

# When Signals Came to DAWSON CITY

WO1 D. PATRICK, RC Signals

*T*HE VAST Northwest Territories & Yukon Radio System's humble beginning occurred nearly 28 years ago with the opening of communications between Dawson City, bustling capital of the Yukon Territory, and Mayo Landing, YT.

Early in 1923 plans were laid in Ottawa for the installation of RC Signals radio stations at the two northern communities to provide a means of communication between the two isolated mining centres. Colonel E. Forde, DSO, VD, then Director of Signals, Major W. Arthur Steele, Major H. F. Webber and Lt. (now Brigadier) H. E. Taber laid the foundation for the present far-flung NWT & Y Radio System. Their plans seem modest indeed beside the present day scope of the system, but they could not foresee the tremendous expansion that was in the cards for Canada's great northwest.

Maj. Steele and Lt. Taber were chosen to supervise personally the installation and initial operation of the two stations. They gathered in Ottawa with the men selected for posting to the new stations, early in August for extensive briefing and outfitting, prior to departure for the then unknown north. Sgt. Frank Heath, Cpl. Cec. May and Sigm. Charlie Routh were

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posted to Dawson, while the first crew for Mayo consisted of Sgt. (now Colonel and Director of Signals) W. W. Lockhart, Sigm. Art Lamb, and Sigm. Bill Whelan. The former group reached their destination on September 10th, accompanied by Maj. Steele and Lt. Taber.

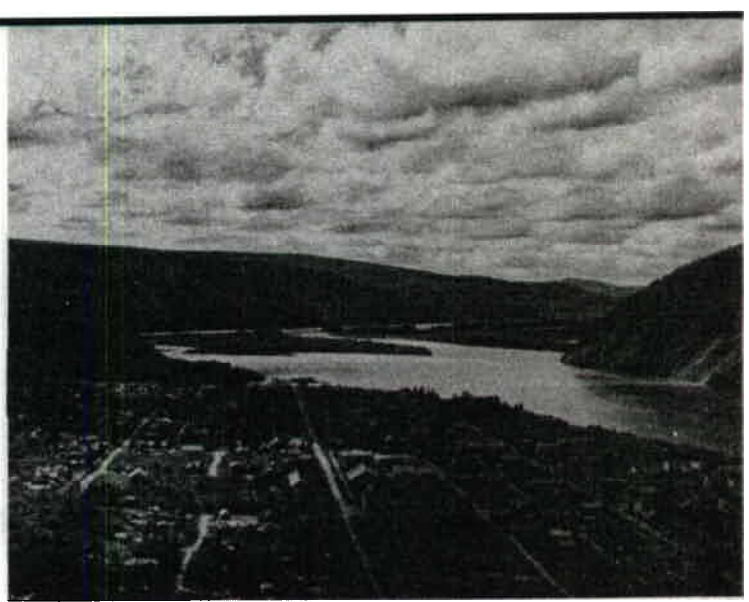
A few days after their arrival the party obtained a six-roomed log building in which to establish their station. Situated in the Police Reserve some distance from the centre of town, the cabin was a relic of the days of '98. It was originally built by a military organization known as the "Yukon Field Force" which kept law and order in the Klondike gold fields before the Royal Northwest Mounted Police took over this duty.

The radio equipment comprised one 500 watt transmitter and one 4-tube receiver, both made by Signals Inspection and Test Department (predecessor of CSRDE) at Ottawa. Power was supplied by a motor-generator set capable of operating either from a 110-volt battery bank or a 3KW Delco plant, and supplied 2000 volts, DC. For a long wave transmitting aerial, a 300-foot two-wire flat top "T" was supported by two 80-foot tubular steel masts. The receiving aerial was a 150-foot length of wire strung between one of these masts and the end of the building. The unique ground system was a copper sheet some 20 feet long and 30 inches wide, buried to a depth of four feet directly under the centre of the flat top aerial.

Although much forethought must have gone into the planning for the original station with regard to the supply of technical equipment, rations, northern clothing and medical stores, the provision of office equipment was apparently overlooked. As a result, desks, chairs, typewriters and other items had to be "procured locally" -- the first recorded case of Signals scrounging in the north.

