

# What to Read

MORE ABOUT THE NORTH. Two easily available pamphlets on the same subject to be found in the BEHIND THE HEADLINES series:

- Canada—Crossroads of the Airways
- Canada's Last Frontier

The latter of these is also by Trevor Lloyd and is a more detailed study than the present article. Both these pamphlets can be obtained free of charge from the Canadian Legion Educational Services.

OF THINGS TO COME. Each week study pamphlets are issued to be used by the groups listening to the CBC series "Of Things to Come" on Tuesday evenings. Find out from your Education Officer how to get them.

OUR NEXT ISSUE. The next issue of *Canadian Affairs* is due on March 1st. The leading article will be "Canada as a Pacific Power" by A. R. M. Lower. On March 7th the CBC Citizens' Forums discuss "The New Relationship with Soviet Russia", on March 14th "The Rise of Asia". Read the pamphlet, listen to both broadcasts.

**CANADIAN AFFAIRS PICTORIAL.** To follow this issue, *Canadian Affairs* is putting out its first Pictorial, a 34" x 46" sheet illustrating the New North. It contains many pictures and two maps, one to show the strategic position of Northern Canada, the other a larger version of the one in this booklet. If you haven't already seen the Pictorial, ask your Education Officer about it.

*Articles which appear in Canadian Affairs should be regarded as expressing the views of the individual Canadians who write them. These are not necessarily the views of the Department of National Defence, the Wartime Information Board, or any other Government Authority. Indeed, occasions will arise when in order to complete the picture of some aspect of wartime life an issue will present opposing views of different authors on one subject.*

*Canadian Affairs is published for the Canadian Armed Forces by the Wartime Information Board. No part of this publication is to be reprinted without permission of the Wartime Information Board.*

OTTAWA  
EDMOND CLOUTIER  
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY

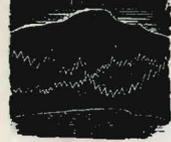
PRINTED IN CANADA, 1944

## THE NEW NORTH

By TREVOR LLOYD



# CANADIAN AFFAIRS



## Northern Crossroads

Long before Hitler's day, another would-be world conqueror cast greedy glances at Canada's North. It was no less a strategist than Napoleon.

He didn't have a Haushofer with a Geo-political Institute to put ideas into his head. He had just read the travelogue of that great explorer, Alexander Mackenzie. So he called in Marshal Bernadotte, and tossed him the job of attacking eastern Canada from the rear by way of the watercourses described by Mackenzie!

What Napoleon took for a back-door to Eastern Canada is now becoming our front-door to air-connections with the world.

Its military importance in this war is clear from the string of airports from Edmonton to Alaska; the Alaska highway; the now famous "Canol" pipeline; and other projects yet unpublished. Its commercial importance for the peace to come may be even greater.

Think of radium ore, flown nine hundred miles south from Great Bear Lake, to be refined and sold at \$25,000 a gram. Think of the Great-Circle routes between the world's largest population-centres, passing through the Canadian north.

What possibilities does this open up in our hitherto forgotten northern wilderness? What are its natural resources? What people live there, and under what conditions?

Dr. Trevor Lloyd's article may help you to answer some of these questions. He writes as a scientist, not as a prophet or a booster. He gives you facts to help you form your own judgment. And he throws in views to help stimulate your own thinking.



If you have any comments, write the Editor, *Canadian Affairs*, Wartime Information Board, Ottawa. Your letters will not be for publication. We want your suggestions, so we can do a better job.

The war has opened up a new country up North. What is its future? Here are the basic facts, told by an expert.

## The New North

By TREVOR LLOYD

### WHY IS THE NORTH STRATEGIC?

WESTERN Canada was first settled from the Arctic. For a hundred and fifty years following 1670, the traders, trappers and settlers of the West knew that the most direct route to Europe lay through the Arctic seaway of Hudson Bay. Yet in spite of nearly sixty years of political campaigning for development of "The Hudson Bay Route", the Arctic still has only a romantic appeal for most Canadians.

Now world forces are at work compelling us to take serious notice. Our southern neighbours, encouraged by the larger American airline companies, are projecting their minds, and many of themselves, across the undefended boundary, across the populated parts of the Dominion, and on into the North. New maps are being produced to show that airline routes in the northern hemi-

sphere no longer run where we thought they ran.

