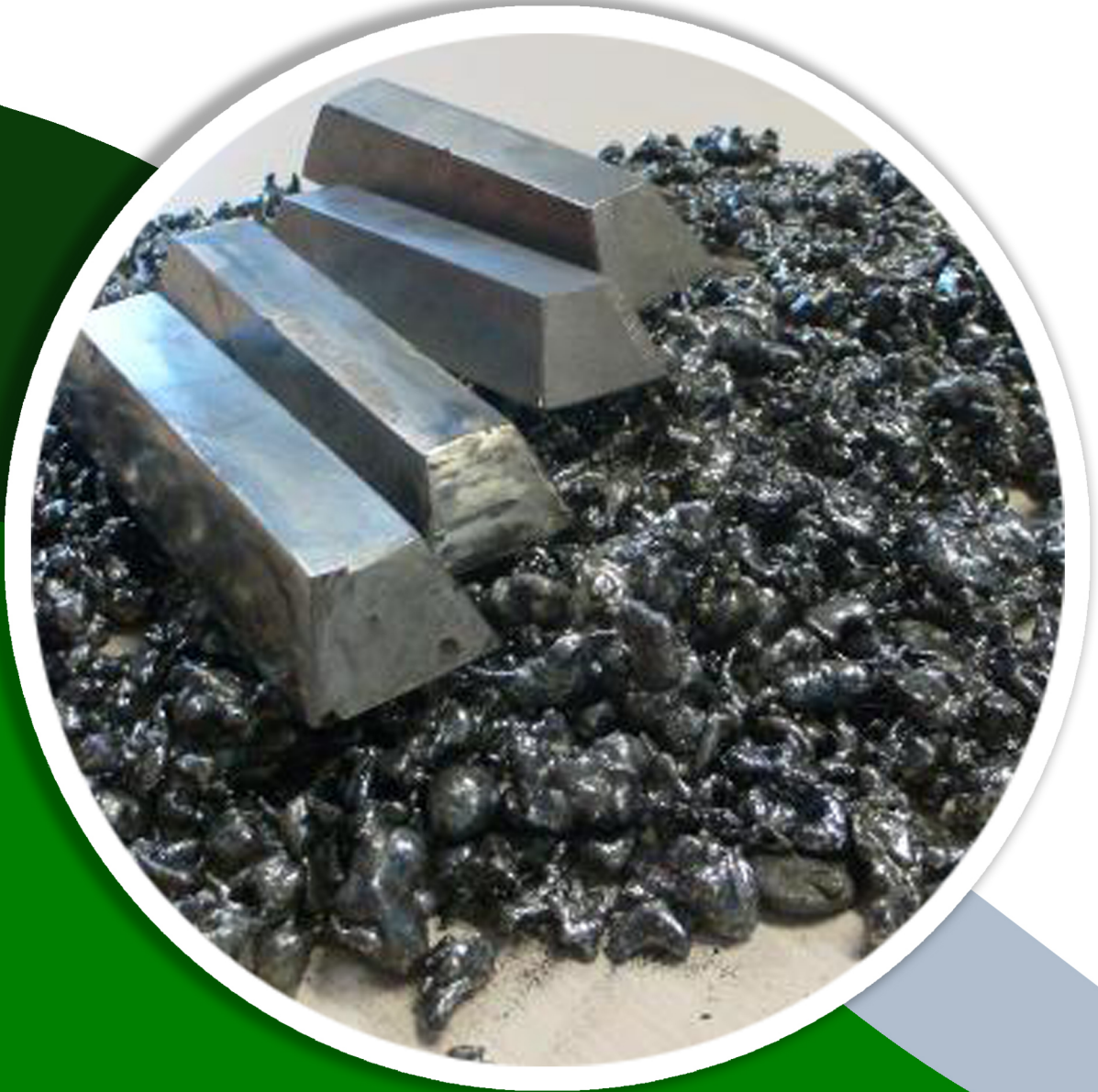


PROJECT DESCRIPTION FOR SCOPING (PDS)

ISABELA NICKEL PROJECT

Brgy. Dimaluade, Dinapigue, Isabela



DECEMBER 2017

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Attachment 4 :	Photo Documentation
Attachment 5 :	Proof of the Conduct of Social Preparation through Information of and Education Campaign

1 PROJECT DESCRIPTION

1.1 Project Location and Area

1.1.1 Location and Area

The proposed project site is located within the jurisdiction of Brgy. Dimalaude in the municipality of Dinapigue, Isabela. The municipality is situated approximately 250 kilometers northeast of Metro Manila and bounded on the south by the municipality of Dilasag, Aurora, on the east by the Pacific Ocean, on the west by the municipality of San Guillermo, Isabela, and on the north by the Northern Sierra Madre Natural Park (NSMNP).

Dinapigue is one of the municipalities of the province of Isabela which had been gifted of mineral resources such as nickeliferous laterite, chromite, gold, copper including other minerals both metallic and non-metallic minerals.

The nickel project of Good Earth Mining and Development Inc. is covered by the Exploration Permit No. EXP000021II (see **Annex 1**) with an aggregate size of 1,967.8317 hectares containing the areas of Parcels I, II and III, located on the southernmost foothills of the NSMNP. However, due to deteriorating peace and order condition in Parcel 1 and Parcel 2 coupled with security threats to field staffs, GMDI decided to focus its exploration activities in the 24-hectare portion of Parcel 3. **Figure 1** and **Table 1** define the geographical boundaries of the three parcels under the EXP000021II, while **Figure 2** and **3** shows the location map and aerial image of the proposed project site.

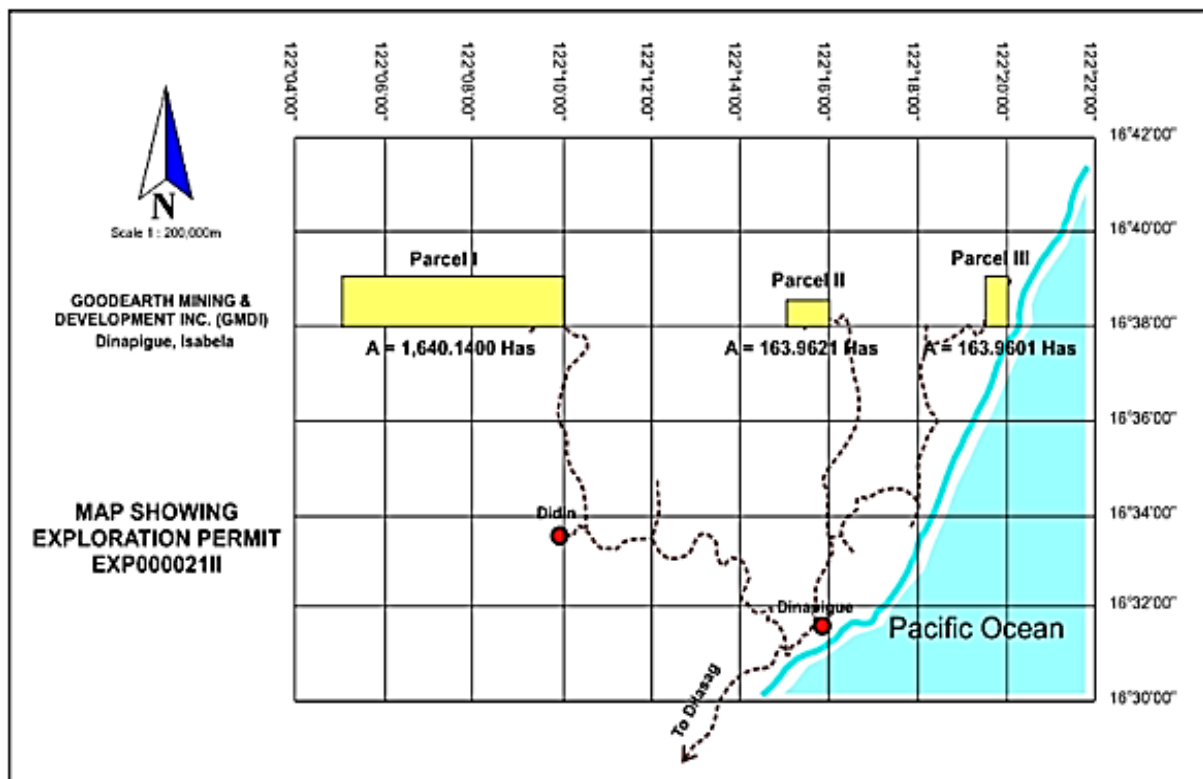


Figure 1: Location Map of Parcels I, II, and III under EXP000021II

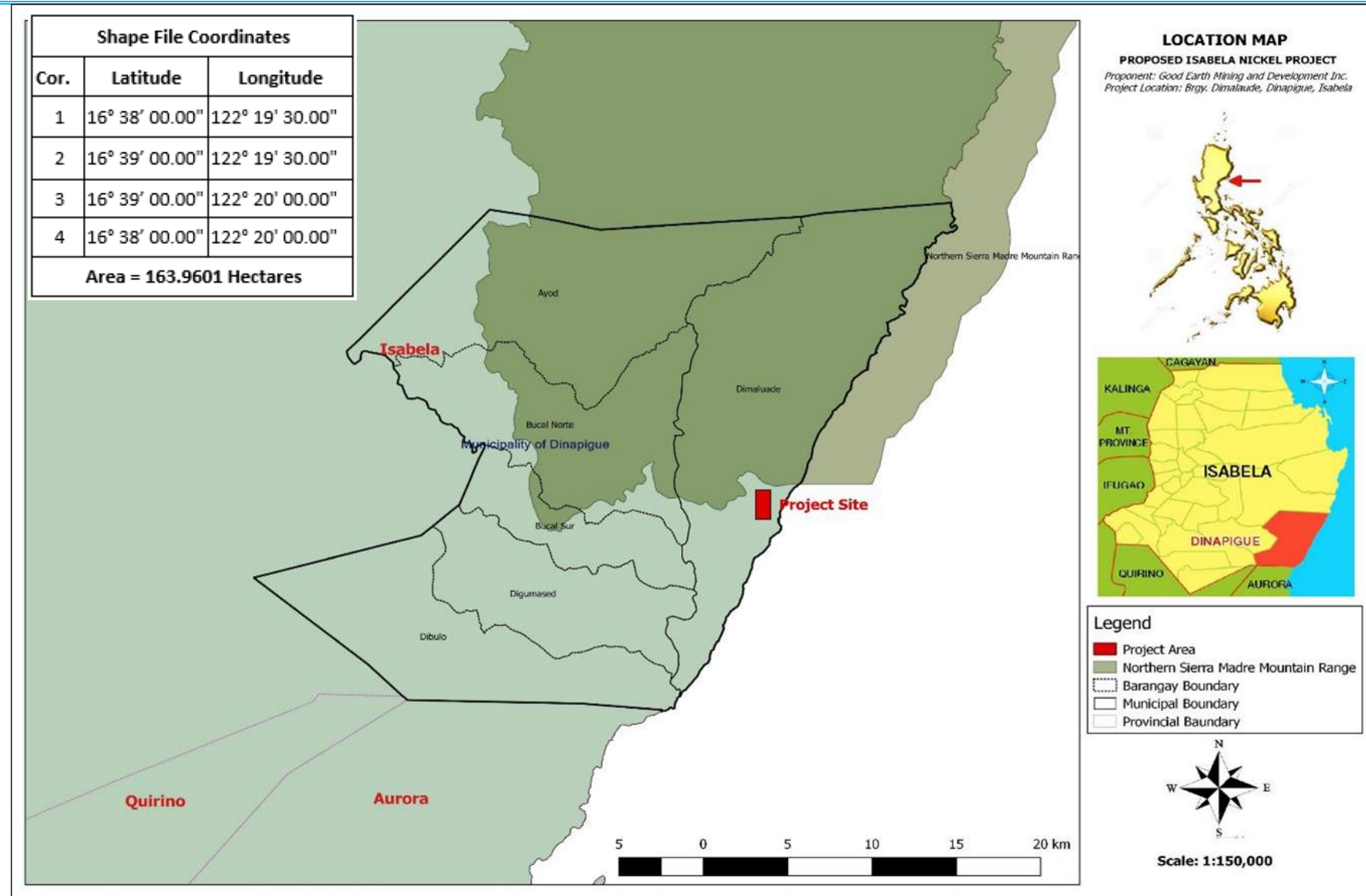


Figure 2: Location Map of the Proposed Project



Figure 3: Aerial Image of Project Site

Table 1: Geographic Boundaries of Parcels I, II, and III under EXP000021II

Parcel	Lot Corners	Geographic Coordinates	Area
I	1	16° 38' 00.00" N; 122° 05' 00.00" E	1,639.9095 hectares
	2	16° 39' 00.00" N; 122° 05' 00.00" E	
	3	16° 39' 00.00" N; 122° 10' 00.00" E	
	4	16° 38' 00.00" N; 122° 10' 00.00" E	
II	1	16° 38' 00.00" N; 122° 15' 00.00" E	163.9621 hectares
	2	16° 38' 30.00" N; 122° 15' 00.00" E	
	3	16° 38' 30.00" N; 122° 16' 00.00" E	
	4	16° 38' 00.00" N; 122° 16' 00.00" E	
III	1	16° 38' 00.00" N; 122° 19' 30.00" E	163.9601 hectares
	2	16° 39' 00.00" N; 122° 19' 30.00" E	
	3	16° 39' 00.00" N; 122° 20' 00.00" E	
	4	16° 38' 00.00" N; 122° 20' 00.00" E	
Total			1,967.8317 hectares

1.1.2 Accessibility

Municipality of Dinapigue can be accessed from Metro Manila through twelve-hour land journey routing the well-paved national and provincial roads of North Luzon Expressway (NLEX), Subic-Clark-Tarlac Expressway (SCTEX), La Paz-Zaragoza Arterial Road, Maharlika Highway, Pinagpanaan-Rizal-Pantabangan Road, Pantabangan-Canili-Basal-Baler Road, and Baler-Casiguran Road; and dirt roads of Casiguran-Dilasag Road and Dilasag-Dinapigue Road. Alternatively, Dinapigue can also be accessed from Santiago City, Isabela through the Cordon-Diffun-Maddela-Aurora Road which connects to the Baler-Casiguran Road.

