

SECRETARY'S CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS:

I, ZENAIDA C. SANTOS, of legal age, Filipino and with postal and business address at Lot 93 Cluster L, Bagong Nayon I, Cogeo Village, 1870 Antipolo, Rizal, after having been sworn to in accordance with law, do hereby depose and state:

1. That I am the duly designated Corporate Secretary of East Coast Mineral Resources Co., Inc., a corporation duly organized and existing under and by virtue of the laws of the Republic of the Philippines with principal business address at Lot 93 Cluster L, Bagong Nayon I, Cogeo Village, 1870 Antipolo, Rizal, (herein referred to as the "Corporation") and as such, I have total custody of the corporate records of the Corporation;

2. That during the Organizational and Regular Meeting of the Board of Directors held at its principal business address on 28<sup>th</sup> September 1995, Mrs. Sofia G. Gatan-Pagauitan, President or Mr. Hilario G. Pagauitan, Chairman of the Board of Directors, were hereby authorized to file, sign and represent the Corporation in its present and future proposal or proposals to enter into a Mineral Production Sharing Agreement with the Government relative its corporate plan to go into exploration, development and commercial utilization of mineral and ore deposits particularly within the Surigao Mineral Reservation, Surigao del Norte, which was captioned as:

**"RESOLVED, That Mrs. Sofia G. Gatan-Pagauitan, President or Mr. Hilario G. Pagauitan, Chairman of the Board of Directors, are empowered and authorized to file, sign, execute and deliver on behalf of the Corporation, all contracts, documents, agreements, and other writings of whatever nature or kind with any and all third persons, concerns or entities, private or government, in connection with its present and future proposal or proposals to enter into Mineral Production Sharing Agreement (MPSA) with the Government; and**

**RESOLVED FURTHER, That Mrs. Sofia G. Gatan-Pagauitan or Mr. Hilario G. Pagauitan are likewise empowered and authorized to transact business with the Government and any other person or persons or entities for the total compliance and fulfilment of all and any requirements on the Corporation's present and future MPSA proposal or proposals"**

*Zenaida C. Santos*

3. That the foregoing resolutions have not been amended, modified or revoked and the same is still in full force and effect up to the present.

AUG 07 1997

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_ day of \_\_\_\_\_ at QUEZON CITY

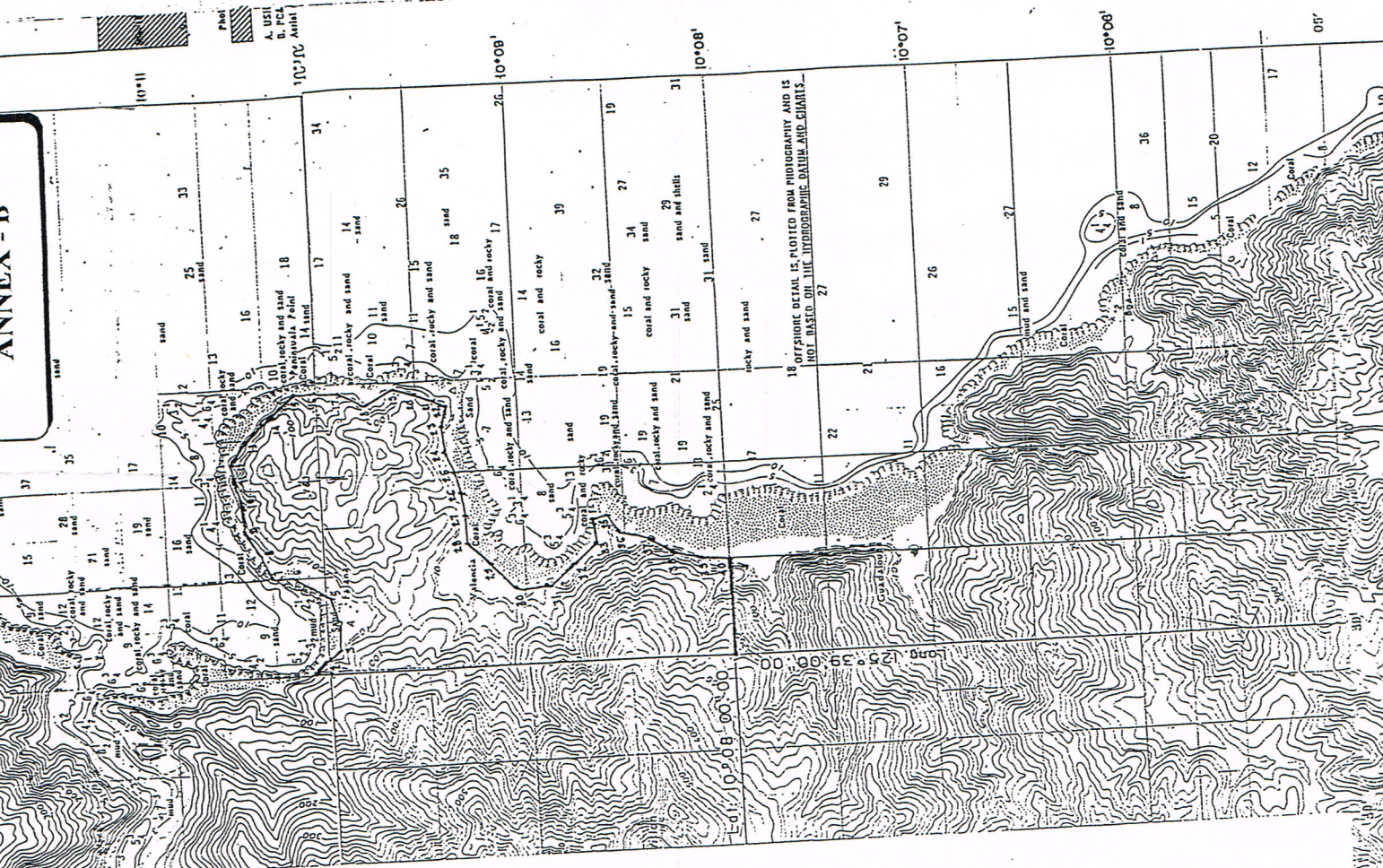
*Zenaida C. Santos*  
ZENAIDA C. SANTOS  
Corporate Secretary

Republic of the Philippines )  
QUEZON CITY ) S.S.

SUBSCRIBED AND SWORN TO before me a Notary Public for \_\_\_\_\_ this \_\_\_ day of AUG 07 1997, affiant exhibiting her Community Tax Certificate No. 7073358E issued at Antipolo, Rizal on February 26, 1997.

Doc. No. 741 ;  
Page No. 74 ;  
Book No. 40 ;  
Series of 1997.