Another unforeseen difficulty arose with the discovery that Army wireless procedure and accounting methods could not be used in conjunction with the procedures of commercial telegraph companies. A hasty revision of the booking and accounting system was called for, and through the combined efforts of Mr. George MacLachlan, manager of the local Government Telegraph Office, Maj. Steele and Lt. Taber, the present bookkeeping system was devised.

In establishing the radio station, R. C. Signals personnel rapidly learned about the many quirks associated with their equipment. Sigm. Routh discovered one the hard way, for example, when he happened to touch the metal part of the sending key, which at that time was in the high tension or plate circuit, and recei-



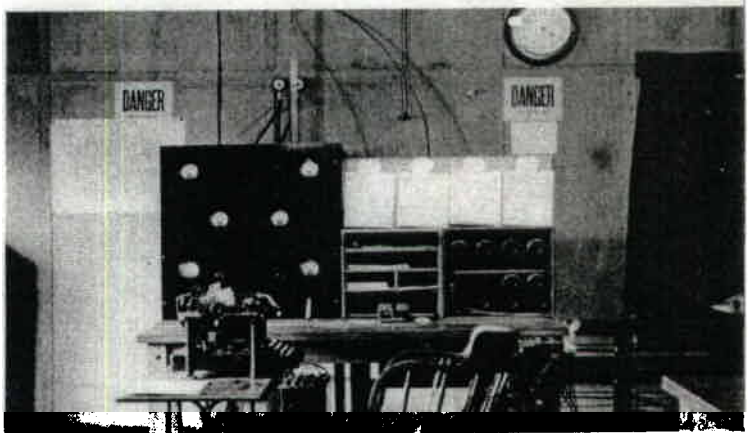
Picturesquely situated in the rugged valley of the Yukon River, Dawson City played host to one of the first two RC Signals stations in the north, in 1923. NFB



The Dawson station occupied this building from 1923 until late in 1945.

*National Defence Photo*

Office furniture for the original station was scrounged locally, the first messages in 1923 being typewritten on top of an old sewing machine stand.





The deceptively peaceful Yukon River three times flooded Dawson City, forcing the radio station to move its equipment to emergency second-storey locations.

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In the 1925 flood the station's wood pile floated quietly away.

*National Defence Photo*

The first air express service in the Yukon, connecting Dawson, Whitehorse and Mayo Landing, was launched in 1927, with this unique aircraft.

*National Defence Photo*



ved a nice 2000-volt jolt.

The station officially opened for business on the 20th of October. Present at the opening ceremony were Gold Commissioner and Governor of the Yukon George P. MacKenzie, former Yukon MP Dr. Alfred Thompson, Manager George Coffey of the Yukon Gold Company, Manager Warren McFarland of the Northwest Gold Corporation, General Agent G. B. Edwards of the White Pass and Yukon Transportation Company and Arthur Devers of the Dawson News. Enthusiastic messages of congratulation were exchanged with the delegation of notables at Mayo Landing.

During the first year's operation, traffic was not very heavy and personnel had an opportunity to become more familiar with their various duties. In addition to learning the new commercial operating procedure and accounting system, they had to cultivate an acquaintance with stores accounting, medical supplies and stationery. As supplies could be shipped only during the summer months, an annual estimate of requirements had to be prepared and sent to Ottawa before the 31st of December in order to obtain shipment the following year.

That winter also taught the original staff how to start a Delco engine in an unheated room at 40 below. Disregarding their manual of instructions, they found that by pre-heating the crankcase and cylinder head with a blow-torch, having the oil hot, the spark plug very hot and the engine primed with warm gasoline, they could get it running and warmed up before switching to its regular kerosene fuel.

Disruption of radio communication in those days was generally attributed to equipment failure of one sort or another. Whenever the receiver failed to bring in signals, the usual practice was to replace all tubes, or spend hours looking for a short circuit. As time passed, operators became aware of the vagaries of atmospheric conditions and soon learned to distinguish between static and local interference.