#### *Look at the Map*

To Canadians a polar map is at first something of a shock. Accustomed to thinking of ourselves as rather away from the beaten track, we find that we are heirs to a central location in the world of tomorrow. It demonstrates that the Japanese in the Aleutians were half way between Tokio and San Francisco—and on the shortest route between the two. The direct line from Ottawa to Chungking is across the North Pole. The airline from Vancouver to the north of Scotland crosses the centre of Greenland and Iceland.

The map also alters our impressions of distances. For example, a student at the Navigation School at Rivers, Manitoba, is in the centre of a circle which

passes through Tokio, Fiji, Natal in Brazil, Benghazi, and Novo Sibirsk in Siberia, all of which are about 5,000 miles away from him.

### *A Small World*

Coupled with these new ideas of direction and distance comes another product of long range flying. The world has become remarkably small. The first round-the-world voyage, by Magellan's ship took 1,083 days to complete. That was 420 years ago. Three hundred years later fast sailing clippers had reduced the time to 160 days, while by 1872 Jules Verne is describing a journey around the world in "Eighty Days".

In 1929 the airship "Graf Zeppelin" took only 20 days and 4 hours while within ten years the American flier Howard Hughes covered almost 15,000 miles in a

A native of Wales, Dr. Trevor Lloyd studied in British and American Universities, travelled widely through Europe, taught in Canada and in the United States. Exploratory trips down the Mackenzie Valley have given him a first-hand knowledge of Canada's North. He has written on that subject for technical journals like the *Geographical Review* and popular magazines like *Maclean's*. He is now a member of the Department of Geography at Dartmouth College, New Hampshire.

round-the-world flight in less than 4 days. Planes have flown from Australia to the United States in a day and a half and the record across the Atlantic to London is about 400 minutes. Today Ottawa is about 30 hours by air from Bombay, while Winnipeg is only 23 hours from Tokio.

These figures are of importance to everyone. Now there are no longer any remote lands, soon there will no longer be unfamiliar peoples. Diseases as well as ideas will be carried on the world's skyways. Willynilly every nation will be the keeper of every other. Internationalism is no longer something that one favours or dislikes. It has happened.

Among the nations that will be most affected by these changes is Canada. Newspapers and magazines are already reflecting popular interest in the subject. How does all this concern our eleven millions of people scattered over half a continent? Are our leaders aware of these changes in world relations brought about by modern flying? What are they doing about it?

### *Air-Bridges Start in Canada*

If we look at a globe, we shall discover that the main centres of population are in the northern

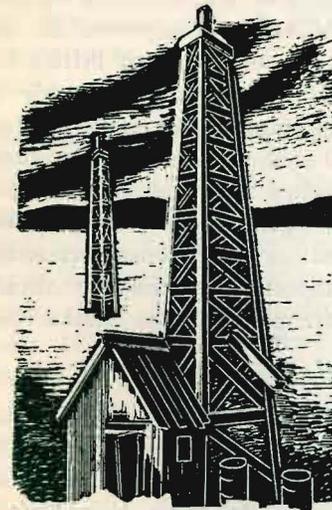
hemisphere. None of them is north of the Arctic Circle and few of them are in the Tropics. The ten largest cities lie between latitude 23° N and latitude 66° N, and of the 33 cities in the world with a population of more than a million, all but 7 are in the same region.

This means that today, and for a long time to come, most passenger and freight travel keeps to the northern hemisphere. The shortest distances for flying between these populous areas are in northern latitudes, either across

the Arctic Ocean or along its shorelines.

About a quarter of the land surrounding the Arctic Ocean is Canadian. Most of the remainder is Russian. Two great air bridges run out from North America—one across the Atlantic to Europe and the other northwestward to Asia. The former leaves Canada in the lower St. Lawrence region, while the latter crosses the Yukon to Alaska and Siberia. In a world of air transport, Canada has a strategic location second only to the U.S.S.R.

### WHAT RESOURCES UP NORTH?



What do we know about Northern Canada? Remarkably little! In the first place it is very large.

One can fly due north from Ottawa for 2,700 miles without leaving the Dominion. Flying for 18 hours at 150 miles an hour, after the first hour one would be over virtually unexplored territory. A seaplane can take off from Goose airport on the coast of Labrador and, flying westward for 2,200 miles, never be out of reach of a lake on which to land in an emergency. This vast northland contains the second longest river in North America, the Mackenzie, and the two largest lakes wholly within the Dominion, Great Bear Lake, and Great Slave Lake. It is enough to

add that the peacetime population was less than 18,000 to emphasize that we know little about it in any detail and that it is largely unsettled.

