

## Section 2.—Government Aid to the Mineral Industry\*

### Subsection 1.—Federal Government Aid

**The Department of Mines and Technical Surveys.**—The Federal Department of Mines and Technical Surveys, which came into being on Jan. 20, 1950, as a result of a departmental reorganization at Ottawa, continues the services, but in larger measure, rendered to the mineral industry by the former Department of Mines and Resources. The Department has five branches—Surveys and Mapping Branch, Geological Survey of Canada, Mines Branch, Dominion Observatories, and Geographical Branch. The Department's functions include the administration of the Emergency Gold Mining Assistance Act and of the Explosives Act.

*Surveys and Mapping Branch.*—The Branch provides the base maps required for use in the development of Canada's natural resources, produces and distributes all Canadian aids to navigation, is responsible for all legal surveys of federal lands, and provides a national system of levelling and precision surveys for use as geodetic control by federal, provincial and private agencies.

The Geodetic Survey provides the original surveys that form the framework or basic control for mapping throughout Canada and for engineering and surveying projects related to natural resources development. Survey stations are established at fairly regular intervals across Canada and are marked by permanent monuments whose latitudes, longitudes and elevations above mean sea-level are determined with a high degree of accuracy. The determination of geographical position by astronomical observations for mapping purposes in northern areas is being superseded by Shoran trilateration in which the adaptation of radar is meeting with success.

The Topographical Survey provides base topographical maps that show all significant natural and artificial features fundamental to the study and economic development of mineral and other natural resources. The Topographical Mapping Section is responsible for the field surveys that provide ground control for mapping from aerial photographs, and the Air Survey Section plots and produces maps from these aerial photographs. The National Air Photographic Library indexes, preserves and distributes prints for all aerial photography done by or for the Federal Government. The Topographical Survey administers the Canadian Board on Geographical Names.

The Legal Surveys and Aeronautical Charts Division makes and records legal surveys of federal Crown lands in the Yukon and Northwest Territories, the National Parks and Indian lands and reserves. This Division prepares and distributes aeronautical charts (the preparation of the base maps for which involves planimetry derived from tri-camera aerial photography and altimetry derived from radar measurements), flight manuals and electoral maps.

The Canadian Hydrographic Service is responsible for the charting of the coastal and inland navigable waters of Canada, the analyses of tides and tidal current phenomena and the investigation of water-surface elevations of the St. Lawrence-Great Lakes waterway. The resultant data are published in the form of official navigation charts, volumes of Sailing Directions, Tide Tables and Water Level Bulletins.

\* Revised under the direction of Marc Boyer, Deputy Minister, in the Editorial and Information Division, Department of Mines and Technical Surveys, Ottawa.