Major	Major/ Minor	Bearing/Plunge/ Dip	Minimum Samples	Maximum Samples	Maximum Vertical Search Distance
LIM	Measured	≤ 50 m	50 m	1	17.5	0/0/0	2	12	10
LIM	Indicated	$>50$ m and $\leq100$ m	100 m	1	17.5	0/0/0	2	12	10
LIM	Inferred	> 100 m and $\leq$ 175 m	175 m	1	17.5	0/0/0	2	12	10
SAP	Measured	≤ 25 m	25 m	1	17.5	0/0/0	2	12	10
SAP	Indicated	> 25 m and ≤ 50 m	50 m	1	17.5	0/0/0	2	12	10
SAP	Inferred	$> 50$ m and $\leq 175$ m	175 m	1	17.5	0/0/0	2	12	10

Table 43. DMC Resource block model interpolation parameters



Figure 48. Block model of DMC

Table 44 shows the minimum and maximum X, Y and Z coordinates of the DMC block model.

### Table 44. Block Model Summary

Туре	Y	x	Z
Minimum Coordinates	1830200	421500	0
Maximum Coordinates	1840680	428090	710
User Block Size	10	10	1
Min. Block Size	10	10	1
Rotation	0.000	0.000	0.000

Total Blocks	3193849
Storage Efficiency %	99.34

The block size is 10x10x1 and is not discretized. No rotation is applied. The total number of blocks in the DMC resource model is 3,193,849 with a storage efficiency of 99.34%.

Block model parameters and attributes that were utilized in the DMC resource block model is summarized in Table 45.

	Block Model Attributes					
Attribute Name	Туре	Decimals	Background Value	Description		
density_lim	calculated	3	0	limonite density		
density_sap	calculated	3	0	saprolite density		
fe_ave	calculated	3	0	average Fe grade		
fe_id_lim	float	2	0	Fe IDW grade in limonite		
fe_id_sap	float	2	0	Fe IDW grade in saprolite		
litho	calculated	0	None	Lithology based on partial percentages		
litho_whittle	character	None	None	LIM and SAP lithology classification		
ni_ave	calculated	3	0	average Ni grade		
ni_id_lim	float	2	0	Ni IDW grade in limonite		
ni_id_sap	float	2	0	Ni IDW grade in saprolite		
oreclass	calculated	3	None	based on DMC ore grade classification		
pp_lim	float	2	0	limonite partial percentage		
pp_sap	float	2	0	saprolite partial percentage		
resclass_lim	calculated	3	None	limonite resource classification		
resclass_sap	calculated	3	None	saprolite resource classification		
tdns_id_lim	real	3	-99	limonite true distance to nearest sample		
tdns_id_sap	real	3	-99	saprolite true distance to nearest sample		

#### Table 45. Block model attributes

Table 46. Volume of blocks inside and outside the MPSA buffer boundary

Parameters	Volume (in cubic meters)
Inside MPSA Buffer Boundary	16,589,576,000.00
Outside MPSA Buffer Boundary	32,445,296,000.00
Total Volume	49,034,872,000.00

The informing samples are constrained using 175x175x10m search ellipsoid. The dimensions of the ellipse are simplified and validated using the maximum distance of continuity determined from variogram models. Since

the minor axis did not yield clear structures for analysis, 10m vertical distance is used. variogram models are in Appendix F of this Report.

# 10.5.2 Model Validation

The resource model is validated to ensure that the established procedures for resource estimation is executed with consistency and accuracy and that the estimated values honored the original data. The validations applied for Dinapigue Nickel Laterite Deposit model are graphical and statistical methods.

Parallel estimation using Ordinary Kriging (OK) and Nearest Neighbor (NN) interpolation methods was conducted to check the Inverse Distance Weighting Squared (IDW) grades. The results of the three interpolation methods are also plotted in swaths. Only the Measured and Indicated Resources are included in the analyses.

# 10.5.2.1 Graphical Validation

Solid volume validation was done before proceeding to grade interpolation. The volumes of the limonite and saprolite solid models are compared to the resulting volume of the blocks constrained within either limonite or saprolite solid. This is to ensure that the blocks are constrained and updated properly by the two modelled solids. The volumes of limonite and saprolite solid and updated limonite and saprolite blocks in the resource model are summarized in Table 47.

The volume difference between the solids and updated blocks per lithology can be attributed to the precision value that was utilized during the computation of partial percentage for the limonite and saprolite blocks. A precision value of 3 was used in the partial percentage computation for both limonite and saprolite solids.

-			
Solid Model	Solids	Volume of Blocks	
	Volume	within the Solid	Difference (cu.m)
Туре	(cu.m)	(cu.m)	
Limonite Solid	68,021,291	68,020,762	529
Saprolite Solid	49,045,398	49,043,911	1,487

Table 47.	Comparison	of limonite and	saprolite solids	s volumes a	and block volumes
	companioon		supronce sonac	· · · · · · · · · · · · · · · · · · ·	

Sectional views of drill holes containing limonite and saprolite solid outlines were produced to verify if the lithologic contacts (limonite and saprolite) were coinciding with the top and bottom limonite and saprolite solid outlines (Figure 49) except for drill holes that were situated in mined out areas wherein the topmost part of the drillhole does not coincide with the top limonite surface outline. The figures below show the outline of the various solids with the drillhole showing the lithology.



Figure 49. Section 1839100N showing the drillholes within limonite and saprolite solid outline



Figure 50. Section 1836660N showing the drillholes within limonite and saprolite solid outline



Figure 51. Section 1835170N showing the drillholes within limonite and saprolite solid outline



Figure 52. Section 425200E showing the drillholes within limonite and saprolite solid outline

After the creation of the block model, plan view and sectional views of the block model were generated to verify if the assigned lithology values lie within the DMC MPSA buffer boundary and ore boundary for limonite and saprolite. All blocks that were outside the ore boundary and DMC MPSA buffer boundary were classified as undetermined.



Figure 53. Limonite blocks within MPSA



Figure 54. Saprolite blocks within MPSA



Sectional views of the block model were also generated to verify that the limonite and saprolite blocks lies within the limonite and saprolite solids. Air blocks should be above the topographic surface while bedrock should lie below the floor of saprolite. Aside from the section verification methods, the blocks should also be contained within the DMC MPSA buffer boundary and Mineral Resource boundary.

The block values are also checked to ensure that the updating and assigning of values are correctly carried out. Examples of sections of the block model are illustrated in Figure 55 to Figure 58.



Figure 55. Block Model at Section 1839100N



Figure 56. Block Model at Section 1836660N



Figure 57. Block Model at Section 1835170N



Figure 58. Block Model at Section 425200E

# 10.5.2.2 Statistical Validation

Upon interpolation of Ni and Fe grades, swath plots, also known as drift models, are generated to compare the average grades of the block model and composites in the following directions: Northing, Easting, and Elevation.

The plot of Inverse Distance Squared (IDS) interpolated blocks generally lies between the highs and lows of the plot for composite samples (Figure 59 to Figure 70). This shows that the interpolation has properly approximated the grades. There are instances wherein some points in the trendlines of the interpolated Ni and Fe grades, depicted by the green outline in the swath plots, coincide with the points in the trendlines of



composite Ni and Fe grades, depicted by the blue outline in the swath plots This means that the interpolated grades are equal to the composite grades. Other points within the interpolated grade trendlines are situated near the composite grade trendline, which indicates minimal difference between the composite and interpolated grades. Some portions of the interpolated trendlines that have large differences with that of the composite trendlines are areas wherein the number of drillholes within the vicinity of the search radius of the blocks is minimal in quantity.



Figure 59. Northing swath plot of Ni composite grades and interpolated Ni grades in limonite



Figure 60. Northing swath plot of Ni composite grades and interpolated Ni grades in saprolite



Figure 61. Northing swath plot of Fe composite grades and IDW interpolated Fe grades in limonite



Figure 62. Northing swath plot of Fe composite grades and IDW interpolated Fe grades in saprolite



Figure 63. Easting swath plot of Ni composite grades and IDW interpolated Ni grades in limonite



Figure 64. Easting swath plot of Ni composite grades and IDW interpolated Ni grades in saprolite



Figure 65. Easting swath plot of Fe composite grades and IDW interpolated Fe grades in limonite



Figure 66. Easting swath plot of Fe composite grades and IDW interpolated Fe grades in saprolite



Figure 67. Elevation swath plot of Ni composite grades and IDW interpolated Ni grades in limonite







Figure 69. Elevation swath plot of Fe composite grades and IDW interpolated Fe grades in limonite



Figure 70. Elevation swath plot of Fe composite grades and IDW interpolated Fe grades in saprolite

Figure 71 to Figure 74 show the swath plot of Ni In IDW, Nearest Neighbor (NN) and OK (Ordinary Kriging).



Figure 71. Swath plot of Ni in limonite (Northing)



Figure 72. Swath plot of Ni in limonite (Easting)



Figure 73. Swath plot of Ni in saprolite (Northing)



Figure 74. Swath plot of Ni in saprolite (Easting)

Figure 75 to Figure 78 are the swath plots of Fe in IDW, NN and OK in Northing, Easting, and Elevation directions.



Figure 75. Swath plot of Fe in limonite (Northing)



Figure 76. Swath plot of Fe in limonite (Easting)



Figure 77. Swath plot of Fe in saprolite (Northing)



Figure 78. Swath plot of Fe in saprolite (Easting)

Figure 79 to Figure 94 are the graphs showing the Histograms of samples and block model grades for Ni and Fe per domain (Limonite and Saprolite) and per resource category (Measured and Indicated). Histograms of Ni in Measured and Indicated produced a normal distribution while lognormal distribution is observed for histograms of Fe in Measured and Indicated.