### *Furs—and Minerals*

The first white men went to the northwest in search of furs. Trapping and trading are still the chief occupation of most people there. We hear of the spectacular advance in mining in recent years. But it hardly touches the lives of the Indians at all. About 150,000 square miles have been set aside for them in the Mackenzie river basin alone—a huge preserve for furs and game. Fish, which are an important source of food for both the Indians and their dogs are plentiful in lakes and rivers, although commercial fishing is not yet extensively developed.

All of the spectacular rushes of settlers to the Canadian Northwest have been due to mineral discoveries. Each time the tide of enthusiasm has receded, some have remained to carry on mining, trapping, or trading, so the white population has increased slowly. Important mineral discoveries have been of four main types. (1) Gold and silver. (2) Radium and uranium. (3) Lead, copper and tungsten. (4) Oil. While a wide variety of other ores have been

located they have not yet been commercially exploited.

### *Gold-Rush and Retreat*

The mineral that attracted world attention to the Yukon was gold, found in the gravels of the upper Yukon river and its tributaries such as the Klondyke. The rush, which began in the late summer of 1896 brought probably 30,000 newcomers to the region in a couple of years. In a short time most of the pioneers withdrew and the industry was concentrated in the hands of companies able to use scientific and large-scale methods of dredging.

As road and aeroplane communications are improved in the Yukon and northern British Columbia there will probably be important new mineral discoveries. All of the Yukon has been photographed from the air. Government geologists are mapping new land as it becomes accessible. Prospecting parties are already scattered along the Alaska road.

### *Oil*

Oil discoveries near the Mackenzie river began the modern period of mineral exploitation east of the Rockies. Although the presence of oil had been known for a long time, the first well was not drilled until 1920. It was

about 50 miles north of Fort Norman on the right bank of the river, 75 miles south of the Arctic Circle. Other wells were put down with varying success in the years that followed, but the small field only became of commercial importance when mining on the eastern shore of Great Bear Lake offered a profitable market nearby.

Between 1932-1942 production was carried on each summer. In 1941 it reached the modest total of 24,000 barrels. Before wartime operations, referred to later, speeded up the industry, the chief markets were mines at Port Radium and Yellowknife. Some oil was sold to diesel vessels plying the Mackenzie and to Eskimo schooners at the mouth of the river.

### *Radium—\$25,000 Per Gram!*

Metal production in the Northwest, apart from gold, silver and lead in the Yukon, has been a recent development. Two settlements have become important since 1930. The first grew up on the east shore of Great Bear Lake following the discovery of pitchblende, from which radium is refined. By 1933 the first producing mine was concentrating silver ore and pitchblende for the long haul to refineries, one of which was in Ontario.

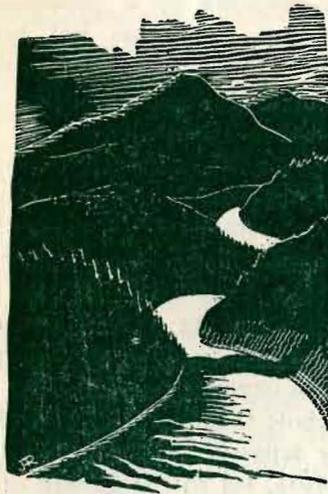
Valuable as was the radium produced from this mine, perhaps its chief merit was that it weakened the world radium monopoly and cut the price to about one third. The discovery led to proposals that the radium as a vital medical product should be mined and marketed by a government company. This has just been done. On January 28th last, the government announced that it had bought up all the shares of the Eldorado Mining and Refining Limited and would operate it as a Crown Company. In 1939-40 the production of this mine was worth about \$2,391,000.

Gold mining at Yellowknife has proved to be of more widespread importance to the north as a whole than has any other pre-war activity. The work, begun in 1938, led to the growth of a town of more than 1,400 persons about 600 miles north of the nearest railway. It has a well-equipped hotel, stores, movie theatres as well as a church, hospital, post office and school. Up to the end of 1943 about \$13,000,000 worth of gold had been refined. The war has temporarily reduced gold production here to almost nothing. Shortage of labor and materials and the more urgent need for base metals are the reasons

Yellowknife is in that part of northern Canada where the soil is poor, most of the surface is exposed rock or swamp and the timber has been badly burned over. As a site for a settlement it is not

good and cannot compare with many along the Mackenzie river. Yet it has proved that if economic reasons for northern settlements exist, life in them is practicable and can become enjoyable.

