REVIEW IN REVIEW

About a year ago—all too briefly—words and a few pictures in the Canadian North—were enough for ourselves. It seemed a logical time with the extent and importance of

Our Cover: Last year James Houseen, postmaster-administrant at Cape Dorset, introduced printmaking in the Eskimo. Some of the resultant work, shown with some blocks or stencils cut from caribou skin, is reproduced in this issue.

The hunter on the cover, with horseradish afi (a sort of skin peel) above his head, is by the late John Pangautie, and painted by his grandson, Richard. Hence the two signatures. The minstrel (who indicates his origin: Baffin Island's Cape Dorset whose people are the most skilled of the Eskimo sculptors, Ungava, another Dogie artist, produced the same, important in Eskimo figurals in the first of all living things. The others he painted for a whole world—and not for a particular religion—because all are his big joy. The real Dogie, he is long dead, long, long ago, and will live forever in the world.

The only five-color print, "Work at Gruening" at no. 15 and 16, is by John Pangautie, a 72-year-old artist, who delights in recording modern things.

We are indebted also to this group of arties for the Eskimo syllabics translating Imperial Oil Review. They can be read as "Unjililak Kablak Ooziimaniq" "Imperial" in Cree, literally, "Story of the Eskimo who look after Oil Imperial." For Kablak (syllabics) is the synonym for "white man."

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REPORT ON THE NORTH

To some the north is a land of insurmountable problems and relatively limited value.

To others—and not all of them are impractical dreamers—the north could be the hub of the world.
HUB OF THE WORLD?

by Michael Jocot

To most Canadians the far-distant deep freeze at the top of their map is a great desert of whiteness, lacking trees, animals and the friendly hand of men.

To the more handful who have visited it, the north also seems to be shockingly short of transportation, population and sanitation. To the 15,000 people who live above the 60th parallel it is yet again a land of unending variety, scarlet sunsets, azure mountains, trees, lush vegetation and a sensitive, charming native people.

And there is truth in all of these versions for the north is beset with contradictions.

What is "the north"? Again, there are many definitions. There's the Arctic Circle—a line 1,600 miles from the Pole marking the limit of the area where, at least one day a year, the sun doesn't rise and, at least one other day, doesn't set.

There is the true Arctic—a million square miles marked by the tree line which meanders sometimes north of the Circle, sometimes south.

And there is the sub-Arctic—a transitional zone having certain climatic and geographic features of the Arctic.

The Arctic and sub-Arctic of the Yukon and Northwest Territories—for our purposes, the north—cover about 1½ million square miles, or approximately 40 percent of Canada. So vast is this Canadian north that no one thing about it is absolutely true. Covering an area half as big as the U.S., it is a meteorologist's nightmare. The January average mean in Whitehorse is eight degrees warmer than Winnipeg's, 800 miles to the south. Fort Smith's all-time high of 101 degrees, beats New Orleans' by one degree. The annual snowfall at Resolute (1,200 miles from the Pole) is less than Ottawa's. The summer sun shines at midnight like a long line of the sun on the horizon at Aklavik. Only the highest mountains and those parts of the Arctic north of northern Baffin Island have permanent ice. The north produces cabbages as big as soccer balls, doubtful like soup plates and carrots a foot long. It is a country of mountains (highest over 10,000 feet), more lakes than the rest of the world combined, and Canada's largest river system, the Mackenzie.

It is anything but ugly. In summer, wild forget-me-nots and deep green grasses color the tundra between the myriad lakes on the Barren. The north has pippins, fireweed, purple locoweed, Arctic cotton, moose, lichens, blueberries and Alpine cranberries. From the air, countless lakes glow with rich green and rusty red, signifying copper and iron. For the north also has minerals as well as furs, fish, game, water resources. It is the home of a people whose very existence and way of life are as strange as you will find it. It contains one of the few large unexplored tracts in the world; the Barren Lands, 100,000 square miles south of the Arctic Ocean to Yellowknife in the west and Hudson Bay in the east.

To some the north is a land of unsurmountable problems and relatively limited value (when the economics of developing it are weighed against the possible returns). To others—and not all of them are impractical dreamers—the north could be the hub of the world.

Since the beginning of history, civilization has been moving north, converging on the Arctic from both sides of the world. On a polar projection map the Arctic is the hub of the northern hemisphere, with 70 percent of the world's population living within this hemisphere.

"A supreme advantage system," suggests Michael Murad, director of the Montreal Office of the Arctic Institute, "would not only take the riches of the north to the rest of the world but could also link the world's major production regions by the very short routes through the Polar basin."

The development of resources, coupled with an integrated transportation system (including the shipping scheme just mentioned), and a sizeable influx of people, could indeed turn this emptiness into a useful land.

There may not in our time be a great civilization here: no skyscraper cities, no significant clusters of industry. But astonishingly important natural wealth
The federal government recently announced an accelerated road-building program to cope with present and future mining activity in the north. By 1980 it's hoped a road will join Edmonton with Fort Smith on the eastern end of Great Slave Lake. Another will pass from Peace River, Alta., through Fort Smith, and on to the eastern end of Great Slave Lake. Yet another is expected to go west from Esksino Point on the western shore of Hudson Bay to Uranium City on Lake Athabasca.

A Royal Commission recently completed its studies on a proposed railway north from the provinces, 400 miles to Great Slave Lake, but didn't make a unanimous recommendation.

But roads and railroads are expensive to build and maintain in muskeg, permafrost, and eight months of winter. Air travel—the backbone of northern development to date—is likewise expensive. It costs $14.95 per hundred pounds for freight from Edmonton to Yellowknife. It costs $36 an hour to rent a light plane in Inuvik. Fresh vegetables in Aklavik are twice what they are in Edmonton; the difference: transportation costs.

But aviation is undergoing dramatic changes. Bush pilots, those swashbuckling characters who opened the north, are increasingly rare. When Imperial in the Twenties pioneered company aviation in the north, it flew Junkers in and out of Norman Wells. Today big integrated air lines are taking over with two- and four-engine aircraft. The government plans to build more airstrips andpredicts that by 1980 a network of air routes will crisscross the north, from Padleying Island off the east coast of Baffin in the east, to the Alaska border. The hovercraft, the helicopter and even freight dirigibles may figure importantly in the future north.

Many are in the north simply because jobs take them there. Others went in to get rich quick. Still others are truly dedicated to the country. In the latter category is Jack Radcliffe, the tall, fair and thirty-two-year-old fisheries officer at Yellowknife's new high school residence. Radcliffe is a man with a purpose: to produce responsible Eskimos and Indian citizens. He is a strong disciplinarian, but he is also kind, gentle, patient. He became a teacher of semi-people in the north: "How can we teach these Eskimos the fine points of our civilization when they see drivers rush up here cheering, hating and bullying?"

There is Lee Post of Inuvik, the patient, hard-working administrator of the lower Mackenzie region, who has devoted 19 years to the north, to one point that it's best to place to cause a family, and predicts a population of 3,000 for Inuvik in 10 years. Practically every community has its own Avocet or Red Cross society. In Edmonton, the local Avocet is a social club, with dues of $5 a year. The Red Cross offers the same social functions, but it is not a social club. It is a club for women. In the north, the Red Cross is a club for women. It is a club for women.
The northland has not one true face but hundreds...
The cost of shipping building materials for a house into remote northern outposts is about equal to the price of those materials in the south. A company currently paying the lowest salaries at Frobisher estimates that it must spend, on the average, $923 a month to send and keep one man there (salary, meals, accommodation, transportation). Further north, where supply costs soar, it can cost $1,000 a day to maintain one man. Unless living conditions are made attractive, special financial inducements have to be offered. Even the departure of northern affairs has had to pay bonuses of up to $2,000 a year to sweeten some northern assignments.

Today the Canadian government is spending more money north of the 60th parallel than ever before. But the role of government is limited. For one thing, the extent of government aid is curtailed by the incredibly small revenues it receives out of the north. Nearly half the income of the Northwest Territories, for instance, comes from the collection of liquor revenues. Furthermore, government officials do not feel it is their job to develop the north, any more than it is to develop the Niagara Peninsula or Vancouver Island. "Our job," Northern Affairs Minister Alvin Hamilton has said, "is just to trigger off interest for the entry of private enterprise."

