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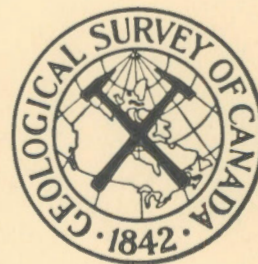
EARLY CANADA



*A collection of historical
photographs by officers of the
Geological Survey of Canada*



Compiled by **E. HALL**





• Dawson
**Yukon
Territory**

Northwest Territories

Pacific

• Laketon
• Dease Lake
• Telegraph Creek

British Columbia

Kung
Queen Charlotte Islands
Skidgate
Tan-oo
Fort Simpson

• Fort St. John
• Fort Chipewyan
• Fond du Lac
• Fort St. James
• Fort McLeod
• Dunvegan
• Fort Fraser
• Prince George

Alberta

Saskatchewan

Manitoba

Columbia

Ocean

Fort Rupert
Alert Bay

• Quesnel

• Victoria
• Edmonton
• Fort Saskatchewan

• Brochet

• Kamloops
• Vernon

• Rocky Mountain House
• Red Deer

• Fort Pitt

• Oxford House

• Nelson

• Anthracite
• Calgary

• Fort Pelly

• Norway House

• Sproats Landing

• Fort Whoop-up
• Medicine Hat

• Swift Current

• Ft. Macleod

• Lettbridge

• Roche Percée

• Russell

• Ft. Ellice
• Portage la Prairie

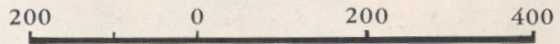
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CANADA

SCALE OF MILES





CONFEDERATION

This publication is issued by the Geological Survey of Canada on the occasion of Canada's Centennial in dedication to the many geologists whose photographic efforts played an important role in the early development of the country and its resources.

Staff of the Geological Survey of Canada—1888



Photographed by Notman in the Museum, 547 Sussex Street, Ottawa.

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G S C Miscellaneous Report 14

CANADA DEPARTMENT OF ENERGY, MINES AND RESOURCES 1967

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Available by mail from the Queen's Printer, Ottawa,
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Price subject to change without notice

ROGER DUHAMEL, F.R.S.C.
Queen's Printer and Controller of Stationery
Ottawa, Canada
1967

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Introduction

The Geological Survey of Canada has been engaged in country-wide investigations and explorations since its formation in 1842. Particularly throughout the last century it was the principal government agency invested by statute with the responsibility not only of determining Canada's potentialities for mineral development but of appraising its other natural resources as well. As a result the members of its staff were pioneers in studying scientifically the settled and unsettled parts of the country, and in mapping, recording and publishing resources information. In fulfilling these duties geologists became among the first to recognize the importance of photography in scientific work.

Prior to Richardson's photographic efforts the staff had relied on sketches to illustrate their geological notes. Some artists, such as Logan, showed a high degree of talent.

Photography in Canada dates back to the establishment of portrait studies in the larger cities during the 1840s. However, a number of years passed before a camera became part of the equipment carried by a party engaged in scientific exploration. One of the world's earliest collections of field photographs was taken in connection with the Assiniboine and Saskatchewan Exploring Expedition of 1858. Working west of the bounds of what was then Canada, the photographer Humphrey Hime took a superb group of pictures of the natives and settlements along the Red River, that form a unique record of the early development of Manitoba. Though this expedition was organized and financed by the Canadian Government the Geological Survey was not involved and Hime's pictures are therefore not included in this publication.

The earliest photographs in the Geological Survey collection were taken in 1860 by James Richardson on his traverse of the north shore of the Gulf of St. Lawrence and the island of Newfoundland. Like so many pictures taken at the time, Richardson's views were all taken in stereoscopic pairs.

In spite of the obvious advantages of photography, twelve years elapsed before Survey geologists took any further official field photographs. Presumably the reason for this was the time-consuming wet-plate or collodion process in use at the time. This necessitated carrying a black, light-tight tent that had to be set up at each photo locality, bottles of chemicals, a heavy load of fragile glass plates, and often a barrel of water. These difficulties would have been insurmountable to a small group of scientists whose primary aim was to study as much of the geology of the country as possible each summer and who frequently had to backpack all of their equipment and supplies through the trackless bush.

However, photography was not completely neglected during this period. In 1871 a contribution was made toward the cost of having two professional photographers from the Notman Studios accompany Selwyn on the first explorations by the Geological Survey in the new province of British Columbia. These men, Baltzly and Hammond, took about 125 photographs on the trip and most of these are now on display at the Notman Photographic Archives in Montreal. At about the same time the scientific capabilities of photography were being realized by T.C. Weston in a series of fossil microphotographs taken in the Survey laboratories.

The extension of the work of the Geological Survey during the last three decades of the nineteenth century fortunately coincided with a number of advances in photographic equipment. Dry glass plates were introduced in the 1870s, freeing photographers from the drudgery of coating and processing wet collodion plates. In 1887 Dawson became one of the first photographers to use paper negatives, which reduced the weight of equipment that had to be carried, but unfortunately also produced an objectionable grain in the prints. With the introduction of nitrocellulose as a film base, about 1890, photography reached something of the convenience of the process that we know today.

Moving in the van of civilization, men such as Dawson, Selwyn, Tyrrell and Low, with their wide range of interests and responsibilities, recorded much of historical as well as scientific merit. Their photo-

graphs now constitute an invaluable record of some phases of the early background from which twentieth century Canada has evolved.

In selecting the following pictures, the Survey has attempted to concentrate mainly on those of general interest that were taken prior to 1900 and for which the negatives are still held in the Survey files. No effort was made to represent all early Survey photographers nor to give equal space to those that are included. Similarly there is no balance to the number of pictures from each province or region and the 'western' bias in the selection is a reflection of the Survey's pre-1900 collection as a whole. For the sake of simplicity most of the captions locate the photographs with respect to present provincial boundaries, as the political subdivisions in Canada in the years following Confederation were subject to numerous rather confusing changes.

The Geological Survey of Canada hopes that this volume will serve as a tribute to some of Canada's pioneer geologists and that their photographs will be judged, not by present-day professional standards, but in consideration of the primitive and exacting conditions under which they were taken and conserved.



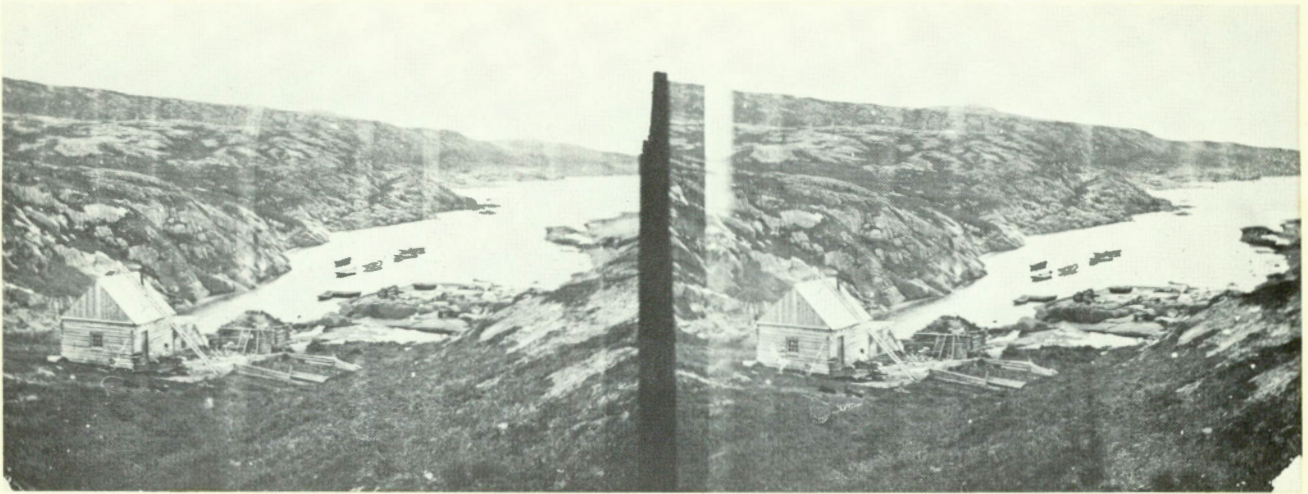


Photo by Notman

James Richardson 1810-1883

James Richardson, with a background of farming and school teaching, was employed by Logan in 1846 to accompany him along the north shore of Lake Superior. In succeeding summers, with Logan's guidance and encouragement, he learned sufficient geology and surveying to be appointed eventually as an explorer on the staff of the Geological Survey of Canada.

Richardson's first independent report, covering Anticosti and the Mingan Islands, in 1856 was followed by others on various areas in Lower Canada. In 1871 British Columbia became a part of Canada and in the same year Richardson started his work in the coal fields of Vancouver Island. This work was later extended onto the Queen Charlotte Islands and the mainland, and until his retirement in 1879 almost all of his field work was carried out in the far west.



FISHING HAMLET, 1860

A stereoscopic pair from the earliest group of photographs in the Geological Survey collection. Though the exact locale of this picture is not known, Richardson's traverse of 1860 took him along the north shore of the Gulf of St. Lawrence and onto the west coast of Newfoundland.



HAREWOOD MINE, NEAR NANAIMO, BRITISH COLUMBIA, 1875

Coal was first reported near Nanaimo in 1849 and the original mining in the area was carried out by the Hudson's Bay Company. Coal remained the chief basis of Nanaimo's economic life for a century and the last large mine in the area closed in 1953.



VANCOUVER COAL COMPANY'S WHARF, NANAIMO, BRITISH COLUMBIA, 1875
The United States gun-boat *Saranac* shown coaling at the wharf was lost in the treacherous waters of Seymour Narrows a few days after this picture was taken.



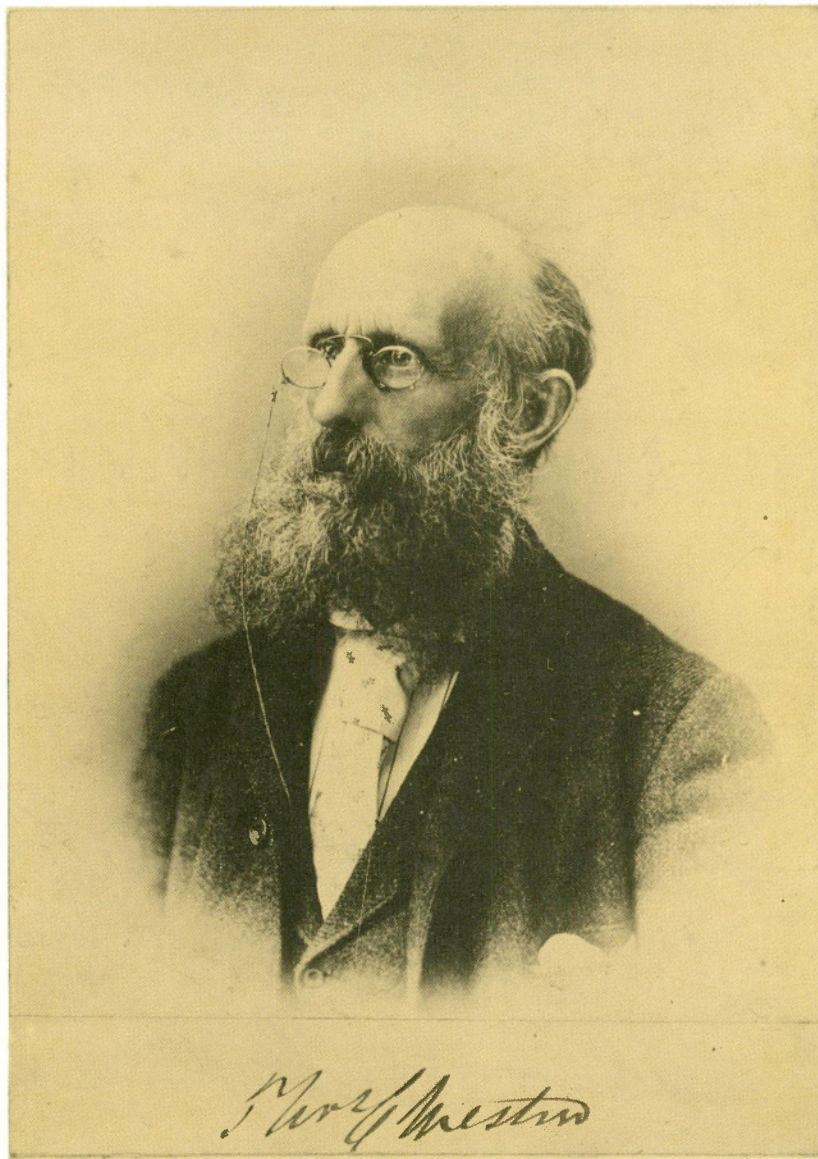
STEAMER MAUDE, NANAIMO, BRITISH COLUMBIA, 1875
The *Maude* was launched in 1872 on San Juan Island, an area that was then disputed territory between Great Britain and the United States. Over the years she survived numerous accidents in the uncharted waters of the West Coast and after conversion from paddle wheels to a propeller became the first boat to serve the isolated communities of western Vancouver Island.

Thomas Chesmar Weston 1832-1910

Thomas Weston received an appointment as museum preparator with the Geological Survey in 1859 following an apprenticeship in the cutting and polishing of precious stones. He soon found that a large part of his time was devoted to assisting Mr. Billings, the staff palaeontologist, in the preparation of fossils for exhibition and study. His first taste of field work came in 1863 and he quickly developed a reputation for having a 'sharp eye' for fossils. Over the next thirty years there was only one summer in which he was not busily engaged in collecting specimens.

Much of Weston's early work was done in the Eastern Townships of Quebec, frequently in company with Sir William Logan, who continued to work there even after his official retirement. In other years he ranged through eastern Canada and onto the island of Newfoundland. During the 1880s Weston made four journeys into western Canada, paying particular attention each time to the Cypress Hills where he found numerous vertebrate fossils and Indian artifacts. In between and after his Prairie travels he made short trips to localities near the St. Lawrence River and in Nova Scotia. He retired from the Geological Survey staff in 1894.

Though not one of the elite 'explorers' or geologists of the Survey, Weston will be long remembered both for his palaeontological work and his many fine photographs of historical value.



*Photo by Dorion
Courtesy of National Museum of Canada*

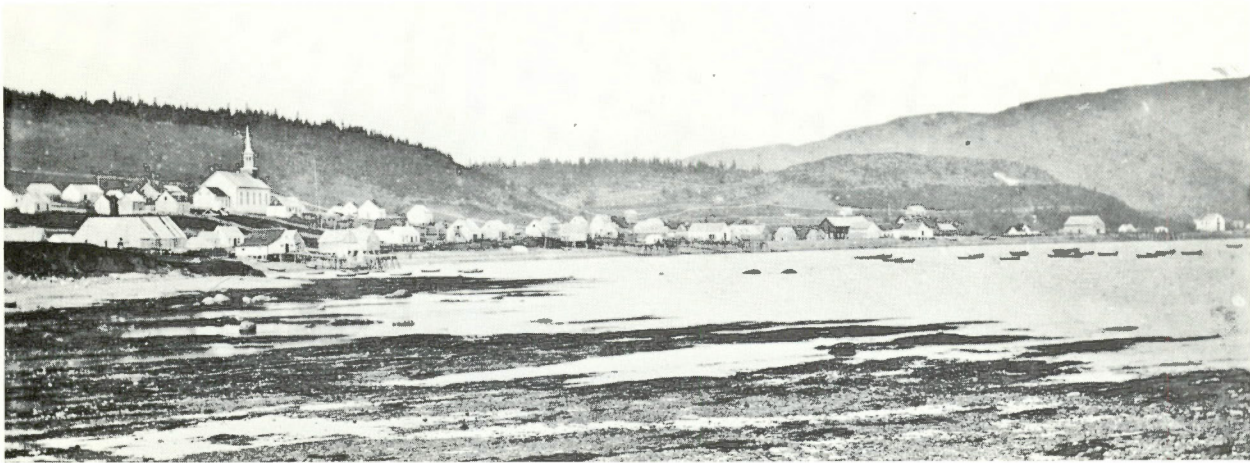


TRUNK ROAD FROM ARISAIG TO ANTIGONISH, NOVA SCOTIA, 1873

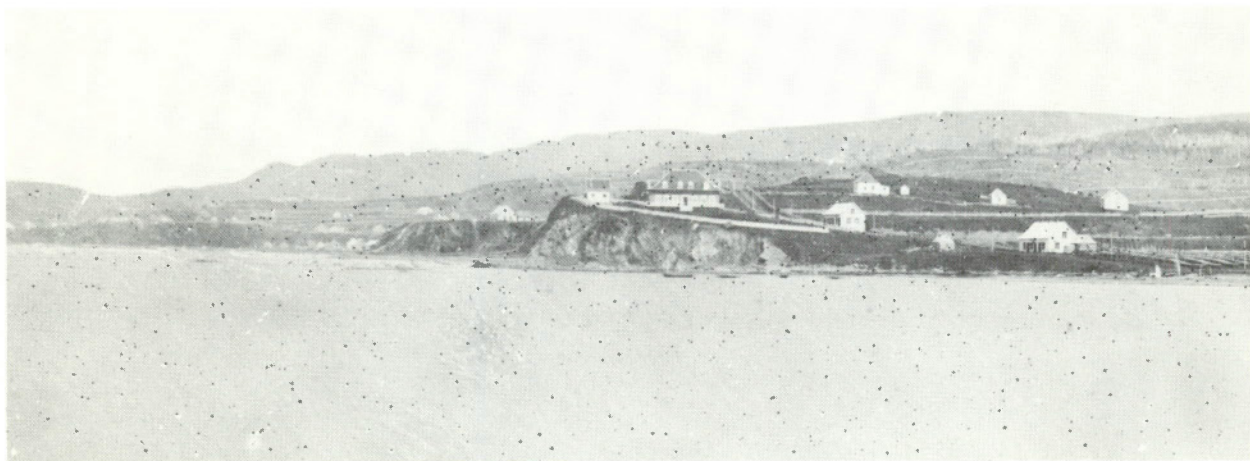


TOPSAIL HEAD, NEWFOUNDLAND, 1874
Though Newfoundland was not a part of Canada at the time, Weston collected fossils in the vicinity of St. John's at the request of the Newfoundland Geological Survey.

Fishing communities on the Gaspé Peninsula, 1878



RIVIÈRE AU RENARD



STE ANNE DES MONTS



ANSE DE L'ÉTANG



LOBSTER TRAPS, LUNENBURG COUNTY, NOVA SCOTIA, 1879



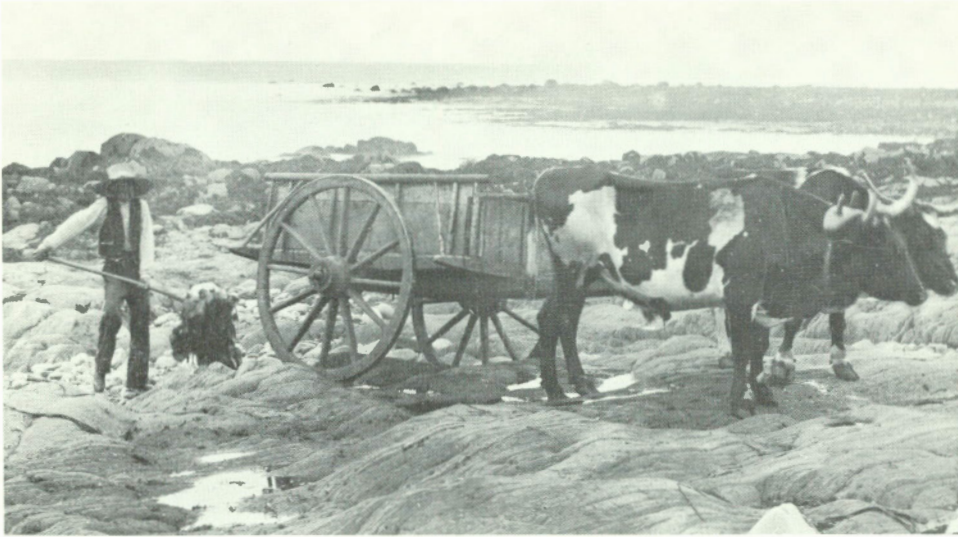
HORSE MACKEREL (TUNA), LUNENBURG COUNTY, NOVA SCOTIA, 1879
T. C. Weston with a horse mackerel he harpooned
in the bay at the 'Ovens'.

MOOSE RIVER IRON WORKS,
ANNAPOLIS COUNTY, NOVA
SCOTIA, 1879

As early as 1825 the Annapolis Iron Mining Company erected buildings at the mouth of Moose River at Clementsport. However, the iron deposits near Clementsport proved to be of only minor importance compared to those at nearby Nictaux—Torbrook.



GOLD WASHING AT THE 'OVENS', LUNENBURG COUNTY, NOVA SCOTIA, 1879
Alluvial gold was discovered in the sea coast at the 'Ovens' in 1861. However the deposits were not rich and at the time of Weston's visit these fishermen were only recovering from fifty cents to one dollar's worth of gold per day.



GATHERING SEA-WEED, FOOT'S COVE, YARMOUTH COUNTY,
NOVA SCOTIA, 1879



MILL CREEK, ALBERTA, 1883

Speaking of his stay here Weston said, "Our three days' sojourn in Mill Creek valley was most pleasant . . . We had good trout fishing at the South Fork of the Oldman River (Castle River); a grand view of the snowcapped Rocky

Mountains, civilization in the way of a blacksmith's forge, carpenter shop, Gladstone's House, a boarding place, mill, white men, half-breeds, Indians and abundant food for the mind of the geologist and palaeontologist."



INDIAN CAMP, DOG'S HEAD, LAKE WINNIPEG,
MANITOBA, 1884



LIMESTONE QUARRY, EAST SELKIRK,
MANITOBA, 1884

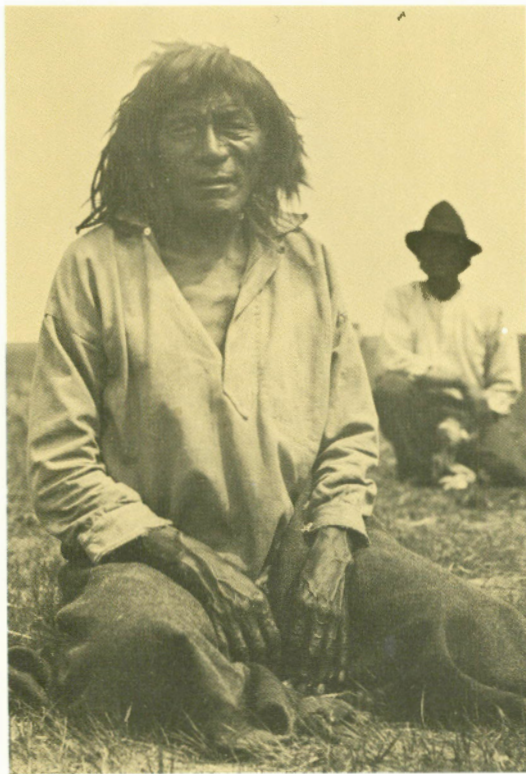


JACK FISH RIVER, LAKE WINNIPEG, MANITOBA, 1884
Ojibwa Indians with birch-bark tepee and a rarely seen dome-shaped lodge. When a camp was moved the poles were left behind and the bark rolled up and moved to the next site.



INDIAN DOG FEAST, DOG'S HEAD, LAKE WINNIPEG, MANITOBA, 1884

The dog feast was a part of the initiation ceremony of young Indian braves and included the boiling of a white dog in a large iron pot. A fee of two pounds of tobacco was charged "the servant of the great white chiefs in Ottawa" to photograph an early part of the ceremony in the sacred wigwam.



CREE INDIAN, MAPLE CREEK, SASKATCHEWAN, 1884





INDIAN, MAPLE CREEK, SASKATCHEWAN, 1884
An Indian bridegroom, who only consented to having his picture taken after being allowed to hold a rifle so he could shoot the "picture maker" if he was hurt in any way.



