

YUKON TERRITORY



HISTORY, ADMINISTRATION, RESOURCES
AND DEVELOPMENT



Above—*White Pass and Yukon Railway in White Pass.*

—C.P.R. Photo

Outside front cover—*Lake Bennett, looking south. A railway skirts the far shore.* —White Pass & Yukon Route Photo

Outside back cover—*A gold dredge at work in the Klondike region.*

—ASN Ltd. Photo

Below—*The Alaska Highway near Lake Teslin, Y.T.*

—C.P.R. Photo



CANADA
DEPARTMENT OF MINES AND RESOURCES

YUKON TERRITORY

A Brief Description of its History, Administration,
Resources, and Development

by

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FOREWORD

This publication, a summary of information on Yukon Territory, has been compiled in the Bureau of Northwest Territories and Yukon Affairs at Ottawa. Acknowledgment is made of the co-operation that has been received from those who had information of a special nature to contribute. More detailed information is contained in the various Dominion Government reports and other references listed at the end of the text.

Additional copies of this booklet may be obtained on application to the Bureau of Northwest Territories and Yukon Affairs, Lands, Parks and Forests Branch, Department of Mines and Resources, Ottawa, Canada.

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YUKON TERRITORY

Location — Area — Population

YUKON TERRITORY comprises the extreme northwestern part of the mainland of Canada, and has an area of 207,076 square miles, or 5.6 per cent of the total area of the Dominion. Yukon is bounded on the north by the Arctic Ocean; on the east by Mackenzie District of the Northwest Territories; on the south by British Columbia (Latitude 60° North) and the United States Territory of Alaska; and on the west by Alaska (Longitude 141° West).

According to the decennial census of 1941, the population of the Territory was 4,914, including 3,172 whites, 1,701 Indians, and 41 others. An estimate of the population in February, 1947, totalled 7,581, including 5,928 whites and 1,653 Indians.

HISTORICAL SKETCH

THE early history of the area now known as Yukon Territory is largely the record of exploration carried out by resourceful and intrepid officers of the Hudson's Bay Company in extending its lucrative fur trade, and the story of adventurous miners who crossed the mountains to the watershed of the Yukon River in the age-old search for gold. Closely associated with the annals of the Yukon is the history of the adjoining United States Territory of Alaska, the development of which coincided, for a lengthy period, with that of the British territory.

The Hudson's Bay Company was incorporated in 1670 by Royal Charter granted by King Charles II, under which it received exclusive administrative and trading rights in the vast territory known as Rupert's Land. A supplementary licence conferred on the company the exclusive right to trade in the territories west of the Rocky Mountains. The North West Company of Montreal, a rival organization founded in 1784, provided keen competition, and vigorously extended its field of operations. The rival companies merged under the name of the Hudson's Bay Company in 1821, and the following year Sir George Simpson was appointed Governor and was given control of territorial affairs.

By 1838 the company had extended its trade up the Liard River to a post on Dease Lake, near the headwaters of the Stikine River. In 1840 Robert Campbell, clerk in charge of Fort Halkett on the upper Liard River, received instructions from Sir George Simpson to explore the north branch of the Liard and cross the divide in search of any river flowing westward. Campbell ascended the Liard to a lake he named Frances, continued up a tributary he called the Finlayson River, and crossed the height of land to discover the Pelly River. In 1842 Fort Frances was built, and the following year Campbell explored the Pelly River to its junction with a stream he named the Lewes River. By 1848 Campbell was in a position to extend his field of operations, and Fort Selkirk was constructed that year at the junction of the Pelly and Lewes Rivers.

In the meantime exploration of the Yukon watershed had also been instituted by the Hudson's Bay Company from the valley of the Mackenzie River. In 1842 John Bell pushed westward over the Richardson Mountains to the Bell River on which Lapierre House was established, and followed the Bell downstream to the Porcupine River. Bell explored the Porcupine in 1846 to its junction with a large river known to the Indians of the region as the "Yukon." The name, meaning 'greatest river,' was adopted by Bell. The following year Fort Yukon was established by A. H. Murray, of the Hudson's Bay Company, on the Yukon River, three miles above its confluence with the Porcupine.

Campbell continued the exploration of the Pelly River in 1851, descending it "for hundreds of miles" to reach Fort Yukon, thus proving the Pelly and the Yukon to be the same river. (The name 'Yukon' is now applied to that part of the river below the junction of the Lewes and Pelly Rivers, although the Lewes is generally considered to be the upper Yukon). Campbell subsequently accompanied Murray up the Porcupine to Lapierre House on the Bell River and from there crossed the mountains to the Mackenzie River, establishing a new route for the transfer of supplies to, and fur from, the upper Yukon River.

Fort Selkirk was destined to have a short career. Its existence interfered with the trading activities of the Chilkat (Tlingit) Indians of the Pacific Coast, who acted as intermediaries between the Kutchin or "Stick" Indians of upper Yukon, and white traders who plied coastal waters. In 1852 the fort, which that year had been moved downstream two miles to the left bank of the Yukon, was attacked and sacked by the Chilkats in the absence of some of the personnel. Campbell sent the survivors down to Fort Yukon, and set out for Fort Simpson via the Pelly and Liard Rivers. The following spring he reached London after a remarkable trip, but was unable to obtain permission to reopen Fort Selkirk, and the Hudson's Bay Company abandoned for nearly a century its posts on the upper Yukon. (It is of interest to relate, however, that the Hudson's Bay Company re-established a trading post at Fort Selkirk in 1938, and also one at the mouth of the Stewart River in 1939).

Exploration in Alaska

Russian exploration and exploitation of Alaska followed its discovery by Bering and Chirikoff in 1741. Fur-traders penetrated the Aleutian Islands and later extended operations to the western and southeastern coasts. In 1799 Emperor Paul granted exclusive trading rights to the Russian-American Company, which virtually ruled Alaska from that date to 1863. In 1831 Russia established a trading post on St. Michael's Island in Norton Sound, north of the mouth of the Yukon River, known there as the "Kwik-pak." The trading post of Nulato on the lower Yukon was established in 1838, and by 1846 Russians had mapped 600 miles of the river.

Russia had attempted to exclude navigators and trade from the Bering Sea and the Pacific Coast of her possessions in 1821. Protests by Great Britain and the United States led to treaties whereby the excessive demands of Russia were relinquished and boundaries established. In the Treaty of 1825 with Great Britain it was agreed that Russia would have the narrow strip of coast north of 54° 40' and west of the summit of the mountains paralleling the coast — now known as the "panhandle" of Alaska — together with the peninsula and islands west of the 141st Meridian. In 1867 Alaska was purchased from Russia by the United States for \$7,200,000, and considerable difficulty subsequently arose over demarcation of the boundary. The question was finally settled by the award of the Alaska Boundary Tribunal of 1903.

Following the sale of Alaska in 1867 the assets of the Russian American Company were purchased by a San Francisco firm; in 1869 they were acquired by the Alaska Commercial Company. In that year the Hudson's Bay Company was forced to relinquish its trading post at Fort Yukon, which was found by preliminary boundary survey to be in Alaska. The post was moved up the Porcupine River to Old Rampart House, but the new site was also found to be in United States territory. After being moved again upstream a few miles, the post was finally abandoned shortly after its completion. Subsequent to the retirement of the Hudson's Bay Company from the field the Alaska Commercial Company enjoyed for many years a

practical monopoly of trade in the Yukon watershed, and established numerous posts within Canadian territory along the Yukon River.

Early Mining Activity

The arrival of prospectors in search of gold profoundly influenced the history of the Yukon region. Following the decline in production of the Cariboo and Omineca areas in northern British Columbia, the Cassiar field was developed about 1873. By 1875 the entire upper Liard Basin was being prospected, with more than 1,000 miners in the field. The next move was toward the Yukon River. A party of prospectors, including Arthur Harper, Alfred Mayo, and Leroy McQuesten, reached Fort Yukon from the Mackenzie River via the Rat, Bell, and Porcupine Rivers, in 1873. Most of this group drifted into trading, but other prospectors followed. A party of miners is reported to have crossed Chilcoot Pass in 1878, following the Lewes River to Marsh Lake. In 1880 another party following the same route reached the Teslin River. By 1885 several parties of miners had reached and commenced mining on the Stewart River. In 1886 miners were making as much as \$100 per day with "rockers" at Cassiar Bar on the Lewes River and at Steamboat Bar on the Stewart River. Coarse gold was discovered in paying quantity on Fortymile River in 1886, and in 1892 the Sixtymile field was located. Trade followed the miners, and posts were established at various points, including Fort Reliance, six miles below Dawson; Ogilvie, opposite the mouth of Sixtymile River; the mouth of the Stewart River; and the mouth of Fortymile River.

The Klondike Strike

On August 17, 1896, the strike that was to make the Klondike region world-famous was made on Bonanza Creek, a tributary of the Klondike River, by George W. Carmack and two Indian companions, "Skookum" Jim and "Tagish" Charlie, on information supplied by Robert Henderson. Henderson had spent the past two years prospecting creeks in the vicinity, and in the spring of 1896 had located a fair prospect on Goldbottom Creek. On a trip down the Klondike to Ogilvie for supplies Henderson met Carmack and his companions fishing for salmon, and invited them to stake on Goldbottom. It is reported that Henderson also suggested that Carmack cross the low divide, prospect the gravels on what is now known as Bonanza Creek, and advise him if anything was found. After locating exceptionally rich placer deposits on Bonanza, Carmack and his companions proceeded to Fortymile to file their claims, but neglected to advise Henderson, who did not hear of the strike until after the entire length of the creek had been staked in the rush that followed. Henderson, however, should be regarded as the real discoverer of the Klondike.

As soon as news of the rich new strike reached the outside world a rush for the Klondike began. Pacific Coast shipping companies landed thousands at the Alaskan ports of Dyea and Skagway at the head of the Lynn Canal, from which points the fortune-seekers climbed the forbidding Chilcoot and White Passes and pressed on to Lake Lindeman, headwaters of the Lewes River. There, primitive craft were constructed for the journey of more than 500 miles down the Yukon River to the mouth of the Klondike. Many others entered the country from St. Michael's, Alaska, travelling up the Yukon River to Canadian territory; along the Stikine River to Teslin Lake, moving down the Yukon; over the Dalton Trail from Chilkat Inlet; and via the Mackenzie and Porcupine Rivers. The settlement of Dawson sprang up at the confluence of the Klondike and Yukon Rivers, and in two years mushroomed from a few houses to a "city" of 25,000.

By the spring of 1899 all creeks of any importance in the Klondike had been staked, and considerable speculation in claims ensued. Newcomers staked claims on the hillsides and benches of the creeks, to the amusement of experienced miners. Many of these hill claims, however, containing what became known as the White Channel gravels, proved to be immensely rich, and made fortunes for their owners. Between 1897 and 1904, inclusive, more than \$100,000,000 in gold was obtained from the placers of Klondike creeks, the greater part of it by what are now considered primitive mining methods.

The name "Klondike," according to the late William Ogilvie, is an adaptation of the Indian word "Trondiuck," meaning "Hammer-water." The stream was noted for its annual salmon run, and the natives trapped the fish by means of barriers of stakes which were driven or hammered into the gravel bed.

In the wake of the Klondike rush there followed rapid development of Yukon district. Steamer services were established on the Yukon River, both upstream and downstream, to Dawson. Construction of the White Pass and Yukon Railroad from Skagway to Whitehorse was commenced in 1898 and completed in 1900. Small towns developed at Carcross near the foot of Lake Bennett and at Whitehorse below the rapids of that name on the Lewes River. Dawson expanded rapidly, and hotels, churches, schools, and a hospital were erected. Numerous business enterprises were established, and construction of a system of roads was undertaken.

As the more easily worked placer ground in the Klondike became exhausted miners left for new fields, and the population of Dawson declined. The consolidation of mining properties under corporate bodies and the introduction of dredging established a smaller but more stable mining industry that has since continued. The discovery of silver-lead deposits in the upper Stewart River country resulted in expansion of the settlements at Mayo and establishment of a new settlement at Keno. Mining enterprises established elsewhere also contributed to the economy of the Territory.

Recent Developments

The inauguration of joint defence projects in northwestern Canada in 1942 brought renewed activity to Yukon Territory. Construction of the Alaska Highway from Dawson Creek, British Columbia, to Fairbanks, Alaska, through southern Yukon, resulted in a temporary influx of population that rivalled that of the Klondike rush. The Canol Project, involving construction of a pipeline for the transportation of crude oil from Norman Wells, Northwest Territories, to Whitehorse, Yukon, and construction of an oil refinery at Whitehorse, also contributed to a large transient population. Development of the Northwest Staging Route in 1941 had resulted in the construction of a chain of modern landing fields for aircraft along the route followed by the Alaska Highway. On the termination of the Canol Project in 1945 the operation of the refinery and pipeline was suspended. The Alaska Highway and adjacent air bases, however, provide a dependable route for motor and air transportation to Yukon Territory from the provinces and from Alaska, and should be important factors in the further development of the Territory.

Scientific Exploration

Early scientific exploration of what is now Yukon Territory included the travels of Robert Kennicott, United States naturalist, on the Porcupine River in 1861, and investigations undertaken by Dr. A. Krause, of the Bremen Geological Society, in the vicinity of Chilcoot and Chilkat Passes in 1882. In 1883 Lieutenant Frederick Schwatka, of the United States

Army, undertook a survey of physical features and native population along the Yukon River. Schwatka's party crossed Chilcoot Pass, built a raft on Lake Lindeman, and successfully navigated the Lewes and Yukon Rivers to the mouth of the latter. Many place names in Yukon owe their origin to Schwatka.

In 1887 Dr. George M. Dawson, of the Geological Survey of Canada, led a Dominion Government expedition to explore that portion of the Northwest Territories drained by the Yukon River. Dawson entered the interior by way of the Stikine River and Dease Lake, and followed Campbell's route of 1840 via Frances Lake to the site of Fort Selkirk at the junction of the Lewes and Pelly Rivers. From Fort Selkirk Dawson ascended the Lewes, crossed Chilcoot Pass, and reached the Pacific Coast at the head of the Lynn Canal.

Other members of the expedition included William Ogilvie, D.L.S., of the Department of the Interior, and R. G. McConnell, of the Geological Survey of Canada. Ogilvie descended the Lewes and Yukon Rivers, conducting an instrument survey in connection with the determination of the 141st Meridian. The following year Ogilvie explored the Porcupine River basin. Later he served as the first Commissioner of Yukon Territory. McConnell accompanied Dawson to Dease Lake in 1887, later descending the Liard and Mackenzie Rivers. In 1888 McConnell crossed the height of land from the Mackenzie River to Fort Yukon via the Bell and Porcupine Rivers, and ascended the Yukon and Lewes Rivers to reach the Lynn Canal. Reports of these explorations included excellent descriptions of the physical, geological, and general features of the districts traversed. They contributed greatly to the general knowledge of the Territory.

Further exploration and numerous surveys have since been undertaken in Yukon Territory, including the investigations of R. G. McConnell, Joseph Keele, Charles Camsell, W. E. Cockfield, D. D. Cairnes, and H. S. Bostock, of the Geological Survey. Their reports contain valuable information concerning the physical characteristics and natural resources of the region. More recent studies have included geological, topographical, geodetic, agricultural, and archaeological surveys along the Alaska Highway and access roads, as well as highway, airport, fisheries, and other surveys elsewhere. Considerable detailed geological and topographical mapping has been completed with the aid of aerial photographs, and an expanded program of exploration in the Territory may be expected in the future.

GOVERNMENT AND ADMINISTRATION

PRIOR to 1895 the area now contained in Yukon Territory formed part of the unorganized Northwest Territories and, although administered by the Dominion Government, was virtually occupied and controlled commercially by foreign traders. In 1895 Yukon was created a district of the Northwest Territories, and a detachment of Royal Northwest Mounted Police under Inspector C. Constantine was sent to Fort Cudahy (Fortymile) on the Yukon River to represent the various Dominion Government departments. By 1896 the mining industry had grown to such proportions that the Inspector was no longer able to handle the necessary transactions and a Collector of Customs was appointed. In 1897 an officer was appointed from Ottawa to represent the Department of the Interior as Gold Commissioner, surveyor, and land agent, and the recording office was transferred from Fortymile upstream to the present site of Dawson.

