

when advances are made, and by prudent limitations in the amount of advances on unthreshed grain.

"I would like to make it clear that the Resolution does not anticipate legislation which in any way will interfere with the Prairie Grain Advance Payments Act, which provides for cash advances on threshed grain. The proposed legislation will have a limited operative period and will be supplementary to the legislation now on the Statute Books...."

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### GRADIOMETER UNVEILED

The world's first airborne gravity gradiometer, a Canadian development, has been unveiled to leading scientists from all over the world and the Canadian public.

A closely-guarded classified instrument, the gradiometer has already proved effective in hitherto unannounced major aerial surveys throughout North and South America and Africa.

The gravity gradiometer will be a vital aid in:

1. The search for essential oil, gas and minerals, by providing fundamental gravity data revealing geological structure.
2. The determination of the true shape of the planet, information necessary for the navigation of nuclear submarines, inter-continental ballistic missiles, rockets and "space ships."

Dr. Hans Lundberg, internationally-recognized geophysicist, recently demonstrated the device in Calgary, Alberta, to the first international symposium of arctic geology sponsored by the Alberta Association of Petroleum Geologists.

Scientists say the gradiometer will be extremely valuable in the Canadian Arctic. The Canadian Government recently announced a crash programme to map the continental shelf of the Arctic and survey the natural resources of the Arctic islands, about which, it is recognized, the U.S.S.R. knows more than Canada. Vast concessions have recently been granted in the Canadian Arctic to petroleum exploration companies.

The gravity gradiometer was flown to Calgary from Toronto in one of the survey aircraft operated by Lundberg Explorations Limited. En route, the gradiometer recorded changes in the earth's gravity in the mineral-rich Precambrian Shield and across the sedimentary basin of Western Canada to the Rockies. Results of the Toronto-Calgary flights and local flights were made for the benefit of the scientist-delegates and proved of considerable interest.

The gravity gradiometer was developed in the Toronto research laboratory of Lundberg Explorations, who intend to operate it around the world. Half a million dollars were spent in developing the device in research over the last three years alone. Extensive testing has removed the "bugs".

The gradiometer is basically a sensitive electric balance composed of two substantially similar masses suspended on thin filaments one above the other. A variable condenser is located near the two masses. When the instrument is flown over density differences, the masses change their relative positions. This movement may be measured electronically with considerable accuracy, to a hundred millionth of a centimeter. Geological masses or conglomerations of masses that have different densities from their surroundings are thus identified by movement of the electrical mechanism. The instrument's sensitivity is such that it will detect a few million tons of iron ore at a height of 500 feet and relatively small but potentially oil-bearing geologic structures under favourable conditions.

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### COMMISSIONER FOR NIGERIA

It has been announced by Mr. Howard C. Green, Secretary of State for External Affairs, that Mr. T. LeM. Carter of the Department of External Affairs has been appointed first Canadian diplomatic representative in Nigeria. Mr. Carter, who will take up his duties in Lagos in April, will bear the title of Canadian Commissioner, which will remain the designation of the head of the Canadian post in the Nigerian capital until the country becomes independent.

Mr. Carter has served in several diplomatic posts, including Warsaw, where he spent a two-year term as Chargé d'Affaires. During 1957-58 he was the Canadian Member of the International Commission for Supervision and Control in Vietnam. Last year he attended the Imperial Defence College in London.

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### REGIONAL PRICE INDEXES

Eight of the ten regional consumer price indexes were lower between November and December 1959, with decreases ranging from 0.1 per cent in Saint John to 0.5 per cent in Saskatoon-Regina and Edmonton-Calgary. The indexes both in St. John's and Montreal were unchanged.

Decreases in foods were mainly responsible for changes at the total level. Food indexes were lower in all ten cities, with declines ranging from a fractional 0.1 per cent in St. John's to 2.0 per cent in Saskatoon-Regina. Shelter indexes rose in seven cities, were unchanged in two, and declined in the other city. Clothing indexes showed mixed results, as five regional-city indexes were up, three were down, and two were unchanged. Household-operation indexes were higher in seven cities, lower in one, and unchanged in the remaining two centres. "Other" commodities and services indexes were higher in four cities, and unchanged in six.