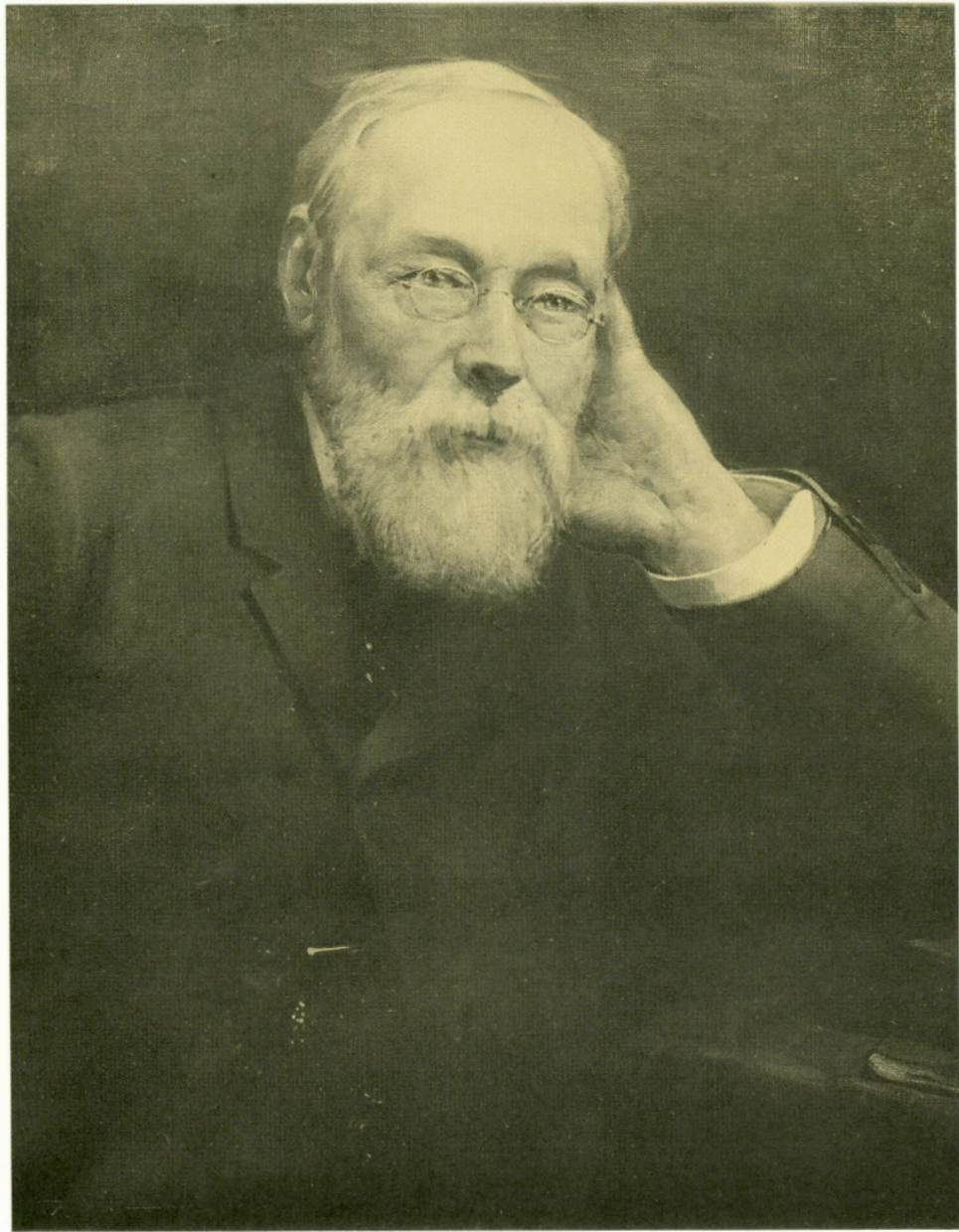
MÉTIS, MAPLE CREEK, SASKATCHEWAN, 1884





COAL MINE NEAR MEDICINE HAT, ALBERTA, 1884



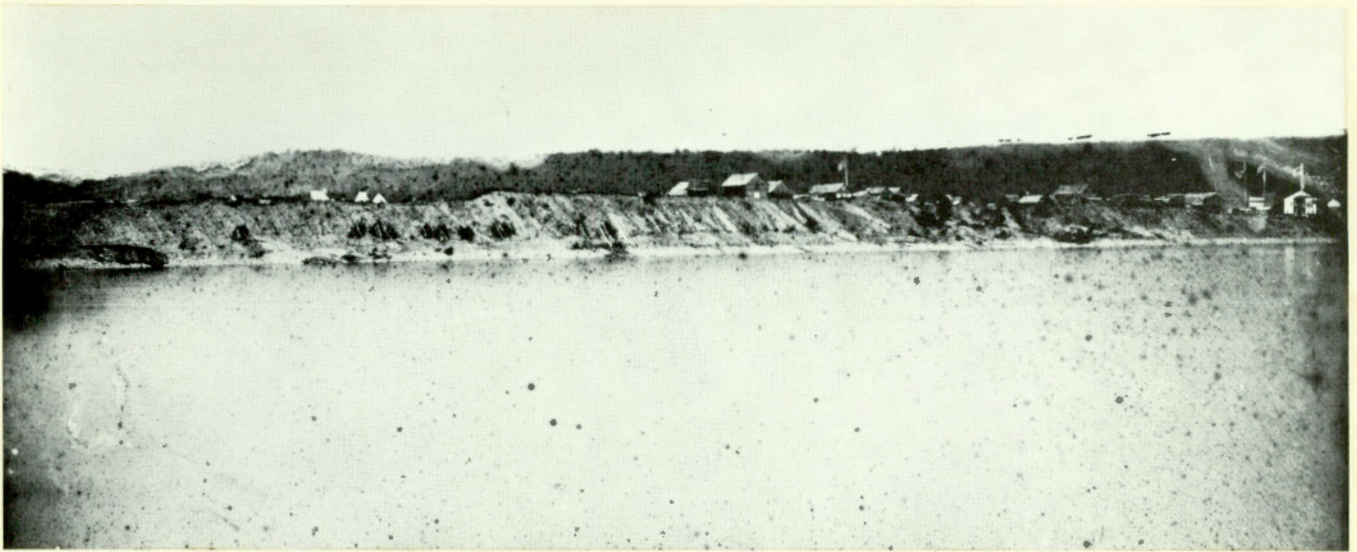


Alfred Richard Cecil Selwyn 1824-1902

In 1869 Alfred Selwyn was chosen to succeed Logan as Director of the Geological Survey of Canada. Born in England in 1824, he brought to his new position the experiences of seven years with the Geological Survey of Great Britain and seventeen years as Director of the Geological Survey of Victoria, Australia.

The task confronting the Geological Survey of Canada toward the end of the nineteenth century was a great one. Confederation, and the subsequent addition of provinces and territories vastly increased the area of study. Almost the only information on the western part of the country was contained in the maps and journals of the fur companies, and civilization consisted of little more than scattered trading posts. When he assumed office Selwyn's staff included only five field geologists, so that of necessity there was a rapid expansion of the Geological Survey of Canada under his direction. These years were a period of wide-faring adventure, equalled by few (if any) other scientific institutions, carried out by some of Canada's best known geologists.

The title of Director did not prevent Selwyn from carrying out a share of the field work during his first few years in office. The Annual Reports show the results of his work from Nova Scotia to the Peace River region of British Columbia and also record the ever-increasing duties and responsibilities of his office that made it difficult to continue field work. Unfortunately Selwyn's last years as Director were marred by public conflict regarding the aims of the Geological Survey of Canada and in 1895 he was superannuated by the Government.



QUESNEL, BRITISH COLUMBIA, 1875

Quesnel is named in honour of Jules Quesnel, who accompanied Simon Fraser on his exploration of the Fraser River. The community grew rapidly during the 1860s when it was a stopping place for miners travelling to and from the Cariboo gold fields.



FORT ST. JAMES, BRITISH COLUMBIA, 1875

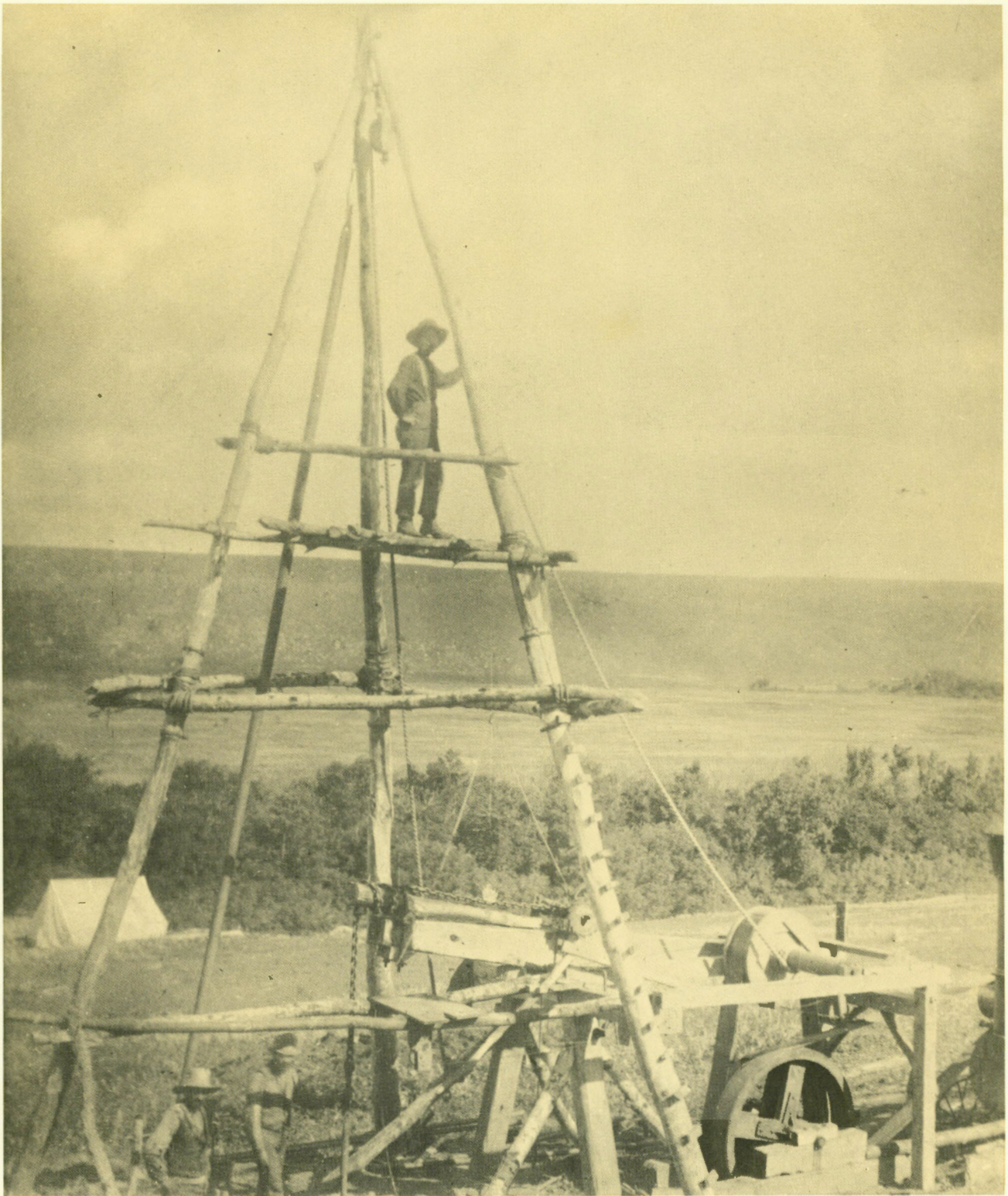
Fort St. James was established in 1806 by the fur traders Simon Fraser and John Stuart. It was probably from here that Fraser started his hazardous passage to the coast by way of the Fraser River. Though the voyage was a remarkable feat of exploration it proved a personal disappointment to Fraser as he had believed the river he descended to be the Columbia.



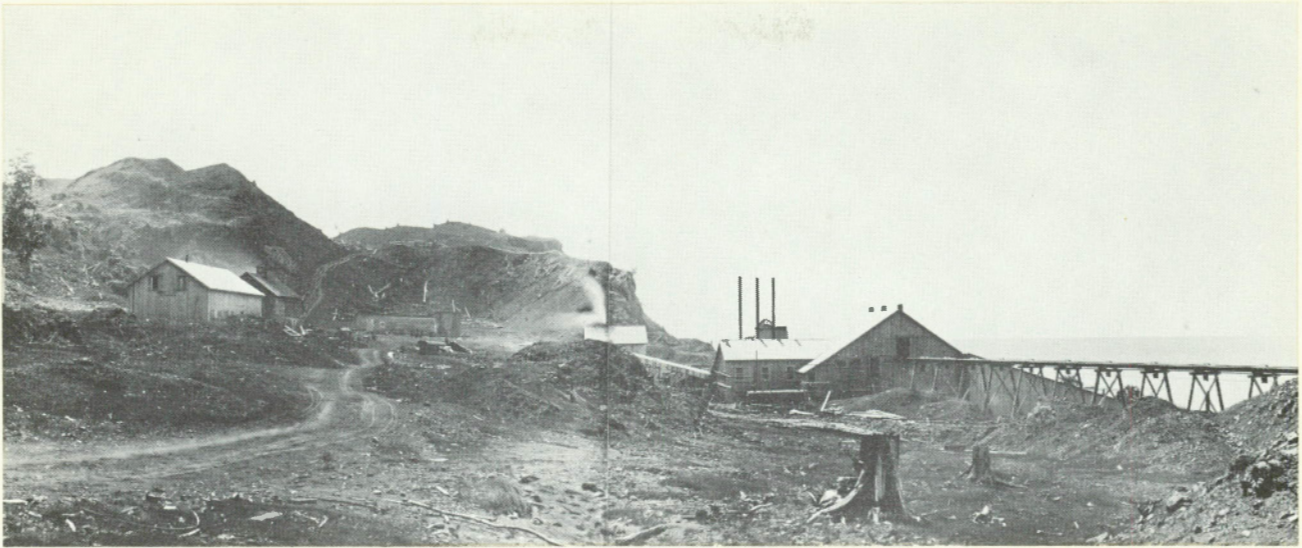
FORT ST. JOHN, BRITISH COLUMBIA, 1875

The name Fort St. John has been applied to a number of trading posts in the Peace River district since 1805. In 1823 the fort was burned by the Indians and the white inhabitants murdered. Since the rebuilding in 1860 there have been a number of moves to opposite sides of the Peace River. At the time of Selwyn's visit the fort was located on the north bank of the river.



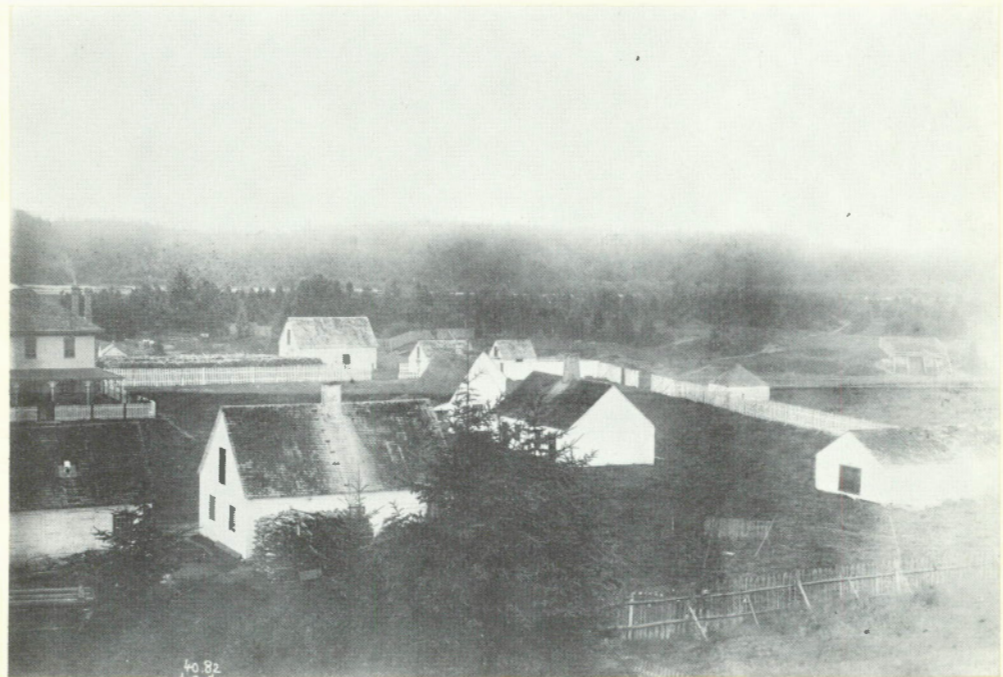


DRILLING FOR COAL NEAR ROCHE PERCEE, SASKATCHEWAN, 1880
In 1880 the Geological Survey contracted for a number of drill holes on the southern Prairies to investigate the extent of the lignite deposits exposed on the Souris River. After experiencing considerable difficulty in obtaining suitable timber for the derrick and engine bed this hole near Roche Percée was drilled to a depth of 295 feet.



MICHIPICOTEN ISLAND COPPER MINE, ONTARIO, 1882

The development of rich copper deposits in Michigan led to a search for ore on the north shore of Lake Superior. One of the early, and apparently unsuccessful, mines established was this one on Michipicoten Island.



HUDSON'S BAY COMPANY POST, MICHIPICOTEN RIVER, ONTARIO, 1882
For many years the Michipicoten River was a part of the main trade route between Lake Superior and Hudson Bay. This post was located at the mouth of the river on the present site of the community of Michipicoten.



George Mercer Dawson 1849-1901

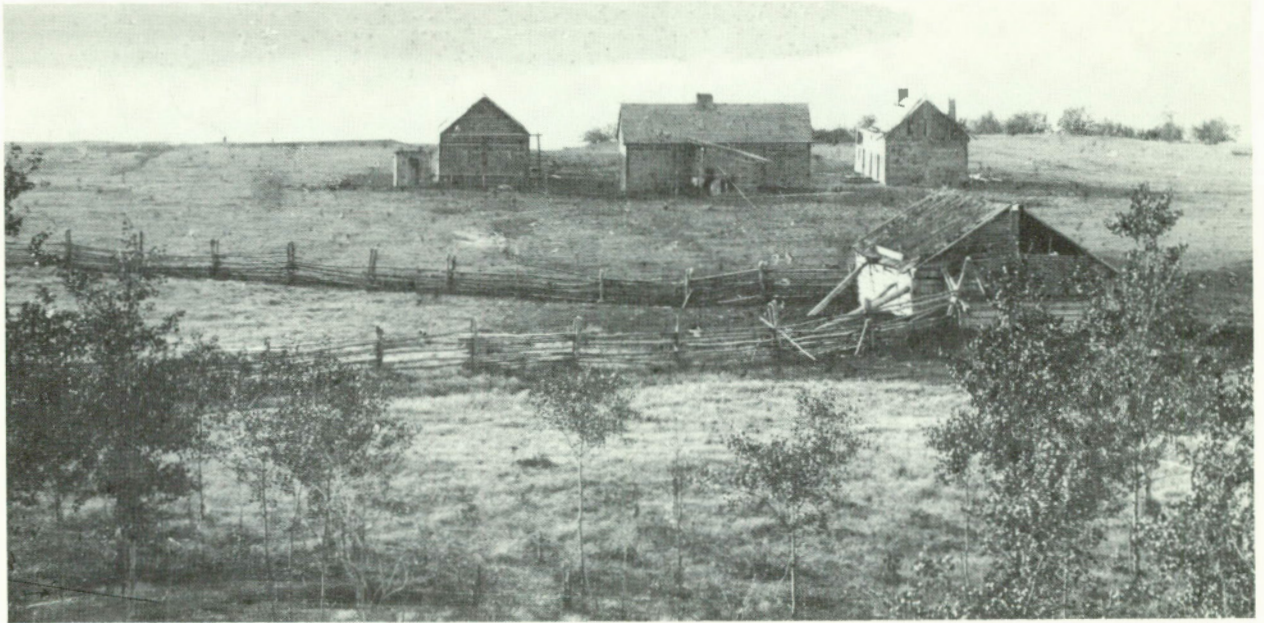
George Dawson was born in Pictou, Nova Scotia in 1849 and settled in Montreal a few years later when his father, himself a noted geologist, accepted the principalship of McGill University. His university training began at McGill and was completed at the Royal School of Mines in London.

In 1873 Dawson was appointed geologist and botanist to the British North American Boundary Commission. His report on the geology and mineral resources of the 49th parallel from the Lake of the Woods to the Pacific Ocean is one of the classics of Canadian geology and led to his appointment to the Geological Survey staff in 1875.

Though short in stature, and of apparently delicate constitution, Dawson's field work was carried out mainly in the Cordillera where travel was difficult and prolonged exertion of the most strenuous kind was required. During his years with the Survey he worked in all parts of British Columbia and his reports form the foundation of much of our knowledge of the province. In 1887 he was in the Yukon and helped to focus attention on the area that became such an important placer gold producer a few years later.

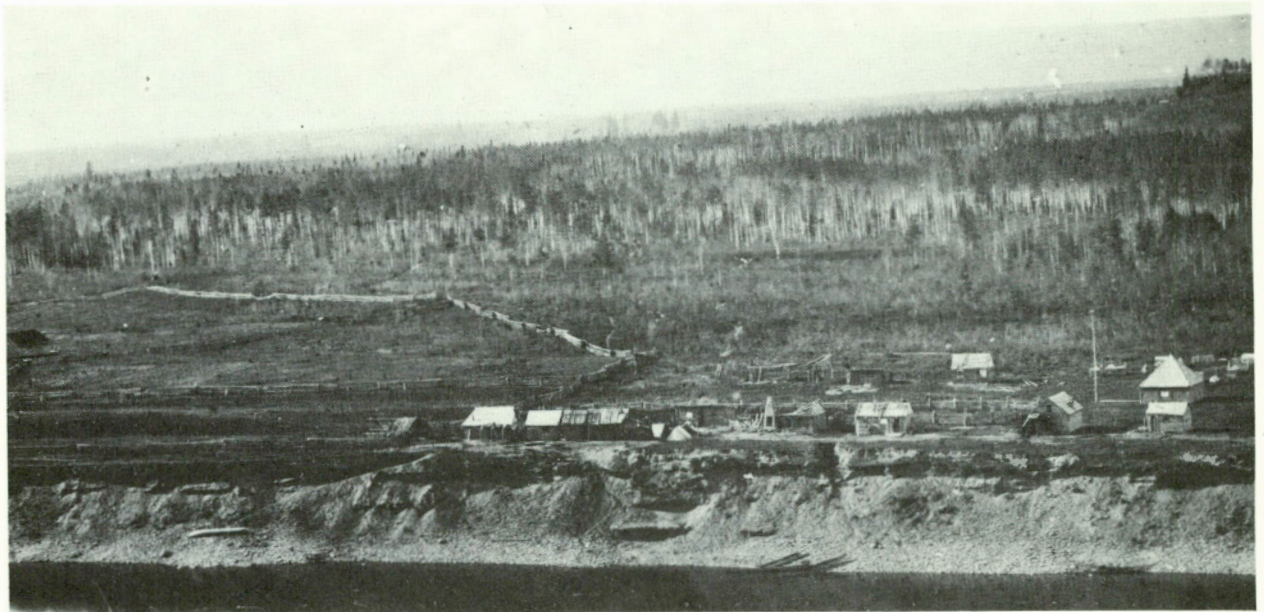
In addition to being a geologist Dawson was an eminent authority on ethnology and archaeology. His most notable ethnological contribution was his report on the Haida Indians of the Queen Charlotte Islands, but his extensive bibliography also includes studies of other western tribes. The many valuable native articles that Dawson brought back from his travels laid the foundation of the ethnological collection of the National Museum of Canada.

Dawson was appointed Director of the Geological Survey of Canada upon the retirement of Selwyn. His unexpected death in 1901, while still in office, was felt with a sense of personal loss by many friends and associates in Canada and elsewhere.