NOTARY PUBLIC  
ATTY HECTOR G. CERVINO  
NOTARY PUBLIC  
P.T.R. # 8318-2  
DATE ISSUED: AUG 07 1997  
ISSUED AT QUEZON CITY  
VALID UNTIL DEC. 31, 1997



MPSA APPLICANT: EAST COAST MINERAL RESOURCES COMPANY, INC.  
 LOCATION: VALENCIA, CAGDIANAO, DINAGAT ISLAND, SURIGAO DEL NORTE  
 SCALE 1 : 50,000

TECHNICAL DESCRIPTION:

Line	Bearings	Distances
1-2	N00°07'W	3,802.00 m.
2-3	S44°51'E	324.37 m.
3-4	S82°27'E	230.37 m.
4-5	N74°49'E	236.43 m.
5-6	N35°49'E	388.96 m.
6-7	N00°07'W	230.42 m.
7-8	N66°16'E	249.20 m.
8-9	N60°07'E	263.00 m.
9-10	N89°53'E	228.29 m.
10-11	N76°38'E	234.56 m.
11-12	N74°49'E	236.42 m.
12-13	S63°20'E	255.72 m.
13-14	S44°51'E	324.39 m.
14-15	S44°51'E	324.36 m.
15-16	S00°07'E	230.42 m.
16-17	S00°07'E	230.43 m.
17-18	S26°14'W	257.15 m.
18-19	S26°28'E	257.16 m.
19-20	S14°41'W	238.33 m.
20-21	S19°51'W	245.16 m.
21-22	S36°38'W	139.94 m.
22-23	N81°49'W	231.04 m.
23-24	S89°53'W	228.31 m.
24-25	S67°54'W	246.21 m.
25-26	S74°49'W	236.44 m.
26-27	S89°53'W	228.31 m.
27-28	S89°53'W	228.31 m.
28-29	S44°37'W	324.39 m.
29-30	S44°37'W	324.39 m.
30-31	S07°39'E	322.42 m.
31-32	S40°46'E	303.72 m.
32-33	S43°55'E	329.89 m.
33-34	N87°57'E	228.44 m.
34-35	N00°07'E	115.21 m.
35-36	S52°46'W	190.90 m.
36-37	S18°10'W	242.67 m.
37-38	S26°14'W	257.16 m.
38-39	S12°54'W	236.50 m.
39-40	S07°25'W	232.37 m.
40-1	S89°53'W	943.75 m.

CONTAINING AN AREA OF 697.0481 HECTARES

PREPARED BY:  
  
 JOSEPH A. PERIDA  
 Licensed Geodetic Engineer  
 P.R. No. CO080364  
 Dated: January 15, 1996  
 Place: Manila

Republic of the Philippines  
Department of Environment and Natural Resources  
**MINES AND GEOSCIENCES BUREAU**  
North Avenue, Diliman, Quezon City

**EXPLORATION WORK PROGRAM  
AND  
FINANCIAL PLAN**

**INTRODUCTION**

This Exploration Work Program (EWP) and Financial Plan is prepared by the undersigned to form part of the application for Mineral Production Sharing Agreement (MPSA) of **East Coast Mineral Resources Co., Inc.** covering an area within Parcel II of the Surigao Mineral Reservation at Cagdianao, Dinagat Island, Surigao Del Norte.

The objectives of this EWP are to determine the potential for chromite and nickel mineralization of the applied area and to determine the viability of developing and exploiting the mineral(s) to be found therein.

**1.0 Name and Address of the Applicant**

Name : **EAST COAST MINERAL RESOURCES CO., INC.**

Contact Person/s : **Mrs. SOFIA G. GATAN-PAGAUTAN, President  
Mr. HILARIO G. PAGAUTAN, Chairman & CEO**

Manila Office : **Lot 93, Cluster L, Bagong Nayon I, Cogeo Village  
1870 Antipolo, Rizal  
Tel. Nos.: (0918) 828-4609; & (0912) 387-2942**

Surigao Office : **Unit A, Ensomo Apartment  
Espina Street, Surigao City  
Tel. No.: (086) 232-6734**

## 2.0 Location of the Project

The application for MPSA covers an area within Parcel II of the Surigao Mineral Reservation (SMR) located at Barangay Valencia, Cagdianao, Dinagat Island, Surigao Del Norte, more particularly describe as follows:

Corner 1 = Latitude  $10^{\circ} 08' 00.00''$   
 Longitude  $125^{\circ} 39' 00.00''$

<u>LINES</u>	<u>BEARING</u>	<u>DISTANCES</u>
1-2	N $00^{\circ} 07' W.$	3,802.00 m.
2-3	S $44^{\circ} 51' E.$	324.37 m.
3-4	S $82^{\circ} 27' E.$	230.37 m.
4-5	N $74^{\circ} 49' E.$	236.43 m.
5-6	N $35^{\circ} 49' E.$	388.96 m.
6-7	N $00^{\circ} 07' W.$	230.42 m.
7-8	N $66^{\circ} 16' E.$	249.20 m.
8-9	N $60^{\circ} 07' E.$	263.00 m.
9-10	N $89^{\circ} 53' E.$	228.29 m.
10-11	N $76^{\circ} 38' E.$	234.56 m.
11-12	N $74^{\circ} 49' E.$	236.42 m.
12-13	S $63^{\circ} 20' E.$	255.72 m.
13-14	S $44^{\circ} 51' E.$	324.39 m.
14-15	S $44^{\circ} 51' E.$	324.36 m.
15-16	S $00^{\circ} 07' E.$	230.42 m.
16-17	S $00^{\circ} 07' E.$	230.43 m.
17-18	S $26^{\circ} 14' W.$	257.15 m.
18-19	S $26^{\circ} 28' E.$	257.16 m.
19-20	S $14^{\circ} 41' W.$	238.33 m.
20-21	S $19^{\circ} 51' W.$	245.16 m.
21-22	S $36^{\circ} 38' W.$	139.94 m.
22-23	N $81^{\circ} 19' W.$	231.04 m.
23-24	S $89^{\circ} 53' W.$	228.31 m.
24-25	S $67^{\circ} 54' W.$	246.21 m.
25-26	S $74^{\circ} 49' W.$	236.44 m.
26-27	S $89^{\circ} 53' W.$	228.31 m.
27-28	S $89^{\circ} 53' W.$	228.31 m.
28-29	S $44^{\circ} 37' W.$	324.39 m.
29-30	S $44^{\circ} 37' W.$	324.39 m.
30-31	S $07^{\circ} 39' E.$	232.42 m.
31-32	S $40^{\circ} 46' E.$	303.72 m.
32-33	S $43^{\circ} 55' E.$	329.89 m.
33-34	N $87^{\circ} 57' E.$	228.44 m.
34-35	N $00^{\circ} 07' E.$	115.21 m.
35-36	S $52^{\circ} 46' W.$	190.90 m.
36-37	S $18^{\circ} 10' W.$	242.67 m.
37-38	S $26^{\circ} 14' W.$	257.16 m.

38-39	S 12° 54' W.,	236.50 m.
39-40	S 07° 25' W.,	232.37 m.
40-1	S 89° 53' W.,	943.75 m

### 3.0 Area Coverage

The applied area contains 697.0481 hectares.

### 4.0 Project Area Description

#### 4.1 Terrain/Physiography

The applied area is characterized by moderately low topography with highest elevation of 163 meters above sea level (see attached topographic map). Ridge crest generally trend northeast and are commonly mantled by reddish lateritic soil.

#### 4.2 Accessibility

The applied area is accessible from Cagdianao through a motorized banca. Likewise, the municipality of Cagdianao is accessible from Surigao City using Inter-island pumpboats/motorized bancas which make daily calls to Cagdianao Pier. Travel time from the applied area to Cagdianao to Surigao City are approximately two (2) and three (3) hours, respectively.