### NATIVES—WARDS OR CITIZENS?



All of the aboriginal population of the Yukon were Indian except for a small number of Eskimos along the northern Arctic coast. Yukon Indians now number 1,700. Within the Northwest Territories the same was true although the number of Eskimo was greater. There are about 4,300 Indians in the Mackenzie valley and very few in other parts of the Northwest Territories. They dress like the white men. But they keep

the beaded moccasins and mitts of their forefathers. From trading posts they get staples like flour, sugar and tobacco. Other foods they get through hunting, fishing and collecting.

While the appearance of the northern Indians to the casual observer is not a particularly happy one, they are not now dying out. Disease still takes far too heavy a toll and careful examination would probably reveal widespread undernourishment. Education and medical care are supervised by the government, but are in practice mainly in the hands of the Anglican and Roman Catholic missions. Canada's Eskimo population is now more than 7,000.

#### *There Are Two Ways*

More and more Canadians are asking the question—Are we doing all that we should for the native peoples whose country we have taken over? Few dare to answer with a confident yes. Many frankly do not know, but are uneasy. Some, in the light

of the experience of the Danish Administration in Greenland, of the Norwegian and Swedish policies in Lapland and of the remarkable efforts of the Soviet Union in Arctic Siberia, are certain that the answer is no.

There are two ways of treating native peoples. They may be kept isolated from civilization. This takes extraordinary care, a thorough scientific study of their ways, money and an informed and enlightened electorate. It also means that natural resources in lands occupied by them sometimes cannot be developed. Alternatively the natives may be considered as potential citizens.

### WHAT THE WAR DID TO THE NORTH



#### *Natives Can be Trained*

In Canada we have followed the former policy, but in a half-hearted and hesitant manner. As a result there has been some exploitation by white men; there is disease, neglect and undernourishment; and no serious attempt has been made to train, for example, the Eskimo in manual skills for which many of them are well suited.

If the far north is to be developed, co-operation of the native peoples will be needed. Such training will take several years. A beginning should be made by choosing some intelligent youths and attaching them as apprentices to northern air bases.

The white population of the Yukon was, before the war, about 5,000. Most of them lived in three areas, around Dawson, Whitehorse and Mayo. In the Mackenzie valley they are concentrated in a few settlements such as Fort Smith, the administrative centre, and Fort Simpson, both of which were originally fur trading posts, and in the new mining towns of Port Radium and Yellowknife already referred to.

