

## **4.0 PROPERTY DESCRIPTION AND LOCATION**

### **4.1 *Property Description***

The Nkamouna project is located in southeastern Cameroon, (Figure 4-1) approximately 640 road kilometers east of the port city of Douala and 400 road kilometers east of the capitol of Yaounde.

The Nkamouna project is one of seven separately-named laterite plateaus forming a crescent-shaped array which extends 80 km north-south and 45 km east-west (Figure 4-2, Location of Laterites and Mine Permit Boundary). The Mada project is a second laterite plateau that is adjacent and extends approximately 10 kilometers north of Nkamouna. The irregularly-shaped laterite plateaus aggregate approximately 337 square kilometers within the 1,250 square kilometer Mine Permit area. The named laterite plateaus are (clockwise) Nkamouna, Rapodjombo, North Mang, South Mang, Messea, Kondong and Mada. The object of this technical report is the Nkamouna (pronounced Ka-moon-ah) area.

Administratively, the project is located in the Haut Nyong Division of the East Province. Nkamouna and the other laterite plateaus (except Kondong) lie within the Lomie Subdivision. All the laterite plateaus except Kondong lie on the drainage divide between the Dja River to the south and west, and the Boumba River to the north and east. Both rivers are tributaries to the Congo (Zaire) River, which lies 600 kilometers to the southeast.


Lomie is the administrative center of the Subdivision that hosts the project and has been the staging area for Geovic's activities. Lomie has about 3,500 inhabitants, a limited local electrical supply, and very basic services and supplies. There is no telephone service, airstrip, or approved heliport, and only rudimentary medical facilities. Geovic's field operations are based from the Kongo Camp, a fully-contained compound near the village of Kongo. The compound has adequate working and sleeping quarters, a diesel generator, satellite-phone facilities, diesel fuel storage, a kitchen with refrigerators, repair shop and sample preparation and storage facilities.

Most inhabitants of the region practice subsistence agriculture (cassava, yams, plantains, bananas, some maize and taro) and supplement their diets with animal protein ("bush meat") procured by hunters. The latter include monkeys, duikers (forest antelope), pangolin, and certain protected species, as well as snakes and birds. The settled people mainly live in villages along roads. In addition, there are semi-nomadic forest people of slight stature ("pygmies") who live in shifting settlements in the forest, in roadside encampments, and also in villages. In the project area, the forest people are referred to as "Baka," while the settlers are referred to as "Bantu." All speak languages of the Bantu linguistic family, and are racially indistinguishable except by stature. The dominant languages in the project area are Dzime (spoken by settled Africans) and Baka (spoken by pygmies). French is nearly universal among adults, and some speak a little English since Cameroon is officially bilingual in French and English.

General geographic coordinates for the Geovic Project area are approximately: Longitude N-3° 20' and Latitude E-13° 50.'