#### 4.3 Drainage Systems

The applied area has no existing river nor creeks. The area is drained by natural drainage pattern.

#### 4.4 Vegetation

Large portion of the applied area, approximately seventy five percent (75%), is either denuded or just covered by cogon grasses while the rest is covered by secondary forest growth, tangling vines, shrubs, and under brushes.

#### 4.5 Land Use

The applied area is not being used by the concerned and neighboring barangays for agricultural purposes since the area is covered by laterite soil, not suitable for the said purposes.

#### 4.6 Climate

The climate of Surigao del Norte is of tropical type with rainy and dry seasons. There is no marked distinction between the two seasons since rains also occur during the dry seasons and vice versa. Generally, the wet months occur from October to March while dry months occur from April to September.

## 5.0 Description of Exploration Program

- 5.1 **Research, compilation, and review** of literatures of previous geological investigations on the applied and other immediate areas particularly the results of the extensive study conducted by the Mines and Geosciences Bureau (MGB), Natural Resources Development Corporation (NRDC) and United Nations Revolving Fund For Natural Resources Exploration (UNRFNRE). This activity would certainly help especially in correlating the results of future activities.

Duration	:	Three (3) Months
Estimated Cost	:	PhP40,000.00
Expected Output	:	Reference Materials/Data

- 5.2 **Semi-detailed geologic mapping** - It involves the investigation/evaluation of the geologic features of the area such as lithologic units, contacts and compositions, structures, rock associations, and other notable alterations that would indicate/establish the horizontal distribution and extent of the valuable mineral deposits based on surface indications, therefore, identifying promising areas.

No. of Samples to be collected	:	100
Duration	:	Three (3) Months
Estimated Cost	:	PhP100,000.00
Expected Output	:	Geological Map at the scale of 1:50,000.00

- 5.3 **Detailed Geologic Mapping** - This activity consist of test pitting, trenching, and Auger drilling for collecting sub-surface subject to metallurgical testing/analysis that would result in sub-surface profile especially on information on the homogeneity and thickness, and quality of the deposits. The initial grid interval of the test pitting/trenching/drilling is 300m x 300m. Potential areas are then drilled at 100m x 100m grid intervals.

### 5.3.1 Vibro/Auger Drill Holes

No. of Drill holes	:	120
Average Depth (m)	:	12-20
No. of Samples to be gathered	:	200-400
Estimated Cost	:	PhP350,000.00
Output	:	Working maps for computation of ore reserves.

of ore reserves.

**.2 Test Pitting**

No. of Test Pits	:	50
Average Depth (m)	:	5
No. of Samples to be gathered	:	300
Estimated Cost	:	PhP100,000.00
Output	:	Working maps to determine potential areas.

**5.3.3 Trenching**

No. of Trenches	:	20
Over-all Length (m)	:	200
No. of Samples to be gathered	:	200
Estimated Cost	:	PhP80,000.00
Output	:	Working maps to determine potential areas

<b>Duration</b>	:	Fourteen (14) Months
<b>Subtotal Cost</b>	:	PhP530,000.00
<b>Expected Output</b>	:	1. Geologic Map at the Scale of 1:5,000 and 1:500. 2. Ore Reserves Data, i.e., ore reserve map with corresponding cross-sections, results of metallurgical testing/analysis.

**5.4 Topography and Boundary Survey** - The topographic survey will be needed in planning, construction and development works and ore reserve calculations. While the boundary survey would result in the ground delineation of the mining area with prominent marks and exclusions of those portions of the unmineralized areas to be relinquished in favor of the Government.

Duration	:	Six (6) Months
Estimated Cost	:	PhP100,000.00
Output	:	1. Topographic Map at the scale of 1:5,000. 2. Actual Survey Plan (identifying the standard mark/monuments of the boundaries or ground)

**5.5 Feasibility Studies** - This will be undertaken by evaluation, interpretation and correlation of data for the computation of the ore reserve and the elementary engineering studies on the construction and development requirements for the efficient and optimum exploitation of the valuable mineral resources. The study shall also include the marketing, technical, organization and socio economic aspect of the project.



MGB Form No. 5-4

Duration : Four (4) Months  
 Estimated Cost : PhP100,000.00  
 Output : Feasibility Study Report

**5.6 Preparation of Reports** - The following reports shall be prepared and submitted to the concerned agencies, to wit:

- 5.6.1 Annual Reports;
- 5.6.2 Feasibility Study Report;
- 5.6.3 Declaration of Mining Feasibility and the Three-year Construction and Development Plan; and
- 5.6.4 Environmental Impact Statement.

Estimated Cost : PhP100,000.00

## 6.0 Total Estimated Exploration Cost

### 6.1 Total Estimated Costings of Item No. 5.0 Activities

	1st year	2nd year
PhP	400,000.00	570,000.00

### 6.2 Other Costings not included in the above estimated costings

#### 6.2.1 Salaries and Wages

No.	Position		1st year	2nd year
	1 Project Engineer	PhP	120,000.00	150,000.00
	1 Bunkhouse Helper		30,000.00	36,000.00
	(10 Testpitters/Drillers Samplers)		included in the above estimated cost	
	<b>Subtotal</b>	<b>PhP</b>	<b>150,000.00</b>	<b>186,000.00</b>

#### 6.2.2 Equipment, Machinery and Tools

Service (rental)	PhP	20,000.00	20,000.00
Bulldozer (rental)		100,000.00	80,000.00
Mining Tools		20,000.00	20,000.00
<b>Subtotal</b>	<b>PhP</b>	<b>140,000.00</b>	<b>120,000.00</b>

#### 6.2.3 Camp Construction and Maintenance

<b>Cost</b>	<b>PhP</b>	<b>100,000.00</b>	<b>20,000.00</b>
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#### 6.2.4 Transportation and Traveling Expenses

<b>PhP</b>	<b>20,000.00</b>	<b>20,000.00</b>
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**6.2.5 Communication  
Expenses**

PhP 5,000.00 5,000.00

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**TOTAL** PhP 815,000.00 921,000.00

**YEAR 1 : EIGHT HUNDRED FIFTEEN THOUSAND  
(PhP 815,000.00) PESOS**

**YEAR 2 : NINE HUNDRED TWENTY ONE THOUSAND  
(PhP 921,000.00) PESOS**

**ESTIMATED EXPENSES FOR ENVIRONMENTAL  
STUDIES :**

**TWO HUNDRED THOUSAND  
(PhP 200,000.00) PESOS**

**GRAND TOTAL** PhP 1,936,000.00

**7.0 Schedule of Activities**

See attached **Gantt Chart**

**8.0 Map Attachments - Location and Topographic Maps are attached.**

**9.0 Prepared by:**

  
**EDUARDO R. STA. INES**

Mining Engineer No. 671

PTR No. 843255S

Date : February 04, 1997

Place : Quezon City

23 August 1997

(Rectified: 27 October 1997)

Quezon City, Metro Manila  
Philippines

Republic of the Philippines  
Department of Environment and Natural Resources  
**MINES AND GEOSCIENCES BUREAU**  
North Avenue, Diliman, Quezon City

## ENVIRONMENTAL WORK PROGRAM

### 1.0 Name and Address of Applicant

Name : EAST COAST INERAL RESOURCES CO., INC.