The Royal Commission on Canada's Economic Prospects concluded its report on the possibilities of northern development in Canada with, "There will be important economic developments in this area in the years to come. But it would take the numbness of a Peter the Great to plant any large centres of population there."

And a former MP has said, "The Canadian north is a treasure house beside which the fabulous wealth accessible to the genie of Aladdin's Lamp was peanuts."

Somewhere between these two extremes lies the north we will see in our time. Beyond that, it could be the hub of the world. But before that we must decide if we want our north and what we want it—a task worth the attention of all Canadians.

IMPRESSIONS

Land of a thousand faces
by Michael Jocot

For over 300 miles we saw nothing but a frozen white blanket of land. Nothing had hardly worked on the tundra, completely frozen tundra in the end of time since the world was born. As the nose of the airplane's engine drooped in its year, Roy Nicholls clicked his camera for the thousandth time. "This is the country that time forgot, the loneliest place in the world.

We were on the first stage of a month-long trip to try to discover the true face of the north, its people, its atmosphere, its charm, its sadness.

The Barren Lands were our first taste of the north's isolation. They seemed endless. Just then the pilot throttled back. Below we saw smoke and a dog sleigh, and then—a man. We landed at Eskinum, with smiles like split pea pods, ran out to greet us. This was Constanza Lake, just south of the Arctic Circle in line with the Alberta-Saskatchewan border, home of half dozen Eskimo families. Living in isolation with three white men— wireless operators at a lean station guiding aircraft across the north. The plane is their link with the world. A child to see, an old woman needs a dentist, the meat runs out, there is no more fuel, a baby is born..., for help in all these matters the aircraft is the only life-line.

The people of the Barrens are simple. In an area the size of Japan there are only 100 families. They live in isolated groups in igloos or tents and feed on fish and game. The wind bothers them, the sun often drains out their lives so that they cannot fish, the caribou sometimes fail to come and there is no food. Yet they are basically happy people.

At the camp we ate lunch sandwiches with them in the huts used by the wireless operators. The tiny kitchen, well-stocked with beans and breakfast cereals, was a friendly place. The bedrooms of the men— one containing a slim book of poems, another some exotic pin-up girls, and the third, Eskimo art pieces— were neat, almost military. There was lots of laughter, at small inconsequential things, such as someone spelling tea on himself. We were told that the nights are long, the days filled with pleasant nothing—a dog led, someone losing a mitt, a man reading aloud from Eric Niesl. We discovered that the northerners, by be Eskimos, Indians, Metis or white, knew a lot more about us than we did about him. Joseph, an Eskimo in his mid-thirties with a wind-bent face, at Constanza, knew of the president of France, the St. Lawrence Seaway, the University of Alberta, Banff and of superhighways. He knew of these things through reading (learned in a mission school) and through a radio which he bought one good trapping year. Yet he has no wish to take part in life "outside."

"You must not think of us as one Eskimo," he said. "We are many Eskimos; more like your life. Same as the Barrens. Myself, I believe that a man who leaves the great land for city comforts is not a man."

Joseph's comment on the soft spots of civilization was directed at the kind of life which has grown up at Yellowknife on Great Slave Lake, 200 miles to the south. It was there that we saw another side of the north.

Yellowknife's streets contain Indians, not dog teams. At the radio station, an Indian disc jockey introduces rock and roll in Chipewyan. At the naturally frozen cutting rank, members of the chamber of commerce spend evenings in friendly rivalry under the cold, critical gaze of Indian Indianookers.

Trappers who pass the winter in the woods come here to enjoy the contrasts in winter: gold miners who spend their nights underground and small gardens in the day. Here also are both pilots and red-coated policemen who try to keep order in a frontier, changing society. Indians, Inuit, Chinese laundrymen, priests, doctors, lawyers and a judge make their homes at Yellowknife.

Civilization is nearer farther away than the hotel, the local art exhibition, the
The north is hoot with contradictions. At old Aklavik, garbage stomachs the open. Inuvik is a brave new settlement full of youth and hope. And at Yellowknife, Indian disc jockey Louis Tipchin slips easily into the white man's rock and roll music and beauty pageant.

Inuvik appears to have achieved the perfect balance of progress in the transition of the Eskimo to our way of life. It does not read him, nor even count. It shows him the advantages and lets him grow accustomed to them slowly.

An Eskimo child is used to living in cramped, untidy quarters," says Father Max Royant of the Catholic Mission. "When he arrives here, it seems like a palace. The beds are six feet apart. He has been used to sleeping six or seven in a bed. The meals are at regular intervals. He has been used to eating when he is hungry. Running water, regular lessons, discipline, are all new to him. The adjustment must come slowly and gently.

One look at Aklavik, the old Arctic capital, 30 miles to the southwest, convinced us of this need for careful adjustment. Today about 600 trapper and hunter families live there. In the off season they sit and wait for the trapping and hunting to begin. The townsite is characterized by tilted sheds, garbage piles, vicious chained dogs, mud, silt and polluted water. In summer the water supply comes from a pipe running down the main (and only) street. In winter, ice blocks are cut from a nearby lake and melted. The slopes, as all summits, are often thrown from the doors.

Aklavik is the original pioneer face of the north and one which, because it is an obstacle, will now die in the face of new "Inuviks."

Roy and I returned to Inuvik one evening at sunset. The shadows were six or seven times as long as the trees which cast them. They were often that large even at midday because in March the sun never rises too high. Seeming the great brown and yellow mission buildings again, was like coming home.

When we got to the missions, however, we were in for a shock. Our flight south, on the last leg of our trip, had been postponed. Although we were not keen to leave, it upset the rest of our timetable. One day lost in the Arctic often means a whole extra week of travel. We were rebooking our plans over a cup of coffee (which at the Catholic Mission comes from a tap in the cafeteria) when the local Hudson's Bay manager reported his store was making a charter flight to pick up vegetables at Whitehorse. We hitched a lift on the empty plane.

The flight took nearly four hours, mostly over the highest mountains in the Northwest Territories, the Richardson, the Mackenzie and the Selwyns. Some say over 10,000 feet. Most have never been properly surveyed, and their valleys have never felt the foot of man. Strange wild stories come out of these valleys. Stories of trappers found with out heads, of sub-tropical growth and hot springs, of weird animal tracks. All we saw was snow, occurrence of it, some-times decked with mountain goats.

Our plane never realized Whitehorse. It landed instead at Watson Lake, 300 miles away where the vegetables had gone by mistake. This is typical of northern travel. You are never sure when you will start or if you will reach your destination.

Watson Lake is in the Yukon. You know that as soon as you land. The signs about it, everywhere. Perpetually by 80 percent white, the territory is one of roads, cars, small cafes, hotels, bars and curio shops. It is a white man's land and it sets out merrily to attract white tourists, although today there is still a good deal of mineral activity.

The next flight to Whitehorse was four days away. Was there a bus? Yes—
at three a.m.

At the small hotel where we rested, preparations for the bus trip began soon after midnight, when the night manager threw out several people who were sleeping in the lobby on the pretext of waiting for it. The bus, a battered, mad
Is there another Leduc at the pole? by Pierre de Boisbief

Last year white word of the "new" oil hot spot—the Canadian Arctic—raced around the world, some 100 Imperial employees went calmly about their jobs at an oil field, with refinery attached, just outside the Arctic Circle. Imperial employees have been working there for 40 years.

The fact was that northern oil wasn't really new. Imperial, in 1920, discovered oil near Norman Wells, 900 miles north of Edmonton on the bank of the Mackenzie River. It supplies most of the western Arctic with fuel oil and gasoline. And the experience gained from 40 years in and around Norman has helped formulate Imperial's present views on Arctic oil.

Last year's flurry tickled the imagination of the public and press. There were stories of New York promoters flying to Ottawa with plans for carrying the undiscovered oil in pipe lines through Alaska to the coast; of the amount of northern oil (enough to supply the entire world for 15 years, it was speculated) and of light-weight refineries and futuristic northern vehicles.

With all this came the promise of the biggest land rush in Canadian oil history. Bids were filed for exploration permits to cover an area of 146 million acres in the Arctic islands and Mackenzie valley.