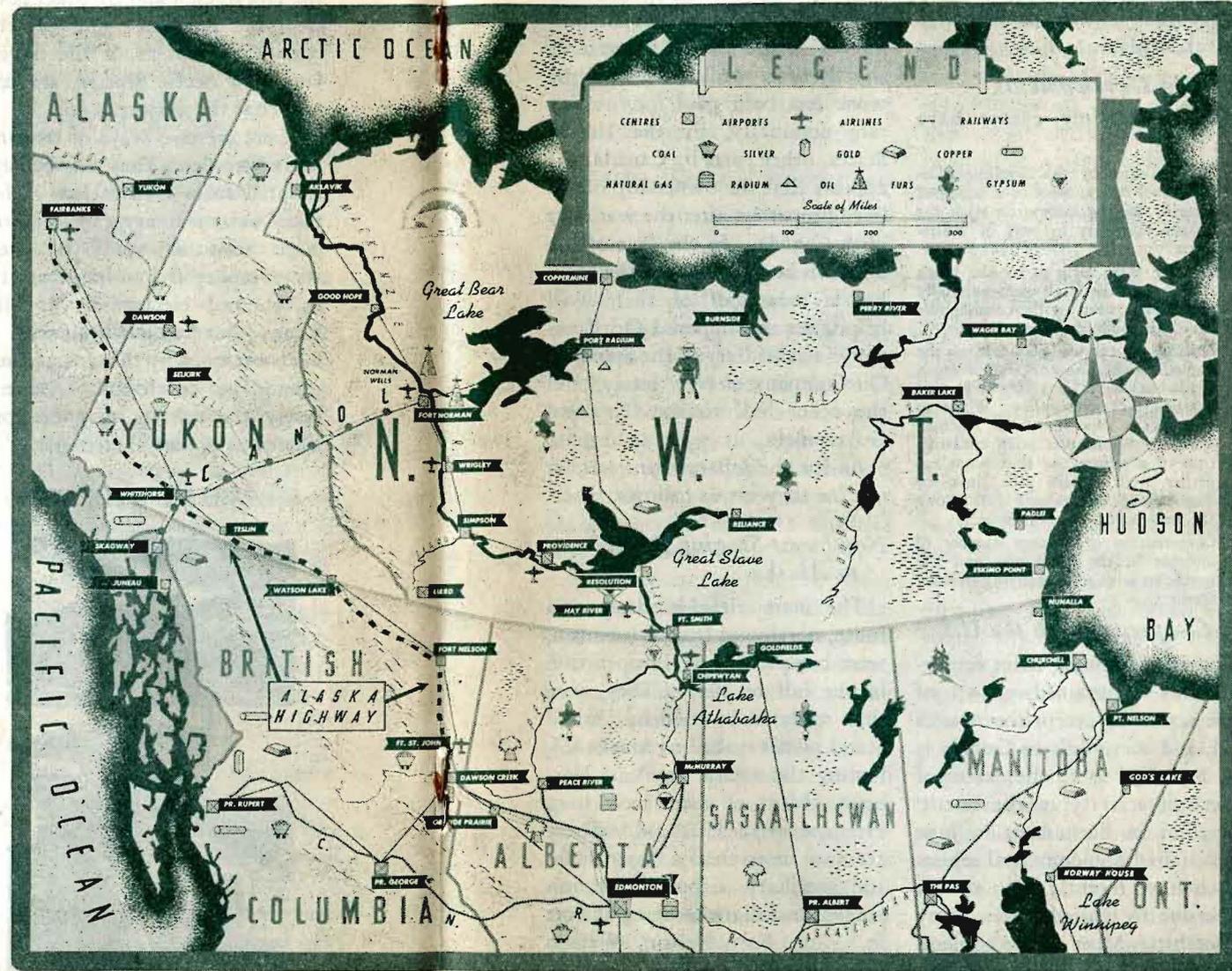
Administration was formerly of a paternalistic type. Increase in the number of white people has

# CANADA'S NORTHWEST

led to some reforms. There are now two locally elected school boards not affiliated with any church. But there are barely the elements of provincial administration. The Yukon is governed by a Commission of three, although effective administration is in the hands of an official appointed by the federal government. There is one member of Parliament for the Yukon, none for the Northwest Territories.

Into this rather backward, and in many ways primitive society, war came with particular force. Accustomed to neglect, the people of the north, especially of the northwest, suddenly found themselves among crowds of contractors' laborers, thousands of troops and more elaborate mechanical equipment than they had dreamed could exist. They had been without adequate trails. Now they found themselves supplied with a military road. Their rivers had heard for years the painful thrash of stern wheel steamers built a generation ago. Now they became highways of commerce used by large and powerful diesel tugs and strings of newly built barges.

A profound change has come over parts of the North. Although the pessimist may prophesy that the result will only be bigger



empty holes and larger piles of rusting machinery when the latest pioneers have withdrawn, many believe that a permanent change has taken place.

### *The Big Developments*

The outstanding events have been these:

1. The building by the Dominion Department of Transport of a string of airfields linking Edmonton with the Alaska boundary by way of Whitehorse.
2. Linking these airfields by the much touted "Alaska Highway"—actually a military road with considerable limitations except in winter.
3. Drilling of oil wells at first in the immediate neighbourhood of Norman Wells but later over a very large area in the Mackenzie valley. Plans to construct a pipe line from Norman Wells to Whitehorse with construction of a refinery at that point together with certain pipe lines for distributing the refined fuel along the new road. (Canol Project).
4. Construction of a large number of airfields in the northwest and the northeast with accompanying weather stations.

### *We Co-operate with the U.S.*

For a long time a strict censorship was maintained on all of these activities except the Alaska road, and the public in Canada is still mystified as to the extent of American activity in the north. Questions in Parliament in June 1943 elicited non-committal replies which have recently been shown to be due to United States Army censorship. Most of the projects were undertaken on the recom-

mendation of the Canada-United States Joint Board on Defence, at the request of the United States Army. Present arrangements terminate at the end of the war or shortly afterwards. Some of the work has been paid for, at any rate nominally, by the United States, other parts by Canada. It appears that the ownership of the fixed properties after the war rests with Canada. In the case of the oil wells being drilled in the Mackenzie area half of them will belong to the Imperial Oil Company (a subsidiary of the Standard Oil Company of New Jersey) and the other half to the Canadian Government.