In 1898 Yukon was created a separate territory by Act of Parliament (the Yukon Act) and provision was made for a local government composed of a chief executive styled Commissioner, and a Legislative Council of six

members appointed by the Governor in Council. In response to a demand for responsible government the Yukon Act was amended in 1899 to provide for the election of two additional members to the Council, with the same powers and duties as the six appointed members. The Act was amended in 1902 to provide for a council of eleven members, five to be elected. In 1908, by further amendment, provision was made for a wholly elective council of ten members to be elected for a term of three years. This form of local government continued until 1919, when the council was reduced to three members. The office of Commissioner was abolished in 1918 by Order in Council. The duties of that office were transferred to the Gold Commissioner, and later to the Controller.

Present Government

The Territorial Government is now composed of the Controller of Yukon Territory, and an elective Legislative Council of three members having a three-year term of office. The Yukon Territorial Council, with the Controller, operates in a manner somewhat similar to a provincial government. The Council sits separate from the Controller and presents ordinances passed by it to the Controller for his assent. The seat of local government is at Dawson.

The Yukon Act provides that the Controller shall administer the government of the Territory under instructions given him from time to time by the Governor in Council or the Minister of Mines and Resources at Ottawa.

The Controller in Council has the power to make ordinances dealing with the imposition of local taxes, sale of liquor, preservation of game, establishment of territorial offices, maintenance of prisons and municipal institutions, issuing of licences, incorporation of companies, solemnization of marriage, property and civil rights, administration of justice, and generally all matters of local nature in the Territory.

Members of Council

The Territory is divided into three electoral districts, namely Dawson, Mayo, and Whitehorse. The Territorial Council elected in 1947 for a three-year term follows:

Dawson District.....JOHN R. FRASER, Dawson
Mayo District.....ERNEST J. CORP, Keno Hill
Whitehorse District.....R. GORDON LEE, Whitehorse

Federal Representation

In 1902 the Territory was granted the right to elect a member to the House of Commons, and J. H. Ross, who resigned the office of Commissioner to contest the new constituency, was elected the first Member of Parliament. In 1947, the electoral district of YUKON was enlarged by the addition of that part of the District of Mackenzie, Northwest Territories, lying west of the 109th meridian of west longitude. The new electoral district is known as YUKON — MACKENZIE RIVER. The present member is Honourable George Black, K.C.

General Administration

The Lands, Parks and Forests Branch of the Department of Mines and Resources is responsible for business arising from the general administration of the Territory under the Yukon Act and Ordinances passed by the Territorial Council; for the disposal of lands and timber under the Dominion

Lands Act; for the administration of the Yukon Placer and Quartz Mining Acts; and for the collection of revenue therefrom. In addition to the Department of Mines and Resources, other federal departments function in Yukon Territory. These include the Departments of Transport, National Defence, Public Works, National Revenue, Post Office, Justice, Fisheries, and Agriculture.

The Controller of Yukon Territory is stationed at Dawson and represents the Department of Mines and Resources and some other Dominion Government departments having interests in the Territory. In addition to being head of the territorial administration, he is ex-officio Mayor of Dawson, and Registrar of Land Titles for Yukon Territory.

The Yukon Act also provides for the appointment of a Public Administrator, whose principal function is the administration of estates, including those of insane persons. The office of the Public Administrator is located at Dawson.

There are three mining districts in the Territory — Dawson, Mayo, and Whitehorse — with Mining Recorders in each. The Mining Recorders also serve as Dominion Lands and Crown Timber Agents. The Territorial Government maintains an Assay Office at Keno Hill in the Mayo District.

The Superior Court of Record is the Territorial Court, over which a stipendiary magistrate presides. The Court has both civil and criminal jurisdiction, and the Court of Appeal for the Province of British Columbia is the Court of Appeal for Yukon Territory.

The enforcement of law and order in Yukon Territory is the responsibility of the Royal Canadian Mounted Police. A sub-division has been established at Whitehorse, and detachments are also stationed at Dawson, Mayo Landing, Old Crow, Fort Selkirk, Haines Junction, Teslin, and Watson Lake.

SOCIAL SERVICES

Medical and Hospital Services

RESIDENT doctors in Yukon Territory are located at Dawson, Whitehorse, and Mayo, and function as medical health officers under the Territorial Health Ordinance. Resident dentists also practise at Dawson and at Whitehorse. Medical and dental officers attached to the Canadian Armed Forces in the Territory are registered under the Ordinance and may furnish medical and dental services to civilians and to natives in outlying parts of the Territory where such officers may be stationed from time to time.

Yukon Territory is served by three hospitals. St. Mary's Hospital, at Dawson, owned and operated by the Sisters of St. Ann, has a capacity of 75 beds, which will be increased by an addition under construction. This institution has special accommodation for indigent patients, consisting almost entirely of aged and infirm dependants without relatives to take care of them.

Whitehorse General Hospital is owned and operated by the Territorial Government, assisted by a locally-constituted hospital board. A doctor resident in Whitehorse serves as the medical superintendent. This institution has a capacity of 40 beds, which can be augmented when necessary.

Mayo General Hospital is also owned by the Territorial Government and is operated under the supervision of a local hospital board. It has a capacity of 25 beds.

All hospitals are staffed with graduate nurses, and possess modern facilities such as well-equipped operating rooms, up-to-date X-ray equipment, facilities for therapeutic treatment, electrically operated sterilizers, adequate refrigeration, and special rooms for observation of isolation cases and mentally-deranged patients.

The Yukon Territorial Council votes substantial sums of money annually toward the cost of maintaining these hospitals and also towards construction costs. The cost of caring for indigent patients is covered by an annual grant.

Education

Schools for the education of white and half-breed children in Yukon Territory are maintained by the Territorial Government. Public schools are operated at Dawson, Mayo, Whitehorse, Carcross, Brook's Brook, and Destruction Bay. The two last-named schools are one-room buildings, situated on the Alaska Highway, and are operated for the benefit of children of Alaska Highway maintenance personnel. In addition to the above institutions, St. Mary's Separate School, in Dawson, operates as a day school, and the Convent of Christ the King, at Whitehorse, as a residential school. The latter is also open to day pupils.

The public schools at Dawson and Whitehorse have high school departments providing education leading to university entrance. University entrance (junior matriculation) examinations are held in June at Whitehorse and at Dawson by authority of the British Columbia Department of Education. The papers are forwarded from Victoria, and returned there to be graded. In outlying districts use may be made of correspondence courses provided at nominal cost by the British Columbia Department of Education.

The British Columbia curriculum is followed in Yukon schools. Whenever possible, teachers holding British Columbia certificates are employed, although in recent years some teachers with Alberta certificates have been engaged. Educational matters in the Territory are in charge of a Superintendent of Schools, resident at Dawson, who is responsible to the Controller. Annual inspections of all schools are made by the Superintendent.

The education of native children is carried on in day schools operated at a number of Indian settlements by missions of the Church of England in Canada and the Roman Catholic Church. In addition, a residential Indian school is operated at Carcross by the Church of England in Canada. These schools receive financial assistance from the Indian Affairs Branch of the Department of Mines and Resources at Ottawa.

TOWNS AND SETTLEMENTS

DAWSON, the capital, with a population of about 800, and Whitehorse, population approximately 3,500, are the largest settlements in Yukon Territory. Other centres of population include small settlements adjacent to mining properties, trading posts situated along the main rivers, Indian villages, and groups of buildings connected with airports and other facilities for transportation. Following will be found brief descriptions of the more important places in the Territory.

Aishihik, an intermediate aerodrome, is situated in southwestern Yukon at the northwest end of Aishihik Lake. It is equipped with a radio range and meteorological station, and is accessible by road from the Alaska Highway.

Burwash Landing is situated near the north end of Kluane Lake about 186 miles west of Whitehorse. It is served by the Alaska Highway and is also on the route of air lines operating from Whitehorse to Fairbanks. The settlement contains a trading post and an emergency landing field, and is an outfitting centre for big game hunting parties. Kluane Lake, situated in southwestern Yukon, is one of the largest and most beautiful bodies of water in the Territory. The lake lies northeast of the St. Elias Mountains, whose snowy summits and glistening glaciers may be seen from points along the Alaska Highway. Discoveries of gold on a number of streams entering the lake caused a small gold rush in 1903-04. There are small Indian settlements at Kluane, situated at the southeastern end of the lake, and at Burwash Landing.

Carcross, at the northern end of Lake Bennett, is the first town reached on entering Yukon Territory by the White Pass and Yukon Railway. It has a landing field, suitable water area for a seaplane base, Church of England and Roman Catholic churches, a post office, a day school, and an Indian residential school. Connection may be made at Carcross during the summer months with a steamer that operates on Tagish Lake and Taku Arm. "Carcross" is a contraction of the name "Caribou Crossing," so called on account of the great number of caribou that once crossed the narrows between Lakes Bennett and Nares. Carcross is connected with Whitehorse and the Alaska Highway by motor road. Lake Bennett lies astride the British Columbia-Yukon Boundary and also is one of the beautiful lakes in the Territory. The eastern shore is skirted by the White Pass and Yukon Railway line, from which may be observed the remarkable colouring of the mountains which, capped with snow, rise along each side. Lake Bennett and its companion body of water to the south, Lake Lindeman, were points of embarkation for thousands of gold-seekers who crossed the Chilcot Pass and launched rough boats for their perilous voyage down the Lewes and Yukon Rivers to the gold-fields in 1897-98.

Carmacks, on the west bank of the Lewes River about 110 miles north of Whitehorse, is an Indian settlement containing a post office, a trading post, and an emergency landing field. It is also the first junction of the water and overland routes north from Whitehorse. In the vicinity are large deposits of coal which were worked for a number of years. A few miles downstream on the Lewes River are the famous Five Finger Rapids, which provide a thrilling experience for river steamer passengers.

Champagne, situated about 56 miles west of Whitehorse on the Alaska Highway, is an Indian village and contains a trading post. About 42 miles west is the junction of the road from Haines, Alaska.

Dawson, administrative centre of Yukon Territory, is situated on the east bank of the Yukon River, north of its confluence with the Klondike River. It is named after Dr. G. M. Dawson, a geologist who explored the region in 1887. Dawson is a base of supply and distributing point for the Klondike gold-fields, and has a population of about 800. In addition to the Dominion Government administrative buildings, Dawson contains a Royal Canadian Mounted Police detachment, two banks, a telegraph office, a Government radio station (Department of National Defence), a weather station, a post office, high, public, and separate schools, a public library, a hospital, Church of England and Roman Catholic churches, a motion picture theatre, stores, hotels, and substantial private residences. The town has electric light, telephone, and water services. A system of roads radiates from Dawson to the placer mining areas of the Klondike district where large gold dredges operating in the creeks and valleys are of great interest to tourists. A ferry provides a means of crossing the Yukon River to West

Dawson, and a truck and tractor road extends westward to the Alaskan boundary and beyond to dredge camps situated on upper Fortymile River in Alaska. A landing field for aircraft is located in Klondike River Valley, 12 miles from Dawson.

Fort Selkirk, an Indian village and trading centre, is situated near the confluence of the Pelly and Yukon Rivers about 178 miles from Dawson. It has a post office, an emergency aeroplane landing field, Church of England and Roman Catholic churches, and a detachment of Royal Canadian Mounted Police. Fort Selkirk is the site of a Hudson's Bay Company fort constructed in 1848 and destroyed by Indians in 1852. Traces of the fort still remain. The Hudson's Bay Company re-established a trading post at Fort Selkirk in 1938. Fort Selkirk is the commercial centre for the fur trade of the Pelly River district, and a starting point for big game hunting parties.

Frances Lake is a trading post situated on the eastern shore of Frances Lake in southeastern Yukon. It has a private commercial radio station.

Fortymile is a small placer mining settlement situated on the west bank of the Yukon River about 47 miles below Dawson at the mouth of Fortymile River. It has a post office.

Keno Hill is situated in the Mayo mining district and is served by a good road from Mayo Landing, about 35 miles distant. The settlement has a post office and a Territorial assay office.

Mayo Landing, situated on the north bank of Stewart River about 180 miles from Yukon River, is the commercial headquarters of the Mayo mining district. It has a mining recorder's office, a detachment of Royal Canadian Mounted Police, a public school, Church of England and Roman Catholic churches, a post office, a Government radio station (Department of National Defence), a weather station, hospital, and several stores. A landing field is located near the town. Roads extend from Mayo Landing to the silver mines on Galena and Keno Hills, and to placer gold mines on Highet, Haggart, and Dublin Creeks.

Old Crow is a fur-trading centre and Indian village on the north bank of Porcupine River at its junction with Old Crow River. It has a Royal Canadian Mounted Police detachment, a trading post, and a Church of England mission, and has two-way radio communication.

Ross River is an Indian village with a trading post, situated at the confluence of the Ross and Pelly Rivers about 200 miles upstream from the confluence of the Pelly and Yukon Rivers.

Snag is a trading post and intermediate aerodrome in western Yukon. The aerodrome is equipped with a radio range and meteorological station and is accessible from the Alaska Highway. The record low temperature for Yukon Territory (-81°F.) was recorded at Snag in February, 1947.

Stewart River, a trading centre and post office, is situated on the Yukon River at the mouth of the Stewart River. Connection is made here with steamers operating on the Stewart River and serving points in the Mayo mining district.

Teslin, an Indian village with a fur-trading post and a post office, is located on the east side of Teslin Lake, about 114 miles southeast of Whitehorse on the Alaska Highway. It contains a Royal Canadian Mounted Police detachment, and Church of England and Roman Catholic churches. An intermediate aerodrome equipped with a weather station is situated near the settlement.

Watson Lake, situated in the southeastern part of Yukon Territory, possesses a post office, a good airport, and a weather station, and is served by Canadian Pacific Air Lines Limited. It is also accessible by a spur road from the Alaska Highway. There is a Roman Catholic church at the road junction. A Royal Canadian Mounted Police detachment is stationed in the settlement.

Whitehorse, situated on the Alaska Highway about 42 miles north of Carcross, is the terminus of the White Pass and Yukon Railway and the head of navigation on the Yukon River. It has a first class airport, equipped with radio range and meteorological stations, served by air lines from Seattle, Vancouver, Edmonton, and Fairbanks, as well as hotels, bank, hospital, stores, weekly newspaper, Church of England and Roman Catholic churches, and public and high schools. The headquarters of the Royal Canadian Mounted Police for southern Yukon and the office of the Mining Recorder for the Whitehorse district are also located in the town. Whitehorse is an important outfitting centre for big game hunting parties. From Whitehorse a motor road provides access to the famous Whitehorse Rapids and Miles Canyon on the Lewes River, which were navigated by many of the gold-seekers in the rush of 1897-98. A foot-bridge across the canyon is a fine vantage point from which to view the rushing waters.

COMMUNICATION

COMMUNICATION with Yukon Territory from outside points is maintained by telegraph, radio, and mail services, details of which will be found in the following paragraphs.

Telegraph

The Dominion Government telegraph system connects Tagish, Whitehorse, and Dawson with points in British Columbia. This service was inaugurated in 1899, when the system was extended from Ashcroft, via Hazelton, Telegraph Creek, and Atlin, British Columbia, to the places mentioned. This line provides connection with commercial telegraph services in other parts in Canada. A telegraph line which was constructed along the route on the Alaska Highway provides communication between Edmonton, Alberta, and Fairbanks, Alaska, and also serves intermediate points in Yukon Territory.

Radio

The Yukon and Northwest Territories radio system, operated by the Royal Canadian Corps of Signals, Department of National Defence, provides communication between Whitehorse, Mayo, Dawson, and Edmonton. The system also ties in with stations located at principal settlements in Mackenzie District of the Northwest Territories, and those in northern Alberta. Radio stations operated by the Department of Transport in connection with airports and landing fields along the Northwest Staging Route include those at Watson Lake, Teslin, Whitehorse, Aishihik, and Snag. Private commercial radio stations are operated by private enterprise at Carcross, Carmacks, Clear Creek, Frances Lake, Sixtymile River, Teslin, and Windy Arm, and by the Royal Canadian Mounted Police at Old Crow.

Telephone

A telephone system operated by the Yukon Telephone Syndicate in Dawson also serves various mining centres in the outlying districts. Mayo Utilities Company operates a telephone service in Mayo, and also from Mayo to Keno, Wernecke, and intermediate points. An automatic telephone service is operated in Whitehorse. It serves the various departments of Government service, the airport, transportation services, and business and residential sections of the town.

A telephone line paralleling the route of the Alaska Highway connects Edmonton and Fairbanks and serves intermediate points. Another line, built from Skagway to Whitehorse, is operated by the White Pass and Yukon Railway.