Figure 79. Frequency and cumulative frequency histogram of Ni in limonite (Measured)



Figure 80. Frequency and cumulative percentage histogram of Ni in limonite (Measured)

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Figure 81. Frequency and cumulative frequency histogram of Ni in limonite (Indicated)



Figure 82. Frequency and cumulative frequency histogram of Ni in limonite (Indicated)





Figure 83. Frequency and cumulative frequency histogram of Ni in saprolite (Measured)



Figure 84. Frequency and cumulative percentage histogram of Ni in saprolite (Measured)

NAC



Figure 85. Frequency and cumulative frequency histogram of Ni in saprolite (Indicated)



Figure 86. Frequency and cumulative percentage histogram of Ni in saprolite (Indicated)



Figure 87. Frequency and cumulative frequency histogram of Fe in limonite (Measured)



Figure 88. Frequency and cumulative percentage histogram of Fe in limonite (Measured)



Figure 89. Frequency and cumulative frequency histogram of Fe in limonite (Indicated)



Figure 90. Frequency and cumulative percentage histogram of Fe in limonite (Indicated)



Figure 91. Frequency and cumulative frequency histogram of Fe in saprolite (Measured)



Figure 92. Frequency and cumulative percentage histogram of Fe in saprolite (Measured)



Figure 93. Frequency and cumulative frequency histogram of Fe in saprolite (Indicated)



Figure 94. Frequency and cumulative percentage histogram of Fe in saprolite (Indicated)

# 10.6 Reasonable Prospects for Eventual Economic Extraction (RPEEE)

### 10.6.1 Geological Parameters

Solid models of limonite and saprolite were utilized in volume and tonnage reporting of limonite and saprolite ore resources. An up-to-date topographic surface of the MPSA area is included to account for changes in topography after every mining activity. Aside from solids and topographic surface, the MPSA buffer boundary is also incorporated in volume reporting to exclude portions of the block model that fall outside the MPSA buffer boundary. Block grades that contain average Ni and Fe grade values greater than zero were only included in the volume reporting, as well as blocks that are classified as either measured, indicated, or inferred.

The Cut-off Grades used in the reporting of resource figures are 0.80%Ni and 25%Fe in limonite and 1.10%Ni for saprolite. Ni and Fe grades that are below cut-off, (LW and SW ore classification) are not included in resource reporting. The ore classification used in resource reporting, with corresponding Ni and Fe grade ranges, is shown below in Table 48.

Time	One dessification	Grade Range	
Туре	Ore classification	%Ni	%Fe
	HF (High Iron)	< 1.3	>= 48
Limonito	MF (Mid Iron)	< 1.3	>=45; < 48
Limonite	LF (Low Iron)	>=0.8; < 1.3	>=25; < 45
	LW (Limonite Waste)	< 0.8	>=25; < 45
	T1 (Type 1)	>=1.7	
	T2 (Type 2)	>=1.6; < 1.7	
	ТЗ (Туре З)	>=1.5; < 1.6	
Connelite	T4 (Type 4)	>=1.4; < 1.5	
Saprolite	T5 (Type 5)	>=1.3; < 1.4	
	Т6 (Туре 6)	>=1.2; < 1.3	< 25
	Т7 (Туре 7)	>=1.1; < 1.2	< 25
	SW (Saprolite Waste)	<1.1	< 25

Table 48.	DMC	ore	classification
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Partial percentage values of limonite and saprolite for each block within the limonite and saprolite solid were utilized as volume adjustment attribute for volume reporting. Blocks that reside within limonite or saprolite solid will be included in the volume reporting for limonite resource and saprolite resource, respectively. For blocks that are partially within limonite solid, the portion of the block that intersects the limonite solid is incorporated in the limonite volume report. Only the portion of the block that intersects the saprolite solid is included in the saprolite volume report while the remaining portion of the block outside the saprolite solid is not included in the saprolite volume report.

Density attributes for limonite and saprolite were incorporated in the tonnage calculation. A density value of 1.153 is used for the computation of limonite tonnage while 1.400 is employed for saprolite tonnage.

10.6.2 Mining and Processing Parameters

The Project involves the extraction of lateritic deposit for Direct Shipping Ores (DSO). The Run-of-Mine Ore (ROMO) will be stockpiled, and then undergo sun-drying and crushing/screening process before it is shipped to local and foreign markets.



The mining method to be applied to extract the nickel bearing laterite is contour stripping (surface mining) method. Contour mining is a type of strip mining that follows the contours of outcrops and hilly terrains. The method requires the mining of the nickel ore in 3-meter bench heights. Variations and modifications will be applied during the mining once the nature of the laterite deposit is fully evaluated.

The mine design parameters used in the Mineral Reserve estimation are based on the following assumptions shown in below:

Table 49. Project mine design parameters		
Parameters	Assumption	
Bench Height	3 meters	
Bench Width	3 meters	
Bench Face Angle	70 degrees	
Ultimate Pit Slope	36 degrees	
Road Width	10 meters	
Road Gradient	10%	
Berm Width	1 meter	
Berm Height	1 meter	

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Since the Project is direct shipping ore operation (DSO), there is no metallurgical test-work or processing involved in its operation. The ores are directly shipped to buyers through barges and supramax-sized vessels. Certain activities, however, are implemented to ensure that the products meet the required specifications by the buyers.

# 10.6.3 Dilution and Mining Recovery

It is recognized that certain portions of the mined ore may be lost or diluted during mining, materials handling and barge/ ship-loading operations because of operational limitations and procedural and human errors, DMC has not yet gathered enough data at this point to accurately account these factors. None of them will be factored in this economic assessment since the Project is only in its first year of operations.

# 10.6.4 Infrastructures

Majority of the critical infrastructures to run the operations are already in-place but continuous improvement is deemed necessary to supplement the Project's transition towards full-blown operation.

The following structures are presently available at the site: Assay Laboratory, Sample Preparation Area, Core House, Warehouse, Motor Pool, Powerhouse, Fuel Depot, Barracks for employees and contractors, Nurseries, Agro Farm, Material Recovery and Hazardous Waste Facility, Water Impoundment Area, Water Refilling Station, Recreational Facilities, Worship House and Administration Offices and Staff Accommodation Container Vans. Within the approved Special Land Use Permit (SLUP) area are additional Fuel Depot, the Rockfill Causeway and Pier Yard. As the Project ramps up production and shipment in the succeeding years, additional

accommodations, facilities in the Main camp, motor pool, larger fuel depots, independent Sample Preparation area, causeway improvement and cell tower will be constructed.

10.6.5 Legal, Government, Permitting, and Licensing, Statutory Parameters

The MPSA of the Project was granted in 2007 which is valid for 25 years and will expire in 2032. It is renewable for another 25 years. The causeway has a Special Land Use Permit (SLUP) given on August 2019 and expired in



August 2022. The SLUP will be replaced by The Forest Land Use Agreement (FLAg) in which the application is on process and DENR has given DMC a provisional permit. The causeway has a Permit to Operate until 2023 and will be renewed before the expiration of the permit.

10.6.6 Environmental and Social Parameters

The company has addressed the government's environmental and social legal compliances. Aside from the exiting MPSA, there is also an ECC, granted in 2007. Other permits obtained were the ECC for the causeway. The Special Tree Cutting Permits (STCP) will be granted yearly by the DENR. Currently, the company has not done any tree cutting activities.

There is the yearly Social Development and Management Program (SDMP) and Environmental Protection and Enhancement Program (EPEP) that DMC is complying with.

### 10.6.7 Marketing Parameters

To determine which part of the deposit has reasonable prospects for eventual economic extraction, an optimized pit was generated. Using the parameters in 51, the lowest Ni% grade that can be used as blending material was identified and was used as the Cut-off Grade for the Mineral Resource.

	Sap 140 Lim 48%		Lim HPAL
Year 1	Ni >= 1.100	Fe >= 47.00	Fe >= 40.95 & Fe < 47.00
Year 2	Ni >= 1.131	Fe >= 47.51	Fe >= 33.79 & Fe < 47.51
Year 3	No Ni Constraint	Fe >= 47.28	Fe < 47.28
Year 4	Ni >= 1.218	Fe >= 47.02	Fe >= 38.08 & Fe < 47.02
Year 5	Ni >= 1.161	Fe >= 45.59	Fe >= 41.51 & Fe < 45.59
Year 6	Ni >= 1.151	Fe >= 46.01	Fe >= 36.06 & Fe < 46.01
Year 7	No Ni Constraint	Fe >= 46.13	Fe >= 37.95 & Fe < 46.13
Year 8	Ni >= 1.065	Fe >= 45.91	Fe >= 40.45 & Fe < 45.91
Year 9	Ni >= 0.875	Fe >= 46.44	Fe >= 39.31 & Fe < 46.44
Year 10	Ni >= 1.16	Fe >= 45.9	Fe >= 41.96 & Fe < 45.90
Year 11	No Ni Constraint	Fe >= 46.03	Fe >= 41.57 & Fe < 46.03
Year 12	Ni >= 1.128	Fe >= 46.25	Fe >= 39.32 & Fe < 46.25
Year 13	Ni >= 0.983	Fe >= 46.18	Fe >= 41.08 & Fe < 46.18
Year 14	Ni >= 1.12	Fe >= 46.46	Fe >= 41.92 & Fe < 46.46
Year 15	Ni >= 1.199	Fe >= 46.51	Fe >= 41.51 & Fe < 46.51
Year 16	Ni >= 1.134	Fe >= 46.65	Fe >= 41.57 & Fe < 46.65
Year 17	Ni >= 1.246	Fe >= 45.5	Fe >= 41.52 & Fe < 45.50
Year 18	Ni >= 1.225	Fe >= 46.03	Fe >= 38.96 & Fe < 46.03
Year 19	Ni >= 1.201	Fe >= 45.91	Fe >= 40.04 & Fe < 45.91
Year 20	Ni >= 1.035	Fe >= 47.21	Fe >= 0.000 & Fe < 47.21
Year 21	Ni >= 0.984	Fe >= 47.23	Fe >= 0.000 & Fe < 47.23
Year 22	Ni >= 1.194	Fe >= 47.04	Fe >= 37.76 & Fe < 47.04
Year 23	Ni >= 1.299	Fe >= 47.41	Fe >= 33.64 & Fe < 47.41
Year 24	Ni >= 1.172	Fe >= 47.01	Fe >= 41.05 & Fe < 47.01
Year 25	Ni >= 1.251	Fe >= 46.84	Fe >= 40.96 & Fe < 46.84
Year 26	Ni >= 1.192	Fe >= 47.36	Fe >= 39.21 & Fe < 47.36
Year 27	Ni >= 1.144	Fe >= 47.14	Fe >= 39.29 & Fe < 47.14
Year 28	Ni >= 0.998	Fe >= 46.64	Fe >= 40.38 & Fe < 46.64
Year 29	Ni >= 1.189	Fe >= 46.77	Fe >= 40.22 & Fe < 46.77
Year 30	Ni >= 0.47	Fe >= 47.02	Fe >= 41.32 & Fe < 47.02
Year 31	Ni >= 1.195	Fe >= 47.2	Fe >= 41.16 & Fe < 47.20
Year 32	Ni >= 1.225	n/a	Fe >= 42.67 & Fe < 48.00

