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CONTRIBUTION TO THE SURVEYING AND MAPPING OF THE COUNTRIES OF AFRICA

Report submitted by the Government of Canada

The Government of Canada has extended technical assistance in several forms to various countries in Africa, through the facilities of its Canadian International Development Agency, in response to their request. These programmes have consisted of major surveys and topographical mapping projects designed to meet immediate needs, the provision of survey advisers, the attachment of senior supervisors to working units in Canada for the study of Canadian methods and procedures and the provision of undergraduate and postgraduate training of survey engineers.

In Nigeria two major mapping projects have been completed, the first for 132 map sheets covering approximately 36,500 sq. miles and the second for 91 map sheets covering an area of approximately 34,000 sq. miles. The second programme also included the aerial photography of an additional 29,000 sq. miles and the large scale (township) mapping of Ibadan and Benin City. Two advisers were supplied to work with the Federal Surveys, one being a map production officer and the other a specialist in photography. The chief draftsman and several senior supervisors were attached to Canadian map production offices for periods of up to eight months observing the procedures and techniques followed there.

In Tanzania a project covering the production of 130 map sheets covering approximately 33,000 sq. miles of south-eastern Tanzania has been completed. This project included aerial photography, supplementary control and map production as well as large scale mapping in the Kilombero Valley for an agricultural development project. A second project requiring aerial photography, control surveys and map production of an area of similar proportions centred on Songea in south-western Tanzania is now well underway and its completion is expected in the coming year. A Canadian survey adviser assumed the responsibility of supervising the programme at the Survey School operated by the Surveys and Mapping Division for a period of approximately six years.

In Kenya a project involving aerial photography, supplementary vertical control surveys and map production is now in progress for an area of approximately 10,500 sq. miles, involving 39 map sheets of 1:50,000 topographical mapping. In addition, several technicians from the Survey of Kenya have spent periods of six to eight months with counterpart organizations in Canada studying their procedures and techniques. A second smaller project in Kenya provided semi-controlled mosaics based on the published 1:50,000 maps for an area of 2,400 square miles in the vicinity of Mombasa in Coastal Province.

Recently a 1:50,000 topographical mapping project was initiated in Ghana covering an area of approximately 24,500 square miles and involving 93 map sheets. The programme consists of aerial photography, supplementary control surveys and map production. It is anticipated that this programme will take three to four years to complete.

A major geological investigation is being carried out for the Imperial Government of Ethiopia in the Omo River area in south-western Ethiopia. Photographic mosaics at 1:50,000 scale of 119 map sheets embracing an area of approximately 32,000 sq. miles are being prepared to support this operation.

In Morocco professional and technical services are being provided for a project which will result in the establishment of a cadastre for an area of approximately 2,500 sq. miles, and will assist in its future development. The tasks include aerial photography, the definition of property boundaries, the preparation of plans and the collection of cadastral information.

A number of airborne geophysical projects are now in progress. In Cameroon, field operations for 240,000 line kilometres of airborne magnetometre work have been completed and the compilation is in progress. In Niger 165,000 line kilometres of airborne magnetometre and radiometric surveys have been completed and only the radiometric data remains to be compiled. In Upper Volta field operations for an airborne magnetometre survey of approximately 110,000 line kilometres have been completed and its compilation has begun. Preliminary arrangements have been made for an airborne survey covering approximately 475,000 line kilometres in the Ivory Coast, and it is anticipated that operations will be undertaken in the near future.

Photo geology projects have been undertaken in Niger and the Cameroon and these are now nearing completion. A project in the Ivory Coast covering approximately one half the area of the airborne survey is now under consideration.

Canada considers the training of new technicians and the provision of opportunities for more experienced technician staff to observe procedures used in Canada as an important phase in support of any project. The activities referred to in the above paragraphs in this regard are designed for this purpose.

Undergraduate training of survey engineers is an important long-term approach to the establishment of viable mapping organizations in countries which now have limited facilities. Over 50 students have come to Canada from different countries in Africa to receive this type of training.

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