Mail Services

Air Mail Services.—Air mail services are maintained daily except Sunday, between Vancouver and Whitehorse, and between Edmonton and Whitehorse. These schedules include mail for Watson Lake. Dawson and Mayo Landing have air mail service twice a week from Whitehorse. In winter, air mail service is maintained weekly between Whitehorse and Carmacks, and between Whitehorse and Fort Selkirk.

Ordinary Mail Services.—Ordinary mails are conveyed from Vancouver by Pacific Coast steamship service to Skagway, and from Skagway by railway to Whitehorse for despatch to destination. Mail service is maintained twice a week in summer between Whitehorse and Dawson by steamer, via Carmacks, Fort Selkirk, and the Stewart River, and weekly mail service is provided from the Stewart River to Mayo Landing. Carcross is served by the White Pass and Yukon Railway according to frequency of service between Skagway and Whitehorse. Other points in Yukon, including Champagne, Readford, Granville, and Glacier Creek, have regular mail service in summer and winter. Keno Hill is served weekly in summer and twice a month in winter from Mayo Landing. Teslin receives mail from Whitehorse twice a month the year round. Mail service from Dawson to Fortymile and to Eagle, Alaska, is provided monthly.

During the winter season parcel post services to and from post offices in Yukon are restricted to the following: *Carcross, Whitehorse, and Champagne*—Rates and services same as during summer; *Watson Lake, Carmacks, Fort Selkirk, Mayo Landing, and Dawson*—By air stage service at the rate of 30 cents for the first pound and 25 cents for each additional pound.

TRANSPORTATION

YUKON TERRITORY is served by water, railway, air, and highway transportation. Normal services were disturbed by war conditions, and consequently all transportation schedules are subject to change. Following is an outline of the various services available in 1947.

Steamship Service

The Canadian Pacific Railway Company operates a steamship service the year round from Vancouver to Skagway, calling at intermediate points in British Columbia and the Alaska "panhandle." During the summer tourist season six trips are made each month. Additional information concerning sailings, rates, etc., may be obtained from any passenger agent of the Canadian Pacific Railway Company in Canada and the United States.

Railway Service

The White Pass and Yukon Railway connects the port of Skagway with Whitehorse, — 110 miles distant — the head of navigation on the Yukon River system. During the summer season, a normal service is provided daily except Sunday, and twice a week during the remainder of the year. Railway Express Agency maintains offices at Skagway, Carcross, Whitehorse, and Dawson.

River Steamer Service

During the season of navigation, which extends approximately from May 15 to October 15, the British Yukon Navigation Company (White Pass and Yukon Route) operates passenger steamboats on the Yukon River between Whitehorse and Dawson. The schedule provides for regular trips approximately 10 days apart, providing connection, in co-operation with the White Pass and Yukon Railway, with Canadian Pacific steamships at Skagway. The trips downstream from Whitehorse to Dawson usually take about two days, and those upstream four days.

In addition the British Yukon Navigation Company provides limited unscheduled services downstream from Dawson to Eagle and the mining districts of Coal Creek and Woodchopper Creek, Alaska, for the transportation of freight. Supplies for the settlement of Old Crow on the Porcupine River are transferred to launches at Coal Creek Landing.

River steamer passenger services are not available at present between Dawson, Yukon Territory, and Circle, Alaska, but occasional sailings of boats with river freight may be undertaken if warranted.

Unscheduled steamer services are operated on the Stewart River to serve Mayo Landing and the Mayo mining district. Frequency of service will be determined by the volume of freight to be carried. These services connect with the main Yukon River route at the Stewart River settlement, situated at the confluence of the Stewart and Yukon Rivers.

A tourist excursion on Tagish Lake is operated during the summer tourist season by the British Yukon Navigation Company. Connection with the steamer *Tutshi* is made at Carcross, from which point trips are made to the resort "Ben My Chree" at the southern end of West Taku Arm, an extension of Tagish Lake. Schedules are arranged to permit passengers on Canadian Pacific steamships to make the trip during the period of two days in which ships lay over at Skagway. Additional information concerning steamer services in Yukon may be obtained from offices of the White Pass and Yukon Route at Seattle, Washington; Vancouver, British Columbia; Skagway, Alaska, and Whitehorse, Yukon Territory.

Air Services

Extension and improvement of commercial air services have brought Yukon Territory within a few hours' flying time of populated centres in Western Canada and northwestern United States. Passenger services are maintained daily except Sunday by Canadian Pacific Air Lines from Vancouver to Whitehorse, and from Edmonton to Whitehorse, via Fort St. John, British Columbia. These services, which extend to Fairbanks, connect with those of Trans-Canada Air Lines and other companies at Edmonton and Vancouver. A service is maintained twice a week from Whitehorse to Dawson, via Mayo, by Canadian Pacific Air Lines.

Whitehorse also is a regular stop for Pan American Airways aircraft which operate on regular schedules between Seattle and Fairbanks.

A well-equipped licensed airport is operated at Whitehorse, which is one of the principal aviation centres along the Northwest Staging Route. Intermediate aerodromes, equipped with meteorological and radio range stations, are located at Watson Lake, Teslin, Aishihik Lake, and Snag in Yukon Territory. Unlicensed airports and auxiliary or emergency landing fields are also situated at Braeburn, Burwash Landing, Carcross, Carmacks, Dawson, Fort Selkirk, Mayo, McQuesten, Minto, and Yukon Crossing. Flight strips, constructed to aid contact flying, are also available along the route of the Alaska Highway.

The Alaska Highway

The highway system in the Territory includes that part of the Alaska Highway which traverses southern Yukon; access roads to airports along the Northwest Staging Route; all-weather roads which radiate from Whitehorse, Dawson, and Mayo Landing to the adjacent mining districts; and a road connecting Whitehorse with Carcross. Winter roads suitable for hauling freight by tractor train connect Whitehorse, Mayo Landing, and Dawson.

The Alaska Highway provides direct connection with Yukon Territory from both Edmonton and Fairbanks. The highway also links the town of Whitehorse with the settlements of Watson Lake, Teslin, Champagne, and Burwash Landing. The port of Haines, Alaska, southwest of Skagway, is connected with the Alaska Highway by the Haines Cut-off road. A brief description of the highway will be found in the following paragraphs.

The Alaska Highway commences at Dawson Creek, British Columbia (Mile 0.0), traverses northeastern British Columbia and southern Yukon Territory, enters Alaska at Mile 1221, and terminates at Fairbanks, (Mile 1523). Dawson Creek is the western terminus of a branch of the Northern Alberta Railways from Edmonton, and is also served by the provincial highway systems of Alberta and British Columbia. Dawson Creek is situated about 495 miles by railway, and 475 miles by highway (shortest route), from Edmonton.

The construction of the Alaska Highway was dictated by military strategy. The development of an overland transportation route linking Yukon and Alaska with British Columbia had been under consideration by federal and provincial authorities for many years, and alternate routes studied, but not until 1942 was the building of a road undertaken. Following the entry of the United States into the war in December, 1941, the need for a safe overland route for the transportation of men, equipment, and supplies to the strategic Alaskan Coast became apparent. After an exchange of notes between the governments of Canada and the United States, the United States Government was given authority to proceed with the construction of the Canadian section of the Alaska Highway.

Construction work in Canada was commenced in March, 1942, and the pioneer road was completed by November of that year. The work was undertaken by United States Army Engineers. During 1943 the pioneer road was developed, with the aid of civilian contractors, into a military highway capable of accommodating heavy vehicular traffic. The work involved extending the right of way through regions of wilderness, much of it mountain terrain; the erection of hundreds of bridges, many of them over large rivers; and the maintenance of equipment and personnel in the face of severe climatic conditions. The most modern and powerful road-building equipment available was used, and, at the peak of construction, more than 15,000 civilians were employed in addition to United States Army personnel. The cost has been estimated at \$138,000,000.

From Dawson Creek the highway crosses the northeastern corner of British Columbia, traversing rolling foothill country before entering the northern Rockies, which are crossed at elevations up to 4,200 feet above sea level. West of Summit Pass the highway descends to Muncho Lake, one of the most beautiful in northern British Columbia, and continues north-westward to the Liard River, which is bridged at Mile 495. The Liard is followed northwesterly along its benches to the southern boundary of Yukon Territory, which is crossed a few miles south of Watson Lake. Turning westward, the route recrosses the Liard River, and enters the Cassiar Mountains, where the continental divide is traversed between the watersheds of the Liard and Yukon Rivers.

From the height of land the highway descends to Teslin Lake, which is followed north to its outlet, the Teslin River. Turning westward again the route crosses the Teslin and Lewes Rivers, touching Whitehorse at Mile 918. From Whitehorse the highway continues in a westerly direction, traversing the Takhini, Dezadeash, and Shakwak Valleys to Kluane Lake, which lies in the shadow of the St. Elias Mountains, highest in Canada. Skirting Kluane Lake, the highway continues in a northwesterly direction to enter Alaska at Mile 1221, and follows the valley of the Tanana River to its terminus at Fairbanks, Alaska.

Under the terms of the agreement governing its construction the highway was maintained by United States authorities until April 1, 1946, when it was turned over to Canada. Maintenance is now being carried on by the Northwest Highway System (Canadian Army). Owing to the fact that travel facilities, including gasoline stations, restaurants, and over-night accommodation, have been extremely limited, it has been found necessary to restrict general travel on the highway. As existing tourist facilities are extended it is expected that these restrictions will be eased and eventually abolished.

At the time this publication went to press, persons allowed to operate vehicles on the highway without permits included Canadian and United States service personnel travelling on duty, and highway maintenance personnel in possession of authority from the Canadian Army. Prospectors and others having actual business along the route are issued permits, provided their vehicles are roadworthy. Permits are not yet issued to those who wish to travel on the highway for a holiday.

To facilitate maintenance operations and for the benefit of travellers without automobiles, bus services are operated on the Alaska Highway between Dawson Creek and Whitehorse by the British Yukon Navigation Company, and between Whitehorse and Fairbanks by O'Harra Bus Lines. The present schedule calls for trips in each direction three times weekly. Overnight stops at lodge-type hotels are being provided at Fort Nelson and Lower Post, British Columbia, approximately 300 miles apart. In addition, luncheon facilities have been opened mid-way between overnight stops, and rest-stop facilities are also available at intervals of 50 to 75 miles. Bus passengers, and those utilizing aerial transportation, do not require permits.

Additional information concerning the use of the Alaska Highway, including the issue of permits, roadside accommodation and facilities, and administration of natural resources along the right of way, may be obtained from the Assistant Commissioner, Royal Canadian Mounted Police, at Edmonton, Alberta; the Inspector, Royal Canadian Mounted Police, at Whitehorse, Yukon Territory, or from the Bureau of Northwest Territories and Yukon Affairs, Department of Mines and Resources, Ottawa.

TOURIST ATTRACTIONS

YUKON offers many attractions to the visitor. It is a land of contrasts—in climate, in physical characteristics, and in human interest. Its romantic history, so intimately associated with the feverish days of the Klondike gold rush and the "Trail of '98," is recalled by visits to places made famous in prose and poetry. Snow-capped mountains, beautiful lakes, and majestic rivers which flow for hundreds of miles provide an ever-changing panorama that is both interesting and delightful.

For those making use of water and railway transportation, the main points of departure for the Yukon are Vancouver and Victoria, B.C., and Seattle, Washington. Commodious, well-appointed vessels operated by Canadian and United States steamship companies provide, in normal times, a frequent service from these points to Skagway, following the famous "Inside Passage" for about 1,000 miles along the coasts of British Columbia and Alaska. In transit, calls are usually made at Alert Bay and Prince Rupert, British Columbia, and at Ketchikan, Wrangell, and Juneau, Alaska.

From Skagway the White Pass and Yukon Railway follows one of the routes of the early gold-seekers up a deep gorge in the Coast Mountains to the summit of White Pass, situated on the boundary between Alaska and British Columbia. From the summit the railway descends by easy grades to Lake Bennett, and skirts its eastern shore northerly across the inter-provincial boundary into Yukon Territory. The first large settlement reached in Yukon is Carcross, 68 miles from Skagway. From Carcross the railway continues for another 42 miles to Whitehorse, metropolis of Yukon.

At Carcross tourists may book passage on the steamer *Tutshi* for an overnight trip on Tagish Lake and West Taku Arm to the resort of Ben My Chree. Further details concerning this service will be found on page 17.

From Whitehorse a variety of excursions may be made. Among the most popular is the trip by steamer down the Lewes and Yukon Rivers to Dawson, a distance, one way, of about 425 miles. This trip, on which state-room accommodation is provided by the British Yukon Navigation Company, Limited, is available at frequencies of about ten days during the season of navigation. The route is that followed by thousands of would-be miners on their way to the Klondike. It touches many well known places such as Lake Laberge—setting of one of Robert Service's most famous poems—the Five Finger Rapids, and Fort Selkirk, first trading post in Yukon. If desired, the return trip may be made to Whitehorse by air.

In the immediate vicinity of Whitehorse, roads lead to the airport, one of the largest in northwestern Canada; Whitehorse Rapids, and Miles Canyon on the Lewes River.

Bus trips to Fairbanks, and Dawson Creek, as well as to intermediate points, may be made from Whitehorse, with the option of return by air line. Combination trips involving ocean-going vessel, railway, bus line, and river steamer, to points in Yukon and Alaska, may also be arranged. Further information on such outings may be obtained on application to the White Pass and Yukon Route, 407 Douglas Building, Seattle, Washington, or to the company's offices in Vancouver, British Columbia; Skagway, Alaska; or Whitehorse, Yukon Territory.

Dawson, gateway to the famous Klondike placer mining field, has many attractions. Several of the former hotels and dance-halls that catered to the miners in the early days of the mining industry are still standing, and form an interesting link with the past. Sightseeing trips up the Klondike River Valley to placer workings may be made, and modern mining operations

with hydraulic dredges inspected. From "Midnight Dome" one can view, in a vast panorama, the headwaters of most of the creeks which have yielded, in the past 50 years, more than \$200,000,000 in gold.

For tourists with limited time at their disposal air services provide a rapid and comfortable means of visiting Yukon Territory. Flights to Whitehorse are operated daily except Sunday from Vancouver and Edmonton by Canadian Pacific Air Lines, utilizing modern 28-passenger Douglas DC-3 and 14-passenger Lockheed Lodestar aircraft. The route to Yukon follows in part that of the Alaska Highway, which may be seen threading its way through the mountains and along the rivers of Canada's vast northland. The company provides stewardess service in flight, and staff-houses operated at Fort St. John, British Columbia, and Whitehorse, offer attractive accommodation and dining-room facilities for passengers.

From Whitehorse visitors may take advantage of services to Fairbanks, Mayo, and Dawson, which are operated three times weekly.

Combination trips, employing air services to and from Yukon Territory and other means of transportation within the Territory, permit tourists to visit many places of interest within a limited space of time.

Additional information concerning points of tourist interest in Yukon Territory may be obtained by writing to the Controller, Yukon Territory, at Dawson, or the Territorial Agent, Whitehorse, Yukon Territory.

PHYSICAL FEATURES*

YUKON is a region of hills and mountains separated by a network of large valleys. The main feature of the Territory is a great basin-like area called the Yukon Plateau which is drained by the Yukon River and walled in on the north, east, and southwest by mountains. A large basin-like area drained by the Porcupine River lies to the north, and another drained by the Liard River lies to the southeast. The mountain barriers around these basins include the St. Elias and Coast Mountains in the southwest and the Mackenzie Mountains on the east. Southwest of the Mackenzie Mountains and separating them from the Yukon Plateau, the Selwyn Mountains form a group of ranges along the divide between the Yukon and Mackenzie Rivers. The Ogilvie Mountains, extending westward from the northwest end of the Selwyn Mountains, form the watershed between the Yukon River and the Peel and Porcupine Rivers. To the north the basin of the Porcupine River is separated from the Mackenzie River and the Arctic Ocean by the Richardson and Buckland Mountains, for which the Arctic Plateau forms a sloping foreland stretching down to the ocean. Little is known of these mountains and the basin of the Porcupine River.