#### Table 50. DMC Cut-off Grades derived from Whittle

Cost Parameter	Saprolite	Limonite	Limonite HPAL	Unit
Waste moving cost	80.01	80.01	80.01	Php/WMT
Ore mining cost	133.86	116.58	116.58	Php/WMT
Production overhead	70.91	70.91	70.91	Php/WMT
Administrative cost	92.54	92.54	92.54	Php/WMT
Rehandling cost	66.75	66.75	66.75	Php/WMT
Regulatory cost (EPEP, SDMP)	54.61	54.61	54.61	Php/WMT
Ship loading cost	74.79	74.79	8.56	Php/WMT
Barge loading cost	97.08	97.08	97.08	Php/WMT
Taxes	118.38	118.38	118.38	Php/WMT

Table 51. Production cost estimates and assumptions used in Whittle

The world Ni and Fe markets dictate the shipment of DMC's limonite and saprolite ores. For the life of mine (LOM) of the project, DMC is expected to produce the following product specifications based on its optimized mine and financial plan (Table 52).

Ore Type	Shipment Type	%Ni	%Fe
	Lim HPAL	≥ 0.90 but < 1.10	≥ 40 but < 48
Limonite	Lim 48% Fe	≥ 0.80 but < 1.10	≥ 48 but < 49
	Lim 49% Fe	≥ 0.80 but < 1.10	≥ 49
	Sap 1.30% Ni	≥ 1.30	regardless of %Fe
Saprolite	Sap 1.40% Ni	≥ 1.40	regardless of %Fe
	Sap 1.50% Ni	≥ 1.50	regardless of %Fe

Table 52. Life of Mine Product quality of the Project

Since DMC started foreign shipments only in 2022, the table below shows the product specifications DMC agrees to sell to its current customers per 2022 contract.

Ore Type	Element	Contents	Buyer
	Nickel (Ni) Iron (Fe)	From 0.80% to 1.10% From 45.00% to 50.00%	Big Wave Resources Co., Ltd. Ningbo Lygend Wisdom Co., Ltd.
Limonite	Nickel (Ni) Iron (Fe)	From 0.90% to 1.10% From 40.00% to 50.00%	Coral Bay Nickel Corporation
	Magnesium (Mg)	Below 1.50%	
Saprolite	Nickel (Ni)	From 1.30% to 1.80%	Big Wave Resources Co., Ltd. Ningbo Lygend Wisdom Co., Ltd.

Table 53. Current product quality of the Project

# 10.6.8 Economic Assumptions and Parameters

The NAC marketing group provided a forecasted price per shipment type in USD/wmt. This is also based on various market analysts on world base metal outlook and forecasts. It is assumed in this assessment that the fluctuations in nickel prices will cancel out over the LOM, as shown below:

Existing Shipment Types	Current Price, USD/WMT	Forecast Price, USD/WMT
0.8-0.9% Ni, >49% Fe	18.00	16.00
0.9-1.0% Ni, >48% but <49% Fe	13.00	14.00
0.9-1.1%, >40% but <48% Fe	12.50	12.00
Sap 1.15% Ni	15.00	17.00
Sap 1.25% Ni	22.00	19.00
Sap 1.30% Ni	32.00	24.00
Sap 1.35% Ni	37.00	29.00
Sap 1.40% Ni	42.00	34.00
Sap 1.45% Ni	47.00	39.00
Sap 1.50% Ni	52.00	44.00

Table 54. Forecasted ore prices per shipment type	Table 54.	Forecasted ore	prices p	per shipmei	nt type
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Since the Project's products are marketed on a per US dollar basis (US\$/WMT), assumptions on the foreign exchange rate were made in the study. Figure 95 shows the historical foreign exchange rates from Bangko Sentral ng Pilipinas (BSP) from January 2018 to August 2022 (BSP Exchange rate bulletin as of September 2022) and the projection from market analyst (*longforecast.com as of September 2022*) from September 2022 to October 2026. For the inclusive period, the average exchange rate is 57.26. The rate used in this economic assessment 57.00 PHP/US\$.



Figure 95. Exchange rate USD to PHP (historical and forecasted)

### 10.6.9 Material Risks

In the future, the market consensus is predicted to follow the downward trend of the nickel demand and price due to economic uncertainties, inflation, increasing interest rates, the rising supply from Indonesia that is

currently leveraging to stimulate investment in battery-grade metal, and the soaring energy prices heightened by the Russia-Ukraine war (see Figure 96).



Figure 96. World bank nickel price forecast

CRU Group—in the long-term nickel price forecast that they prepared for NAC in October 2022<sup>1</sup>—also projects the same downward trend until 2026 along with a price recovery to almost the same level in 2022 by the year 2030. Its long-term forecast upside case is shown in Figure 97.



Figure 97. CRU nickel price forecast (adapted from Victor Chin et al., NAC Nickel Market Study: Upside Case Long-term Nickel Price Forecast, (CRU, 2022)).

# **10.7 Mineral Resource Categories**

The Mineral Resource of DMC is classified into Measured, Indicated, and Inferred categories. The geometric method of classifying resources based on the influence of the drillholes is used as its primary criteria and is based on the true distance to nearest sample attribute of the resource model. Table 55 shows the criteria of categorization per mineral type. All Mineral Resource categories are within the ranges defined by the variograms in the major and semi-major axis.

Domain	Resource Class	True Distance
LIM	Measured	≤ 50 m
LIM	Indicated	> 50 m and ≤ 100 m
LIM	Inferred	$>$ 100 m and $\leq$ 175 m
SAP	Measured	≤ 25 m
SAP	Indicated	> 25 m and ≤ 50 m
SAP	Inferred	> 50 m and ≤ 175 m

Table 55. Resource classification with corresponding true distance

The block model showing the Mineral Resource classifications for limonite and saprolite are shown in Figure 98 to Figure 101.



Figure 98. DMC limonite Resource classification



Figure 99. DMC saprolite Resource classification



Figure 100. DMC limonite Ni and Fe grade range map


Figure 101. DMC saprolite Ni grade range map

### **10.8 Mineral Resources Estimates**

The estimated year-end 2022 DMC Mineral Resources (Measured and Indicated) on a dry and wet basis is equivalent to 51.9 MDMT and 87.7 MWMT, respectively, of limonite Ore with Cut-off Grades of 0.80% Ni and 25% with average grades of 1.02% Ni and 43.70% Fe. For saprolite, the DMC Mineral Resource (Measured and Indicated) on a dry and wet basis is equivalent to 24.6 MDMT and 41.3 MWMT, respectively with Cut-off Grades of 1.10%Ni and average grades of 1.35% Ni and 16.80% Fe.

	Limonite				Saprolite					
Mineral Resource Classification	mWMT	mDMT	%Ni	%Fe	Ni Content	mWMT	mDMT	%Ni	%Fe	Ni Content
					(Kt)					(Kt)
Measured (stockpile)	0.1	0.1	1.1	44.28	1	0.1	0.1	1.48	23.26	1
Measured (in-situ)	65.9	39	1.03	43.83	400	19.6	11.6	1.38	16.79	161
Indicated	21.7	12.8	0.98	43.3	126	21.6	12.9	1.31	16.82	169
(Measured + Indicated)	87.7	51.9	1.02	43.7	527	41.3	24.6	1.35	16.8	331
Inferred	4	2	0.96	42.52	21	13	8	1.26	17.55	100

 Table 56. DMC Mineral Resource summary as of end December 2022

The Mineral Resource estimates of Dinapigue Mining Corporation's Dinapigue Nickel Laterite Deposit have been classified in accordance with the Philippine Mineral Reporting Code, 2020 Edition. The estimates are based on, and accurately reflect data, compiled, and interpreted by Romulo C. Subong and Joenelle C. Donato. Validation of the resource model was conducted by Jacky Almadin, then Junior Resource Geologist under Geologic



Management Sector of NAC. All have sufficient relevant experience in the Mineral Resource estimation of nickel laterites. All activities undertaken for the preparation of this technical report are carried out under the guidance and supervision of the ACP, Kristine Grace Victoria.

In-situ Mineral Resources of DMC are summarized per mineral type and resource classification in Table 56. DMC Mineral Resource summary as of end December 2022. The resources are stated in dry metric tonnages (DMT), wet metric tonnages (WMT) and contained nickel (kT). Contained nickel does not consider dilution due to mining and recovery during extraction of metals from the ore. It is simply a multiplication of the average nickel grade and estimated tonnage in dry metric tonnes (DMT).

The Cut-off Grades used are derived from the minimum mineable grade within the optimized pit shell with which the target specifications of marketable ores can be achieved. With this, the economic potential, spatial continuity of the deposit and mining selectivity are deemed to be sufficiently taken into consideration and appropriate for the resource declaration.

The resource classification of saprolite and limonite are based on the continuity of grades within the zones. Limonite is more homogenous and continuous while the saprolite zone has higher variability due to the occurrence of bedrock floats/unmineralized boulders and bedrock pinnacles. The lower confidence in the estimation of saprolite is reflected in the shorter range used for its resource classification.

Figure 102 to Figure 105 are the grade-tonnage curves for %Ni and %Fe of limonite and saprolite showing the various tonnages and corresponding grades at any given Cut-off Grade.