AFRICA



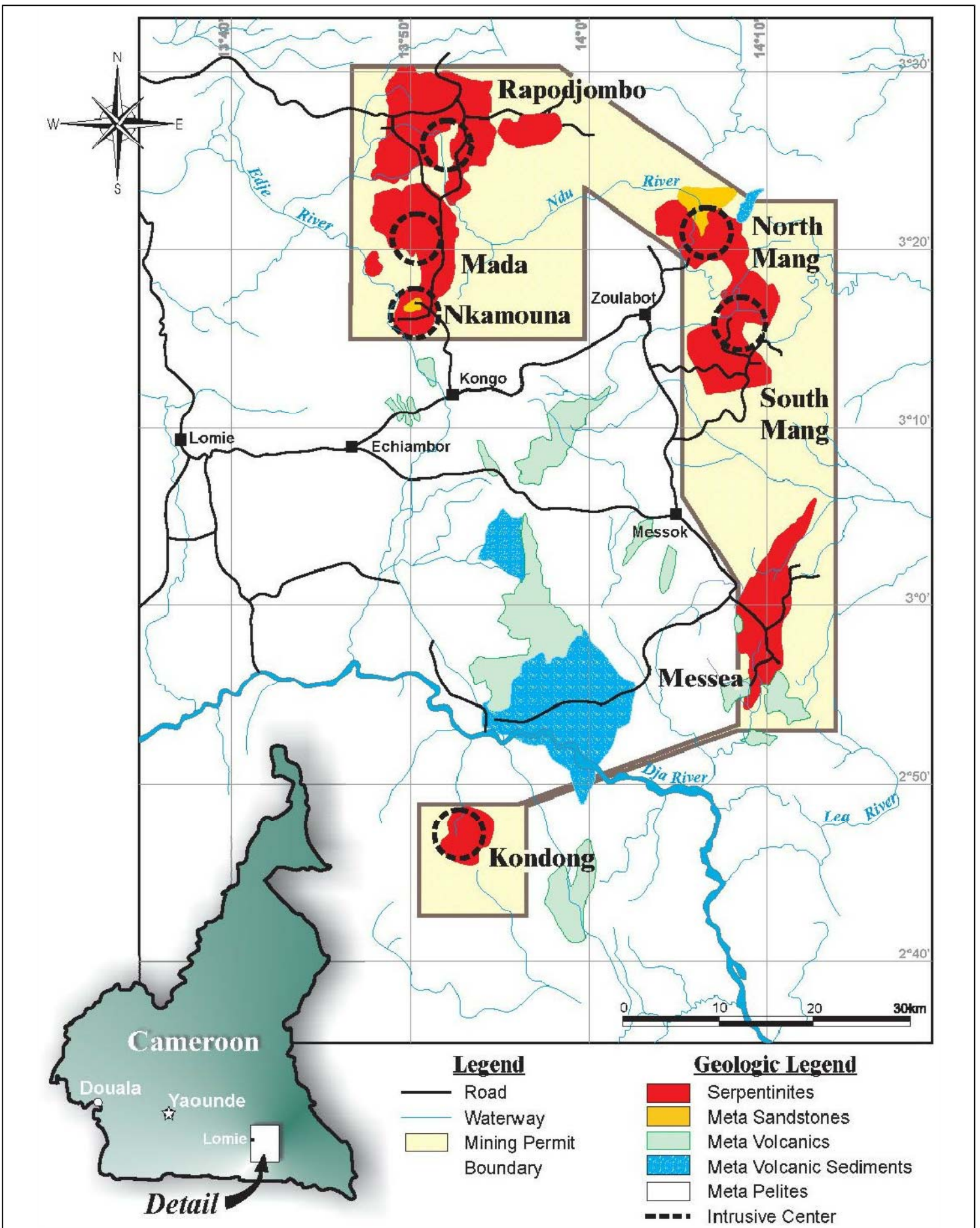
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FIGURE 4-1  
 GENERAL LOCATION MAP  
 for the NKAMOUNA COBALT PROJECT

Date of Issue  
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 Fig.4-1.dwg



## **4.2      *Property Area***

This Technical Report presents a review of the mineral resources under Geovic's control, with mineral rights held by Geovic Cameroon under a Mine Permit and administered under a Mining convention. The Mine Permit with an area of 1,250 square kilometers of "multiple use" forestlands, includes an area of 337 square kilometers of "mineral exclusive" lands.

## **4.3      *Location***

Geovic's Cobalt-Nickel Project is located in the Haut Nyong district, East Province of Cameroon, Africa. The Project's site is 640 kilometers by road from the seaport of Douala, and about 400 kilometers from the capital city of Yaounde. The closest town to the Project site is Lomie, at approximately 26 kilometers to the west – southwest. The closest railroad transport to the Project is at the town of Belabo, at a distance of approximately 250 kilometers. Transportation from Yaounde to the Project is by paved highway to Ayos, improved public road to Abong Mbang and private logging roads or public roads to the project site.

International airports and modern telecommunication facilities exist at Yaounde and Douala. Suitable shipping and receiving facilities exist at the international seaport of Douala.

## **4.4      *Prospecting, Exploration and Mining Rights***

In mid-1995 GeoCam received a Prospecting Permit that covered 19,600 square kilometers. In January 1999 the Prospecting Permit was replaced with an Exploration Permit that covered 4,876 square kilometers and specifically allowed exploration drilling. In July 2002 a Mining Convention was executed that defined the general, legal, financial, tax, economic, administrative, customs, social, land and environmental conditions under which GeoCam shall undertake the mining of cobalt, nickel, and their associated substances within GeoCam's Exploration Permit area. In April 2003 a Mining Permit replaced the Exploration Permit and the area was reduced to 1,250 square kilometers. Figure 4-2 shows the laterite deposits and the Mining Permit boundary.

### **4.4.1    *Project Ownership***

The mining rights held by GeoCam, consist of a Mining Permit covering a total surface of 1,250 square kilometers, which includes approximately 337 square kilometers of cobalt-nickel mineralized lands. Most of the Mining Permit lands are zoned "mineral exclusive" lands.

The Mining Convention was signed on July 31, 2002 by the Ministry of Mines, Water, and Power of the Republic of Cameroon. On April 11, 2003, a Mining Permit Decree was issued to GeoCam, covering an area of 1,250 square kilometers. The Mining Permit Decree states the area as 1,250 square kilometers, although the area within the coordinate boundary measures 1,600 square kilometers.