Northeast of the Yukon Plateau, the Mackenzie Mountains form a barrier of ridges similar in structure to those of the Rocky Mountains, from which they are separated by an area of plateau and plain country along the valley of the Liard River. A lofty section is situated near the headwaters of the Snake River, a tributary of the Peel River, where peaks close to 10,000 feet high are reported. The Selwyn Mountains hold the same relative position to the Mackenzie Mountains that Selkirk, Cariboo, and associated ranges in the south hold to the Rocky Mountains. The Ogilvie Mountains have a similar structure, but their peaks are not known to be more than 8,000 feet high, and no glaciers have been found in them.

**Contributed by H. S. Boslock, Geological Survey of Canada, Mines and Geology Branch, Ottawa, Canada.*

The Yukon Plateau contains the best known and most developed part of the Territory. It is an area of rolling uplands whose summits show marked uniformity of elevation over broad expanses, representing an old erosion surface, now an upland surface. In many places this surface is interrupted by isolated mountains and ranges, among which are the Dawson, McArthur, Glenlyon, Big Salmon, and Pelly Mountains. These mountains have few peaks more than 7,000 feet in elevation. A broad warped depression in the surface of the upland follows the central northwest line of the plateau. A network of main valleys is deeply trenched from 1,000 to 2,000 feet below the upland surface. The valleys of the main rivers spread out in a great branching system connected by similar large valleys occupied by small streams. Several great valleys trend northwestward through the plateau, followed in different parts by various major streams. The greatest of these valleys, Tintina Valley, extends through the Territory from the Hoole River to the Yukon River and northwest to Dawson. This valley is occupied in part by the Pelly, Stewart, Klondike, and Yukon Rivers. Another great valley — Shakhwak Valley — extends from Kusawa Lake northwest along Kluane Lake, thence across the International Boundary. To the northwest the plateau extends on into Alaska. Although broken by mountain ranges it extends southeastward to the Stikine Plateau of British Columbia. To the southwest the plateau slopes upward and abuts against the Coast Mountains.

The Coast Mountains in Yukon Territory are the northward extension of the Coast Mountains of British Columbia and have all the characteristic roughness of the latter. In Yukon, however, the elevations seldom exceed 7,500 feet, and they slope northwestward, terminating near Kusawa Lake. The front ridges of the St. Elias Mountains rise abruptly to 7,000 feet or more, and are separated from the main ranges by a belt of plateau-like country. The main ranges of the St. Elias Mountains then rise southwestward to a vast plateau of snow and ice, out of which great valley glaciers extend their tongues, and above which stand these great peaks: Mount Craig, 13,250 feet; Mount Wood, 15,880 feet; Mount Walsh, 14,780 feet; Mount Vancouver, 15,720 feet; Mount Steele, 16,439 feet; Mount Lucania, 17,150 feet; Mount St. Elias, 18,008 feet; and Mount Logan, 19,850 feet, the second highest peak in North America. There are also many other unnamed peaks having elevations of 10,000 feet and more above sea-level. On rare days the great peaks can be seen from prominent elevations hundreds of miles away, dazzlingly white in their almost complete mantle of snow and ice, and appear to float like clouds above the denser and hazy atmosphere below.

As they approach the 60th parallel the St. Elias Mountains are intersected by a sharp depression which is followed by the Alsek River, the only stream from Yukon flowing directly to the Pacific Ocean. This river, which rises in an area of spreading valleys on the northeast slope of the St. Elias Mountains and in the plateau, turns south into a great gorge partly blocked by glaciers, and, although it contains no great single cataract, drops over 1,500 feet in its 80-mile journey to the sea.

The Yukon River has played a vital part in the development of the Territory, although only the upper reaches of the mighty stream are contained within the territorial boundaries. The volume of the Yukon River is less than that of many other rivers of the same length elsewhere in the world, owing to the semi-arid climate of most of the region which it drains. Its heads, rising in the mountains, gather volume and descend quickly, at first, but lose their gradient as they come into the plateau. This has resulted in the formation of an amazing branching system of navigable waterways. From Whitehorse, situated only 110 miles by rail from the ocean port of

Skagway on the Alaskan Coast, a river steamer more than 200 feet long and carrying several hundred tons of freight may navigate without interruption by rapids to the Bering Sea. Within Yukon Territory smaller steamers have navigated more than 1,400 miles of this river system, and a still greater mileage of smaller streams is navigable for suitable power-driven river boats.

The semi-arid climate of the Yukon Plateau extended far back through the Pleistocene Era and prevented the ice sheets, which blanketed nearly all the rest of Canada, from covering its northwestern part. To this factor may be attributed the general lack of lakes in the interior and northern parts of Yukon Territory. The larger lakes which do exist are found within or close to the mountains, and are renowned for their beauty.

GENERAL GEOLOGY*

THE main physical features of Yukon Territory mentioned in the previous section are in a broad way geological units and form a suitable basis for the description of the geology. The Yukon Plateau occupies a central position. It is constructed on a well-exposed foundation of crystalline rocks, mainly old metamorphic strata of Precambrian and Palæozoic ages and younger intrusions. Tertiary lavas and sediments lie in scattered patches on its surface. In the southeast a broad trough in the foundation is occupied by a thick section of folded Mesozoic strata. On the east the surface of the crystalline foundation is depressed and the older metamorphic rocks are in most places overlain by folded and faulted late Palæozoic and Mesozoic strata.

Geological information concerning the interior of the St. Elias Mountains is very limited. Its great peaks are reported to be of granitic rocks, but along its northeastern border, Palæozoic and Mesozoic strata form the front ranges. The plateau-like belt between the front ranges and the main ranges is largely occupied by Tertiary sediments capped by volcanic rocks. The Coast Mountains to the southeast are formed of granitic intrusions with roof pendants of old metamorphic rocks and Mesozoic strata of the Yukon Plateau.

To the northeast of the plateau the Selwyn Mountains are composed of a great thickness of folded and faulted sediments ranging from Precambrian to Tertiary in age, but in many sections, notably in the northern flanks, long periods of Palæozoic and Mesozoic time are not represented. These mountains also contain considerable areas of granitic intrusive rocks that swell to batholithic dimensions east of Frances Lake. Farther east the Mackenzie Mountains appear to be wholly of sedimentary rocks.

Little is known of the Ogilvie Mountains except that they are composed mainly of Palæozoic and Mesozoic sedimentary rocks associated with small intrusions and with areas of Precambrian rocks in their southwest part.

To the north the Richardson and Buckland Mountains are composed of upfolded Palæozoic and Mesozoic strata. Some intrusions have been found in the Buckland Mountains, but none is known in the Richardson Mountains. The broad basin of the upper part of the Porcupine River contains a wide expanse of flat-lying strata believed to be mainly Mesozoic sediments. Old Crow Range is a ridge of Palæozoic and perhaps Precambrian rocks, with granitic intrusions. To the south of it areas of Tertiary strata lie along the Porcupine River, and, to the north, another large basin-like area of flat-lying rocks, perhaps of Mesozoic or Tertiary age, extends toward the Buckland Mountains.

**Contributed by H. S. Bostock, Geological Survey of Canada, Mines and Geology Branch, Ottawa, Canada.*

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The following selected list of publications of the Geological Survey of Canada may be of service to prospectors and others interested in the geology and mineral possibilities of Yukon Territory. These reports, some of which contain bibliographies, may be obtained at nominal cost on application to the Chief, Bureau of Geology and Topography, Department of Mines and Resources, Ottawa.

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CLIMATE*

GREAT variations in temperature from year to year are characteristic of the climate of Yukon Territory. In some years the coldest month has averaged from 40 to 50 degrees below zero F., and in other years it may have had an average temperature above zero.

The geographical location of Yukon is one of the reasons for these variations in weather. Since the Territory extends latitudinally from the relatively warm Pacific Ocean to the cold Arctic Ocean it is difficult to generalize on the climate of the whole region. When cold air masses from the Arctic Ocean north of Alaska and Siberia move over Yukon temperatures are very low and remain low while the air masses stagnate over the region. On the other hand, if these cold air masses enter the North American continent to the eastward, passing up the Mackenzie Valley, Yukon comes under the influence of northward moving air from the North Pacific Ocean, and winter temperatures may, therefore, be relatively mild. Depending upon the frequency and duration of these cold air mass invasions, winters will vary in intensity of cold from month to month and from year to year.

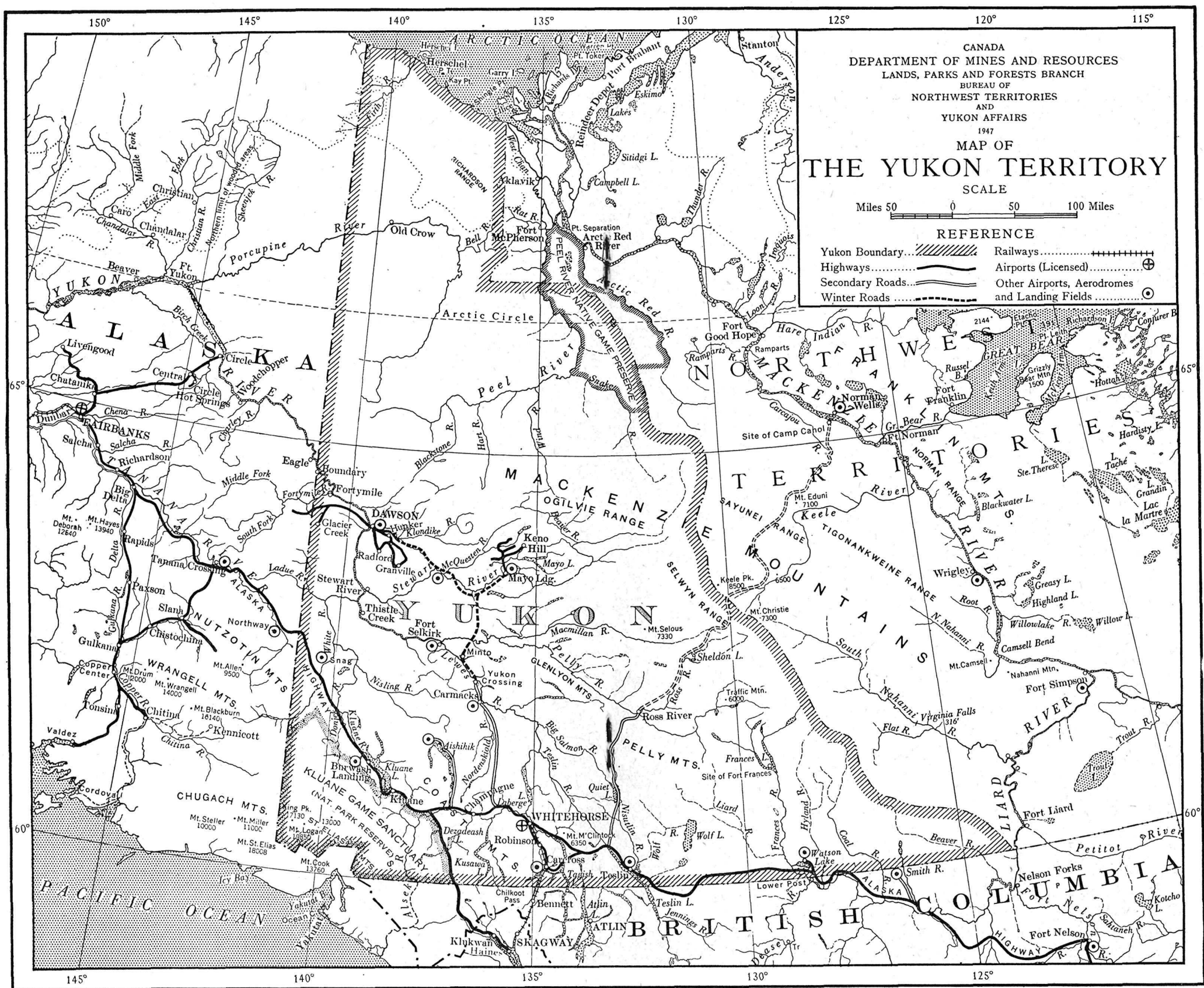
Similarly, summer temperatures vary according to the predominant air mass movements. Days can be quite hot when air from the Pacific Ocean or Alaska is over Yukon, or be cool when Arctic air invades the Territory. The duration of sunlight is long during the summer, which assists the warming process and aids garden growth. Dawson has almost 24 hours of daylight during late June and about 20 hours during July. At the same time, Whitehorse, farther south, has about 20 hours of daylight in June and about 18 hours in July. Conversely, winter days have only 5 to 8 hours when the sun is above the horizon.

Only a few weather stations have long periods of meteorological records, and these represent only valley conditions, but their averages indicate the general climatic conditions of the rest of the Territory. Mean monthly winter temperatures range from zero degrees in January at Carcross to -13 degrees at Mayo and -21 degrees at Dawson. An extreme minimum temperature of -81 degrees was recorded at Snag airport in February, 1947. Summer, characterized by warm days and cool nights, has monthly average temperatures of 50 to 60 degrees. Daily maxima usually reach 80 to 85 degrees sometime during the month, and a temperature of 95 degrees at Dawson is the highest yet recorded in Yukon.

Killing frosts may occur in any month of the year, but are rare in July. Southern Yukon, with higher elevations, has a frost-free period of about 45 days, while Dawson, in west central Yukon, has an average of 75 days without frost. In general, the average last spring frost occurs in mid-June and the average first autumn frost is recorded in mid-August. The first autumn frost has always been recorded before September 15 at all Yukon stations.

Annual precipitation is low in Yukon, due mainly to the high barrier of the St. Elias Mountains on the south which cuts off moisture from the Pacific. An average of 9 to 13 inches of precipitation is recorded during the year. Of this 35 to 50 per cent is rain which falls during the four summer months. From 1½ to 2 inches of rain per summer month is typical. Snowfall occurs most frequently from November to January, when an average of about 10 inches of snow may be expected monthly. Lesser quantities fall in October and March, and some snow may be expected in April, May, and September.

**Compiled from information supplied by the Meteorological Division, Department of Transport, Toronto, Canada.*



ABORIGINES*

THE native inhabitants of Yukon Territory are Indians and Eskimos. The Indian population was estimated in 1945 to be about 1,700, but only two families of Eskimos were known to be living in Yukon.

Indians

The Indian inhabitants of Yukon may be divided into two principal groups, the Déné or Athapascans who inhabit the interior, and members of the Tlingit tribe who occupy the southwestern part of the Territory.

The Déné people may be again subdivided into two main groups. The first of these is the Loucheux tribe, occupying the drainage systems of the Peel and Porcupine Rivers. Their principal settlement is at Old Crow. South of these people, and occupying the drainage system of the Yukon River, are the Kutchin Indians. These people are often referred to as "Stick" Indians; a term meaning "forest," taken from the Chinook jargon, now no longer used in Yukon.

To the south of these Kutchin people and occupying the drainage of the Alsek, the Tatshenshini, and other rivers flowing into the Pacific Ocean, are several small groups of people who, though of Kutchin origin, have intermarried with the Tlingits and have adopted much of their language, and who depend in large part on the migrating salmon which mount these streams to spawn.

The Tlingit Indians of the coast were for many years in the habit of conducting annual trading expeditions into the interior. They frequently terrorized the Déné people and, in 1852, looted the Hudson's Bay Company post at Fort Selkirk.

In the southeastern corner of Yukon Territory, in the neighbourhood of Frances Lake and the streams draining into the Liard River, is a small group of Nahani Indians.

Before the arrival of Europeans in Yukon the native inhabitants depended on the products of fishing and hunting for their livelihood. The Eskimos followed a mode of existence in no way different from that of their neighbours along the Arctic Coast to the east and west. The large body of Déné Indians, occupying most of the interior, hunted the moose and cariboo, the black and grizzly bear, and mountain sheep, and ate large numbers of smaller animals such as hares and gophers, as well as fish. For vegetable food they used berries and a few roots of plants. Their clothing was of smoke-tanned cariboo skin and their principal weapon was the bow. Snares were used extensively for small game as well as for bears, and moose were driven along specially constructed fences into ambush. Transportation was by means of canoes of birch bark or of skin stretched on wooden frames in summer, and by toboggans in winter. Both dogs and people frequently carried packs. Snowshoes were used extensively in winter.

Recent archaeological work in the southwest part of Yukon has revealed stone tools at such a depth underground as to indicate a very considerable antiquity. This early stone culture has not yet been correlated with other archaeological cultures, but preliminary work seems to suggest a connection with Siberia and southwestern United States.

