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DEFENCE AND THE NORTH

An address by the Minister of National Defence, Mr. Ralph Campney, to the Empire Club of Toronto, Toronto, April 12, 1956.

The time is long past when any one nation can, by itself, guarantee the peace of the world. But the time now is when one nation might quite easily, by itself, destroy the world. Such has been the development of unprecedented, almost unbelievable powers of destruction within the last few short years.

What we choose to call conventional weapons have been overtaken by atomic possibilities, and atomic possibilities are now themselves quite overshadowed by thermonuclear weapons.

And no one should confuse atomic with thermonuclear weapons. Thermonuclear weapons are as much more devastating than atomic weapons in their effect as atomic weapons are more destructive than conventional weapons. Atomic weapons spell devastation. Thermonuclear weapons mean annihilation.

Our hopes for permanent peace in the face of these dismal and foreboding facts rest more and more on the growing unity and strength of the free nations. This means in effect that it depends largely on the success or otherwise of the North Atlantic Treaty Organization or NATO as it is called. It may prove possible for 15 nations working closely and effectively together to accomplish what none of them could hope to achieve singly. It will prove possible if we all give to NATO that continuing, energetic and all-out support which it requires -- which indeed it must have if it is to ultimately relieve us of the continual threat of war.

We Canadians have nearly always shown a good sense of proportion in adjusting ourselves to rapid changes, whatever their nature, in peace as well as in war. The whole amazing record of Canada's achievements and development in recent years affords abundant evidence of our ability in that

respect. And our ability to find a middle road has proven one of our greatest assets.

In the last ten years our population has increased by nearly one-third and now stands just short of 16,000,000. Of this increase, some one and a quarter million people are new Canadians who, since 1945, have come to this country as immigrants. At least one out of every four of these new Canadians has made his start here in greater Toronto.

The past decade, too, has witnessed the greatest period of industrial expansion, prosperity and general well being in the history of our country. Canada's gross national product has risen from less than twelve billion dollars in 1945 to more than twenty-six billion dollars last year and throughout that period we have consistently been one of the top trading nations of the world.

During two world wars and action in Korea we have demonstrated beyond peradventure that prosperity has not made us soft and that freedom is regarded by all of us as dearer than life itself.

This is a record of which Canadians may indeed be proud, and as we look hopefully forward we think we see Canada ending the twentieth century as one of the world's major powers. But however much we enjoy the progress, the growth and the prosperity which are ours, all this marvellous advance will avail us nothing if it should end in an atomic ashheap.

National defence therefore becomes supremely important to all Canadians -- to every individual -- to you, and to me, and Canada's defence policy must continue to rate top priority in our national consideration as well.

What is our defence policy? On what basis does it rest? Since all-out war, unleashing as it would the full fury of modern thermonuclear weapons, can only result in unimaginable death, destruction and misery, it becomes obvious that our basic policy must be directed to the preventing of such a war starting at all.

It is our duty, therefore, as Canadians to contribute everything we can, within the limits of our ability, toward strengthening the deterrent power of the free world. This has come to be known as the "policy of the deterrent."

To make such a deterrent policy effective means that we, and our allies, must build up such strength as will enable us to retaliate against any attack so swiftly and so surely and with such awful destructive force that no nations will dare to invoke all out war for fear of being itself destroyed. The development of such strength has already, for

several years, called for great and continuous effort and sacrifice on our part. It will continue throughout the foreseeable future to require more and more of the same.

We can hardly hope to understand or fully appreciate the twistings and turnings of the Soviet mind as it rings all the changes from sweet plausibility to bitter anger and unreasoning rage.

But we ought not to be deceived as to the real aims and purposes of Communism. The record in that respect is very clear. And we do know one thing, that the Soviets understand and respect strength. We must, therefore, if we would hope to prevent all out war, continue to lead from more and more strength.

