

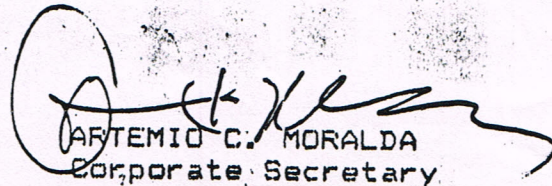
## SECRETARY'S CERTIFICATE

I, ARTEMIO C. MORALDA, Corporate Secretary of Rio Tuba Nickel Mining Corporation, do hereby certify that the following resolution was unanimously adopted at the regular meeting of the Board of Directors of the corporation held at the 2nd Floor Solid Mills Building, Dela Rosa cor. Adelantado Sts., Legaspi Village, City of Makati on 24th day of May, 1995 and that the said resolution is in full force and effect and has not been amended, altered or revoked as of this date:

"RESOLVED, as it is hereby resolved that the President, MANUEL B. ZAMORA, JR., be authorized to prepare, draw, execute, sign and deliver for and in behalf and that of the corporation any and all documents, deeds, contracts or agreements with the government that are necessary in connection with or for the processing of the application for extension/renewal of the Mining Lease Contract of RIO TUBA NICKEL MINING CORPORATION at Rio Tuba, Bataraza, Palawan, or in the alternative the same to be converted into a Mineral Production Sharing Agreement under R.A. No. 7942 otherwise known as the New Mining Code of the Philippines.

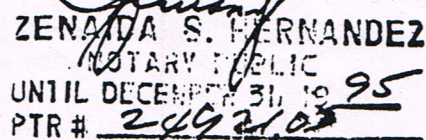
RESOLVED FINALLY, as it is hereby resolved that a copy of this resolution be furnished DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, Quezon City by the Corporate Secretary."

IN WITNESS WHEREOF, I have hereunto signed this Certificate on this 6th day of July, 1995, at City of Makati.

  
ARTEMIO C. MORALDA  
Corporate Secretary

SUBSCRIBED AND SWORN to before me on this 6th day of July, 1995, affiant exhibiting to me his Community Tax No. 1993323 issued at City of Makati on February 28, 1995.

Doc. No. 66  
Page No. 14  
Book No. 11  
Series of 1995.

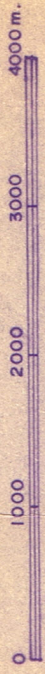
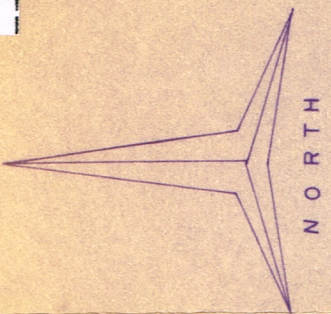
  
ZENAIDA S. HERNANDEZ  
NOTARY PUBLIC  
UNTIL DECEMBER 31, 1995  
PTR # 2492105

117°20'

117°25'

117°30'

# ANNEX "B"



### BULANJAO TRIANGULATION STATION

Latitude 8° 36' 05.083"  
 Longitude 117° 22' 04.844"

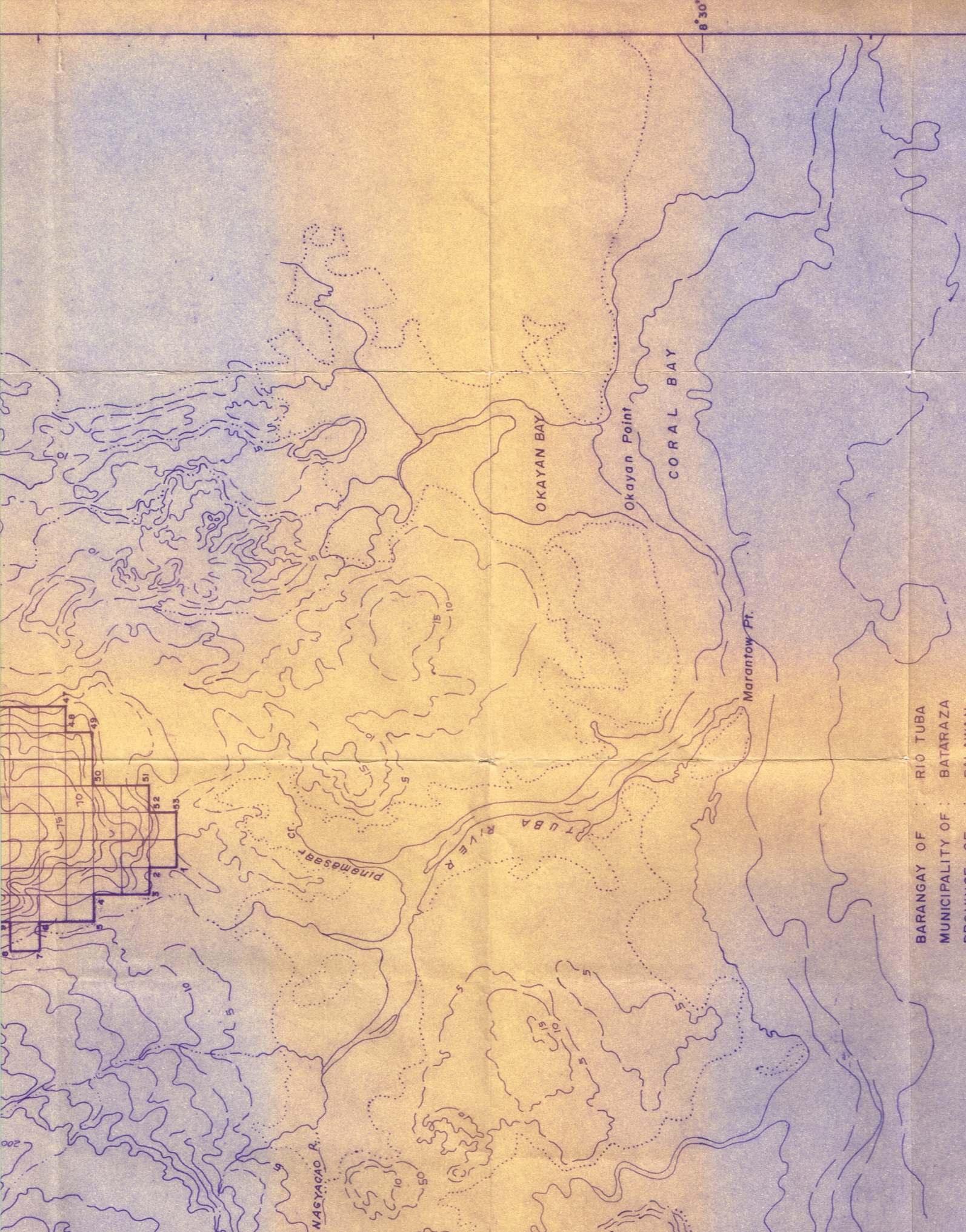
5° 33' 04" E  
 1,271.57 m.