FORT FRASER, BRITISH COLUMBIA, 1876

The westward extension of fur-trading activities by Simon Fraser of the North West Company in 1805 led to the building of Fort Fraser at the outlet of Fraser Lake the following year.



FORT GEORGE, BRITISH COLUMBIA, 1876

This post, established by Simon Fraser in 1807, was the forerunner of the present modern city of Prince George.

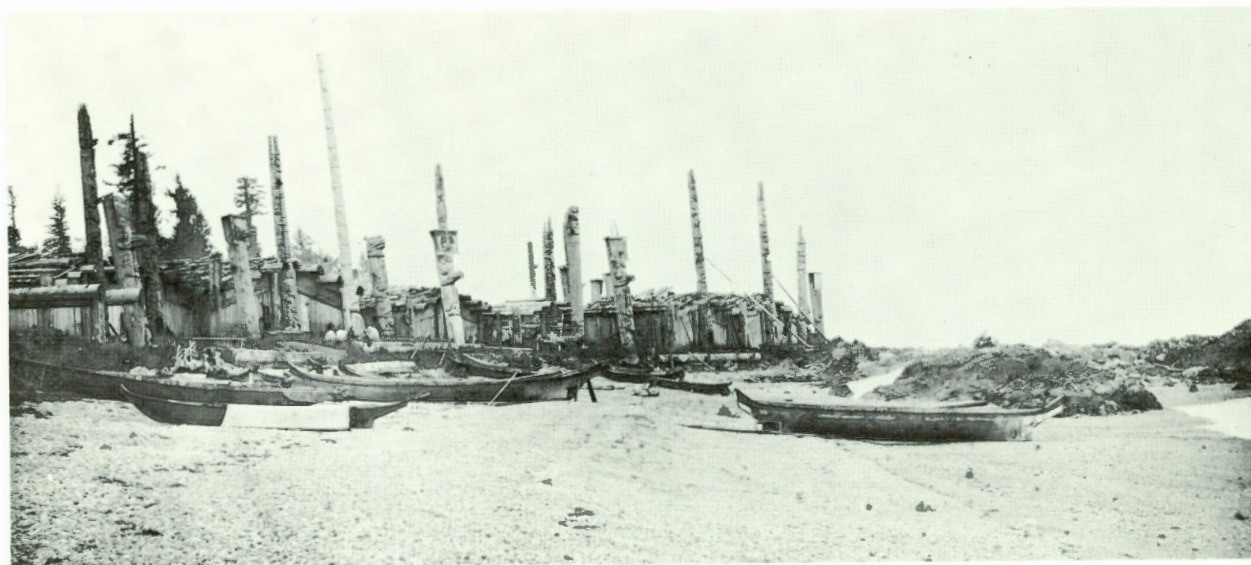


KAMLOOPS, BRITISH COLUMBIA, 1876

Both the Pacific Fur Company and the North West Company established fur-trading posts near the strategic junction of the two branches of the Thompson River. The Cariboo gold rush provided the impetus that brought early settlers to the area and the community became firmly established following completion of the Canadian Pacific Railway.

Haida Villages on the Queen Charlotte Islands

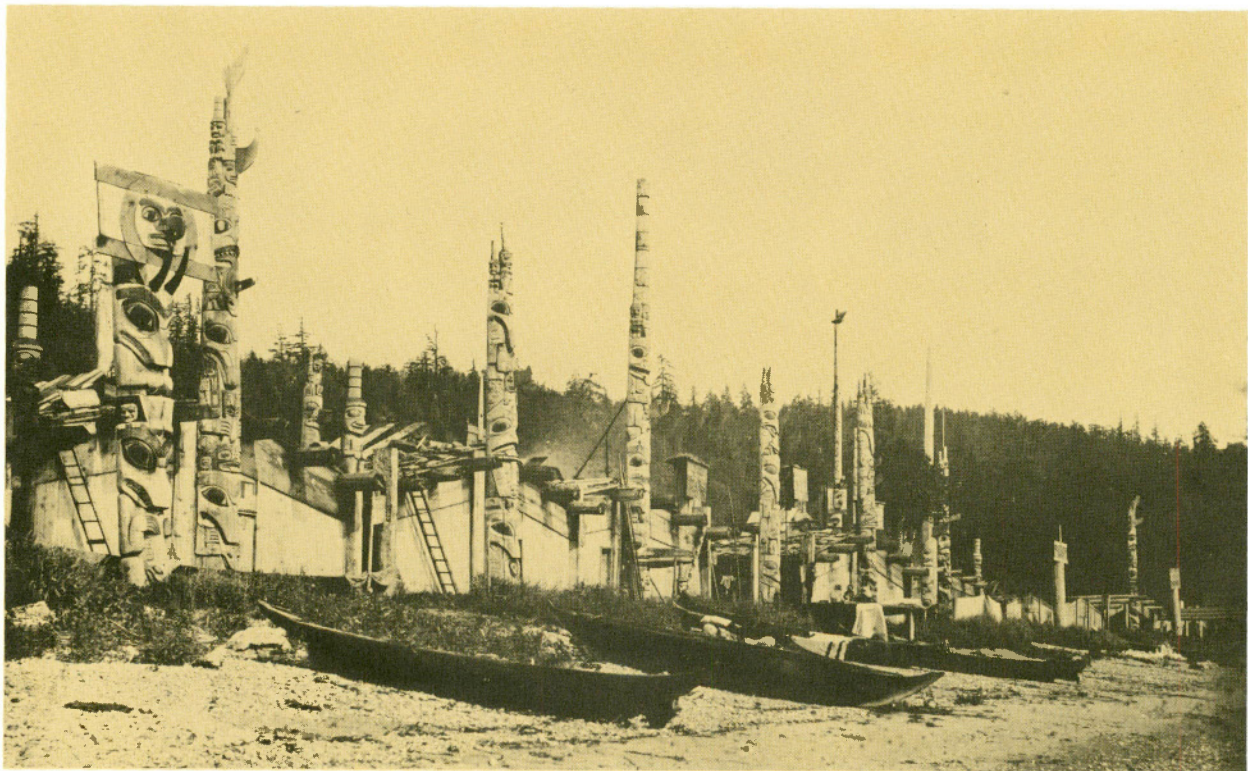
Dawson's detailed account of the Haida Indians was "prosecuted during moments not occupied by the geological and geographical work of the expedition, at the camp fire in the evening, or on days of storm when it was impossible to be at work along the coast." Fortunately it was possible for Dawson to take his photographs of the Haidas' environment at a time when the construction of totem poles reached a peak; few were erected after 1900 and the majority of those remaining in the native villages were soon destroyed by the ravages of storm and decay.

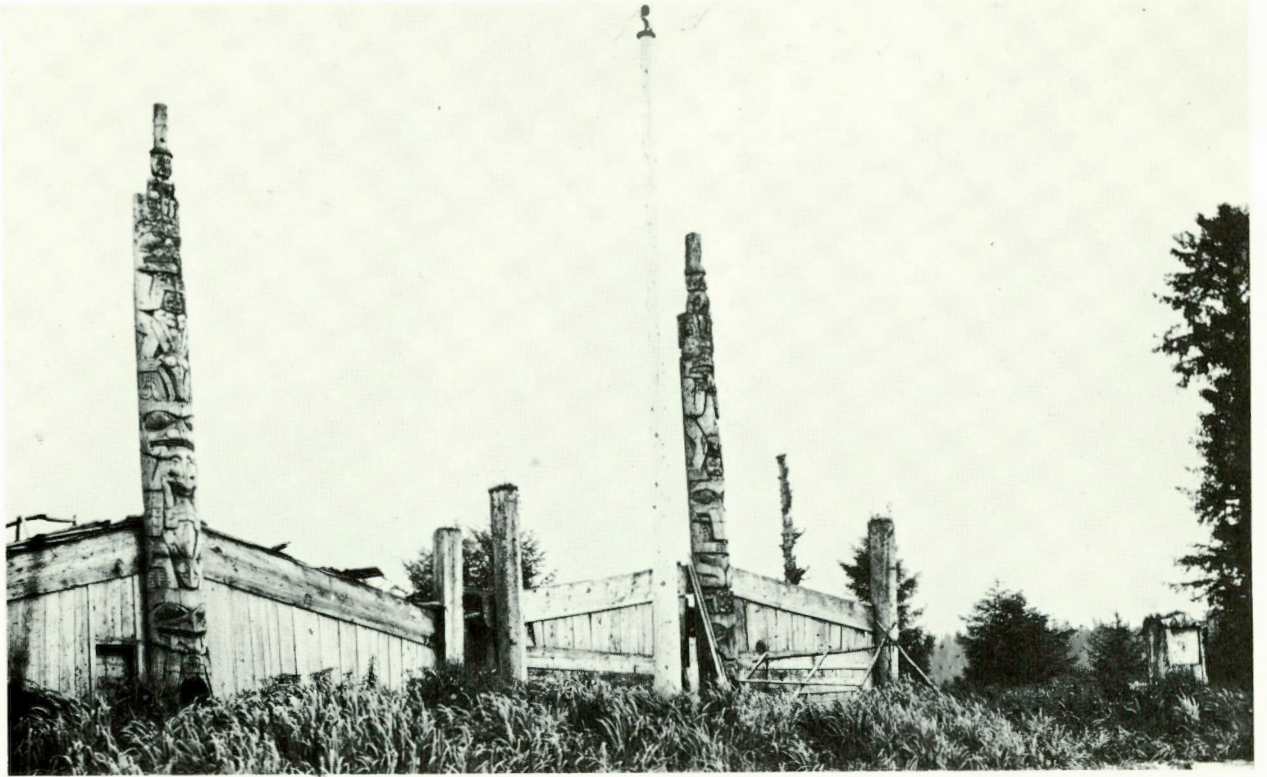


TAN-OO INDIAN VILLAGE, LASKEEK BAY,
QUEEN CHARLOTTE ISLANDS, B.C., 1878

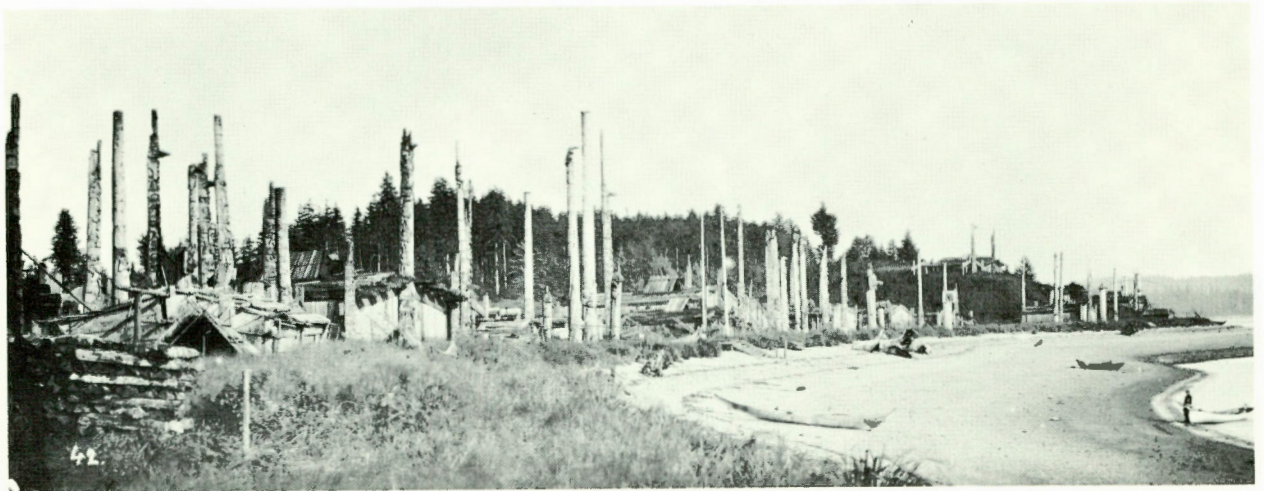


SKIDGATE INDIAN VILLAGE, QUEEN CHARLOTTE ISLANDS, B.C., 1878



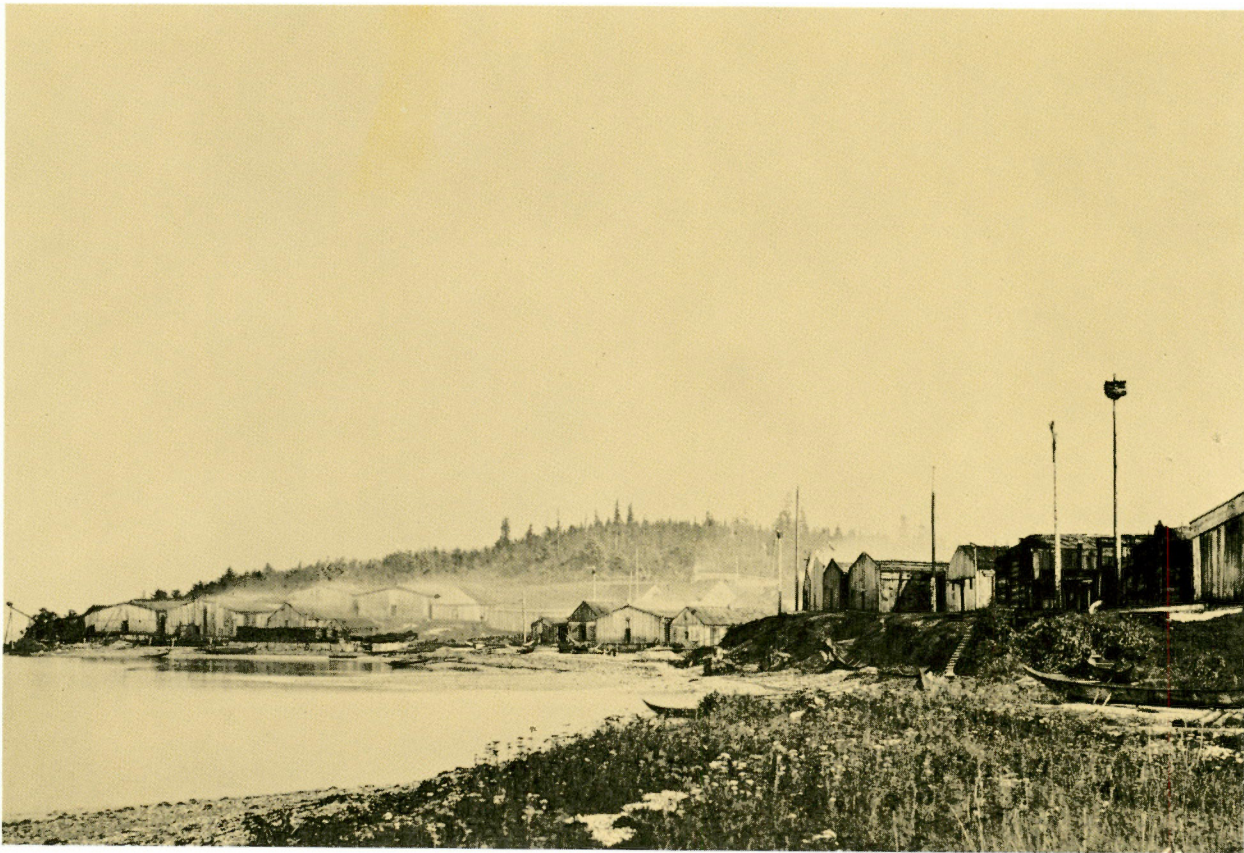


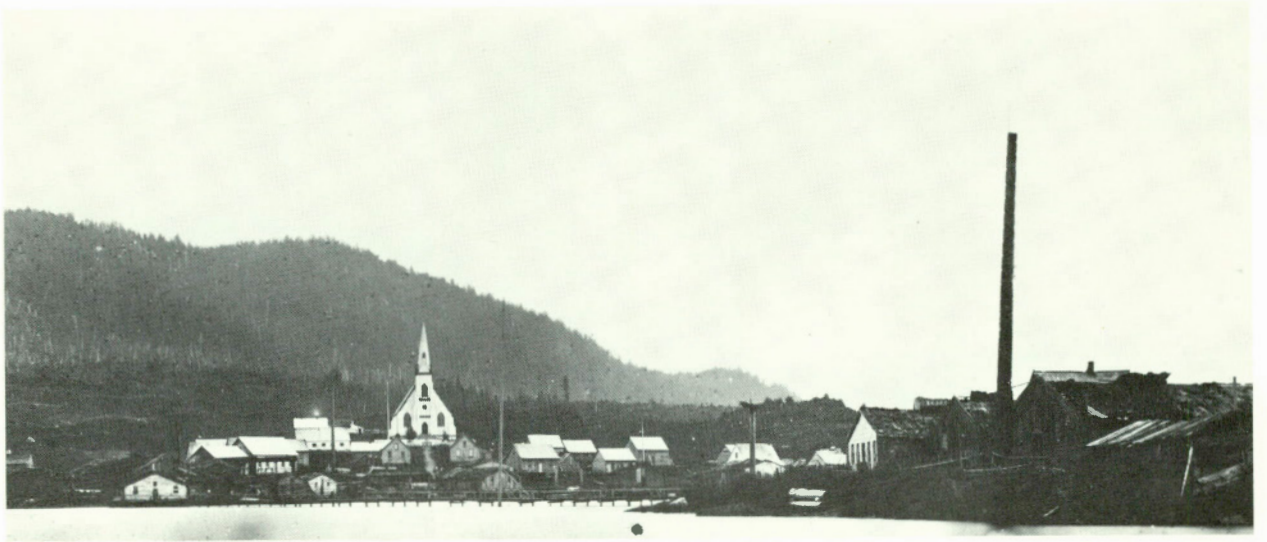
KUNG INDIAN VILLAGE, VIRAGO SOUND,
QUEEN CHARLOTTE ISLANDS, B.C., 1878



INDIAN VILLAGE ON MASSET SOUND,
QUEEN CHARLOTTE ISLANDS, B.C., 1878

VILLAGE OF THE KWAKIUTL INDIAN TRIBE AT
FORT RUPERT, VANCOUVER ISLAND, B.C., 1878
Fort Rupert was built by the Hudson's Bay Company in 1849, near the
present settlement of Port Hardy, to develop the coal deposits of the area.
However the coal proved to be of poor quality and the fort was closed at
about the time of Dawson's visit.





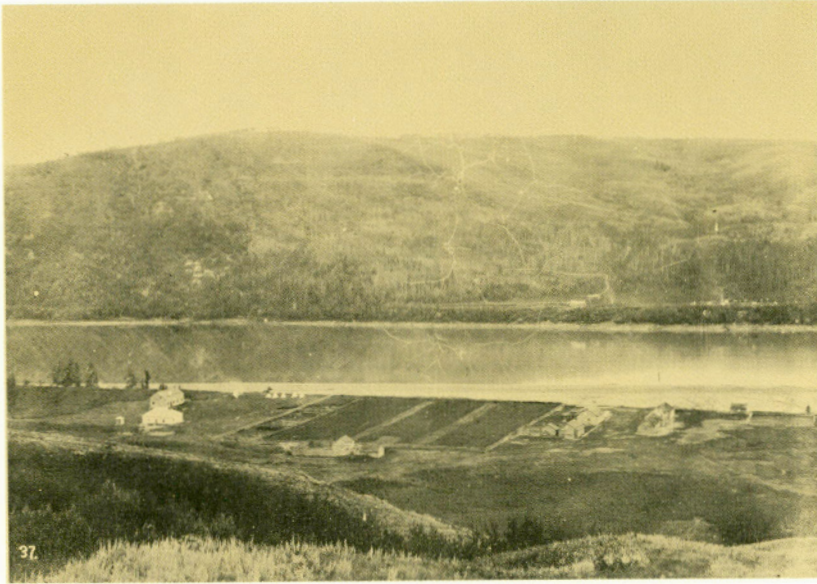
PORT SIMPSON, BRITISH COLUMBIA, 1878



FORT McLEOD, BRITISH COLUMBIA, 1879
Built by Simon Fraser of the North West Company in 1805, Fort McLeod became the first permanent settlement west of the Rocky Mountains in what is now British Columbia.

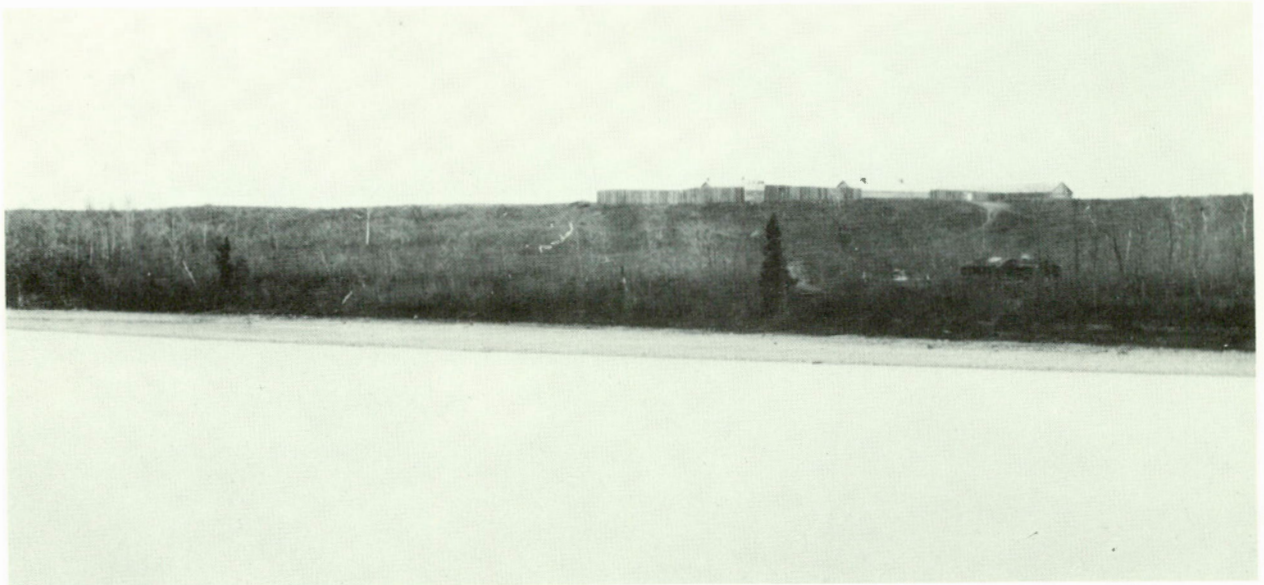


DAWSON'S PARTY, FORT McLEOD, BRITISH COLUMBIA, 1879
G. M. Dawson is shown third from the left. The epitaph over the door,
'H.B.C. Fort Misery' was apparently placed there by a disgruntled factor.



FORT DUNVEGAN, ALBERTA,
1879

The building of Fort Dunvegan was started by Archibald McLeod of the North West Company in 1805. The fort was for many years the centre of fur trading on the Peace River and a link in the chain of communications westward into British Columbia.



FORT SASKATCHEWAN, ALBERTA, 1879

Fort Saskatchewan, located on the North Saskatchewan River a few miles below Edmonton, was established by the North West Mounted Police in 1874. The location was chosen for its proximity to a proposed river crossing of the Canadian Pacific Railway on the Yellowhead Pass route. The fort remained, though the railway was finally built far to the south.



