

SIERRA LEONE

*By Leslie Wright
Vice President (Exploration) Mano River Resources*

Following almost a decade of uncertainty and civil strife in the country, a ceasefire came into force on May 24, 1999 following the signing of a peace accord between the Government and the rebel movement, the Revolutionary United Front (RUF), the Lomé agreement. The RUF gained a share in government and its leader, Foday Sankoh, was given vice-presidential status and the chairmanship of a new Minerals Commission to control mineral development. A United Nations Monitoring force (UNAMSIL) gradually took over peace-keeping and disarmament duties in the country from the West African peace keeping force, ECOMOG.

The process was badly implemented and ground to a halt a year later. Fighting recommenced when poorly prepared UNAMSIL peace-keepers started to move into the diamond-producing heartlands of the RUF. Both sides blamed the other, the government and the UN said the RUF were impeding their mandate to ensure disarmament. The RUF said the government was dragging its feet over implementing the Lomé Agreement as regards vice-presidential status for Foday Sankoh; allowing the RUF to have a share in government and to form a political party; and most particularly, with regard to Sankoh's role in mineral development policy primarily related to the diamonds.

A year later, the RUF again had to be pushed back from entering Freetown, this time under British Army guidance. Foday Sankoh was again arrested and in exchange the RUF took many UNAMSIL peace-keepers hostage.

Following months of negotiations between the Sierra Leone Government and the RUF with the active assistance and co-operation of ECOWAS members, a much re-organised and strengthened UNAMSIL and the help of the international community, including the

British Army, new peace talks were held in Abuja and the process restarted. Over a period of time, regular dialogue and an increasing level of trust and co-operation between the parties have led to:

- the completion of the disarmament of the RUF and the government-backed Civil Defence Force (CDF/Kamahjors), with members of both groups now enlisting in the regular army being trained by UK military personnel;
- the holding of democratic elections in which President Kabbah and his Sierra Leone People's Party (SLPP), was re-elected with a large majority vote.

It now appears certain that Sierra Leone is facing a period of stability and peace during which significant international support, most notably from the UK, has been promised to rebuild the country.

Many lessons were learnt from the peace process. At the moment, the general atmosphere in Sierra Leone throughout all parties to the conflict is one of 'no more war, give peace a chance'. However, peace in Sierra Leone is at present ensured by thousands of UNAMSIL peace-keepers and the active, at battle stations deployment, Sierra Leone army throughout the country, with UK military and training personnel attached to each battalion. This is considered necessary because a number of groups in the larger region, with sympathisers in the country, are still fighting and borders are very porous.

There is now general recognition in informed quarters that there is a need to work both internally and regionally to recognise and solve problems to ensure lasting peace. Thus, alongside the process of internal dialogue, diplomatic efforts during the disarmament

process first worked towards a reconciliation between Guinea and Sierra Leone, sealed by a meeting of Presidents Kabbah and Conteh at the border. This followed disarmament of the area of Sierra Leone adjacent to the Guinea border and the deployment of UNAMSIL troops to the region. More recently, and following significant diplomatic activity, King Hussain of Morocco hosted a summit between Presidents Kabbah, Conteh and Taylor at which the Presidents agreed to work together for peace in the region, to respect each others country's sovereignty and to work towards the re-installation and development of the Mano River Union as a significant international body.

There is still a significant amount of work to be done. The borders, particularly those close to the 'parrot's beak' (where all three countries meet) continue to be very porous. However, there are encouraging signs that all three governments are increasingly applying pressure to bring an end to past practice of supporting rebel groups against each other. If this trend towards increasing co-operation and trust between the Presidents and countries continues, then it may well be that in future the summit between the Mano River Union Presidents in Rabat will be seen as the turning point in the quest for lasting peace in the region.

Economic Outlook

In the past, Sierra Leone's main exports included rutile, of which it was the second largest world producer, and diamonds; as well as fisheries and agricultural products. There was also an artisanal gold industry.

Rehabilitation of the rutile mine is seen by the government as of utmost priority. Rehabilitation has been under way for some months, with the operating company, Sierra Rutile (now controlled by MIL Investments SA, a company owned by Jean-Raymond Boulle), working with the government and international agencies in an attempt to move the process forward as quickly as possible. Plans are now being finalised on whether production will commence with one dredge or two.