The Sugpo Airfield is also located in the municipality of Dinapigue which was formerly built and used by mining and logging companies. The proposed project area (Parcel III) which is 15 kilometers north-northeast from the Dinapigue town proper is accessible through a 20-kilometer logging and mining road provided by Platinum Group Metals Corporation (PGMC) and Pacific Timber Export Corporation (PATECO).

1.1.3 Delineation of Direct and Indirect Impact Areas

The potential primary and secondary impact areas of the project were identified based on the definition of direct and indirect impact areas in the Revised Procedural Manual of DAO 2003-30. Direct impact areas are areas where project facilities are proposed to be constructed and where project operations are proposed to be undertaken. Direct impact areas also include areas where emissions and effluent is expected to exceed from relevant standards. On the other hand, indirect impact areas are areas immediately outside the coverage of the project facilities and project operations/activities. **Table 2** lists the delineated direct and indirect impact areas of the proposed nickel mining project.

In addition to the direct and indirect impact areas, the general area that will benefit from the project is called the Regional Impact Area (RIA). The RIA includes the host province, region, and the Philippines as a whole that will potentially benefit from the project. The potential direct and indirect impact areas will be accurately established once the project operates and environmental monitoring activities commence.

Table 2:Delineation of Direct and Indirect Impact Areas

Impact Classification	Impact Areas	
	In terms of Biophysical Impacts	In terms of Socio-economic Impacts
Direct Impact Areas	- The area within the project site boundary comprising 24 hectares. - Portion of the bay where the proposed causeway will be built. - Areas at the northern portion of the project site where silt ponds and access road to causeway will be constructed. - The portion of the bay, east of the project site, which will receive drains and run-offs from project operations.	- The host municipality of Dinapigue for the direct employment, infrastructures and revenues from the project. - The Ancestral Domain which covers the project site.
Indirect Impact Areas	- The southernmost portion of the Northern Sierra Madre National Park for possible terrestrial environment disturbance. - Areas beside the mining access road including the river in the Kanamuan Brook at the northern portion of the project site.	- Community-based mining-related/dependent businesses. - The coastal communities of Dinapigue (fisherfolks) which may be affected in case of sedimentation in the nearest portion bay.

1.2 Project Rationale

1.2.1 The Nickel Industry in the Philippines

Nickel is widely used in over 300,000 products for consumer, industrial, military, transport, aerospace, marine and architectural applications. The biggest use is in alloying - particularly with chromium and other metals to produce stainless and heat-resisting steels. These are used for pots and pans, kitchen sinks etc., as well as in buildings, food processing equipment, medical equipment and chemical plants. (www.nickelinstitute.org)

Stainless steel has traditionally accounted for 65% of primary nickel use worldwide, with more than one-half of the steel going into the construction, food processing, and transportation sectors. China, the world's leading producer, cast a record-high 14.3 million tons of austenitic stainless steel in 2013. Another 20% is used in other steel and non-ferrous alloys - often for highly specialized industrial, aerospace and military applications. About 9% is used in plating and 6% in other uses, including coins, electronics, and in batteries for portable equipment and hybrid cars.

The Philippines accounts for about 15.7 percent of worldwide nickel production as its mines extract about 330,000 metric tons (MT) of nickel a year, the most in Asia and just slightly ahead of neighbor Indonesia, according to a January 2013 report of the US Geological Survey.

Nickel accounts for 47 percent of the Philippines' metallic mineral gross production value, as 21 operating nickel mines produced close to 27 million MT in direct shipping ore (DSO) in 2012 with an average grade of 1.13. The country can expect to produce an average of 25 million MT of DSO for the next few years. Majority of the laterite nickel ore of the country are exported to China's steel industry.¹

¹ Mining Philippines News, Volume 2013/Issue 1

1.2.2 Benefits of the Proposed Project

Mining has been identified as a domestic economic growth sector with a high employment multiplier. For example, estimates suggest that one direct mining job creates between 4 and 10 ancillary jobs in upstream and downstream industries. In addition, mining companies have developed local communities through shared infrastructure and services (e.g., roads, potable water supply, footbridges, etc.) and direct community development programs required by law and undertaken as corporate initiatives.

The project is expected to generate foreign exchange equivalent to the average gross sales of the nickel ore amounting to USD; 3.026 Million or PHP 136 Million per year. Out of the gross income, the average annual excise tax to be paid to the government is USD 60,520 or PHP 2.7 Million, while the average annual income tax is USD 363,120 or PHP 16.34 Million. The projected annual share to the government, inclusive of the excise tax, income tax and local government and fees, is estimated to be equivalent to USD 536,253 or PHP 23.7 Million.

Aside from the revenues collected by the government from the project, the municipality will directly benefit through jobs and community development projects. The Social Development and Management Program (SDMP) of the project is expected to allocate USD 6,352 or PHP 285,771 annually. It will also generate direct employment of up to 200 skilled and unskilled laborers, not yet considering the indirect jobs brought by the project such as food stalls, and other small businesses.

1.3 Project Alternatives

Mining development is constrained by the fixed location of the mineralized zone, site topography, and limited waste storage alternatives. These constraints are influenced by the location of the project site, hence subsequently influencing the evaluation of the project development aspects and project alternatives. Summary of project alternatives is provided in **Table 3**.

Table 3: Project Alternatives

Aspect	Criteria	Preferred Option	Reason for Selection
Mining Location	Accessibility and Security	Parcel III only	Due to deteriorating peace and order conditions coupled with security threats to field staffs during exploration works in Parcels I and II, proponent decided to focus its exploration in the 24-hectare portion of Parcel III only. Parcel III's relative proximity to the coast translates to shorter hauling distance.
Mining Method	Technical, economic, and environmental accountability	Surface mining in parcels without blasting	The said mining method is the appropriate and most economical method for the type of ore to be extracted and transported.
With and Without Project	Economic Benefit, Resource Utilization	With the Project	The 'w/o project' option must be weighed against the economic benefit that the project would bring to the host barangays and to the national and regional economies. The economic benefits that will stem from the project are discussed in the later sections. Should the project not proceed, these potential benefits will not materialize.

1.4 Project Components

The key components of the project include the following:

1) Major Project Components

- a) Partial Mining Area (24 Hectares)
 - Ore Stockpile Area
 - Waste Rock Storage Area/Overburden Emplacement Area
- b) Mining and Access Roads (5 Kilometers)
- c) Building Facilities (1.5 Hectares)
 - Office and Staff House
 - Assay Laboratory
- d) Causeway (200 Meters)

2) Support Facilities

- a) Mining Equipment
 - i. 6 units Backhoe, PC-200, 1.17 cu.m.
 - ii. 4 units Backhoe, PC-300
 - iii. 2 units Bulldozer, CAT D6
 - iv. 2 units Bulldozer, CAT D8
 - v. 20 units Dump truck 20T
 - vi. 1-unit Generator, 30KW/ 1phase
 - vii. 1-unit Mitsubishi Canter
 - viii. 2 units Road Grader
 - ix. 1-unit Road Roller/Compactor (10T)
 - x. 2 units Welding Machine, engine driven type
 - xi. 2 units Wheel Loader, CAT 960 (2.83cu. m.)
 - xii. 2 units Flatbed truck with lifter, 8T
 - xiii. 1-unit Lube Truck
 - xiv. 4 units Service Pick-up 4x4
 - xv. 4 units Tower Lights, 6Kw
 - xvi. 2 units Water Tank Truck, 1000 gals. Capacity
- b) Ore Treatment Equipment
 - i. 1-unit Grizzly (8-inch opening)
 - ii. 1-unit Jaw Crusher
 - iii. 2 units Conveyor Stackers
 - iv. 1-unit Vibrating Screens
 - v. 1-unit Wheel Loader
 - vi. 1-unit Service Vehicle for Supervisors

3) Pollution Control Devices

- a) 3 Silt Ponds
- b) Waste Rock Storage Facility (WRSF)

Figure 4 illustrate the proposed site development plan of the project site.

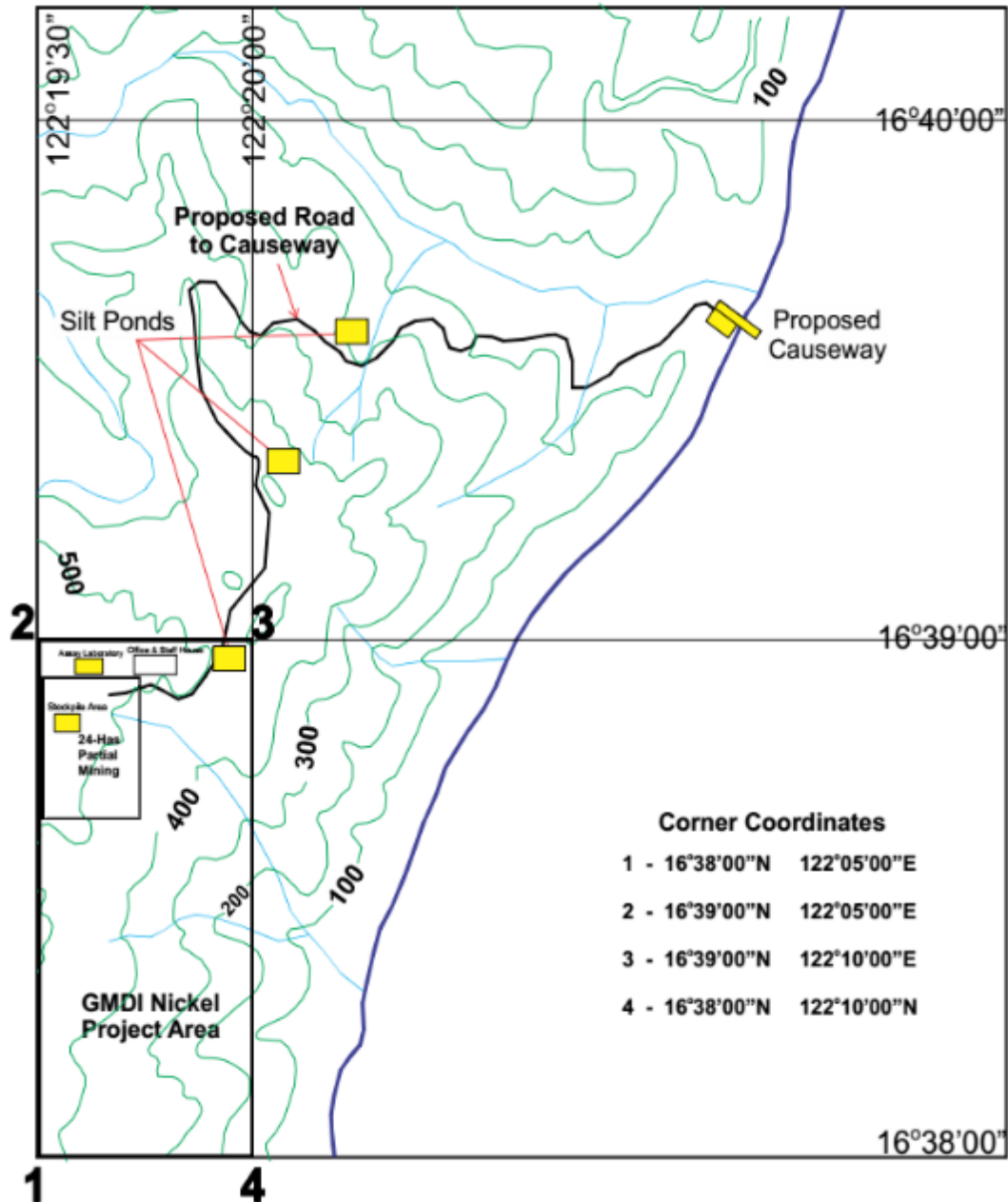


Figure 4: Proposed Project Layout

1.5 Process/Technology options

Extensive ore processing will be involved in the mining operations. After extraction, the ore will be stockpiled and then undergo sun-drying and crushing/screening process before it is shipped to foreign markets principally to China.