FORT EDMONTON, ALBERTA, 1879

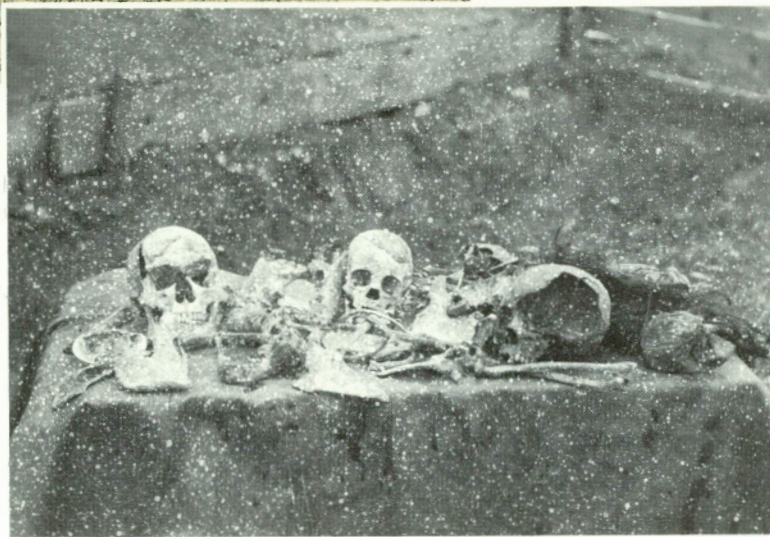
For many years following 1795 there was intense rivalry between the Hudson's Bay Company and the North West Company for control of the fur trade in the vicinity of Edmonton and a number of posts were built in the region. The original forts built within the present city limits were Fort Edmonton and Fort Aguafus. Rivalry between the companies ended with their amalgamation in 1821. The floods of 1830 forced the abandonment of the buildings then in use and a new fort was built on higher ground.



CANADA'S LAST CANNIBAL, 1879

When an obviously well-fed Cree Indian named Kah-Kee-Sec-Koo-Chin returned from his winter hunting trip and claimed that his family had died of starvation he was brought to Fort Saskatchewan for questioning by the North West Mounted Police. He refused to lead police to his hunting camp until an Indian medicine consisting of a generous quantity of plug tobacco soaked in a strong brew of tea was administered. This truth serum proved effective and the evidence of cannibalism was found. Kah-Kee-Sec-Koo-Chin was hanged in the early morning of December 20th, 1879 at Fort Saskatchewan.

THE EVIDENCE, 1879





TRAIN OF RED RIVER CARTS, 1879

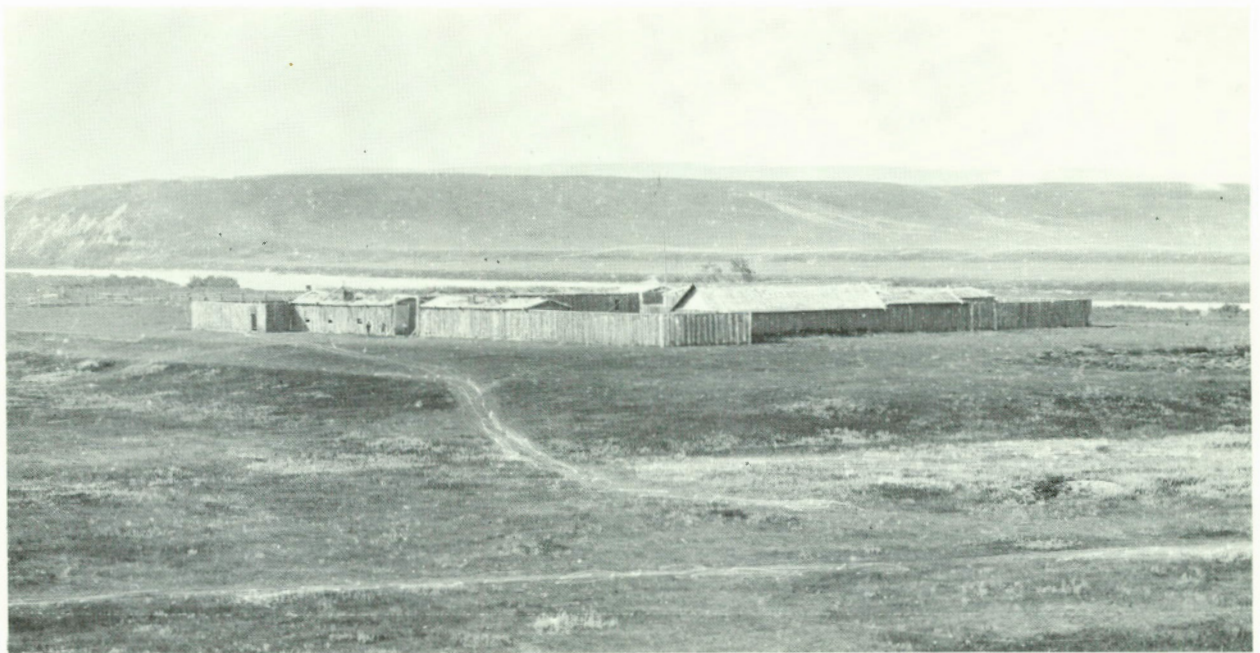
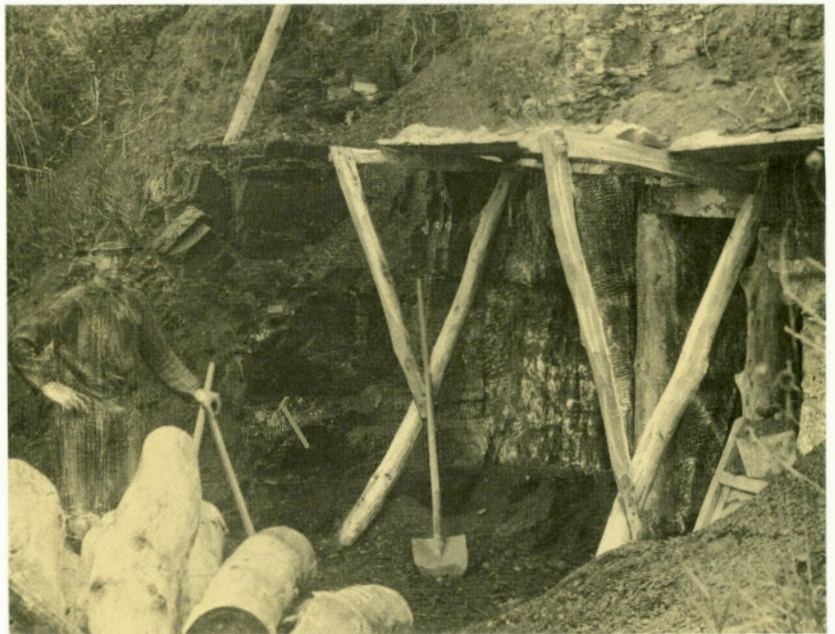
Prior to the coming of the railways Red River carts were almost indispensable to prairie travellers. Constructed entirely of wood, they were easily repairable. Even when timber was not available the hide of a freshly killed buffalo wrapped around the broken ends would soon dry and tightly bind the pieces.



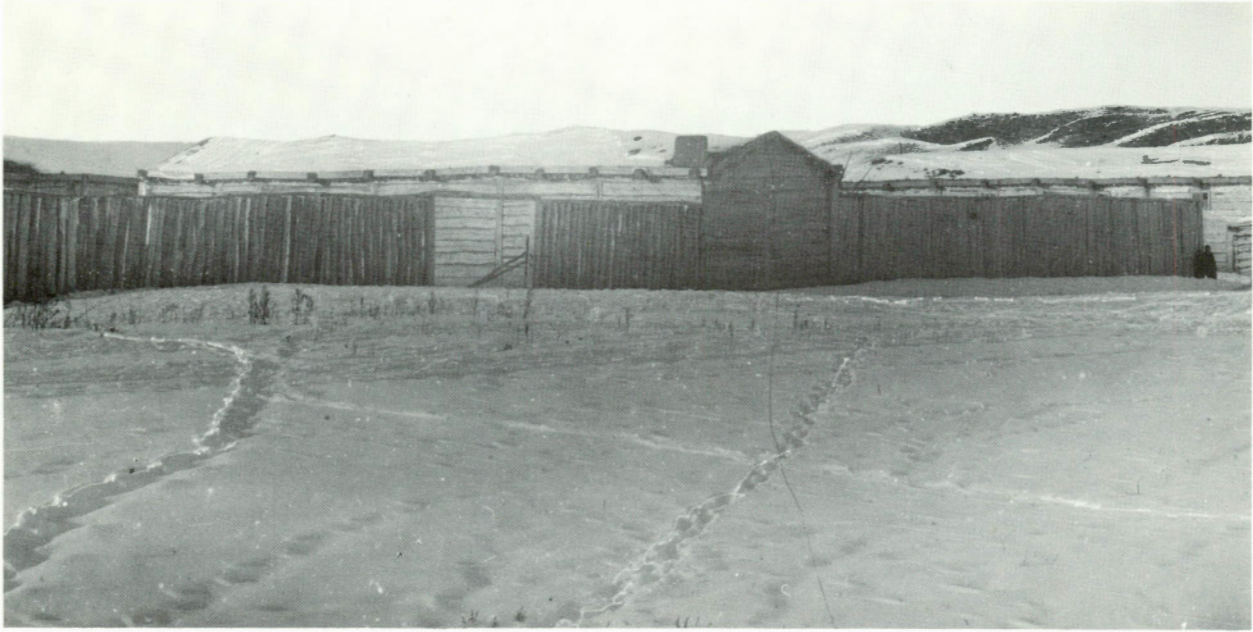
FORT ELLICE, MANITOBA, 1879

Fort Ellice was built by the Hudson's Bay Company in 1831-32 on the Assiniboine River about five miles below the mouth of the Qu'Appelle River. For many years it was a centre for the collection of the company's pemmican supplies and a stopping place on the trail between Winnipeg and Edmonton.

ENTRANCE TO MINE, COAL
BANKS, ALBERTA, 1881
Coal Banks or, as it is now known,
Lethbridge had its beginnings in
1870 when mining started to supply
coal to the nearby Fort Whoop-up.



FORT CALGARY, ALBERTA, 1881
In September of 1875 the North West Mounted Police erected a stockaded
log fort at the junction of the Bow and Elbow Rivers. Two years after this
photograph was taken the Canadian Pacific Railway arrived bringing a
steady stream of settlers. By 1884 the population had risen to 500 and the
Town of Calgary was incorporated.



FORT WHOOP-UP, ALBERTA, 1881

Fort Whoop-up, or more correctly Fort Hamilton, was the second fort built by American traders beside the Oldman River, some eight miles above the present city of Lethbridge. Whisky was liberally used for trade with the Indians and goods were moved north and south without regard for the International Boundary. With the arrival of the North West Mounted Police in 1874 the fort was practically abandoned.

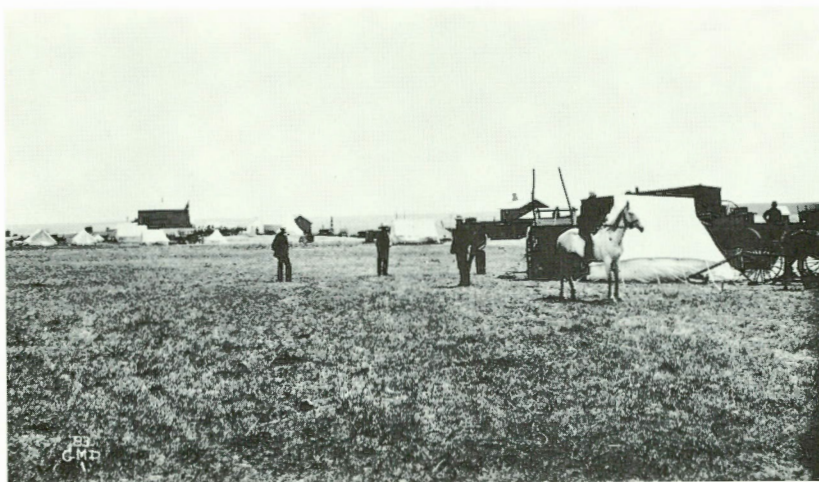


**BLOOD INDIAN WOMAN WITH
TRAVOIS, FORT WHOOP-UP,
1881**

Until the introduction of wheeled vehicles Prairie Indians moved relatively heavy loads by means of the travois pulled by either dogs or horses.



BLOOD INDIANS, FORT WHOOP-UP, 1881



SWIFT CURRENT CREEK,
SASKATCHEWAN, 1883

In 1883 Swift Current Station was the end of the railway journey for Geological Survey parties working in the west. Here beside the newly constructed Canadian Pacific Railway they organized their equipment in preparation for further travels by carts and horses.



BIG BEAR'S CAMP, MAPLE CREEK, SASKATCHEWAN, 1883
Two years after this picture was taken the Cree Indians, under Big Bear, joined forces with Louis Riel in the Northwest Rebellion and took part in the massacre of a number of people at Frog Lake and the burning of Fort Pitt. At the close of the rebellion Big Bear was tried, found guilty and sentenced to two years in prison.



INDIAN HOUSE, FORT RUPERT,
BRITISH COLUMBIA, 1885
A house belonging to members of the Kwakiutl tribe,
with legendary figures painted on its front.



INDIAN SCHOLARS, ALERT BAY, BRITISH COLUMBIA, 1885



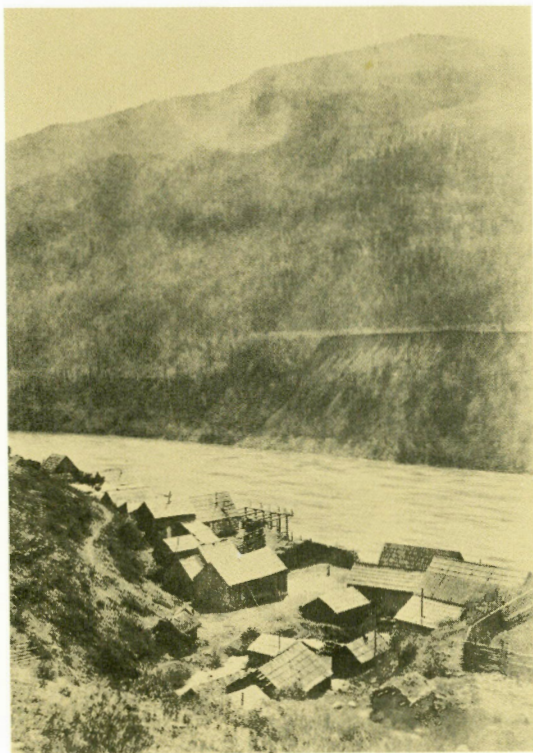
CHIEF KWA-HILA AND A GROUP OF MEN,
KOSKIMO, BRITISH COLUMBIA, 1885



INDIAN WOMEN OF THE KWAKIUTL
TRIBE AT KOSKIMO ON QUATSINO
SOUND, B.C., 1885



MISSION CHURCH, ALERT BAY, BRITISH COLUMBIA, 1885

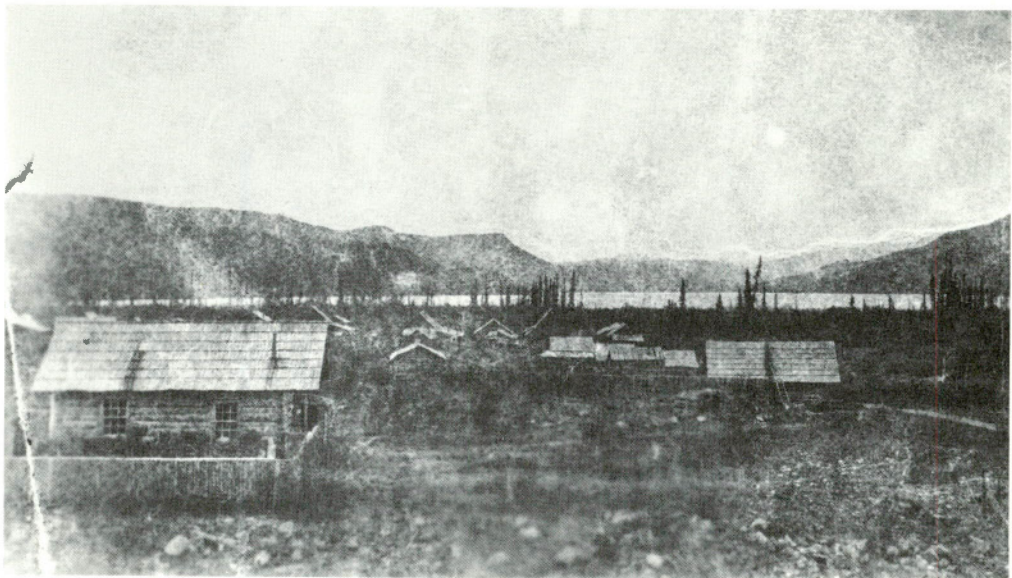


TELEGRAPH CREEK,
BRITISH COLUMBIA, 1887

In 1866 the Collins Overland Telegraph Line started the British Columbia portion of a line that was to connect North America and Europe by way of Bering Strait. Successful completion of the Atlantic cable later in the same year brought the work to a halt. Telegraph Creek, located at the head of navigation on the Stikine River, derived its name from the abandoned cache of unused wire that was to have been used in the ill-fated venture. This picture was taken on a paper negative and shows the characteristic grain of this medium.



DEASE LAKE LANDING, BRITISH COLUMBIA, 1887
Buildings at the south end of Dease Lake on the site of the present
community of Dease Lake. (Paper negative.)



LAKETON, DEASE LAKE, BRITISH COLUMBIA, 1887
Discovery of gold in the Cassiar District in 1872 led to a gold
rush and within two years production reached a value of
roughly one million dollars a year. Laketon, situated at the
mouth of Dease Creek, became the centre of mining activity
and during its brief history boasted of a population of as
many as 2,000 persons. (Paper negative.)



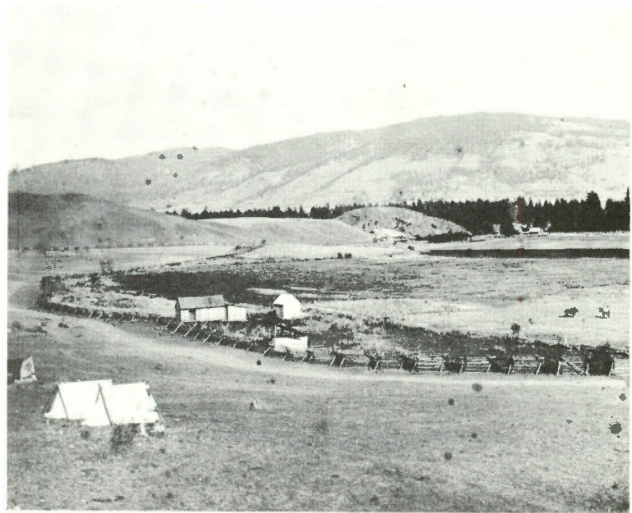
NELSON, BRITISH
COLUMBIA, 1889
Settlement at Nelson started in
1888 when prospectors flocked
to the area following discovery
of rich ore deposits on nearby
Toad Mountain.



SPROAT'S LANDING, BRITISH COLUMBIA, 1889
The mining boom of the 1880s in the Kootenays led to the establishment
of a regular steamer service on the Arrow Lakes to connect the area with
the railway at Revelstoke. The *Dispatch* was one of two stern-wheelers plying
the Lakes in 1889 and is shown tied up at the present site of Robson.



INDIANS DRYING SALMON, SPENCE'S BRIDGE,
BRITISH COLUMBIA, 1889



VERNON, BRITISH COLUMBIA, 1890



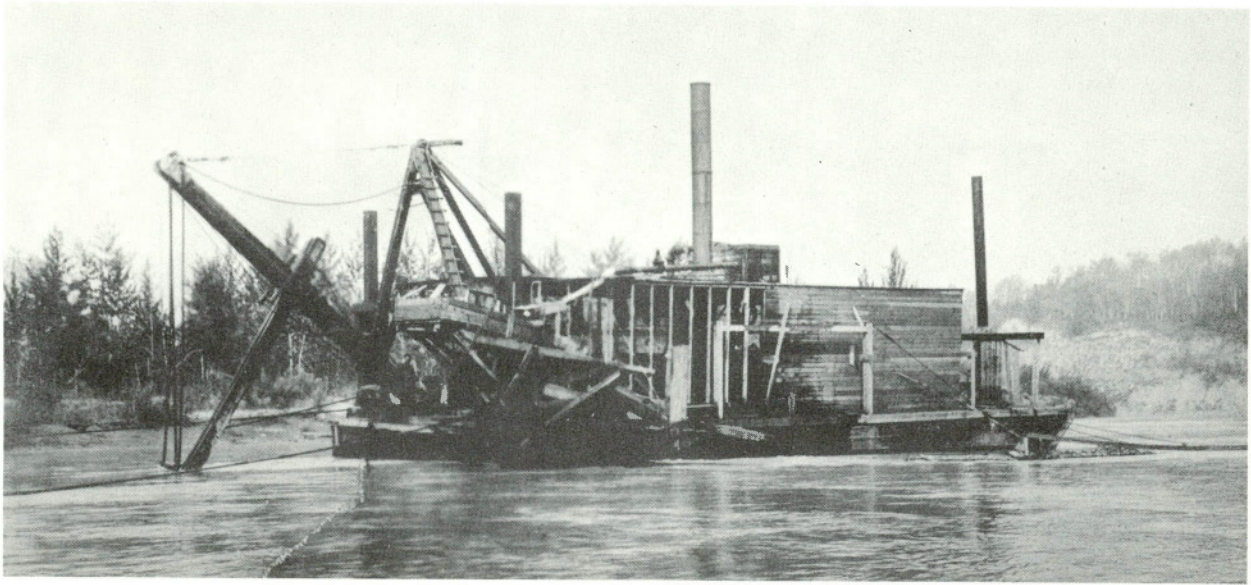
MONITORS USED IN HYDRAULIC MINING, CARIBOO DISTRICT,
BRITISH COLUMBIA, 1894

DRILLING PLANT AT VICTORIA,
ALBERTA, 1898

This drilling rig was used in one of the early Geological Survey attempts to locate commercial quantities of oil and gas on the Prairies. The primitive nature of the equipment forced abandonment of this hole at a depth of 1,840 feet.

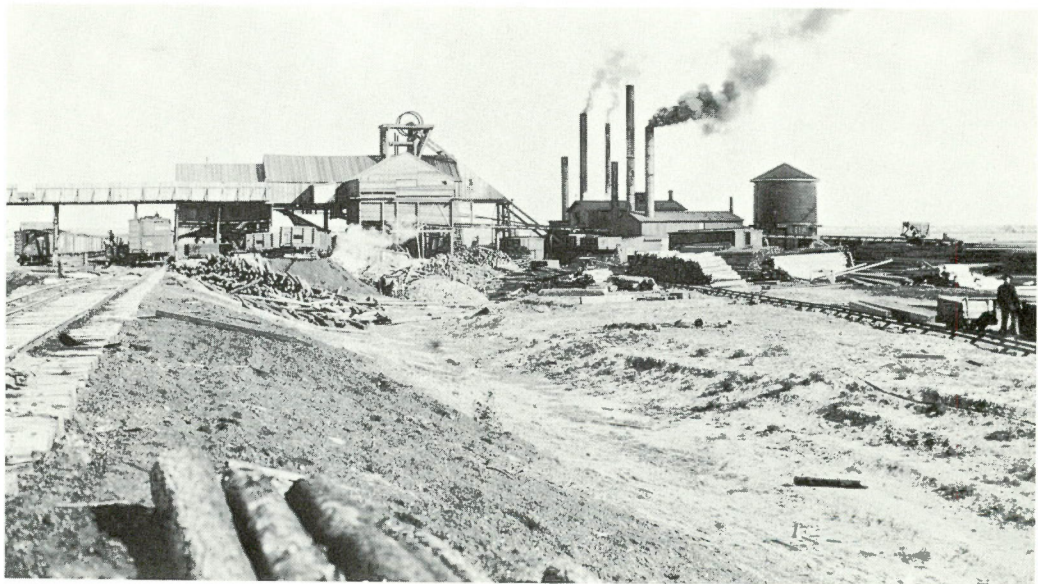


VAN WINKLE HYDRAULIC COMPANY, LYTTON, BRITISH COLUMBIA, 1894
Gold was discovered in the Fraser River in the late 1850s. Later the benches along the sides of the river valley were mined using high-pressure jets of water to move the gravel into sluices where the gold was recovered.



DREDGING FOR GOLD, NORTH SASKATCHEWAN RIVER,
ALBERTA, 1898

Toward the turn of the century steam-powered dredges made their appearance on the North Saskatchewan River. The largest of these, owned by the Loveland Brothers, is shown here working beside Big Island above Edmonton.