Figure 102. Grade-tonnage curve of %Ni in DMC limonite Resource as of end December 2022



Figure 103. Grade-tonnage curve of %Fe in DMC limonite Resource as of end December 2022



Figure 104. Grade-tonnage curve of %Ni in DMC saprolite Resource as of end December 2022



Figure 105. Grade-tonnage curve of %Fe in DMC saprolite Resource as of end December 2022

Cut-off Grade	Tonnes (mDMT)	Tonnes (mWMT)	%Ni	%Fe	Ni content (kt)
0.6 Ni, 25% Fe	62.5	105.8	0.96	43.45	600
0.7 Ni, 25% Fe	57.1	96.7	0.99	43.62	566
0.8 Ni, 25% Fe	48.6	82.2	1.03	43.80	501
0.9 Ni, 25% Fe	38.0	64.3	1.08	43.89	410
1 Ni, 25% Fe	26.3	44.5	1.15	43.75	302
1.1 Ni, 25% Fe	15.4	26.1	1.22	43.30	188

Table 57. Grade-tonnage table of Measured and Indicated limonite at various cut-off Ni and Fe grades

Table 58. Grade-tonnage table of Measured and Indicated saprolite at various cut-off Ni and Fe grades

Cut-off Grade	Tonnes (mDMT)	Tonnes (mWMT)	%Ni	%Fe	Ni content (kt)
0.9 Ni	35.1	59.0	1.24	15.79	435
1.0 Ni	29.6	49.8	1.30	15.99	385
1.1 Ni	23.8	40.0	1.36	16.14	324
1.2 Ni	17.9	30.1	1.43	16.22	256
1.3 Ni	12.5	21.1	1.51	16.30	189
1.4 Ni	8.4	14.2	1.59	16.30	134

Changes in the Mineral Resource figures of DMC from end December 2021 to end December 2022 consist of increase from limonite and saprolite solids adjustment, increase due to 2022 drilling campaign, and decrease due to 2022 mining operations. These changes are summarized in Table 59.

Table 59. DMC Mineral Resource changes from end December 2021 to end December 2022

	Limonite				Saprolite			
Resource Classification	mWMT	%Ni	%Fe	mDMT	mWMT	%Ni	%Fe	DMT x 1000
Mineral Resources as of 31 Dec 2021*	68.9	1.02	43.65	44.8	39.1	1.35	15.85	25.4
Increase/(Decrease) from topography adjustment in limonite and saprolite solids	17.6	-0.01	1.22	6.3	2.3	0	-0.84	- 0.8
Increase/(Decrease) from additional drilling	1.0	0.01	-1.17	0.6	- 0.3	0	1.79	- 0.2
Increase/(Decrease) by Mining Operation in 2022	- 0.1	0	0.23	- 0.1	- 0.2	0.06	6.46	- 0.1
Mineral Resources as of 31 Dec 2022 (In-situ)	87.4	1.02	43.7	51.7	41.0	1.35	16.8	24.4
Stockpile as of End of Dec 2022	0.1	1.1	44.28	0.0	0.1	1.48	23.26	0.1
Mineral Resources as of 31 Dec 2022**	87.5	1.02	43.7	51.7	41.1	1.35	16.82	24.4



#### **11. AUDITS AND REVIEWS**

Verification by NAC Geology Sector which is done at least annually can be considered as internal audit as the resource estimation process is entirely carried out by DMC Geology. The review process is described in more detail in Section 10.3.

Other reviews were conducted by SRK Consulting Australasia Pty.Ltd in July 2010 and Radegundo S. De Luna, a Competent Person under PMRC 2007 for nickel laterite and an independent consultant of NAC in September 2010. It is noted with regret that Mr. De Luna has since passed away. In the review conducted, no material risks are identified but recommendations are made to establish a more comprehensive QAQC protocol.

Independent review of the remaining nickel laterite Mineral Resources of NAC which includes HMC was conducted by Engr. Ramon N. Santos, an ACP under PMRC 2020, for the periods ending December 2017 and December 2018.

No regular external audit has been established at this time and is one of the recommendations included in this Report.

Independent review of the outstanding nickel laterite Mineral Resources of NAC which includes DMC was conducted by Engr. Ramon N. Santos for the period ending December 2017 and December 2018.

At of this writing, there is no established regular audits yet. This has been recommended and will be conducted in the future.

#### **12. DISCUSSION AND CONCLUSIONS**

Synthesis of all the data:

Exploration and development works conducted in the tenement area of DMC indicated that the Dinapigue Nickel Laterite Deposit has sufficient mineralization to support the estimation of Mineral Resource.

The Mineral Resource Estimation for the Dinapigue Nickel Laterite Deposit followed the parameters outlined in the PMRC 2020 Guidelines for Reporting Mineral Resources and Exploration Results.

The key points in sampling, Mineral Resource Estimation and reporting are discussed below:

Sampling Techniques and Data:

Sampling	Drill cores are split in half vertically. One half is sent to the laboratory for analysis and the remaining half is stored for future reference.
	The first run is sampled together with the next meterage if the decimal is <50cm from the base elevation. Intercepts ≥50 cm are treated as separate samples.
Drilling	Single core tube drilling was employed using NQ-sized core barrels. All drillholes are vertical.
Core Logging	The cores are logged by geologists. Logging is mostly descriptive in nature but some parameters are measured (core recovery and lengths). Except for the first run which is based on the elevation of the hole, all samples are logged per meter.

	Core photographs of each core box belonging to the drillhole are generated. Photographs are taken before sampling the cores, showing the drillhole number, the core box number and date drilled.
Drill Core Recovery	Core recovery is logged beginning in 2015. The average total drillhole recovery is considered excellent at 98.94%. No records of core recoveries preceding the NAC-conducted drilling programs are available.
QA/QC	Assays were conducted by DMC in-house QA Laboratory and same for QA/QC external repeats. The laboratory analysis of samples generally shows acceptable repeatability and bias to be acceptable for use in the Mineral Resource estimation.
Verification of sampling and assaying	Before Nickel Asia Corporation (NAC) purchased the MPSA from Geogen Corporation, thirty (30) drillholes were identified and subjected to twin drilling. The twin drillhole is approximately at 1 m distance from the existing drillhole location. Following NAC's purchase of the MPSA in 2015, drilling activities were concentrated in the northern part of the MPSA at Area 1including ten (10) confirmatory drillholes from 2015-2017. In 2019, a 77-hole confirmatory drilling program was undertaken by DMC to verify majority of the high-grade areas which were previously identified in earlier drilling campaigns.
Location of data points/drillholes	All drill hole collars have been surveyed by DMC in-house Survey team. The RTK GPS has a vertical accuracy of 5mm, and horizontal accuracy of 3mm while the vertical and horizontal error is less than 0.10 m for total station.
Data spacing and distribution	Limonite exhibit longer distance of grade continuity as compared to the saprolite. The difference in grade variability, homogeneity and uniformity in weathering across these two layers necessitates closer-spaced drilling for the saprolite zone. The Mineral Resource categories are assigned using the true distance of nearest informing sample for each block.
Estimation and Rep	oorting of Mineral Resources
Geological Interpretation	The boundaries of limonite, saprolite and bedrock are delineated based on the lithological identification of core samples. The identification is validated using the assay results and known trends in nickel, iron, magnesium and silica across the profile. The spatial continuity is validated through visual inspection of cross sections and statistical analysis.
Estimation Method	Inverse Distance Squared (IDS) was used in the estimation of grades. The samples are constrained using search ellipsoids. A minimum of 2 samples are required to proceed with the interpolation.
	The block model was validated using graphical inspection and statistical comparison using swath plots and scatter graphs.
	Previous studies, conducted to check the accuracy of the block model as well as reconciliation exercises, indicate good approximation of the estimated values compared to actual grades.

Cut-off Grades Limonite Cut-off grade: 0.80% Ni, 25% Fe Saprolite Cut-off grade: 1.10% Ni Bulk Density The sand cone method was used to

Bulk DensityThe sand cone method was used to determine the in-situ bulk density of limonite<br/>and saprolite materials. Testing using larger volumes/ pit excavations will be<br/>conducted as the materials are exposed during mining.

Adequacy of data, overall data integrity, and areas of uncertainty:

The data DMC has acquired through drilling is deemed adequate for Resource Estimation. The level of accuracy and precision in sampling, preparation of samples and laboratory analysis is deemed appropriate as demonstrated by the QAQC results and the Company's adherence to its standard protocols.

All throughout the sample chain of custody, utmost care is exercised so as not to expose the samples to any form of contamination, spillage and untoward alteration. Likewise, data validation and database management are carried out according to established protocols.

The method of estimation used is deemed appropriate for the mineralization in the tenement area. Since DMC is a newly opened mine, the application of geostatistical methods in grade interpolation such as ordinary kriging is currently being studied with the proximity to tonnage and grade reconciliation results as primary consideration.

The Cut-off Grades applied for the limonite and saprolite have been derived from the minimum mineable grades within the optimized pit shells. Thus, the economic potential, spatial continuity of the deposit, and mining selectivity are deemed to be sufficiently taken into consideration. DMC, being an existing operating mine, has the infrastructure and is compliant with legal, environmental, and social requirements. The criteria for reasonable prospects for eventual economic extraction therefore have been met for the Mineral Resource to conform with the PMRC 2020. The Mineral Resource has been categorized to Measured, Indicated, and Inferred with different criteria applied for limonite and saprolite. Lower classification was applied for saprolite due to its higher degree of heterogeneity.

Overall conclusions of the ACP Geologist:

The ACP Geologist asserts that the Report objective has been met, which is to provide a reliable estimate of the Mineral Resource of the Dinapigue Nickel Laterite Deposit in accordance with the PMRC 2020 edition. All available data as of end December 2022 was reviewed and the Resource Estimation undertaken was validated. The remaining Mineral Resource of DMC is reported and classified accordingly, based on the geological confidence in the estimates.

### **13. RECOMMENDATIONS**

Remaining areas within the Dinapigue Nickel Laterite Deposit with accumulation of nickel laterite have been identified. These areas will be subjected to further drilling at 50x50m intervals to delineate additional resources and upgrade Indicated limonite to Measured category and for saprolite from Inferred to Indicated category. If deemed necessary based on the results of this drilling program, drilling at closer intervals will be conducted.