Then Arctic oil dropped out of the news. By midsummer of this year only one-third of those firms that had bid for exploration permits actually took out their permits. It was not that the oil prospects were any less promising; un-official estimates of oil in the Arctic—purely guesswork at this stage—range from 33 million to 100 billion barrels. But as anyone with northern experience knows, the problem is what to do with Arctic oil if we find it.

The north currently uses more than one million barrels a year. Norman Wells supplies 420,000 barrels of this in the northwest, and could supply more. The refinery capacity is 1,350 barrels a day, Rantin Inlet, the nickel mining community on Hudson Bay is also supplied by Imperial, but from southern refineries. So is Frobisher, in the eastern Arctic. Aside from some DEW-line supplies shipped north via Churchill, there are no other important northern markets.

Nor are there markets abroad, par- ticulary for a crude that could be costly to produce and transport. Middle East oil is being cheaply produced for European markets. Western Canadian fields serve Canada as far east as Toronto. Venezuela's new oil is the cheapest that can be supplied for the Maritimes and most of Quebec, including Montreal. Hence Imperial views northern oil realistically.

"Like other minerals which may be found in the area, Arctic oil must be produced in large volumes to permit economic operation," company president G. W. Twitas said recently. "But we in the industry must be thinking 20 and 30 years ahead and, with this in mind, industry is putting much effort into Arctic research and exploration."

In fact, the company's history of northern exploration goes back to 1919. When they started drilling that year, it looked like a mad venture. But the Norman Wells discovery was in reality a long step forward for the north. It helped promote settlement: with oil for heat and power, tiny settlements grew into comfortable towns.

Norman Wells became a sort of oasis in a sea of whiteness. It meant year-round employment, not only for newcomers to the north but for Indians and Eskimos who hold jobs as agent's helpers, laborers and semi-skilled tradesmen. It meant that problems of northern living had to be met—housing, sewage, water supply. Today rows of neat frame, well-insulated bungalows, bordered with daisies, primroses and sub-Arctic flowers spread along the river bank. Heat and hot water are piped from the refinery.

At Norman, too, Imperial was one of the first employers to cope with the problems of living in northern isolation. The company provides a wide range of recreation facilities—baseball, tennis, movies, curling, dancing—and at holiday times flies employees to Edmonton and back. There's also a church and a 13-bed hospital with a company doctor and nurses. Boxed and lodging are free unless a man prefers a food allowance and eating at home.

With Norman, too, came company aviation. In 1920 Imperial flew a converted German Junkers plane regularly in and out to supply geological parties and the Norman Wells crew. Today Imperial and commercial aircraft fly regular schedules, help supply outposts, fly oil into lonely camps in the Barren Lands and supply geological parties in the Franklin mountain foothills.

Today, the company's marketing
operations cover the whole of the Mackenzie valley, north to the Arctic shore line, and from Hudson Strait into the high Arctic. No settlement can survive these days without oil products. With the opening of the northland, the scope of Imperial's marketing these grows almost daily. Aircraft must be fueled, tractors powered, boats kept working.

At Froodbeir Bay, Imperial has an investment of about $1.2 million in plant and inventory to fuel defence aircraft and passenger planes. At Churchill, the company operates a marine terminal for northern ships. At Aktivik, Imperial's tanks fuel whaling boats, Eskimo and Indian outboard canoes, RCMP and Mission boats.

Earlier this year, J. R. White, former Imperial president now on the board of Standard Oil (N.J.), in a speech to the Royal Canadian Geographical Society, said that Norman Wells has proved two important things about the north:

"The first of these is that, contrary to widely-held opinions, the problems of cold, muskog, building on permafrost and other factors associated with Arctic living have largely been solved... The second lesson we have learned is that the problems of bulk transportation are tremendous. There is a very limited local market for anything that can be produced, which means that most everything has to be exported from the area if it is to pay at all."

Long ago Imperial learned the grim realities of northern transportation: water is cheapest but strictly seasonal, limited by ice; air is handy but highly expensive; pipe lines are at least twice as costly as in the south. Although the transportation problem is largely unsolved, many other difficulties are nearing solution. Much of our cold weather experience in northern Alberta is applicable, for, given protection from the wind, crews often find Arctic temperatures no more severe. They have learned that portable electric power plants, specially constructed cabin-trailers and frequent supplies of fresh food keep them operating efficiently throughout the winter. They know what a slow-finger-freezing job it is to assemble a rig in icy weather.

Oil can be drawn from the ground. Crude from a well almost on the Arctic Circle in the Yukon last year flowed satisfactorily enough to be pumped out. Engineers are still working in Imperial laboratories to improve the low-temperature flow problem for pipe lines. Com-
The puzzling plight of the Eskimo by Robert Collins

Of all the north’s dilemmas, none is more puzzling than that of those 11,000 original northerners—the Eskimos. What lies ahead for them?

Until the white man arrived with his technical know-how, diseases, soft foods and Coca-Cola, the Eskimos lived a relatively untroubled life. Since then they have been written about, exploited, disrupted, analyzed and rehabilitated. Never have so many been so preoccupied with so few.

The reason, of course, is that the Eskimos are unique. No other race has accomplished so much under such rigorous conditions. Long before the birth of Christ, they were making a living with primitive implements in a land where, until recently, the whites with all their skills were hard-pressed to last a winter. Like the Indians they probably came from Asia across the Bering Strait. They have been here at least 2,000 years. Originally they may have been a sea people; at any rate, most of them now live near salt water. Their language falls into about 10 major dialectical areas.

They are an admirable but paradoxical people. Although there is no mass warfare in their history, police records show a number of murders and, in some cases, a primitive disregard for human life. Yet at Baker Lake, near Chesterfield Inlet, Eskimos asked that shooting, stealing and murder be censored from the weekly movies. Basically they are cooperative, patient and cheerful. They do not punish their children and—al-Eskimo communities at least—this works well; the children thrive on affection and gentle instruction, without becoming delinquents. They love music (there are at least two Eskimo disc jockeys in the north) and are delighted with gift from “civilization”: hillbilly music. They’re fond of ice hockey and, at Frobisher, sometimes launch noisy baseball games at five a.m.

Most of them are Christians and some are clergymen; the Rev. Armand Tagoona of Rankin Inlet, for example, was recently ordained an Anglican priest. As a race, they are intelligent, and are particularly apt mechanics. Eskimos run the laundry at Frobisher, work in the nickel mines at Rankin, run sawmills and work on oil rigs. Magistrate Lawrence Pinney of Yellowknife employs an Eskimo aircraft mechanic. The barber at Frobisher is named Mosseau and the movie manager is Joannese. In Ottawa, government employee Mary Pannygoongo edits a magazine for her people. Abe Oqpiok from Iakivik hopes to become a senior civil servant with a government rehabilitation centre. At Inuvik, a 17-year-old deaf-mute girl, Meno Thramper, is a talented artist.

But this is only part of the story.

In the Barrens Lands Eskimos still starve to death. In other areas, exploitation and poor living and working conditions cause disease and a soul-destroying lack of initiative. Not all of the white man’s influence has been good. It has introduced the Eskimos to prostitution, poker (which involves arithmetic, which they enjoy) and alcohol (the Eskimo race never had a native home-brew).

Eskimos do not think like white men (which isn’t necessarily a bad thing) and still cling to their own standards, superstitions and morals. Although some of them gross up to 5000 a month as truckers, and bank their money, they have not really grasped the significance of saving. Frobisher bank manager David Hawkins told Review writer Bob Fenster: “Some of them make two withdrawals a day.”

Dispensing justice is a headache because white men’s morals and penalties puzzle the Eskimos. Government sociologists find that white men’s psychology doesn’t always apply: deviant behavior in our society isn’t necessarily regarded in such by the Eskimos. In court they plead guilty to offences (Eskimos rarely lie) with a “so what?” attitude. Once at Frobisher, when a man pleaded guilty, the territorial judge admonished: “Do you realize that I could send you south to jail?” There was a flurry of words between interpreter and accused. “What did he say?” asked the judge. "He wants to know how soon he can go south,” said the interpreter.