COAL MINE, LETHBRIDGE, ALBERTA, 1898



ANTHRACITE, ALBERTA, 1898



GOLD WASHING, SASKATCHEWAN RIVER, ABOVE EDMONTON, ALBERTA, 1898
The presence of gold in the North Saskatchewan River was known at least as early as 1873. By 1895 some 300 men were at work along the river washing gold from the river bars.



MacLEOD, ALBERTA, 1898

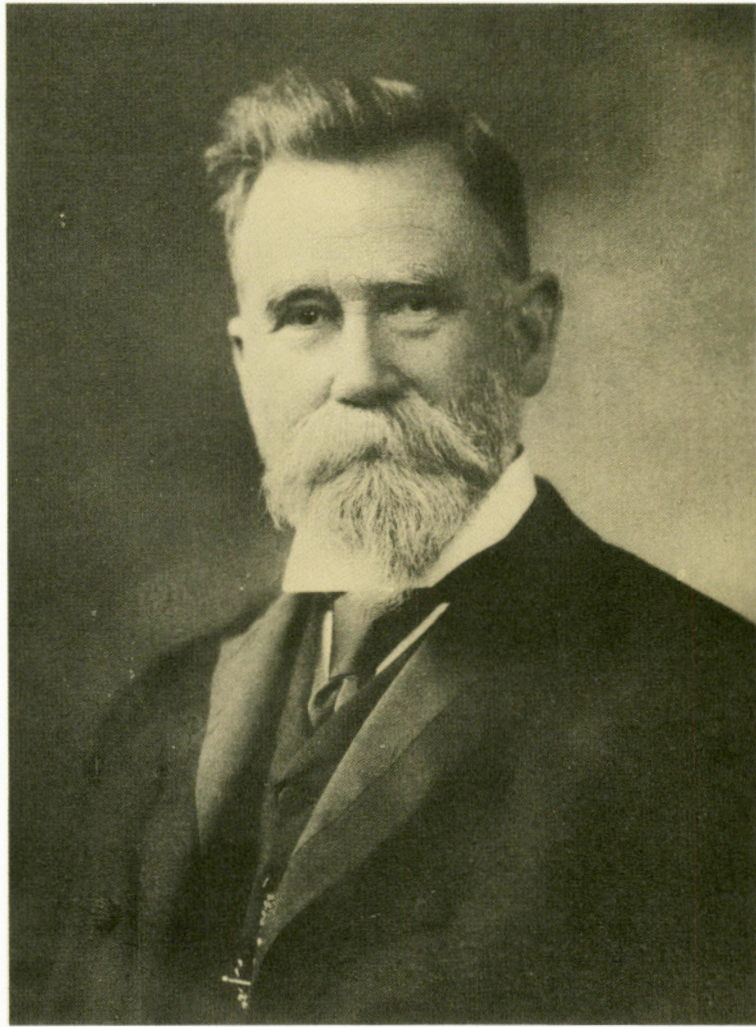
The first North West Mounted Police fort on the Prairies was built in 1874 after an offer to buy Fort Whoop-up was refused by its owners. Located on an island in Oldman River and subject to flooding, the fort was moved to the present site of Fort Macleod. For many years the community that grew up around the fort was simply known as Macleod and it was not until 1952 that the original name was restored.

Robert Bell 1841-1917

Robert Bell was born in 1841 in the township of Toronto. As a youth he frequently accompanied his minister father on fossil collecting trips in the Ottawa Valley and at the age of 15 he eagerly accepted the opportunity to join James Richardson's party in the Gaspé Peninsula. Bell continued to work during the summers for the Geological Survey of Canada in various parts of the country while he obtained a civil engineering degree from McGill and taught at Queen's University. Later he returned to McGill and obtained a medical degree, a training he felt would be useful while working in remote parts of the country.

Bell's field areas ranged from the Gaspé Peninsula to Great Slave Lake, but he is best remembered for his numerous topographical and geological reconnaissance surveys in the region between Lake Superior and Hudson Bay. As early as 1884 he was on the staff of the steamship *Neptune* exploring Hudson Bay and returned the following year on the *Alert*. In 1897 he headed a party working on southern Baffin Island. In later years he carried out more detailed studies in such areas as Sudbury and along the French River.

Following the untimely death of G. M. Dawson in 1901 Robert Bell was appointed Acting Director of the Geological Survey of Canada, a position he held until his retirement in 1906.





MAIN STREET, WINNIPEG, MANITOBA, 1880



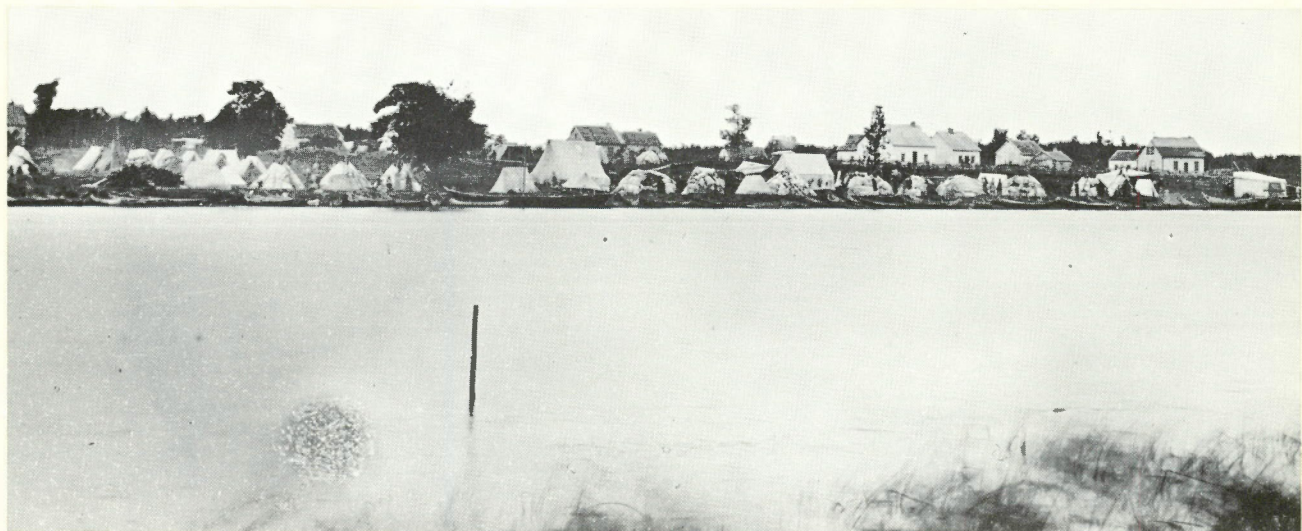
TREATY TIME, ST. PETERS, MANITOBA, 1880



NORWAY HOUSE, MANITOBA, 1880

The original Norway House was built in 1814 and named after a group of Norwegians who were brought in to build a winter road from York Factory to the Red River settlement. The building of the post pictured here was started in 1826 on an island at the mouth of Gunisas

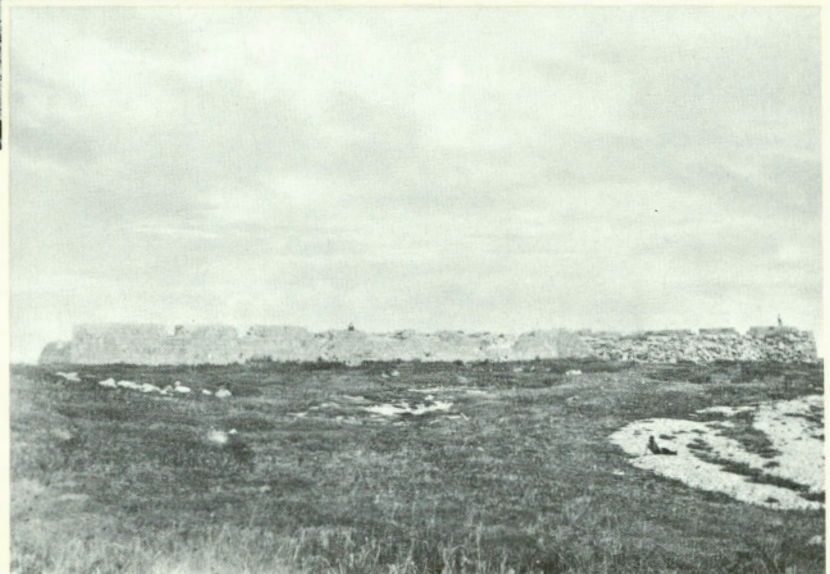
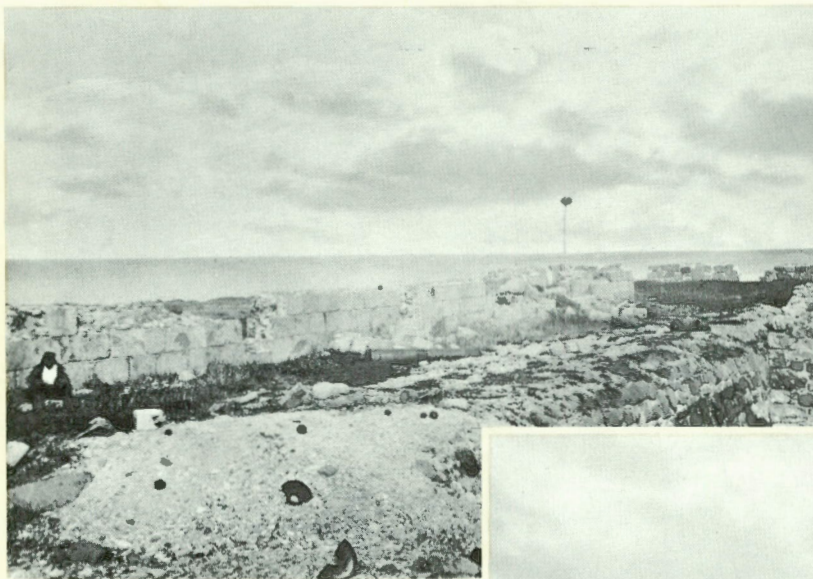
River. Because of this strategic location at the junction of the trade routes from the West and the Red River to Hudson Bay it became an important supply depot and the administrative centre for the Hudson's Bay Company's Northern Department.



ST. PETERS, MANITOBA, 1880



MOOSE FACTORY, ONTARIO, 1880s
 Moose Factory, the second of the Hudson's Bay Company's trading posts, was originally built at the mouth of Moose River in 1672-73. After capture by the French in 1686 it was not permanently re-established until 1730, some fifteen miles up the Moose River.



FORT PRINCE OF WALES,
 MANITOBA, 1880

Construction of the stone Fort Prince of Wales, at the mouth of the Churchill River started in 1732 and was not completed until 1771. However, it was so weakly garrisoned that it was easily seized by the French in 1782 and so heavily damaged that it was never reoccupied.



CREE INDIAN CAMP, OXFORD HOUSE, MANITOBA, 1880



ARRIVAL OF THE ANNUAL SUPPLY SHIP AT
YORK FACTORY, MANITOBA, 1880



OTTAWA, ONTARIO, 1880s

In 1884 and 1885 teams of scientists were sent north by the Canadian Government to investigate Hudson Bay and Hudson Strait. Because of long experience in the region Robert Bell was chosen to collect information on geology, botany and zoology as well as serve as medical officer. These photographs taken on the expeditions are among the earliest showing the native inhabitants of the region.



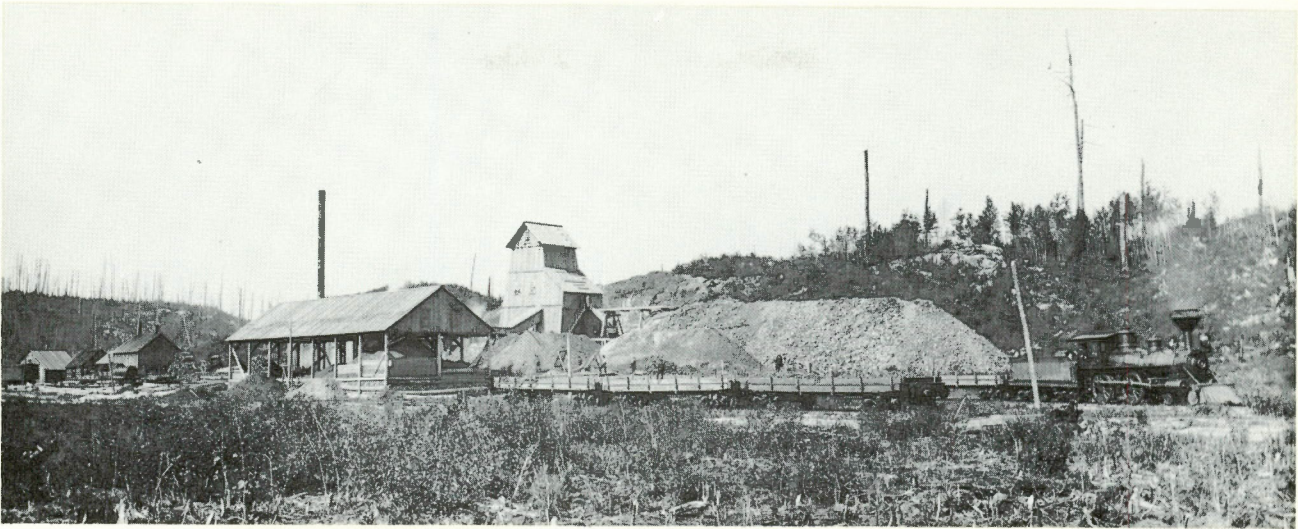
ESKIMOS ON THE NEPTUNE, 1884



MEMBERS OF THE HUDSON BAY EXPEDITION WITH ESKIMOS AND POLAR BEAR SKINS, 1885



KILLARNEY, ONTARIO, 1888



COPPER CLIFF MINE OF CANADIAN COPPER COMPANY, SUDBURY, ONTARIO, 1888

The first mention of the presence of copper and nickel in the vicinity of the present city of Sudbury is made in Murray's report of 1856 to the Geological Survey. However it was not until the news spread that construction crews for the new Canadian Pacific Railway had cut through

a mineralized zone three miles beyond Sudbury that prospectors flocked to the area. Mining began at the Copper Cliff mine in 1886. In 1902 the Canadian Copper Company became a part of the giant International Nickel Company.



FORT ALBANY, ONTARIO, 1886





Albert Peter Low 1861-1942

A. P. Low was born in Montreal in 1861 and joined the staff of the Geological Survey of Canada in 1882 following graduation from McGill University. In 1906 he succeeded Robert Bell as Director of the Survey, but was forced by ill health to retire only a year and a half later.

Low's name is most closely associated with his investigations in what is now northern Quebec and Labrador. It was in this vast region where he worked for many years that he discovered the large iron ore deposits that have only started to be commercially exploited within the past few years. In the two years 1893-1894 it is estimated he travelled 5,460 miles: by canoe 2,960 miles, on vessel 1,000 miles, with dog teams 500 miles and on foot 1,000 miles. One story still recalled tells something of the physical ability of the man. When he wintered with a joint provincial-federal party on the shores of Lake Mistassini, disagreement between Low and the provincial officer arose regarding the operation of the survey. To settle matters he snowshoed to civilization alone in the dead of winter, received the authority he required, and returned by means of another difficult journey on foot to rejoin his party in time to commence the summer's work.

In 1903 Low was appointed to command a Canadian Government expedition to northern waters for the purpose of laying formal claim to the Arctic islands as well as to carry out scientific studies. During the winter, while the ship was locked in the ice of Fullerton Inlet of Hudson Bay, he had a remarkable opportunity to study and photograph the Eskimos of the region. His book *The Cruise of the Neptune* is a very readable account of the results of this expedition.



BETSIAMITES (BERSIMIS), QUEBEC, 1884



INDIAN WEDDING, BETSIAMITES, QUEBEC, 1884



GEOLOGICAL SURVEY PARTY ON LAKE MISTASSINI,
QUEBEC, 1884

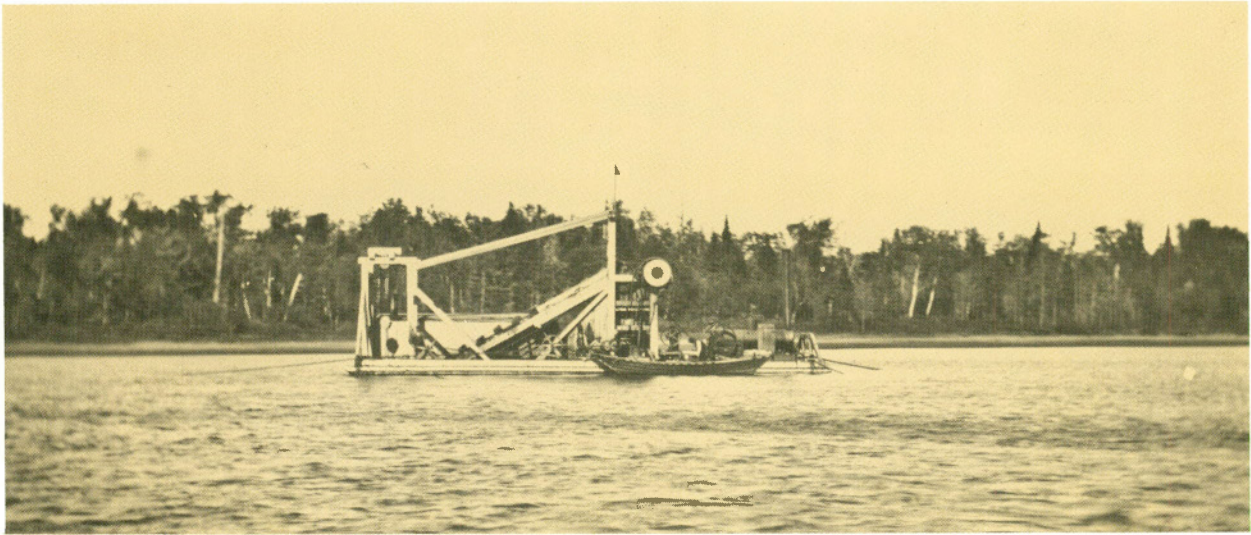


GEOLOGICAL SURVEY PARTY IN WINTER CAMP AT HEAD
OF PERIBONKA RIVER, QUEBEC, 1884



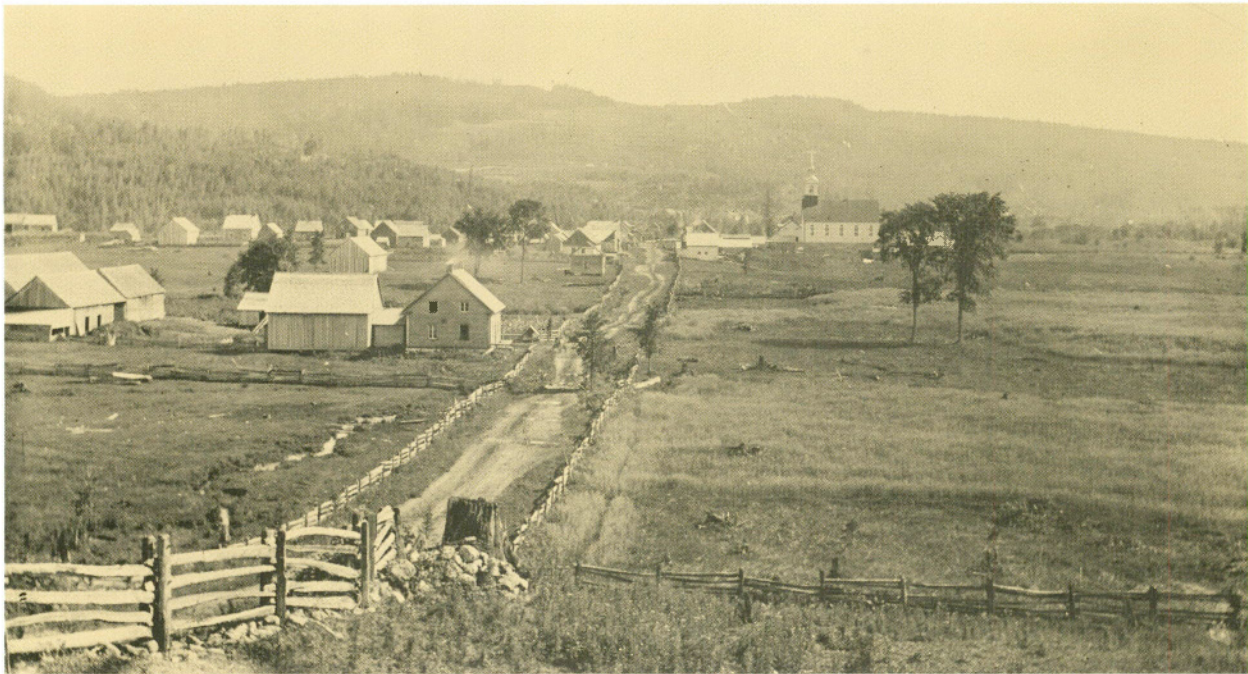
RUPERT HOUSE, JAMES BAY, QUEBEC, 1884

Rupert House is the oldest trading post of the Hudson's Bay Company. It was built by Sieur des Groseilliers as Fort Charles in 1668. Eighteen years later it was captured by the French and was not permanently re-established until 1777.



DREDGE ON LAC TORTURE, QUEBEC, 1891

One of the earliest mining ventures in Canada under the French regime was the development of the bog iron ores near Trois Rivières, where a smelter was built in 1737. This dredge was in use in 1891 to recover the iron ore from the bottom of Lac Torture.



NOTRE DAME DE BATISCAN, QUEBEC, 1890



INDIAN CANOE, LAKE CHIBOUGAMAU,
QUEBEC, 1892



HUDSON'S BAY COMPANY POST AT EASTMAIN,
QUEBEC, 1892



HUDSON'S BAY COMPANY POST, LAKE MISTASSINI, QUEBEC, 1894
Originally located near the outlet of Lake Mistassini, this post was moved to its present location at the south end of the lake prior to the amalgamation of the Hudson's Bay Company and the North West Company in 1821.



GRAND (CHURCHILL) FALLS, HAMILTON (CHURCHILL) RIVER, LABRADOR, 1894
One of the earliest photographs of these 245-foot-high falls that were discovered by John McLean in 1839.



RUINS OF FORT NASKAUPI, LABRADOR, 1894



WILSON CHILDREN AT RIGOLET,
HAMILTON INLET, LABRADOR,
1894



DIANA IN HUDSON STRAIT, 1897
When the Department of Marine and Fisheries sent the *Diana* north in 1897, A.P. Low and R. Bell accompanied her to carry out geological work along the coasts of Hudson Strait.



FORT CHIMO, QUEBEC, 1897



NACHVAK, LABRADOR, 1896
A scene in Nachvak Fiord showing the Hudson's Bay Company trading post and steamer *Erik*.