POINT	LATITUDE	LONGITUDE
1	8° 33' 14.680"	117° 24' 59.550"
2	8° 33' 24.446"	117° 24' 59.550"
3	8° 33' 24.446"	117° 24' 49.741"
4	8° 33' 43.977"	117° 24' 49.741"
5	8° 33' 43.977"	117° 24' 39.932"
6	8° 34' 03.508"	117° 24' 39.932"
7	8° 34' 03.508"	117° 24' 30.123"
8	8° 34' 13.274"	117° 24' 30.123"
9	8° 34' 13.274"	117° 24' 39.932"
10	8° 34' 42.571"	117° 24' 39.932"
11	8° 34' 42.571"	117° 24' 49.741"
12	8° 34' 52.337"	117° 24' 49.741"
13	8° 34' 52.337"	117° 24' 59.550"
14	8° 35' 02.102"	117° 24' 59.550"
15	8° 35' 02.102"	117° 24' 20.319"
16	8° 34' 52.337"	117° 24' 20.319"
17	8° 34' 52.337"	117° 23' 50.880"
18	8° 35' 02.102"	117° 23' 50.880"
19	8° 35' 02.102"	117° 23' 41.067"
20	8° 35' 31.399"	117° 23' 41.067"
21	8° 35' 31.399"	117° 23' 01.815"

8°35'

5	8° 33' 43.977"	117° 24' 39.932"
6	8° 34' 03.508"	117° 24' 39.932"
7	8° 34' 03.508"	117° 24' 30.123"
8	8° 34' 13.274"	117° 24' 30.123"
9	8° 34' 13.274"	117° 24' 39.932"
10	8° 34' 42.571"	117° 24' 39.932"
11	8° 34' 42.571"	117° 24' 49.741"
12	8° 34' 52.337"	117° 24' 49.741"
13	8° 34' 52.337"	117° 24' 59.550"
14	8° 35' 02.102"	117° 24' 59.550"
15	8° 35' 02.102"	117° 24' 20.319"
16	8° 34' 52.337"	117° 24' 20.319"
17	8° 34' 52.337"	117° 23' 50.880"
18	8° 35' 02.102"	117° 23' 50.880"
19	8° 35' 02.102"	117° 23' 41.067"
20	8° 35' 31.399"	117° 23' 41.067"
21	8° 35' 31.399"	117° 23' 01.815"
22	8° 35' 50.930"	117° 23' 01.815"
23	8° 35' 50.930"	117° 23' 21.441"
24	8° 36' 10.461"	117° 23' 21.441"
25	8° 36' 10.461"	117° 23' 11.628"
26	8° 36' 20.227"	117° 23' 11.628"
27	8° 36' 20.227"	117° 23' 01.815"
28	8° 36' 29.993"	117° 23' 01.815"
29	8° 36' 29.993"	117° 22' 52.002"
30	8° 36' 39.759"	117° 22' 52.002"
31	8° 36' 39.759"	117° 23' 21.441"
32	8° 36' 29.993"	117° 23' 21.441"
33	8° 36' 29.993"	117° 23' 31.254"
34	8° 35' 41.165"	117° 23' 31.254"
35	8° 35' 41.165"	117° 23' 41.067"
36	8° 35' 31.399"	117° 24' 39.932"
37	8° 35' 21.633"	117° 24' 39.932"
38	8° 35' 21.633"	117° 25' 19.184"
39	8° 35' 02.102"	117° 25' 19.184"
40	8° 35' 02.102"	117° 25' 28.997"
41	8° 34' 52.337"	117° 25' 28.997"
42	8° 34' 52.337"	117° 25' 38.810"
43	8° 34' 42.571"	117° 25' 38.810"
44	8° 34' 42.571"	117° 25' 48.623"
45	8° 34' 23.040"	117° 25' 48.623"
46	8° 34' 23.040"	117° 25' 58.436"
47	8° 33' 53.743"	117° 25' 58.436"
48	8° 33' 53.743"	117° 25' 48.623"
49	8° 33' 43.977"	117° 25' 48.623"
50	8° 33' 43.977"	117° 25' 28.997"
51	8° 33' 24.446"	117° 25' 28.997"
52	8° 33' 24.446"	117° 25' 19.184"
53	8° 33' 14.680"	117° 25' 19.184"

Tie line From Bulanjoo Triangulation Station to  
Corner-1 of RODY -1 Claim, S63°04'E B 4,271.47 m.