As for the separate projects, in outline they are as follows:

### *Northwest Staging Route to Alaska*

The main airfields along this route, northwest from Edmonton, were completed and in operation in the fall of 1941. They were thus ready to be used by United States planes rushed to Alaska following the attack on Pearl Harbour. Most of them have been extended with U.S. aid. There are now more than a dozen main and auxiliary airports, the important installations being at Fort St. John, Fort Nelson, Watson Lake and Whitehorse. Civilian

planes operate along this route, as well as U.S. and Canadian military planes. The airports are controlled by the R.C.A.F. It was recently announced in Washington that military aircraft have been flying over this route to the Soviet Union for many months.

### *Canada-Alaska Military Road*

Selection of a route for a military road to Alaska was influenced by the existence of this line of airfields. The road runs from Dawson Creek, the end of the railway in northern British Columbia, to Whitehorse where it is linked to the Pacific coast by a railway running to Skagway in Alaska and by a road nearby. From Whitehorse the road runs westward to the Alaska border en route to Delta and Fairbanks.

Tremendous difficulties have been encountered in building the northern stretches of the road. They are not yet permanent, being liable to destruction by flood, muskeg and frost. The route is not used to supply Alaska although through traffic has been possible in winter. While not planned as a scenic highway, the road passes through beautiful country. It should facilitate the opening up of mineral discoveries and the extension of farming in the area.

### *"Canol"*

Mention has been made of a small oilfield discovered in 1920 at Norman Wells. The shortage of shipping and the heavy demands for oil in Alaska led to an American suggestion that more wells should be drilled and the oil pumped about four hundred miles to the Alaska roadway. With customary enthusiasm and enormous resources, the United States Army in the summer of 1942 set to work to find oil. Troops were moved in to handle much of the freight, new barges were built to transport the drill pipe and other heavy equipment the 1,200 miles down the Mackenzie waterway from the end of steel at Waterways, and Imperial Oil Company drillers worked all summer and on into the winter.

The contractors building the pipe-line were confronted with completely unfamiliar conditions, and as plans were not made in advance the work went ahead slowly. The project was begun in May 1942 and was to have been completed by October 1942. It may be operating by July 1944. Oil wells have been drilled that are said to be capable of 8,500 barrels a day.

Whether or not oil produced through this "Canol" project makes any appreciable difference

in the Yukon and Alaska, the Mackenzie area will have been "opened up" to a remarkable extent. Winter trails have been cleared, very large construction camps exist, and there are now more modern shipping facilities on the rivers. Practically every settlement between Waterways and Norman Wells now has a large landing field. All this is bound to have great influence on developments after the war.

### *Air Routes in the North*

Mention has already been made of the northwest staging route to Alaska, which is also a main road

through Canada to Asia. However, the most striking air developments have been in northeastern Canada where Goose Airport on the coast of Labrador (belonging to Newfoundland) has under Canadian direction and control grown into one of North America's main air bases. Although designed primarily for wartime ferrying operations, its location is so good for flying at all seasons, and it is so strategically placed with respect to future world air routes, that its post-war maintenance seems assured. Air bases also exist in Northern Quebec and Southern Baffin Island.

## WHAT FUTURE FOR THE NORTH?



There are three main schools of thought.

The first believes that when the war ends there will be a gradual, or hurried withdrawal from the north, both by American armed forces and civilian contractors employed by them. Believing that the area does not justify the expenditure of large sums, Canadian authorities will allow it to return to a state of neglect. Mineral production may have been stimulated slightly by wartime activities, but these people believe that on the whole little permanent change will have taken

place. The northern market for bulldozers and jeeps may be flooded for a generation, but things will settle down as they did after earlier booms such as the Klondike gold rush and the Norman oil rush a generation later.