Contact Person/s : Mrs. SOFIA G. GATAN-PAGAUTAN, President  
Mr. HILARIO G. PAGAUTAN, Chairman & CEO

Manila Office : Lot 93, Cluster L, Bagong Nayon I, Cogo Village  
1870 Antipolo, Rizal  
Tel. Nos. (0918) 828-4609; & (0912) 387-2942

Surigao Office : Unit A, Ensomo Apartment  
Espina Street, Surigao City  
Tel. # (086) 232-6734

### 2.0 Type and Nature of the Project

#### 2.1 Project description

The proposed initial project is exploration period. The general objectives of the this project is to determine the potential for Chromite and Nickel mineralization concealed under a shallow cover lateritic soil, and the residual and alluvial chromite deposits and limonite and sapprtolitic deposits of the project area will be to be used as basis for the determination of the viability of developing and exploiting the mineral(s) to be found therein using socially accepted procedures but least negative impact on the environment.

#### 2.2 Type and Nature of Mineral Deposit(s)

Since Surigao Mineral Reservation is notable of its high potential for Chromite and Nickel mineralization and due to the increase of demands for chromite and nickel ores, the primary minerals to be explored are chromite and nickel. However, other valuable minerals to be found therein, will also be given attention once it is found to be mineable.

### 3.0 General Location and Coverage Area of the Project

#### 3.1 Location and Accessibility

The application for Mineral Production Sharing Agreement (MPSA) covers an area within Parcel II of the Surigao Mineral Reservation (SMR) located at Barangay Valencia, Cagdianao, Dinagat Island, Surigao Del Norte, more particularly describe as follows:

Corner 1 =   Latitude     10° 08'00.00"  
                  Longitude   125° 39'00.00"

<u>LINES</u>	<u>BEARING</u>	<u>DISTANCES</u>
1-2	N 00° 07' W.,	3,802.00 m.
2-3	S 44° 51' E.,	324.37 m.
3-4	S 82° 27' E.,	230.37 m.
4-5	N 74° 49' E.,	236.43 m.
5-6	N 35° 49' E.,	388.96 m.
6-7	N 00° 07' W.,	230.42 m.
7-8	N 66° 16' E.,	249.20 m.
8-9	N 60° 07' E.,	263.00 m.
9-10	N 89° 53' E.,	228.29 m.
10-11	N 76° 38' E.,	234.56 m.
11-12	N 74° 49' E.,	236.42 m.
12-13	S 63° 20' E.,	255.72 m.
13-14	S 44° 51' E.,	324.39 m.
14-15	S 44° 51' E.,	324.36 m.
15-16	S 00° 07' E.,	230.42 m.
16-17	S 00° 07' E.,	230.43 m.
17-18	S 26° 14' W.,	257.15 m.
18-19	S 26° 28' E.,	257.16 m.
19-20	S 14° 41' W.,	238.33 m.
20-21	S 19° 51' W.,	245.16 m.
21-22	S 36° 38' W.,	139.94 m.
22-23	N 81° 19' W.,	231.04 m.
23-24	S 89° 53' W.,	228.31 m.
24-25	S 67° 54' W.,	246.21 m.
25-26	S 74° 49' W.,	236.44 m.
26-27	S 89° 53' W.,	228.31 m.
27-28	S 89° 53' W.,	228.31 m.
28-29	S 44° 37' W.,	324.39 m.
29-30	S 44° 37' W.,	324.39 m.
30-31	S 07° 39' E.,	232.42 m.
31-32	S 40° 46' E.,	303.72 m.
32-33	S 43° 55' E.,	329.89 m.
33-34	N 87° 57' E.,	228.44 m.
34-35	N 00° 07' E.,	115.21 m.

35-36	S 52 <sup>0</sup> 46' W.,	190.90 m.
36-37	S 18 <sup>0</sup> 10' W.,	242.67 m.
37-38	S 26 <sup>0</sup> 14' W.,	257.16 m.
38-39	S 12 <sup>0</sup> 54' W.,	236.50 m.
39-40	S 07 <sup>0</sup> 25' W.,	232.37 m.
40-1	S 89 <sup>0</sup> 53' W.,	943.75 m.

The said project area is accessible from Cagdianao through a motorized banca. Likewise, the municipality of Cagdianao is accessible from Surigao City using Inter-island pumpboats/motorized bancas which make daily calls to Cagdianao Pier. Travel time from the applied area to Cagdianao to Surigao City are approximately two (2) and three (3) hours, respectively.

### **3.2 Area Coverage**

The applied area for MPSA contains 697.0481 hectares.

## **4.0 Description of the Existing Environment where Work is Proposed to be Undertaken (We commit to undertake the gathering of any and all lacking data and information in this section and submit the same within the exploration period or as prescribed by the Director of Mines & Geosciences Bureau, as per attached Sworn Statement, Annex-D1 & Annex-D2)**

### **4.1 Land Environment**

#### **4.1.1 Topography/physiography**

The applied area is characterized by moderately low topography with highest elevation of 163 meters above sea level (see attached topographic map). Ridge crest generally trend northeast and are commonly mantled by reddish lateritic soil.

#### **4.1.2 Land use/capability**

The applied area is not being used by the concerned and neighboring barangays for agricultural purposes since the area is covered by lateritic soil, not suitable for the said purposes. At present, the applied area is idle. However, some portions can be noted that small scale mining activities were conducted in the past.

#### **4.1.3 Pedology**

The applied area is covered by lateritic soil, notably deficient in nitrates, lime and phosphate is not productive of grain and vegetable plants. Erosion is moderate to extensive especially during rainy seasons due to the absence of plants/trees.

## 4.2 Climatology/meteorology\*

The climate of Surigao del Norte and offshore islands, including Dinagat Island, lie in the tropical belt influenced by an equatorial weather regime with mild temperature variation and frequent rainfalls. The applied area lies on the southern edge of the typhoon belt and receives both northeast and southwest monsoons, locally known as "Amihan" and "Habagat", respectively.

There is no marked distinction between the wet and the rainy seasons since rains also occur during the dry seasons and vice versa. Generally, the wet months occur from October to March with December and January having the greatest precipitation (55 to 68 cm) while dry months occur from April to September having moderate precipitation (10 to 22 cm) with May and June are relatively dry, although periods of more than a few days without measurable rainfall are rare. The mean monthly precipitation ranges from 10 to 68 cm and the annual precipitation averages 372 cm.

Temperatures are remarkably constant, with the mean monthly temperature ranging from 25° to 27.6° C. The average annual temperature for the last ten years period was about 27°C. Records of the Provincial Weather Station of Surigao seldom show temperatures higher than 35°C or lower than 18°C. The mean relative humidity in the region ranges from 82% to 99%.

Although winds of high velocity are infrequent in Dinagat Island and Surigao Del Norte in General, are affected by strong winds, mainly during southwest monsoon period. Three tropical cyclones passed through the province within the last ten years. The waters in the western embayments of Dinagat Island are quiet during the severest storms but very rough in the open sea and Surigao Channel. During severe storms the Surigao Channel may not be navigable by launches, resulting in the isolation of the island. This may happen once or twice a year and may last up to eight days. In the local Visayan language, this phenomenon is known as "Walo-Walo" (from Walo meaning eight).