With one shift per day, an average of 416 Wet Metric Tons (WMT) per day is programmed for extraction on the first year and will increase to 932 WMT per day on the succeeding years. Mining operations will be maximized during the dry months of January to June and November to December taking into consideration the nature of climate in the area. Shipment will be via the causeway that the project proponent will construct. **Figure 5** illustrates the mining process that the proponent will adopt.

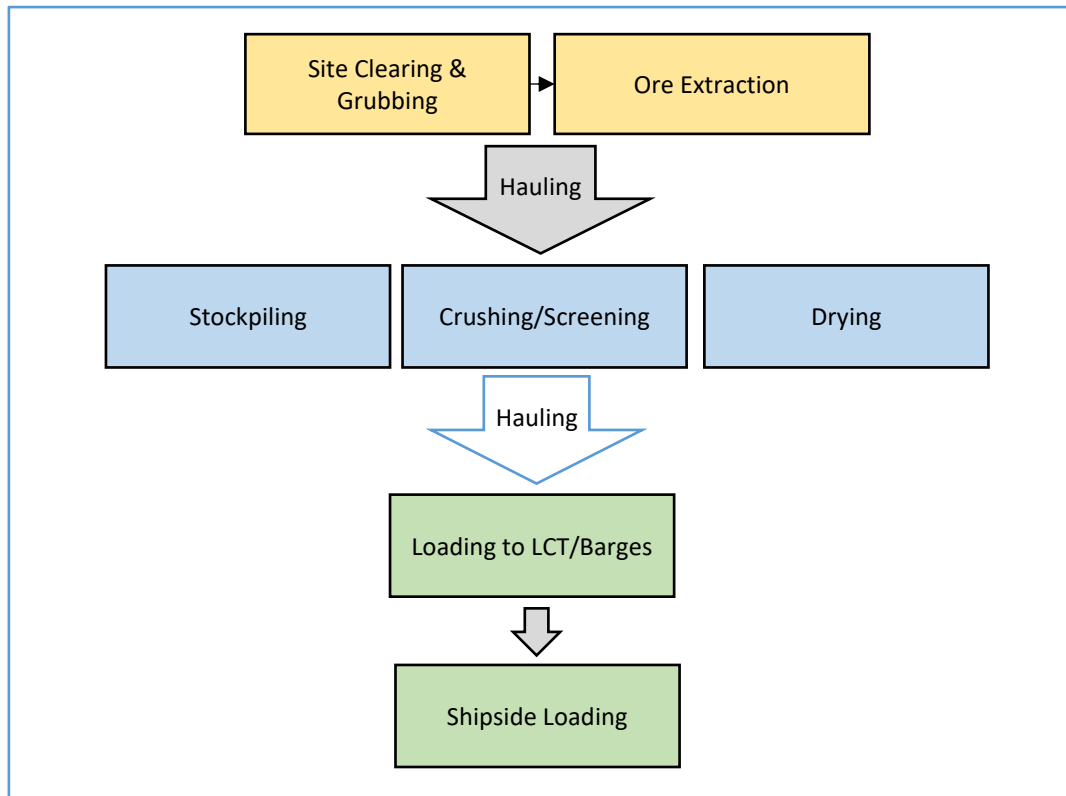


Figure 5: General Mining Process Plan

1.5.1 Production Process

1.5.1.1 Extraction of Laterites

Surface mining method is essentially the mining method to be used to extract nickel and iron bearing laterites. The method requires the mining of the ore in three-meter slices. Once the economic nature of the laterite is established, modifications will be applied during mining which may vary from a meter up to over 12 meters thick. Ores will be delivered at the required size, grade, and volume to the various end-users.

1.5.1.2 Breaking, Loading and Hauling of Ore and Waste

Mining of laterites requires limited rock breakage except on oversize boulders found in saprolites and base rock contacts. The laterite material will be loosened up by backhoes and bulldozers whenever necessary. The limonite could be freely dug, scooped and loaded by backhoes. Whenever necessary, mechanical rock breakers will be used for boulders. Backhoes will be used to break and load the laterites. Two (2) units of backhoes will be available to handle the loading requirement of the operations.

Haulage of the ore and waste from the mine area to designated dump sites and stockpile areas will be managed by five (5) units of 10 to 12-ton capacity off-on highway trucks. It is estimated that the delivery sites for the ore stockpiles and waste dumps will be within 2-km radius from the working area. Each truck is expected to make four (4) trips per hour.

1.5.1.3 Stockpiling, Ore Dressing (Sun Drying and Crushing/Screening Operations) and Ship Loading

The stockyard will serve as the staging area for the stockpiled ore to be loaded to ocean-going vessels for shipment to China. A leveled and cleared area is prepared to store more than 50,000 MT of ore. The leveled surface is covered with a thin mantle of low-grade to serve as matting before the higher-grade limonite and saprolite ores are stocked. Limonite and saprolite ores of different grades are stockpiled separately. Peripheral ditches are dug around the area to catch water draining from the stockpiles. The ore will then be prepared into the specification requirement of the ore buyers. The following procedures will be followed:

- Sorting using grizzly bars on the dumping bins which separates the boulders or oversize from the fines material;
- Oversized are crushed and/or reduced in acceptable sizes depending on the requirement of the buyer, smelter, and/or metal traders;
- Screening of the crushed ores if further required and necessary. Oversized products after this stage are manually broken or crushed to acceptable sizes;
- Stockpiling in separate wind-row piles in accordance to grade specification; and,
- Sun-drying of the ores in the windrow piles are done naturally by sun. Moisture content will be maintained within 28% to 36% moisture. During rains, the stockpiles are covered with canvas covers to minimize increased moisture content.

The stockpiled ores from the various stockyards will then be loaded directly to the berthed/moored landing craft tank (LCT)/barges. The ores loaded are transferred from the pier site into the ocean going to the anchored cargo ship. For this work, one (1) front-end loader is assigned complete with the complimentary number of hauling trucks. The ore will be discharged directly into the LCT or barge after the required sampling work has been done.

1.5.1.4 Waste Disposal

The mining design and engineering indicated a stripping ratio of 1:1. The waste material (overburden, low grade laterite and off-specification laterite) will be removed, transported out of the site and stockpiled. Waste dumps will be designated and environmental protection will be provided.

1.5.1.5 Marketing of Extracted Ore

The laterite ore produced from the mine will be sold to China. The main goal is to enter into a long-term supply agreement and achieve the highest possible price for laterite ore sales.

1.5.2 Technology Options

1.5.2.1 Power Supply

The operations do not require heavy power supply, therefore, portable generators will be provided for lighting and running office equipment, laboratory facilities and motor ship facilities. Arrangement with the National Power Corporation (NPC) for power supply through its distribution line from Baler, Aurora will later be evaluated and arranged if feasible.

1.5.2.2 Water Supply

Since the operations will involve only mining/extraction of the nickel ore, water requirements for the operations will be minimal. Domestic and industrial water supply will come from the various drainage systems available in the municipality, particularly spring waters. Water rights will be obtained from the National Water Rights Council (NWRC) regarding the use of the water.

1.5.2.3 Pier Facilities

The project will involve the construction of a causeway where the ores will be loaded on to LCT or barges that will transport the ores to vessels anchored at a distance from the causeway.

1.5.2.4 Mine and Access Roads

Mining roads will be constructed as part of the mine development and production. The existing project access road from Dinapigue town will be developed as an all-weather road to provide primary access between the mining areas and the various facilities.

1.5.2.5 Camp Facilities

There is a need for integrated camp facilities to service the operating company and to take care of the needs of the employees of the mine. It is to be remembered that all of the employees and workers in the mine would come from various places, since the locality of the mine precluded the existence of any community and/or settlement, all manpower of the project must be provided with housing and shelter. It is expected that during construction/development period, everyone will be staying in the project site on bachelor and/or single status.

1.5.3 Waste Management System

Waste Management System will exist in the proposed project to manage and mitigate all forms of environmental pollutants which may be generated by the project. **Table 4** summarizes the planned waste management system of the proposed mining project.

1.6 Project Size

Parcel 3 has an aggregate size of 163.9601 hectares of land bounded within coordinates 16°38'00" to 16°39'00" north latitude and 122°19'30" to 122°20'00" east longitude. However, for this Environmental Compliance Certificate (ECC) application, project area will be delimited only in the 24-hectare northwestern portion of Parcel 3.

In addition, the project will also include the 5-km access road from project area to causeway, and the construction of a 200-meter length causeway.

The estimated mine production is at 100,000 WMT of ore on the first year and 200,000 WMT on succeeding years. The estimated life of the mine is over 15 years based on the area's ore reserves.

1.7 Development Plan, Description of Project Phases and Corresponding Timeframes

1.7.1 Pre-Development/Pre-Construction Phase

Pre-operation phase involves the following:

- 1) Application for Exploration Permit;
- 2) Exploration works and studies;
- 3) Conduct of Environmental Impact Assessment;
- 4) Acquiring endorsement from the host community and local government unit (LGU);
- 5) Obtaining Free, Prior and Informed Consent (FPIC) or Certification of Non-Overlap (CNO) from National Commission on Indigenous Peoples (NCIP); and
- 6) Securing of relevant endorsements, permits and clearances from Mines and Geosciences Bureau (MGB), LGU, and other government agencies.

1.7.2 Development/Construction Phase

Construction phase shall involve site development works (clearing and grubbing, filling works, site clearing for the vegetation and existing structures, site preparation, etc.). It will also involve drainage and slope protection works, provision of utilities, road construction, and miscellaneous environmental infrastructures for the treatment and disposal of wastewater and solid wastes.

The following activities will be commenced immediately after the entire required permit and clearances will be granted:

- 1) Site clearing
- 2) Road rehabilitation and construction
- 3) Waste dumps and environment related works
- 4) Ore stockyard construction
- 5) Stripping of overburden
- 6) Preparation of benches and ramps
- 7) Construction of Causeway

This phase of the project is expected to last for one year or less.

1.7.3 Operation Phase

The operation phase of the project shall include mining operations such as stripping, excavation, hauling, stockpiling, ship loading, and transport. The development project shall be operated and maintained in accordance with the requirements of pertinent and applicable environmental laws and regulations.

Table 4: Waste Management System

Type of Waste Generated	Source	Pollution Control Measure	Estimated Waste Generation Rate
Run-off suspended solids to nearby water bodies	• Site clearing • Construction of access road and causeway • Mining operation and earthmoving	• Three (3) silt ponds will be constructed in strategic locations downstream of the project site to trap run-off suspended solids before discharging to river/ocean. • Mining operation will be maximized during dry months to minimize run-off of suspended solids.	Not yet estimated
Suspended particulates	• Site clearing • Construction of access road and causeway • Mining operation and earthmoving	• Speed of all mining equipment will be reduced to minimize dust generation. • Silt curtains will	Not yet estimated
Emission from equipment and generators	• Motor equipment and vehicles • Generators	• Use of low emission fuel. • Regular maintenance of equipment and vehicles.	Not yet estimated
Oil and grease	• Equipment maintenance • Canteen	• All equipment maintenance will be conducted in a designated equipment maintenance area. • Maintenance area will be provided with concrete containment to avoid soil contamination and runoff to water bodies. • Used engine oil from equipment maintenance and cooking oils from canteens will be stored in a designated Materials Recovery Facility (MRF) prior to hauling by registered Treat-Store-Dispose (TSD) Facility.	Not yet estimated
Domestic wastewater	• Workers	• Portalets will be provided during construction phase of the project. • Septic tank will be constructed to treat all wastewater from toilet and sinks.	1,500 cu. meters annually from 80 workers
Domestic solid wastes	• Workers	• Waste bins will be provided in different areas within the project site. • Littering violators will be penalized accordingly. • MRF will be established in the project site. Recyclables will be stored and sold to junkshop while residual solid wastes will be	5.8 MT annually

Type of Waste Generated	Source	Pollution Control Measure	Estimated Waste Generation Rate
		disposed to municipal sanitary land fill (SLF). Compost pits will be established for biodegradable solid wastes.	
Waste Ore	Mining operation	Waste ore storage area shall be prepared and an environmentally sound abandonment and rehabilitation plan shall be implemented to this area upon project decommissioning.	100 WMT on first year and 200 WMT annually on the succeeding years
Wood trimmings and lumbers	Site clearing	- Lumbers from the site clearing will be surrendered to Forest Management Bureau of the Department of Environment and Natural Resources. - Wood branch trimmings will be stored and will be used as firewood.	Not yet estimated
Special/Hazardous Wastes	- Used/expired chemicals from assay laboratory - Busted lamps - Used batteries - Broken electronic equipment - Unused explosives	All hazardous wastes generated will be safely stored in the designated hazardous waste storage area prior to hauling by registered TSD facility.	Not yet estimated.