Rehabilitation of the diamond industry has achieved most publicity because of the association made by NGO's between diamond-rich areas and conflict in Africa, with diamonds being seen as the main source of revenue to buy the weapons to fuel the war. In reality, diamonds have significant importance but are rarely the main means of acquiring weapons. Benevolent larger nations providing funds or weapons to either side in the conflict, (or peace keeping forces 'delivering weapons into rebel heartlands') can claim that role with weapons regularly being bartered, sold or captured by one group from another. Until more recently there have been very limited efforts undertaken to control or better monitor the weapons trade.

However, the UK Government, in particular, regards as a priority the developmental aspects of improving the productivity of artisanal diamond mining by the local population as a means of possibly raising living standards above subsistence level. A report from consultants Amco-Robertson Mineral Services, commissioned by the UK's Department for International Development, has outlined a number of options as to the way forward for assistance and re-organisation. The report was published in February 2002, and a consultant has been appointed to work with the Sierra Leone Government for a year on the finalisation and implementation of the proposals.

In parallel, the World Bank is funding a review of all aspects of the mineral development industry in the country. Although rehabilitation of the rutile mine is the priority in the short term, it is looking at the whole structure of the industry in terms of its ability to attract long-term investment in exploration and subsequently in the development of mines. Priorities include the legal framework, the Mining Code and regulations, as well as the structure of the artisanal diamond- and gold-mining industries. Several visits have been made in the past twelve months, with a large team of consultants visiting the country in February, 2002.

A conference on the future of the diamond mining industry, at which it is hoped all interested parties will be represented, is to be held in Freetown in September 2002.

Development of large-scale mining has to be the medium-term objective of all the assistance if the mining sector is going to make a significant impact on the economy of the country as a whole. The development of a formal mining sector in diamond areas can also be used as a catalyst to assist in changes in the artisanal sector. The government is very keen to encourage the development of DiamondWorks' Koidu kimberlite mining project and to encourage the return to the country of exploration companies. Most serious companies have maintained their licences on a force majeure basis and the government, wishing to encourage a rapid start-up of exploration activities, gave all those companies holding licences three months until mid-June, 2002 to put forward exploration plans for their permits.

In this respect, results just announced by Mano River Resources from an exploration programme conducted in February 2002, in its Kono licences giving positive results with regard to the potential for further kimberlites there, is seen as of great significance in helping to attract other investors. However, a well-designed mineral development programme aimed at improving the data base of the country is also considered an important step for the government to take. The Geological Survey has attempted over many years to interest funding organisations in such a programme, and a draft version of a proposal incorporating many of its ideas has been circulated to interested parties for comment.

The Kimberley Process

Sierra Leone and Angola established a diamond certification scheme before the formation of the internationally agreed Kimberley Process designed to formulate an internationally standard system to control diamond exports. Discussions on the scheme were instigated by the UN in response to NGO

pressure for some system of control to stop the trade in conflict diamonds. This is estimated by the UN to amount to some 20% of all diamond production, with Sierra Leone, Angola and the Democratic Republic of Congo considered as some of the principal sources of conflict diamonds. Interested governments, the diamond industry (represented by the World Diamond Council) and NGOs are participants in the process. In a separate initiative, the UN Security Council has voted to impose sanctions on all diamond exports from Liberia until a certification scheme is in place.

Whereas many of Sierra Leone's diamonds traditionally found routes out through other African capitals, the presence of a direct and legal route into the diamond markets through Freetown has resulted in an increasing number of diamonds now passing through the Government Gold and Diamond Office in Sierra Leone. However, Sierra Leone still believes it is losing diamonds to other countries such as Guinea and the Gambia, which do not yet have to certificate their diamond exports. For this reason they are looking forward to the full implementation of the Kimberley Process certification scheme due to be announced in the next Process meeting in Geneva in November, 2002 for implementation at the end of the year.

According to Sierra Leone's Minister of Mines, Mohammed Deen, revenue for official diamond sales was US\$10.7 million in 2000, as opposed to US\$1.5 million in the previous year. It would be interesting to know how this relates to the true production value for the region; some observers suggest that even this new level still represents only 10% of the value of Sierra Leone's true production.