## 4.3 Biological Environment

### 4.3.1 Plants

Large portion of the applied area, approximately seventy five percent (75%), is either denuded or just covered by cogon grasses while the rest is covered by secondary forest growth (such as red lauan, guiho and tigo), tangling vines, shrubs, and under brushes.

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\* Excerpt from Report on Chromite Exploration in the Philippines, Vol. III by United Nations Revolving Fund for Natural Resources Exploration.

#### 4.3.2 Animals

Due to the absence of forest, there is no endangered species that can be noticed in the area and its immediate vicinities.

#### 4.4 General Geology \*

In the regional context Dinagat and its islands are located in the central part of the Eastern Bicol-East Mindanao ophiolite belt and apparently represent the northwestern projection of Eastern Mindanao Ridge. With more that ninety percent of its area underlain by ophiolitic suite rocks the Dinagat group of islands constitutes the lowermost section of the eastern Mindanao Tectonic block and form part of a NW-SE trending horst extending from Bucas Grande Island and Carrascal area of Surigao mainland on the south, to Hibuson Island on the north (see geological map attached). The Dinagat ophiolite has a K-Ar age of 84 m.y. corresponding to the Upper Cretaceous period. It is dominated by ultramafic plutonic rocks with small amounts of pillow basalts and sheeted diabase complex and only minor gabbro and pyroxenite. The bulk of ultramafites is made of Harzburgite Tectonic grading upward through a layered Transition Zone into cumulate dunite masses. This Transition Zone consist of dunite and harzburgite interlayers and is the major host of economic chromite mineralization. The boundary between the Transition Zone and the Dunite can be easily recognized but the boundary between this Transition Zone and the Harzburgite Tectonic is hardly delineated.

Mafic cumulate members of the ophiolite are noticeably absent, except of small, local interlayers of pyroxenite, particularly within the Transition Zone and dunite masses. A small body of isotropic gabbro cuts the serpentized dunite mass in the northern part of the island. A second small body of similar gabbro is associated with the diabase dyke swarms in Malinao valley. The sheeted diabase complex and spilitic pillow lavas occur as underthrust sheets below the ultramafites, forming two prominent tectonic windows in the Loreto-Malinao and Albor-San Jose River valley, respectively. The relationship between these two principal ophiolite components, as well as the absence of mafic cumulates suggest an imbricated sequence of slabs for the Dinagat ophiolite.

In the southern part of the island, the ultramafic complex of the Dinagat ophiolite is overthrusting crystalline basement rocks fo the Nueva Estrella Schist. On the basis of regional evidence, the emplacement of the Dinagat ophiolite to its present position over the Nueva Estrella Schist is enterferred to be the result of an Early Eocene eastward detachment of ophiolite slabs, along the westward subduction

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\* Excerpt from Report on Chromite Exploration in the Philippines, Vol. III by United Nations Revolving Fund for Natural Resources Exploration.

zone of West Mindanao. Although no age data are available for Nueva Estrella Schist, it is inferred as an older cretaceous are fragment which collided with the Dinagat ophiolite during Early Tertiary. The schist forms a large tectonic window between San Jose and Cagdianao, in southern Dinagat.

Unlike Surigao Mainland, on Dinagat Island there is a conspicuous absence of thick sediments. Unconformably overlying the Dinagat ophiolite and the crystalline rocks of Nueva Estrella Schist are the Loreto Clastics (Lower Miocene), consisting of polymictic conglomerates and fine clastics, with lithic fragments of various ophiolite lithologies. A thickly-bedded reef limestone (Mid. Miocene-Lower Pliocene), probably equivalent to Siargao Formation (JICA-MMAJ, 1990) overlies conformably the Loreto Clastics and marks the end of Tertiary deposition. These post ophiolite sediments fringe in places Dinagat Island along its western coast. Their overall distribution and dips point to deposition in shallow basin or irregular depressions in the ophiolite mass, marginal to a NNW-SSE trending principal basin, now submerged in the Surigao Straits.

The distinct gap in the geological record suggests repeated uplift of the ophiolite ground and prevailing erosional conditions during Lower Tertiary. The number of sedimentary cycles intervened between the emplacement of the ophiolites and deposition of the presently known Tertiary rocks cannot be determined. Loreto Clastics directly overlying the ophiolitic rocks, incorporate in some localities water-worn pebbles and cobbles suggesting the reworking of some older conglomerates, also of serpentinite derivation. The discovery of reworked Eocene forams and Eocene limestone boulders in these conglomerates, on Nonoc Island (southernmost island of Dinagat) suggests deposition of Eocene sediments in the area but later removed by erosion (Wright et. al., 1958). Similarly the epithermal gold mineralization of Bale-Bale (Esperanza) hosted by a fault zone in dunite may be associated with eroded andesitic volcanics equivalent to those of Surigao mainland.

Quaternary and recent deposits consist of laterites, alluvium and shallow beach sediments. Thick mantles of ferruginous laterite developed over ultramafic rocks during a period of prolonged and widespread chemical weathering, probably active since Pleistocene. Several of these laterites constitute secondary nickel and chromite deposits. The confinement of most these deposits to relatively lower ground suggests the present of distinct erosional levels not recognized by the present study. Alluvial and beach deposits are mostly confined to the principal river valleys and western embayments of the island, respectively. The morphology of the western coast of Dinagat and associations of raised beach deposit may considered as indicative of a relative slower submergence of this side of the island.



Structurally, the island is characterized by low-magnitude folding and lowgrade regional metamorphism in both ophiolite massif and post-ophiolite sediments. High degree metamorphism and tight folding is restricted to the Nueva Estrella Schist. In general, the area is dominated by intense shearing, which resulted in wide breccia and cataclastic zones with local development of semi-schists in serpentinites. A prominent structural feature in the area, however, is the presence of several NNW-SSE trending faults paralleling the Philippine Fault Zone and a set of thrust faults bringing lower members in juxtaposition with upper members of the ophiolite sequence. These groups of faults are cut by NE-SW trending faults resulting in a complex structural pattern.

#### 4.5 Socioeconomic Environment

The population of Brgy. Valencia is estimated at approximately three hundred (300) concentrated within the northern coast of the applied area. The adjacent Barangay to the North-east, Brgy. Legaspi, situated approximately nine (9) kilometers from the applied area has the same population to Brgy. Valencia. While the adjacent Barangay to the South-east, Brgy. Boa, situated approximately seven (7) kilometers from Corner No.1 of the applied area has approximately 60 families.

The dominant occupations of the inhabitants of the above-mentioned Barangays are fishing and mining. The scale of wages for the labour is about PhP75.00 per day.

There is no existing infrastructure as well as present infrastructure project, educational facilities on education, health, social services, telephone, electricity in the vicinity (above-mentioned Barangays). However, the said facilities are present in the Municipality of Cagdianao.