The summer of 1924 introduced station personnel to continuous daylight and with it every known variety of radio-inductive interference, plus a fresh tropical brand of static. To take advantage of the infrequent quiet spells, operators were obliged to work at odd hours of the day and night. By the fall, Dawson was relaying most of its traffic outside via Mayo, the third new station at Fort Simpson, and Edmonton. Cpl. May was posted to Simpson that summer, being replaced by Cpl. Gordon Armstrong. In July, 1924, Dawson made contact with the US

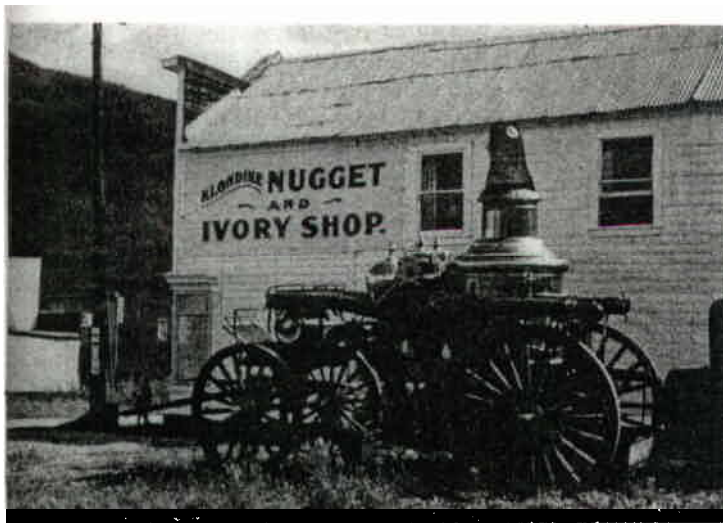
Army Signals station WUM at Circle City, Alaska, and regular schedules were maintained for a number of years.

Material for two 100-foot lattice steel masts arrived by the last boat on October 8th, and with the help of local civilian labour, they were assembled and erected by November 11th. A four-wire flat top "T" was erected for long wave transmission.

Following the break-up of ice in the Yukon River in May, 1925, a serious flood inundated most of Dawson and vicinity. At the height of the deluge there was about a foot of water in the station operating room and nearly two feet surrounded the power plant. As the danger became apparent, the Delco plant, the M&G Set, battery bank, transmitter and receiver were all tediously dismantled and installed temporarily on the second floor of the old courthouse building. The move, while strenuous and somewhat hectic, saved all vital gear and the station was operating again within eight hours.

During the flood most of the station's wood pile joined the procession of boxes, old cabins, oil drums, dog kennels, trees and ice cakes which sailed majestically past for several hours. The disagreeable task of shovelling out the debris and sediment preceded the return of equipment to the station building.

Also during this summer Sigm. Routh was replaced by Sigm. Ted Glynn, and Sgt.



What modern fire truck packs the thrill provided by this engine of gleaming brass and red paint, belching clouds of black smoke as it roars down the cobblestones behind a team of fine black horses?

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Dawson in 1951 still resembles the old west of pioneer days, architecturally, but even modern aircraft fail to attract a second glance. NFB

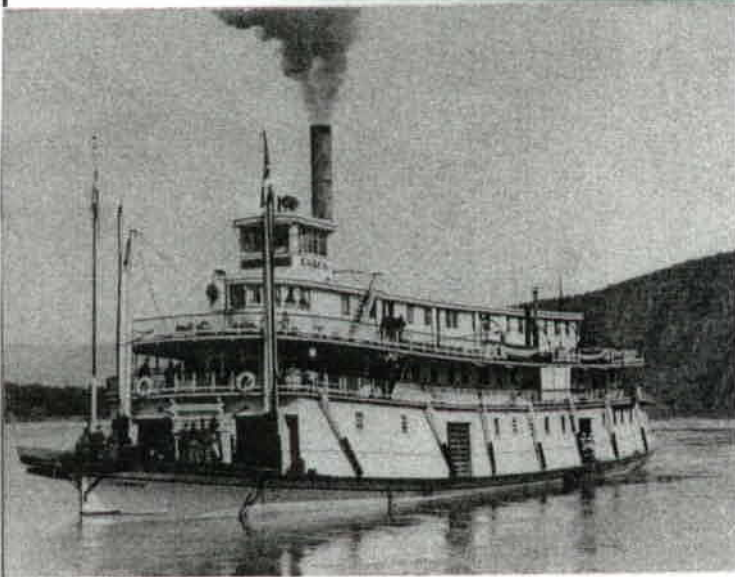
Heath went "outside" to return to Dawson with a bride, early in September.