Mining and Exploration

The highly prospective Archaean granite-schist belt terrain of the Leo Shield makes up 70% of the country. The mineral potential was recognised in startling fashion by geologists from the Geological Survey of Sierra Leone in 1926-30. Stream-sediment sampling picked up

occurrences of diamonds, gold, rutile, platinum, iron ore, chromium, bauxite, ilmenite, cassiterite and other minerals. The potential of the Continental shelf to host petroleum (following success in neighbouring countries) and diamonds has recently been recognised.

Although only artisanal mining of diamonds and gold is in progress at the moment, peace and the democratic re-election of the government should allow the industry to re-commence operations rapidly. Already, prior to the elections, significant progress has been made on the rehabilitation of the rutile mines, and a diamond indicator mineral survey conducted in Kono by Mano River Resources has produced positive signs that both kimberlite dykes and pipes remain to be discovered.

Diamonds

Selection Trust was the first company to undertake diamond mining in Sierra Leone and began production in the Kono field in 1935, signing an exclusive licence with the government. Most production was alluvial but three small diamondiferous kimberlite pipes and a number of dykes were discovered and they were mined to a limited extent. National Diamond Mining Corp. (NDMC) took over the mines from Sierra Leone Selection Trust (SLST) in 1970 but problems of illicit mining and security mounted, and NDMC went into liquidation in 1993. Since then only artisanal diamond mining has taken place.

Recent exploitation in the Koidu and Tongo areas has consisted of mining eluvial, alluvial and weathered kimberlite deposits by artisanal miners attached to one or other of the factions in the civil conflict. Considerable areas of ground have been extensively dug extending the worked area for at least several kilometres around the Koidu/Yengema area for instance. The Artisanal Mining Licence scheme, which allows for licences of one year to Sierra Leone nationals and majority-holding partnerships over areas of 25 acres, continued to operate normally over the south and southeast of the country throughout the conflict and is now being restored to the whole

country. However, local government (in the form of the Chiefs) is expected to play an increasing role in the issuing and policing of these licences and will receive part of the revenue through a Community Development Fund. A full review of the scheme is expected over the next 12 months with assistance from the UK and the World Bank.

In 1997, Mano River Resources, in co-operation with the government, proposed an exploration scheme for kimberlites in Kono. An indicator mineral survey was completed over the Nimini, Yengema and Njaiama Nimikoro licences during a two-month period between February and April 2002. Results are very positive with indications of kimberlite pipe source rocks south of Yengema, and the discovery of several new dykes. A follow-up exploration programme has begun.

The known kimberlite pipes and dykes have reserves to 600 m depth, estimated to contain 6.3 Mct at Koidu and 3.2 Mct at Tongo. DiamondWorks Ltd, which owns a mining lease over Pipes 1 and 2 at Koidu, was on the point of processing a bulk sample at the time of the coup d'état in 1997 and is now re-establishing its operation in the country, as witnessed by its recent joint-venture with Magma Diamond Resources.

There is considerable potential for offshore diamonds, and both Casierra Development Fund and De Beers have completed preliminary exploration programmes in the past few years.

Gold

Between 1930 and 1955, artisanal and semi-mechanised gold mining spread around all areas of alluvial gold in the main schist belts of the Sula Mountains, Kangari Hills, Nimini Hills, Loko hills and Gori Hills. Bedrock gold deposits were mined in semi-mechanised operations at Baomahun, in the Kangari Hills and in the Sula Mountains at Darakuru near Lake Sonfon and Yirisen. Local people around Lake Sonfon had for years been bringing gold from Mali and Guinea to perform ceremonies associated with the lake.

Gold mining largely ceased with the introduction of the Alluvial Diamond Mining Scheme in 1956, which allowed local people to mine diamonds legally for the first time. Gold exploration recommenced in the 1960s when the Geological Survey undertook drilling programmes for gold and base metals at Baomahun, Dalakuru and Komahun in the Nimini Hills. Harry Winston of New York undertook a programme of underground development and drilling at Baomahun in the late 1980s, established a pilot heap-leach pad and went into partnership to develop the deposit with Golden Star Resources of Canada. Subsequently, the work was interrupted by the civil disorder in the country and Golden Star pulled out of the agreement.

Following the election of President Kabbah in 1996, exploration and prospecting licences for gold were granted over almost all the known areas in the country prospective for gold. However, only a few companies commenced work, Mano River Resources and Golden Prospect being the most serious. The two companies have now signed a joint-venture agreement covering their respective adjacent Lake Sonfon licences, and have commenced an exploration programme.