BARANGAY OF : RIO TUBA  
MUNICIPALITY OF : BATARAZA  
PROVINCE OF : PALAWAN  
AREA : 990.00 HAS.  
BEARING : TRUE  
SCALE : 1:50,000

**PLAN OF THE 110 MINING CLAIMS**  
**OF**  
**RIO TUBA NICKEL MINING CORPORATION**  
**FOR MPSA APPLICATION**

SURVEYED BY: *Agustin Timbancaya*  
AGUSTIN TIMBANCAYA  
GEODETIC ENGINEER

Reg. Cert. No. 2251 Date 5-12-67  
License No. 4312180 Date 1-19-98

THREE-YEAR UTILIZATION WORK PROGRAM1.0 CORPORATION INFORMATION

- 1.1 Project Name : RIO TUBA BENEFICIATED NICKEL SILICATE  
ORE PROJECT
- 1.2 Company Name : RIO TUBA NICKEL MINING CORPORATION  
Head Office  
Address : 2nd Flr., Solid Mills Bldg.  
Dela Rosa Cor. Adelantado Sts.  
Legaspi Village, Makati City  
Tel. No. 892-1006 to 10  
Fax No. 893-31-63/817-61-91
- Minesite Address: Bgy. Rio Tuba, Bataraza, Palawan
- 1.3 Contact Person : Jose S. Saret  
VP-Operations

2.0 PROJECT DESCRIPTION2.1 Project Details

## 2.1.1 Location

The mining claims and facilities of Rio Tuba Nickel Mining Corporation are located in Barangay Rio Tuba, Municipality of Bataraza, province of Palawan. The project site is bounded by 8 33'15" - 8 36'40" latitude and 117 22'52" - 117 05'58" longitude and approximately 850 Km from Manila.

## 2.1.2 Estimated Capital Costs

As of year end 1997, the current assets of the company stand at P478 million.

## 2.1.8 Commodity: Nickel Ore (Lateritic type)

## 2.1.4 Present Status of the Project:

The project is presently in operation stage. It started mining operation in 1976 and since then has continuously operated for the last twenty one(21) years.

## 2.1.5 Description of Mining Method

The company employs open pit mining method using conventional mining equipment like bulldozer, backhoe, wheel loader, dump trucks, breaker, etc.

The mining activities follow a sequence of operations consisting of development drilling, pit planning and survey, clearing and grubbing, stripping of overburden and ore mining. Areas with confirmed minable reserves are first cleared of vegetation using bulldozer. After clearing, removal of overburden follows where laterites and unshippable ore grade materials are excavated using backhoe and/or truck loader. These materials are loaded into dump trucks and then hauled and dumped in designated stockpile areas. Some of these materials are actually utilized as matting materials, siltation dike construction materials, filling materials in the restoration of mined-out areas, etc. Stripping operation is usually done during the rainy months of May to November.

During the production period (December-April), shippable ore are extracted using same set of mining equipment used in stripping operations. This time, mined nickel ore materials are hauled and dumped into piles in designated sun-drying area (SDA). Relatively hard portion of the ore section are initially broken into boulders using a breaker instead of explosive blasting. These hard ore boulders are loaded into boulder trucks using grapple and then hauled to nearby breaking areas for further size reduction and ore sorting.

Actual mining usually reached down to a depth of about 20 meters maximum. Pit walls assume a final pit limit based on the following pit design parameters:

Bench height	... 3 meters
Bench Width	... 5 meters
Bench Slope	... 90 degrees
Overall pit slopes	... 30.96 degrees

## 2.1.6 Estimated Daily/Annual Production

	Dry Season (5 Months)	Wet Season (7 Months)
<u>Stripping:</u>		
Annual Volume	-	1,500,000 WMT
Daily Capacity	-	9,000 WMT/day
No. of Shift/day	-	1

	Dry Season (5 Months)	Wet Season (7 Months)
--	--------------------------	--------------------------

Ore Mining:

Annual Volume	600,000 WMT	-
Daily Capacity	6,000 WMT/day	-
No. of Shift/day	2	-

## 2.1.7 Description of Beneficiation Process

The process employed to produce beneficiated nickel silicate ore (final product) basically includes solar drying and screening of soft nickel ores, and crushing and screening of hard nickel ores.

The solar drying of soft ore is carried out during the dry period from January to the first week of May of each year. The run-of-mine soft ore is hauled and dumped into piles in the solar drying area. The pile is scraped using hydraulic track excavators provided with specially designed 6-meter long blade. About 20 cm thick of the surface of one side of the pile is scraped and pushed over the top of the pile towards the other side. Scraping is done twice daily. Once the desired moisture level is reached the ore is loaded into dump trucks and transferred for screening.