The native women are undergoing perhaps the hardest change. After talks with Eskimos, churchmen, police and government workers, staff writer Michael Jacob reported of the Eskimo wife, “A passive, quiet, unassuming person, for centuries blindly following the travels and dictates of her husband, she now has opened to her a fantastic life of washing machines, electric irons and stoves. She is freed from the disciplines and hardships of the hunting camps. She finds time on her hands. Underneath, another change, not so quite so healthy, may be taking place. In illness, in education, in the incessant longing for food, she used to be essential. She suffered terribly from cold and hunger but she never suffered a doubt as to her worth as a woman.”

Now, often, the children drift away from her to their new interests. Sometimes she does not even understand her new language. In Frobisher, government social worker R.J. Green tells of a small boy who returned to his people in a remote eastern Arctic village after eight years in the Hamilton, Ont., sanitarium. He spoke no Eskimo and knew nothing of Arctic life. “Your father is coming for you,” Green told him. “Is he coming in his car?” the child asked.

To help native women cope with this changing world, they are offered a variety of courses, with varying degrees of success. At Iakivik, a government-sponsored course teaches them better ways to cut, match and sew pelts into parkas. At Baker Lake, Mrs. Sam Dods, whose husband until recently was DNA officer there, gave impromptu instruction in sewing and cooking. The women were particularly fascinated by doughnuts.

On the other hand, a Frobisher Bay home economics course, to include nutrition, food buying and child care, started in September 1959 and this spring was.

(Continued on page 23)
struction camp and wonders, "What is happening here?" He does not know that a change in life is beginning.

First of all money, which he did not know much about in the past. He begins to earn it and spends it. He also has to come to work on time, which he never had to do before. He does not really know or understand what he is asked to do. He puts up with this for a short time, then decides to leave the job.

His problems now begin. He knows he used to live off the land but it seems harder now to get out on the land than before. He decides that if he goes to work again he is going to stay. Then other problems start. He knows if he is going to be employed steadily he has to have something better to live in than an igloo, but where does he get the material? He picks up an odd board here and there and builds himself a shelter, at least more permanent than an igloo, simply because this is the first time he ever saw that many boards to put together. All this is happening in just a few years.

He then finds out his children would have to go to school, but what is that supposed to accomplish in life? Nevertheless, Johannus and Aaloocie go to school every day. Sometimes they are late for school because in the evenings their father and mother visiting late, come home to their one room and wake them up. So we are faced with these problems because we were never taught in schools and never lived in large communities before.

In the past some of the so-called first class schools left things sort of unfinished and this left some fairly intelligent pupils with little to go on in life but adopting the idea that they did not want to live like their parents did.
still concentrating on basic sanitation. Attendance is spotty. Because the Eskimos like to please, they often nod and smile broadly—but don’t really understand. The degree of understanding shows up in their homes. Some are very clean. Some are tidy where it shows but neglected in the corners. In others, you find fresh seal meat on the sole: they lived in this way in igloos, so why not at home?

Since we are largely responsible for the Eskimos’ problems, we should be solving them—and to some extent, we are. Health services are provided for most communities and the general health is improving. Last year there were only 397 TB cases in the north. Mortal felling is unavailable in large communities such as Frobisher, Rankin and Inuvik. Smaller communities need cheap Eskimo housing. At Puvungnait, the DNA has experimented with oil-based houses of aluminum siding, plywood and peat sod. Cost per unit: about $400. At Port Harrison a police constable helped Eskimos build double-wall tents.

To help the Eskimo support himself, there are co-operatives, sponsored by DNA, with Eskimo president, vice-presidents and directors. Each co-op must stand or fall on its own performance, without government support. Its Eskimo participants are paid in cash on the basis of goods or services produced or rendered. The northern co-ops are:

- Cape Dorset, near Frobisher, producing Eskimo art and operating an Arctic char fishing camp.
- Puvungnait, P.O., producing stone carvings, clothing and papa baskets.
- George River in the Ungava region, operates a commercial char fishery (the fish are sold in Montreal) and with timber cut, hopes to build a town.
- Port Burwell, nearby, runs a char and cod fishery.

For the physically handicapped and the emotionally disturbed the latter conditions act as evident in patients back from southern hospitals and unable to rekindle native life, there is the Frobisher rehabilitation centre, a cluster of neat blue frame buildings. There, social worker Green heads up a program that includes basic English and simple arithmetic, pre-vocational training and fundamental education for living in the modern world. So far, 60 Eskimos have graduated. While undergoing rehabilitation they get food, housing, essential clothing and an allowance ranging from $10 to $20 to spend depending on their stage of achievement. They produce goods and services worth $500,000 per year, all marketed locally.

General education in the north is a complex affair. In the Territories, most schools are operated by the federal government. In some cases, attached government-owned hostels are managed by the Anglican or Roman Catholic churches. There are also a few church, municipal and company-operated schools. The Yukon handles its own education.

With few exceptions, northern education of Canadian Eskimos is in English. In Russia, where there are 1,000 odd Siberian Eskimos, native children are taught in Eskimos during their early years. Advanced studies are in Russian.

More than half the eligible Eskimos in the Canadian north as yet have no opportunity to attend school. By 1966 the hoped education will be available to all.

Meanwhile, teachers are juggling the delicate task of educating three separate cultures at once. They want to educate the Eskimos primarily as citizens, neither forcing them to leave their present way of life nor forcing them to stay in occupations which are obsolete.

Principal R. J. Graven at Frobisher and Jack Black, Yellowknife’s high school principal, agree that Eskimo children are well behaved and intelligent.

"I only hope," says Black, "that something will be done to give them decent jobs when they leave school."

The unanswered question is: who will use the graduates? Le Point, Lower Mackenzie area administrator says, "We are striving to use as many trained Eskimos as feasible. Here at Inuvik they are secretaries and in technical jobs. But as more graduates go on the market, some will have to go out for jobs."

Throughout the north, no one has a pat answer to this employment problem. It is not exclusively government's responsibility. Mining, oil development or construction programs might help.

If they can acquire the best of white training, ways, without losing the best of their own, or without losing their identity, the Eskimos could become the back-bone of northern development. They love the north (many whites do not) and have the physical capacity and an instinct for northern living—ever stronger as many no longer know how to build an igloo. There is no reason why they could not hold senior governmental positions.

But this assimilation will not be easy. Frobisher’s Belch Green says, "I am absolutely sure there is no paperless way for Eskimos to make the transition."

Mr. Okipik, a hunter, trapper and Dew-Line worker from Aklavik, has been with the department of northern affairs since May 1959.

This is how some of the problems in the north were created. This is why I feel we should never forget to start intensified education programs in the small communities, starting with a community teacher to try to get every adult interested in learning. We must be sure the parents of the children understand what the goal is.

Some of the people in Ottawa in other organizations, including the department of native affairs, ask: "What are we educating the children for? How are we going to establish them in jobs after they are through school?" I think the answer would be to let us educate them and see what they can do for themselves in the future.

"Review art center invited Eskimo children to portray native life. Workers included Eula Toonoo, 16, and Home Tate by Germaine Araktukyok, 13"

"The puzzling plight of the Eskimo"

(Continued from page 38)
Mr. Newosad's frosty farms
by Norman Riddough

Just before the snow began to fly in October 1944, four agricultural scientists headed north by truck and car out of Dawson Creek on the newly-built Alaska Highway. One thousand and nineteen miles later, west of Whitehorse in the Yukon, they pulled off into virgin timberland at an 880-acre site: Canada's first experimental farm in the north.

Against a picture-postcard backdrop of the snow-capped St. Elias mountains, they built their own cabins with a portable sawmill. In spring, aided by Indians, and using brush breakers, tractors and harrows, they broke enough land to sow grain in 1946.

Since then other scientists have established experimental farms on an island in the Mackenzie River at Fort Simpson, northwest of Labrador at Fort Chimo, and where the Mackenzie flows into the Arctic Ocean at Inuvik.

The fact that there are any farms in this land, is surprising enough for most outsiders. But even more surprising: enough vegetables, eggs, poultry and meat could be produced to support up to six million people in the north—although this may be a century or more in the future.