A carefully designed counterpoise system was installed during 1925, and proved so effective that it was adopted as a standard system for all future stations.

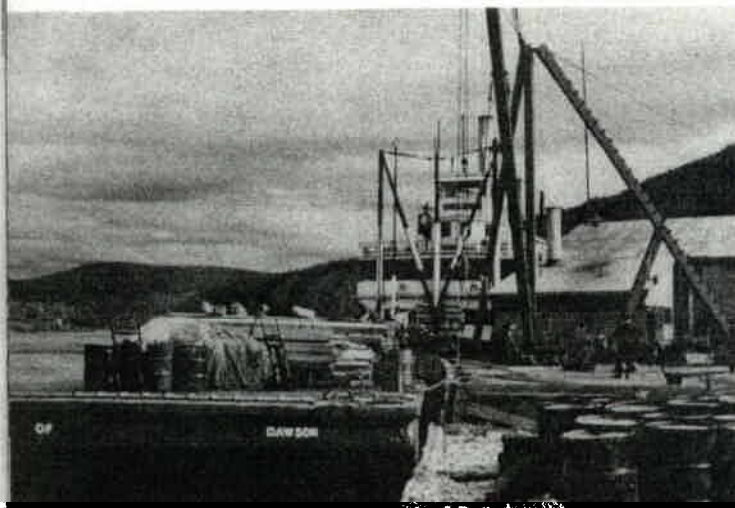
In June, 1926, the station bid goodbye to Lt. Taber and welcomed Lt. Cliff Underwood as officer in charge. That month Ted Glynn was replaced by Cpl. Harry Ewing, who arrived in  
*Continued on page 14*

Last fall Dawson voted overwhelmingly in favour of the sale of liquor in bars. This pioneer-style hotel spells its war-inspired name in both English and American. NFB





This stern-wheeler plies not the Mississippi but the Yukon River, between Dawson and Whitehorse, during summer months. NFB



Winter supplies arrive by boat during the few short months that the Yukon River is open to navigation. NFB

In winter months the old reliable dog team replaces the stern-wheeler for river travel. NFB

time to help with the newly assumed meteorological duties, which were taken over from a local resident. At that time weather reports were filed at 4 a. m. and 4 p. m.

The first aircraft to make its appearance in Dawson arrived from Fairbanks, Alaska, in the summer of 1926, on a search for a missing man. It was a big event, attracting hundreds for their first view of a plane. The following year a group of enterprising Yukoners organized the first "Air Express and Mail Service", connecting Whitehorse, Mayo and Dawson. Although the advantages of air transport were quickly appreciated and business was brisk, the lack of flying aids, plus the normal hazards of weather and primitive equipment, discouraged the enterprise and it was soon abandoned.

Early in August, 1928, Frank Heath, by now a QMS, was posted to Ottawa, and Cec May came back a CSM to take his place. At that time Lt. Underwood also relinquished his Yukon command, the last commissioned officer to be in charge of the Dawson and Mayo stations.