FORT GEORGE, JAMES BAY, QUEBEC, 1899

CRUISE OF THE *NEPTUNE*, 1903-1904



SCOTCH WHALER *ECLIPSE* AT PONDS INLET

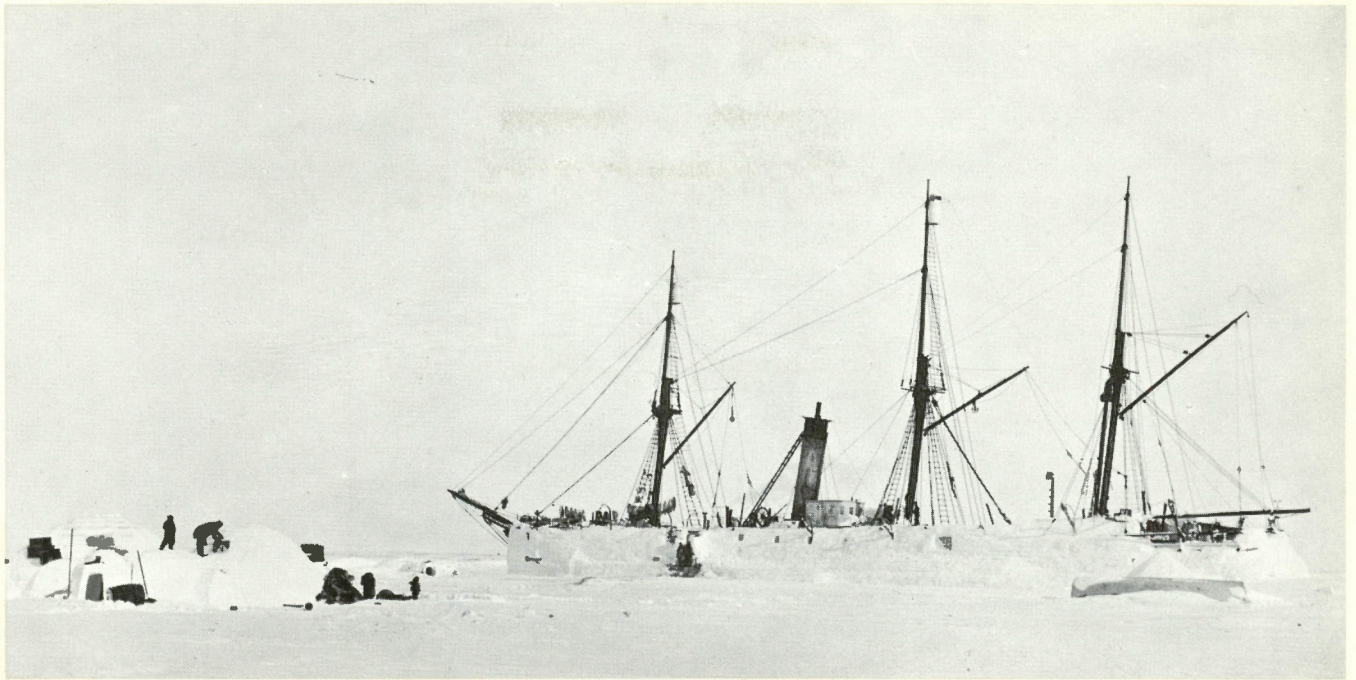
During the latter part of the 1800s whaling was an important industry in the waters of Hudson Bay and Strait. In the seven years prior to 1903 American vessels alone had realized one and one third million dollars from their whaling activities.



NEPTUNE AND AMERICAN WHALER ERA IN WINTER QUARTERS AT CAPE FULLERTON
In contrast to the practice of British ships the American whalers were usually provisioned for two years and wintered in the north.



OFFICERS OF THE NEPTUNE
Standing are: J. Hearn, J. Crossman, S. Bruchett, L. Guay. Seated: M. Bartlett, Captain S. Bartlett, A.P. Low, W. Crossman, Dr. L.E. Borden.



NEPTUNE AT CAPE FULLERTON WITH SNOWHOUSES UNDER CONSTRUCTION



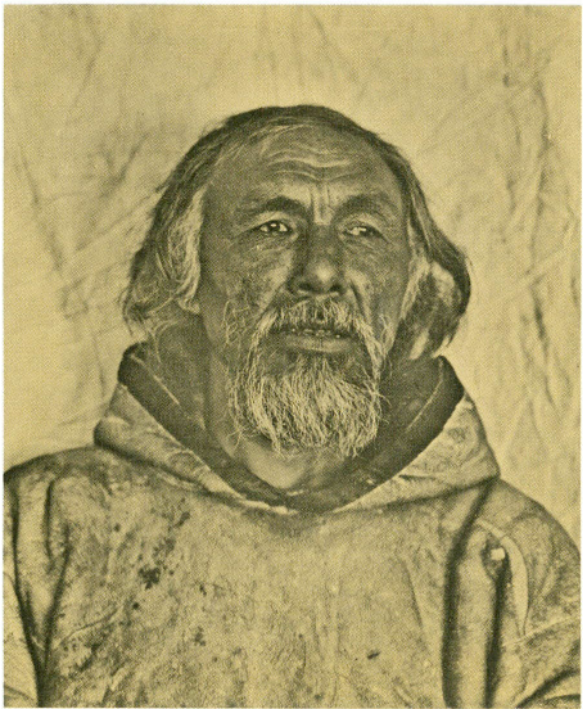
MISSION STATION AND SCOTTISH WHALING STATION
AT BLACKLEAD ISLAND, CUMBERLAND GULF



PORT LEOPOLD, SOMERSET ISLAND
A cache of provisions set out for the use of Roald Amundsen and the crew of the Danish vessel *Gjøa* by a Scottish whaler. The *Gjøa* spent three years from 1903 to 1906 in northern waters and became the first vessel to navigate the Northwest Passage. The boiler was previously abandoned at Port Leopold by one of the Franklin search parties.



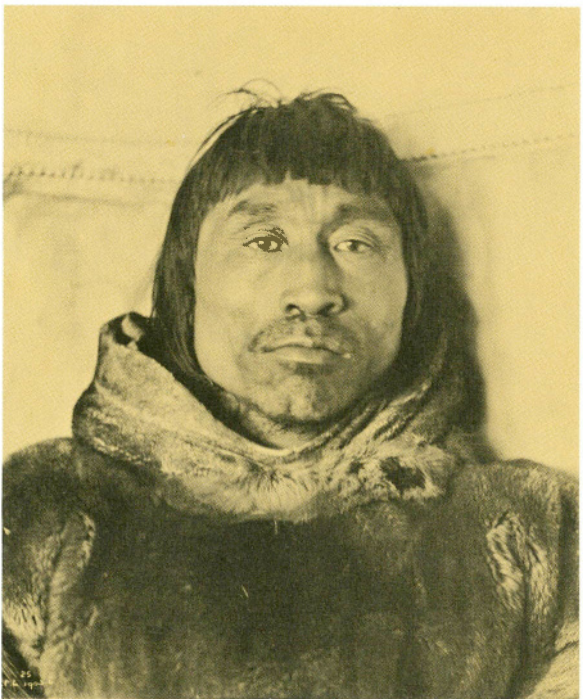
RAISING THE FLAG, CAPE HERCHELLE, ELLESMERE ISLAND



HARRY, CHIEF OF THE AIVILLIKS



TATTOOED AIVILLIK WOMAN



KENIPITU MAN FROM CHESTERFIELD INLET



TATTOOED NECHILLIK WOMAN



ESKIMO CHILDREN





ESKIMO WOMEN





BUILDING SNOWHOUSES AT CAPE FULLERTON



UMIAK, OR WOMEN'S BOAT IN WAKEHAM BAY



INTERIOR OF SNOWHOUSE



ESKIMO KAYAK OFF CAPE HAVEN

Joseph Burr Tyrrell 1858-1957

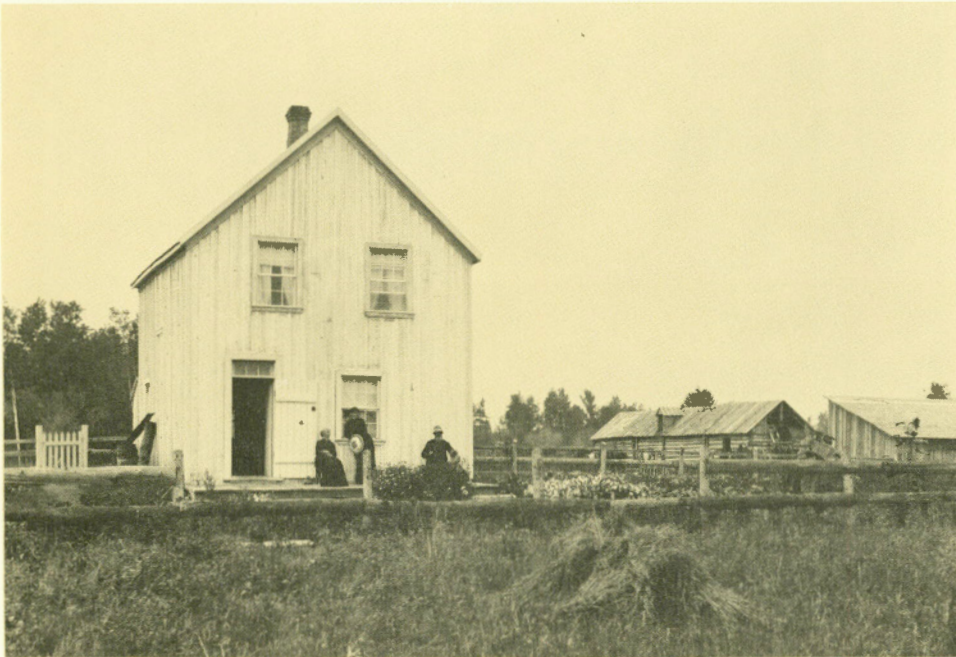
J. B. Tyrrell was born in Weston, Upper Canada in 1858. After graduation from the University of Toronto in 1880 he chose the law as a profession. However, a life-long interest in natural science brought him to the Geological Survey of Canada, where he obtained a position at a salary of \$500 per year.

Tyrrell's work was carried out mainly on the Prairies. His travels led him to the discovery of the Drumheller and Pincher Creek coal deposits, dinosaur remains near Red Deer, oil seeps near Edmonton and indications of the nickel deposits of northern Manitoba. In 1893 he made the first of his famous trips through the 'Barren Lands.' From Lake Athabasca his party travelled northwest and descended the Dubawnt River to Chesterfield Inlet. A hazardous trip along the western edge of Hudson Bay to Churchill was followed by a 600-mile walk to Winnipeg on snowshoes. The following year his explorations ran from Reindeer Lake, down the Kazan and Ferguson Rivers to Hudson Bay, then south once again to Churchill and Winnipeg.



News of gold in the Klondike reached the outside world in 1897 and the following year Tyrrell was sent to the Yukon. Returning to Ottawa in the fall with memories of the fabulous riches of the creek valleys in his mind he tendered his resignation to the Government and joined the gold rush. Seven years later he moved to Toronto and played an important part in the opening of a number of northern Ontario mines before his death in 1957.

The many honours tendered to Tyrrell during his lifetime were not only for his contributions to geology. One of his many interests was in the lives of the early fur traders whose trails he frequently crossed in his travels. His research and writings on such men as David Thompson and Samuel Hearne serve as a tribute from one of Canada's last explorers to his predecessors.



SETTLER'S HOUSE NEAR
EDMONTON, ALBERTA,
1886

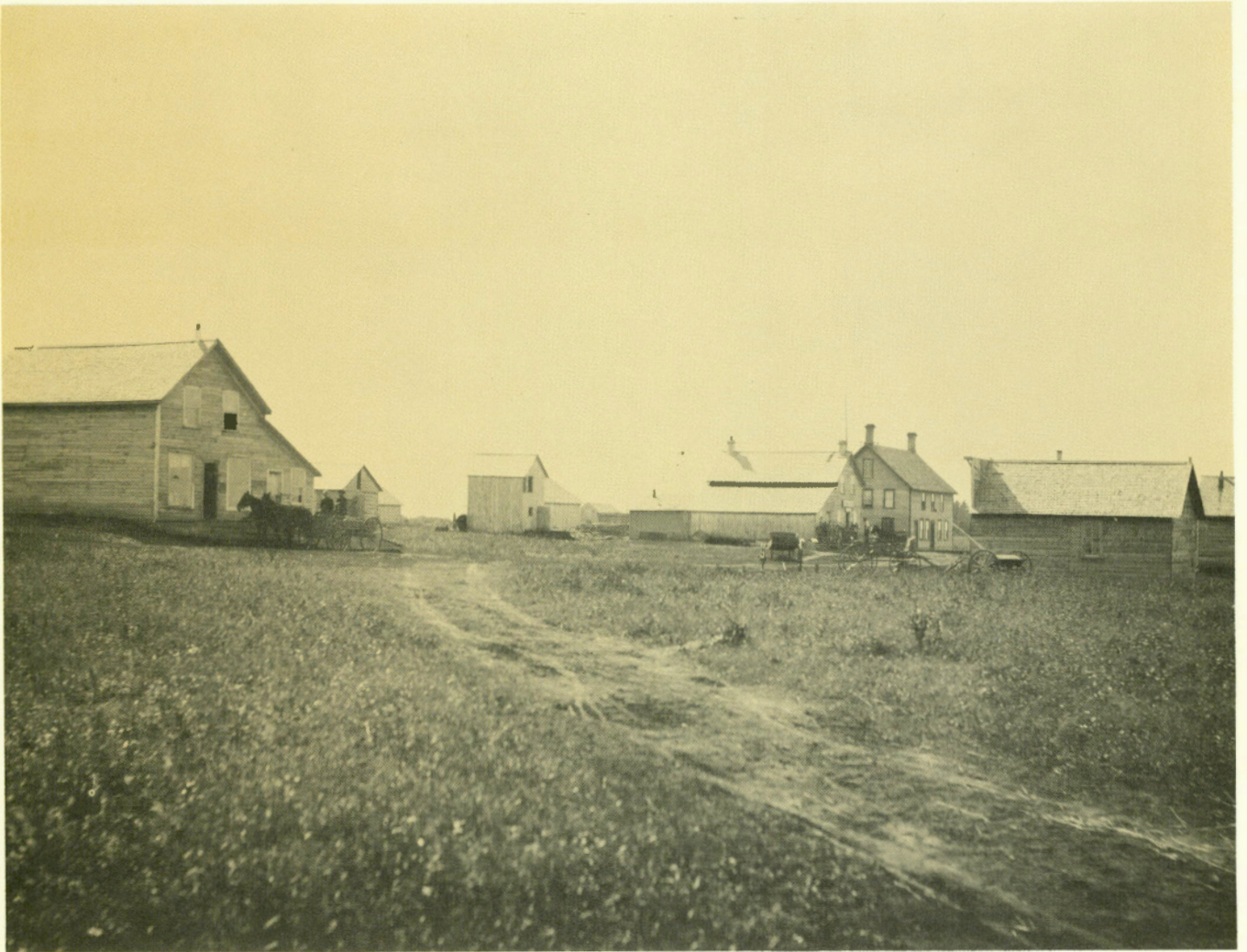


FORT PITT, SASKATCHEWAN, 1886

Fort Pitt was built by the Hudson's Bay Company in 1835 on the North Saskatchewan River a few miles east of the present Alberta-Saskatchewan boundary. Located on the main travel route between Fort Garry and Fort Edmonton, it was a stopping place for early travellers and an important source of the company's meat supplies.



RUINS OF ROCKY MOUNTAIN HOUSE, ALBERTA, 1886
This was the site of a North West Company post as early as 1799. After the amalgamation of the fur-trading companies in 1821 it remained the most westerly post of the Hudson's Bay Company on the North Saskatchewan River until 1875.



RUSSELL, MANITOBA, 1887



RED DEER SETTLEMENT, ALBERTA, 1886



LUNCH STOP ON THE PRAIRIES, 1887



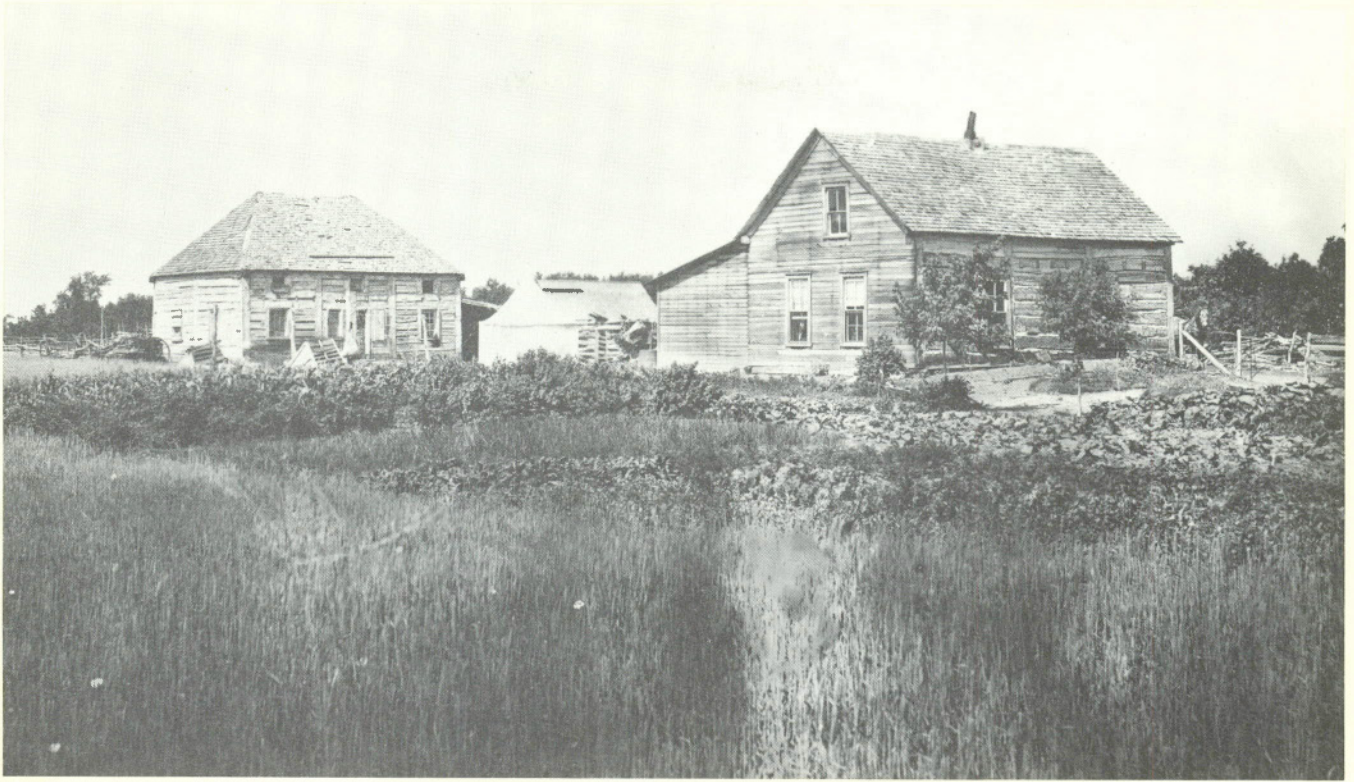
SAULTEUX INDIANS FROM THE UPPER ASSINIBOINE RIVER, 1887