RTNMC maintains two screening lines. One is triple-deck vibrating screen with 75 mm opening, the other is a fixed grizzly with a size of 6 meters x 7 meters, bars set at 50 mm openings and inclined at 30 degrees. About 60% of the solar dried ore for screening is fed to the fixed grizzly line. The balance of 40% is delivered to the vibrating screen through a receiving hopper. Screening rate averages 100 tons/hour for the vibrating screen and 160 tons/hour for the fixed grizzly. The undersize of both vibrating screen and the grizzly constitutes the beneficiated nickel silicate soft ore.

The stockpiled hard ore and oversize from the vibrating screen and fixed grizzly are fed to a jaw crusher through a receiving hopper. The crusher has a capacity of 70 tons per hour with a discharge opening of 95 mm.

## Solar Drying/Crushing and Screening Schedules:

Annual Volume	380,000 WMT	20,000 WMT
Daily Capacity	4,300 WMT/day	200 WMT/day
No. of Shift/day	2	1

## 2.2 Mineral Reserves (as of April 15, 1998)

## 2.2.1 Ore Reserves/Resources at 2.0% Ni Cut-off

Category	Tonnage DMT	Grade %Ni
-----	-----	-----
Positive	4,720,000	2.37
Probable	1,592,000	2.33
Possible	<u>708,000</u>	<u>2.36</u>
	7,020,000	2.35

Based on the present positive minable ore reserves and production rate of 400,000 WMT beneficiated nickel silicate ore averaging 2.3% Ni, the remaining life of the mine is six(6) years (1998-2003).

## 2.2.2 Potential for Additional Reserves

The area has geological potential for additional ore reserves coming from the existing and subsisting claims of the company but outside the subject area

2.3 Access/Transportation

The project site is accessible from Manila via two main routes: direct from Manila to the site by private plane or ship; or through Puerto Princesa City, the capital of Palawan. In the latter route, Puerto Princesa City can be reached from Manila through a one-hour flight by commercial airplane or through an 18-hour commercial boat ride. From Puerto Princesa, the project site is accessible through 5-hour land trip or through a one-hour flight of a company-owned single engine airplane.

2.4 Utilities

## 2.4.1 Power Supply

The company power plant maintains 3 units of 700 KW each generators. One unit operates daily to provide electricity requirement of the plantsite and townsite.

The piersite power plant maintains one units of 75 KW Caterpillar generator to provide electricity requirement of the pier facilities for drydocking maintenance and barge loading operations.

Presently, no power supply alternatives are available in the area.

#### 2.4.2 Water Supply

Beneficiation method employed is totally dry basis, therefore, no process water is required. Only domestic water needed for drinking, washing, etc. purposes is required and this is presently being supplied by existing 4 units deep well.

#### 2.5 Mining Equipment/Beneficiation Equipment and Auxiliary Machinery

RTNMC maintains the following equipment for the different phases of operation and maintenance.

<u>Equipment</u>	<u>Quantity</u>
a. Dump trucks, 10-15 cu.m.	57 units
b. Wheel loaders	14 units
c. Track Excavators	20 units
d. Track Loaders	3 units
e. Drills	12 units
f. Fuel Lorry	2 units
g. Track Crane	2 units
h. Water Truck	5 units
i. Maintenance Truck	2 units
j. Garbage Truck	1 unit
k. Fire Truck	2 units
l. Road graders	3 units
m. Road roller	1 unit
n. Truck Trailer	1 unit
o. Bulldozers	9 units
p. Service vehicles	25 units
q. Tugboats	3 units
r. Ore barge	11 units
s. Farm Tractor	3 units
t. Lifting machine/crane	2 units
u. Generator set, 700 KW	3 units
v. Screening/Crushing Plant	1 lot
w. Assaying Equipment	1 lot

#### 2.6 Workforce Information

##### 2.6.1 Total operational workforce

The work force as of the end of 1997 is summarized as follows:



<u>Job Class</u>	<u>Number</u>
Sr. Staff/Managerial	10
Jr. Staff/Middle Mgr.	14
Foremen/Supervisor	56
Technical	24
Teachers	35
Rank & File	<u>267</u>
Total	406

### 2.6.2 Staff Organizational Set-up

The Minesite Table of Organization is presented in Table 1.

