

## BURUNDI

*By Tharcisse Songore Ministry of Energy and Mines.*

This small country of 28,000 km<sup>2</sup>, land-locked in the trouble-prone Great Lakes Region of Central Africa, has been entangled in a bloody civil war between the Hutu and Tutsi ethnic groups since 1993, when the assassination of the first elected Hutu President, Melchior Ndadaye, triggered an unprecedented outbreak of violence. A peace process initiated by neighbouring countries in 1996 resulted in the signing of an 'Agreement for Peace and Reconciliation' by 19 parties in Arusha, Tanzania, in August 2000 and the installation of a broad-based transitional government, in November 2001. Despite the signing of the agreement, scepticism still prevailed among observers, since four Hutu rebel groups had refused to join the process. By the end of the year 2002, cease-fire agreements had eventually been signed between the transitional government and three of those rebel groups. While the international community is still urging the last rebel group to join the peace process, the groups which have already signed cease-fire agreements with the transitional government have not yet ceased their deadly raids on mostly civilian targets.

Burundi's political and security instability over the past decade has prevented the development of the single most important mining project, the Musongati laterite nickel project. Its development would have a significant impact on the economy of the country. In 1992, the project was the subject of a mining convention between the government of Burundi and Rio Tinto, the first such convention the country had ever signed. Ten years later, it is appropriate to look back and recall the evolution of the project.

Burundi's total laterite nickel resources evaluated to date are in excess of 250 Mt with metal content averaging 1.38% Ni, 0.07% Co and 0.12% Cu, most of which occur in the Musongati deposit. The mining convention between the State of Burundi and Rio Tinto in respect of Musongati was concluded in 1992. Due to the outbreak of violence following the attempted military coup of October 1993, Rio Tinto declared *force majeure* and put the project on hold until July 1998 when the company and the Government of Burundi agreed to terminate the convention.

Andover Resources NL, a junior company incorporated in Perth, Western Australia, jumped in and signed a convention with the government. In February, 1999, under the terms of the convention, Andover was granted an exploration licence to complete a feasibility study for the production of 45,000 t/y, 7,500 t/y and 2,500 t/y of refined nickel, cobalt and copper respectively. Pressure acid leach (PAL) technology developed by Dynatec/Sherritt was suggested as the preferred route to process the Musongati ore. At the time, similar projects were being developed in Western Australia, ie Murrin Murrin, Bulong and Cawse. Due to company restructuring, Andover Resources became a wholly-owned subsidiary of Argosy Minerals Inc. of Perth, Western Australia, in May 1999.

In April 2000, after barely completing the compilation of existing data on Musongati, Andover Resources NL declared *force majeure* for security reasons. The convention between Burundi and Andover provides that when *force majeure* occurs during the course of the feasibility study and lasts two years, both parties may agree to terminate the convention. If *force majeure* lasts longer than two years, the parties have a further period of twelve months to reach an agreement after which period, if no agreement is reached, either of the parties may terminate the convention by simply notifying the other party. In last year's review it was predicted that Andover would lift its declaration of *force majeure* before the end of the two-year period, ie April 2002. That is exactly what happened. In March 2002, Andover notified the government of its intention to lift *force majeure* and resume the work leading to the completion of the feasibility study, provided that the validity of its exploration licence was extended. The government agreed to extend the licence's validity until April 2004. As a result, Andover formally announced the resumption of activities and sent a delegation to Burundi.

During the period of *force majeure*, Andover Resources had been monitoring the progress at laterite projects in Western Australia, in which the revolutionary PAL technology seemed not to have lived up to the expectations of the process designers and project developers. A case in point was the Murrin Murrin project which had never reached the designed production capacity, and had substantial technical problems and cost overruns.

At the same time, Andover's geologists had familiarised themselves with academic studies of platinum group metal (PGM) mineralisation within the Musongati igneous intrusion conducted by university researchers in Canada and Belgium. The most interesting finding was that one deep borehole had intersected PGM-bearing disseminated sulphides, from 20 m to 280 m in depth. Assays on some individual 5 m intervals had revealed PGM (Pt + Pd + Rh) contents ranging from 1.5 to 5.4 g/t with an average of 2.9 g/t. These high PGM values, combined with mineralogical, petrographic and structural similarities between the Musongati intrusion and the Bushveld Complex led Andover's geologists to suggest that Musongati had a clear potential for hosting a major sulphide target in the layered ultramafic rocks underlying the nickel laterite deposits.

With the problems of the Western Australia laterite projects and the Musongati PGM potential in mind, Andover tried to convince the Burundi Ministry of Energy and Mines that the focus of the Musongati project should be shifted from the production of refined nickel, cobalt and copper by pressure acid leaching of lateritic ore to the evaluation of the PGM potential of the sulphide deposit which may (or may not) occur beneath the laterite deposits. From Andover's point of view, the unfortunate experience of laterite projects in Western Australia had demonstrated that PAL-based laterite projects were not economically viable. The Ministry of Energy and Mines insisted that the viability of the Musongati project could only be demonstrated by a detailed feasibility study as set out in the mining convention. Furthermore, the Minister recalled that the terms of reference of the feasibility study required Andover to

evaluate the recovery of PGM from the Musongati deposit, the evaluation of the PGM potential was therefore just one aspect of the study and could, by no means, be considered as an alternative.

From April to July 2002, a geologist from Andover visited Burundi on a couple of occasions to re-examine and re-sample selected borehole cores from a core warehouse in Bujumbura for future evaluation of PGM. At the end of July, Argosy made a public announcement that Andover had notified the Government of Burundi that it was re-imposing *force majeure*. "The current deterioration in the stability in Burundi and, specifically the risk to personnel within Burundi which prevents the timely conduct of the feasibility study has necessitated the resumption of the declaration of *force majeure*," announced by Argosy in a press release dated August 2, 2002.

Many observers in Burundi expected such an announcement to be made at any time since there had never been any substantial improvement in the security situation to justify the removal of *force majeure* four months earlier. The situation was even worse, as observed by the BBC World Service at the time: "...Argosy's decision comes despite fierce fighting in and around the capital Bujumbura, which has killed at least 29 civilians in the past three weeks." "You have to be pragmatic about mining in Africa." Mr David Russell, Argosy Manager of corporate strategy had said. It seemed that, with its exploration licence's validity extended, the availability of core samples to evaluate the PGM potential of the project and government officials reluctant to accept the shifting of the project's focus, Argosy considered that pragmatism was no longer appropriate.

Over the past few years, the Burundi people have been looking upon the Arusha process and the Musongati project as the means of achieving peace and prosperity respectively. While the Arusha process has gone a long way towards its objective, the Musongati project is now back to where it started ten years ago ie, an exploration licence held by a foreign company over the mineral resources, and the feasibility study to develop them stuck in an open-ended *force majeure* situation.