Environmental monitoring will be conducted in all aspects of environment which includes the water, air, terrestrial environment, and the community, which will be prescribed by the Department of Natural Resources (DENR) – Environmental Management Bureau (EMB) and the organized Multipartite Monitoring Team (MMT).

This phase of the project will last, depending on the estimated life of the mine which is presumed to be 15 years.

1.7.4 Abandonment and Rehabilitation Phase

A conceptual rehabilitation and mine closure strategy has been developed as part of the overall mining plan and to comply with DAO 1996-406, and its Implementing Rules and Regulations (IRR).

The conceptual rehabilitation and mine closure plan will include but is not limited to:

- 1) Stability of the mined area, in terms of the physical structure and water seepage quality;
- 2) Management of the seepage water quantity and quality from the WRSF and Silt Ponds;
- 3) Progressive rehabilitation of the WRSF and will involve placement of subsoil and/or topsoil; topsoiled areas will be revegetated with grass and shallow-rooted shrub species to ensure integrity of the cover layer is maintained;
- 4) Rehabilitation of the disturbed areas will include topsoiling (minimum of 0.3 m) and revegetated with selected grass species;
- 5) Decommissioning of the crushing facility and conveyor system;
- 6) Decommissioning of the offices, workshops, and other ancillary facilities;
- 7) Decommissioning of stockyards;
- 8) Removal, cleanup and proper disposal of unused chemicals and wastes;
- 9) Determination of any potential site contamination and conduct of remediation works, if necessary; and
- 10) Decommissioning of water supply and sewage system.

1.8 Manpower

There is no available data on the number of available men/women/indigenous people workers at this stage of the project. However, a recruitment strategy will be developed to ensure the right skills required by the project can be locally sourced as much as practicable and giving equal opportunities to both genders and the indigenous peoples. Training and upgrading of skills will also be provided to the labor pool as part of the sustainability strategy of the company. **Table 1.5** below lists the proposed manpower requirement for the project.

Table 5: Manpower Requirement of the Project

Expertise/Skills	Number of Personnel
Construction Phase	
Project Manager	2
Skilled	5
Unskilled	25
Total	32
Operation Phase	
Project Manager	4
Mine Engineering	6
Mine Operations	5
Road Maintenance	2
Exploration/Geology	17

Expertise/Skills	Number of Personnel
Laboratory	16
Administration	5
Accounting	3
Materials	3
Environment	4
Safety	5
Surveyor	4
Legal	1
Medical	3
Consultants	2
Total	80

1.9 Indicative Project Investment Cost

The projected total investment for the project is estimated at PHP 121,088,000. This includes the capital expenditures for exploration, development, mining rights acquisition, equipment, engineering works, working capital, and other costs.

2 SOCIAL DEVELOPMENT PLAN (SDP) AND INDIGENOUS PEOPLES DEVELOPMENT PLAN (IPDP)

The SDP for this project outlines the social and community development programs that need to be implemented in order to adequately address the social impacts of the project. This framework will consider but not be limited to:

- Psycho-social issues and concerns (e.g. fears and apprehensions) of the project affected communities;
- Social impacts associated with employment (increased household income; local hiring; local outsourcing, etc.);
- Migration, population change, and community cohesiveness;
- Community impacts associated with resource competition, water pollution, dust emissions, increased noise levels, traffic, public services, and amenities;
- Safety and security of locals and workers; and
- Socio-economic impacts resulting from mine closure.

For mining projects, the Social Development Management Program (SDMP) is a statutory requirement to address these social impacts. This is a post-Environmental Certificate Compliance (ECC) submission required by MGB and operating under revised guidelines (DAO 2010-13). The SDP Framework serves as a framework for designing the SDMP.

The SDMP is meant to contribute to the development of host and neighboring communities and to address concerns of community sustainability including preparing the host communities for mine closure. The proponent is obligated to commit a minimum of 1.125% of its annual operating costs attributed to the mining project to SDMP programs or activities. The proponent is responsible for the preparation of the SDMP in consultation with community stakeholders. The SDMP will be monitored periodically and will undergo an annual audit of funds. The SDMP is effective from commencement of operations. In preconstruction and construction phases, the proponent would provide support to communities as indicatively outlined.

Since the project is located within ancestral domain, there is an equivalent statutory requirement for the IPs called the Indigenous Peoples' Development Plan (IPDP), which also aims to address similar social impacts on IPs. The IPDP is intended to be the basis for the preparation of the Ancestral Domain Sustainable Development and Protection Plan (ADSDPP). The ADSDPP will be prepared by the IPs with assistance from the proponent and from the National Commission on Indigenous People (NCIP), the institution that facilitates the planning and implementation of programs for IPs.

The indicative SDP Framework and IPDP for the project were developed through a series of consultation workshops with the decision makers from:

- The host municipalities and barangays;
- The tribal leaders of the ancestral domain;
- Local offices dealing with municipal planning and development, engineering, social and development, agriculture, health, education, environment and natural resources;
- Local police;
- Church; and
- Field offices of NCIP.

As early as the application of the project's exploration permit, consultation was already done by the proponent to determine the acceptability of the mining project within the host locality. After

knowing that the proposed project is accepted by the leaders of the host municipality, series of public consultations was done in each of the barangays of Dinapigue, and the tribal leaders of *Dumagats* in the area. The result of the conducted public consultation activities enables the proponent to draft the Two-Year Community Development Program (CDP) for the host barangay (see **Annex 2**) and acquire project endorsements (see **Annex 3**).

Among of the planned projects under the drafted CDP include:

- 1) Spring Development/Water System Project;
- 2) Establishment of Information Center;
- 3) Procurement of Information, Education and Communication (IEC) Materials;
- 4) Scholarship Grant for deserving Dinapigue student; and
- 5) Educational Assistance Program

During the operation phase of the project, the project will allocate 1.5% of its fund for its SDMP while 1% will be allocated for IPDP. Programs for SDMP and IPDP will be drafted on the succeeding stages of project development.

3 INFORMATION, EDUCATION, AND COMMUNICATION (IEC) CAMPAIGN

3.1 IEC Program

The Information, Education and Communication (IEC) Framework seeks to foster transparency in dealing with the various stakeholders and to capacitate them to form a balanced opinion of the project, and make informed judgments on issues and concerns that affect their lives and communities. The IEC also aims to dispel wrong perceptions of the project. The IEC is part of the overall SDMP for the project. DAO 2010-13 and DAO 2017-15 require the submission of a program to Promote Public Awareness and Education on Mining Technology and Geosciences (PPAEMTG), funding for which will come from a 0.225% of operating costs. Among the activities under the IEC Program are the following:

- 1) Establishment/enhancement/maintenance of information and publicity centers where stakeholders can access information on the performance of the mining project;
- 2) Publication of IEC materials on social, environmental and other issues/concerns relative to mineral resources development and responsible mining operations;
- 3) Expenditures for continuing public awareness and education campaigns; and
- 4) Expenditures on equipment and capital outlay as assistance to the institutionalization of public awareness and education on mining technology and geosciences.

As of now, the proponent has already undergone radio and newspaper broadcasting as part of its information dissemination regarding the proposed project (see **Annex 4**). From 12-15 December 2016 the proponent together with the EIA Team conducted social preparation activities thru Information and Education Campaign (IEC) by meeting with the Municipal and Barangay officials of the host communities, interviewing some key informants and conducting a Social Perception Survey on the proposed project.

From 07-10 December, 2017 the proponent and the EIA Team continued the conduct of IEC activities including distribution of IEC materials to the concerned LGUs, government agencies with related mandate and impacts of the proposed undertaking, interest groups (NGOs, POs), local institutions (schools, churches, hospitals) and households, and business activities that will be displaced. This IEC activity is documented in **Attachment A**.

The proponent shall continue an effective IEC program to disseminate relevant information about the project in such a way that the host communities may objectively comprehend and understand project-related issues. The IEC campaign will be implemented through community consultations, neighborhood discussions, and use of media and focus group discussions with the different stakeholders.

3.2 Public Participation

On March 31, 2015, a public scoping session was already conducted for the project. It was attended by 105 attendees from DENR-EMB Region 2, where the first ECC application was submitted, Mines and Geosciences Bureau (MGB) Region 2, and various stakeholders from the host municipality. **Annex 5** presents the scoping report of the conducted public scoping.

With this application and in compliance with DAO 2017-15, the proponent shall re-conduct the Public Scoping as a requirement for the ECC acquisition for the project. This Public Scoping Activity is scheduled on January 6, 2018, Saturday at 1:00 PM at the Dinapigue Municipal Gymnasium (EDUARDO F. CHAKITON MEMORIAL MULTI-PURPOSE COMMUNITY CENTER). Presentation materials

for the proposed public scoping is presented in **Annex 6**. List of Prospective attendees for the public scoping shall include representatives from the following stakeholders (see **Table 6**).

Table 6: List of Prospective Attendees for the Proposed Public Scoping

Stakeholder	Name of Representative	Position
EMB Central Office	Jacqueline A. Caanacan	OIC Director
Concerned Government Agencies		
MGB Region 2	Engr. Mario A. Ancheta	OIC Regional Director
EMB Region 2	Engr. Cesar S. Siador Jr.	Regional Director
Provincial Environment and Natural Resources Office (PENRO)	William S. Savella	PENR Officer - Isabela
Community Environment and Natural Resources Office (CENRO)	Jose R. Donato	OIC CENR – Dinapigue, Isabela
Isabela Provincial LGU		
Office of the Governor	Faustino G. Dy, III	Provincial Governor
Provincial Environment and Natural Resources Office (Prov'l ENRO)	For. Geronimo P. Cabaccan, Jr.	ENR Officer
Provincial Planning and Development Office (MPDO)	Dr. Troy Alexander G. Miano	OIC, Prov'l Planning and Dev't Coordinator
Provincial Agriculture Office (PAO)	Dr. Angelo Naui	Prov'l Agriculturist
Dinapigue LGU		
Office of the Mayor	Reynaldo D. Derije	Mayor
Municipal Planning and Development Office (MPDO)	Bonifacio Briones	MPD Coordinator
Municipal Agriculture Office (MAO)	Sannyfel L. Nieves	Municipal Agriculturist
Barangay LGUs		
Brgy. Dimaluadi (host barangay)	Concepcion P. Donato	Brgy. Captain
Brgy. Ayod	Basilio W. Caligtan	Brgy. Captain
Brgy. Bucal Sur	Armando V. Fajardo	Brgy. Captain
Brgy. Bucal Norte	Samuel P. Cariño	Brgy. Captain
Brgy. Digumased	Lorenzo F. Paulino	Brgy. Captain
Brgy. Dibulo	Cresencio C. Casabar Sr.	Brgy. Captain
IP Community	Vetriolo Sepa	Tribe Leader
Concerned NGOs (church, women group, youth sector, and fishermen association)	Jovita C. Mondala Ruth Derije	NCIP Coordinator Pres. Federation of Womens' Assoc.
Other Concerned Citizens of Dinapigue	(see Attachment B for the complete Listing)	

3.3 Perception survey

On December 7-10, 2017, environmental and social impact assessment team conducted perception survey in six (6) barangays of Dinapigue, namely, Dimaluade, Ayod, Bucal Sur, Bucal Norte, Digumased, and Dibulo. Thirty-six (36) respondents were surveyed from the five barangays, which almost half of the respondents are from the host barangay.

Summary of the result of perception survey is tabulated in **Table 7**.