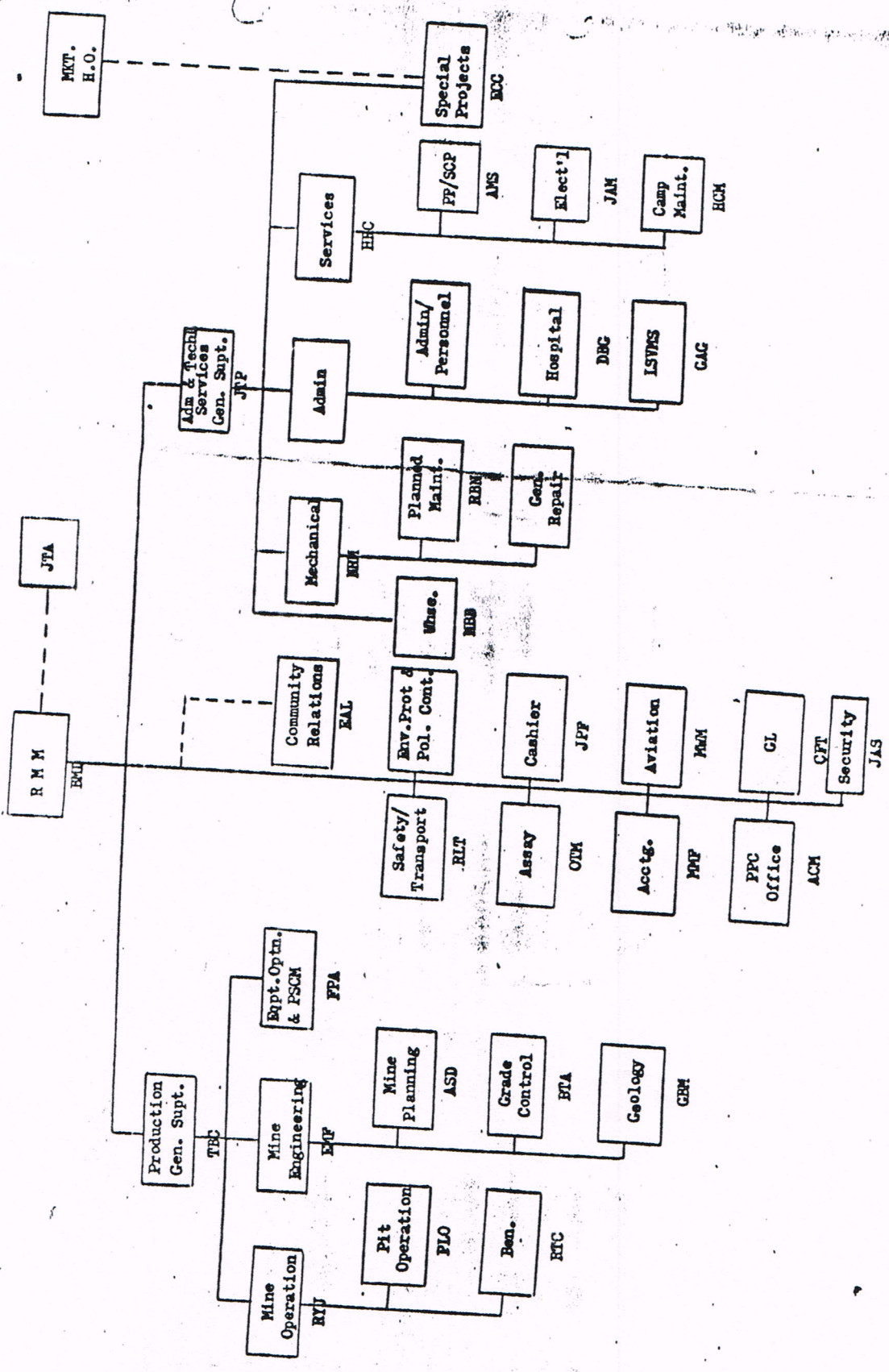
### 2.6.3 Housing Options

A new township consisting primarily of housing, hospital, school, recreational facilities, etc. was established by the company capable of accommodating all its regular workers.

A detailed list of townsite facilities is enumerated below.

Construction and Maint. Bldg.	1 unit
Shopping Center	1 unit
Market Bldg.	1 unit
Coop Warehouse Bldg.	1 unit
Gymnasium	1 unit
Children's Park	2 areas
School Bldg.	Private School(LSVMS)
Basketball Court	2 courts
Church/convent	Catholic Church, 1 unit
Hospital	Secondary class, 1 unit
Morgue	1 unit
Ladies Dormitory	1 unit
Guest Lodge Annex	1 unit
Bachelor's Quarters	1 unit
Guest Lodge	1 unit
Foreman's Duplex	32 units
Laborers' Row Houses	100 units
Senior Staff House	9 units
Junior Staff House	24 units
RMM House	1 unit

APPENDIX B  
 Effective September 1, 1976



ARMM House	1 unit
Clubhouse	1 unit
Swimming Pool	1 unit
Pelota Court	2 units
Tennis Court	3 units
Farm and Vegetable House	1 unit

## 2.7 Development Schedule

The Rio Tuba Nickel Project has been in operation for the last twenty one (21) years since 1976 when actual mining started.

## 2.8 Production Schedule and Estimated Cost per Annum (1998-2000)

	1998	1999	2000
A. Production Schedule			
Stripping Vol., WMT	1,420,300	1,369,000	1,367,700
Mining Vol., WMT	668,200	595,900	611,000
Prod. Vol., WMT	464,600	400,000	400,000
Shipping Vol., WMT	400,000	400,000	400,000
B. Estimated Annual Production Cost (x P000)			
Mining	44,000	42,300	43,700
Beneficiation	30,500	32,300	33,000
Other Mining/ Beneficiation Cost	79,600	73,800	90,500
Overhead Cost	105,500	106,100	114,000
Marketing Cost	22,900	24,000	25,000
Excise Tax	4,700	5,500	6,800
Environmental Safety & Health	12,800	15,400	13,500
Community Devel. Cost	<u>4,300</u>	<u>4,600</u>	<u>5,000</u>
Total Cost	P 304,200	P304,000	P332,000