The following are recommended to assure accuracy of future Mineral Resource estimation exercises:

• Continue strict implementation of QA/QA protocol with focus on the following:



- o Inclusion of field duplicates to assess the repeatability of sampling
- o Inclusion of blanks in coarse and fine form to monitor contamination within the sample preparation
- Mine reconciliation should be conducted regularly. Excellent data capture of the actual tonnage and grades should be of primary importance. Adequacy and accuracy of sampling, volume calculation and recording of data should always be ensured.
- The in-situ bulk density values of DMC are limited. It is recommended to conduct additional testing for insitu bulk density to cover areas that currently have no limonite and saprolite exposures for proper sampling. Bulk density determinations should be done on a larger scale using excavation pits and volume survey.
- Although the current database management meets the minimum requirements to ensure data integrity and security, it is recommended to transition to digital data recording and management using specialized software and centralized database system. This will streamline workflows and allow seamless usage of different applications throughout the Mineral Resource Estimation process.
- Consider the use of kriging interpolation technique after an extensive geostatistical study of the deposit and compare nearness of block estimates to actual values versus the current method of interpolation.
- Complete analysis for other elements specifically REEs that may be present in significant amounts and may be deemed marketable in the future.

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# Appendix A. Comments on PMRC 2020 Table 1. Assessment and Reporting Criteria

		latur du sti su	
	Ι	Introduction	Commentary
General	(i)	PMRC 2020 Reporting Criterion The scope of work or terms of reference	Commentary In 1.1 Purpose and Scope of Work.
	(ii)	The Accredited Competent Person's relationship to the issuer of the Public Report, if any	In Accredited Competent Person's 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	In Accredited Competent Person's Consent Form and 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	In Executive Summary (page ii), 1.6 Disclaimer, and References (page 140).
	(v)	A title page and a table of contents that includes figures and tables	In the first page and page iv, respectively
	(vi)	An Executive Summary, which briefly summarizes important information in the Public Report, including mineral property description and ownership, geology and mineralization, the status of exploration, development and operations, Mineral Resource and/or Mineral Reserve estimates, and the Accredited Competent Person's conclusions and recommendations. If Inferred Mineral Resources are used, a summary valuation with and if practical without inclusion of such Inferred Mineral Resources. The Executive Summary should have sufficient detail to allow the reader to understand the essentials of the project	In Executive Summary in page ii
	(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	In Accredited Competent Person's Consent Statement, Executive Summar and in 1.1 Purpose and Scope of Work.



	reporting code other than the PMRC having jurisdiction has been used, an explanation of the differences	
(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. All DMC maps, plans and sections were made in 2022 and 2023.
(ix)	The units of measure, currency and relevant exchange rates	In 1.7 Units of Measure, Currency, and Exchange Rates
(x)	The details of the personal inspection on the mineral property by each Accredited Competent Person or, if applicable, the reason why a personal inspection has not been completed	The ACP has conducted numerous site visits on the mineral property as a full- time employee of Nickel Asia Corporation, which is the holding Company of DMC. She has also worked during the initial drilling campaigns conducted by NAC at DMC and had stayed at the mine site for extended periods of time to conduct studies and validations.
(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	In 1.5 Qualification of Accredited Competent Person(s), Key Technical Staff, and Other Experts
	Section 1: Project Outline	



1.1	Location	1.1.1	Description of location and map (country, province, and closest town/city, coordinate systems and ranges, etc.)	In 1.3 Location of the Mineral Property and Accessibility
		1.1.2	Country Profile if Mineral Property is outside the Philippines, with a description of information relating to the project host country that is pertinent to the project, including relevant applicable legislation, environmental and social context etc. An assessment, at a high level, of relevant technical, environmental, social, economic, political, and other key risks	NA
		1.1.3	For Exploration Results: A general topo-cadastral map / For Mineral <u>Resources:</u> Topo-cadastral map in sufficient	In Figures 2 and 5
1.2	Mineral Property Description	1.2.1	Brief description of the scope of project (i.e., whether in preliminary sampling, advanced exploration, Scoping, Pre-Feasibility, or Feasibility Study, Life-of-Mine plan for an ongoing mining operation or closure)	In 1.1 Purpose and Scope of Work
		1.2.2	Description of topography, elevation, drainage and vegetation, the means and ease of access to the mineral property, the proximity of the mineral property to a population center, and the nature of transport, the climate, known associated climatic and seismic risks and the length of the operating season and to the extent relevant to the mineral project, the sufficiency of surface rights for mining operations including the availability and sources of power, water, mining personnel, potential tailings storage areas, potential waste disposal areas, heap leach pad areas, and potential processing plant sites (noting any conditions that may affect possible exploration/mining activities)	In: 1.3 Location of the Mineral Property and Accessibility 1.4 Property Description and Adjacent Properties 3.1 Physiography, Climate, and Vegetation 3.2 Land Use and Infrastructures



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.	In 1.4 Property Description and Adjacent Properties, page 4
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	In 1.8 Previous Works
		1.4.2	Previous successes or failures referred to transparently with reasons why the project should now be considered potentially economic	In 1.8 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	In: 1.8 Previous Works 1.9 Previous Mineral Resource Estimate
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	In: 2.1 Description of Mineral Rights 2.2 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)	In: 2.1 Description of Mineral Rights 2.3 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.	In 2.1 Description of Mineral Rights



I			Can Clause 22 for deals with a f	
			See Clause 32 for declaration of a	
			Mineral Reserve	
			A statement of any legal	
			proceedings, for example:	
			adverse/competing claims, or land	
		4 5 4	claims that may have an influence	
		1.5.4	on the rights to prospect or mine	None that is known as of this writing
			for minerals, or claims that the	
			tenurial instrument is defective, or	
			an appropriate negative statement	
			A statement relating to	
			governmental/statutory	
			requirements permits, and	
			consents as may be required, have	In:
		1.5.5	been applied for, approved or can	2.1 Description of Mineral Rights
			be reasonably be expected to be	2.3 Royalties, Receivables, and
			obtained. A review of risks that	Liabilities
			permits will not be received as	
			expected and impact of delays to	
			the project	
			The royalties or streaming	In 2.3 Royalties, Receivables, and
1.6	Royalties	1.6.1	agreements that are payable in	Liabilities , page 13
			respect of each mineral property	Liabilities, page 15
			Any liabilities, including	
			rehabilitation guarantees and	
			decommissioning obligations that	
			are pertinent to the project. A	
			description of the rehabilitation	
	Liabilities	1.7.1	liability and decommissioning	In 2.3 Royalties, Receivables, and
		_	obligation, including, but not	Liabilities, 13
			limited to,	
			legislative/administrative	
			requirements, assumptions, and	
			limitations	
I		Soction		t Mineralization
	Coclesient	Section	a 2: Geological Setting, Mineral Deposi	
	Geological			
	Setting,			
2.1	Mineral	2.1.1	The regional geology	In 6.1 Regional Geology, page 45
	Deposit,			-0
	Mineralizati			
	on			
			The project geology including	In:
		2.1.2	mineral deposit type, geological	6.2 Mineral Property Geology
		2.1.2		7.1 Mineral Deposit Type
			setting, and style of mineralization	7.2 Style of Mineralization

NAC.

				1
		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	In: 10.5 Mineral Resource Estimation and Modeling Methodology, page 100 7.4 Localization of the Deposit and Continuity of Mineralization
		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	In: 7.4 Localization of the Deposit and Continuity of Mineralization, page 50 8.6 Drilling and Sampling, page 51 8.6.1 Type of Drilling Programs 8.6.2 Drill Logging Method 8.6.3 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	In: Executive Summary in page 6 10.1 Mineral Deposit Model and Interpretation 10.6.1 Geological Parameters
		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	In: 7. MINERALIZATION IN THE MINERAL PROPERTY, page 50
		2.1.7	The existence of reliable geological models and/or maps and cross sections that support interpretations	In: 10.1 Mineral Deposit Model and Interpretation Figures 47-57
	S	Section 3	: Exploration and Drilling, Sampling Te	chniques, and Data
3.1	Exploration	3.1.1	Data acquisition or exploration techniques and the nature, level of detail, and confidence in the geological data used (i.e., geological observations, remote sensing results, stratigraphy, lithology, structure, alteration, mineralization, hydrology, geophysical, geochemical,	In: 8.1 Geological Work 8.6 Drilling and Sampling 8.7 Sample Preparation, Analysis and Security



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	
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	
contaminating substances, geotechnical and rock characteristics, moisture content, bulk samples, etc.). Data sets with all relevant metadata, such as unique sample number, sample	
geotechnical and rock characteristics, moisture content, bulk samples, etc.). Data sets with all relevant metadata, such as unique sample number, sample	
characteristics, moisture content, bulk samples, etc.). Data sets with all relevant metadata, such as unique sample number, sample	
characteristics, moisture content, bulk samples, etc.). Data sets with all relevant metadata, such as unique sample number, sample	
bulk samples, etc.). Data sets with all relevant metadata, such as unique sample number, sample	1
all relevant metadata, such as unique sample number, sample	
unique sample number, sample	
mass, collection date, spatial	
location, etc.	
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 In:	
following relevant processes: 10.3 Database Integrity Verificatio	'n
3.1.2 3.1.2 3.1.2 acquisition (capture or transfer), and Validation and 10.3 Database	"',
	on
validation, integration, control, Integrity, Verification, and Validation	JU
storage, retrieval, and backup	
processes. If data are not stored	
digitally, presentation of hand-	
printed tables with well-organized	
data and information	
Acknowledgment and appraisal of	
data from other parties, and	
3.1.3 reference to all data and NA	
information used from other	
sources	
Distinction between data /	
information from the mineral	
3.1.4 property under discussion and that NA	
derived from surrounding	
properties	
The methods for collar and down- In:	
3.1.5 hole survey, techniques, and 8.10 Geodetic and Topographical S	urvey
3.1.5 expected accuracies of data as well 10.2 Database and Software Used i	in the
as the grid system used Estimation of Mineral Resources	
8.6.1 Type of Drilling Programs	
Discussion on the sufficiency of the 10.1 Mineral Deposit Model and	
data spacing and distribution to	
establish the degree of geological	a la d
3.1.6 and arade continuity appropriate 10.5 Mineral Resource Estimation a	
for the estimation procedure(s) Middeling Technology (under Block	
and classifications applied Middeling and Grade Interpolation	
10.7 Mineral Resource Categories	
12. 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.	In: 8.6 Drilling and Sampling 10.1 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	In: 8.6 Drilling and Sampling 10.1 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.)	In: 8.6 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	In: 8.6.2 Drill Logging Method
		3.2.3	The nature of logging (qualitative or quantitative) and the use of core photography (or costean, channel, etc.)	In: 8.6.2 Drill Logging Method (under Drill Core Photography) 8.7.1 Sample Preparation and Analysis
		3.2.4	The total length and percentage of the relevant intersections logged	In 8.6.2 Drill Logging Method
		3.2.5	<i>Results of any down-hole surveys of the drill hole</i>	No downhole surveys undertaken as drillholes are shallow typically at 15 meters.
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	In 8.6.3 Drill Sampling Method, Collection, Capture, and Storage