That is not to say that we should not ceaselessly and sincerely seek a solution of all our difficulties by peaceful and diplomatic means. But we had better be cautious and careful and sup with our adversaries, when we must, with a long spoon.

May we now for a few moments consider Canada's contribution to that deterrent to which I referred a few moments ago.

The immediate and over-all aim of Canada's defence programme and planning is, of course, to provide for the security of Canada itself. Defence -- like charity -- begins at home. And any defence effort is based on military and scientific preparation, the extent of which at any given time and under any given circumstances is determined in the last analysis by the will of the people by democracy in action. Obviously, particularly in peace time -- and we are today living in a time of peace troubled and uncertain thought it may be -- democracies tend to look more to the development and prosperity of their country than to military preparations for its defence.

Following demobilization and readjustment after World War II, our active forces numbered less than 33,000 in all. Today we have some 116,000 officers and men in the regular forces maintained in a constant state of preparedness. The maintenance of such sizeable standing forces in time of peace is something new for this unmilitary nation and reflects very clearly the realistic approach of the Canadian people to the potential danger which threatens the world.

In our modernized Royal Canadian Navy, ready to protect our shores and the sea lanes, we have 44 war ships in commission with 35 in reserve and 20 under construction. The army has at home three infantry brigades and a mobile striking force as well as a brigade in Europe. The Royal Canadian Air Force maintains 17 regular squadrons in Canada and 12 in Europe.

Nine of the regular squadrons in Canada are fighter squadrons equipped with long range, all-weather CF-100 jet fighters. In addition, there are in Canada's regular air force three maritime squadrons, four transport squadrons and one photographic squadron.

And, of course, each of the three services is supported by its reserve components. I can assure you that no effort has been spared in making these forces the very best that human ingenuity and patriotic devotion can achieve.

Canada has always been an active member of the United Nations, which has as its primary aim the preservation of peace.

Under the aegis of the United Nations in Korea Canadian service men, through dedicated service and sacrifice, helped to clearly demonstrate that aggression can be halted by collective action. In the Korean conflict which added such lustre to Canada's military record, some twenty-seven thousand Canadians served in Korea during the period of active hostilities, of whom three hundred and twelve made the supreme sacrifice and twelve hundred were wounded in action.

Canada is a charter member and has always been a constant supporter of the North Atlantic alliance.

The North Atlantic Treaty Organization was born out of the threat to peace in Europe during the late 1940's at a time when the Soviet Union was seizing control of nation after nation, one by one. NATO originated and remains a great and constructive experiment in international relations, designed to provide security on a collective basis. Under the treaty, pursuant to a very simple covenant, an attack upon one or more of the NATO members in Europe or North America will be regarded as an attack upon all. No longer will it be possible for an aggressor to pick the free nations off one by one.

Almost everything Canada is doing in the realm of defence constitutes an integral part of NATO's great co-operative effort.

The build up of our forces at home, the provision of an infantry brigade group and 12 squadrons of fighter craft in Europe, our contribution to the cost of providing airfields, pipelines, communication and the like in Europe -- known by the horrible name of infrastructure -- our provision of mutual aid in the form of military equipment to the extent of almost one and a quarter billions of dollars, including our NATO air training scheme for training aircrew for our allies -- nearly 4,000 have been trained already -- all of these represent substantial and effective contributions to the strength being developed by the NATO countries.

When General Gruenther, the Supreme Allied Commander of NATO forces in Europe, was in Ottawa last month he spoke in the highest terms of the Canadian forces in Europe and of Canada's overall contribution to NATO as well, with particular emphasis on the great morale building effect of our effort on our European allies. We are playing our part in the NATO picture and I believe with General Gruenther that we are playing it effectively and well.

In North America we are engaged with our neighbour to the south in establishing a comprehensive air warning and defence system. Now that the Soviet Union has discovered the secret of the hydrogen bomb and has developed the means of delivering it to North America, this project becomes increasingly urgent.