This is the prediction of chunky farm-boss Frank Newosad who, as special assistant to the director of research, federal department of agriculture, is spearheading the breakthrough. Newosad is admirably suited to the job. He is still a farmer at heart, whether he's putting over his suburban garden in checked shirt and rubber boots, or lagging a sleeping bag around the Arctic. He travels 10,000 miles a year through the north, by plane, helicopter, canoe, tractor, bombardier car, truck and train; turning up unannounced in out-of-the-way places; forever trying to find out how things are growing in gardens and fields; gradually moving farming nearer the Pole.

Newosad sees the future of northern agriculture this way:

- As gas, oil and minerals are exploited and the population expands in the Mackenzie River system and the Yukon, commercial farming will be feasible in 3,802,000 productive acres.
- In the eastern Arctic and the far northern islands, agriculture, because of soil and climatic conditions, will be limited, but eggs, poultry and vegetables can be produced for local consumption. Plastic greenhouses are being tried here; soon hydroponics—the science of growing plants without soil—will be introduced. (Ottawa researchers have already been growing plants in gravel; the Russians in asbestos tile.)

As the north grows, so must it feed itself. There are now some 35,000 people in the Yukon and Northwest Territories, a 40 percent increase since 1951.

In the face of this challenge, agricultural scientists are learning to cultivate perennial, tackle pests and diseases, battle pre-dawn frosts, cope with a short growing season, make hens lay in darkless summers, and overcome northern drought. Although these northern farm workers number only 40, Newosad is backed by a formidable array of 1,190 federal agricultural specialists across the country. For example, brown root rot, a disease peculiar to the north, attacks alfalfa and has destroyed up to 99 percent in some fields. Workers in the federal research lab at Edmonton are trying to develop a rot resistant strain.

Newosad has a third force of 50 RCMP men, Hudson's Bay Company managers, trappers, teachers and traders who supply reports of their own garden experiments in remote areas. In return they get seed and advice.

Quietly but persistently Newosad, who was raised on a farm at Roblin, Man., has been launching experiments and seeing spectacular results. His fields are full of photographs of 26-pound cabbages grown at Inuvik, vitamin-rich broccoli at Fort Simpson, mouth-watering strawberries at Whitehorse, and goat herded by Eskimos at Chimo.

Latitude is not all-important. Climate and soil are. Crops grown in the Mackenzie valley, for example, cannot be grown at Fort Chimo, which is on the same latitude as Fort Vermilion in northern Alberta and south of cities like Helsinki, Oslo and Leningrad. Yet Russia has shown that crops can be nurtured on Siberian stations 250 miles north of Aklavik by latitudes, but not by climatic conditions.

"As people push north to explore and to settle, we've got to be prepared to help them provide their own vegetables, beef, pork and eggs," says Newosad. In some centres imported potatoes may cost 20 to 25 cents a pound and eggs $2 a dozen.

For example, there were enough workmen in the Ungava Bay region one summer recently to consume 1,000 dozen eggs. The nearest experimental farm didn't have that many. The hens, which had laid seven eggs every 10 days during winter, had gone into summer mood and quit producing. "We know now we'll have to darken their quarters as

Sunday, the experts predict, this fertile Mackenzie delta will be dotted with small farms and the north will raise enough food for six million people.
The Arctic's icy secrets by Ron Kenyon

If you went into the Canadian north tomorrow, how would you live?

What equipment should you take along? How about food and shelter? Would you be safe? Could you survive?

These and many other questions are being answered by Canadian scientists as they try to understand the effects of climate change on the northern environment.

The scientific trawl has fallen into two main categories. On the one hand, researchers are trying to learn what species are being affected by climate change. This includes not only plants and animals, but also the way that the environment itself is changing.

On the other hand, scientists are trying to predict what will happen in the future. They are looking at factors such as temperature, precipitation, and sea ice to determine how these might change over time.

The results of these studies are helping to provide a clearer picture of what life will be like in the Arctic in the future. This knowledge is essential for making informed decisions about how to manage the region's resources and protect its biodiversity.
leaves the cells and at freezing point the liquids freeze outside the cell walls. The clam cells are not ruptured by the internal expansion of ice crystals.

Northern codfish have been recorded alive and hearty with bodies below the freezing point. When caught, they freeze as they die, yet in life they are not frozen.

What is there to be learned from this and how can it be applied to mankind?

Until man learns to resist cold like clams and codfish, we’ll have to settle for warm clothes and houses. There’s already a prefabricated house insulated with fibre glass and aluminum foil, two stores high (living quarters on the second storey, storage below) with an aluminum-pitched roof and outer walls of white-painted cedar shingles.

For outdoor activity, the Canadian Army has devised an improved sled of aluminum alloys, with suspension springs; a fibre glass snow-boat (wood can become brittle and break at a crucial moment) and snowshoes made of magnesium and nylon.

The armed services have discovered that the key to warmth in the Arctic is not the weight of clothing but its success in trapping air, which acts as an insulator. This, of course, is why fur is so good. Modern Arctic clothing is lightweight but with several thicknesses, stopped by a garment of close weave capable of stopping the wind.

For summer life in the north the Defence Research Board has come up with some cheering facts. You can live solely on tundra vegetation; a DRB party did it for 10 days.

Dr. A. W. A. Brown, working for DRB at the University of Western Ontario, discovered that mos-quitoes like dark clothing and seem to be attracted by perspiration and movement.

Researchers are now studying the mosquito’s smelling faculties and are even putting mosquitoes on treadmills to measure their energy.

Government biologists have found that Arctic char will flourish as far north as Lake Hazen, 800 miles north of the Circle. The world’s great fisheries, of course, are nearly all on the edge of the cold Arctic water but not within it—the Grand Banks, the North Sea, the Russian fisheries in the White Sea. The best fish which reproduce prolifically prefer relatively cold water, provided it permits the growth of enough plankton and other tiny food life on which they can feed. At present the icy Arctic doesn’t.

The fishing situation could be changed by the spectacular Russian proposal to dam the Bering Strait, pump cold Arctic water across the dam into the Pacific and thus allow warm Atlantic water to circulate in the north. Fogs and icebergs would vanish from the Canadian east coast and Labrador might become relatively balmy. The project could create one of the greatest fisheries on earth in the Arctic Ocean.

Dr. M. J. Dunbar of McGill University, chief Canadian expert on the subject, doesn’t consider the Russian proposal entirely practicable. To warm even superficial layers of the frigid Arctic would require 1,000 of the largest pumps in the world, working continuously for 70 years.

But, says Dr. Dunbar, “damming the Bering Strait is possible. This alone...”
would reduce the Arctic current that flows down the Canadian east coast—much as the draft is stopped when a door is shut—and warm up Labrador. Unfortunately, it wouldn’t benefit the Russians. Canada might have to build the dam herself—a mere $35 billion if Russian estimates are correct.

Both we and the Russians are also studying the strength of ice. Suppose you want to land a light aircraft on the ice pack, or set up camp with a truck or jeep. Will the ice withstand it? Dr. E. R. Pounder of McGill hopes to find out.

Normal sea water contains some 16 major salts which concentrate around the ice crystals. These salts vary in concentration from the top to the bottom of an ice floe. Thus, the floes are not equally strong all the way through. Dr. Pounder has been developing a new machine capable of estimating the thickness of ice by seismology, in brief, explosive charges are set off on the surface of the ice and sound waves indicate its thickness.

The scientific gems of the north aren’t all on land and sea.

In 1957 researchers proved the existence of a “polynya night jet stream” that blows in winter around the fringe of the Arctic. High flying aircraft will eventually be able to use these winds to increase their speed.

Elsewhere in the stratosphere, there’s much to be learned from the aurora borealis. This shimmering, shifting natural pyrotechnic display favors Canada more than any other country. Practically all pictures show it in the northern sky, yet from most Arctic areas it is usually seen in the south. It passes over a belt which crosses Canada roughly at the latitude of Fort Churchill, swinging farther north in the west.

The aurora interferes with electronic communications of all kinds—telephone, telegraph, radio—and a better understanding of it is vital to the opening up of northern Canada. At present, with the aurora occurring 200 days a year in its belt of greatest frequency, the Canadian far north is often almost shut off from southern Canada.