#### 5.0 Description of Exploration Program

- 5.1 **Research, compilation, and review** of literatures of previous geological investigations on the applied and other immediate areas particularly the results of the extensive study conducted by the Mines and Geosciences Bureau (MGB), Natural Resources Development Corporation (NRDC) and United Nations Revolving Fund For Natural Resources Exploration (UNRFNRE). This activity would certainly help especially in correlating the results of future activities.

Duration	: Three (3) Months
Estimated Cost	: PhP40,000.00

- 5.2 **Semi-detailed geologic mapping** - It involves the investigation/evaluation of the geologic features of the area such as lithologic units, contacts and compositions, structures, rock associations, and other notable alterations that would indicate/establish the horizontal distribution and extent of the valuable mineral deposits

based on surface indications, therefore, identifying promising areas. In addition, traverses and footrails will be made concurrent with the activity.

No. of Samples to be collected : 100  
 Duration : Three (3) Months  
 Tools : Compass  
     for footrails/traverses  
     construction : pick and shovel  
 Estimated Cost : PhP100,000.00

**5.3 Detailed Geologic Mapping** - This activity consist of test pitting, trenching, and Vibro/Auger drilling for collecting sub-surface subject to metallurgical testing/analysis that would result in sub-surface profile especially on information on the homogeneity and thickness, and quality of the deposits. The initial grid interval of the drilling is 100m x 100m. Potential areas are then drilled at 25m x 25m grid intervals. Test pitting and trenching shall be driven on selected intervals on potentially proven areas by drilling. Access roads will be constructed at the initial stage of the activity.

**5.3.1 Vibro/Auger Drill Holes**

No. of Drill holes : 120  
 Average Depth (m) : 12-20  
 No. of Samples to  
     be gathered : 200-400  
 Equipment : Vibro/Auger  
                     Drills  
     for road  
     construction : Bulldozer  
 Fluids/Chemicals to  
     be used : lubricants, fuel,  
                     and oils.  
 Estimated Cost : PhP350,000.00

**5.3.2 Test Pitting**

No. of Test Pits : 100  
 Average Depth (m) : 5  
 No. of Samples to  
     be gathered : 300  
 Tools : Pick and Shovel  
 Estimated Cost : PhP100,000.00

**5.3.3 Trenching**

No. of Trenches : 20  
 Over-all Length (m) : 200  
 No. of Samples to  
     be gathered : 200  
 Tools : Pick and shovel  
 Estimated Cost : PhP80,000.00

Duration : Fourteen (14) Months  
 Subtotal Cost : PhP530,000.00

- 5.4 Topography and Boundary Survey** - The topographic survey will be needed in planning, construction and development works and ore reserve calculations. While the boundary survey would result in the ground delineation of the mining area with prominent marks and exclusions of those portions of the unmineralized areas to be relinquished in favor of the Government.

Equipment : Transit, Tape and Stadia Rod  
 Duration : Six (6) Months  
 Estimated Cost : PhP100,000.00

- 5.5 Feasibility Studies** - This will be undertaken by evaluation, interpretation and correlation of data for the computation of the ore reserve and the elementary engineering studies on the construction and development requirements for the efficient and optimum exploitation of the valuable mineral resources. The study shall also include the marketing, technical, organization and socio economic aspect of the project.

Duration : Four (4) Months  
 Estimated Cost : PhP100,000.00

- 5.6 Preparation of Reports** - The following reports shall be prepared and submitted to the concerned agencies, to wit:

- 5.6.1 Annual Reports;**  
**5.6.2 Feasibility Study Report;**  
**5.6.3 Declaration of Mining Feasibility and the Three-year Construction and Development Plan; and**  
**5.6.4 Environmental Impact Statement.**

Estimated Cost : PhP100,000.00

**5.7 Total Estimated Exploration Cost**

**5.7.1 Total Estimated Costings of Item No. 5.0 Activities**

	1st year	2nd year
PhP	400,000.00	570,000.00

**5.7.2 Other Costings not included in the above estimated costings**

**5.7.2.1 Salaries and Wages**

No.	Position	1st year	2nd year
1	Project Engineer	PhP 120,000.00	150,000.00
1	Bunkhouse Helper	30,000.00	36,000.00

(10 Testpitters/Drillers

Samplers) included in the above estimated cost

<b>Subtotal</b>	<b>PhP</b>	<b>150,000.00</b>	<b>186,000.00</b>
<b>5.7.2.2 Equipment, Machinery and Tools</b>			
Service (rental)	PhP	20,000.00	20,000.00
Bulldozer (rental)		100,000.00	80,000.00
Mining Tools		20,000.00	20,000.00
<b>Subtotal</b>	<b>PhP</b>	<b>140,000.00</b>	<b>120,000.00</b>
<b>5.7.2.3 Camp Construction and Maintenance Cost</b>			
	<b>PhP</b>	<b>100,000.00</b>	<b>20,000.00</b>
<b>5.7.2.4 Transportation and Traveling Expenses</b>			
	<b>PhP</b>	<b>20,000.00</b>	<b>20,000.00</b>
<b>5.7.2.5 Communication Expenses</b>			
	<b>PhP</b>	<b>5,000.00</b>	<b>5,000.00</b>
<hr/>			
<b>GRAND TOTAL</b>	<b>PhP</b>	<b>815,000.00</b>	<b>921,000.00</b>

**YEAR 1 : EIGHT HUNDRED FIFTEEN THOUSAND (PhP815,000.00) PESOS**

**YEAR 2 : NINE HUNDRED TWENTY ONE THOUSAND (PhP921,000.00) PESOS**

## **6.0 Identification of Potential Effects**

### **6.1 On Land**

A change in topography and clearing of vegetative cover may cause erosion in the future, as such, possible occurrence of siltation.

#### **6.1.1 Surface Disturbance Off the Mineral Property Subject of Exploration.**

##### **6.1.1.1 Construction of Access Roads, Trails and Traverse.**

Construction of access roads leading to all exploration workings and to field camp in some cases may affect the topography of the area especially if the road should pass on an inclined ground, the said inclined ground should be cut (see annex B). It may also affects and some vegetation if the road should pass in an area wherein vegetation is present.

In the case of construction of foot trails and traverse, the effect on topography and vegetation is minimal.

#### **6.1.1.2 Field Camp and Facilities**

The location of field campsite and facilities will depend on (a) availability of human basic needs and (b) distance from the mineral property/exploration workings. As such, the said field camp and facilities may be constructed in an area which is not level/flat ground and vegetative cover is present. If that will be the case, leveling/flattering of the ground and clearing of vegetative cover are needed. Leveling of the ground will change the natural topography.

### **6.1.2 Surface Disturbance On the Mineral Property Subject of Exploration**

#### **6.1.2.1 Road Access, Traverse and Trails**

Road, traverse and trails will be constructed to transport equipment and machinery, materials and supplies needed during the exploration. Again, this activity will affect vegetative cover and natural topography. Road construction might be the most extensive in the exploration work to affect the environment (due to siltation).

#### **6.1.2.2 Drilling Activities**

The clearing and leveling of drilling sites will affect vegetative cover and topography.

#### **6.1.2.3 Testpitting Activities**

Effect on the environmental setting due to testpitting is negligible to very minimal since this is a narrow vertical excavations. Soil and rocks produced from the excavation will only be the one to affect the environmental setting.