Time was when attacks on North America, if at all, would only be diversionary attacks to tie down this continent's forces which, in the event of war, would probably be urgently required in Europe. All that has now been changed, and we are faced with the real possibility of an attempt to strike a crippling blow by air on our two countries for the dual purpose of destroying our industrial potential and destroying the retaliatory capacity of the United States Strategic Air Command on which so much depends, not only from our own point of view but for the safety of the whole NATO alliance.

We must not ignore the threat thus poised. Indeed, we must seek to meet it effectively, and this we are actively endeavouring to do. Along with the United States we are building an integrated system of air defence for the North American continent in which Canada and the United States each plays its respective role.

Effective air defence requires adequate detecting apparatus, adequate communications and adequate attacking power to seek out and destroy invading planes.

For some time, as you know, we have been building an integrated warning and communications system to serve a threefold purpose, should the need arise -- to alert fighter aircraft to the approach of hostile bombers, to warn the civil population of that fact, and to enable the powerful United States' strategic bombing force to get off the ground and on its way to carry out its crippling, devastating, retaliatory blow at the enemy.

The joint Canada-United States radar warning and control system consists of four main parts: the Pinetree system, covering the industrial heartlands of Canada and the United States; the Mid-Canada early warning line, roughly located along the 55th parallel of latitude; the distant early

warning or DEW line, located generally where the continental land mass meets the Arctic Ocean, with extensions on both flanks of the continent into the oceans on either side.

The day before yesterday I returned from a 10,000-mile flight through northern Canada and the Arctic regions examining the progress being made in construction of both the DEW line and the Mid-Canada lines.

I was accompanied on this trip by Rt. Hon. C.D. Howe; Hon. Jean Lesage, Minister of Northern Affairs and National Resources; Mr. Charles Wilson, Secretary of Defence of the United States and Mr. Donald Quarles, Secretary for Air of that country, as well as by Hon. Douglas Stuart who is just finishing his term as United States Ambassador to Canada.

It proved to be an intensely interesting, revealing and inspiring experience.

What is going on in that vast, barren, sparsely populated area today staggers the imagination. And it is all being done in spite of a multitude of tough problems -- problems of transportation and of construction -- problems arising from the severity of the climate -- from the vast distances involved -- from the permanently frozen conditions -- and from these and a dozen other problems which hamper and delay.

Incidentally, I had the unusual experience of flying across Canada's Far North without touching Canada at all -- I left from northern Greenland by air in the morning and landed in northern Alaska in the evening, having crossed in the interval the whole of that vast, fascinating area which constitutes Canada's Arctic northland.

The construction by the United States government of the most northerly early warning line -- the DEW line, as it is called -- will constitute, if ever its story can be fully told, one of the greatest epics in the history of the Far North.

The United States Air Force, the Western Electric Company, the general contractor charged with its construction, and the thousands of workers and suppliers under their direction, will certainly have every reason to be proud of their achievement. Throughout all this vast effort, they have received the close co-operation of the Canadian armed services and of Canadian government departments and agencies. Perhaps, as I cannot disclose very many details of the construction and supply effort which is going into the DEW line at this time, it may give you some idea if I tell you that one distributing centre in the Arctic which I visited is being served by eighteen civil air lines. Including USAF and RCAF planes, over one thousand planes landed there last month -- an average of well over thirty a day.

Perhaps somewhat less dramatic but equally important to our defences -- and even more significant, perhaps, to Canada's economic progress as it rolls the map northward -- is the building of the Mid-Canada line. This also we saw at close hand earlier this week as we inspected key sites on the ground and from the air, and saw something of the marshalling of supplies and materials needed for this great enterprise. More than 1,200 men are working on the Mid-Canada line and thousands more are working to supply and equip it.

The building of this line is entirely a Canadian undertaking. The rapid way in which the little known sub-Arctic hinterland of Canada is being opened is evidence of the imaginative and effective way in which the RCAF and federal government departments, the management contractor, the Bell Telephone Company, and the other Canadian contractors are working together on this huge assignment.