So far the aurora is little understood. Even the cause of it is uncertain. The most popular theory is that particles from the sun flying toward the earth are trapped by the Van Allen belts of magnetic force that surround the equatorial and temperate latitudes of the earth in the shape of a doughnut. The hole in the doughnut is at the poles, where the Van Allen belts do not extend. The trapped particles from the sun escape at the upper and lower ends of the doughnut hole—which coincides with the area of greatest auroral frequency.

These particles descend toward earth and, striking the heavier gases in the atmosphere, cause brilliant displays like the moon lights on main street.

The principal centre for the study of the aurora in Canada is at the University of Saskatchewan. In addition, the Defence Research Board maintains a telecommunication centre at Shirley Bay near Ottawa, a northern research laboratory at Churchill and a giant radar telescope at Prince Albert, Sask.

The university has one all-sky camera on the campus to photograph auroral displays. It also has radio stations and radar equipment, within a 600-1,000-mile radius, that bounce waves off the aurora to receivers in Saskatchewan.

Sooner or later the scientific onslaught will solve the mysteries of the “northern lights.” But there are countless other unanswered riddles in the north. Will large and presently barren areas some day lend themselves to afforestation? It’s possible. Can we make soil in the Arctic, possibly with marine material (fish and weeds)?

Why do some southern species of animal life thrive better than others in the north’s peculiar daily and seasonal rhythms of long days and nights? Does this different living cycle affect humans? If so, can man accustom himself to it with drugs or other methods?

The matter of sheer survival is no longer a problem. But the problems of inexpensive survival, cheaper working methods, and a host of other mysteries—some of them as basic as life itself—will make our north the scientific hot spot of the Sixties.

TOWN THAT LIVES FOR TOMORROW

by Rob Fenner

War, cold war and the air age pinned Frobisher to the bleakest corner of the globe. But its happy pioneers, gambling on the future, are carving civilization out of the rock of Baffin Island

One of the favorite stories going around the town of Frobisher Bay, 1,300 miles north of Montreal, is about a psychologist who came to study and classify the townsperson last year. After several frustrating days, the psychologist went away baffled: Frobisher residents didn’t fit into any standard personality classification.

The happy individualists of this Baffin Island community were frankly delighted. It gave professional confirmation to something they’ve always suspected: there’s literally no place like Frobisher.

Even as Arctic communities go, Frobisher is a paradox. It is, perhaps, a prototype of northern towns to come: a product of war, cold war and the air age, pinned arbitrarily to the map by man.

It occupies a choice site, between bleak forbidding mountains and a bay that is ice-locked 10 months of the year. Nearby a radar station raises its distinctive aerials as a grim reminder of the uneasy world we live in.

Yet Frobisher, with 900 whites and as many Eskimos, is the largest settlement in the Arctic islands and the biggest Eskimo community in Canada. It is regional headquarters for the department of northern affairs and a centre for DNA rehabilitation of handicapped Eskimos. Eskimos operate its barber shop, laundromat, coffee shop and theatre. Frobisher also has an 18-bed hospital, and the island’s only public hotel and cocktail bar.

In traditional frontier fashion, Frobisher has sky-limit poker games, hard-living transient workers, and even a sometime black market wherein tailored
U.S. Air Force parks are highly prized. It also has a boys' club, Greetings. Beavers and probably baseball's most northerly Little League. Playgrounds are being planned and streets are planned for children. It has a surprising array of vehicles: cars, jeeps, trucks, even a bus—with Eskimos driving. Whites and Eskimos study a mixed Ontario—Alberta public school curriculum in the nine school rooms. High school students study by correspondence.

Unlike Aklavik, Yellowknife or Churchill, Froshburger has no steady economy based on trapping, mining or shipping. Its only economic reason for existence in the air field, built in 1942 by the United States and now operated by the federal department of transport. Despite an ongoing-off again history dating back to the 1950s, Froshburger as such did not exist until the field was built. It has virtually no past, it lives for the future.

As a D.O.T. airport it has tasted the heady opportunism of being arefueling point for major airlines flying the polar route between the Pacific coast and Europe. Although the air lines have stepped landing on a scheduled basis—they complained that the runway was bumpy—a resurfacing and lengthening job completed this fall may bring them back. Primary reason for the runway renovation however, is to accommodate USAF Strategic Air Command refueling squadrons which will give the field increased military significance.

Meanwhile on a busy day the field handles 68 flights. They may include the thrice-weekly DC4 flight from Montreal, supply flights or sorties to eastern Arctic DEW line sites.

Through the hangar and terminal building come Froshburger's residents—also a collection as ever passed through any town's portals: school teachers like Toronto-born Fred Ellis and attractive blonde wife Mary who admittedly are in search of adventure; building Vancouver-born social worker Bob Greens who helps the rehabilitation centre and, on occasion, goes out to live like an Eskimo; USAF officers like wind-blown Captain Walter Jarnes whose rural Minnesota boyhood prepared him for the rigors of northern weather.

There are ex-pilots like tall, sandy-haired Clare Dobbin who flew bush planes in northern B.C. in the 1930s and during the war was a civilian pilot with ferry command. He tried dairy farming after the war, then went to Froshburger to work on the DEW line. As manager of Froshburger Electric he supervises staging of DEW line material. There is D.O.T. administrative officer Bert Royal, an English immigrant; helicopter pilot Jack Godoy, wearing the requisite vest and baseball hat of his trade, and ruddy-faced prospective David "Buddy" Turner, one of the few white men who can meet the Arctic on its own terms. Each year Turner sets out on six to eight-month trips, traveling by dog sled and living off the land: Arctic hare, ptarmigan and caribou. His dog team is preceded by two dogs running loose (part wolf, part Godoy sheepdog) to warn him of roaming polar bears.

A new class of entrepreneurs is emerging. Dashing, handsome Alex Gallacher, a former RAF wing commander and DEW line pilot has established a sprawling little empire called East Coast Carriers Ltd. Started in 1959 as a ground handling service for aircraft, the company now includes a public garage, nine car taxi fleet and a hotel and cocktail bar.

Blond, creosol Raymond St. Julien and his brothers Ralph and Ivan, former construction workers, gambled $45,000 on a pool room and bowling alley.

Froshburger's cast of characters includes, of course, the transient construction workers, some of whom seem to be caught in personal conflict with the Arctic. One of them sums it up this way: "You can't beat this old 'Frobe'. It beats you. I go out of here swearing I'll never come back. As soon as I get to Montreal I spend all my money celebrating and have to come back."

And in the background are the north's traditional white citizens: RCCMP, missionaries and Hudson's Bay Co. men. The Eskimo population offers, as many contrasts as the white. There are the wage-earning Eskimos who grow up to $500 a month working for the white man and live in government apartments and houses. At the other extreme is a group of hunters and fishermen who crowd into Froshburger for employment but didn't find it. For the most part they live in squalor in the old, all-Eskimo tent-and-shack village of Erkarluit.

Erkarluit is one of four separate communities making up Froshburger. The radar station—known locally as the "up per base"—is in a self-contained piece of the United States perched on a hill behind the bay. A white and Eskimo community—the "lower base"—curts around one end of the runway. Three miles away is the Apex village, another white and Eskimo community which includes the rehabilitation centre.

At the lower base, home to most of the population, frame houses and one-storey, metal-sided government apartment buildings rub shoulders with ware houses and Quonset huts. The landscape, except for a patch of grass used by Imperial representative Don Sooley and wife Shirley, is a monotonous rock-and-gravel brown. But draw the drapes on Sooley's picture window and you could be sitting in a Toronto suburb.

Utility costs are high. Electricity for the appliances costs 10 cents a kilowatt, or about $0.80 a month. Water, hauled from a nearby lake to individual tanks at one-quarter cent a gallon costs about $0.20 a month. Water is chlorinated but most residents boil it because, says one housewife, "You never know when the Eskimo tank truck drivers might be cooling a piece of seal in the bottom of the tank."

With an average mean summer high of 54 above and average mean winter low of 24 below, homes must be heated the year round. During cold months fuel

Froshburger has schools. North needs many more

In the 'Rastic' Room, gentlemen must shed parkas and wear ties.

In the Aurora Room, gentlemen must shed parkas and wear ties.