#### **6.1.2.4 Trenching Activities**

Trenching activity will affect the vegetation and topography since the activity is a horizontal excavation. Thus, might cause erosion.

Secondary growth if traversed might be cut during topographic survey. However, these might not affect the topography. As such, cutting of trees might cause erosion in the future.

## **6.2 On hydrology and water quality**

### **6.2.1 Potential generation of Acid Mine Drainage**

Generation of Acid Mine Drainage is impossible, however, if possible, minimal. Sulfur, chlorite, chloride, nitrite is very minimal if present in the host rocks, laterite soil, and other rocks present in Chromite mineralization. In addition, restoration of the excavated areas in areas that is not mineralized will be given preferential attention in backfilling, as such, these areas will not be exposed for a long period of time (duration is one of the parameters for generation of acid mine).

### **6.2.2 Siltation and Pollution of Surface Waters**

Siltation occurs already in the area since large portion of the area is already denuded. Exploration activities might induced additional erosion, but, the mitigating measures to be undertaken by the proponent might help in the future to minimize the said problem. Pollution on surface waters will be caused mainly by erosion.

### **6.2.3 Changes in hydrology**

The hydrology/water quality will improve since the present problem in siltation will be solved by constructing series of small ponds to catch all the silt not only comes from the exploration activities but also from natural siltation.

## **6.3 On the Ecology**

Alternation of land form from non-productive area to mining area, if found to be feasible, will benefit immediate vicinity due to labor employment, development of community as well as the technology.

Effect on natural drainage is minimal since change in topography and denudation caused by exploration activities is still tolerable. In addition, mitigating measures are to be undertaken by the proponent to prevent/minimize the damages that may be caused by exploration activities.

Only the noise came from equipment will increase the existing level of noise within the immediate distance from the said equipment (Bulldozer/Drilling). However, the noise from the equipment can not be heard anymore from a distance of 200 meters.

## **6.4 On Socioeconomic Effects**

During the exploration period, the concerned and immediate community will benefit due to the labor employment. However, the proponent will help the said community to some of their project to be implemented, i.e., drilling of water wells, construction of facilities. On the part of Local Government, occupation fee will be generated.

Once the area found to be feasible for extraction and exploitation of minerals, meaning commence of mining operation, the concerned and immediate communities will benefit due to the labor employment, development of the community as well as the technology, etc. On the part of National and Local Government, taxes that will be generated such as but not limited to royalty, occupation fee, income tax, business tax, etc.

## **7.0 Environmental Management Measures Including Total Cost**

- 7.1 The following mitigating measures will be undertaken by the proponent to prevent or minimize the effect on environmental setting cause by exploration activities, to wit:
- 7.1.1 Rip-rapping of loose ground slopes especially caused by constructed roads, trails and traverse to prevent subsidence and landslides.
  - 7.1.2 Revegetation / reforestation of the damage areas, denuded areas, and ground slopes to prevent erosion. Cutting of trees and vegetation will be avoided as much as possible.
  - 7.1.3 Exploration works and other disturbed areas in areas that are not mineralized or that are not necessary for future re-evaluation work shall be rehabilitated/restored immediately.
  - 7.1.4 Each test pits/trenches will be surrounded by fench to prevent stray animals from being trapped.
  - 7.1.5 Stockpile materials produced from drilling, trenching and testpitting will be used to restore the area (backfilling).
  - 7.1.6 The stockpile materials will be placed within the perimeter of each excavations and will be enclosed by a metal/wood plate/rock boulders (see attached preventive plan) to prevent erosion which may cause surface water pollution.
  - 7.1.7 Handling of toxic and hazardous materials - there will be no toxic and hazardous materials to be used during the duration of the exploration period. If the said materials refer to the lubricants, fuels and oils that will be used by equipment - these will be handled carefully in the storage facility (room).
    - 7.1.7.1 Keep the storage room clean.
    - 7.1.7.2 All the said materials/fluids will be placed in a safe container.
    - 7.1.7.3 Safety instructions/signs on how to use the said materials properly will be provided.
    - 7.1.7.4 Unauthorized personnel will not be allowed to enter the said facility room.
    - 7.1.7.5 The facility room will be constructed of concrete, as such, accidental spillage of fuels and oils can be cleaned

properly to prevent contamination with the soil outside the facility room.

In the case of handling the said materials to the exploration area:

7.1.7.6 To prevent spillage, damaged containers will no longer be used.

7.1.7.7 The containers should be properly closed, and as much as possible, sealed.

In the case of fueling/oiling,

7.1.7.8 Use proper gadget like funnel, hose, etc.

7.1.7.9 Use an impervious soil cover to catch unnecessary spillage of the said material at the drill site.

7.1.8 Equipment/machines will always be lubricated to minimize noise pollution.

7.1.9 Roads will be constantly sprayed by water to prevent dust which will cause additional problem to the siltation.

7.1.10 Series of small siltation pond will be constructed to catch the silt coming from the operation.

7.1.11 A nursery will be constructed for seedlings preparation.

7.1.12 Socioeconomic mitigating measures...

7.1.12.1 Information and education campaign and dialogue between the company and population regarding project plans (exploration and mining activities) including compensation measures and commitments will be undertaken by the company. This will be conducted within three months after approval of the contract.

7.1.12.2 Laborers will be provided by safety gadgets such as boots, earmuffs, hardhats, etc.

7.1.13 Abandonment

7.1.13.1 As discussed in Item No. 6.2.1, potential generation of acid mine/mine acid is impossible or, if possible, minimal/negligible.

7.1.13.2 All disturbed and affected areas will be restored, rehabilitated and replanted by the proponent.

7.1.13.3 There is no river system in the area, however, natural surface drainage will be planned carefully to minimize the effect on surface waters.

7.2 To address other needed information on ecological profile which are not discussed in Item 4.0 such as information on water quality and hydrological data, Geomorphological Environment, and in addition, chemical, physical, biological characteristics of the soil, the proponents commits to undertake field evaluation on such existing environmental conditions within first two months of the contract and submit the necessary report within one month after the said duration (three months from the signing of the contract).

7.3 To implement the above mitigating measures, the proponent commits to spend a minimum amount of PhP200,000.00.



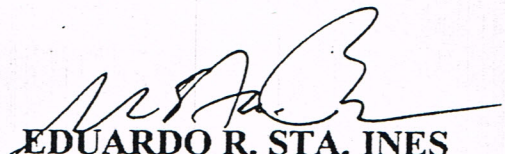
**Budgetary Requirement**

Construction of Siltation Ponds	=	PhP 50,000.00
Fencing the perimeter of excavations	=	25,000.00
Enclosing the stockpile		
by wood/metal/plate	=	20,000.00
Rip-rapping	=	35,000.00
Rehabilitation	=	10,000.00
Construction of Nursery	=	20,000.00
Seedlings	=	5,000.00
Reforestation	=	20,000.00
Conduct of IEC Campaign in three Barangays @ PhP 5,000.00	=	15,000.00
<b>Total</b>		<b>PhP 200,000.00</b>

**8.0 Attachments :**

1. Gantt Chart
2. Location and Topographic Maps
3. Preventive Plans
4. Duly Notarized commitment to undertake evaluation of present water quality, hydrological data and Geomorphological Environment in coordination with EMPAS/MGB-RO, at the proponent's expense, before the conduct of exploration activities and submit the necessary report to MGB-CO-Mining Environment and Safety Division.