## 3.0 COMMUNITY DEVELOPMENT PROGRAM AND ESTIMATED COST

### 3.1 Community Development Program

#### 3.1.1 Infrastructures

- . Provide assistance in the construction, repair and maintenance of barangay roads, deep wells, irrigation dikes and similar infrastructures upon the request of concerned barangay officials
- . Construction of community latrine for indigeneous people (Palawans) residing in sitio Buhay
- . Provide assistance in the improvement of existing multi-purpose pavement/basketball court

### 3.1.2 Social Services

- . Provide medical and dental services thru the company existing hospital
- . Undertake medical mission activities with the help of US-based Filipino-American doctors
- . Donation of garbage drums to LGU's and schools for their beautification and sanitation drive
- . Provide electric lighting facilities to selected public places such as churches, military barracks, etc.
- . Provide drinking water supply facilities to residents within the company's immediate vicinity
- . Provide free transportation services to:
  - school pupils to and from school
  - wedding ceremonies
  - burials
  - other related purposes

### 3.1.3 Education and Sports

- . Provide educational services thru the company's school facilities (LSVMS)
- . Scholarship program to some 80 deserving elementary, high school and college students
- . Assistance for athletic and scouting activities
- . Sponsor inter-community basketball tournaments
- . Availment of company resort facilities by community residents

### 3.1.4 Livelihood Projects

- . Support to livelihood projects of the community
- . Availability of cattle, swine and poultry products of subsidized prices
- . Production of ice blocks at reduced prices to fishing companies in the community
- . Undertake manpower training programs for drivers, mechanics and equipment operators

3.2 Community Development Cost

<u>Year</u>	<u>Estimated Cost (xP000)</u>
1998	P 4,300
1999	4,600
2000	5,000

4.0 ENVIRONMENTAL PROTECTION AND MANAGEMENT COST ESTIMATES (including Mine Safety and Health)

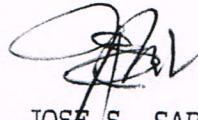
4.1 Environmental Protection and Management Program

The company's environmental management program is detailed in the proposed Environmental Protection and Enhancement Program (EPEP) already submitted.

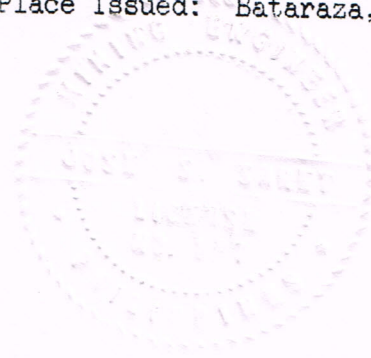
4.2 Cost Estimates

<u>Year</u>	<u>Cost Estimate (xP000)</u>
1998	P 12.900
1999	15,444
2000	13,582

5.0 PERSON WHO PREPARED THE WORK PROGRAM



JOSE S. SARET  
Mining Engineer  
PRC License No. 887  
PTR No. 4656966  
Date Issued : January 28, 1998  
Place Issued: Bataraza, Palawan





Republic of the Philippines  
 Department of Environment and Natural Resources  
 Visayas Avenue, Diliman, Quezon City, 1100  
 Tel. Nos. (632) 929-66-26 to 29 • (632) 929-62-52  
 929-66-20 • 929-66-33 to 35  
 929-70-41 to 43



## ENVIRONMENTAL COMPLIANCE CERTIFICATE

The **Department of Environment and Natural Resources (DENR)**, through the Environmental Management Bureau (EMB) hereby grants this **Environmental Compliance Certificate (ECC)** to the proposed **RIO TUBA BENEFICIATED NICKEL SILICATE ORE PROJECT** of Rio Tuba Nickel Mining Corporation (RTNMC) to be located in **Barangay Rio Tuba, Municipality of Bataraza, Province of Palawan**, after complying with the Environmental Impact Assessment (EIA) requirement as prescribed in the promulgated guidelines implementing Section 3 (b) of P.D. 1121 and P.D. 1586.

This Certificate is being issued subject to the following conditions:

1. This Certificate shall be limited to the existing 110 mining claims of the company in Barangay Rio Tuba, Municipality of Bataraza, Province of Palawan, covering some 990 hectares but excluding areas identified as core zone, as defined in the Strategic Environmental Plan for Palawan Act (Republic Act 7611). All other remaining subsisting claims within the Bulanjao Range shall no longer be available for mining operations or for any development considering its old growth forest status.

In view of some legal constraints to be addressed by the DENR, mining operations in controlled use area as defined under the SEP Law shall be forestalled pending the resolution of legal issues;

2. The proponent in coordination with the Office of the Undersecretary for Environment & Programs Development, the Forest Management Bureau (FMB), the DENR Regional Units, the Protected Areas and Wildlife Bureau (PAWB), the Palawan Council for Sustainable Development (PCSD) and the MGB Regional Units shall quantify the areas to be excluded from mining operations within the coverage of the 990 has. and clearly delineate said areas on a map within forty five (45) days after the receipt of the ECC; to wit:
  - 2.1 core zones
  - 2.2 subsisting claims within the Bulanjao Range
  - 2.3 forest patches for in-situ conservation
  - 2.4 corridors linking the forest patches in item 2.3 to permit movement of biota and to ensure genetic flow
  - 2.5 controlled use area

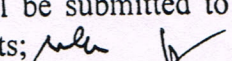
3. The proponent, prior to project implementation, shall undertake a 100% forest inventory of all forested portions/patches and every five (5) years thereafter, the results of which shall be submitted to the EMB, the DENR Regional Units, the MGB Region IV and the FMB-Geographic Information System Unit;

4. A Watershed Management Plan shall be prepared in coordination with the DENR Regional Units and submitted to the FMB and the EMB for review and endorsed to the Office of the Undersecretary for Environment and Programs Development for approval prior to project implementation. A status report on the implementation of the same including an impact assessment shall be submitted to the DENR Regional Units and the EMB for review and endorsement.