Since the arrival of white residents there has been a great change in the condition of the native population. In the southern part of the Territory and along the Yukon River many white men have married Indian women and a large number of people of mixed blood are now seen. Native clothing has

**Contributed by J. D. Leechman, National Museum of Canada, Ottawa, Canada.*

disappeared almost entirely except for moccasins and the skin parka, and the Indians of the younger generations are adopting white habits very rapidly. Many of them speak good English, have their own cars, and are quite efficient at handling complex machinery, several having been engaged to operate bulldozers while the Alaska Highway was being constructed.

The people in the south, who show such strong Tlingit influence, represent a particularly fine type of Indian, — frank, sincere, and intelligent, reminding one of the Eskimo rather than the typical Indian of the Northwest Territories.

Eskimos

Archæological remains indicate that the short Arctic Coast of Yukon (about 135 miles) once supported a considerably larger population of Eskimos than it does today. Until 1931 a Royal Canadian Mounted Police post was maintained at Herschel Island. The Anglican Mission settlement at Shingle Point was moved to Aklavik in 1936, shortly before the point itself was swept away by violent storms. Habitable cabins still stand at Kay Point, Herschel Island, and Demarcation Point. Good shelter for small boats may be found in a cove about 8 miles northwest of Shingle Point. Eskimos from Alaska travel the coast frequently, on the ice in winter and by boat in summer, on their way to and from the Mackenzie Delta, but travellers cannot rely on finding any people or assistance here. During the winter Eskimos still go inland to the Richardson Mountains in pursuit of caribou.

Indian Administration

The administration of Indian Affairs in Yukon Territory is carried out by a resident Indian Agent at Whitehorse, under the direction of the Indian Affairs Branch, Department of Mines and Resources, at Ottawa. The Indian welfare program in the Territory includes assistance in the provision of means of livelihood; education of Indian children; payment of treaty money; supervision of the payment of Family Allowances in kind; provision of relief rations to the old and physically incapacitated; and the furnishing of such supplies and equipment as circumstances may require.

Native-born Indians, Eskimos, and half-breeds are authorized under free permits to engage in hunting and trapping. An area of approximately 4,000 square miles in northeastern Yukon, known as the Peel River Native Game Preserve, was established in 1923 for the benefit of the native Indian and half-breed population, which has exclusive hunting privileges therein.

Medical care and hospitalization of Indians in the Territory is the responsibility of the Department of National Health and Welfare. Doctors resident in Dawson and Whitehorse serve as departmental medical officers on a part-time basis. Indians requiring hospital care are admitted to hospitals situated in Dawson and Whitehorse. In addition a full-time nurse, with headquarters at Whitehorse, patrols Indian settlements along the Alaska Highway in Yukon Territory. Medical inspections of natives in outlying districts are made possible through use of aircraft and other means of transportation.

To meet the educational needs of Indian children one residential and several day schools have been established in the Territory by the Indian Affairs Branch. These schools are operated by missions of the Church of England and Roman Catholic churches, with financial assistance from the Dominion Government. The residential school is situated at Carcross and the day schools are at Burwash Landing, Champagne Landing, Little Salmon (Carmacks), Moosehide (Dawson), Old Crow Village, Rampart House, Fort Selkirk, Teslin Lake (two), and Whitehorse.

FLORA

Forests

THE forests of Yukon belong to the Boreal Forest Region of Canada, which is characterized by combinations of a small number of species as well as by a relatively slow rate of growth. Especially is this true of the forest along its northern border where the full effect of latitude is obvious. Although Yukon Territory south of latitude 65° North may be classed as forested country, its general elevation is fairly high and the combined effect of altitude and latitude limits tree growth over much of the area to stands of little or no commercial value. The absolute timber-line ranges from about 5,000 feet above sea-level in the south to about 4,000 feet or less at latitude 65° North, and the limit of merchantable growth is situated at least 1,500 feet below the timber-line. Consequently, conditions over practically the whole of Yukon are such that timber cannot grow to merchantable size, except in the major valleys and depressions.

White spruce is the most common species occurring in Yukon and makes up the bulk of all important stands. In the Liard River watershed there are excellent bottom-land stands of white spruce. Elsewhere, especially along the valleys of tributaries of the Yukon River which rise in the Mackenzie Mountains, bottom-land stands of merchantable timber occur frequently. White spruce also is the most common species found on the uplands. Here, however, it is usually of poor quality and occurs most frequently in pure stands of widely-spaced, branchy trees of poor height.

Aspen poplar, balsam poplar, and birch are also common, and usually occur as mixed stands along with spruce. However, as these species are confined mainly to well-drained uplands, they seldom attain sawlog size, but nevertheless are useful as fuel-wood where supplies of spruce are not available. Lodgepole pine occurs in pure stands in the southern part of the Territory, where it is useful as fuel-wood and for the manufacture of ties, poles, etc. Alpine fir is found in that part of Yukon east of the Lewes and Yukon Rivers, but because of its poor quality and inaccessible location it is not commercially important. Black spruce and tamarack also occur in limited quantities.

As a result of recent surveys it is believed that a good supply of merchantable timber suitable for sawlog material may be found in those parts of the Territory situated south of latitude 61° North, and east of the Lewes and Yukon Rivers as far north as latitude 65° North. It is probable that the rate of growth is such that these areas could continue to supply all local needs and even provide an exportable surplus for use in the drier and less well-timbered western and northern parts of Yukon. The only area that might be called upon to supply areas outside Yukon Territory is the valley of the Liard River in the southeast corner.

For about 30 years after the gold rush of 1898 nearly all lumber used in Yukon Territory was of local manufacture. Sawmills operated at Dawson and other points along the Yukon River supplied the lumber used in the construction of buildings in Dawson, as well as the large quantity required for the construction of flumes and sluice boxes necessary for the mining industry. These operations have practically exhausted the supply of timber suitable for sawn lumber in the area close to the Yukon River, and since 1930 the lumber requirements of Dawson and Whitehorse have been supplied largely by shipments from British Columbia.

Several sawmills are operated in Yukon Territory. Two mills situated at Mayo are equipped to manufacture practically all types of lumber

required for building purposes. A small sawmill is operated at Dawson, and others have been in operation at points along the Alaska Highway. Practically all lumber is sawn from white spruce logs. While native timber is used in the construction of small boats and scows, all steamboats and barges operating in Yukon are constructed of imported lumber.

White spruce and birch are used extensively as fuel, and poplar is substituted where these species are not available. In the southern part of the Territory jackpine is plentiful and forms an important fuel supply. Wood is used as fuel in all steamboats operating on the Yukon River and its tributaries, and over a period of 45 years a very large quantity has been consumed. The average consumption of an ordinary river steamboat for a round trip from Whitehorse to Dawson is 150 cords.

In the early days of mining, frozen areas to be worked by placer dredges were first thawed by steam, and considerable timber along the Klondike and Yukon Rivers was used as fuel in these operations. Much wood was also burned by miners in thawing gravel to be worked in sluice boxes and rockers.

Forest reconnaissance surveys were carried out in southern Yukon and along the Lewes and Yukon Rivers in 1943 and 1944 by forest officers of the Department of Mines and Resources, and much information about forest conditions was obtained. As a result, a Forest Protective Service, headed by a qualified forest engineer with headquarters at Whitehorse, was organized. For the present forest protection is being confined to areas adjacent to the main arteries of travel i.e., the Alaska Highway, the Haines Cut-off, and the Lewes-Yukon River system. The officer in charge assists the Crown Timber and Dominion Lands Agent at Whitehorse in the administration of timber and public lands.

Wild Flowers

Yukon is a land of flowers. They grow wild almost everywhere, and in great profusion. They are a constant source of delight to the visitor, for their luxuriance, colour, and fragrance give an additional touch of beauty to many a lovely scene. Wild flowers grow in the valleys and on the lower slopes, and even on the higher spaces above the timber-line will be found the hardier species that refuse to be beaten back by the temperature and the elements. Nearly 500 varieties of wild flowers, ferns, and shrubs have been identified in the Territory.

Wild flowers in Yukon are principally blue, pink, and magenta in colour, with a generous touch of yellow in a number of species. Strangely, deep scarlet flowers are rare, and species such as Indian paint brush that farther south range in shade from brick-red to cherry, appear in Yukon in lemon and magenta shades. Characteristic species include arnica, shrubby cinquefoil, marsh marigold, yellow pond lily, Arctic poppy, mustard, yellow violet, vetch, goldenrod, Drummond's dryas, locoweed, stonecrop, hawkweed, and monkey flower. The ubiquitous dandelion is found in Yukon, as is also the eastern buttercup.

From early spring, when the dainty pasque flower — known locally as the purple crocus — pushes its head above ground, until the last faded leaves of autumn have fluttered down, a constant variety of floral beauty embellishes the countryside. By June the landscape is carpeted with purplish-blue lupine, broken here and there by the Arctic poppy and Jacob's ladder. On the higher slopes are the mountain forget-me-not, mountain harebell, and brilliant cerise shooting star. Lower down grow the wild rose, Dutchman's breeches, bleeding heart — a tiny prototype of the cultivated variety — and many other species that flourish during the long hours of summer daylight.

Among the distinctive flowers of the Yukon are several varieties of the orchid family. The most common is a large purplish-pink blossom with white spots. It grows on sunny exposed slopes, as well as in shady damp woods. Occasionally a pure white orchid is discovered, an exquisite single flower exhaling a faint but delicate fragrance. Within a few minutes' walk of Dawson will be found the fragrant bog orchid, fly-spotted orchid, dainty coral-root, ladies' tresses, and calypso.

By late July distant hills and mountains, road-sides, and borders of trails are coloured by the gorgeous magenta-purple of the fireweed, presaging the coming of autumn. Later, as trees and shrubs change colour, Nature adds a final touch by painting the countryside in brilliant shades of scarlet and gold — a closing pageant before the first crystalline flakes of snow begin to fall.

FAUNA

Mammals

ONE of the important natural resources of Yukon Territory is mammalian wildlife, which includes varieties of big game such as mountain sheep, mountain goat, moose, caribou, and bear, as well as numerous fur-bearers. The most widely known big-game districts are a large area extending northward from Kluane Lake to the upper White River, including the Donjek River, part of which now lies within Kluane Game Sanctuary; the region adjacent to Teslin Lake in southeastern Yukon; and areas in the vicinity of the Big Salmon, Macmillan, Ross, and Stewart Rivers. Game is also found in the area bounded by the Yukon, Porcupine, and Peel Rivers.

Mountain sheep in Yukon are of the Dall variety (*Ovis dalli* Nelson). They are more slender than the Rocky Mountain or "bighorn" sheep (*ovis Canadensis*) and vary in colour, according to locality, from pure white to almost black. Two of three subspecies occur in Yukon as follows:

Dall Sheep, *Ovis dalli dalli* Nelson, nearly pure white, are found principally in the northern and southwestern parts of the Territory. They range south from the Richardson Mountains to the Ogilvie Mountains, in the St. Elias Mountains. In central Yukon they intergrade with **Stone Sheep**.

Stone Sheep, *Ovis dalli stonei* Allen, dark brown, with underparts, rump, and face white, range from the Cassiar Mountains of British Columbia north to the Pelly River. They intergrade with **Dall Sheep** in the northern Cassiars and in the Pelly Mountains.

Intergrades that are white sheep with dark saddles were at one time called *Ovis fannini* or **Fannin Sheep**. However, complete intergrading between the white Dall and the largely black Stone sheep has necessitated the view that Dall, Stone, and Fannin sheep represent only one species.

Mountain Goat, *Oreamnos americanus* Blainville, a white animal with black horns, hoofs, and nose, is found in the St. Elias Mountains and in parts of southern Yukon.

Mule Deer, *Odocoileus hemionus sitkensis* Merriam, occurs in southern Yukon, but is rare.

Alaska Moose, *Alces americana gigas* Miller, is one of the common big game species in Yukon, and is a principal source of food for native Indians in some localities. Heads of specimens killed in Yukon having spreads of 65 to 70½ inches have been reported. Moose occur from southern Yukon north to the Porcupine River region, and are particularly common in the vicinity of the Macmillan River.

Barren Ground Caribou, *Rangifer arcticus* Richardson, is also plentiful in Yukon. Two sub-species are recognized in the area. They include **Stone Caribou**, *Rangifer arcticus stonei* Allen, and **Osborn Caribou**, *Rangifer arcticus osborni* Allen. The former ranges over northern and western Yukon, and includes the great migratory herds that once ranged south from the Porcupine River to the Whitehorse and Kluane areas. The **Osborn Caribou** is found principally in southeastern Yukon.

Black Bear, *Ursus americanus* Pallas, including the brown phase or variety, occurs generally through the wooded portions of the Territory. In some parts of Yukon the brown phase predominates.

Grizzly Bear, *Ursus Horribilis* Ord, is fairly common in the Territory, although generally found in the less heavily timbered and more inaccessible regions.

Polar Bear, *Thalarctos maritimus* Phipps, occurs along the Arctic coastline of Yukon.

Timber Wolf, *Canis lupus* Linnæus, is common. Subspecies found in Yukon include the **Tundra Wolf**, *Canis lupus tundrarum* Miller, ranging from the Porcupine River north, and the **Alaska Wolf**, *Canis lupus pambasilius* Elliot, a larger form ranging over most of the area.

The **Bowhead whale**, *Baleana mysticetus* Linnæus, and **White Whale** or **Beluga**, *Delphinapterus leucas* Pallas, occur off the Arctic Coast of Yukon.

Fur-bearers which occur in Yukon include beaver, ermine (weasel), mink, marten, wolverine, muskrat, otter, lynx, and Arctic fox. Red fox, including the silver, cross, and black phases is also found. Snowshoe rabbit is abundant, and porcupine, pika or "rock rabbit," and northern hoary marmot or "whistler" are prevalent. Other forms of smaller wild animal life to be observed include red squirrel, Yukon ground squirrel and Arctic ground squirrel, flying squirrel, chipmunk, brown lemming, white lemming, pack rat, and several species of meadow mouse, tundra mouse, red-backed mouse, and white-footed mouse which form an important portion of the food of the carnivorous fur-bearing mammals.

Birds

Biological investigations carried out in Yukon at various times by qualified observers have disclosed an extensive and varied bird life. Many of the species found are year-round residents.

Among the game birds, the most abundant are grouse, ptarmigan, and some species of waterfowl. Dusky grouse, commonly known as blue grouse, is quite plentiful in some districts, and spruce grouse, sharp-tailed grouse, and ruffed grouse are also common. Willow ptarmigan is found near the timber-line in many districts, and rock ptarmigan and white-tailed ptarmigan occur above the timber-line.

Waterfowl which occur include wild goose, swan, and duck. The Canada goose breeds along the main tributaries of the Yukon River, and swans have been observed on the Pelly River and small lakes of the region. Species of duck which have been identified include American merganser, red-breasted merganser, mallard, baldpate, pintail, shoveller, greater and lesser scaup, harlequin, and American and Barrow golden-eye. Wilson's snipe, northern phalarope, spotted sandpiper, black-bellied plover, and golden plover are also present.

Predatory birds found in Yukon include bald eagle, Richardson's owl, hawk owl, great grey owl, and snowy owl, goshawk, red-tailed hawk, sharp-shinned hawk, and marsh hawk. Osprey is also found in some districts.

Common residents or migrants which occur also include the American robin, American raven, Canada jay, hairy and Arctic three-toed woodpecker, pine grosbeak, Bohemian waxwing, crossbill, horned lark, yellow warbler, mountain bluebird, common redpoll, hermit thrush, rufous hummingbird, Townsend's solitaire, black-capped chickadee, brown-headed chickadee, bank swallow, cliff swallow, tree sparrow, pine siskin, slate-coloured junco, Say's phoebe, and snow bunting.

Additional information concerning wild animal and bird life in Yukon Territory is contained in the publications "Mammals of Yukon" (Bulletin No. 100) and "List of Yukon Birds and those of the Canol Road" (Bulletin No. 105) which are available from the National Museum of Canada, Ottawa, at a cost of 25 cents per copy. (See bibliography on page 49).

Fish

Several varieties of game fish occur in the lakes and streams of Yukon Territory. King, or "tyee," and dog salmon ascend the Yukon River and tributaries from Norton Sound, and provide a valuable fishery for the native Indian population, particularly in the vicinity of Dawson. A small number of the same species are found in the Porcupine River. Five species of salmon—king, humpbacked, sockeye, coho, and dog—ascend the Tatshenshini River, a tributary of the Alsek River, from the Pacific, and contribute to an important Indian fishery at Klukshu. Steelhead trout, a sea-going form of the famous rainbow, also ascends the Tatshenshini and tributaries in May.