 I		1 10 10 11 1	
		examples limiting the broad	
		meaning of sampling	
3	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	In 8.6.3 Drill Sampling Method, Collection, Capture, and Storage
3	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	In: 8.6.2 Drill Logging Method 8.6.3 Drill Sampling Method, Collection, Capture, and Storage
3	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	In 10.1 Mineral Deposit Model and Interpretation, page 92
3	3.3.5	A description of retention policy and storage of physical samples (e.g., core, sample reject, etc.)	Retention Policy: The remaining portion of the halved cores are retained in the core boxes or stored as coarse rejects or duplicates. Pulverized samples (retention samples) are stored in the Sample Preparation section for future reference.
3	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	In 8.6.2 Drill Logging Method

		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	Drill core samples are split vertically in half. One half is sent to the laboratory for analysis and the other half is retained. In: 8.6.3 Drill Sampling Method, Collection, Capture and Storage, page 55
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. 8.7.3 Quality Assurance and Quality Control
		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	In: 8.7.1 Sample Preparation and Analysis (under Analytical Methods)
		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.)	In: 8.7.1 Sample Preparation and Analysis 8.7.4 Statement of the ACP on the Quality of Sample Security, Preparation, Analysis, and Data Validation
	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	In: 8.7.2 Sample Governance; 8.7.3 Quality Assurance and Quality Control (QA/QC)
		3.5.2	The measures taken to ensure sample security and the Chain of Custody	In 8.7.2 Sample Governance (under Sample Dispatch, Security, and Chain of Custody



		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.)	In 10.3 Database Integrity, Verification, and Validation of Database
		3.5.4	The audit process and frequency (including dates of these audits) and disclose any material risks identified	In: 8.7.3 Quality Assurance and Quality Control (QA/QC) 8.7.2 Sample Governance (under Laboratory Audits)
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	In 8.7.3 Quality Assurance and Quality Control (QA/QC)
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	In 8.8 Bulk Density Measurements
		3.7.2	Preliminary estimates or basis of assumptions made for bulk density	In 8.8 Bulk Density Measurements
		3.7.3	The representativeness of bulk density samples	In 8.8 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	In 8.8 Bulk Density Measurements
3.8	Bulk Sampling and/or Trial- mining	3.8.1	The location of individual samples (including map)	



		3.8.2 3.8.3 3.8.4	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 The method of mining and treatment The degree to which the samples are representative of the various types and styles of mineralization	In: 8.6 Drilling and Sampling; 8.6.1 Type of Drilling Program; 8.6.3 Drill Sampling Method, Collection, Capture, and Storage; and 8.7.4 Statement of the ACP on the Quality of Sample, Security, Preparation, Analysis, and Data Validation In 10.6.2 Mining and Processing Parameters Samples are classified as limonite, saprolite, and bedrock following the nickel laterite mineralization model. 7.1 Mineral Deposit Type and
			and the mineral deposit as a whole	7.2 Style of Mineralization
ļ	Section 4	l: Estima	tion and Reporting of Exploration Res	ults and Mineral Resources
4.1	Geological Model and Interpretatio n	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	In: 8.6.2 Drill Logging Method 8.6.3 Drill Sampling Method, Collection, Capture, and Storage
		4.1.2	The geological model, construction technique, and assumptions that form the basis for the Exploration Results or Mineral Resource estimate. The sufficiency of data density to assure continuity of mineralization and geology, and provision of an adequate basis for the estimation and classification procedures applied	Drillhole spacing ranging from 10 – 100 meters provide an adequate basis for the applied estimation and classification procedures. Drillhole intercepts are the basis for construction of the limonite and saprolite domains/geology solids.
		4.1.4	Geological data that could materially influence the estimated quantity and quality of the Mineral Resource or Mineral Reserve	Limonite and Saprolite boundaries Limonite and Saprolite lateral limits
		4.1.5	Consideration given to alternative interpretations or models and their possible effect (or potential risk), if any, on the Mineral Resource estimate	Limonite and Saprolite Mineralization Domains are interpreted from drillhole intercepts
		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.)	Geological discounts are not applied



4.2	Estimation and Modeling Techniques	4.2.1	For Mineral Resources & Mineral <u>Reserves:</u> 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	In 10.4 Basic Statistical Parameters. IDS with search ellipse and minimum of 2 samples. Existing search ellipse parameters are validated using variogram parameters. Variograms are in Appendix F.
		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 10.5 Mineral Resource Estimation and Modeling Methodology; Vertical shallow drill holes spaced from 10-100 meters; Selective mining units of 10m x 10m x 3m dimensions
		4.2.3	Assumptions and justification of correlations made between variables	There are no correlations made between variables.
		4.2.4	Any relevant specialized computer program (software) used (with the version number) together with the parameters used	GEOVIA Surpac 2023 Refresh 2
		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	In: 10.3 Database Integrity, Verification, and Validation (under Data Verification and Validation); 10.5 Mineral Resource Estimation and Modeling Technology (under Block Modeling and Grade Interpolation.
		4.2.6	The assumptions made regarding the estimation of any co-products, by-products or deleterious elements	There are no assumptions made on any co-products, by-products or deleterious elements
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	Nickel laterite occurs as shallow and blanket-like deposit. Limonite Mineral Resource has a cutoff grade of 0.80%Ni and 25% Fe while Saprolite Mineral Resource has a cutoff grade of 1.10 % Ni. In 10.6.1 Geological Parameters
		4.3.2	The engineering parameters, including mining method, processing, geotechnical,	The shallow and blanket-like occurrence of the limonite and saprolite allows the use of contour mining using low-



			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	capacity equipment without blastholes and explosives in 10.6.2 Mining and Processing Parameters on page 124
		4.3.3	The infrastructure including, but not limited to, power, water, and site access	DMC is an operating mine with infrastructures in 10.6.4 Infrastructures
		4.3.4	The legal, governmental, permitting, and statutory parameters	DMC and its mother Company NAC are above compliant in these parameters.
		4.3.5	The environmental and social (or community) parameters	DMC and its mother Company NAC are environmentally compliant.
		4.3.6	The marketing parameters	Limonite and saprolite ores are sold as direct shipping ores (DSO).
		4.3.7	The economic assumptions and parameters, including, but not limited to, commodity prices, sales volumes, and potential capital and operating costs	In 10.6.8 Economic Assumptions and Parameter
		4.3.8	Material risks, e.g., legal, environmental, climatic, etc.	In 10.6.9 Material Risks
		4.3.9	The parameters used to support the concept of 'eventual' in the case of Mineral Resources	CMC has been on the production stage for over three 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	In 10.7 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	<ul> <li>In:</li> <li>10.7 Mineral Resource Categories.</li> <li>The true distance of the nearest sample used in the grade interpolation serves as the basis for categorizing global limonite and saprolite materials into Measured, Indicated, and Inferred classes. The Mineral Resource categories have been proven with time to be suitable to the mining operations of long-standing mineralization style and is deemed applicable for DMC considering the results.</li> <li>12. Discussion and Conclusions</li> </ul>

			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.		
4.6	Reporting				
		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)	In 1.9 Previous Mineral Resources Estimates and 10.8 Mineral Resources 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 DMC, the entity commissioning this Technical Report.	
		4.6.7	The basis of the Metal Equivalent formulae, if relevant	NA	
			Section 5: Technical Studies		
5.1	Introduction	5.1.1	The level of study – Scoping, Pre- Feasibility, Feasibility or ongoing Life-of-Mine Plan	Ongoing Life-of-Mine Plan	
5.2	Mining Design	5.2.1	Assumptions regarding mining methods and parameters when estimating Mineral Resources	In 10.6.2 Mining and Processing Parameters	
		5.2.3	Mineral Resource models used in the study	In: 10.1 Mineral Deposit Model and Interpretation	
		5.2.4	<u>For Mineral Resources:</u> The basis of the cut-off grade(s)	The cut-off grades of 0.80 Ni% and 25% Fe for limonite and 1.10 % Ni for saprolite represent the minimum grades for blending to attain the target grade specifications. The limonite Mineral Resource is blended to attain the minimum grade of 0.80% Ni and 48% Fe. For the saprolite, current target grade for blending is minimum of 1.3% Ni. See Table 52. Life of Mine Product quality of the Project	



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		5.3.3	<u>For Mineral Resources:</u> 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	DMC has no processing plant. DMC's limonite and saprolite ores are sent to Big Wave Resources Co.Ltd. and Ningbo Lygend Wisdom Co. Ltd., while HPAL- type limonite is directly shipped to CBNC.
5.4	Infrastructur e	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	The existing infrastructure is adequate to support the current operations as discussed in 10.6.4 Infrastructures but further developments will be necessary with the expansion of its mining operations in the future.
5.5	Environment al & 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	In 10.6.5 Legal, Governmental, Permitting and Licensing, and Statutory Parameters
		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 DMC is an operating mine, all permits required for operations are existing.
		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 is 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	<u>For Mineral Resources:</u> Technical and economic factors likely to influence the RPEEE	In 10.6 Reasonable Prospects for Eventual Economic Extraction (RPEEE)