Table 7: Result of Perception Survey Conducted on Dec. 7-10, 2017

Question	Result
1. Alam nyo ban a may planong magmina ang GDMI sa bayan nyo? A. Oo	A (59%)

B. Hindi	B (41%)
2. Kung Oo, saan nyo nakuha ang kaalaman tungkol sa pinaplanong proyekto? A. Mga opisyal ng barangay o bayan B. Mga kinatawan ng GDMI C. Pagdalo sa pulong tungkol sa proyekto D. Iba pa	A (53%) B (13%) C (0%) D (33%)
3. Sa pangkalahatan, sang-ayon po ba kayo sa binabalak na proyektong pagmimina ng GDMI? A. Oo B. Hindi (no answer)	A (93%) B (0%) (7%)



ATTACHMENTS

Attachment 1

List of Invitees for Public Scoping

ATTACHMENT B

LIST OF INVITEES TO THE PUBLIC SCOPING ON THE ISABELA NICKEL MINING PROJECT (INMP)

	NAME	POSITION	ADDRESS	CONTACT # CP Number
1	ENGR. METODIO U. TURBELLA	Director, EMB Central Office	DENR Compound, Visayas Avenue, QC	
	Concerned Government Agencies			
2	ENGR. MARIO A. ANCHETA	OIC Regional Director	MGB Region 2, Tuguegarao, Cagayan	
3	ENGR. CESAR S. SIADOR, JR.	Regional Director	EMB-02 Regional Office Government Center, Carig SurTug. City	
4	WILLIAM S. SAVELLA	Provincial Environment & Natural Resources Officer	PENRO, Isabela	
5	JOSE R. DONATO	OIC Community Environment and Natural Resources Officer	CENR-Sub-Office, Dinapigue, Isabela	
	Isabela Provincial LGU			
6	FAUSTINO G. DY, III	Provincial Governor	Capitol , Ilagan Isabela	
7	GERONIMO P. CABACCAN	Prov'l Environment and Natural Resources Officer	Ilagan, Isabela	
8	DR. TROY ALEXANDER G. MIANO	Provincial Planning & Development Officer	Provincial Capitol, Ilagan Isabela	
9	DR. ANGELO NAUI	Provincial Agriculturist	Provincial Capitol, Ilagan, Isabela	
	Dinapigue LGU			
10	HON. REYNALDO D. DERIJE	MUNICIPAL MAYOR	DINAPIGUE, ISABELA	0928-212-8512
11	HON. HERMINIO B. DOMINCEL	VICE-MAYOR	DINAPIGUE ISABELA	0947-173-9829
12	MR. ROMULO CORPUZ	PRESIDENT, SENIOR CITIZENS ASSOCIATION	OFFICE OF SENIOR CITIZENS AFFAIRS, DINAPIGUE, ISABELA	
13	MR. BONIFACIO BRIONES	MUN. PLANNING & DEVELOPMENT COORDINATOR	MPDC OFFICE, DINAPIGUE ISABELA	

14	DR. REYGENECARATIQUIT	MUNICIPAL HEALTH OFFICER	RURAL HEALTH UNIT, DINAPIGUE ISABELA	
15	HON. ALDO REY T. VARGAS	MEMBER, SANGGUNIANG BAYAN	SB OFFICE, DINAPIGUE, ISABELA	
16	HON. ANATALIO P. DONATO	MEMBER, SANGGUNIANG BAYAN	SB OFFICE, DINAPIGUE, ISABELA	
17	HON. FELICITA S. FELIX	MEMBER, SANGGUNIANG BAYAN	SB OFFICE, DINAPIGUE, ISABELA	
18	HON. FERNANDO M. DUQUE	MEMBER, SANGGUNIANG BAYAN	SB OFFICE, DINAPIGUE, ISABELA	
19	HON. CORAZON D. DIAZ	MEMBER, SANGGUNIANG BAYAN	SB OFFICE, DINAPIGUE, ISABELA	
20	HON. PATRICK D. ANDRES	MEMBER, SANGGUNIANG BAYAN	SB OFFICE, DINAPIGUE, ISABELA	
21	HON. VICENTE D. MENDOZA	MEMBER, SANGGUNIANG BAYAN	SB OFFICE, DINAPIGUE, ISABELA	
22	HON. SHEILAH M. CANDIDO	MEMBER, SANGGUNIANG BAYAN	SB OFFICE, DINAPIGUE, ISABELA	
23	HON. CONCEPCION P. DONATO	BARANGAY CAPTAIN, DIMALUADE	DIMALUADE, DINAPIGUE, ISABELA	0918-586-4584
24	HON. BASILIO W. CALIGTAN	BARANGAY CAPTAIN, AYOD	AYOD, DINAPIGUE, ISABELA	
25	HON. SAMUEL P. CARIÑO	BARANGAY CAPTAIN, BUCAL NORTE	BUCAL NORTE, DINAPIGUE, ISABELA	
26	HON. ARMANDO V. FAJARDO	BARANGAY CAPTAIN, BUCAL SUR	BUCAL SUR, DINAPIGUE ISABELA	
27	HON. CRESENCIO C. CASABAR, SR.	BARANGAY CAPTAIN, DIBULO	DIBULO, DINAPIGUE, ISABELA	
28	HON. LORENZO PAULINO	BARANGAY CAPTAIN, DIGUMASED	DIGUMASED, DINAPIGUE, ISABELA	
29	MS. RUTH B. DERIJE	PRESIDENT, FEDERATION OF WOMEN'S ASSOCIATIONS	DINAPIGUE, ISABELA	
30	MR. RUBEN TABLANG	PRESIDENT, DIMALUADE FARMERS' ASSOCIATION	DIMALUADE, DINAPIGUE ISABELA	
31	MR. OSCAR DULAY	CHAIRMAN, DINAPIGUE FARMERS' COOPERATIVE	BUCAL NORTE, DINAPIGUE ISABELA	
32	MR. ARIES VILLAREAL	CHAIRMAN, FISHERFOLK COOPERATIVE	PUROK 1, DIGUMASED, DINAPIGUE, ISABELA	
33	MR. PABLO C. MALENAB, JR.	PRINCIPAL, DINAPIGUE CENTRAL SCHOOL	DINAPIGUE CENTRAL SCHOOL, DINAPIGUE, ISABELA	0921-676-8116
34	MS. JOY D. DUMOCLOY	PRINCIPAL, DINAPIGUE NATIONAL HIGH SCHOOL	DINAPIGUE NATIONAL HIGH SCHOOL, DINAPIGUE, ISABELA	
35	MS. MARILYN D. LINAZA	PRINCIPAL, BUCAL SUR ELEMENTARY SCHOOL	BUCAL SUR, DINAPIGUE, ISABELA	
36	MR. BONIFACIO R. TABLANG	PRINCIPAL, AYOD ELEMENTARY SCHOOL	AYOD ELEM. SCHOOL, AYOD, DINAPIGUE, ISABELA	

37	MR. JAMES N. NAVARRO	PRINCIPAL, DIBULO ELEMENTARY SCHOOL	DIBULO ELEMENTARY SCHOOL, DIBULO DINAPIGUE, ISABELA	
38	MR. JOSE R. DONATO	OIC, CENR –SUB OFFICE	COMMUNITY ENVIRONMENT AND NATURAL RESOURCES SUB-OFFICE, DIGUMASED, DINAPIGUE ISABELA	
39	MR. SANNYFEL L. NIEVES	MUNICIPAL AGRICULTURIST	MAO OFFICE, DINAPIGUE, ISABELA	
40	MR. ARNEL BALANAG	PRESIDENT, TRICYCLE DRIVERS’/OPERATORS’ ASSOCIATION	DINAPIGUE, ISABELA	
41	MS. JOCELYN D. DANO	MUN. SOCIAL WELFARE OFFICER	MSWD OFFICE, DINAPIGUE, ISABELA	
42	REV. FR. FROILAN S. CRUZ	PARISH PRIEST, ST. JOHN THE BAPTIST PARISH	PUROK 4, DIGUMASED, DINAPIGUE ISABELA	
43	PASTOR VEN GLORIA	PASTOR, IGLESIA NI CRISTO	DIGUMASED, DINAPIGUE, ISABELA	
44	HON. JOSEPHINE V. BELTIJAR	KAGAWAD	DIBULO, DINAPIGUE, ISABELA	
45	HON. JULIAN TABLANG	KAGAWAD	BUCAL SUR, DINAPIGUE, ISABELA	
46	ARIEL AVANCENA	RESIDENT	DIGUMASED, DINAPIGUE, ISABELA	
47	BELINDA W. MAGBANWA	RESIDENT	Bgy AYOD, DINAPIGUE, ISABELA	
48	VIRGINIA SABADO	RESIDENT	Bgy. AYOD, DINAPIGUE, ISABELA	
49	CELIS CALIGTAN	RESIDENT	Bgy. AYOD, DINAPIGUE, ISABELA	
50	ALBELINA PISCAWAN	RESIDENT	Bgy. AYOD, DINAPIGUE, ISABELA	
51	BERNARD BALBOA	RESIDENT	Bgy. BUCAL NORTE, DINAPIGUE, ISABELA	
52	HON. DELIA SORIANO	KAGAWAD	Bgy. BUCAL NORTE, DINAPIGUE, ISABELA	
53	MR. REYNALDO RUFINO	RESIDENT	Bgy. DIGUMASED. DINAPIGUE, ISABELA	
54	MS. CINDY BALICANA	RESIDENT	OSCA, Bgy. DIGUMASED, DINAPIGUE, ISABELA	
55	MS. ROSENDA P. BERNABE	MINISTRY OF SOCIAL SERVICES, ST. JOHN THE BAPTIST PARISH	BGY. DIGUMASED, DINAPIGUE, ISABELA	
56	MR. CAPIOS CAMCAM	RESIDENT	BGY DIGUMASED, DINAPIGUE, ISABELA	
57	JESSIE AGUSTIN	RESIDENT	Bgy. BUKAL SUR, DINAPIGUE, ISABELA	
58	CAROLINA BAJET	RESIDENT	Bgy. BUKAL SUR, DINAPIGUE, ISABELA	
59	ZALDY RASPADO	RESIDENT	Bgy. BUCAL SUR, DINAPIGUE, ISABELA	
60	JEFFREY NAVARRO	RESIDENT	Bgy. BUCAL SUR, DINAPIGUE, ISABELA	
61	ROSEMARIE DONGAULO	RESIDENT	Bgy. DIBULO, DINAPIGUE, ISABELA	

62	JERRY CANDIDO	RESIDENT	Bgy. DIBULO, DINAPIGUE, ISABELA	
63	LOURDES B. MIGUEL	RESIDENT	Bgy. DIBULO, DINAPIGUE, ISABELA	
64	AILEEN S. CANDIDO	RESIDENT	Bgy. DIBULO, DINAPIGUE, ISABELA	
65	LILIAN CORPUZ	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
66	SIMPROSA BANAGA	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
67	JULIDA EPIS	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
68	REYSIE U. SALAMANCA	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
69	KRISTINE ANTONIO	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
70	NATIVIDAD A. DELA TORRE	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
71	VIOLETA BASCOS	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
72	ANALYN BERGADO	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
73	FEDY APELADO	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
74	JONATHAN DAIRO	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
75	NERISSA DAIRO	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
76	SATURNINA APELADO	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
77	CRESENCIA B.MULATO	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
78	ARLYN MINA	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
79	MS. RESALINA ARRIOLA	RESIDENT	Bgy. DIMALUADE, DINAPIGUE, ISABELA	
80	MS. JOVITA MONDALA	NCIP COORDINATOR	Bgy. DIGUMASED, DINAPIGUE, ISABELA	0921-362-3696
81	MR. VETRIOLO SEPA	IP LEADER	Purok 4, DIGUMASED, Dinapigue, Isabela	
82	MR. RONALDO E. QUIWA	PRESIDENT, GOODEARTH MINING and DEV'T, INC. (GMDI)	White Oak Road, Greenfields Homes San Fernando, Pampanga	

Attachment 2

Invitation Letter for Public Scoping



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
DENR Compound, Visayas Avenue, Diliman Quezon City 1116
Telephone Nos.: (632) 927-1517, 928-3725; Fax No.: (632) 920-2258
Website: <http://www.emb.gov.ph/> Email: mail@emb.gov.ph

14 December 2017

Dear _____,

We would like to invite you to a Public Scoping for the Proposed Isabela Nickel Project of the GoodEarth Mining and Development, Incorporated (GMDI) to be located at Barangay Dimaluade, Dinapigue, Isabela. The Public Scoping will be held on Saturday, January 6, 2018 1:00 PM at the Dinapigue Municipal Gymnasium (EDUARDO F. CHAKITON MULTI-PURPOSE COMMUNITY CENTER), Dinapigue, Isabela. This public scoping activity is a proponent driven activity, an early part of the Environmental Impact Assessment (EIA) process to solicit and address issues and concerns on the proposed project pursuant to Presidential Decree (P.D.) 1586 (Environmental Impact Statement System) and its Implementing Rules and Regulations.

We look forward to your invaluable participation.

Thank you.