Great lake trout and Nelson's whitefish are common to many of the larger lakes in southern Yukon, including Teslin, Tagish, Marsh, Laberge, Kathleen, Dezadeash, and Kluane. Least herring, or cisco, is plentiful in lakes near Carcross including Bennett and Tagish. Landlocked steelhead trout and sockeye salmon occur in the upper Alsek River watershed, presumably having been cut off from the sea by the formation of falls on the Alsek River.

Rainbow trout is plentiful in the Dezadeash and Alsek Rivers, and occurs in other streams accessible from the Alaska Highway. Dolly Varden trout is also caught in eastern Yukon Territory and in the Tatshenshini River. Arctic grayling or "bluefish" is abundant, and can be taken on a fly in most rivers. Other species which occur include inconnu, northern chub, northern pike, northern sucker, common sculpin, trout-perch, "tezra" or Mackenzie whitefish, and the rare Coulter's whitefish.

THE MINING INDUSTRY

THE presence of gold in the bars of streams feeding the Yukon River was first reported by officers of the Hudson's Bay Company in the 1850's, and later by a missionary stationed in the vicinity of Fort Yukon about 1862. Prospecting began in 1873 and fine gold was later discovered along most of the principal streams. By 1886 more than one hundred miners were working in Yukon, and gold to the value of thousands of dollars was recovered from Steamboat Bar on the Stewart River and Cassiar Bar on the Lewes River. By 1890 prospecting had spread to other streams, including Fortymile River, where coarse gold was discovered. The Sixtymile River placer field was found in 1892, and by 1895 its annual production had reached a value of \$250,000. This was the first area in Yukon in which the creek gravels were the chief source of gold, in contrast to the river bars, as on the Lewes, Stewart, and Fortymile Rivers.

The smaller streams then became a field for prospecting and in August, 1896, the famous Klondike placer creeks were discovered. Their amazing

richness attracted miners from other parts of Yukon, and most of the better creeks of the district were quickly staked, while those of other areas, including Sixtymile, were deserted. The strike also attracted thousands of prospective miners who made their way to the Klondike, and in the next ten years prospectors had spread out over the entire region. It was during this period that nearly all the known placer creeks in Yukon were discovered, and also the deposits of the Whitehorse copper belt, the Mayo silver-lead district, and the Carmacks coal basin. In addition ores of gold, antimony, tungsten, zinc, arsenic, manganese, and iron were found in lode deposits, and tungsten, mercury, tin, platinum, and bismuth were found in placers.

Placer Mining

The climate and the nature and richness of the gold placers at first favoured hand methods of mining with the result that each claim soon became a productive mine in itself. The output of gold rose rapidly and in 1900 it reached a peak value of \$22,275,000. By 1906 most of the rich, easily-mined ground was worked out, and in 1907 the value of gold production declined to \$3,150,000. The introduction of dredging in 1905, followed by an amalgamation of interests, resulted in increased placer production during the next few years, until in 1913 it reached a value of \$5,846,780, an amount which has not since been exceeded. The gradual exhaustion of the richer hydraulic and dredging grounds lowered the value of production to \$1,243,287 in 1923, and from then until 1932 the annual production was valued at less than \$1,000,000.

In 1932 a change of policy and management took place in Yukon Consolidated Gold Corporation, which had acquired practically all the reserves of the Klondike district. The possible reserve areas were explored and a development program lasting several years was undertaken. Prospect drilling proved the presence of huge reserves of pay gravels, including a virgin channel several miles long, which extended under the cabins of old-time miners who did not know of its existence. The rise in the price of gold quickened the revival of placer mining which followed improvements of method, organization, and mechanical equipment, and by 1939 the value of annual production had increased to more than \$3,000,000. This figure was maintained from 1940 to 1942, but in 1943 labour shortages resulted in fewer dredges being operated and restricted production to \$1,584,660. Gold production for 1944 declined to a value of \$916,993, but by 1946 it had risen to \$1,664,260. As additional labour becomes available, it is expected that more dredges can be manned in the post-war period, with a corresponding increase in output.

No separate records have been kept of the placer gold output of the other districts. The Sixtymile camp, which includes Miller, Glacier, and other creeks, as well as Sixtymile River, has been worked continuously for over fifty years. The introduction of modern dredging equipment in this area was planned for 1947. In the Mayo district, Highet and Haggart Creeks have yielded gold to the value of hundreds of thousands of dollars each, and several other smaller creeks have been worked since 1897. South of Klondike district, Black Hills, Mariposa, Scroggie, Barker, Kirkman, Canadian, and other creeks continue to be worked intermittently, their total production to date being large. Operations on Thistle and Henderson Creeks, with the aid of modern steel dredges, were expected to begin in 1947. Drilling carried out on Clear Creek, which lies between the Klondike and Mayo districts and which was worked on a small scale in the early days, proved the existence of many miles of pay gravel for operation with the aid of modern mechanical equipment. Dredging was commenced in the area in 1943 and has been continued since.

In southern Yukon a number of rich creeks that were worked in the past are now inactive, except for the few miners who return from time to time to gain a grubstake. Among these are Sayyea Creek on the Liard River, worked before the Klondike; Livingstone Creek on the Big Salmon River, said to have produced to a total value of over \$1,000,000; Burwash, Ruby, Boulder, and Squaw Creeks in the areas west of Whitehorse; and many others. In the last few years exploration of old creeks has proved others besides Clear Creek to be worthy of development with modern methods. The construction of the Haines cut-off road, which meets the Alaska Highway about 95 miles west of Whitehorse, has provided easier access to placer creeks in southwestern Yukon, and prospecting has been carried on recently on several streams, including Mush, Iron, and other creeks, and the Bates River. On Shorty Creek mechanical equipment has been installed, and this creek is now by far the most important producer in southern Yukon.

Lode Mining

Lode mining in Yukon has not as yet attained the importance of placer mining, and most of the production has come from the Whitehorse and Mayo areas. The Whitehorse copper belt, discovered in 1897, is near the railway and therefore had advantages for early development. The first shipment of ore was made in 1900, and from then until 1912 production was intermittent. Because of the high price of copper, the output was continuous during the next eight years, and in 1916 reached a peak of 2,807,096 pounds of copper, worth \$763,586. With the lowering of the price of copper the camp was closed down at the end of 1920, although much material formerly regarded as ore is said to remain. The deposits are of the contact metamorphic type and are exceptionally rich, but spotty, and hard to follow.

The Mayo silver-lead veins were found by placer miners in 1906. Mining was commenced in 1913, and, with the exception of 1919 and 1920, some ore has been shipped from the camp each year since. The veins are exceedingly rich in silver, and large tonnages of ore containing 200 to 300 ounces to the ton and many pockets containing 1,000 or more ounces to the ton have been mined.

The Silver King property on Galena Hill was the first mine to enter production, but from 1920 to 1932 most of the silver produced came from mines that were discovered on Keno Hill several miles to the northeast. In 1924 Treadwell-Yukon Corporation Limited built a 150-ton concentrator at Wernecke on the slope of Keno Hill, and this development enabled the mining of lower grade material. Following the decline in the price of silver below 30 cents per ounce, the mill at Wernecke continued to treat the ore in sight until 1932, when it was closed down. Interest then shifted to Galena Hill, where a small tonnage of high grade ore continued to be mined. The Calumet mine deposits were discovered on Galena Hill in 1934, and proved to be the largest and deepest ore-bodies yet found in the district. In 1935 the mill at Wernecke was moved to Elsa on Galena Hill and treated ore from the Silver King, Elsa, and Calumet mines until it was closed down in 1941. A few operators continued to mine and ship small tonnages of high grade ore.

In 1945, Conwest Mining Company, Limited, took an option on properties of Treadwell-Yukon Corporation, Limited, in the Mayo District, and later that year the Keno Hill Mining Company, Limited, was incorporated to acquire and work available holdings. Work on the property, including the repair of camp buildings and cleaning out of old workings, was undertaken in 1946, and it is expected that production will be resumed in 1947. Prospecting in the vicinity of Keno Hill was also undertaken in 1946 by Yukon Northwest Explorations Limited, and production is expected to get under way in 1947.

Some lode gold has been mined in the Klondike and Carmacks districts. In the Klondike several prospects have been worked at the heads of the placer creeks, the most important being the Lone Star mine between Bonanza and Eldorado Creeks. A lode gold discovery was made in the Carmacks district on Freegold Mountain in 1930 and since then many other lode prospects of gold and other metals have been found in that area. Gold has been mined from two properties, the more important of which, the Laforma mine, produced approximately 1,150 ounces of gold in 1939. Some silver and copper were also recovered by this company, which later closed down. A new interest in the property developed in 1946, and early in 1947 it was reported that an option to purchase had been signed by Transcontinental Resources, Limited.

In 1945, gold discoveries were made in the vicinity of Victoria and Nansen Creeks, west of Carmacks, and options on several properties were obtained by Yukon Northwest Explorations Limited with a view to their development. By the end of 1946 a sufficiently large body of ore had been blocked out to warrant the formation of a new company known as Brown-McDade Mines, Limited. Considerable equipment was moved to the property during the winter of 1946-47, preparatory to erecting a mill in 1947. Prospecting on properties acquired in the vicinity of Nansen Creek was also commenced in 1947 by Conwest Explorations, Limited.

Construction of the Alaska Highway through southern Yukon opened up a new field for prospecting, and in 1945 drilling was undertaken by the Hudson Bay Exploration and Development Company Ltd., on a group of claims on Log Jam Creek in the Swift River district. Another company engaged in exploratory work on claims in Dublin Gulch in the Mayo District.

Aside from those mentioned lode discoveries have been made in many parts of Yukon, the most easily accessible being the gold, silver, lead, copper, and antimony occurrences in the Wheaton district. Several large persistent veins containing antimony have been prospected in the district, but no deposit of commercial grade has been found.

A few thousand pounds of tungsten concentrates were shipped in 1918 from the gold placers of Dublin Gulch in the Mayo district and from Canadian Creek in the Klotassin River area. The placers of Dublin Gulch again produced tungsten from 1941 to 1945. Veins and contact metamorphic deposits of tungsten-bearing minerals have been found near Dublin Gulch and near the head of Hight Creek.

Tin in the form of crystalline cassiterite was found in the placer gravels of Dublin Gulch in 1941, and later in many other placer creeks of the Mayo district, including Clear Creek. An estimate based on the meagre figures available suggests the presence of 200 or more tons of tin in these gravels. In 1943 a lode discovery assaying up to 1.53 per cent of tin was discovered on the north side of Dublin Gulch.

Coal Mining

Coal produced in Yukon is used to meet the local needs, which are small and uncertain. It has come from five localities, namely, Rock Creek on the Klondike River, Coal Creek on the Yukon River, Granite Creek on the Duke River, Carmacks, and the Whitehorse-Wheaton area. In the first three areas the coal is Tertiary lignite, and in the other two areas good bituminous coal of late Mesozoic age has been found. Most of the output, however, has come from three mines near Carmacks, where production began in 1900 and continued with short interruptions until 1938, when operations were suspended. It reached a peak of 16,185 tons, valued at \$110,925, in 1910. Interest in the coal property at Tantalus Butte, about

four miles upstream from Carmacks, was revived in 1947, when investigations were undertaken to determine the quality and extent of the deposits, with a view to resuming production.

Future Prospects

To date production of minerals in Yukon has come from a few rich deposits. No area has been thoroughly prospected and little drilling has been done except for placers. Prospecting has been handicapped by the remoteness of the Territory and the length of the winter season, but much of the geology of areas that have so far received little active attention is favourable for the occurrence of minerals. This factor, together with the variety and widespread distribution of the lode and placer prospects, suggests the possibilities for expansion in mineral development.

Mining is, and will continue to be, the main export industry of Yukon Territory. It is an industry closely associated with transportation. Viewing transport possibilities broadly, it will be seen that most of Yukon is located within 500 miles of the ocean port of Skagway. The greater portion of the Territory, therefore, can be made one of the most accessible parts of Canada to world-wide ocean transport.

Summary of Mineral Production

According to figures released by the Dominion Bureau of Statistics at Ottawa, the value of mineral production in Yukon Territory was as follows:

	1943	1944	1945	1946	Total Production to end 1946
Gold ¹	\$1,584,660	\$916,993	\$1,221,258	\$1,664,260	\$213,813,104
Silver ²	23,690	13,788	11,824	26,124	21,021,058
Lead.....	7,347	4,758	5,976	3,520	4,389,604
Copper.....	—	—	—	—	2,711,695
Coal.....	—	—	—	—	803,192
Tungsten.....	10,122	3,780	—	—	18,315
Antimony.....	—	—	—	—	173
	\$1,625,819	\$939,319	\$1,239,058	\$1,693,904	\$242,757,141

¹Includes gold from the refining of silver, lead, and copper ores and a small amount from lode gold mining in addition to that from placer mining.

²Includes silver from the refining of placer gold as well as that from lode mines.

WATER POWER

NO comprehensive examination of the water power possibilities of Yukon Territory has been undertaken, but reconnaissance investigations carried out some years ago by the Dominion Water and Power Bureau of the Department of Mines and Resources indicated resources of quite substantial magnitude in the Whitehorse and Mayo districts. For the most part the great rivers of the Territory and many of their tributaries are of uniform gradient and are navigable except in their upper reaches. Water power possibilities, therefore, are to be found chiefly on these upper reaches.

The climate and topography are such as to cause great variations in the seasonal flow of the rivers, with high flows in the open season and greatly diminished flows during the winter months. Power possibilities, accordingly, are affected in like manner by these seasonal flows.

Development of water power in Yukon Territory has taken place almost wholly in connection with placer gold mining operations. The Yukon Consolidated Gold Corporation owns and operates a hydro-electric plant on the Klondike River about 26 miles above Dawson. A continuous and assured flow of water the year round is obtained for this plant by a diversion from the south fork of the Klondike River into the north fork of the same stream, and by a large ditch from this north fork to the power plant. The ditches freeze over in winter and as the water flows under the ice as in a river, power is generated the year round. This plant was constructed in 1911 with an installation of two 5,000 horse-power units and was enlarged in 1935 by the addition of a similar unit bringing the total capacity to 15,000 horse-power. Power is transmitted principally for the operation of gold dredges, pumps in stripping and thawing operations, and the company's machine shops in the Dawson area. A small amount of power is also sold in bulk to the Dawson Electric Light and Power Company, Limited, for distribution in Dawson.

Of undeveloped water power resources, reconnaissance investigations indicated that at Miles Canyon on the Lewes River, about four miles from Whitehorse, a development should be possible under a head of about 50 feet which should yield about 9,000 dependable horse-power. In the Mayo district investigations disclosed a site at Fraser Falls on the Stewart River some 40 miles above Mayo where a head of 80 feet might be secured making 7,000 horse-power available under ordinary minimum flow or 22,000 horse-power ordinarily available for six months of the year. At the canyon on the Mayo River about five miles from Mayo a head of 250 feet might be concentrated which should yield about 2,400 horse-power at ordinary minimum flow, but with storage developed upon Mayo Lake this might be raised to 14,000 horse-power of dependable power. On Janet Creek in the same district a small site offered possibilities of some 240 horse-power at ordinary minimum flow or about 1,400 horse-power if storage should be developed.

In addition to these sites, power possibilities are indicated by explorations of the Geological Survey of Canada on the Peel River, and it is probable that many of the smaller rivers and creeks in the Territory are capable of developing moderate quantities of power, at least during the open season.

THE FUR INDUSTRY

THE fur trade is the oldest industry in Yukon. It had its beginning in 1842 when Robert Campbell of the Hudson's Bay Company established Fort Frances on Frances Lake, which he had discovered and named in 1840. A small trading post was constructed at Pelly Banks on the upper Pelly River in the winter of 1842-43, and in 1846 Fort Pelly Banks was built. In 1848 Campbell opened the post of Fort Selkirk at the junction of the Lewes and Pelly Rivers. This post remained the centre of the fur trade in the upper Yukon region until 1852, when the fort was attacked and sacked by Indians from the Pacific Coast, and abandoned by the Hudson's Bay Company.