WEKEMOUSKUNK, A SAULTEUX CHIEF, WITH HIS SON AND CANOE,
LAKE ST. MARTIN, MANITOBA, 1888



HARTMAN'S TRADING POST, WATERHEN RIVER, MANITOBA, 1889



OLD FORT OF THE HUDSON'S BAY COMPANY AT PORTAGE
LA PRAIRIE, MANITOBA, 1890



NORWAY HOUSE, MANITOBA, 1890



CHILDREN OF MR. ANGUS McKAY, INDIAN AGENT AT BERENS RIVER, MANITOBA, 1890

THROUGH THE BARREN LANDS, 1893



TYRRELL ON DUBAWNT LAKE, N.W.T., 1893





BARREN-GROUND CARIBOU, CAREY LAKE, N.W.T., 1893

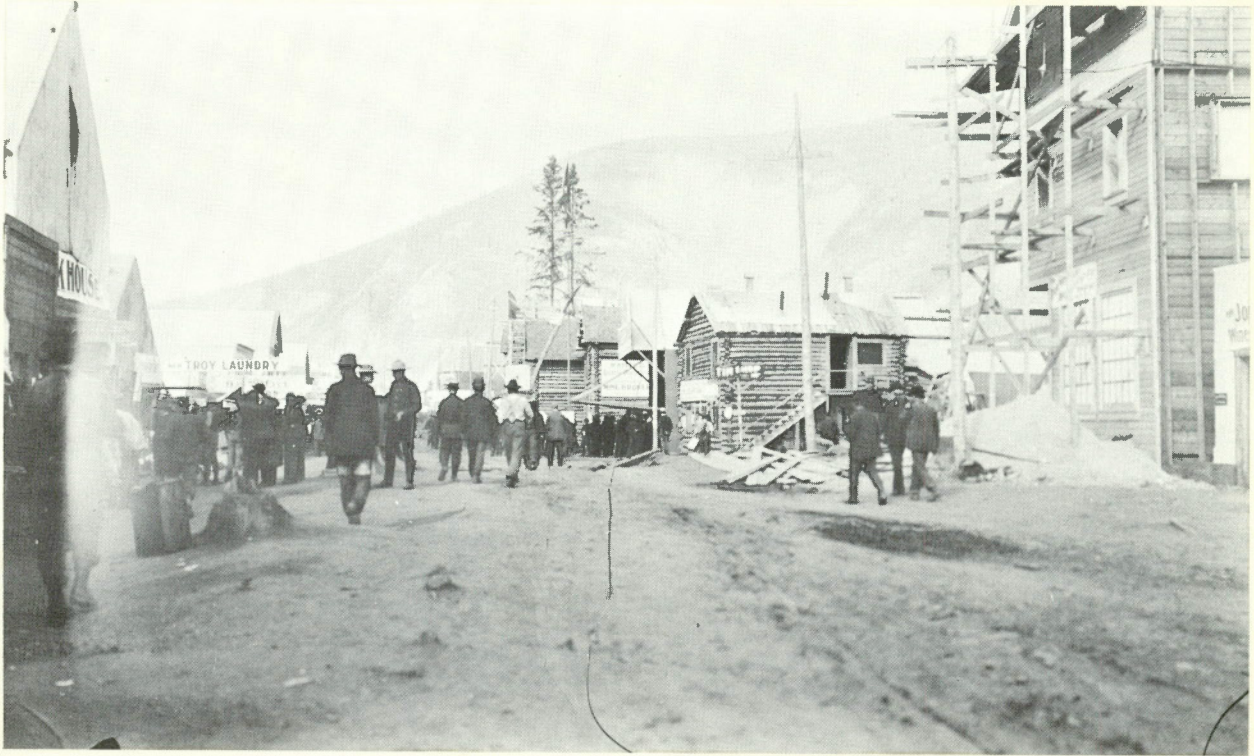


ESKIMO HUNTERS, 1893

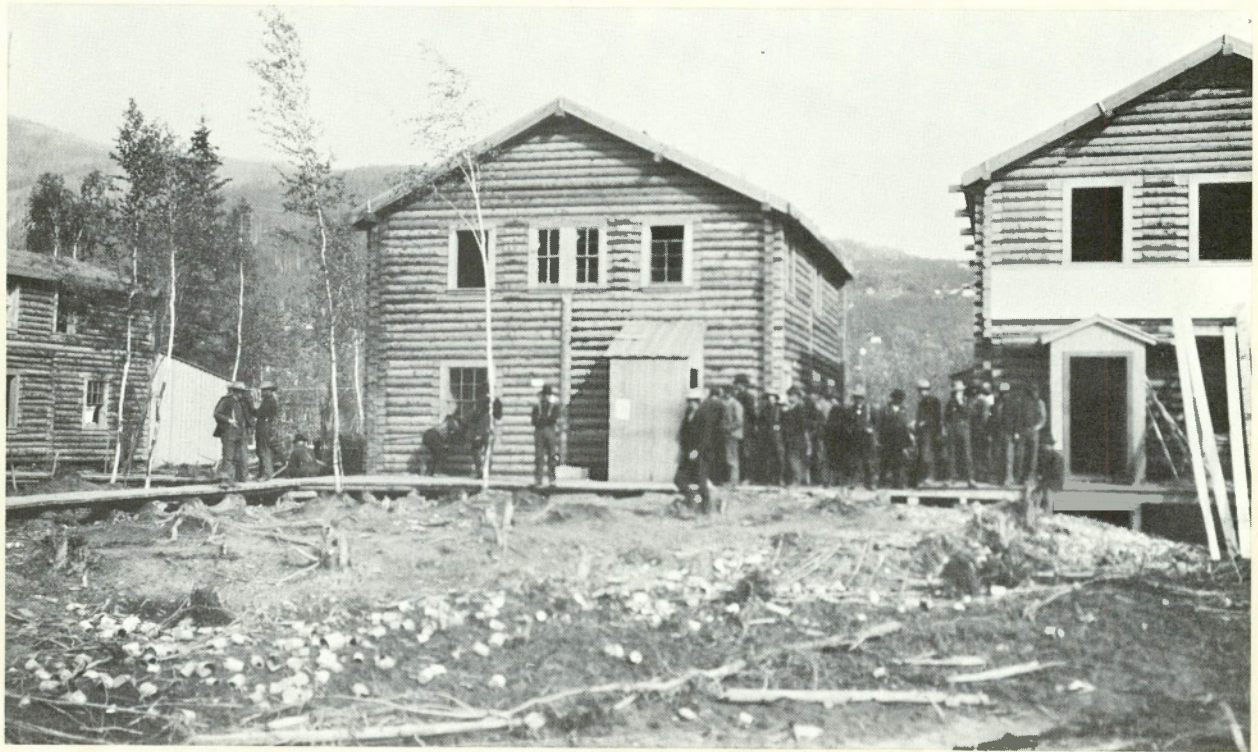
Gold Rush Days, Dawson, Y.T., 1898



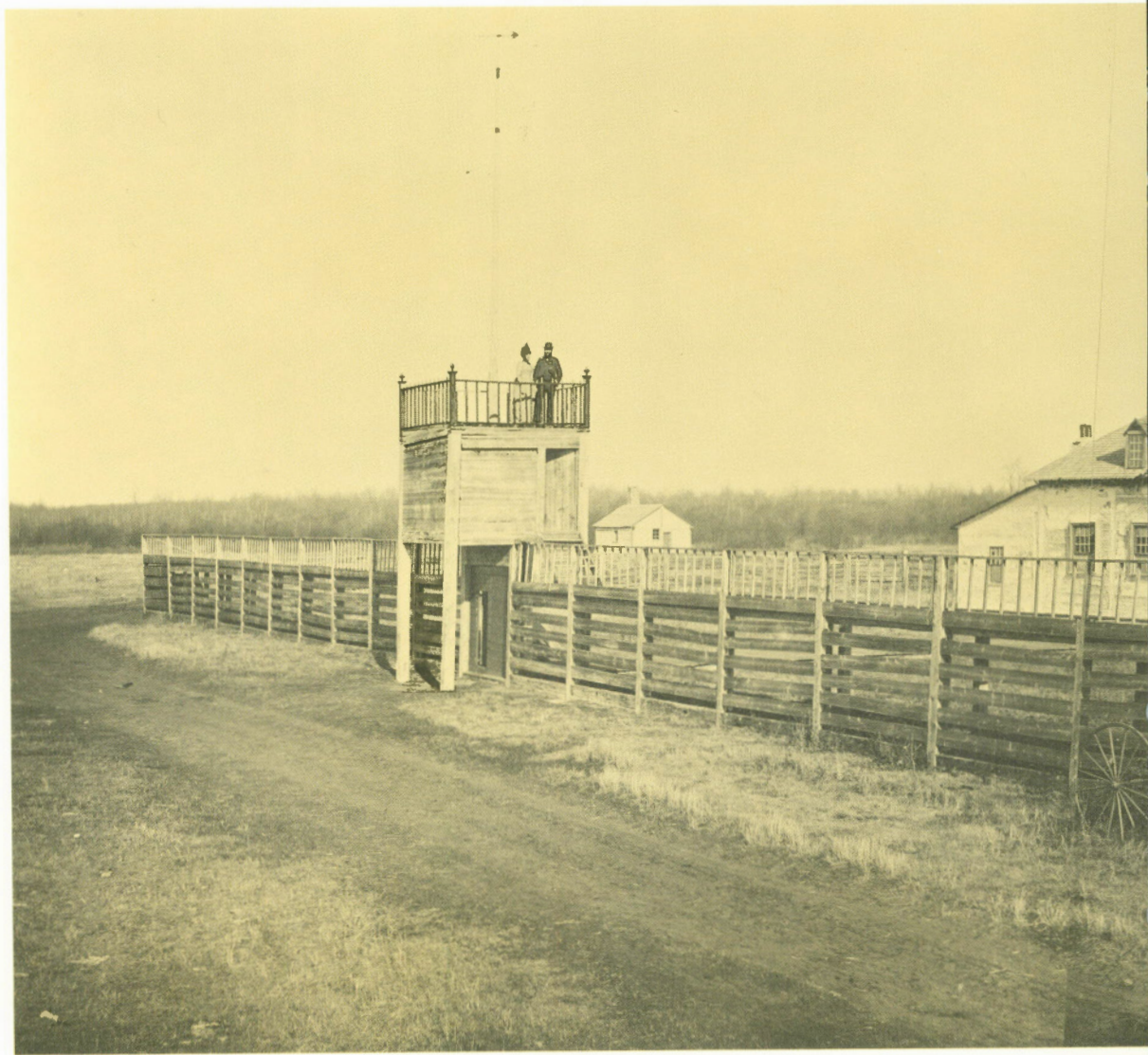
THE WATER FRONT



MAIN STREET



GOLD COMMISSIONER'S OFFICE





FORT PELLY, SASKATCHEWAN, 1887
Fort Pelly was built in 1824 by the Hudson's Bay Company on the north bank of the Assiniboine River not far from the headwaters of Swan River.

Eugene Rodolph Faribault 1860-1953

E. R. Faribault was born at L'Assomption, Quebec, in 1860 and graduated from L'Ecole Polytechnique in 1882. The following year he started a career with the Geological Survey of Canada that was to extend for over fifty years.

From the time of his appointment Faribault carried out a program of mapping of the southern half of Nova Scotia—that part underlain by the Meguma Series—from which almost all of that province's gold production has been recovered. He was first to realize the close association between most of the productive veins and anticlinal structures, which helped to lead prospectors to likely areas.

Faribault's photographs recall a page of Canada's mining history that is almost forgotten today. Though the presence of gold along the Atlantic seaboard of Nova Scotia may have been known to the first Acadian settlers it was the announcement of a find at Mooseland in 1861 that touched off a gold rush. Men flocked to the province and within a short time names such as Wagamatkook, Ecum Secum and Lake Catcha became familiar throughout Canada as important centres of gold production.





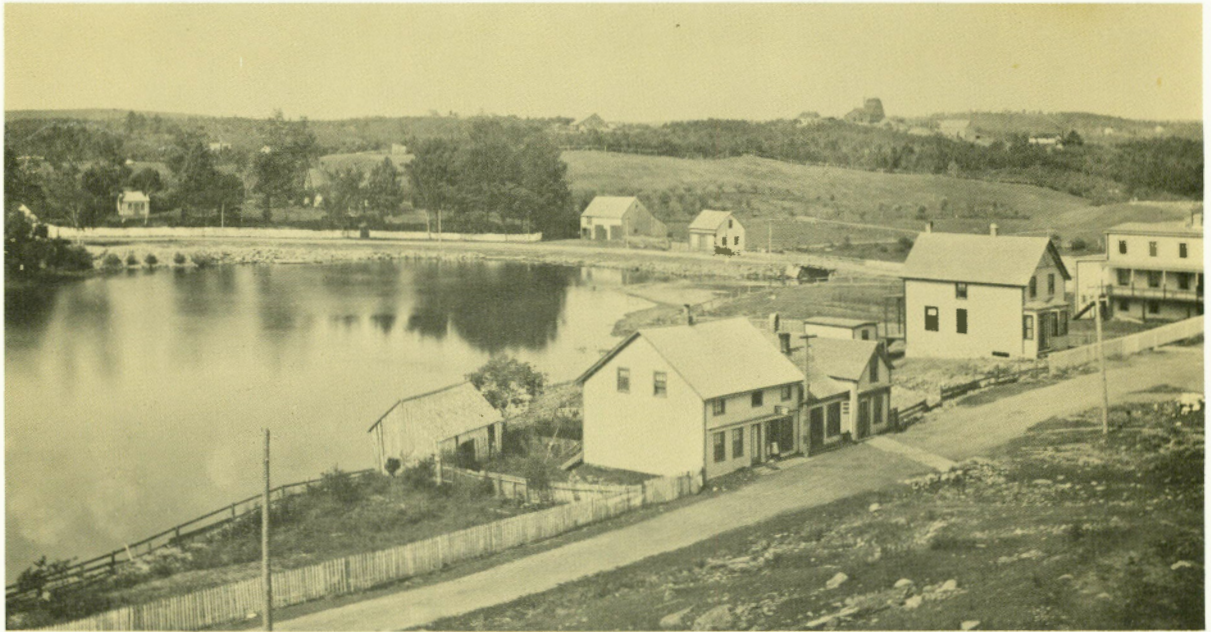
ISAAC'S HARBOUR, NOVA SCOTIA, 1891



MIC MAC INDIAN CAMP, NOVA SCOTIA, 1891



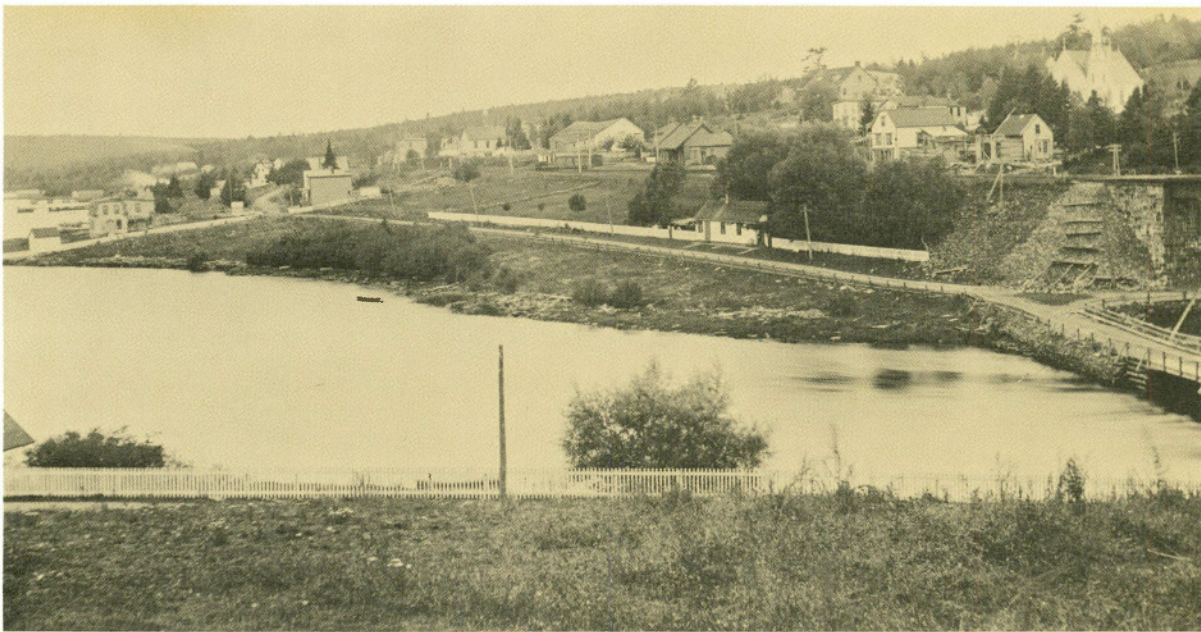
STAMP MILL, HALIFAX COUNTY, NOVA SCOTIA, 1891



WAVERLEY VILLAGE, NOVA SCOTIA, WITH THE LAKE VIEW
GOLD MINE IN THE BACKGROUND, 1891



MINER'S HOUSE AT MONTAGUE, NOVA SCOTIA, 1891



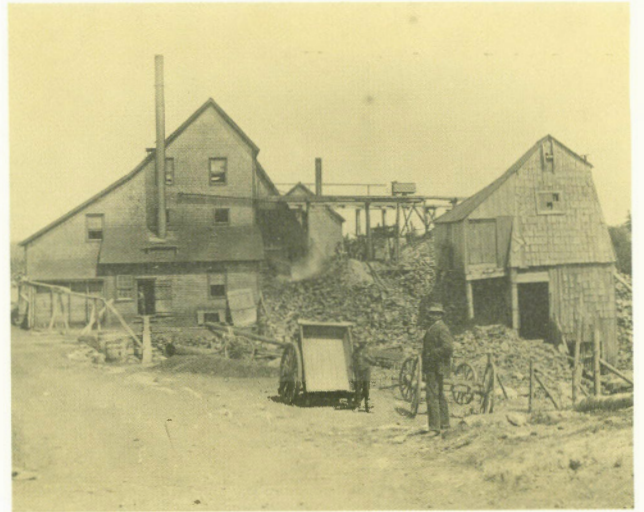
BEDFORD, HALIFAX COUNTY, NOVA SCOTIA, DURING THE 1890 s



CRUSHER, CONCENTRATOR, AND REMAINS OF STAMP MILL,
HALIFAX COUNTY, NOVA SCOTIA, 1891



SAWMILL, SHEET HARBOUR,
NOVA SCOTIA, 1893



ENGINE ROOM AND SHAFT HOUSE,
RICHARDSON GOLD MINING COMPANY,
ISAAC'S HARBOUR, NOVA SCOTIA, 1897



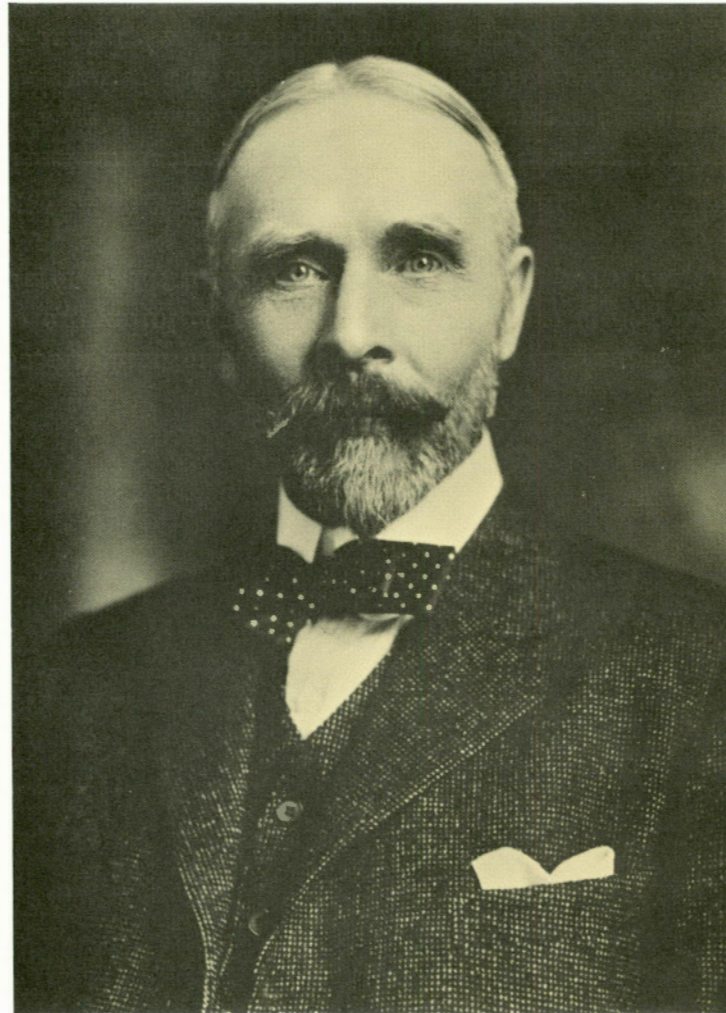
OPEN-CUT MINE, MONTREAL GOLD MINING COMPANY,
MOUNT UNIACKE, NOVA SCOTIA, 1896



THOMPSON AND QUIRK MINE, SOUTH UNIACKE, NOVA SCOTIA, 1896



UNDERGROUND MINERS, HALIFAX COUNTY, NOVA SCOTIA, 1897

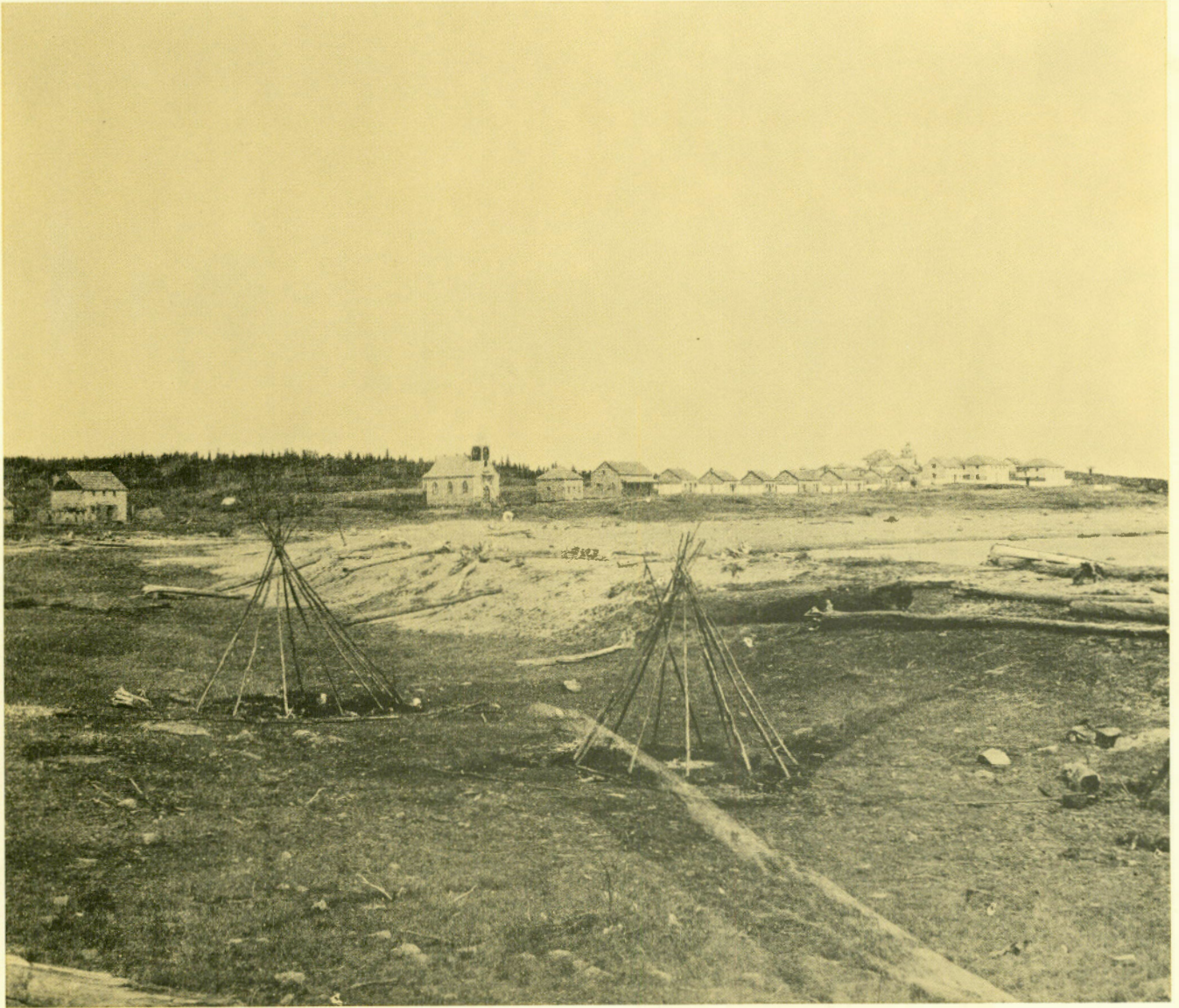


Richard George McConnell 1857-1942

R. G. McConnell was born in 1857 in Chatham, Quebec. In 1879 he graduated from McGill University and the following year started field work with the Geological Survey west of the St. Maurice River in Quebec.

From 1881 to 1914, when he was appointed Deputy Minister of Mines, he was engaged every summer in geological studies, mainly of a reconnaissance and exploratory nature, in Canada's West and Northwest. His work in the Rocky Mountains led to a better understanding of the structural complexity of the region and he was first to recognize and interpret the great thrust faults along the mountain front. His work took him to British Columbia for some twelve summers and among the important results of his ten summers in the Yukon may be mentioned his study of the Whitehorse copper belt and the Klondike placer gold field. The results of McConnell's studies were published on many geological maps and in some forty reports of the Geological Survey.



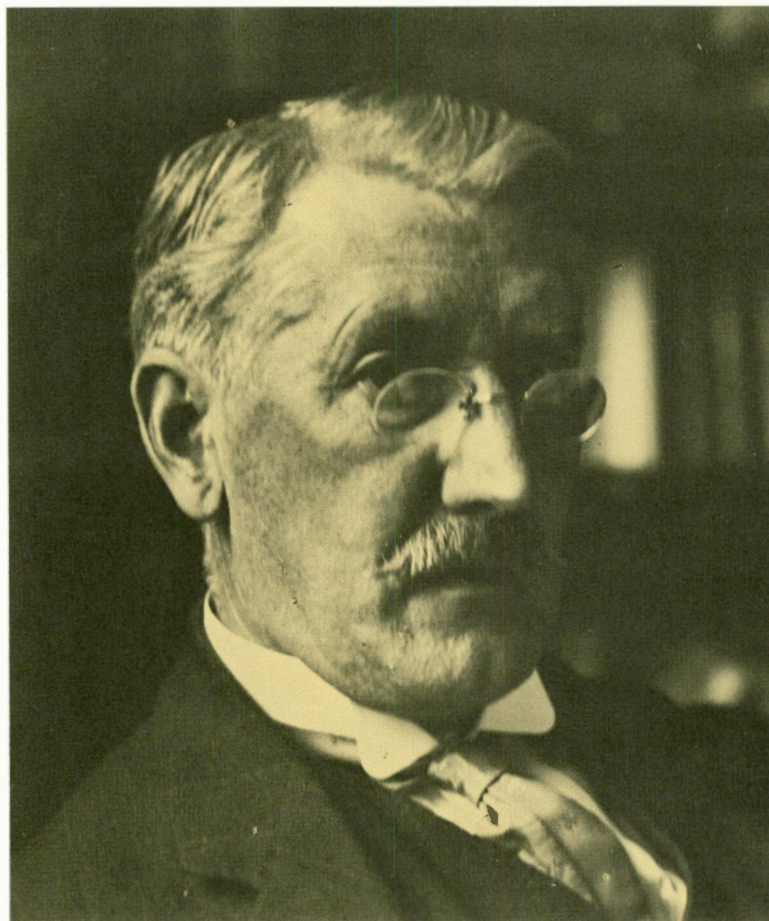


FORT CHIPEWYAN, ALBERTA, 1891

Fort Chipewyan was originally built by the North West Company on the south shore of the west end of Lake Athabasca. In 1804 it was moved to the north shore of the lake and has been in continuous operation since that time.



ROAD BETWEEN EDMONTON AND CALGARY, ALBERTA, 1889

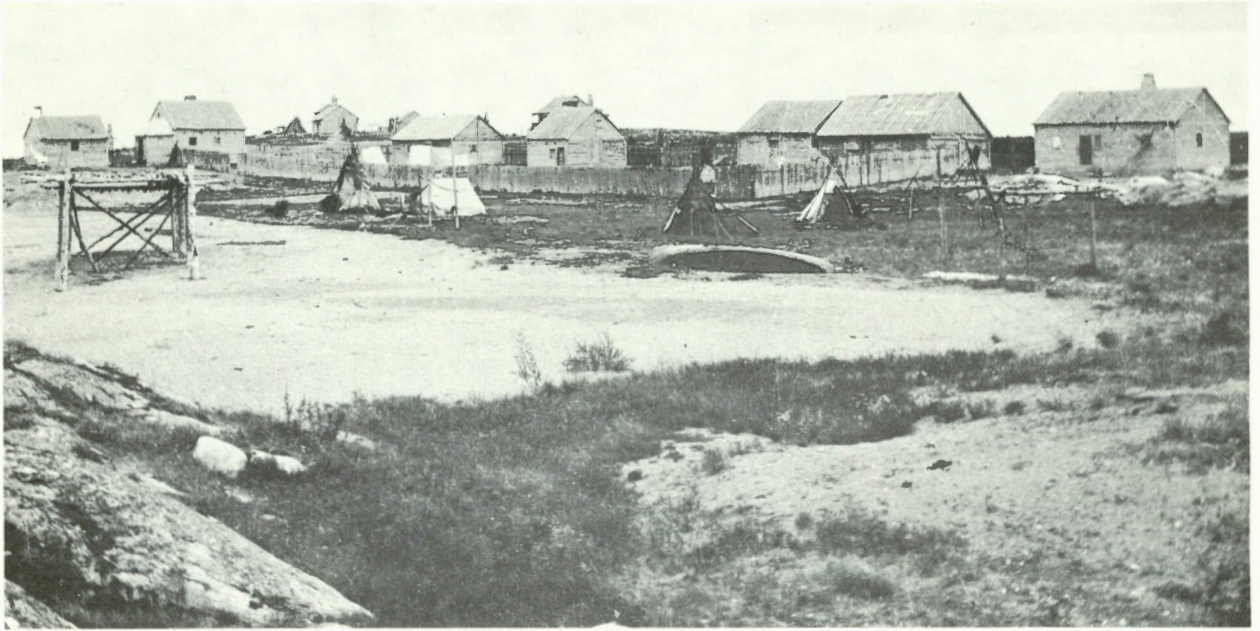


Donaldson Bogart Dowling 1859-1925



D. B. Dowling, born in 1859, started work with the Geological Survey a year after graduation from McGill University in 1883 and remained with this institution until the time of his death in 1925.

