

LIBERIA

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The highlight of the year with regard to the mineral development of the country has been Mano River Resources Inc.'s discovery of diamondiferous kimberlites in the Wuesua area of Lower Lofa County. This adds to the already promising gold deposits being evaluated by Mano at Weaju and King George Larjor in Cape Mount County. Active evaluation, including drilling, of well known mining areas at Kukoya, in the centre of the country and Bukon Gedeh in the east, is now actively in progress by AmLib and Freedom Gold respectively.

Politics

The United Nations Security Council finally imposed sanctions on Liberia on May 7, 2001, following a suspension of six months to allow Liberia a final chance to comply with the UN's terms, primarily to stop assisting the Revolutionary United Front (RUF) in neighbouring Sierra Leone. The scope of the sanctions is fairly limited, being targeted on prohibiting the export of all rough diamonds, an arms embargo, the grounding of improperly registered Liberian aeroplanes and restrictions on the travel movements of 130 senior government officials and their commercial contacts.

Additionally there is a limited border problem. Liberian and Guinean dissidents are attacking towns either side of the border in northern Lofa County. This border conflict, where each country accuses the other of assisting the rebels of the other side to fight their own governments, has been in progress for several years. To coincide with the beginning of sanctions, several groups attacked from Guinea and attempted to make their way south towards Monrovia. Propaganda from rebel spokesman attempting to fuel unrest, tried to suggest they had penetrated further south than they had, including infiltrating Monrovia. But the population is tired of war.

They held marches, collected signatures and presented petitions to all interested parties. The government re-organised its defence forces, called up its veteran fighters and with assistance from local hunters in Lofa County, pushed back the dissidents and captured most of their weapons. An obvious attempt to de-stabilise the government in the eyes of its people has thus had the opposite effect and made the Liberian people more determined to emerge from their problems without resorting again to armed conflict.

The fundamental issue to be resolved in order for UN sanctions to be lifted is the conflict in Sierra Leone. Liberia has claimed that it has withdrawn all its contacts with the RUF and closed RUF offices and bank accounts in Monrovia. On its side, the RUF is actively engaged in dialogue with the elected government in Sierra Leone and peace talks have led to the deployment of the United Nations peace keeping force, UNAMSIL throughout the country. Disarmament, region by region, of the RUF and the Kamahjors (a pro-government militia), is now in progress. There are still hurdles of trust to overcome but with so much positive international pressure now focussed on solving the problems of this region, assessment of the position as far as mineral development over the next decade or so has to be very positive.

The Economy

The UN sanctions have not affected Liberia's main economic activities of logging agriculture and farming (including rubber), fishing, alluvial gold mining, shipping and general trading. In these sectors the wheels of economic activity continue to turn. Trade with neighbouring countries is on the increase. The three major sea ports at Monrovia, Buchanan and Sinoe are all operational and active, and the number of international flights into Roberts International

Airport (RIA) continues to increase, only being restricted by problems of being granted additional landing rights at Conakry, in the neighbouring Republic of Guinea.

Other aspects of the Liberian economy also remain vibrant. The foreign exchange rate has slipped by 20% to 50 Liberian dollars to the US dollar but is now again stable. Construction and re-construction of buildings continues, especially in Monrovia and as a result, trade in building materials such as cement, roofing sheets, building aggregates and sand, has also increased. A number of new international companies are starting to arrive, particularly in the telecommunications sector.

All of these factors point to the fact that, against the odds and despite all the pressures from the international community, the Liberian economy has remained reasonably sound. Thus forecasts for significant growth and a bright future over the next few years would appear correct, especially if the sanctions issue can be resolved in the next twelve months.

Mineral Development

The loss of its position as a major iron-ore-producing country in the 1960s and 1970s has not taken Liberia off the map as one of the least explored highly prospective countries in the world. Its geological setting, the typical Pre-Cambrian schist belt granite gneiss craton terrain, with Archaean rocks in the west of the country and Birrimian rocks in the east, provides very favourable prospects in terms of mineral potential and wealth. Liberia is believed, to have economic concentrations of iron ore, diamonds and gold, and is highly prospective for platinum, palladium, base metals, nickel, manganese, uranium and rutile and other heavy minerals in beach sands.

During the period under review, the Ministry of Lands Mines and Energy continued to promote and encourage large-scale local and foreign mineral exploration and exploitation

activities in the country. A new Mining Code has been put in place and, despite international adversity, the country was able to attract and maintain a number of mining and exploration companies.

Projects

Primarily, Mano River Resources Inc. continued its exploration activities on its main permits in western Liberia. Up to the present Mano has identified over fifteen targets for gold and carried out detailed evaluation on three of these targets, namely King George Larjor, Weaju and Gondoja.