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Much of Frohisher's social life, however, centres around Gallagher's Rustic Room cocktail lounge. Here whites and Eskimos share places at the bar. When the versatile Gallagher isn't personally entertaining at the organ, Disieland, modern jazz and ballads pour steadily from a tape recorder. The back mirror displays everything from diamanté (cheaper domestic; $9 a bottle) to after-dinner liqueurs. Beer costs 60 cents a can.

After seven p.m. Gallagher insists that his patrons wear jackets and ties—a rule faithfully obeyed by even the oldest Eskimos who only a short time ago dressed in furs. Those who come without ties get them at the bar.

This does not mean that the bar lacks frontier atmosphere. Eskimos, with their law-abolish tolerance, can become happy on three cars of beer—the maximum Gallagher allows them at one sitting. Construction workers while away their time trying to pick fights with bastardised bartender Norman Robinson. (Generally this is an unrewarding exercise because Robinson is a past-master at talking drunks into submission.)

This is Frohisher Bay 1960, a mixture of frontier outpost and settled town. Where has it been? Where is it going? It has been on the map since 1578 when English explorer Sir Martin Frohisher, searching for a passage to Asia, found iron pyrite (fool's gold) on an island about 35 miles down the bay. Frohisher identified the iron pyrite as gold, set up a mining operation—the trenches are still visible—and took some home. When he presented it to Queen Elizabeth I, her majesty was not amused. Her displeasure ended Frohisher's mining future.

During the 1960s it was a whaling station, then dropped back into oblivion until 1942 when the U.S. set up the wartime staging point on the northern route to Europe. In 1946 the air field was turned over to the RCAF and in 1954, DNA established its regional headquarters.

Then in 1955 came the building of the DEW line. Some days the field handled 107 flights. Pilots and construction workers, attracted by high wages, flocked in from all over the world. The DEW line rush had barely ended when the air lines began eyeing the polar route to Europe and in 1957 the field was turned over to the federal department of transport.

To supply high octane fuel to the air lines, Imperial won a race with the elements to build storage tanks so that fuel could be brought in by tanker. It was a time of confusion; so much so that $20,000, bound for a local bank from its head office, once lay unnoticed for two days on the hangar floor.

"The first task," says DOT agent Gordon Hollinsworth, "was to restore order out of this confusion. To date no one had taken the attitude 'This is mine.' If they needed more space they glued a few boards to the side of a building."

Since 1953 Hollinsworth has been both pilot, test pilot, bus hauler, fish, sprayed forests and co-ordinated the air lift operations for building the eastern portion of the mid-Canada line. He feels that Frohisher has now entered a stabilizing phase. What happens next depends largely on the future of the revamped runway, stretching 9,000 feet along the prevailing northwest-southeast wind. To build it, construction men blasted through a ridge, knocked down three baby mountains and dumped 30 feet of fill into an old river bed. They moved half a million cubic yards of rock, 100,000 yards of dirt and laid 80,000 barrels of asphalt. Although it was built primarily for the U.S. Air Force, the field can handle the largest passenger jets.

With the runway comes a four-storey, composite building, the best-equipped in Frohisher, and two more hangars. Total cost of the project, paid for by the U.S., is estimated at $32 million.

In contrast one of the biggest buildings in Frohisher stands empty, for sale for a reported $400,000. It was built by Pan American World Airways to hold stop-over crews. Even if the air lines return, the building will remain empty. New jets can fly from the Pacific coast to Europe without using up the 13 hours and 45 minutes a crew is allowed to be on duty.

"Says airport operations manager Bill McKay: "If rockets replace strategic bombers, the new buildings could suffer the same fate."

Looking at the commercial future of the field, agent Hollinsworth says the factors that will make Frohisher a good choice in 1957 still apply: 'Stretch a string around a globe from the Pacific coast to Europe. The string marks the shortest distance, and it passes through Frohisher. Here you are almost exactly halfway—3,000 miles to London, 2,200 miles to Seattle.'

The field's position, right at sea level, and the low temperatures give the air greater density resulting in more lift under the wings and greater engine efficiency. Aircraft can take off in relatively short distances. Clear weather makes flying possible at least 90 percent of the time, which compares favorably with Toronto's Malton airport.

Despite the advantages the air lines still may not return simply because newer aircraft can fly the trip non-stop.

"Landing and putting passengers off and on during the refueling operations costs money," says McKay. "Besides, when it's 50 below with a 100 mile-an-hour wind blowing, aircraft captains can't be sure all engines are going to start again. On the other hand, carrying enough fuel to fly the trip non-stop means burning extra fuel—and this is also expensive."

McKay feels, however, that the disadvantages of refueling outweigh the advantages, and that the field's future may lie in increased air freight.

"Big transport aircraft like the CL44 can make a profit hauling freight at three cents a ton mile, compared to present rates ranging from 20 to 37½ cents. Transport aircraft flying the polar route..."
would refuel at Froebisher," he says. "Froebisher will probably always be an important staging point to other settlements in the eastern Arctic, and may draw increased numbers of prospecting government employees and even tourists."

DNA last year opened a sports lodge at Cape Dorset, 200 miles west of Baffin Island. Eight American sportmen paid $1,000 to $1,500 for a week's fishing for Arctic char at this highly reputed lodge. The strategy is for the owners of the Arctic islands, must administer the federal government. He has considered scrapping the present hodgepodge and building a model town like

Innuvik. There has been even talk of Froebisher attracting the small manufacturers with its steady, settled labor force and tidewater outlet to markets. This is an outsider Froebisher's future may look uncertain but Froebisheries are optimistic. Hollomsworth says the arrival of the Community Assistance program will help. People are staying longer. "If the new townsite is built and "Give us another five years and we won't know what this place" are the favorite phrases around town.

And 24-year-old Peter Grondin, manager of the Hudson's Bay Company's ladies' shop, can testify that the population of Froebisher has taken on a more sophisticated as women anywhere. One of them demanded recently, "When are you going to get some strapless bras in that ladies' shop of yours?"

sitting for extra days on the trail and potentially for as long as 14 days. Sammy was short, slender and very dark. He spoke English enough to carry on a simple conversation. Sammy's strategy was short, squat, didn't know his age and spoke one English word: "maybe." Sammy also adopted the same routine: "Sammy, ask Samyoo- alee if he's had enough to eat." A brief "When I'll like more of that." (That was fruit cock-tail.)

We took sleeping bags, a tent designed to be held down by rocks instead of stakes, a kerosene stove, a week's supply of food, a cornet of cigarettes, Arctic sunglasses (without them you'd go snow blind).

Because white men are not allowed to shoot seals, Sooley and I were unarmed. The Eskimos took .270 rifles, a favorite for seal hunting because of their range and accuracy (they fire an almost flat trajectory up to 400 yards).

We told the RCMP, "We're going seal hunting. Plan to be back by Friday."

"If you're more than two days late," they assured us, "we'll look for you."

At 2:30 a.m. we delivered our gear to the all-Eskimo village of Erikaffait, one of fourteen villages at which they catch the seal. We climbed aboard the Eskimo boat and trundled up Froebisher Bay. Sammy lived here with his grandmother in a two-storey tent furnished with a stove.

Compared to the Eskimos looked as if they were dressed for Florida. They looked like a rich man in ten cent shoes buffeted by wind; saw three seals, shot at three and got one. Out of courtesy I joined the Eskimos in eating the local delicacy, raw seal's heart. It was tender and tasted like lever but two small pieces were enough. I scattered behind a rock and heaved the third piece downward.

We washed our dishes in snow, but never washed nor shaved ourselves. We returned windburned, sunburned and exhausted. I wouldn't have missed the experience—but I'll never do it again.

To arrange the trip we first got permission from the department of northern affairs to approach an Eskimo hunting. Then with an Eskimo employed by the department of transport acting as mid- dleman, Sooley contacted Sammy, a 20-year-old trying to earn a living by fronting and fishing. Sammy rounded up a two- men-ago helper named Samyoo alee. We agreed to pay $15 a day for the dogs and sled and furnish the food and ammunition. Our companions tried to make the most of this windfall during the trip when we had it up they covered the snow-covered houses-like hill followed by shrub hedges.

Dinner was juice, canned meat, fruit cocktail and salty tea. After dinner, in a rare moment of confi- dence, we came in to know about Sammy and the dogs in the camp.