Very truly yours,

ATTY. MICHAEL DRAKE P. MATIAS
Chief, Environmental Impact Assessment and
Management Division

Attachment 3

Public Scoping Presentation

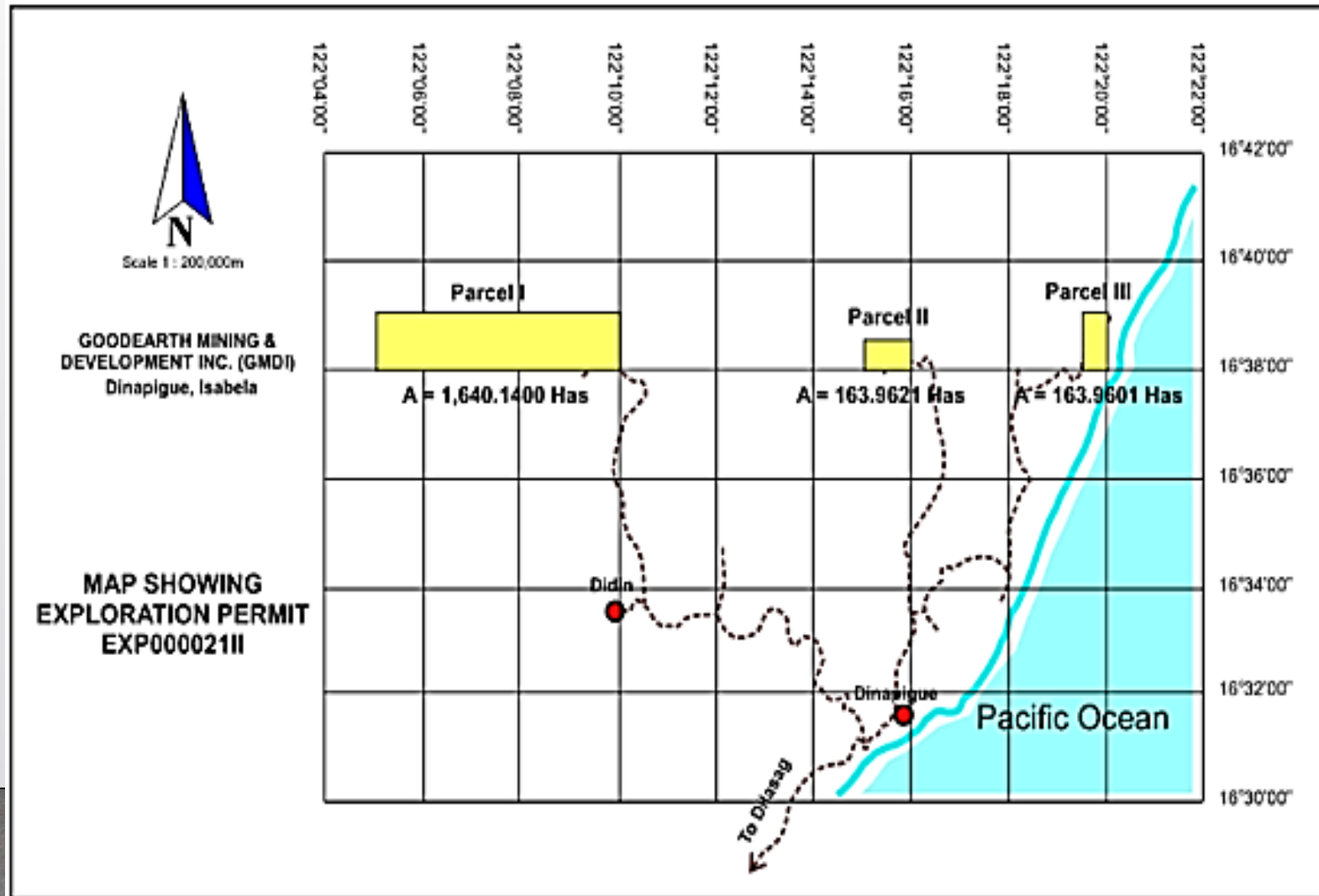


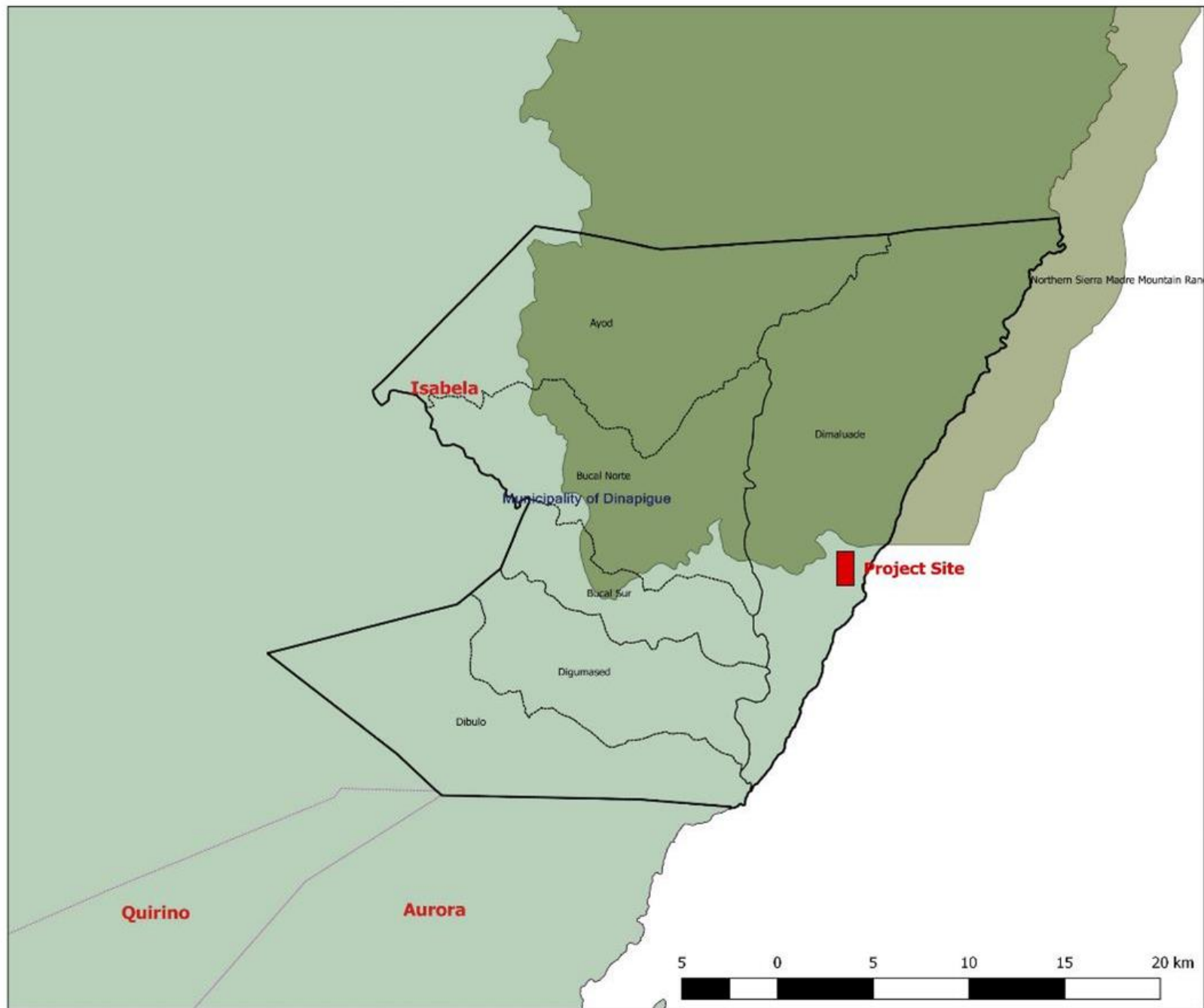
Public Scoping

ISABELA NICKEL PROJECT

Brgy. Dimaluade, Dinapigue, Isabela

Project Location





LOCATION MAP

PROPOSED ISABELA NICKEL PROJECT

Proponent: Good Earth Mining and Development Inc.

Project Location: Brgy. Dimaluade, Dinapigue, Isabela



Legend

- Project Area
- Northern Sierra Madre Mountain Range
- Barangay Boundary
- Municipal Boundary
- Provincial Boundary



Scale: 1:150,000





Geographic Boundaries of Parcels I, II, and III under EXP000021II

Parcel	Lot Corners	Geographic Coordinates	Area
I	1	16° 38' 00.00" N; 122° 05' 00.00" E	1,639.9095 hectares
	2	16° 39' 00.00" N; 122° 05' 00.00" E	
	3	16° 39' 00.00" N; 122° 10' 00.00" E	
	4	16° 38' 00.00" N; 122° 10' 00.00" E	
II	1	16° 38' 00.00" N; 122° 15' 00.00" E	163.9621 hectares
	2	16° 38' 30.00" N; 122° 15' 00.00" E	
	3	16° 38' 30.00" N; 122° 16' 00.00" E	
	4	16° 38' 00.00" N; 122° 16' 00.00" E	
III	1	16° 38' 00.00" N; 122° 19' 30.00" E	163.9601 hectares
	2	16° 39' 00.00" N; 122° 19' 30.00" E	
	3	16° 39' 00.00" N; 122° 20' 00.00" E	
	4	16° 38' 00.00" N; 122° 20' 00.00" E	
Total			1,967.8317 hectares

Delineation of Direct and Indirect Impact Areas

Impact Classification	Impact Areas	
	<u>In terms of Biophysical Impacts</u>	<u>In terms of Socio-economic Impacts</u>
Direct Impact Areas	- The area within the project site boundary comprising 24 hectares. - Portion of the bay where the proposed causeway will be built. - Areas at the northern portion of the project site where silt ponds and access road to causeway will be constructed. - The portion of the bay, east of the project site, which will receive drains and run-offs from project operations.	- The host municipality of Dinapigue for the direct employment, infrastructures and revenues from the project. - The Ancestral Domain which covers the project site.
Indirect Impact Areas	- The southernmost portion of the Northern Sierra Madre National Park for possible terrestrial environment disturbance. - Areas beside the mining access road including the river in the Kanamuan Brook at the northern portion of the project site.	- Community-based mining-related/dependent businesses. - The coastal communities of Dinapigue (fisherfolks) which may be affected in case of sedimentation in the nearest portion bay.