The second school of thought casts a suspicious eye upon the activities of Americans in the north. Deprived of any exact statement about their numbers, it prefers to believe the worst, and refers ironically to the "Army of occupation". This school believes the north to be not only of strategic importance because it controls the routes from the United States to Europe and Asia, but also because of its inherent wealth of natural resources. Emphasis is laid on the American agreement to prospect for oil in 600,000 square miles of the Mackenzie and Yukon area, of the sometimes rather possessive attitude of army and civilian personnel, and of the presence of American scientists and airmen throughout the whole of the North. When reference is made to Treaty obligations of the U.S. government, clearly stating that the activities are for the duration only, the attitude of American air-lines and manufacturers of planes who speak of their nation "ruling the air of tomorrow" is offered as a reply.

### *A Job Ahead of Us*

By contrast to these two opposed schools is a third. It agrees that the north has been neglected in the past. There was no one to lobby for it at the seats of government, and immediate return for capital invested did not seem to be forthcoming. It was looked on as a national liability and maintained on a shoestring. However, this situation was changing even before the war. Canadians were becoming aware of their northern inheritance and some were already a little conscience stricken about the neglect of the native peoples. It is pointed out that early in the war while Canadians were busily occupied fighting the war overseas and working in the factories at home, it was convenient as part of a North American plan for the United States to be invited into Canada to carry out certain war projects. They had the available materials and the surplus money and manpower. That was a temporary undertaking.

### *Lick Into Shape!*

The time has now come, it is felt, when the schemes can be gradually liquidated. At the conclusion of the war, when a large number of skilled young men and women will be released from war-

time activities, there can be a large scale assault on the north. It could be like that carried out in the Soviet Arctic Through use of large bases built for war purposes, with highly skilled air personnel and adequate aircraft, with ample shipping and the benefit of wartime experience, it should be possible, to lick the north into shape in a generation.

Following carefully laid plans of exploration and research, backed by all the resources of the Dominion, we could soon take the measure of a region that has baffled others for three hundred years. If there are valuable mineral resources hidden on the Precambrian Shield or among the Arctic

islands, they will be found. If there is a practicable northwest passage for shipping, using modern ice-breakers, it will be charted. If scientists need large permanent northern bases from which to operate, they will be maintained. If the Eskimo and the Indian can be trained, as the Russians appear to have shown, to take an active and intelligent part in modern society, it shall be done. Such people believe that the north offers a challenge that young Canadians can answer. If so, there will be no need to allow this vast portion of the Dominion to fall into neglect, nor will it be necessary to turn its exploitation over to others.

### Answers to Quiz

1. False.
2. True.
3. True (Ottawa to Aklavik is roughly 500 miles farther).
4. False (there are about 5 times as many Indians in Ontario as Indians and Eskimos in the Territories).
5. False.
6. True.
7. True (55° F.).
8. False.
9. False (Great Slave Lake is half as big again as Lake Ontario).
10. False.

# Notes for Discussion

## *The North in the News*

Our new North is very much in the news these days. Stories of the Alaska Highway, the Canol project, the big construction developments in the Yukon and Mackenzie Valley have stirred the imagination of nearly everyone. It shouldn't be hard to develop an interesting discussion on the points raised in the article.

Here are half a dozen varying opinions of the sort often heard expressed. Any one of them is good for an argument; the answers to most of them, so far as answers are possible, can be worked out from the article.

## *Different Views*

"Northern Canada is a wilderness, with an extremely cold climate and few useful natural resources. Time and labor spent in developing it would be wasted."

"The United States has spent a lot of money and sent in a number

of men to work there for the past two or three years. They should be encouraged to continue the work and be given control of any areas they need."

"Long distance air routes of the future may cross the Polar regions. Northern Canadian air bases built during the war should be maintained as part of them."

"The Soviet Union has tackled the problem of Northern conquest by new techniques. Canada should send men to the Soviet Union to find out what they are doing."

"Young Canadians should be encouraged to train as scientists, explorers and administrators to assist in opening up the North."

"Our new North may turn out to be a storehouse of mineral wealth. Its resources should be developed as rapidly as possible."

## QUESTIONS AND ANSWERS

Here are a few more formal questions and some remarks on each.

### *1. How do you think the development of the North should be carried out?*

NOTE: The first point is to find out what its resources are. All kinds of estimates are made about what can be done in our North. The point is that they are all estimates. We have to get some facts. Even the soil is largely an unknown quantity, to say nothing of the mineral resources.

Of course a great deal of surveying and prospecting has been done, especially since the war, but a great deal remains to be

done. There are large waterpower resources in the N.W. Territories, estimated at 285,000 horsepower. There are large oil reserves, an estimated pool of 100,000,000 barrels. Gold and silver, radium, lead, copper and tungsten are all there. But where, and how much?