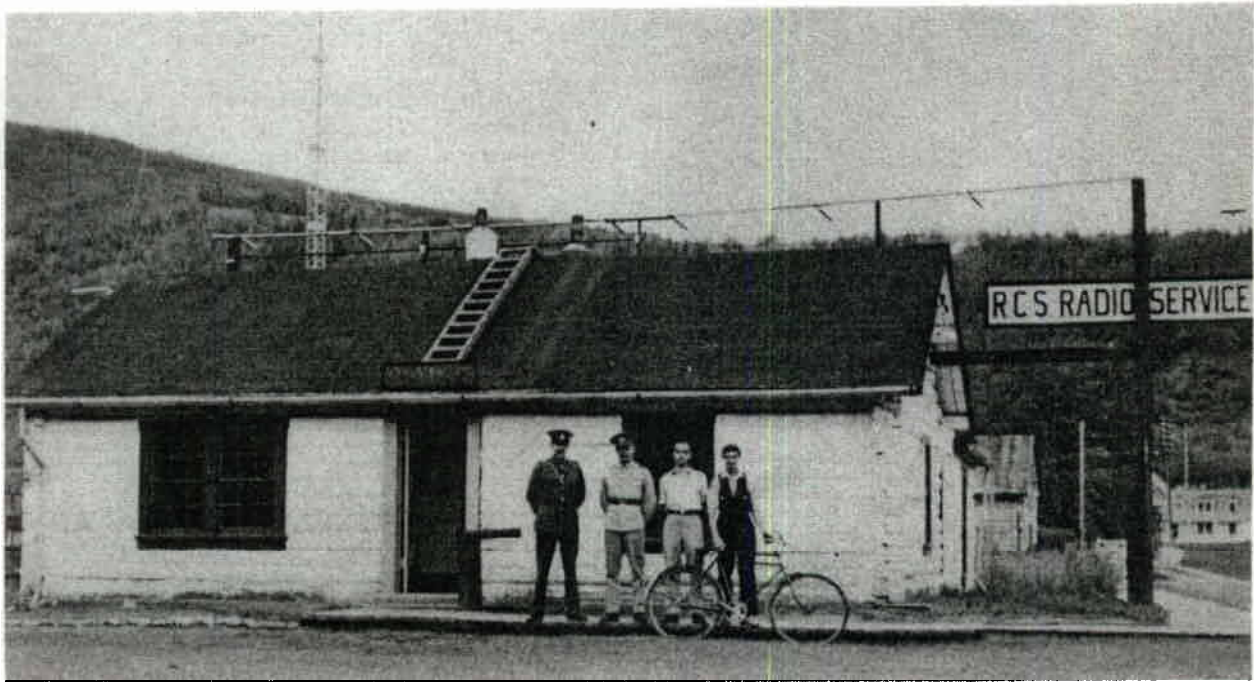
CSM May remained in charge until 1931 when he handed over to CSM Armstrong who brought with him S Sgt (later Capt.) Harry Yelland. Yelland left to take over the Mayo station the following year, his replacement being Sgt. Newt Plunkett, who became a major in the Second World War.

Short wave equipment made its debut at Dawson in the fall of 1931, in the form of a M7X short wave transmitter and a receiver designed by the SITD. With this equipment new transmitting and receiving aeriels were erected.

After a five year absence, Frank Heath returned to Dawson a WO1 in 1933, to once more take charge of the station, relieving CSM Armstrong.

In the summer of 1934 a small "bush" station was opened at Burwash Landing by Pan American Airlines, and Sigmn. Red Waddell was posted there to operate it, being replaced by a locally hired civilian messenger-janitor-clerk. This left WO1 Heath and Sgt. Plunkett to handle the operation of the station, no small chore with weather reports required at 3 a. m., 9 a. m. and 3 p. m., plus regular traffic.

A highlight of 1935 was the pensioning off of the Delco plant, M&G Set and battery bank in favour of city power, converted to DC by a Marconi rectifier unit. In 1936 the Yukon River once more threatened to flood the radio station but the water receded before any serious damage was done, although station personnel had to travel to and from work by boat. Later that year Sgt. Plunkett was replaced by L. opl Paul Reid.



At the outbreak of the Second World War, the Dawson staff comprised WO1 Frank Heath, Cpl. (now WOII) Paul Reid, Cpl. (now Capt.) J. E. Coderre, and a civilian messenger. National Defence Photo

Transmitting and receiving equipment underwent a radical change in 1937. The old SITD 500-watt long wave transmitter was replaced by a 1-KW Marconi, while a Marconi crystal-controlled phone and CW PT 200 transmitter took over for the much used and much abused M7X. The latter, being the first transmitter at Dawson with a radiophone, was a great asset to the station which could now render ground/air service. By this time the White Pass and Yukon route had introduced summer and winter air transportation to the district. Three planes including a Ford tri-motor, were in use as early as 1935 but the service was rather erratic until the planes were radio equipped. Contact by the radio station with planes en route to Dawson, providing weather and other information, proved invaluable to local air transport.

Work with aircraft increased the volume of business, and to alleviate the shortage of operators, Cpl. (now Capt.) J. E. Coderre arrived in 1938. However, with the declaration of war in September, 1939, he was posted back to Vimy Barracks, once again leaving Frank Heath, L cpl Reid, and the messenger to operate the station. The staff was not increased until 1943 when Sigm. Bill Hunka came from Edmonton.