An additional soil geo-chemical and trenching programme has shown that the 2,000 m long auriferous body delineated by a 2,500 m diamond drilling programme at the King George Larjor prospect is open at both ends. Soil geo-chemical programmes and limited diamond drilling have, similarly, shown that the Weaju prospect has very high potential over and above the 250,000 oz already inferred from preliminary drilling, with around ten times the tested strike length of mineralisation now having been demonstrated. Other targets under investigation, which should allow rapid improvements to the 800,000 oz of gold already delineated, include Soso Camp, Vaney Camp, Silver Hills, Bea Mountains and Gayama.

The programme of exploration for primary diamond production in alluvial diamond-mining areas is showing very encouraging results. Focusing on targets defined by the study of artisanal diamond-mining activity, a diamond indicator mineral survey has, within six months of commencing, delineated six kimberlites in the Wuesua area of the western Kpo Range. The first two have tested positive for micro-diamonds, and all show good indicator mineral chemistry and widespread artisanal mining of diamonds on top of the exposures of the kimberlites.

Besides Mano River, two other companies are active in Liberia:

1. Freedom Gold holds a 900 km² Mineral Development Agreement in one of the best known gold mining areas of the country, in Bukon Gedeh. Artisanal mining has been in progress in this area since the 1930s. The primary source of the gold mineralisation is a quartz vein stockwork within dioritic and grano-dioritic intrusive rocks. A 1,000 m diamond-drilling campaign has been completed to focus the exploration programme on primary gold mineralisation at the same time as attempts are being made to begin gold production from lateritised source rocks containing a surface concentration of gold.
2. America-Liberia United Minerals is in the process of an evaluation of the Kukoya gold field in Bong County. It has an exploration licence across 200 km² of a shear-zone hosted quartz vein deposit and the company has conducted a soil geo-chemical and trenching programme prior to the planning of a diamond -drilling programme intended for the 2001-2 field season.

Petroleum exploration

Since 1968 several companies have carried out exploration for oil along the continental shelf of Liberia.

In the period 1968-73, five exploration blocks covering an area of some 24,000 km² were explored, 16,711 km of seismic lines were completed and four wells drilled, two by Union Carbide to 3,145 m and 1,647 m respectively, one by Chevron to 2,897 m, and one by Frontier Co. to 1,706 m. These wells were located 19-26 km off Liberia's coast and hydrocarbons were encountered in all the wells.

As a result of a loan from the International Bank for Reconstruction and Development in 1981, J.C.Ferrand and associates completed 2,390 km of new seismic survey and completed a re-evaluation of existing data. As a result of this survey Amoco took four exploration blocks and completed three wells

to 414 m, 3,040 m and 3,475 m respectively. Because of the civil disturbance in the country, Amoco suspended work in 1987 and finally closed down operations in 1989. At this point a total of 27,950 km of seismic lines and seven test wells had been completed. The result of this work is that the Liberian continental shelf has been shown to have the correct conditions in that good Lower Cretaceous source rocks have been shown to contain hydrocarbons and potential structural and stratigraphic trap sites. However, experience from continuing exploration off the Côte d'Ivoire suggests that the survey had at this point not been conducted in deep enough water.

Following the result of an initiative by the Sierra Leone Government which signed a non-exclusive exploration deal with TGS/NOPEL, a joint American/Norwegian company, for the completion of a two-dimensional seismic survey of the Sierra Leone continental shelf, an in-fill survey was conducted for the eastern Sierra Leone shelf. An agreement was signed with the Liberian Government for the completion of the same style of survey for the potentially interesting continuation on to the Liberian continental shelf. As a result, a programme of 7,500 line km of two-dimensional seismic survey was completed in the deeper water areas of the Liberian continental shelf from September 1, 2000 to February 9, 2001. In the meantime, the Liberian Government had established, in 1999, the National Oil Co. of Liberia (NOCAL) as an independent entity to the Ministry of Lands Mines and Energy with the authority to develop Liberia's petroleum potential. At present the continental shelf is divided into eight exploration blocks which extend from the coast line into deep water and therefore cover the whole potential of the continental shelf. Onshore potential is also recognised.

Following the full evaluation of the survey which has been completed, offers will be invited for continuing exploration in the Liberian offshore area. It is intended that the present blocks will be re-defined and this will

be done in the light of the nature of the interest that oil companies show in the data.

Mineral Resource Development

Liberia lags behind many other African countries in the development of its mineral resources because of the time lost due to the ten-year period of civil unrest in the country ended by democratic elections in July, 1997. In spite of the obvious potential of the Archaean areas of mineralisation to emulate the recent performance of the Victoria

goldfields of Tanzania in terms of hosting large, high- grade gold mines, at present only artisanal mining of both gold and diamonds is in progress. Revenue intake for the government continues to be at a lower level than prior to the civil unrest. This is particularly true in the case of diamonds certainly because of the large-scale smuggling of the diamonds from the country. Present production is estimated at upwards of 500 kg of old and several thousand carats of diamond production per annum.