Prior to 1851 fur from upper Yukon was transferred to Fort Simpson in the Mackenzie Valley by way of the Pelly, Frances, and Liard Rivers. In that year Campbell pioneered a new route down the Lewes and Yukon

Rivers to Fort Yukon, a Hudson's Bay Company post erected in 1847 at the mouth of the Porcupine River. From Fort Yukon the fur was transported up the Porcupine River and over the height of land to the Mackenzie Valley. In 1869, when Fort Yukon was found to be in United States territory (Alaska), the post was moved up the Porcupine into Canadian territory; it was, however, abandoned a short time later. This action marked the retirement of the Hudson's Bay Company from trade in the Yukon River Basin for more than half a century. In recent years, however, the company has reopened several trading posts, including those at Fort Selkirk, Stewart River, and Frances Lake.

Following the sale of Alaska to the United States in 1867, American trading companies extended their field of operations into Canadian territory and for many years operated posts at points along the Yukon River. The Northern Commercial Company and Taylor and Drury, Limited, have maintained trading posts in the Territory for many years, and, together with the Hudson's Bay Company, now share much of the fur trade. In addition, many individual traders operate under licence.

Fur Production

Although several fur farms are operated in the Territory, principally in southern Yukon, most of the fur produced is harvested from wildlife. The fur industry provides a livelihood for a large proportion of the Indian population. From the standpoint of value, muskrat pelts lead, followed in order by marten, beaver, lynx, mink, and fox (principally red). An export tax is collected on all fur exported from the Territory.

The following statement indicates the average number of pelts on which the export tax has been collected annually, over a period of five years ended July 31, 1945.

Bear.....	83	Fox (Cross).....	304	Mink.....	2,459
Beaver.....	3,411	Fox (Black).....	1	Muskrat.....	56,229
Coyote.....	185	Fox (White).....	7	Otter.....	77
Fisher.....	35	Fox (Blue).....	1	Weasel (Ermine)...	3,568
Fox (Red).....	866	Lynx.....	983	Wolverine.....	182
Fox (Silver).....	98	Marten.....	2,418	Wolf.....	261

Although natural fluctuations in the numbers of the various species of fur-bearing animals influence the annual fur yield, increased prices paid for furs have resulted in a gradual rise in the total value of fur production. This increase is shown in the following table for the five years ended June 30, 1945, compiled from statements issued by the Dominion Bureau of Statistics:

<i>Year</i>	<i>Total No. Pelts</i>	<i>Total Value</i>
1941	70,953	\$373,399
1942	66,700	398,132
1943	52,897	338,035
1944	78,005	467,188
1945	87,292	669,217

Game Preserves and Sanctuaries

Hunting and trapping in the Territory are controlled by provisions of the Yukon Game Ordinance. A native game preserve, known as the "Peel River Game Preserve" and containing an area of 4,000 square miles, has been established to assist in maintaining the basic industry of the native population. In this area hunting and trapping are confined to natives and half-breeds living the life of natives. Hunting and trapping are not permitted in the Kluane Game Sanctuary. In other parts of Yukon Territory natives may hunt and trap under free permit.

Elsewhere in this publication will be found a summary of the Game Regulations for the Territory, including information on hunting and trapping licences.

AGRICULTURE

AGRICULTURE has been carried on in Yukon Territory since the beginning of the present century, when farming and gardening were instituted to augment the food supply for the influx of population that followed the Klondike "strike." Early settlers found that the far northern latitude did not hinder the successful growing of field crops and vegetables during the long days of a short summer season, and, owing to the high prices prevailing for food, general farming proved economically possible. During the period of greatest mining activity farms totalling several thousand acres were cleared in west central Yukon, and a variety of produce was grown.

Following the peak years of the mining boom the population of the Territory declined, and this factor, coupled with an increasing use of mechanical equipment instead of horses, resulted in a loss of local markets for grain and fodder. Consequently many farms were abandoned. The decline in general agriculture, however, was accompanied by an increase in gardening, and horticulture is now almost a self-sustaining home industry.

Current agriculture operations are not extensive. In 1941 a total area of 2,781 acres was contained in the 26 farms operated. Of these farms only two exceeded 300 acres in extent, and the balance were less than 200 acres each. The total area under crops, however, was 511 acres only. All farms were worked by owners, and were devoted to a variety of purposes, including the production of field crops, tubers, vegetables, and live stock. Most of the general-purpose farms are sown predominantly in brome grass for hay, and yields vary from one to two tons per acre. In addition smaller areas are devoted to wheat, oats, barley, alfalfa, and potatoes. Grain crops are usually grown for green feed, although they will ripen in all but unusual years of early frost. Wheat has been matured and harvested in 87 days in the vicinity of Dawson.

Farm income is derived chiefly from the local sale of milk, butter, beef, and pork, and some farmers also sell vegetables. In 1941 two farms were classified as live stock producers. Others maintain some live stock, including horses, cattle, and swine. Some poultry is also raised.

Gardening is a flourishing activity in Yukon, and is possible wherever soils are good. In the principal settlements home gardens supply most of the vegetable requirements of the population. Remarkable results have been achieved in the growing of potatoes, particularly near Dawson and Mayo. Other common varieties grown successfully include carrots, beets, turnips, parsnips, cauliflower, cabbage, and celery. Garden beans and peas bear well in favourable seasons, and rhubarb, radishes, lettuce, Swiss chard, and small onions also thrive. In addition, numerous small green-houses in Whitehorse, Mayo, and Dawson are used to produce tomatoes and cucumbers. Small fruits, including strawberries, raspberries, currants, and gooseberries, furnish good yields in many localities.

Experimental Work

Experimental work in the form of co-operative trials has been conducted in Yukon by the Dominion Department of Agriculture since 1915. An experimental substation opened in 1917 at Swede Creek, on the left bank of the Yukon River about six miles west of Dawson, was operated until 1925.

As a result many interesting facts concerning agricultural possibilities in the region were established. Good crops of wheat, oats, and barley matured in most years, although occasional early frosts necessitated the harvesting of these crops as fodder. Of the forage crops grown timothy and alfalfa were moderately successful, although the latter did not produce seed. Brome grass proved to be the most successful, and is now the principal hay crop in Yukon.

In 1943 a program of investigation undertaken by the Dominion Government to determine more accurately the possibilities of development of natural resources in northwestern Canada was extended to Yukon Territory. In that year, a broad soil reconnaissance survey of lands adjoining the Alaska Highway, together with those in the Yukon River Basin, was made by a senior soils scientist of the Experimental Farms Service. The following year a site for an experimental substation was selected adjacent to the Alaska Highway, at Pine Creek, about 106 miles west of Whitehorse.

The new substation is situated in the Takhini-Dezadeash Valley, which contains a large area of potential agricultural land. Experiments are being conducted on varieties and methods of production of horticultural and field crops, and in the near future experimental work will be undertaken with poultry, cattle, and swine. While results obtained in 1946 were encouraging it will be necessary to obtain data from the results of several years' work before definite statements on the agricultural possibilities of this area can be safely made. The resident manager of the substation also undertakes periodic visits to the various settlements along the Yukon River system during the growing season, and furnishes advice to gardeners concerning the choice of suitable varieties and the culture of vegetables and small fruits.

Recent surveys have disclosed that the best soils in the Territory are found in the west central region, where the climate is also most equable. Soils in southern Yukon in the vicinity of Whitehorse are inclined to be arid. Final estimates of the amount of land suitable for future agricultural development will not be possible without further investigation, but reconnaissance up to 1945 indicated that about 160,000 acres could be put under cultivation. Of this area 100,000 acres are located in the Takhini-Dezadeash Valley served by the Alaska Highway, and 60,000 acres along the Yukon River flats. While general farming is limited to those valleys in which soil suitable for cropping purposes occurs, a much larger area, particularly in southern Yukon, could be used for grazing purposes. However, both general farming and ranching are handicapped by lack of markets, as the sale of farm produce is limited to local residents.

The future of agriculture in the Territory is closely linked with the development of other resources, and probably will always be dependent on mining — the chief industry — for the profitable disposal of farm produce. Agricultural settlers are not being encouraged, however, until more is known about the climate, soils, and other characteristics of the regions.

GENERAL INFORMATION

Opportunities for Employment

OPPORTUNITIES for employment in Yukon Territory are provided principally by the mining industry, and to a lesser degree by companies and services which supply public transportation. National Employment Service offices have been established by the Department of Labour at Whitehorse and Dawson, and inquiries should be directed to the managers of these offices, which are actively in touch with those who are in a position to offer employment. Inquiries concerning prospective employment also may be directed to the Controller, Yukon Territory, at Dawson.

Business Opportunities

Persons desiring to operate tourist camps, gasoline stations, or other concessions along the Alaska Highway or elsewhere in Yukon Territory are reminded that the tourist business, particularly in this part of Canada, is a seasonal occupation. It is, therefore, apparent that any venture of this nature should be augmented by some other enterprise to be self-sustaining throughout the year. Additional information concerning business opportunities or business licences in Yukon Territory should be obtained from the Controller, Yukon Territory, at Dawson, or from the Territorial Agent at Whitehorse.

Cost of Living

Owing to the long distances over which commodities must be imported, and the high cost of transportation, the cost of living in Yukon Territory is considerably greater than in the provinces. As a general rule the cost of clothing, food, and other necessities is at least 25 per cent more than in the more southerly portions of Canada.

Immigration Requirements

Citizens of the United States or other countries desiring to settle on lands or engage in other occupations in Yukon Territory should apply to the Director of Immigration, Department of Mines and Resources, Ottawa, Canada, for information concerning immigration requirements.

Maps

Topographical maps of Yukon Territory on various scales may be obtained at a nominal charge from the Legal Surveys and Map Service, and from the Bureau of Geology and Topography, of the Department of Mines and Resources, Ottawa, Canada. Geological maps of mineral areas may be obtained from the Bureau of Geology and Topography, Department of Mines and Resources, at Ottawa. These services supply map index sheets free of charge. A limited number of maps are also available from the Controller of Yukon Territory at Dawson.

General

Requests for general information concerning all matters relating to Yukon Territory should be addressed to the Controller, Yukon Territory, at Dawson, or to the Bureau of Northwest Territories and Yukon Affairs, Lands, Parks and Forests Branch, Department of Mines and Resources, Ottawa.

DIRECTORY OF OFFICIALS IN THE YUKON TERRITORY

Department of Mines and Resources

Justice Department

Department of Labour

Department of National Defence

Department of National Revenue

Department of Public Works

Royal Canadian Mounted Police

Department of Transport

Territorial Officials

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SUMMARY OF REGULATIONS GOVERNING DISPOSAL OF LANDS, TIMBER, GRAZING, AND HAY

PUBLIC or Crown lands in Yukon Territory, other than coal lands, normally are disposed of by sale, homestead entry, or lease, under regulations approved by the Governor in Council. The minimum sale price of Crown land is \$10 per acre, and the maximum area which may be purchased in any one locality by an individual is 160 acres. Any person who is the sole head of a family, as well as any male who has attained the age of 18 years, may make application for a homestead entry on Dominion lands in Yukon Territory covering an area not exceeding 160 acres which is suitable for agricultural purposes. As land in Yukon Territory, exclusive of that within townsites, is unsurveyed, applicants are required to select and stake the land required, and forward an appropriate sketch and description when application is filed.

In the case of land situated along the Alaska Highway on which buildings are to be erected immediately or which is otherwise to be used for the provision of tourist facilities, only "Permission to Occupy" is being given at present.

Applications for land privileges should be made to the Controller of Yukon Territory, Dawson, or to the Agents of Dominion Lands at Whitehorse or Mayo, Yukon Territory, from whom application forms and additional information may be obtained. Applications for land purchases, leases, or "Permissions to Occupy" must be accompanied by an application fee of \$5. In the case of homestead entry the application fee is \$10.

Timber

Under the Timber Regulations fixed dues are charged on timber cut for other than mining purposes or for use in the erection of churches, parsonages, and school-houses, or by a bona fide settler to be used on his own land. Application for timber privileges should be made to the Crown Timber Agent (Agent of Dominion Lands) for the district concerned.

Grazing and Hay

Leases for grazing purposes and permits for cutting hay are available in suitable areas, and applications for them may be filed with the Agent of Dominion Lands in any district.

Copies of the Homestead, Lands, Timber, Grazing, and Hay Regulations may be obtained from the Controller, Yukon Territory, at Dawson, the Agents of Dominion Lands at Whitehorse and Mayo, Yukon Territory, or from the Bureau of Northwest Territories and Yukon Affairs, Department of Mines and Resources, Ottawa, Canada.

SYNOPSIS OF MINING ACTS AND REGULATIONS

UNDER the Yukon Placer and Yukon Quartz Mining Acts any person eighteen years of age and over has the right, with certain reservations, to enter, locate, prospect, and mine upon any lands in Yukon Territory whereon the right to mine minerals has not been alienated from the Crown. These Acts, with subsequent amendments, as passed by the Parliament of Canada, govern placer and quartz mining in the Territory.

No person shall enter for mining purposes or shall mine upon lands owned or lawfully occupied by another until adequate security has been furnished to the satisfaction of the Mining Recorder for any loss or damage which may be thereby caused.

Where claims are being located which are situated more than one hundred miles from the Mining Recorder's Office, the locators, not less than five in number, are authorized to meet and appoint one of their number an emergency recorder, who shall as soon as possible deliver the applications and fees received to the Mining Recorder for the district.

If two or more persons own a claim each such person shall contribute, proportionately to his interest, to the work required to be done thereon, and in the event of it being proved to the Controller that he has not done so his interest may be vested in the other co-owners.

The survey of a claim made by a duly qualified Dominion Land Surveyor shall be accepted as defining absolutely the boundaries of the claim surveyed, provided the survey is approved by the proper authority and remains unprotested during the period of advertisement.

A person about to undertake a bona fide prospecting trip may, on payment of a fee of two dollars (\$2.00), secure from the Mining Recorder written permission to record within six months at his own risk a claim under the Placer Mining Act.

A legal post must stand four feet above the ground, squared or faced for the upper eighteen inches and measuring four inches across the faced portion. The post must be firmly fixed in the ground.

Placer Mining

Creek means any natural watercourse, whether containing water or not, having an average width of less than one hundred and fifty feet.

Creek claims shall not exceed five hundred feet in length, measured along the base line or general directions of the creek, by one thousand feet on each side of the base line. Other claims shall not exceed five hundred feet in length by one thousand feet in depth. Claims shall be as nearly as possible rectangular in form and shall be marked by two legal posts, one at each end of the claim, numbered "1" and "2" respectively. Location posts shall be placed on the base line of creek claims and parallel to the base line of all other claims, and on the side of the claim nearest the creek or river towards which it fronts.

Any person locating the first claim on any creek, hill, bench, bar, or plain upon which there is no recorded claim shall be entitled to one claim 1,500 feet in length; two locators shall each be entitled to one claim of 1,250 feet in length; each member of a party exceeding two persons may stake a claim of ordinary size only.

The boundaries of any claim may be enlarged to the size of a claim allowed by the Act, if the enlargement does not interfere with the rights of other persons or the terms of any agreement with the Crown.

An application for a claim must be filed with the Mining Recorder within ten days after being located if within ten miles of the Recorder's Office. One extra day shall be allowed for every additional ten miles or fraction thereof. A claim may be located on Sunday or any public holiday.

Any person having recorded a claim shall not have the right to locate another claim in the valley or basin of the same creek within sixty days of locating the first claim.

Title.—Any person, having complied with the provisions of the Act with respect to locating and recording a claim, shall be entitled to a grant for one year and shall have the absolute right of renewal from year to year thereafter, provided during each year he does or causes to be done \$200 worth of work on the claim, files with the Mining Recorder within fourteen days after the expiration of the claim an affidavit showing a detailed statement of the work, and pays the required renewal fee.

Grouping.—Under certain conditions claims may be grouped and the work required to be performed to entitle the owner or owners to renewals of the several claims grouped may be performed on any one or more of the claims in the grouping. If the claims grouped are owned by more than one person a partnership agreement creating a joint and several liability on the part of all the owners for the joint working of the claims shall be executed and filed with the Mining Recorder. Grants of claims grouped or owned by one person may be made renewable on the same date.

Taxes and Fees.—A royalty is collected on all gold shipped from Yukon Territory.

Schedule of Fees

For grant to a claim for one year.....	\$10.00
For renewal of grant—	
If renewed within 14 days after expiry date.....	10.00
If after 14 days and within 3 months.....	30.00
If after 3 months and within 6 months.....	45.00
Recording an abandonment.....	2.00
Registration of any document.....	2.00
If it affects more than one claim:	
For each additional claim.....	1.00
Abstract of Title:	
For first entry.....	2.00
For additional entry.....	.50
For copy of document:	
Up to 200 words.....	2.50
For each additional 100 words.....	.50
For grant of water:	
For 50 inches or less.....	10.00
For 50 to 200 inches.....	25.00
For 200 to 1,000 inches.....	50.00
For each additional 1,000 inches or fraction thereof.....	50.00

Quartz Mining

Subject to the boundaries of other claims in good standing at the time of its location, a mining claim shall be rectangular in shape and shall not exceed 1,500 feet in length by 1,500 feet in width.