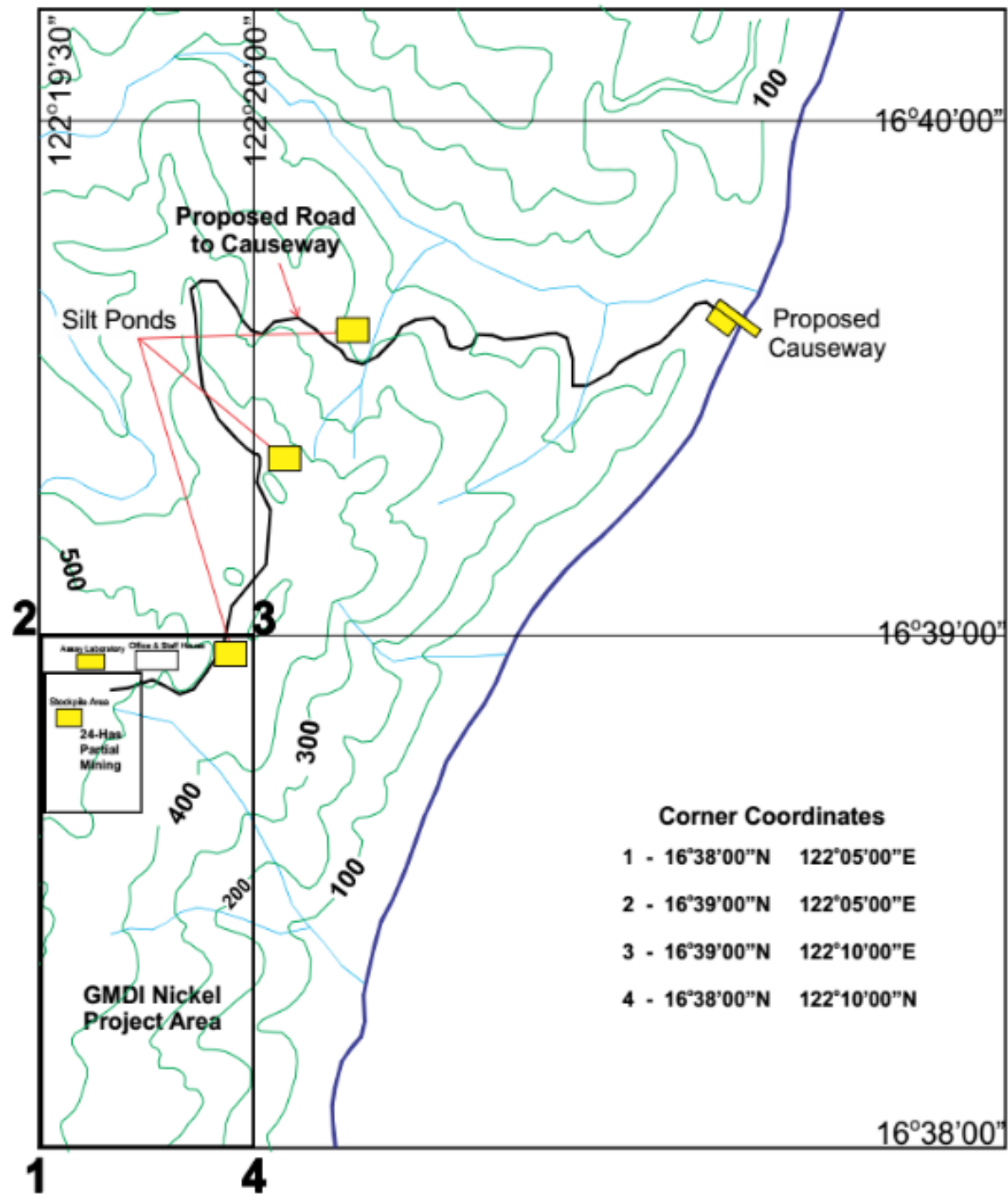
Project Benefits

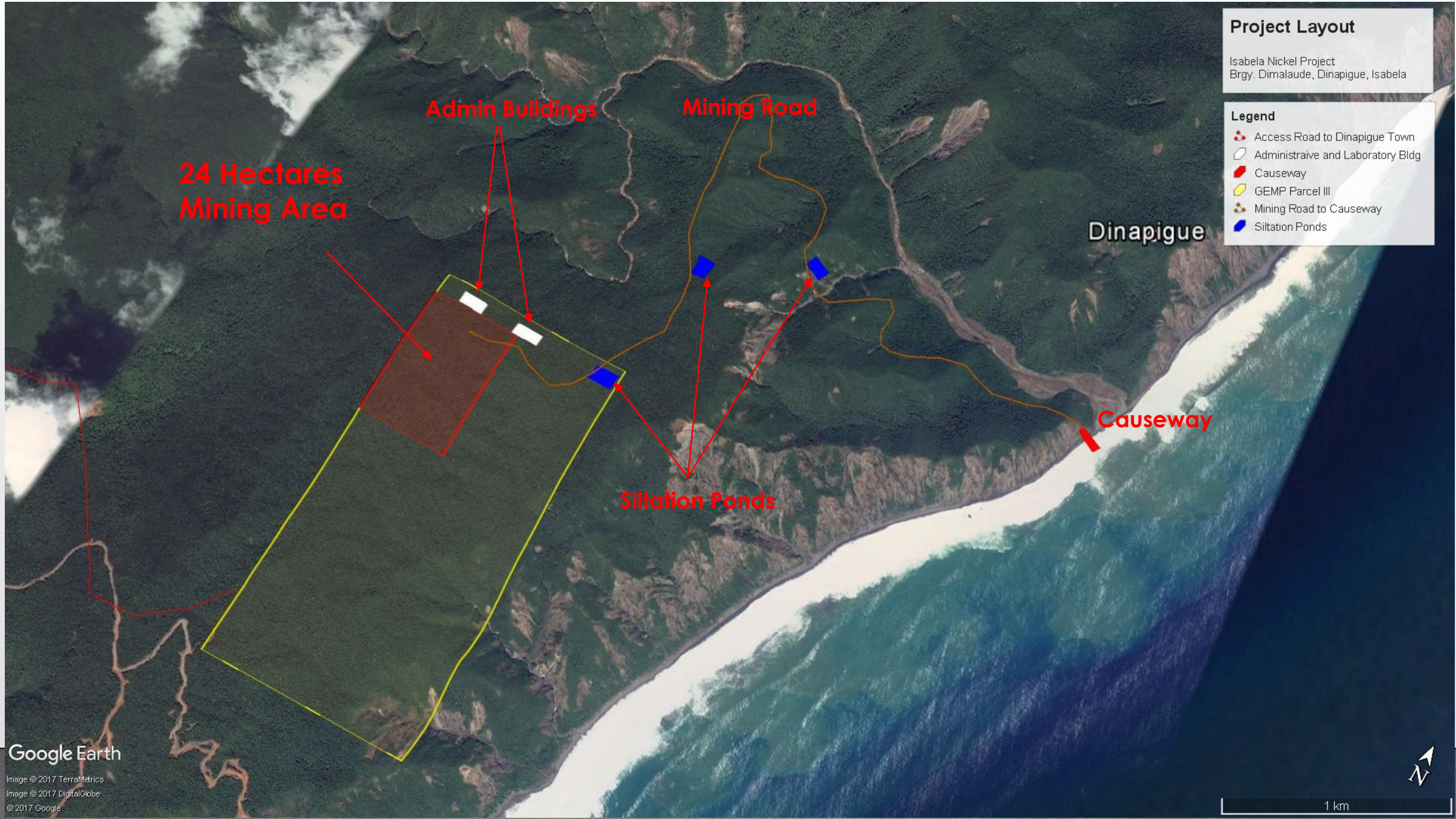
- **Estimated USD 536,253 or PHP 23.7 Million annual share to the government, inclusive of the excise tax, income tax and local government and fees.**
- **Local benefits through community development projects from Social Development and Management Program (SDMP) amounting USD 6,352 or PHP 285,771 annually.**
- **Generation of direct employment of up to 200 skilled and unskilled laborers.**



Project Components

- **Mining Area (24 Hectares)**
- **Mining and Access Roads (5 Kilometers)**
- **Building Facilities (1.5 Hectares)**
- **Causeway (200 Meters)**





Project Layout

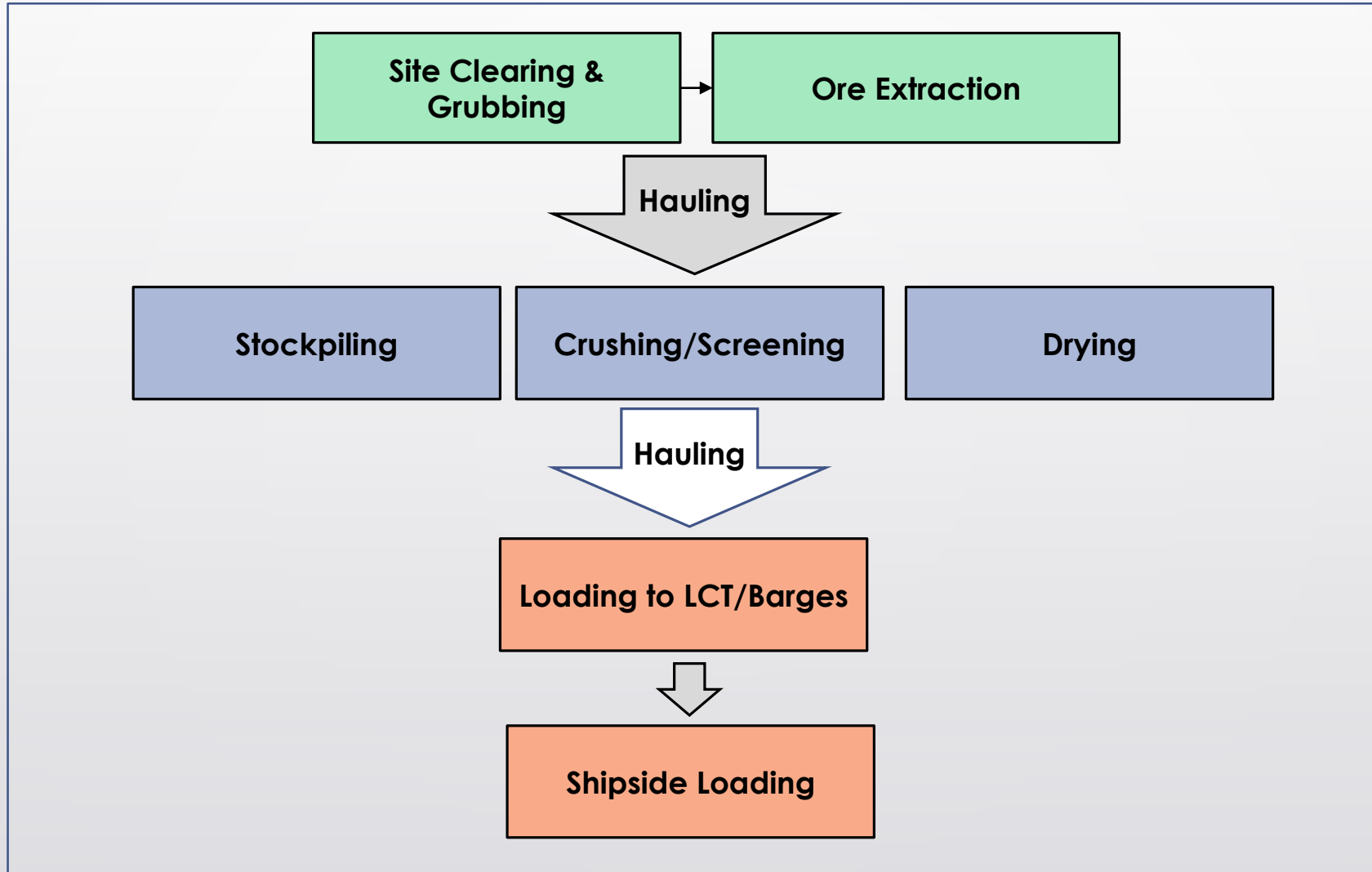
Isabela Nickel Project
Brgy. Dimalaude, Dinapigue, Isabela

- Legend**
- Access Road to Dinapigue Town
 - Administrative and Laboratory Bldg
 - Causeway
 - GEMP Parcel III
 - Mining Road to Causeway
 - Siltation Ponds



Process

- Extraction of Laterites
- Breaking, Loading and Hauling of Ore and Waste Rock
- Stockpiling, Ore Dressing and Ship Loading
- Waste Rock Disposal
- Marketing of Extracted Ore





1. Extraction of Laterites

Surface mining method is essentially the mining method to be used to extract nickel and iron bearing laterites. The method requires the mining of the ore in three-meter slices. Once the economic nature of the laterite is established, modifications will be applied during mining which may vary from a meter up to over 12 meters thick. Ores will be delivered at the required size, grade, and volume to the various end-users.



2. Breaking, Loading and Hauling of Ore and Waste

Mining of laterites requires limited rock breakage except on oversize boulders found in saprolites and base rock contacts. The laterite material will be loosened up by backhoes and bulldozers whenever necessary. The limonite could be freely dug, scooped and loaded by backhoes. Whenever necessary, mechanical rock breakers will be used for boulders. Backhoes will be used to break and load the laterites. Two (2) units of backhoes will be available to handle the loading requirement of the operations.

Haulage of the ore and waste from the mine area to designated dump sites and stockpile areas will be managed by five (5) units of 10 to 12-ton capacity off-on highway trucks. It is estimated that the delivery sites for the ore stockpiles and waste dumps will be within 2-km radius from the working area. Each truck is expected to make four (4) trips per hour.



3. Stockpiling, Ore Dressing (Sun Drying and Crushing/Screening Operations) and Ship Loading

The stockyard will serve as the staging area for the stockpiled ore to be loaded to ocean-going vessels for shipment to China. A leveled and cleared area is prepared to store more than 50,000 MT of ore. The leveled surface is covered with a thin mantle of low-grade to serve as matting before the higher-grade limonite and saprolite ores are stocked. Limonite and saprolite ores of different grades are stockpiled separately. Peripheral ditches are dug around the area to catch water draining from the stockpiles.



3. Waste Disposal

The mining design and engineering indicated a stripping ratio of 1:1. The waste material (overburden, low grade laterite and off-specification laterite) will be removed, transported out of the site and stockpiled. Waste dumps will be designated and environmental protection will be provided.



Project Size

Parcel 3 = 163.9601 hectares

For this ECC Application

= 24-hectare northwestern portion of Parcel 3.