Who will carry out this survey work? Who will pay for it? Is it to be left to individual initiative? Should the resources

of the government be mobilized to find out as far as possible what is up there? Who will develop them, and for what purpose, when they are found?

## 2. What is the future for Eskimos and Indians of the New North?

NOTE: The Eskimo population of the Northwest is about 5,000, and the Indians number some 7,000. A fairly sizeable group in all.

Read again what the author says in the third part of the article.

He considers that in dealing with native peoples there is a choice of two methods of approach. The first is that of trying to keep them native, setting them apart in reserves, allowing them to lead their own traditional life. To do this, quite large areas have to be set aside for them. Native game reserves in the N.W. Territories cover about 600,000 square miles, an area about the size of Quebec. Difficulties may arise if mineral wealth is found in such a reserve. The scheme may break down under pressure from people who want to develop the mines.

The other choice is to educate and train the natives as ordinary Canadians on the same basis as anyone else. That sounds easy but requires a certain amount of planning, special schools and equipment. Obviously they can't learn overnight how to

## 3. What do you know about Canol?

NOTE: Here are some additional facts about the project. Bear in mind that many details are still not available to the public.

A four-inch pipeline is being laid from Norman Wells on the Mackenzie River, to a refinery at Whitehorse in the Yukon, more than 600 miles away. Whitehorse is connected by rail with Skagway, on the coast in U.S. Territory, and by river boat with Dawson City, and so on to the Bering Sea. It is also on the Alaska Highway.

Ten pumping stations will be required to force the crude oil across the Mackenzie Mountains. This line can carry only 3,000 barrels a day, but the existing wells will probably produce three times as much. Geologists believe that the Mackenzie Valley contains large oil reserves.

The Trueman Committee of the United States Senate has criticized the project on the grounds that it cost too much, that more oil could have been got to Alaska

Those are all provocative questions. Ones for which no exact answer can be given, but all ones on which we can have opinions.

read and write, how to handle machinery. But there is no reason to expect that they can't learn.

A government bulletin on the Territories states: "Eskimos are good mechanics and with a little coaching quickly learn to run, take down and keep in repair quite complicated marine engines." They have "a mechanical frame of mind that permits them to take advantage rapidly of labor-saving devices".

The question of self-government comes into the picture. The Yukon has a local government composed of a Controller and three elected councillors. They also send a member to the House of Commons at Ottawa. The N.W. Territories are governed by an appointed council which sits in Ottawa.

If there is any considerable growth of population in those areas there would obviously be some change in that set-up. Would you argue that Eskimos and Indians should be excluded from taking part in local government? The problems to be discussed would certainly concern them.

much more cheaply and much more quickly by freighter from California, and that the contracts with the oil company concerned were "improvident". The Committee is not satisfied that American interests are protected after the war. It is argued that the line should have followed another route.

The U.S. Army undertook the project by arrangement with the Canadian authorities. The Army has defended the project on the grounds that when it was undertaken a state of emergency existed, Japanese attacks on Alaska were expected and it did not look as if oil could be shipped by sea. Oil was needed regardless of the cost in dollars. They add that a reserve of 100,000,000 barrels exists and that they are assured that the field can produce up to 20,000 barrels per day.

The pipeline was to have been finished in January 1944 and the refinery by March. The total cost will be close to \$150,000,000.



# Northern Highlights

## A Quiz

### TRUE OR FALSE?

1. The Canol project enables *river boats* to pass from the Mackenzie River to the Yukon River.
2. The Northwest Territories are *larger* than the combined areas of Ontario and Quebec.
3. By air it is *farther* from Ottawa to Aklavik than from Ottawa to Vancouver.
4. The Indian population in Ontario is considerably *smaller* than the combined Indian-Eskimo population of the Yukon and Northwest Territories.
5. The Norman Wells Oil Field is *farther north* than the port of Murmansk in the Soviet Union.
6. Part of Canada is *north* of the Magnetic North Pole.
7. In July the mean temperature along the Upper Mackenzie Valley is *about the same as* in northern Gaspe.
8. The Northwest Staging Route is an *old stage coach route* of gold-rush days.
9. Lake Ontario is *about twice the size* of Great Slave Lake.
10. The St. Lawrence River is *longer* than the Mackenzie.

(Answers to Quiz on page 16).