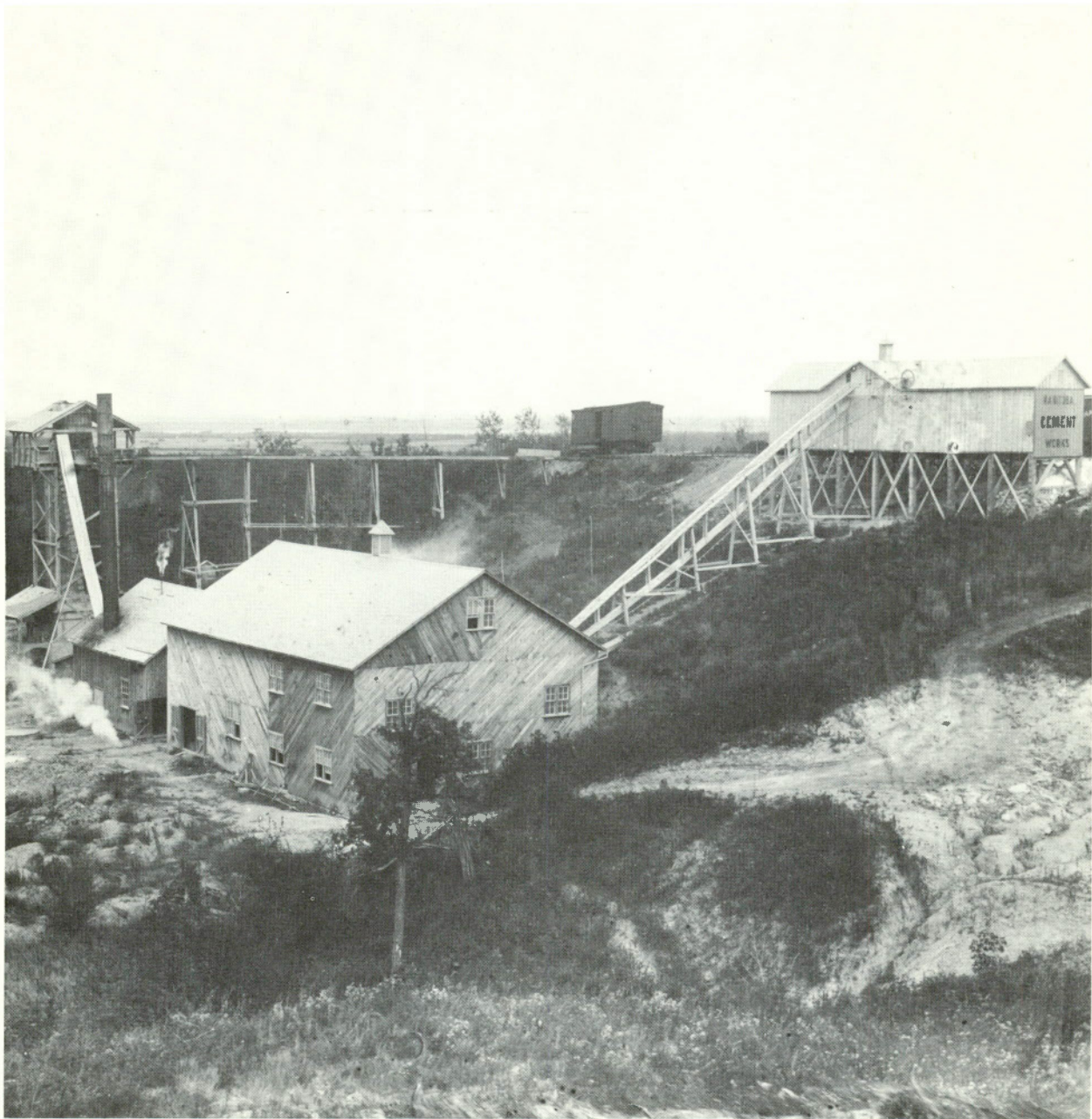
Dowling's early field work included areas in northern Manitoba and Ontario, but his name is now particularly associated with his studies of the oil, coal, natural gas and underground water of the southern Prairies. In view of recent developments in potash mining in Saskatchewan it is interesting to note that as early as 1917 he suggested the possibility that such deposits were present in rocks underlying the Province. Dowling's publications on coal in Canada and his knowledge of the subject placed him as the leading author of a four-volume work entitled *Coal Resources of the World*, compiled for, and issued by, the Twelfth International Geological Congress, which met in Canada in 1913.



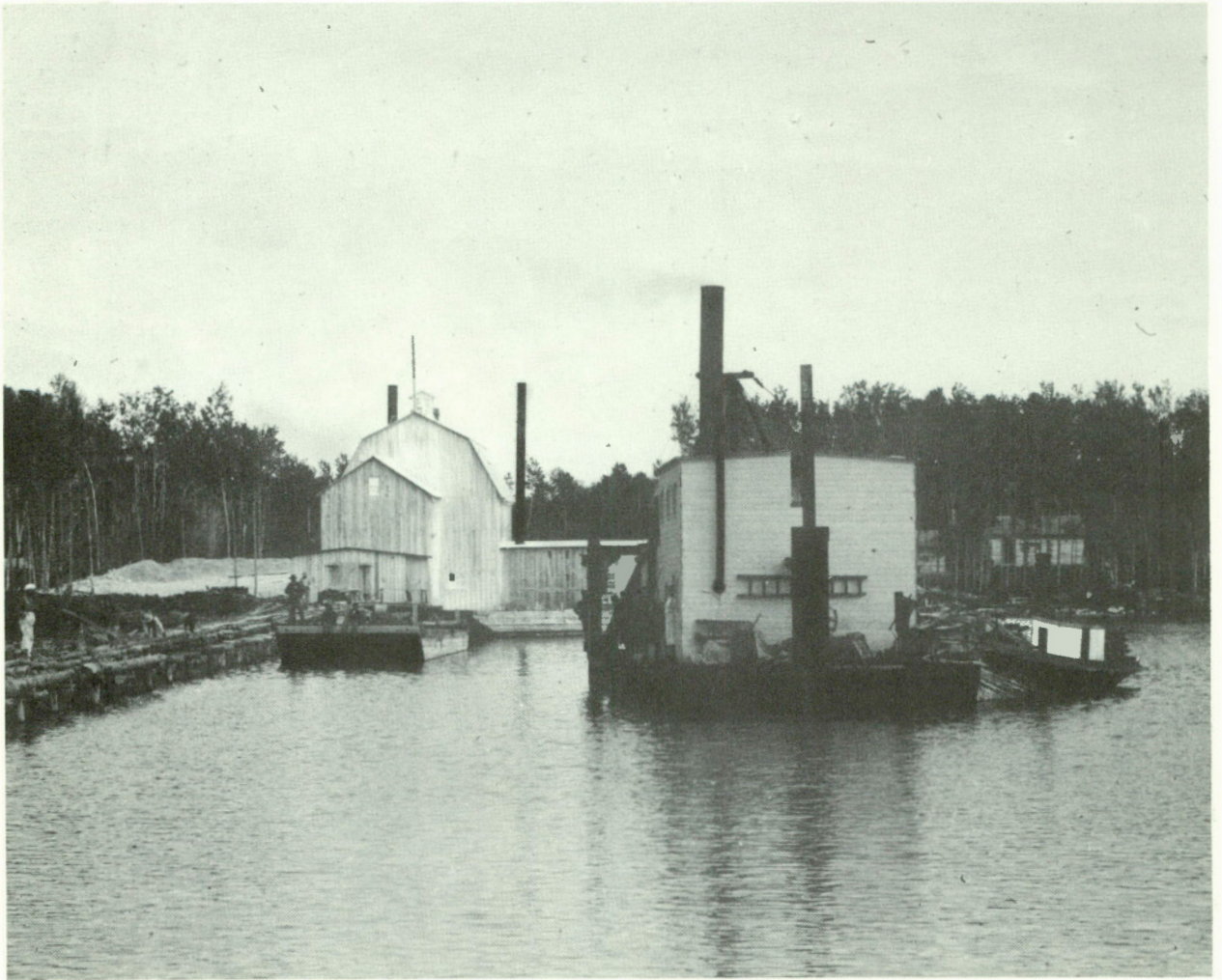
FOND DU LAC POST, LAKE ATHABASCA, SASKATCHEWAN, 1892



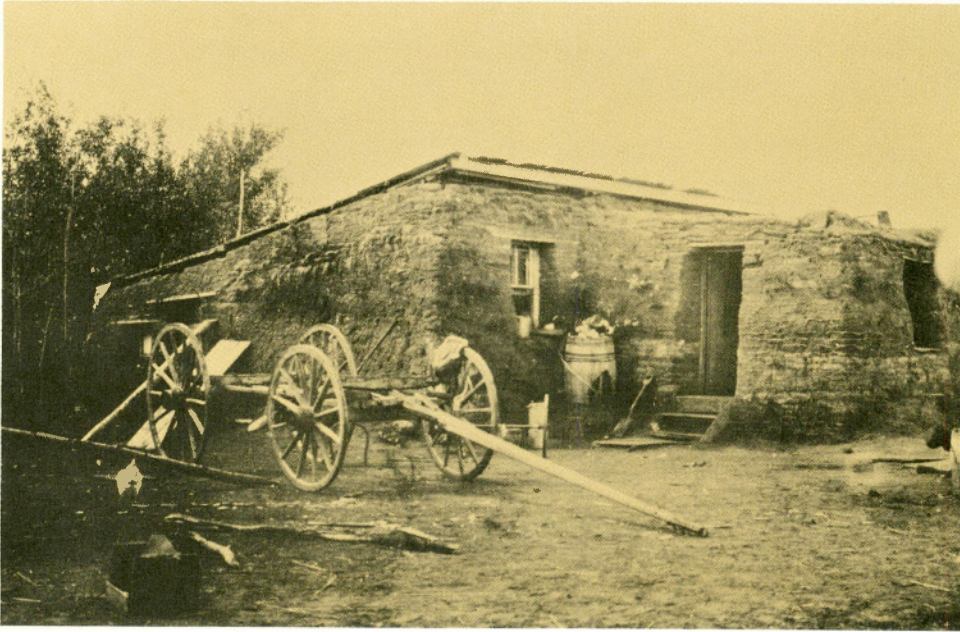
DU BROCHET POST, REINDEER LAKE, MANITOBA, 1892



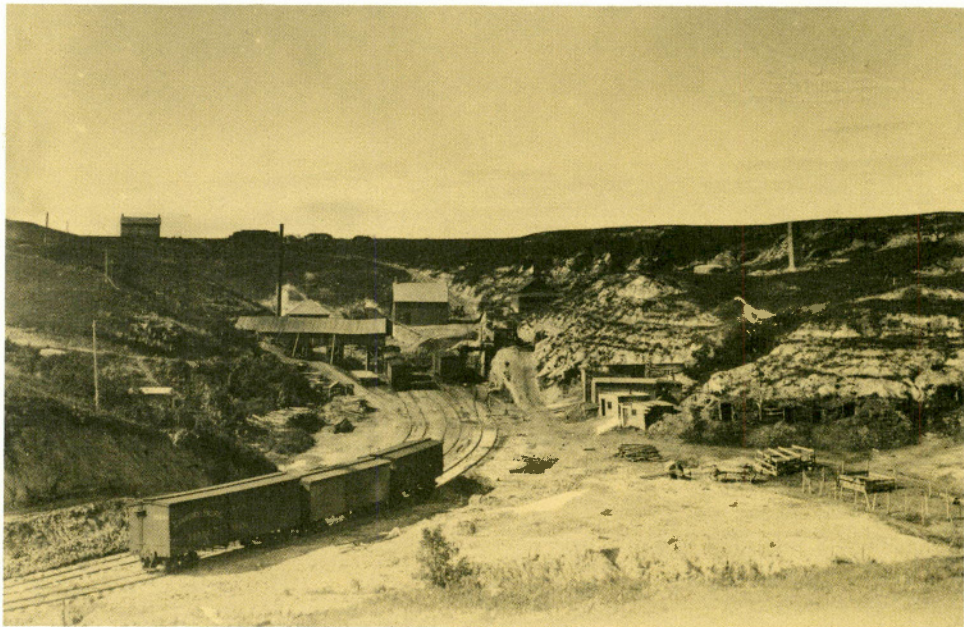
MANITOBA CEMENT PLANT, ARNOLD, MANITOBA, 1902



PLASTER MILL AT GYPSUMVILLE, MANITOBA, 1902



SOD HOUSE NEAR SASKATOON, SASKATCHEWAN, 1908

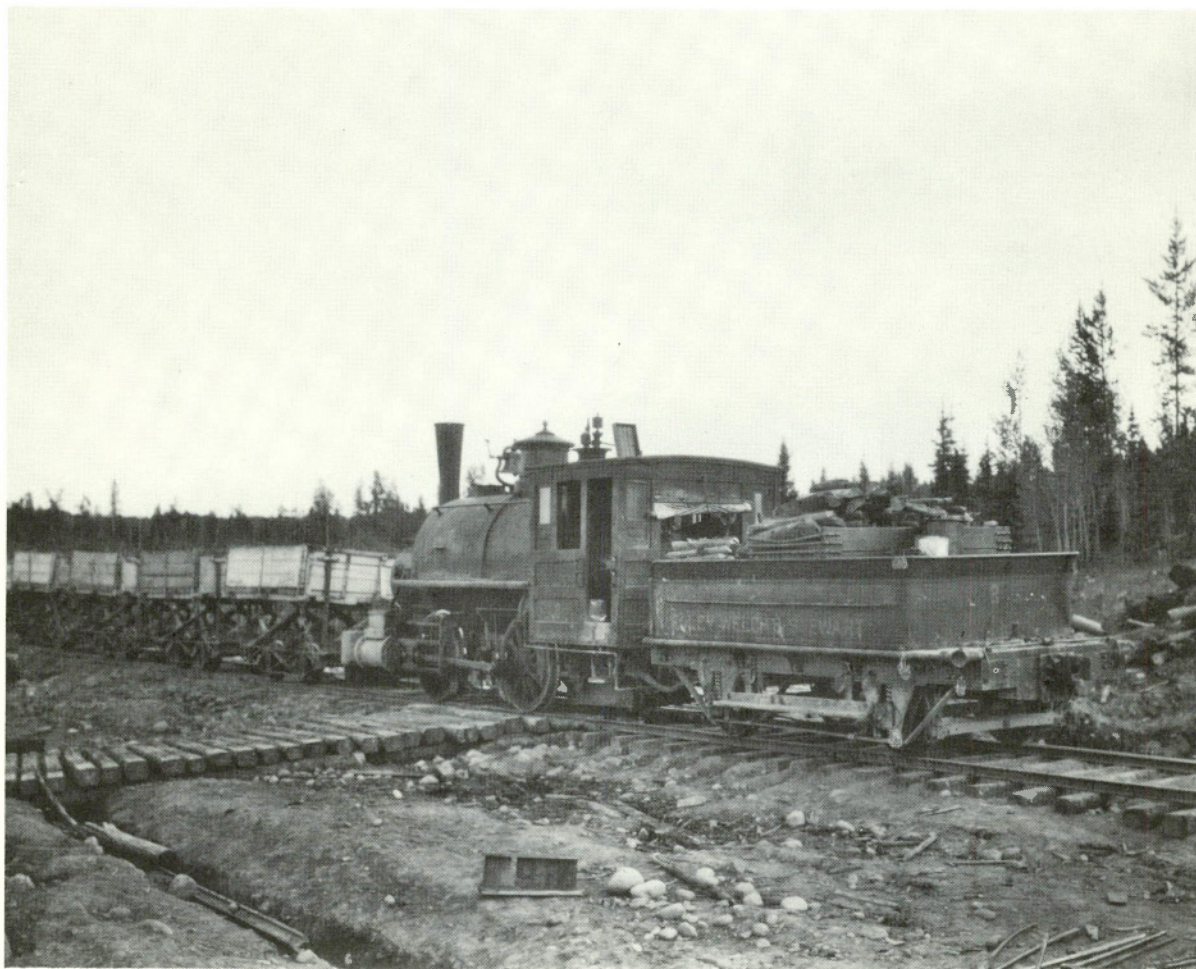


HASSARD AND NEW SOURIS COAL MINES, NEAR ROCHE PERCÉE,
SASKATCHEWAN, 1902


CONSTRUCTION WORK ON THE GRAND TRUNK PACIFIC
RAILWAY IN WESTERN ALBERTA, 1910




CONSTRUCTION WORK ON THE GRAND TRUNK PACIFIC
RAILWAY IN WESTERN ALBERTA, 1910



Horatio Nelson Topley



H. N. Topley was a professional photographer who, in association with his brothers, operated a photographic studio in Ottawa. From time to time Topley was engaged to accompany Geological Survey parties for photographic purposes. Using a large eleven-inch by fourteen-inch glass plate view camera, equipment far too bulky for use by a field geologist, he recorded many fine scenes of mining activity in Ontario and Quebec. The Topley studio was closed in 1924 and the bulk of the photographs, comprising over 150,000 items dating back to Confederation, was acquired by the Public Archives of Canada. However, the selection of photographs shown here is from the group taken for the Geological Survey, that now form a part of the photographic collection of this Branch.





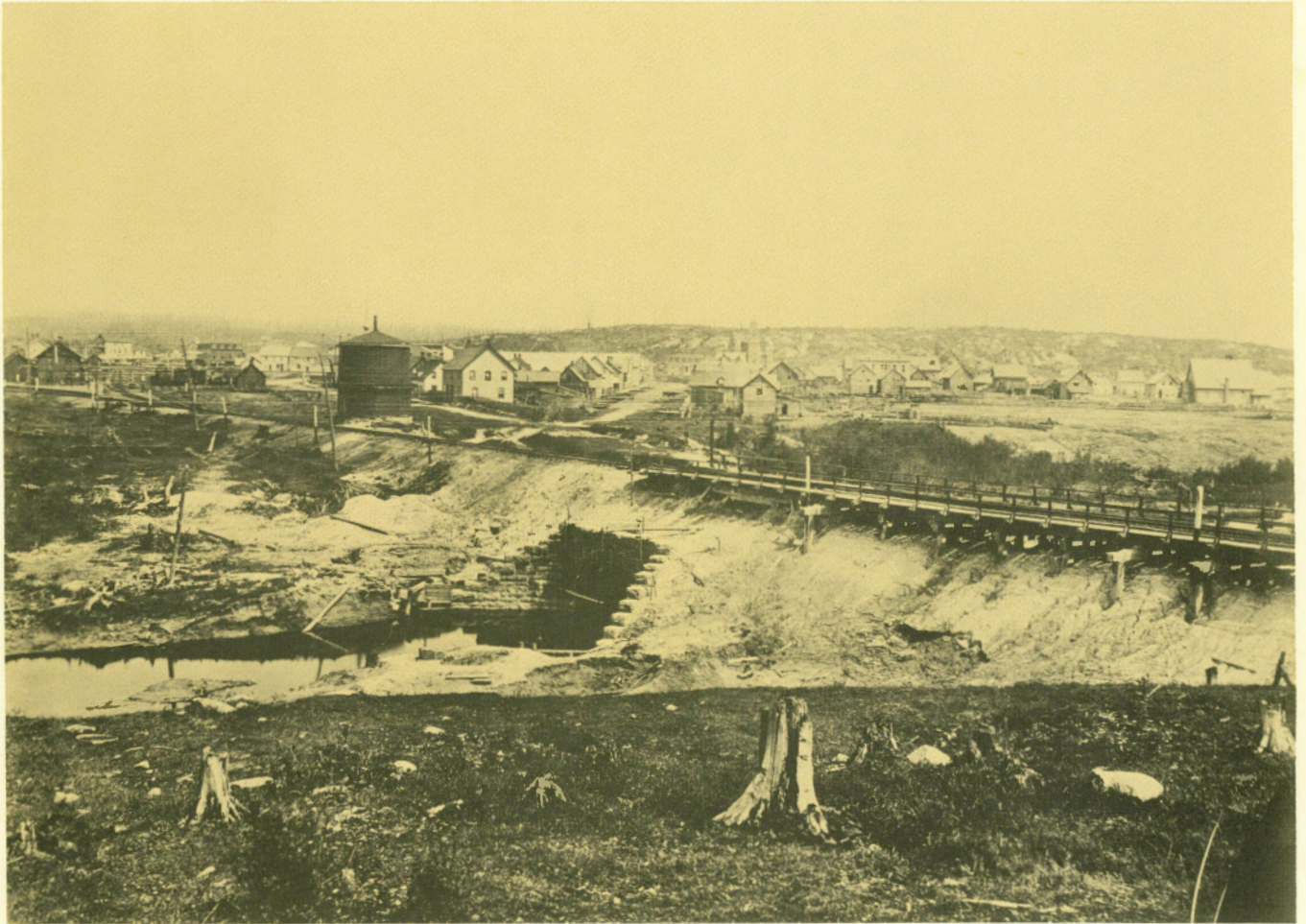
*Courtesy Public
Archives of Canada*



COPPER CLIFF MINE OF THE CANADIAN COPPER
COMPANY, COPPER CLIFF, ONTARIO, 1890



STEAM DRILLING AT SILVER LAKE MINE NEAR
KINGSTON, ONTARIO, 1890



SUDBURY, ONTARIO, 1890

ROAST YARDS, COPPER CLIFF MINE, SUDBURY
AREA, ONTARIO, 1890





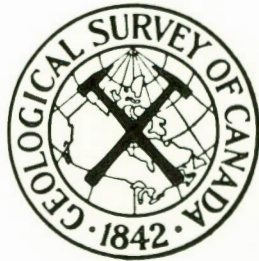


FALLS ON THE RIDEAU RIVER, OTTAWA, ONTARIO DURING 1890s

RESULTS OF THE HULL-OTTAWA FIRE, 1900







Department of Energy, Mines and Resources

CANADA

Designed by: COM/art Studio, Ottawa

Edited by: . . V. McBride, Public Relations and
Information Services.

Printed by: . Pierre Des Marais Inc/Montréal
for the Queen's Printer, Ottawa



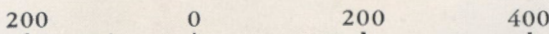
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CANADA

SCALE OF MILES



C. Fullerton

of Wales

Hudson Bay

Ontario

Quebec

Labrador

Newfoundland

P.E.I.

New Brunswick

Nova Scotia

Atlantic Ocean

Nachvak Fd.

George River
Fort Chimo

Rigolet

Fr. Naskaupi

Grand Falls

Topsail

Fort Albany
Eastmain
Rupert House
Moose Factory

Lake Mistassini
Mistassini Post
Betsiamites

Anse de l'Etang
Rivière au Renard

Sie Anne des Monts

Isaac's Harbour
Sheet Harbour
Bedford

Michipicoten
Michipicoten I.

Sudbury
Killarney

Ottawa

Batiscan

W. Wesley