As I have just seen it at close hand over one thousand miles of its extent, I should like to tell you something about the Mid-Canada line, the culmination of many new ideas in construction, communications and transportation.

I well recall the first conferences to study the problem of providing this vital element in the continental warning system.

Our experts began, of course, by studying the map of Canada - Northern Canada. And in so doing they were forced to consider the difficulties they would face in building this line across the sub-Arctic. Around Hudson Bay especially, the terrain and climate conspired against any intruder: in winter, forbidding trackless wastes and cold; in summer, impassible bogs and muskeg -- and mosquitoes, large alike in size and in number.

Each area presented special problems. Ungava in the east was slashed across by its innumerable lakes, rocky ridges, scrub forests and bogs. The James Bay area in summer was mired down in muskeg, with many lakes and surprisingly large streams. The coast of Hudson Bay, because of shallow waters, was almost unapproachable. To the west, the muskeg merged again into wooded country, at first hilly, and then, in the far west, vast areas of high, forbidding, almost unexplored mountains.

It was evident, of course, that cold would challenge the builders' ingenuity, but transportation above all was the great and continuing problem. The construction of the Mid-Canada line would clearly involve many of the harrowing problems which in earlier years plagued the pushing of the Hudson Bay Railway to Churchill, the building of the Alaska highway and the opening of the Knob Lake country.

If ever there was a Canadian construction project in which the difficulties all argued against action, this was it. However, the RCAF was not to be daunted, and in this enterprise they found determined allies in government and industry.

Once we had decided to push ahead with it -- and this was less than three years ago -- dozens of sites had to be chosen along 2700 miles of little known and inadequately mapped territory. Aerial photography by the RCAF and large-scale maps by the Canadian Army made possible the preliminary selection of sites. Next, came the ground survey and siting parties to verify or improve on the locations, both from the construction and electronic points of view. Then came the designing of the buildings for the various types of stations and to meet the special conditions of the country.

The building of the Mid-Canada line is a notable construction story, but above all, it is the story of transportation. Each phase of the project has depended on getting the supplies, material and construction workers to the right place at the right time. If -- as well it may -- the building of the Mid-Canada line becomes one day a part of Canadian folklore, accounts of these journeys and hauls will, I am sure, be longest recalled and recounted to succeeding generations.

Many means of transportation have been used in the trek northward: ship, train, truck, and tractor train, airplane and helicopter. The eastern and central areas have been, by the nature of their terrain, most difficult to traverse.

At Moosonee, for example, there was, at one stage, a great marshalling of 9000 tons of freight that had to go forward this winter and spring by tractor train over the trackless wastes to a desolate site near Hudson Bay. Where no road existed, one was built -- surely one of the most extraordinary roads ever made - the Snow Trail, a wide, smooth highway of packed snow and ice, taking the tractor trains north for 500 miles along the western shores of James Bay and Hudson Bay.

To build this road a survey party first set out, followed by Indians on snowshoes, then by snowmobiles and, finally, by tractors and tractor trains.

The Snow Trail is melting now and may not be needed again, and the tractors are striving to reach their summer bases before they mire down in the muskeg. But for further advances into the north there is now a new transport technique -- thanks to the ingenuity of the Mid-Canada engineers.

Experimentation is the mark of this project. Studies are being made of a great balloon-tired vehicle, with wheels 8 to 12 feet in diameter, which might replace the much slower tractor train. To traverse the hitherto impassible muskeg, the "muskeg buggy" and other amphibious vehicles are now being tried out.

The difficulties of the Hudson Bay beaches too have presented special problems. For transport of fuel to several beach sites, miniature Pluto lines -- on the same principle as those used for the Normandy invasion -- might have to be run on the seabed for several miles off shore to tankers; or in other cases fuel lines had to be used that are specially designed to float on the water.