In May, 1944, Dawson experienced its third and by far its worst flood. The water rose in the station to a depth of 16 inches and all eq-

uipment had to be hastily dismantled and moved out of the flooded area by boat. Schedules were maintained from a private home, where the transmitter and receiver were set up. To assist in restoring the equipment after the waters had receded, Capt. Cec. May flew in from Edmonton with emergency equipment for his old station, accompanied by two technicians.

Not only did 1945 see the end of the Second World War, it also saw the end of the old log cabin as the home of the Dawson radio station. By the end of the year, Signals were established in a brand new building with every modern convenience, plus a new combined transmitter-receiver remote site. *Continued on page 16*

Foundations for a new radio station building were laid in July, 1945, in the heart of downtown Dawson. The Yukonia Hotel and the M&N Saloon which formerly stood here, were burned to the ground in 1940. National Defence Photo





Under a deep blanket of snow, Dawson's new radio station opened its doors for business on December 12th, 1945. WO1 Frank Heath (left) spent 19 of his 30 army years in Dawson, and retired in 1947.

*National Defence Photo*



The transmitting and receiving station was completed in 1946, a mile-and-a-half east of town.

*National Defence Photo*

Shortage of staff left little time for WO1 Heath, Sgt. Black and Sigm. Bushell to take time out for morning coffee, but they occasionally found their way to the Arcade for that purpose.

*National Defence Photo*



The new operating centre was built on the corner of King and Front Streets, in Dawson's downtown business section, and the transmitter-receiver site is a mile-and-a-half east of town. Construction began on the 4th of July and finished by December, through the combined efforts of RCE, RCAF and RC Signals. During the following summer two 150-foot latticed steel masts were put up for the long wave aerial, and in August the NWT & Y Radio System was favoured with a return visit by Lt-Col. W. W. Lockhart, who came with the then Director of Signals, Col. A. E. Wrinch and Capt. (now Maj.) F. J. McCauley. The following winter is also remembered in Dawson since it proved to be the coldest ever recorded in the Yukon, temperatures as low as -73 being experienced.

On the night of February 15th, 1947, a report was received by amateur radio channels that the Mayo station had burned to the ground. To put her sister station back on the air, Dawson shipped the old SITD long wave transmitter to Mayo the next day.

On the 24th of May, 1947, Frank Heath handed over the station to WOII Paul Reid, after 30 years in the Canadian Army -- 19 of them spent in Dawson, and headed for retirement. 1947 also saw an increase in station traffic brought about by the fact that several outlying mining camps had obtained radiolicenss and began operating into Dawson three times daily, and three of the British Yukon Navigation Company river boats also became radio-equipped.

Early in 1948 plans were made by Signals to install a civilian broadcasting station in Dawson, to be operated by the community. Local citizens were very pleased with the idea, since the district had never enjoyed reliable broadcast reception. A town radio committee was formed, and CFYT commenced broadcasting on April 1st.

The Signals radio station once again changed hands in 1948, when WOII Reid relinquished command to WOIPatrick, who arrived from Ottawa in July. On December 31st, the last regular traffic schedule with WXP, Fairbanks, Alaska, was made, after which the task was taken over by the Northwest (telephone) Communication System from Whitehorse.

When Newfoundland became Canada's tenth province, the CBC arranged a national broadcast. In order that the Yukon might join the other provinces in the programme, Signals arranged to broadcast greetings from Commissioner J. E. Gibben, KC, on behalf of the Yu-



Common enough in Dawson to-day, the first visit from an aircraft in 1926 attracted hundreds of curious onlookers. NFB

kon Territory.

Signals' first permanent married quarters in Dawson were completed in 1949. The finished building met with the approval of Brig. A. B. Connelly, officer commanding the Northwest Highway System, who carried out a thorough inspection in December.

In their 28-year stay, R. C. Signals in Dawson have won an important place in the business and social life of the busy community. In developing the station from its primitive battery-operated equipment in the old log cabin to the present modern installation, Signals have kept pace with the rapid expansion of Canada's northland.



Since 1947, placer gold mining camps in the Dawson area have communicated with the Yukon capital by radio schedules with the RC Signals station.

*National Defence Photo*