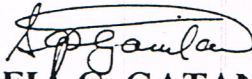
**9.0 Prepared by:**

  
**EDUARDO R. STA. INES**  
 Mining Engineer No. 671  
 PTR No . 843255S  
 Date: February 04, 1997  
 Place: Quezon City

23 August 1997  
 (Rectified: 27 October 1997)

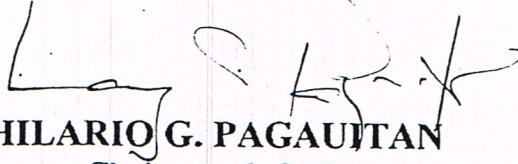
Quezon City, Metro Manila  
 Philippines

10.0 Approved by:



**SOFIA G. GATAN-PAGAUTAN**

President



**HILARIO G. PAGAUTAN**

Chairman & CEO

**EAST COAST MINERAL RESOURCES CO., INC.**



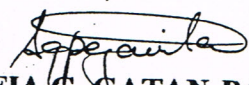
COMMITMENT

KNOW ALL MEN BY THESE PRESENTS:

That I, **Sofia G. Gatan-Pagaitan**, President of **East Coast Mineral Resources Co., Inc.** (herein referred to as "ECMRCI") with office address at Lot 93 Cluster L, Bagong Nayon I, Cogeo Village, 1870 Antipolo, Rizal, Philippines, do hereby commits the following:

1. ECMRCI will conduct a field evaluation on the existing Environmental Conditions, i.e., hydrology & water quality, chemical, physical, biological characteristics of the soil, etc. Result of the evaluation will be used to dispel perceptions of environmental damage.
2. The said evaluation will be in coordination with the concerned Government Agencies, i.e., EMPAS, Bureau of Soils and Water Management, MGB, etc., at company's expense.
3. The said evaluation will be conducted within sixty days after the signing of the Mineral Production Sharing Agreement (MPSA). and
4. The reports on the result of the evaluation will be submitted by ECMRCI to the Mines and Geosciences Bureau (MGB) within thirty days after the above mentioned duration (as such, ninety days after the signing).

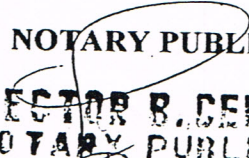
IN WITNESS WHEREOF, I, have hereunto set my hand this OCT 28 1997 day of \_\_\_\_\_ at Quezon City.

  
**SOFIA G. GATAN-PAGAITAN**  
President

Republic of the Philippines)  
QUEZON CITY ) S.S.

SUBSCRIBED AND SWORN TO before me a Notary Public for \_\_\_\_\_ this OCT 28 1997 1997, affiant QUEZON CITY exhibiting her Community Tax Certificate No. 7073356E issued at Antipolo, Rizal on February 26, 1997.

Doc. No. 433 ;  
Page No. 57 ;  
Book No. 477 ;  
Series of 1997.

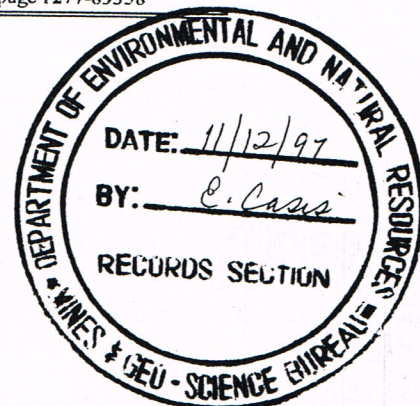
**NOTARY PUBLIC**  
  
**ATTY. HECTOR B. CENTENO**  
**NOTARY PUBLIC**  
P.T.R. # 8318529  
DATE ISSUED JAN. 5, 1997  
ISSUED AT QUEZON CITY  
VALID UNTIL DEC. 31, 1997

# EAST COAST MINERAL RESOURCES CO., INC.

Lot 93 Cluster L, Bagong Nayon I, Cogeo Village, 1870 Antipolo, Rizal  
 Cellphones: (0918) 828-4609 & (0912) 387-2942 \* Pagers: PocketBell 125 # 1135187 & Infopage 1277-83358

11 November 1997

The Honorable Director  
**Mines & Geosciences Bureau (MGB)**  
 Department of Environment & Natural Resources (DENR)  
 North Avenue, Diliman  
 Quezon City



Attention: **Mr. Leo L. Jasareno**  
**OIC, Mining Tenements Management Division**

**Mr. Michael V. Cabalda**  
**OIC, Mine Environment & Safety Division**

Subject : Commitment to undertake and supply the lacking information and data in  
our Environmental Work Program (EnWP) for AMPSA-SMR-003-95

Dear Sir :

In connection with our **Environmental Work Program (EnWP)** for **AMPSA-SMR-003-95** located at Barangay Valencia, Cagdianao, Surigao Del Norte, we would like to undertake this commitment to execute the gathering of all and whatever lacking data and or information relative to the EnWP and submit them to your good office within the exploration period of our future MPSA with the Government.

Now therefore, I, **Hilario G. Pagautan, Chairman & CEO** of **East Coast Mineral Resources Co., Inc.** of legal age, and with business and postal address at Lot 93 Cluster L, Bagong Nayon I, Cogeo Village, 1870 Antipolo, Rizal, and after having been sworn to in accordance with law, do hereby execute the following:

“That East Coast Mineral Resources Co., Inc. or its appointees or assignees, do hereby commit the obligation to undertake the gathering of all and whatever data and information lacking in its Environmental Work Program (EnWP) for its AMPSA-SMR-003-95 located at Barangay Valencia, Cagdianao, Surigao Del Norte and do hereby commit to execute and undertake the same during the exploration period of the future MPSA with the government and or as will

be prescribed by the Director of Mines & Geosciences Bureau (MGB) or his duly authorized representative/s”

Done this 11<sup>th</sup> day of November 1997 at Quezon City, Metro Manila, Philippines.

Very truly yours,

**EAST COAST MINERAL RESOURCES CO., INC.**

By: (As Authorized by the Board of Directors)

*[Handwritten Signature]*  
**HILARIO G. PAGUITAN**  
Chairman & CEO

Republic of the Philippines )  
Province of \_\_\_\_\_ ) S. S.  
City/Municipality **QUEZON CITY**

**SUBSCRIBED AND SWORN** to before me at the place aforesaid, on this NOV 12 day of 1997 of \_\_\_\_\_, 19\_\_\_\_, the affiant exhibited to me his Community Tax Certificate No. 7073357E issued at Antipolo, Rizal on the 26th day of February, 1997.

**NOTARY PUBLIC**

My commission expires on December 31, 19\_\_\_\_

Doc. No. 179;  
Page No. 26;  
Book No. 280;  
Series of 1997.

**ATTY. VICTOR B. CENTENO**  
**NOTARY PUBLIC**  
**8318529**  
**DATE ISSUED JAN. 5, 1997**  
**ISSUED AT QUEZON CITY**  
**VALID UNTIL DEC. 31, 1997**