Geovic's participation in the Mining Permit holder GeoCam is 60 percent direct corporate holding by the US-based Geovic Mining Corp. In addition, another 0.5 percent is held by Geovic's founder. The 39.5 percent balance is currently held by four Cameroonian individual shareholders with 19.5 percent and 20 percent held by SNI, a Cameroon government investment corporation.

#### **4.4.2 Mineral Tenure**

The Mining Permit will remain in force for the duration of the mineable resource and has an initial term of 25 years from April 2003. The Mining Permit and Convention are renewable every ten years thereafter until the depletion of resources.

#### **4.4.3 Property Survey**

The boundary of the Mining Permit has been surveyed by Global Positioning Satellite (GPS) carried out by a certified government surveyor. The irregular 18-corner polygon-shaped Mine Permit area is monumented with red painted cement markers that stand about one meter high and are described in the Presidential Degree authorizing the Mining Permit. The Mining Permit is the main operating permit for the commercial GeoCam facilities and is shown in Figure 4-2.

Geographic references are listed in Table 4-1. These geographic references were converted to UTM coordinates and the area within the perimeter was measured to obtain an area of 1,600 square kilometers.

#### **4.4.4 Surface Land Ownership**

Fifty-nine percent of the Eastern Province is dominated by forests zoned "multiple-use." Over 64 logging concessions are designated in the province that surround GeoCam's "mineral exclusive zone". A significant portion of the area is also dedicated to protected forests, wildlife reserves and general "evergreen forest" habitat (22%) that are located well away from planned operations. A small proportion of the district is zoned for mineral development (1.6%), part of which includes "mineral exclusive lands" (0.35%). Indigenous community lands dominated by subsistence gardening and "community forest" developments form the remainder of the district lands which covers about 18 percent of the province. These lands are located principally along the main access routes developed when the province was first opened to plantation farming in the late 19<sup>th</sup> Century. Table 4-2 presents land uses in Southeastern Cameroon.

Lands held within the Mining Permit are designated "multiple-use", with the principal mineralized areas set aside for "exclusive mine" development. Mining Permit lands were specifically established to exclude village lands and avoid conflicts with local communities.

**TABLE 4-1**  
**Geovic Mining Corp.**  
**Nkamouna Project, Cameroon**  
**Mine Permit Boundary**

POINTS	GEOGRAPHIC REFERENCES	
	EAST	NORTH
1	13°59'43.7"	3°15'00.3"
2	13°47'03.4"	3°14'49.6"
3	13°47'02.5"	3°29'57.7"
4	13°58'37.6"	3°29'56.0"
5	14°09'21.3"	3°22'46.6"
6	14°13'45.9"	3°22'46.8"
7	14°13'57.7"	2°53'46.1"
8	14°08'11.9"	2°53'40.0"
9	13°56'54.8"	2°49'19.6"
10	13°56'54.5"	2°42'41.9"
11	13°51'41.3'	2°42'24.6"
12	13°51'05.7"	2°49'21.6"
13	13°56'55.3"	2°49'22.5"
14	14°08'12.4"	2°53'41.9"
15	14°08'10.1"	3°01'32.3"
16	14°05'25.0"	3°05'43.9"
17	14°05'23.3"	3°19'27.3"
18	13°59'43.1"	3°24'33.7"

**TABLE 4-2**  
**Geovic Mining Corp.**  
**Nkamouna Project, Cameroon**  
**Southeast Cameroon Land Uses**

Land Designation	Square Kilometers	Square Miles	Percentage
Timber Concessions	43,000	16,602	64.9
Parks and Forest Reserves	12,000	4,633	18.1
Community and Village Lands	10,000	3,861	15.1
GeoCam Lands Mine Permit	1,250	483	1.9
Mineral Exclusive (incl.)	300	116	0.45
Land Lease (incl.)	10	4	0.02
<b>Totals</b>	<b>66,250</b>	<b>25,579</b>	

Specific sites that will be impacted by mining and mine related activities will be "land leased" and will have "site specific" environmental plans designed and approved by governing agencies prior to mining. This 6-month process requires local government approval, following a review of each site by district leaders. The closest village to the Nkamouna site is Kongo village that is over 8 kilometers (5 miles) from the site, and is well screened from most day-to-day operational noises and activities.