5. A Resettlement/Compensation and Livelihood Program acceptable to the families whose properties have been affected during the previous mining operation and who will be directly affected by the proposed project shall be submitted to the EMB for approval within thirty (30) days upon issuance of this ECC. A status report on the program's implementation including schedule of payments (recipients, amount paid, date paid) shall be submitted to the EMB prior to project implementation;
6. The proponent shall submit an acceptable archaeological survey report covering all the areas in which major surface soil disturbance will be undertaken such as quarry sites, plant site, access roads, pond sites, storage sites, settlement and rehabilitation sites, etc. to the EMB within sixty (60) days upon issuance of the ECC and before any surface soil disturbance is effected. If an archaeological site is identified, provisions shall be made for a rapid recovery (salvage archaeology) of the artifacts. In addition, an effective monitoring program to report any significant archaeological site shall be implemented during the operation of the project. In case of any archaeological findings, appropriate rapid recovery efforts shall be instituted, before any mining activity in that area is resumed;
7. Ore extraction shall be by Open Pit method and limited to 475,000 WMT per annum. The open pit shall be of the conventional cone type with a 45° final pit slope. Bench height shall not exceed 10 meters and the final berm shall not be less than 4.5 meters wide. Ramps and haulage roads shall not exceed 10 meters wide with an average gradient not exceeding 8%;
8. No blasting operation shall be conducted for the entire mining operation;
9. Direct use of the recovered topsoil for re-soiling or as soil cover on waste dumps, and for camp beautification in general shall be effected or, if not yet possible, stockpiling on designated suitable areas shall be done and limited to low heights of not more than one (1) meter and temporarily re-vegetated to protect the soil from erosion
10. A buffer zone of 50-meter strip shall be provided and maintained along the entire periphery of the project site as well as the easement for any water body within the project site and the quarry areas and stockpile areas;
11. All areas not affected by the quarrying, stockpiling, and transportation of ore, waste, and other materials, particularly those supporting sensitive ecosystems such as secondary growth forests, creeks, and natural springs shall be protected;
12. Slope stabilization and erosion control of the affected side slopes of the nearby river/creeks, siltation ponds, as well as the stockpiles, within the project site shall be strictly effected;
13. Measures shall be undertaken to prevent siltation of the affected coastal/surface water bodies during mining and stockpiling operations;

15. Instead of sprinkling water, portions of the Macadam Road linking the pier and the quarry areas, especially those adjacent to populated areas shall be permanently paved to mitigate dust pollution;
16. Adequate drainage system(s) including silt traps shall be provided and regularly maintained in the stockpiles, quarry areas; the entire plant premise and parallel access roads to minimize the transport of sediments from the earthwork areas to the river system. Siltation ponds shall be lined and drainage ditches, well maintained;
17. All appropriate mitigating measures shall be instituted to minimize generation of noise, dust and siltation of any water body during the quarrying, stockpiling, and transportation activities;
18. Adequate measures and protection shall be given to the nearby/affected mangrove forests. Enrichment planting shall be undertaken by the proponent in coordination with DENR, Local Government Units (LGUs) and Non-government Organizations (NGOs) to enhance the protective and productive capacities of these ecosystems;
19. A comprehensive rehabilitation/restoration program for the destroyed/disturbed wildlife habitat, shall be prepared in coordination with the PAWB and the DENR Regional units and implemented by the proponent. The program shall include a detailed plan of activities with time table and defined strategies in implementation;
20. Noise level, emissions and effluents generated shall be conform with prescribed DENR standards;
21. A solid wastes management program shall be strictly implemented during project implementation. Stripped-off overburden materials, mine wastes, sludge and other solid wastes shall be properly stockpiled and disposed of in permanent, stabilized areas and away from any water and drainage systems, and shall be maintained in safe and non-polluting conditions;
22. Pursuant to the pertinent provisions of the Philippine Mining Act of 1995 (R.A. 7942) and its implementing rules and regulations (DAO 96-40), the following, among others, shall be complied with:
  - 22.1. Contingent Liability and Rehabilitation Fund (CLRF)) to cover expenses of multisectoral monitoring activities, short and long-term rehabilitation programs and/or indemnification of damages to life and property shall be set up by the proponent within thirty (30) days from the receipt of the ECC through a separate Memorandum of Agreement (MOA) with the DENR on