On the second day Sammy drove his dogs and at 3.30 a.m. with the Arctic sun rising behind us and Sammy shouting harder, we were off. Sammy's dogs were like "gymnastics" we had two pairs of pants, two shirts, a sweater, socks and my hat. We slept for 10 hours.

After breakfast Sammy climbed a hill and scanned the bay through a telescope. He returned grinning from ear to ear: "Two seal. Maybe more." We repeated the comic-opera routine of harnessing the dogs and circled downwind of the quarry.

On warm, still days seal climb through the holes they keep open in the ice and sunbath. From a distance they show up as dark specks on the ice. Sammy usually gets a first shot—he performs it, but never a second. A half-mile from the seal stop he stopped the sled and made a white shield of cloth supported by two crossed sticks. With the shield as camouflage he moved stealthily across the ice until he was within 20 feet of the seal. The seal alternately lowered its head to sleep, then raised it up to look for danger. Sammy, watching through a periscope in the shield, moved only when the seal's head was down. Behind, the dogs waited, alert for the shot that might mean more food.

Twenty minutes dragged by. Suddenly Sammy dropped the shield and aimed. The rifle cracked.

The dogs let out a wild yelp and shot forward. But Sammy had missed.

But a quarter-mile away was another seal—same age, same size, same color and same number of hearing and eyesight—had not been dis- tanced by the shot. They stopped. The dogs, Sammy shouted behind them. Three shots were off in rapid succes- sion. Once again the dogs were off at top speed. This time the dead seal was carried back to them. Sammy was walking toward a dark blue ice on the ice—our first seal.

The rest of the hunt was less rewarding. The next two seals we stalked slipped back down the slope before Sammy could get within range. On the final attempt Samyoo alee did the stalking and fired too soon.

The return trip was considerably easier. The cold wind had left a frozen crust over the soft spots. A few miles from the islands we picked up the Arctic version of a superhighway: four sets of sled tracks leading to Froebisher. The dogs dropped their noses into the trail and pulled. Sooley and I were able to try our hands at driving—actually only a matter of keeping the kompass pointed straight behind the dogs.

From time to time they lagged and we left the whip handling to Sammy. The whip is at least 20 feet long and an inexperienced driver either ties himself in knots or confuses the dogs.

We reached the pressure ice off Froebisher, turned the sled back to Sammy, went through in a mixture of whip cracks, commands and threats—and no more.

I'd like to be able to say that the trip was three solid days of the old-fashioned story, no sun, no moon, no current illusionation moment when I realized that civilization is sneaking in. The first day found me staring at Sammy's rearview camera in conversation. "What are you doing?" I asked. Sooley grinned sheepishly. "Sam- my's showing me how to reverse the film on the movie camera I borrowed."

WE HUNTERED NET-SIKA

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"The seal (or seal) was a favorite food. "Our young men and women were celebrated as "net-sika"—a fisherman or a fisher of fish."

In the traditional帐, the seal was hunted and served as a food staple. The account describes the seal hunting experience, highlighting the close relationship between the hunter and the animal. The hunter, Sammy, is a reflection of a traditional lifestyle, where seal hunting is a culturally significant activity.
Wanted: a northern state of mind

One of the crucial (and largely forgotten) factors in the future development of the Canadian north appears, from our studies in this issue, to be nothing more or less than a state of mind. The land north of the 60th parallel has much to offer. But if we are going to develop and live in it, we, as individuals and as a nation, must first develop interest, understanding and mental preparedness.

So far, Canadians have shown little interest in living there. Exploiting it, yes. Staying to develop it, no. Are we afraid of our north?

Perhaps we are, with reason. This is a harsh land, a fact many employers and employees don’t realize. But having recognized its harshness, men can cope with it. The Hudson’s Bay Company, a long-time northern citizen, sometimes recruits young Scots for its posts. Reason: they are “mature” and “born settlers.” You must be mature of mind, as well as of body, to live in the Canadian north.

What is it really like in a small Arctic community? (Not Yellowknife or Ft. Resolution, although some of the following applies to them too.) The physical problems are not insurmountable, and sometimes not even important. Everyday living can be far harder on the mind than on the body. In the winter, above the tree line, there is an incredible monotony of sights, sounds, tastes and smells. A few isolated towns stand out against a great backdrop of silence. Sometimes the nights seem endless, which in winter they very nearly are. There are days when you yearn for the sight of just one tree.

Minor irritations can grow beyond all proportion; small community cliques spring up overnight. The mere mechanics of staying alive (checking supplies, servicing equipment, cleaning windows, cleaning chimneys, filling in forms) can occupy entire days, leaving a nagging sense of unfulfillment. Apathy, sloppv habits and intolerable boredom are always at your elbow.

There is a lesson for employers here, and it doesn’t necessarily involve higher pay. Hudson’s Bay salaries are based on the responsibilities of the job (a beginning clerk earns $175 a month plus $500 annual northern allowance, and pays $50 a month board) and are not intended to induce people north. The Bay is primarily concerned with “the temperament of the individual, and strives to keep his morale high” with such important features as books, good homes, furnishing assistance, home study courses, educational arrangements for children in the south.

Dr. J. S. Willis, general superintendent of Northern Health Services, in a study of northern mental health last year, concluded that the happy family unit is the best bulwark against the north. Such a family must have first-class private accommodations, many community facilities (indoors, and outdoors when possible) to provide escape from home and job; educational and health services, and community committees where grievances can be aired. This is a costly idea, he admits, but it is the only way to permanently develop the north. (Imperial’s Norman Wells, for one, has such community facilities.)

But the notions isn’t entirely on employers. Too many Canadians go into the north with wrong attitudes. Dr. Willis puts them in four categories:

- the young and enterprising who need money, don’t want to stay north but are honest enough to do a good job while there.
- people with varying degrees of “missionary” spirit who, if well trained, are invaluable and, if not, are less than useless.
- southerners who see the north as an escape.
- visitors who “go by aircraft and make sure the pilot keeps the engine running.”

What sort of northerner do we need? A stable, mentally prepared person. Dr. Willis says, “If he does not have inner spiritual resources and imagination; if he has not made many interesting pathways in his memory or if he cannot retrace those pathways serenely and with a touch of amusement; if he is not curious to know whether he really could learn Eskimo syllables; if he does not relish the fact that he has always wanted to read Churchill’s memoirs and now has time; if he cannot mix honest compassion with some reasoning and creative community effort, he may very likely end up mentally and emotionally, if not physically, a liability to his employer, a drag on his community, even a danger, and a costly problem in rehabilitation.”

Canada can’t expect many such ideal pioneers to materialize on its own. First we must make up our minds: do we want our north? If so, we ought then to provide money and facilities to interest and educate people for northern living. It would be a task for everyone—industry, government, and institutions of learning. It might well be a national project for the Sixties.

In the strange patchwork of lives and talents that make up the north, the world of Didy Woolgar is unique. The wife of prospector-pilot Jake Woolgar, she is also artist, craftsman and sophisticate. Their home in Yellowknife’s “old town” perches on the rocks overlooking Great Slave Lake. Outside are northern wilds and miners’ shacks. Inside is a world of books, Brahm’s, Indian and Eskimo relics and modern paintings. In the midst, on a rust-colored chesterfield, sits Didy Woolgar, brightly blue-eyed, tall, graceful, with the poised and mannerisms she brought from London, Paris and Cairo 16 years ago. (Widowed during the war, she met Jake, then a Spitfire pilot, at the RCAF leave centre she managed in Cairo.)

Around home, Didy Woolgar is known for her paintings of the exquisite wild flowers of the Barren Lands. She has had exhibitions in Ottawa and New York, and two paintings were presented to the Duke of Edinburgh. Her life is not the usual for housewife or artist. To paint the delicate flowers, she flies with her husband 500 to 900 miles into the Barren Lands. Often they remain four to six weeks. She paints, he prospectors, and both collect relics and ramble around historic sites.

In 16 years in the north ("When I first arrived, I took one look and wanted to run") Didy Woolgar has earned the respect and admiration of other northerners as learned to respect and love the northland. She has faced its harsh realities—a crash-landing, violent storms, lonesome winters—but found its beauty and made it part of her life.