Any facility, including a GeoAid humanitarian center, will have to be land leased. Port storage and facilities required for transportation to and from project site will also have to be land leased unless sublet or leased from existing companies operating in Douala (SDV and others). Environmental studies and approvals will also include the port facility and the material handling and transport between the port and project site.

#### **4.5 Environmental and Permitting**

Geovic completed an Interim Environmental Assessment Report in November 2000, with the assistance of URS-Woodward and Clyde. This Report was submitted with the Mining Convention Application in early 2001. In 2004, Geovic commissioned a site specific environmental study of the Nkamouna area, which was performed by the consulting firm Knight Piesold and presented as Environmental and Social Assessment including an Environmental and Social Impact Assessment, and Environmental and Social Action Plan for the Nkamouna area.

Geovic's Mine Permit area is totally contained in areas zoned for logging concessions and "multiple use." All planned mine developments are in logged over areas and are exclusive of "primary forest" designations. Logging concessions cover over 72,000 square kilometers or 37 percent of Cameroon forests. Geovic's mining operations will result in partial deforestation during the mining phase, which will only represent less than 0.5 percent of the annual deforested area within the region. The Mine Permit contains 300 square kilometers of mineralized rocks.

Geovic's mining exploration activities have been carried out in an area 25 to 75 kilometers to the northeast and east of the Dja Biosphere Reserve, and within drainage basins isolated from the Dja Reserve, consequently Geovic does not envision direct adverse impacts on the Dja Reserve area.

The Company has adopted a philosophy of contributing to the local community, even in the early stages of project development, by establishing the GeoAid program (Geovic, 1999), a social-humanitarian program to contribute to the well being of the local community through its assistance to education, health and hygiene.

Principal legislative, regulatory and policy considerations are as follows:

- A) Environmental Protection: Law No. 96/12 relating to environmental management outlines the general legal framework for environmental management in Cameroon. The law requires that any development must carry out an "impact assessment study." The new mining code specifies the bonds are required before mine development can commence. The project's proposed environmental mitigation and rehabilitation practices are reviewed once every four years to determine if the bond is sufficient to cover annual impacts caused by mining activities. The bond is based on an estimated annual cost of environmental impact mitigation of disturbed sites.
- B) Law 94/01(Decree No. 94/436) pertains to forest developments. Article 9 prescribes that cutting trees in a state forest can be performed only after an impact study has been conducted. This study

will be carried out as part of Geovic's "site specific" environmental impact assessment report and environmental rehabilitation plan.

- C) Law No. 81-13 regulates fishing, hunting and the issuance of related licenses. Also, the law controls the possession or trade in wild animals and trophy hunting and provides for the protection of endangered species. Enforcement measures and penalties are defined in this law, as described in the Geovic environmental plan.
- D) Law No. 89/027 addresses specific waste disposal regulations. It pertains to storage, transportation and disposal of hazardous waste. Businesses must declare the volumes and nature of each waste product and ensure elimination of waste without undue risk to people and the environment.
- E) Law 84/13 regulates water resources. The government manages and protects state waters such as rivers, lakes and groundwater. Non-state waters include spring, well and drill holes not used by the public, and rainwater falling on private land or collected artificially from roof systems. The use of water for commercial purposes may be granted by the State authority and is subject to permitting, exploitation and conservation taxes.

Decree No. 85/758 regulates water use by committee. This committee provides advice in implementing the water code that will include issues such as inventory, conservation, protection, use, effluent treatment and taxation.

A hydroelectric permit would be required should Geovic intend to build a mini-hydro electric plant on the Edje or Boumba Rivers. If AES, the US based utility company builds the plant, they would obtain the necessary permits.

#### **4.6 *Permits Required for Property Development***

The principal remaining permits required before the initiation of construction at Nkamouna include:

- 1) Land Lease for development sites.
- 2) Water Use Permit.

Permits are currently pending for a 20 ha construction camp site near Lomie for 350 workers, a water permit to divert local surface water for the project, and an airstrip permit for a restricted use airstrip site near the project area.

A Certificate of Compliance for the Environmental and Social Assessment (ESA) was received on May 29, 2007. This Environmental Permit details the impact mitigation measures, plans, and monitoring. The environmental bond will need to be determined based on the final footprint.

A certificate of registration will be issued to Geovic and Geovic will pay for the cost and compensation of freeing the lands under the "Long Lease." This is a governmental administrative action granting a lease to GeoCam to develop the project on 2,484 ha. This permit is expected in early 2008.

Geovic will have the right to occupy, build roads, remove vegetation and mine and process cobalt, nickel and related substances covered in the Mining Convention once the land is freed, in accordance to the GeoCam Mining Convention of August 1, 2002.