- 22.2. The proponent shall submit an Environmental Protection and Enhancement Program (EPEP) within sixty (60) calendar days from receipt of this ECC to the EMB and MGB for preliminary review and final approval. The EPEP shall include the following:
- 22.2.1 The project's environmental protection, enhancement and rehabilitation commitments covering all areas to be affected by development under their contracts;
  - 22.2.2 The life-of-mine to the completion of rehabilitation of the mine that is proximate to the land use prior to its disturbance, unless other beneficial users are pre-determined and agreed upon in partnership with local communities and local government units;
  - 22.2.3 A statement on post-mining land use potential for various types of disturbed land and the completion of the commitments in the rehabilitation of the disturbed land in a technically, socially and environmentally competent manner; and
  - 22.2.4 Financial requirements up to post-decommissioning over a ten-year period implementation including schedules, system of environmental guarantees, monitoring and reporting provisions;
- 22.3 A Multipartite Monitoring Team (MMT) to be composed of the DENR, local environmental NGO representative, LGU representative, affected community(ies) and/or disadvantaged sector (women, youth, elderly, indigenous cultural community, etc.) representatives and RTNMC shall be organized to serve as a monitoring arm of the CLRF Steering Committee and the MRF Committee through a MOA within sixty (60) days from the receipt of the ECC; and
- 22.4 A Mine Environmental Protection and Enhancement Office (MEPEO) shall be established to set the level of priorities and organize the resources needed to implement environmental management programs;
22. Mine safety rules and regulations as provided for under Mines Administrative Order No. RD-51, Series of 1991 shall be strictly observed to prevent health and occupational hazards posed by the project operations;
23. The proponent shall conduct a monthly emissions (air, water and noise) monitoring, the results of which shall be submitted to the DENR Region IV-A and the EMB. Should the monitoring indicate exceedance of DENR standards, the proponent shall either reduce the level of operation or cease operation until such time that emissions conform to the DENR standards;
24. The proponent shall gather baseline condition on the aquatic biota of all surface water resources in the area and annually monitoring the same, the results of which shall be submitted to the EMB, the MGB Region IV and the DENR Regional Units;
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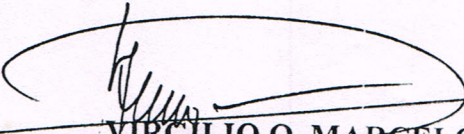
25. A revised Environmental Risk Assessment (ERA) which will include a Disaster Preparedness Program and risk from natural hazards, including collapse of the siltation ponds shall be submitted by the proponent to the EMB within ninety (90) days upon receipt of this ECC. An annual auditing of risks and hazards of the project shall be undertaken, a report of which shall be submitted to the EMB and the DENR Regional Units;
26. A progressive rehabilitation/reforestation program shall be immediately implemented on the mined-out areas and completed prior to abandonment and monitoring of the program shall continue over a ten-year period;
27. Qualified local residents and women shall be given priority in employment. Adequate public information shall be provided for jobs available to local residents in the affected areas and as part of its livelihood support, the proponent shall undertake appropriate skills training and job preparation;
28. A community assistance program for livelihood that shall entail the meaningful participation of women shall be formulated and implemented. The program shall also include assistance in the construction of shallow and deep wells for potable drinking water and other domestic uses;
29. The proponent shall implement a Social Development Program and shall assist the local government units in the provision of health, education and welfare services to the residents of the impact areas and vicinities in coordination with the Department of Health, the Department of Education, Culture and Sports, and the Department of Social Welfare and Development;
30. The proponent shall give assistance/protection to the fisherfolks should complaints/other problems arise which are brought about by the mining operations in the area;
31. The proponent shall commission an independent and continuing health study which shall include a determination of the levels of airborne-related diseases of the affected residents, particularly the children, to be funded from the CLRF, the results of which shall be evaluated by the DOH and the EMB, and shall constitute as basis for determining compliance;
32. The proponent shall link up with other industries in the area, the Coastal Environmental Program (CEP) of the DENR, the academe, the NGOs and LGUs to put up a marine protection program for the portion of the Sulu Sea fronting its pier facilities. It shall devise ways to minimize its disturbance, particularly the effect of vessels used to load/unload personnel, ore and other materials;
33. The proponent shall undertake an effective and continuing Information Education and Communication (IEC) Program to explain publicly its EIS mitigative measures for negative impacts as well as conditions of the ECC that are of importance to wildlife, marine ecology, and biodiversity, for a greater awareness, understanding and acceptance of the project among the local residents. It shall

open opportunities to educate the affected community(ies) through sectoral and small group consultations on environmental and human safety measures in quarrying. The IEC activities shall be funded by the proponent but implemented by a joint team of the proponent, MGB Region IV, DENR Region IV and DENR's selected NGO partner. The proponent shall submit a detailed IEC program to EMB, MGB Region IV, DENR Region IV and the LGUs annually;

34. The proponent shall immediately execute a Perpetual Lease Agreement and/or Lease Agreement with the landowners of the 7 km. Macadam Road linking the quarry areas and the pier facilities;
35. On-the-spot monitoring and inspection may be initiated by the DENR in coordination with concerned groups to monitor the project's compliance with the ECC conditions;
36. All other permits and requirements of other concerned government entities such as clearance from the National Museum and the DAR conversion permit shall be secured prior to operations; and
37. Transfer of ownership of this Project carries the same conditions in this ECC for which written notification shall be made by herein grantee to the EMB and MGB within Fifteen (15) days from such transfer.

Non-compliance with any of the above stipulations will be sufficient cause for the suspension or cancellation of this Certificate and/or imposition of fine in the amount of Fifty Thousand Pesos (P50,000.00) for every violation thereof, at the discretion of the Bureau (Section 9 of P.D. 1586)

Granted this 11 day of Dec., 1997.

  
**VIRGILIO Q. MARCELO**  
Acting Secretary