

**SIGMA** (formerly Canac Telecom), a leading edge telecommunications software company based in Toronto, signed a contract with Zambia's national telecom provider, Zamtel, in 1996 and is currently implementing it. The contract is purely commercial, without financing from development agencies or IFIs. Sigma's contract with Zamtel is evidence of the opportunities beckoning in the region for hi-tech Canadian firms willing to consider new markets.

Sigma predominantly serviced North American telecom and banking clients before it purchased Canac Telecom from Canac International in 1996. Canac International sold its telecom division as it refocused efforts on its core transportation consulting business. Through this calculated acquisition, Sigma inherited international commitments in Africa and Europe, including the delivery of the Zamtel contract.

How any Canadian company ended up in the bidding process for the Zamtel work is another story entirely. Through TEMIC – the Telecommunications Executive Management Institution of Canada – Canada's telecom industry runs periodic professional seminars related to various aspects of the telecom business. Funded by corporate members and the Canadian government, TEMIC has opened doors for Canadian telecom companies across the globe. The seminars specifically address the needs of senior telecom managers, engineers, and officials from the developing world. It was at such a seminar in 1994 that a Canac Telecom presentation made a favorable first impression on Zambian telecom staff.

Shortly thereafter, with Zamtel needing to modernize its telephone billing capability, Canac was invited to respond to a Request for Quotations in early 1995. After extensive evaluations of the technical and financial submissions of a number of companies, Canac was awarded the project and negotiations began to finalize the contract to install the TELCASE

Service Order and Billing System. As with any large project there were obstacles to overcome in the negotiations: schedules were fine tuned, legal agreements needed to be reviewed and reworked by both company's lawyers, and financing details agreed and finalized. By February 1996 ink was put to paper with Zamtel and by the end of 1996 Sigma contracted with Canac to implement the Zamtel project.

With completion scheduled for mid-1997, the TELCASE Service Order and Billing System now being installed will compliment the existing Zamtel computer network used to collect telephone toll traffic and modernize the processing through to customer billing and collection. The Zamtel staff are very capable and have a good understanding of computer systems as evidenced by their successful program of self maintenance on their existing hardware.

Technology transfer is always a significant issue when installing a computer system. To help with this transfer, Sigma is conducting training for Zamtel staff in train-the-trainer format. The training program will cover all segments including operating system, database management system, application software, hardware operations and end user training. In this way the fully trained trainers will be able to initially train the Zamtel end users, and also be available to conduct their own courses for any new staff or provide their own retraining courses where necessary.

For the Sigma staff, working in Zambia is a challenge due to the change in climate, food, culture and work environment. However, they have been welcomed by the management and employees of Zamtel who have provided assistance to Sigma whenever possible.

With a foot firmly planted in the region, Sigma is eyeing potential in Tanzania, Uganda, and Malawi, as well as elsewhere in Africa.

privatization, and other market liberalization efforts. Canadian companies like Noranda, Caledonia, Falconbridge, Teck, Indochina Goldfields, First Quantum, and Colossal Resources have either been involved in bidding on ZCCM assets or have other mining projects underway. A host of related suppliers and consultants – including Champion Road Machinery, McElhanney Consulting Services, Agra Earth and Environmental, and Albarrie Environmental Services – are also benefiting from

the re-emerging mining sector.

One particularly interesting story is that of Vancouver-based Colossal Resources. In 1995 Colossal acquired a majority interest in not a mine or property, but 8.5 million tonnes of the Nkana Slag Dump. By purchasing 60% of Qasim Mining Enterprises, a private Zambian company that initially made the deal with ZCCM for access to the stockpile, Colossal secured what is probably the largest proven cobalt deposit in the