Pre-Construction Phase

- **Application for Exploration Permit;**
- **Exploration works and studies;**
- **Conduct of Environmental Impact Assessment;**
- **Acquiring endorsement from the host community and local government unit (LGU);**
- **Obtaining Free, Prior and Informed Consent (FPIC) or Certification of Non-Overlap (CNO) from National Commission on Indigenous Peoples (NCIP); and**
- **Securing of relevant endorsements, permits and clearances from Mines and Geosciences Bureau (MGB), LGU, and other government agencies.**



Construction Phase

- Site clearing
 - Road rehabilitation and construction
 - Waste dumps and environment related works
 - Ore stockyard construction
 - Stripping of overburden
 - Preparation of benches and ramps
 - Construction of Causeway
- 



Operation and Maintenance Phase

- **Extraction of Laterites**
- **Breaking, Loading and Hauling of Ore and Waste Rock**
- **Stockpiling, Ore Dressing and Ship Loading**
- **Waste Rock Disposal**
- **Marketing of Extracted Ore**



Abandonment and Rehabilitation Phase

- **Stability of the mined area**
- **Management of the seepage water quantity and quality**
- **Progressive rehabilitation of the WRSF and other disturbed areas**
 - *placement of subsoil and/or topsoil*
 - *Revegetation with grass and shallow-rooted shrub species*
- **Decommissioning of the facilities**
- **Removal, cleanup and proper disposal of unused chemicals and wastes**
- **Determination of any potential site contamination and conduct of remediation works, if necessary**
- **Decommissioning of water supply and sewage system.**

Waste Management

Type of Waste Generated	Pollution Control Measure
Run-off suspended solids to nearby water bodies	- Three (3) silt ponds will be constructed in strategic locations downstream of the project site to trap run-off suspended solids before discharging to river/ocean. - Mining operation will be maximized during dry months to minimize run-off of suspended solids.
Suspended particulates	- Speed of all mining equipment will be reduced to minimize dust generation. - Silt curtains will
Emission from equipment and generators	- Use of low emission fuel. - Regular maintenance of equipment and vehicles.
Oil and grease	- All equipment maintenance will be conducted in a designated equipment maintenance area. - Maintenance area will be provided with concrete containment to avoid soil contamination and runoff to water bodies. - Used engine oil from equipment maintenance and cooking oils from canteens will be stored in a designated Materials Recovery Facility (MRF) prior to hauling by registered Treat-Store-Dispose (TSD) Facility.
Domestic wastewater	- Portlets will be provided during construction phase of the project. - Septic tank will be constructed to treat all wastewater from toilet and sinks.
Domestic solid wastes	- Waste bins will be provided in different areas within the project site. - Littering violators will be penalized accordingly. - MRF will be established in the project site. Recyclables will be stored and sold to junkshop while residual solid wastes will be disposed to municipal sanitary land fill (SLF). - Compost pits will be established for biodegradable solid wastes.
Waste Ore	Waste ore storage area shall be prepared and an environmentally sound abandonment and rehabilitation plan shall be implemented to this area upon project decommissioning.
Wood trimmings and lumbers	- Lumbers from the site clearing will be surrendered to Forest Management Bureau of the Department of Environment and Natural Resources. - Wood branch trimmings will be stored and will be used as firewood.
Special/Hazardous Wastes	All hazardous wastes generated will be safely stored in the designated hazardous waste storage area prior to hauling by registered TSD facility.

Manpower Requirement

Expertise/Skills	Number of Personnel
Construction Phase	
Project Manager	2
Skilled	5
Unskilled	25
Total	32
Operation Phase	
Project Manager	4
Mine Engineering	6
Mine Operations	5
Road Maintenance	2
Exploration/Geology	17
Laboratory	16
Administration	5
Accounting	3
Materials	3
Environment	4
Safety	5
Surveyor	4
Legal	1
Medical	3
Consultants	2
Total	80

Attachment 4

Photo Documentation

Photo Documentation December 2016



EIA Team Conducting Social Preparation thru IEC
&Initial Perception Survey at Bgy. Ayod 12-13-16



EIA Team Conducting Social Preparation thru IEC
&Initial Perception Survey at Bgy. Bucal Norte 12-13-16



EIA Team Conducting Social Preparation thru IEC
&Initial Perception Survey at Bgy. Bucal Sur 12-13-16



EIA Team Conducting Social Preparation thru IEC
&Initial Perception Survey at Bgy. Dibulo 12-13-16



EIA Team Conducting Social Preparation thru IEC &Initial
Perception Survey at Bgy. Bucal Norte 12-13-16

Photo Documentation December 2017



EIA Team member Conducting Social Preparation thru IEC & Initial Perception Survey at Bgy. Bucal Norte 12-08-17



EIA Team member Conducting Social Preparation thru IEC & Initial Perception Survey at the office of the Mavor, Dinapigue, Isabela 12-07-2017



EIA Team Conducting Social Preparation thru IEC & Meeting with Mayor Reynaldo D.Derije, Dinapigue, Isabela 12-07-2017



EIA Team member Conducting Social Preparation thru IEC & Meeting with Kagawad Josephine Bertjar of Bgy Dibulo, Dinapigue, Isabela 12-07-2017



EIA Team Conducting Social Preparation thru IEC & Meeting with Mr. Sannyfel Nieves , Municipal Agriculturist, Dinapigue, Isabela 12-07-2017



EIA Team member Conducting Social Preparation thru IEC & Meeting with the OIC of the CENR-Sub Office, Dinapigue, Isabela 12-07-2017



EIA Team member Conducting Social Preparation thru IEC & Meeting with Ms. Marilyn Bernardo, OIC of the Principal, Dinapigue, National High School 12-08-2017



EIA Team member Conducting Social Preparation thru IEC & Meeting with Mr. Pablo C. Malenab , Jr. Principal. Dinapigue Central School. 12-08-2017



EIA Team Conducting Social Preparation thru IEC & Meeting with a resident of Dimaluade, Dinapigue, Isabela 12-08-2017



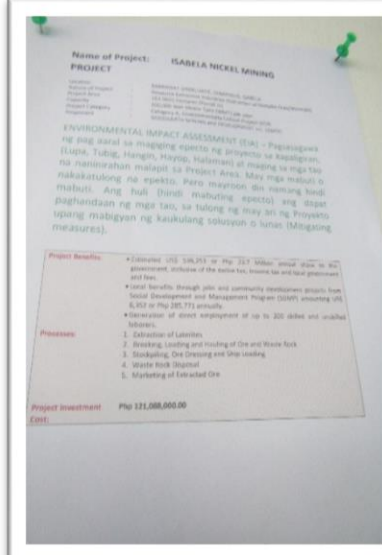
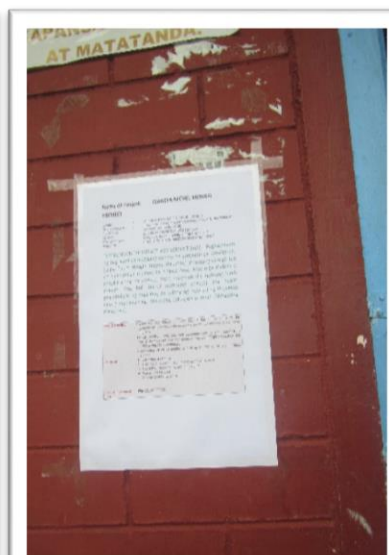
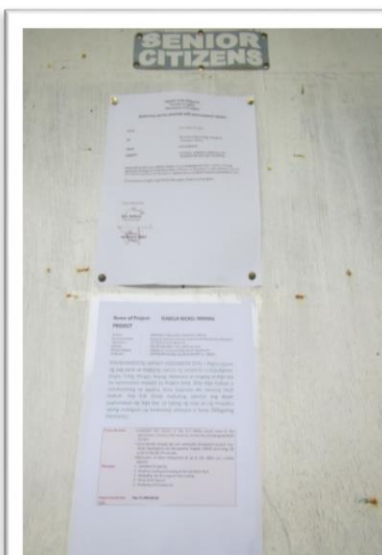
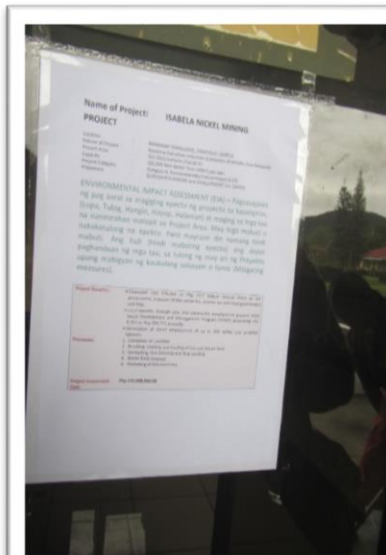
EIA Team member Conducting Social Preparation thru IEC & Meeting with Mr. Bonifacio R. Tablang, Teacher-In-Charge . Avod Elem. School 12-08-2017



EIA Team member Conducting Social Preparation thru IEC & Meeting with Kagawad Julian Tablang, Jr. of Bucal Sur 12-08-2017



EIA Team member Conducting Social Preparation thru IEC & Meeting with Ms. Marilyn D. Linaza, Principal, Bucal Sur Elem School 12-08-2017



IEC Materials posted on walls and Bulletin Boards of receiving offices and LGU Units

Attachment 5

Proof of the Conduct
of Social Preparation
through Information of and
Education Campaign

Attachment 5

PROOF OF THE CONDUCT OF SOCIAL PREPARATION ACTIVITIES THROUGH INFORMATION AND EDUCATION CAMPAIGN (IEC)

Information and Education Campaign (IEC) for the Isabela Nickel Mining Project

A. IEC Material (Flyer) about the Project

	Name of Stakeholder/LGU	Received by	Position	Date	Remarks
1	Hon. Reynaldo D. Derije Municipal Mayor, 0928-212-8512	Hilario B. Calpi, Jr. 0939-316-3151	PS-II	Dec. 07, 2017	Posted near the Main door of Municipal Hall
2	Mr. Romulo Corpuz President , Senior Citizen Association	Cindy Balicama 0910-837-6475	Sec., OSCA	Dec. 07, 2017	Posted at OSCA
3	Dr. Reygene Caratiquit Municipal Health officer	May Natalia Wera		Dec. 07, 2017	Posted, Rural Health Center
4	Ms Jocelyn D. Dano Mun. Social Welfare Officer	May Florina Ramos		Dec. 07, 2017	Posted at Bulletin Board
5	Hon. Cresencio C. Casabar, Jr. Barangay Chairman, Dibulo	Hon. Josephine V. Beltjar 0930-244-1691; 0935-721-1638	Kagawad (OIC)	Dec. 07, 2017	Posted at Bgy. Hall
6	Ms. Joy D. Dumocloy Principal Dinapigue National High School	Ms Maribel M. Bernardo 0909-292-9064	OIC	Dec. 8, 2017	Posted at school
7	Mr. Pablo C. Malenab, Jr. 0921-676-8116 Principal, Dinapigue Central School	himself		Dec. 8, 2017	Posted at school
8	Ms. Marilyn D. Linaza 0919-603-1617 Principal, Bucal Sur Elementary School	herself		Dec. 8, 2017	Posted at school
9	Hon. Armando V. Fajardo Barangay Chairman, Bucal Sur	Hon. Julian R. Tablang, Jr.	Kagawad	Dec. 08, 2017	Posted at Bgy. Hall
10	Hon. Samuel P. Cariño Barangay Chairman, Bucal Norte	Hon. Delia M. Soriano	Kagawad, officer of the day	Dec. 08, 2015	Posted at Bgy. Hall

	Name of Stake Holder / LGU	Received by	Position	Date	Remarks
11	Hon. Basilio W. Caligtan Barangay Chairman, Ayod, Dinapigue	Nialyn Baniwas 0947-144-8592	Wife of Kagawad Larry Baniwas	Dec.08, 2017	For Posting
12	Mr. Bonifacio R. Tablang 0930-143-9003 Principal, Ayod Elementary School	himself		Dec. 08, 2017	Posted at the school
13	Hon. Concepcion P. Donato 0918-586-4584 Barangay Captain, Dimaluade	Salvador Salamanca	Bgy Tanod	Dec.08, 2017	Posted at Bgy Hall
14	Hon. Lorenzo Paulino Barangay Captain, Digumased	Jamaleigh M. Ubungen 0928-693-8401	Barangay Secretary	Dec.08, 2017	Posted at Barangay Hall
15	Pastor Vem Gloria Iglesia Ni. Cristo, Local ng Dinapigue	himself 0927-715-7182		Dec. 08, 2017	For Posting
16	Rev. Fr. Froilan S. Cruz 0908-881-6465 Parish Priest, St. John the Baptist Parish	Rosenda P. Bernabe 0925-645-7788	Ministry on Social Svcs	Dec. 09, 2017	For Posting

B. Posting of IEC Material on Public places

1. Waiting Shed where tricycle drivers cue/wait for passengers
2. Rufino's Store, Purok 4

C. Key Informant Interviews (KII)

	Persons Interviewed	Issues/ Concerns on the Isabela Nickel Mining Project	Suggestions	Date Interviewed
1	Mr. Sannyfel L. Nieves, 0910-736-4770 Municipal Agriculturist, Dinapigue, Isabela	Positive impact – employment opportunities for residents, especially those with no farms to till	Follow strictly social safeguards and environmental protection	Dec. 07, 2017
2	Mr. Reynaldo Rufino Farmer/ Businessman	Positive Impact – Perk up business	Fast Track ECC to expedite start of mining operations	Dec. 08, 2017
3	Mr. Ariel Avancena Tricycle Driver, former GMDI employee during Exploration	-People employed in Exploration could again be employed during mining operations -Improvement of roads for the mobility of residents and workers	Fast Track ECC	Dec. 08, 2017
4	Mayor Reynaldo D. Derije	The Isabela Nickel Mining Project of GMDI when operating can contribute a lot to the employment of Dinapigue work force	Follow strictly social safeguards and permitting requirements	Dec. 07, 2017