Many Mid-Canada sites have lakes nearby, thus making summer airlift possible. And when these lakes are frozen, ice air strips can be developed for winter supply. A study of lakes adjacent to stations has also had to be made from the point of fresh water supply. Many lakes freeze solid during the long Arctic winter, and such solid freezing would, of course, render them useless as a source of water supply. It becomes, therefore a matter of considerable importance that a deep lake be found near each station to ensure unbroken water supply.

In a project of this magnitude, forward planning is all-important. As the line's sites are being developed, the equipment for them is being tested, perfected and scheduled for delivery when the line is ready to receive it.

The line will consist of dozens of unit detection and warning stations, with a number of main stations. Stations will vary in size, requiring, in the initial period, from two men at unit stations to more than one hundred at main stations.

It has been decided to man the line in large part by civilians under contract. Hundreds will be hired and trained for this important task. While it is proposed that civilians will operate the line, operational control will, of course, remain the responsibility of the RCAF.

An advanced training course for RCAF and civilian personnel was started several months ago. The third of the basic training courses for technicians to install and test the line is now proceeding.

For testing and training purposes, two simulated line sections of the line have been developed; one at Montreal some time ago; and the second in the Ottawa Valley, now nearing completion. The Ottawa Valley test system, in its main and subordinate stations, will provide an excellent training ground for technicians needed on the line.

In addition to the building of the Mid-Canada stations, there is being built along the line a multi-channel communications system. The Mid-Canada line is also being tied into the vast communications network now being thrown across Canada and into the Arctic to link all elements of the warning and interceptor control system for United States and Canadian military and civil defence purposes.

The Mid-Canada line is being built in spite of awesome difficulties, with the same kind of persistence, endurance and ingenuity which in earlier days pushed Canadian railroads across unmapped territories and through formidable mountains.

It is a sombre thought that such costly and elaborate arrangements are required today and are indeed essential for purposes of defence.

But we can hope that because the invader is being closely watched for, he may never come. In any event, we all can be sure that this activity in our northland will have its peace time usefulness too.

In solving the many, many problems of supply and construction on difficult terrain and in a climate of extremes, Canadians are learning how to build, how to work and how to live in the rigorous north. We are learning that by adaptation, by effort and by skill, the sub-Arctic can be made habitable.

The old concept of the "frozen" north as an inhospitable forbidding wasteland of snow and ice is giving way to the new concept of the north as a land of opportunity, of challenge and of hope. Vistas of great promise are opening for a sturdy, enterprising people, and I envision a new era of promising expansion for Canada -- a surge of development perhaps as spectacular as that which opened the west at the turn of the century.

Canada's northland yields much wealth but it can yield far, far more. In recent years there has been a wave of mineral exploration and extraordinary development. Recent discoveries have included such a variety of minerals that it appears the northland may prove to be very rich indeed in mineral wealth.

Development has been hindered up to now by problems of distance, transportation, climate and terrain but, as I have said, the ingenuity of man is overcoming those problems. We are mastering the hitherto untameable north. And the establishment of the northern early warning lines, which are designed to meet the threat of thermonuclear war, is providing air transport bases, tractor roads, communications systems, and even community centers which will be of incalculable value to peaceful pursuits and industrial development.

In conclusion may I say that while I have been talking of defence, all our efforts are really being directed solely to the preservation of peace. Canadians have no aggressive designs against any other country or its people. We love our land, but we do not covet any other's territory. We will never attack anyone. We wish only to live at peace and help the rest of the world to live at peace.

We are, in short, dedicated to the determination so well expressed by Prime Minister Eden and President Eisenhower in the recent Washington Declaration:

> We shall help ourselves and other to peace, freedom and social progress, maintaining human rights where they are already secure, defending them when they are in peril, and peacefully restoring them where they have been temporarily lost.
>
> We can have no higher ideal than that.

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