Rutile

Rutile mining commenced in 1967 from mineral sands in the southeast of the country. During the period 1990-95, annual output of close to 150,000 t of ilmenite and 60,000 t of rutile represented 25% of world production. The operating company, Sierra Rutile, was owned by Nord Resources Corp. of the US and Consolidated Rutile Ltd (CRL) of Australia. The mine was closed during the period of civil unrest in Sierra Leone but has been maintained on a care-and-maintenance basis. Since 1996, three studies have been made for the re-opening and expansion of the operations, and a programme involving assistance from the European Union's Sysmin Fund and the World Bank has been proposed.

Sierra Rutile, has now been taken over completely by MIL Investments SA, a

company owned by Jean Raymond Boule, who has had a controlling interest in Nord Resources for some time and preliminary rehabilitation has commenced prior to re-opening hoped to be within about 18 months. Sierra Rutile is in the process of raising the estimated US\$114 million required for a restarting of operations with two dredges. Funding is expected from the IFC and OPIC (US\$50 million), CDC, DEG, ADB (US\$15 million) and the European Union's Sysmin Fund (US\$25 million) and with political risk insurance through MIGA.

Haz Care Mining Pty Ltd, a subsidiary of Consolidated African Mines of Australia, has given up on its application for a mining licence for rutile mining at Rotifunk and the project is passing to Sierra Rutile as an exploration licence. A feasibility study proposed a 7 Mt/y operation producing 36,800 t rutile, 38,000 t of high-titanium ilmenite and 34,800 t zircon. Measured reserves are 163.6 Mt at 0.48% rutile and indicated reserves are 44.3 Mt at 0.5%.

Bauxite

Bauxite is associated with weathering of hypersthene feldspar rich rocks of the Kasila Group which forms a NNW-SSE trending belt along the edge of the West African Craton. Sieromco (Alusuisse), began mining at Moyamba in 1963. Up until 1995, production was averaging 1.5 Mt/y at 55-56% aluminium. Sieromco has handed over control of the mine to the government in return for its liabilities and Sierra Rutile has now taken over the project on an exploration licence in the name of Sierra Minerals Holdings No. 1 Ltd. Many of the assets were destroyed during the civil unrest but Sierra Minerals Holdings operation is close enough to the rutile mine that it should be possible to keep costs down by sharing facilities such as workshops. There is an intention to restart production as soon as possible.

Dimension Stone

Olympus Mining Company Ltd. recently acquired by Matrix International, began a pilot quarry operation near Freetown in 1995 leaving in 1997. They have since returned and have cut

and polished some slabs of their 'black granite' for demonstration purposes. They also have licences in the south-east. A second company Swalford, has also taken out licences. It appears that South African-based dimension-stone companies are keen to establish a base in west Africa, believing that this will significantly reduce their transport costs to Europe, in relation to their costs from South Africa.

Platinum

Three exploration licences cover the Freetown Peninsula layered complex target for platinum. Olympus Mining have the smallest area at the end of the Peninsula but have made an application to conduct offshore exploration including airborne geo-physics.

Petroleum

Following geophysical surveys across the continental shelf of Sierra Leone, two oil wells were drilled in the early 1980s. Recent research has suggested that the oil trap structures are likely to be in much deeper water, and there has been renewed interest in the area.

The government signed a non-exclusive survey agreement in August, 2000, with TGS/NOPEC (of Houston, Texas and Oslo,

Norway, respectively) for a US\$3.5 million, 2,500 km line, two-dimensional seismic survey of the continental shelf. A follow-up programme of 3,200 km line of in-fill has also been completed for the central and eastern continental shelf area and the company followed this up with a 9,000 km line survey of the Liberian continental shelf.

The Government of Sierra Leone is in the process of reviewing its petroleum law to bring it into line with other petroleum-producing nations and, following this passing into law, will ask for bids for blocks of the shelf. This includes the possibility that a major explorer could take the whole region of interest. The government asked TGS/NOPEC to supervise this process on its behalf with a bid round proposed for late 2001, with successful tenders being advised by February, 2002. Follow-up exploration expected for the 2002-3 season would include three-dimensional seismic imaging and proposals for the drilling of wells. In the event, the announcement of the bid round was held back until after the elections and was made in May, 2002, with a closing date of end- March, 2003 and awards due to be made on April 30.