

Drummond Ltd., a U.S. company, started production at the La Loma mine in 1995 and is expected to invest US\$ 1 billion until the year 2000 to produce up to 15 million tons of coal per year. Colombia's largest existing mine, Cerrejón, is half owned by INTERCOR, an Exxon subsidiary, and the state-owned CARBOCOL. Currently the government is interested in privatizing CARBOCOL sometime this year. A new entrant in the Colombian coal mining sector is London-based RTZ Corp., which bought a 75% stake in the Colombian coal producer, Oreganal. This company is hoping to increase their Colombian production from 500,000 tons per year to 6 million tons per year over the next 20 years. In the past, both Drummond Ltd. and INTERCOR have used geomatics services in support of their mining operations.

Colombia's territory has not been fully explored and potentially contains an abundance of commercially viable minerals. Colombia is currently the world's largest producer of emeralds and the sixth largest producer of gold, and has mining operations for platinum, silver, iron ore and nickel.

### **E) Mapping and Cadastral Services**

The Instituto Geografico Agustín Codazzi (IGAC) is responsible for providing national cartographic services. It is also responsible for providing national cadastral mapping services for the country, except for the municipalities of Santa Fé de Bogotá, Cali, Medellín and the state of Antioquia. IGAC is by far the biggest government organization that uses geomatics services. IGAC reports to El Ministerio de Hacienda y Crédito Público (Finance Ministry).

IGAC provides these services for the public, who must pay a fee to use the available data base of maps. They also provide these services to various government ministries and organizations. Some of the ministries that have used IGAC's services include the Ministry of Agriculture, the Ministry of Energy & Mines and the Ministry of National Defense. Some of the public organizations that have used IGAC's services include the Department of Taxation and Customs (DIAN) and the Colombian National Police. Any government organization can use the services provided by IGAC. However, if their requirements are not held in IGAC's data bases, the ministries and public entities must contract for the work themselves. IGAC acts as the general provider of cartographical and cadastral information and does certain agricultural projects, in which they determine crop development in select regions.

Approximately 50% of IGAC's budget goes towards work that is completed in-house. The remaining 50% of the budget is used to contract work for the Institute. Approximately 70% of Colombia has been mapped and there is an initiative underway, spearheaded by ECOPETROL and IGAC, to unify all cartographical information of Colombia under one system of symbols and under the management of IGAC. Currently, numerous private firms and public sector organizations have their own cartographical data base of information. At times, this causes duplication of services when one firm does not have access to another firm's more complete data, causing the company to contract out for the work.

In the past, IGAC has used the services of Canadian companies such as INTERA, RADARSAT, SNC-Lavalin Inc. and PGI. The Canada Centre for Remote Sensing (CCRS) has a memorandum of understanding with IGAC. (Please see Annex 2 under Support Services / Canadian Contacts). All of IGAC's contracts are