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5.7	Risk Analysis	5.7.1	An assessment of technical, environmental, social, economic, political, and other key risks to the project. Actions that will be taken to mitigate and/or manage the identified risks	In 10.6.9 Material Risks		
5.8	Economic Analysis	5.8.1	<u>For Mineral Resources:</u> The basis on which RPEEE has been determined. Any material assumptions made in determining the 'RPEEE'	In 10.6 Reasonable Prospects for Eventual Economic Extraction (RPEEE)		
7.1			Audits and Reviews	5		
7.1.1			Type of review/audit (e.g., independent, external), area (e.g., laboratory, drilling, data, environmental compliance, etc.), date and name of the reviewer(s) together with their recognized professional qualifications. The level of review/audit (desk-top, on- site comparison with standard procedures, or endorsement where auditor/reviewer has checked the work to the extent they stand behind it as if it were their own work).	In 11. Audits and Reviews		
			The level and conclusions of relevant audits or reviews. Significant deficiencies and remedial actions required.	In 11. Audits and Reviews		
			Section 8. Other Relevant Inform	ation		
	[]					
8.1	Other Relevant Information	8.1.1	Other relevant and material information not discussed elsewhere	None		
	Section 9: Accredited Competent Person					
9.1	Qualification of Accredited Competent Person(s) and Key Technical Staff	9.1.1	The full name of the Accredited Competent Person, profession, address, their PRC and Accredited Competent Person registration numbers and the name of the professional representative organization (or RPO), of which the Accredited Competent Person(s) is member. The relevant experience of the Accredited Competent	In Accredited Competent Person's Certificates, Consent Form and Statement		



		Person(s) and other key technical staff who prepared and who are responsible for the Public Report	
Relationship to the issuer	9.1.2	The Accredited Competent Person's relationship to the issuer of the Public Report, if any	In 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.	In Accredited Competent Person's Consent Form

### Appendix B. List of Acronyms

Terms and Abbreviations	Meaning
ACGR	Annual Corporate Governance Report
ACP	Accredited Competent Person
AD	Ancestral Domain
AHR	Aspect and Hazard Register
ANMSEC	Annual National Mine Safety and Environment Conference
APSA	Application for Mineral Production Sharing Agreement
AURELCO	Aurora Electric Cooperative Inc.
Al <sub>2</sub> O <sub>3</sub>	Alumina
ASTM	American Society for Testing and Materials
ave	Average
BD	Bulk Density
BFAR	Bureau of Fisheries
BMB	Biodiversity Management Bureau
Brgy	Barangay
BSP	Bangko Sentral ng Pilipinas
°C	Degrees Celsius
CaO	Calcium Oxide
CBNC	Coral Bay Nickel Corporation
CG	Corporate Governance
CSHEC	Central Safety, Health, and Environment Committee
СМС	Cagdianao Mining Corporation
СМР	Care and Maintenance Program
Со	Cobalt
СОМР	Chamber of Mines of the Philippines
CPD	Continuing Professional Development
Cr	Chromium
Cr <sub>2</sub> O <sub>3</sub>	Chromium (III) oxide
CSR	Corporate Social Responsibility
DENR	Department of Environment and Natural Resources
dist	Distance
dh	Drillhole
DMC	Dinapigue Mining Corporation
DMT	Dry Metric Tonnes
DOLE	Department of Labor and Employment
DOH	Department of Health
DPWH	Department of Public Works and Highways
DSO	Direct Shipping Ore
DTM	Digital Terrain Model
E	East
ECC	Environmental Compliance Certificate
EMB	Environmental Management Bureau
EMPAS	Environmental Management and Protected Areas Services
EOH	End of Hole

EP	Exploration Permit
EPEP	Environmental Protection and Enhancement Program
EPSG	European Petroleum Survey Group
ERM	Enterprise Risk Management
ESG	Environmental, social, and governance
FDT	Field Density Test
FLAg	Forest Land Use Agreement
Fe	Iron
FMRDF	Final Mine Rehabilitation and/or Decommissioning Fund
FWP	Family Welfare Program
g	Gram
>	Greater Than
GHG	Greenhouse gases
GRI	Global Reporting Initiative
GSI	Geoinnovative Specialists Inc.
GSP	Geological Society of the Philippines
has	Hectares
HPAL	High Pressure Acid Leach
HIRARC	Hazard identification risk assessment and risk control
НМС	Hinatuan Mining Corporation
ID	Identification
IDW	Inverse Distance Weighting
IDS	Inverse Distance Squared
IP	Indigenous People
IPRA	Indigenous Peoples Rights Act
IR	Incident Rate
IRR	Internal Rate of Return
ITS	Intertek Testing Services, Inc.
JICA	Japanese International Cooperation Agency
kg	Kilogram
Km	Kilometer
kDMT	Dry metric tonnes (in thousands)
kT	Kilotonnes
kVA	Kilovolt-ampere
kWMT	Wet metric tonnes (in thousands)
<	Less Than
LGU	Local Government Unit
LiDar	Light Detection and Ranging
LIM	Limonite
LOI	Letter of Instruction
LOM	Life of Mine
LTA	Loss Time Accident
LTFIR	Lost Time Injury Frequency Rate
m	Meter
М	Million
m <sup>3</sup>	Cubic Meter

мсмс	Mine Consultants and Management Corporation
	Mines Environmental Protection and Enhancement
MEPED	Department
Mg	Magnesium
MGB	Mines and Geosciences Bureau
MgO	Magnesium Oxide
μm	Micrometer
Mn	Manganese
MnO	Manganese Oxide
MOA	Memorandum of Agreement
MPSA	Mineral Production Sharing Agreement
MRF	Materials Recovery Facility
Mt	Million tonnes
Mtpa	Million tonnes per annum
N	North
NAC	Nickel Asia Corporation
NAMRIA	National Mapping and Resource Information Authority
NCIP	National Commission on Indigenous Peoples
NH <sub>4</sub> I	Ammonium Iodide
Ni	Nickel
NI	NiHAO Mineral Resources International, Inc.
NIPAS	National Integrated Protected Areas System
NLEX	North Luzon Expressway
NN	Nearest Neighbor
No.	Number
NSMNP	Northern Sierra Madre Natural Park
ОК	Ordinary Kriging
OREAS	Ore Research & Exploration Assay Standards
ORVI	Oriental Vision Inc.
%	percent
%HARD	Percent half absolute relative difference
PATECO	Pacific Timber Export Corporation
PAWB	Protected Areas and Wildlife Bureau
pdf	Portable Document Format
PENRO	Provincial Environment and Natural Resources Office
PGMC	Platinum Group Metals Corporation
Php	Philippine Peso
PM10	Particulate Matter (particle size of 10 micrometers or less)
PMRC	Philippine Mineral Reporting Code
PMRCC	Philippines Mineral Reporting Code Committee
PMSEA	Philippine Mine Safety and Environment Association
рр	Partial Percent
РРА	Philippine Ports Authority
PPE	Personal Protective Equipment
PRC	Professional Regulation Commission
RPO	Recognized Professional Organization


PRS	Philippine Reference System
PRS92	Philippine Reference System of 1992
PSE	Philippine Stock Exchange
PSEM	Philippine Society of Mining Engineers
QA/QC	Quality Assurance/Quality Control
QNI	Queensland Nickel Pty Ltd
RMC	Risk Management Committee
RPEEE	Reasonable Prospects for Eventual Economic Extraction
RSAP	Rocky saprolite
RR	Risk Register
RTK	Real Time Kinematic
RTN	Rio Tuba Nickel Mining Corporation
SAP	Saprolite
SCTEX	Subic-Clark-Tarlac Expressway
SEC	Securities and Exchange Commission
SLUP	Special Land Use Permit
SDMP	Social Development and Management Plan
SG	Specific gravity or dry bulk density
S&H	Safety and Health
SHP	Safety and Health Program
Si	Silicon
SiO <sub>2</sub>	Silica
SRM	Standard Reference Material
STCEP	Special Tree Cutting and Earth-balling Permit
STCP	Special Tree Cutting Permit
STD	Standard Deviation
t	Tonnes
TLCM	Total Loss Control Management
TM	Transition Material
ТМС	Taganito Mining Corporation
tpa	tonnes per annum
TRIR	Total Recordable Incident Rate
TSM	Towards Sustainable Mining
TSP	Total Suspended Particulates
TSS	Total Suspended Solids
UN SDGs	United Nations Sustainable Development Goals
USD	United States Dollar
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
VTGI	Verum Terra Geosciences Inc.
WGS	World Geodetic System
WMT	Wet Metric Tonnes
X	Easting
XRF	X-ray fluorescence
Y Z	Northing           Elevation
Δ	

# Appendix C. Certificate of Calibration – Survey Equipment







# Appendix D. Calibration Certificates – Select Laboratory Equipment

	S	ou	Tł	Ê	RI	N	-	Re	ferer	nce N	lo.: 20		S18642	
PAB ACCREDITED ALIBRATION LABORATORY	Metro	logy and	Calibra	tion Ser	vices,	inc.						Pa	ge 1 of 4	
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End-user: The same as above: End-user Address: The same as above. <b>SPECIFICATION OF UNIT UNDER TEST</b> Unit Under Test: Analytical Balance Capacity: 220 g Resolution: 0.0001 g Manufacturer: Sartorius Model: Practum Serial Number: 0038103356 Identification: EM-ASY-BAL-02 <b>3. DATE OF ACTIVITES</b> Date Calibrated: 18 Apr 2024 Recommended Due: 18 Apr 2025 Date Issued: 22 Apr 2024 <b>4. APPROVAI</b> Calibrated By: Approved Signatory: Approved Signatory: MANUEL RICARDO P. BALBUENA	4	DINAPIO	UE MININ	IG CORI	PORAT	ION		17	1		1		ŝ.		à.	1	i.	ŝ,		ŝ.	1	
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Certified By:

Anthony Pimentel Vice-President – Technical Services

SHIMADZU Excellence in Science

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TECHNICAL SERVICE CENTER 19th Floor Marajo Tower 26th Street corner 4th Avenue Bonifacio Global City, Taguig City 1634 Metro Manila, Philippines Phone (632) 8669-9563 / Fax (632) 8519-9285 E-mail : service@shimadzu.com.ph







# Appendix E. Calibration Certificates –Select Sample Preparation Equipment

	APIGUE MINI	IG CORPORA	TION	R	teference No	o.: 2024IMI	016	Cus		GUE MINING ue, Isabela	CORPORAT	ION	F	Reference N	o.: 2024IMI
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Appendix F.	Variogram	Models	of the	DNLD
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Domain and Grade	Nugget	Sill 1	Sill 2	Range 1	Range 2	Major/ Semi-Major	Major/Minor
Limonite Nickel	0.022	0.090	0.083	52.254	175.740	1.000	2.410
Limonite Iron	0.650	22.171	6.765	18.705	184.843	1.092	1.149
Saprolite Nickel	0.003	0.237	0.055	31.193	182.171	1.000	2.975
Saprolite Iron	0.494	37.141	26.627	6.055	159.903	1.618	3.640



Saprolite Ni

Saprolite Fe



# Appendix G. NAC and DMC Secretary's Certificates

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

# **SECRETARY'S CERTIFICATE**

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

- I am duly appointed and incumbent Assistant Corporate Secretary of DINAPIGUE MINING CORPORATION, (the "Corporation") a corporation organized and existing under and in accordance with the laws of the Philippines and with office at 29<sup>th</sup> Floor NAC Tower, 32<sup>nd</sup> 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, **KRISTINE GRACE C. VICTORIA** does not own any shares of stock of the Corporation.

IN WITNESS WHEREOF, I have hereunto set my hand this MAY 17 2024 at Taguig City.

ma R.K.A. HR¥N ROSÁLIE F. DIONISIO

Assistant Corporate Secretary



Appointment No. 102 Notary Public for and in the City of Taguig Until December 31, 2025 Poll No. 73631 PT<sup>D</sup> No. A-6161135/16 January (024/Taguig City MCLE Compliance No. VR-9010815, Unit-14 April 2025 28th Floor NAC Tower, 32nd Street, BGC, Taguig City

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

### SECRETARY'S CERTIFICATE

I, **GEORGINA CAROLINA Y. MARTINEZ**, of legal age and with office address at 28<sup>th</sup> Floor NAC Tower 32<sup>nd</sup> 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 28<sup>th</sup> Floor NAC Tower 32<sup>nd</sup> 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 March 2024, MS. KRISTINE GRACE C. VICTORIA, Assistant Vice President -Geology of the Corporation, does not own shares of stock of the Corporation. Attached hereto as Annex "A" is a copy of the Corporation's Public Ownership Report as of 31 March 2024.
- 3. The foregoing is in accordance with the records of the Corporation.

JUN 1 4 2024 IN WITNESS WHEREOF, I hereby issue this certification this \_ at Taguig City. NAY. MARTINEZ RGIN⁄A CARO Assistant Corporate Secretary JUN 1 4 2024 at Taguig SUBSCRIBED AND SWORN to before me this City, affiant exhibiting to me her to me her Philippine Passport No. ssued on April 20, April 21, 2018 by the Department of Foreign Affairs, Manila; and 2028.

Doc. No. Page No. Book No. Series of 2024.



MCLE Compliance No. VII-bour 592. Until 14 April 2025 28th Flow NAC Tower, Serie Street, Doc, raying City



#### CR01330-2024

The PSE makes no representation on the accuracy, validity, correctness and completeness of the information stated in the respective PORs of listed companies. The PSE shall use the information contained in the POR submitted by the company in computing a company's weight in the index and this may be updated or adjusted consistent with the policy of the Exchange in managing the PSEi and sector indices.

# Nickel Asia Corporation NIKL

#### PSE Disclosure Form POR-1 - Public Ownership Report Reference: Amended Rule on Minimum Public Ownership

#### **Report Type**

•

- Monthly
- Quarterly
- Others

#### Report Date Dec 31, 2023

#### **Computation of Public Ownership**

Number of Issued Common Shares	13,958,322,808
Less: Number of Treasury Common Shares, if any	54,422,000
Number of Outstanding Common Shares	13,903,900,808

#### Less :

#### A. Directors

Name	Direct	Indirect	Total direct & indirect shares	% to Total Outstanding Shares
Harvey T. Ang	2,000,000	10,625,640	12,625,640	0.09
Gerard H. Brimo	17,057,784	9,662,225	26,720,009	0.19
Leonides Juan Mariano C. Virata	100	0	100	0
Martin Antonio G. Zamora	540	5,515,671	5,516,211	0.04

Yusuke Niwa	2,023	0	2,023	0
Shiro Imai	2,023	0	2,023	0
Maria Patricia Z. Riingen	1,000	910,800	911,800	0.01
Angelo Raymundo Q. Valencia	10,000	10,101,987	10,111,987	0.07
Florencia Gozon Tarriela	1	16,799	16,800	0
	19,073,471	36,833,122	55,906,593	0.4

B. Officers

Name	Direct	Indirect	Total direct & indirect shares	% to Total Outstanding Shares
Jose Bayani D. Baylon	0	20,200	20,200	C
Rolando R. Cruz	614,952	1,085,962	1,700,914	0.01
Koichi Ishihara	0	0	0	C
Georgina Carolina Y. Martinez	0	84,000	84,000	0
Barbara Anne C. Migallos	0	188,582	188,582	0
Ma. Angela G. Villamor	0	1,047,554	1,047,554	0.01
Romeo T. Tanalgo	0	730,435	730,435	0.01
Jeffrey B. Escoto	0	499,999	499,999	0
Marnelle A. Jalandoon	0	0	0	0
Ryan Rene C. Jornada	0	101,500	101,500	0
Iryan Jean U. Padillo	0	4,500	4,500	0
Patrick S. Garcia	0	612,419	612,419	0
Christopher C, Fernandez	0	0	0	0
Rodrigo V. Gazmin, Jr.	0	0	0	C
Bimbo T. Almonte	0	0	0	C
Salvador C. Cabauatan	0	1,000	1,000	C
Remedios C. Camo	0	16,000	16,000	C
Ma. Fatima C. Mijares	0	0	0	C
Arnilo C. Milaor	0	0	0	0
Christine Joanne C. Navarro	0	0	0	C
Teody A. Pascual	0	0	0	0
Jessie A. Payuyo	0	121,600	121,600	C
Kristine Grace C. Victoria	0	0	0	۵
Charito R. Villena-Co	0	0	0	C
Jessie N. Pagaran	0	0	0	C
Andre Mikael L. Dy	0	0	0	C
Edwin P. Nerva	0	50,000	50,000	C
Reynaldo DG Mata II	0	0	0	C
Fernando P. Cruz	0	4,000	4,000	(
Christian Jae R. Gascon	0	0	0	C
Edwin D. Casiano	0	0	0	C
Walter B. Panganiban	0	0	0	(
Cynthia E. Rosero	0	2,642,972	2,642,972	0.01
Philipp D. Ines	0	3,573,150	3,573,150	0.04
	614,952	10,783,873	11,398,825	0.0

C. Principal/Substantial Stockholders

Name	Direct	Indirect	Total direct & indirect shares	% to Total Outstanding Shares
Sumitomo Metal Mining Co., Ltd. (indirect through Sumitomo Metal Mining Phil. Holdings Corp.)	0	0	0	0
Nonillion Holding Corp.	1,136,000,000	0	1,136,000,000	8.17
Mantra Resources Corporation	1,000,000,000	2,545,743,602	3,545,743,602	25.5
Ni Capital Corporation	0	1,833,078,231	1,833,078,231	13.18
Sumitomo Metal Mining Phil Holdings Corp.	3,614,397,887	0	3,614,397,887	26
	5,750,397,887	4,378,821,833	10,129,219,720	72.85

# D. Affiliates

Name	Direct	Indirect	Total direct & indirect shares	% to Total Outstanding Shares
	-	-	-	-
	0	0	0	0

# E. Government

Name	Direct	Indirect	Total direct & indirect shares	% to Total Outstanding Shares
-	-	-	-	-
	0	0	0	0

# F. Banks

Name	Direct	Indirect	Total direct & indirect shares	% to Total Outstanding Shares
-	-	-	-	-
	0	0	0	0

# G. Employees

Name	Direct	Indirect	Total direct & indirect shares	% to Total Outstanding Shares
-	-	-	-	-
	0	0	0	0

# H. Lock-Up Shares

Name	Direct	Indirect	Total direct & indirect shares	% to Total Outstanding Shares
-	-	-	-	-
	0	0	0	0

# I. Others

Name	Direct	Indirect	Total direct & indirect shares	% to Total Outstanding Shares
-	-	-	-	-
	0	0	0	0
Number o Common		13,958,322	2,808	
Total Number of Non-Public Shares		10,196,525	i,138	ne try na hela inaninanina na kata doo a kantosa a na dahara a trada na ga terbah akara ngo na hela daga ngo n
Total Num Owned by the Pu	iber of Shares blic	3,707,375,	670	
Public Ownership Percentage		26.66		
Other Rel	evant Informa	tion		

Amended to reflect the following	
<ol> <li>Corresponding correction of the second second</li></ol>	ect shares of Ms. Cynthia E. Rosero from 1,407,800 to 2,642,972 the total number of direct and indirect shares of Ms. Rosero from 1,407,800 to 2,642,972 tet shares of Mr. Philipp D. Ines from 5,573,150 to 3,573,150 to 3,573,150 to 3,573,150 to a total number of direct and indirect shares of Mr. Ines from 5,573,150 to 3,573,150 on-public shares from 10,197,289,966 to 10,196,525,138 ublic shares from 3,706,610,842 to 3,707,375,670 e resulting from the corrections is 26.66%, the same percentage reported previously.
Filed on behalf by:	
Name	Georgina Carolina Martinez
Designation	Senior Vice President - Corporate Support and Compliance Services, Chief Compliance Officer, Chief Governance Officer, and Assistant Corporate Secretary