Every claim shall be marked on the ground by two legal posts, one at each extremity of the location line, numbered "1" and "2" respectively. On the side of No. 1 post facing No. 2 post shall be inscribed the name of the claim, a letter indicating the direction to No. 2 post, the number of feet to the right or left of the location line, the date of location, and the name of the locator. On No. 2 post on the side facing No. 1 post shall be inscribed the name of the claim, the date of location, and the name of the locator.

The claim shall be recorded within fifteen days if located within ten miles of a Mining Recorder's Office; one extra day shall be allowed for every additional ten miles or fraction thereof.

Adjoining claims not exceeding eight in number may be grouped. The necessary representation work for each claim may then be performed on any one or more of the claims in the group.

Every application for a full claim shall be made on Form "A."

Form "A-1" should be used for a fractional claim.

No person shall be entitled to locate, whether personally, as attorney for another, or by an attorney, more than seven mineral claims in the aggregate within a distance of ten miles from any other mineral claim (making a total of eight mineral claims) located by him personally, as attorney, or by attorney, during a period of twelve months.

The timber on a mineral claim is reserved until the Mining Recorder certifies that it is required for use in mining operations on the claim. The Controller, however, may issue a permit to holders of other claims to remove the timber for use in their mining operations where other timber is not readily available.

Title.—Any person having complied with the provisions of the Regulations with regard to locating and recording a claim shall be entitled to hold it for one year from the date of the record and thereafter from year to year, provided during each year he does or causes to be done work on the claim to the value of \$100, and shall, within fourteen days after the expiration of the year, satisfy the Mining Recorder that the work has been done and pay the certificate of work fee. One hundred dollars may be paid each year in lieu of assessment work other than survey. Any person having completed representation work for five consecutive years, including a survey of the mineral claim or having made payment in lieu thereof as provided under the Act, may apply for and obtain a lease.

Schedule of Fees

Recording every claim.....	\$10.00
For a substitutional record.....	10.00
Application for a lease.....	10.00
Recording every Certificate of Work.....	5.00
For a Certificate of Improvements.....	5.00
For a grouping certificate.....	5.00
Recording any document.....	2.50
If document affects more than one claim, for each additional claim.....	1.00
For granting period of six months within which to record.....	4.00
For an abstract of the records of a claim:	
For the first entry.....	4.00
For each additional entry.....	.50
For copy of documents up to three folios.....	4.00
For each additional folio.....	.30
For recording a power of attorney to stake:	
For one person.....	4.00
For two persons.....	8.00
For recording an assignment.....	3.00
Royalty collected on yearly profits in excess of \$10,000.	

Miscellaneous

Dredging.—A lease may be issued for a period of fifteen years for a continuous stretch of river not exceeding ten miles in length giving the exclusive right to dredge for gold, silver, and platinum. The lessee must have at least one dredge in operation on the leasehold within three years. "River" means a stream of water, the bed of which has an average width of 150 feet throughout the portion to be leased.

Petroleum and Natural Gas.—A lease may be issued for a period of twenty-one years for an area not less than 1,280 acres and not exceeding

2,560 acres giving the right to the petroleum and natural gas on the area leased. A rental is charged of 50 cents per acre for the first year and \$1 per acre for each subsequent year.

Coal.—A lease may be issued for a period of twenty-one years for an area not to exceed 2,560 acres; the length of the location must not exceed four times its breadth. The lease conveys the coal mining rights only, but surface rights may be obtained by arbitration if already disposed of, or under lease from the Crown if vacant. Rental is payable on coal leases at the rate of one dollar per acre per year.

Copies of the Yukon Mining Acts and Regulations may be obtained from the Controller, Yukon Territory, at Dawson, from any Mining Recorder in Yukon Territory, or from the Bureau of Northwest Territories and Yukon Affairs, Department of Mines and Resources, Ottawa, Canada.

SUMMARY OF THE GAME REGULATIONS

HUNTING and trapping in Yukon Territory is controlled by provisions of the Yukon Game Ordinance. No person shall engage in hunting or trapping game without being the holder of a valid and subsisting licence or permit issued pursuant to this Ordinance. Any person whose main occupation is other than trapping shall not be deemed eligible for a trapping licence.

For the purpose of the Yukon Game Ordinance, "resident" means any Canadian citizen who has resided continuously in Yukon Territory for not less than one year immediately prior to the date of his application for a licence.

Regulations have been enacted from time to time to establish special sanctuaries or preserves for the protection of game and fur, and to restrict hunting and trapping in areas where species are believed to be in danger of decimation. Included among such areas are the following:

Kluane Game Sanctuary—An area of approximately 10,000 square miles in southwestern Yukon, in the vicinity of Kluane Lake. In this area the hunting, trapping, or molesting of game and birds is prohibited. All lands within this game sanctuary have also been reserved from disposal so that they may be available in their present state for establishment as a national park.

Peel River Native Game Preserve—An area of approximately 4,000 square miles in northeastern Yukon, established in 1923 for the benefit of the native Indian, Eskimo, and half-breed population, which has exclusive hunting privileges therein. This preserve adjoins a similar game preserve of 3,300 square miles in the Northwest Territories which bears the same name.

Alaska Highway—The Game Ordinance of Yukon Territory provides that no person shall hunt, trap, kill, shoot at, wound, injure, or molest in any manner, any wildlife, including bear, within an area extending for a distance of one mile on either side of the centre line of the Alaska Highway and Haines Cut-off Road.

Hunting and Trapping Licences

Hunting and trapping licences are available on payment of the following fees:

RESIDENT:

Hunting licence.....	\$ 1.00
Trapping licence.....	2.00

NON-RESIDENT:

Big game hunting:	
Canadian citizen.....	75.00
Alien.....	100.00
Trapping licence:	
Canadian citizen.....	250.00
Game bird licence.....	5.00

INDIAN:

Combined Indian hunting and trapping licence — free.

Note—An alien is not eligible for a trapping licence.

Open Seasons and Bag Limits

Moose, mountain sheep, mountain goat.—Open season, August 1 to November 30. Bag limit — one moose, one mountain sheep, one mountain goat.

Caribou.—Open season, August 1 to January 31. Bag limit (resident)—one woodland caribou and four migratory caribou; (non-resident) — one caribou of each species.

No female, and no animal of the above species under the age of one year, shall be killed at any time.

Bear.—No close season; no bag limit.

Beaver.—No open season at any time.

Buffalo, bison, elk (wapiti) or any species of deer. — No open season at any time.

Game Birds.—*Ptarmigan, sharp-tailed grouse, Franklin grouse, spruce grouse (fool hen).* — Open season, September 1 to January 31. *Ruffed (willow) grouse and blue grouse.* — Open season, September 1 to October 31. Bag limits — Not more than 15 birds daily in the aggregate or 30 during the season.

Waterfowl.—*Ducks, geese, and Wilson's snipe or jacksnipe* (except species not permitted to be taken under the Migratory Birds Convention Act and Regulations). — Open seasons and bag limits as permitted under the Migratory Birds Convention Act and Regulations.

Full information concerning the Game Regulations is contained in the Game Ordinance and Fur Export Tax Ordinance, copies of which may be obtained from the Controller, Yukon Territory, at Dawson, or from the Bureau of Northwest Territories and Yukon Affairs, Department of Mines and Resources, Ottawa, Canada.

SUMMARY OF SPORT FISHING REGULATIONS

A NGLING in waters of Yukon Territory by residents and non-residents is permitted without licence, but open-season provisions of the fishing regulations must be observed.

Open Seasons

Whitefish, lake trout, salmon trout—December 1 to September 14.

Speckled trout (including char)—March 31 to October 31.

Maskinonge, pike, pickerel, gold-eye, mullet—May 16 to April 14.

Grayling—February 1 to November 30.

Tullibee (Cisco)—December 16 to October 14.

Fishing through the ice for speckled trout of any kind, including char, is prohibited.

The use of spears, lights, firearms, dynamite, or other explosive material in killing fish is prohibited.

The use of bare unbaited hooks or grapnels is prohibited.

Provision is made in the fishing regulations whereby explorers, prospectors, surveyors, or travellers, while engaged in exploration, mining, or survey operations, or other examination of Yukon Territory, may fish at any time without a licence, but with legal implements, for their own domestic use, but not for sale or barter.

Additional information, including copies of the regulations governing fishing in Yukon Territory, may be obtained from the Department of Fisheries, Ottawa, Canada.

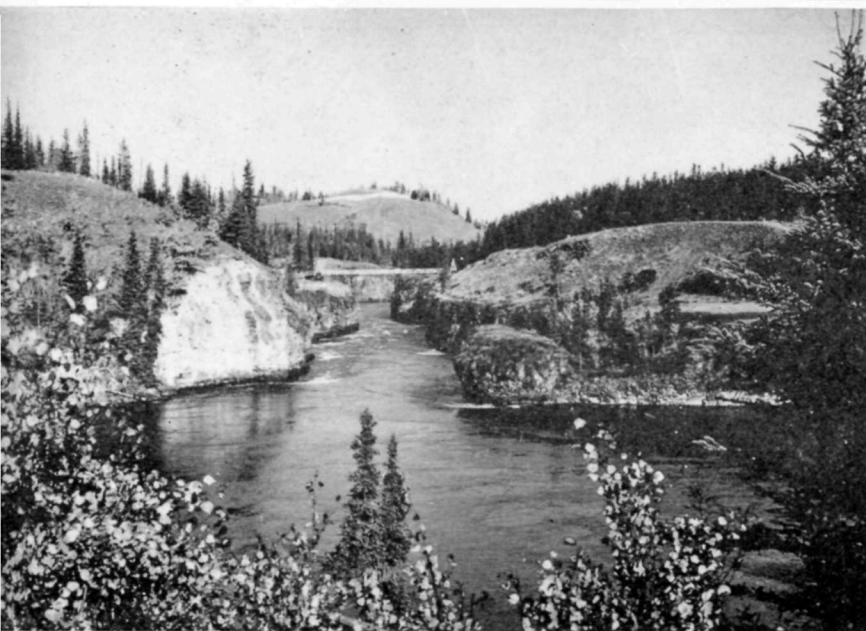
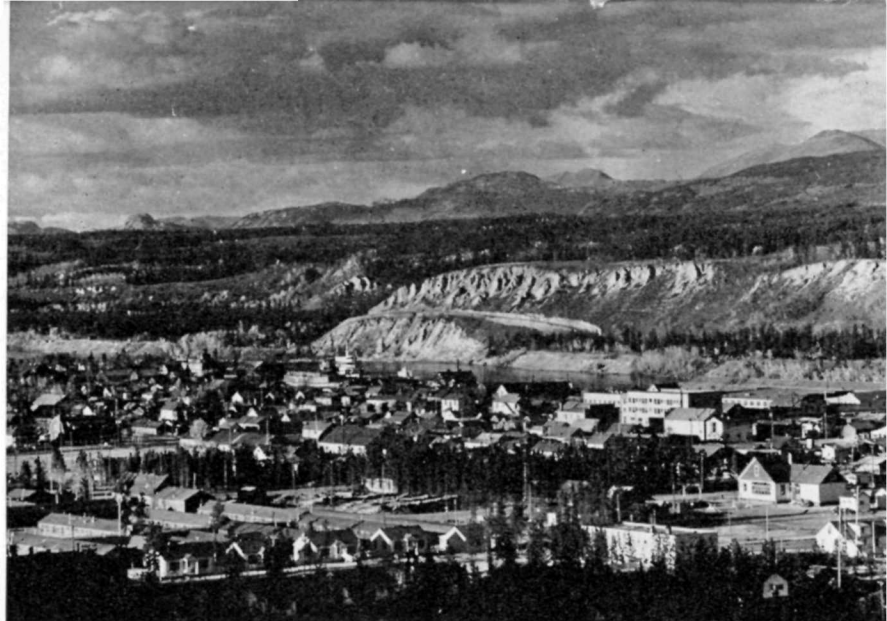
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*Town of Whitehorse,
Y.T., looking east.*

C.P.R. Photo

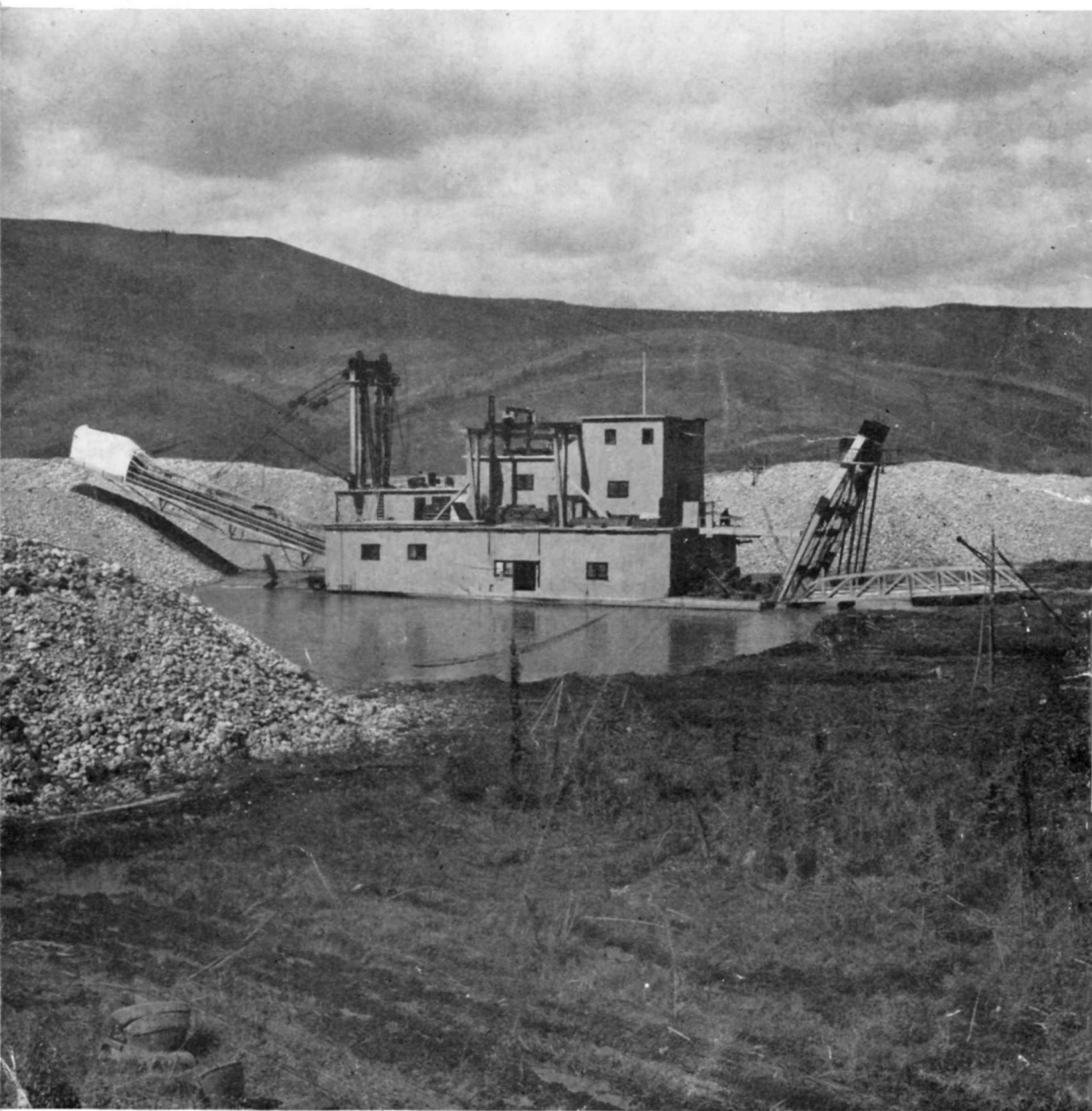


*Historic Miles Canyon
on Lewes River near
Whitehorse.*

*Dawson, the Territorial
Capital, Yukon River in
background.*



YUKON TERRITORY



HISTORY, ADMINISTRATION, RESOURCES,
AND DEVELOPMENT