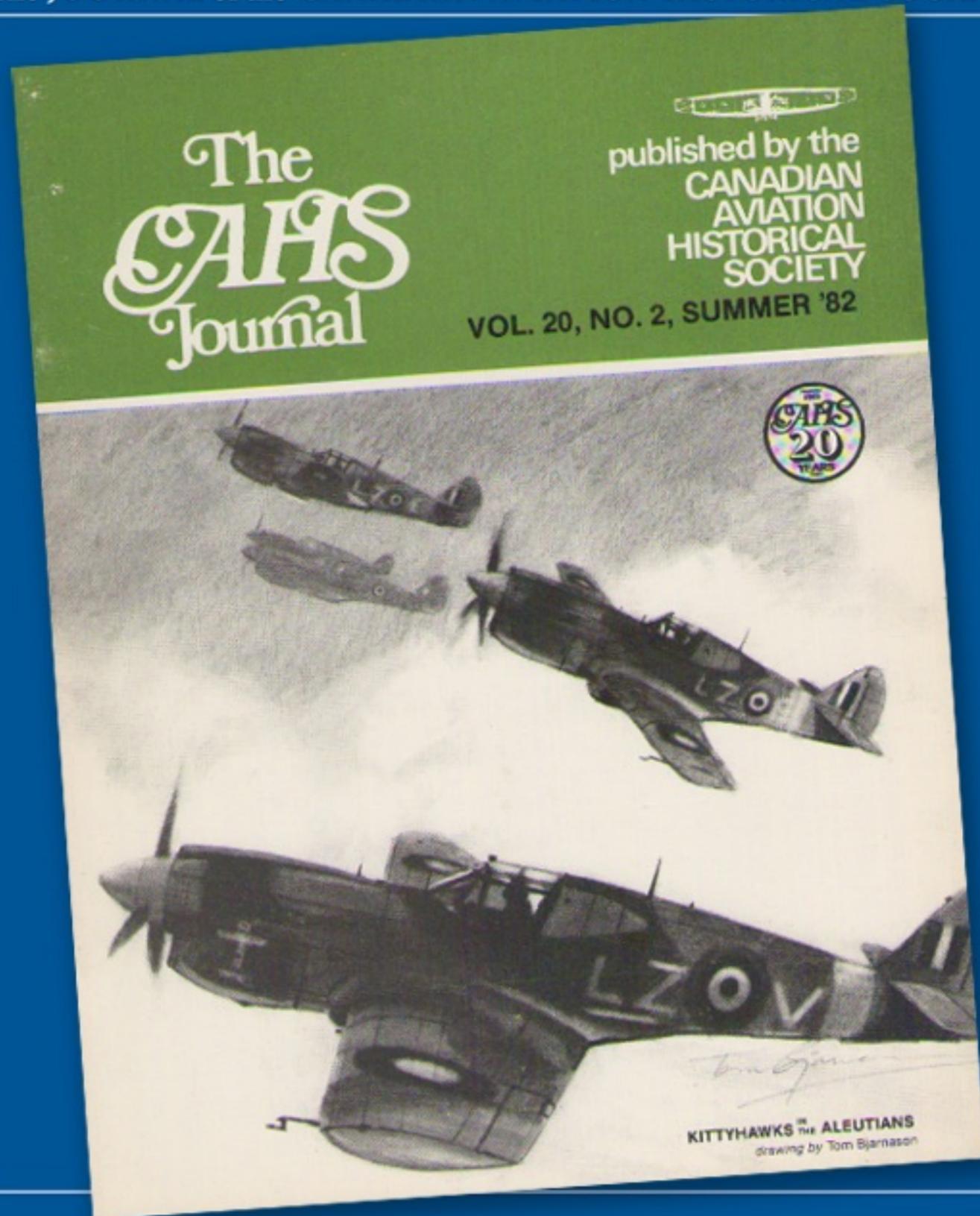


CAHS JOURNAL

The JOURNAL of the CANADIAN AVIATION HISTORICAL SOCIETY



EARLY FLYING ALONG THE MACKENZIE

FOREWORD

Very possibly more has been written on the attempt by the Imperial Oil Company to establish an air service in 1921 along the Mackenzie River than any other event in Canadian aviation history. So one may ask, why write again about it? There are at least two reasons why the story should be retold. First, most accounts tend to concentrate on the extraordinary feat of the manufacture of the propellers at Fort Simpson while devoting little space to the rest of Imperial Oil's efforts, let alone mentioning the other proposals to establish air services to Norman Wells in 1921. And second, a search has disclosed many first hand accounts of the events and it is thought that all of these have not been available to previous researchers.

Four Imperial Oil employees, Fullerton, Hill, Link and Thompson, who participated in the venture have written about it and in addition, three first hand observers of the events, Bloom, Godsell and Jackson have also written about it. If these accounts could be put together so the participants could tell the whole story it would be ideal but this would result in too much repetition. Still, for the really serious student, a study of the material in the bibliography will be found educational.

Conflicting statements occur between accounts which are difficult to resolve at this time as the participants are now deceased. Most, but not all, of the conflicts are noted in end-notes. The interested reader can form his own opinion from the material listed in the bibliography.

The event that triggered the flying, and the proposals to fly, along the Mackenzie River was the Imperial Oil Company's successful drilling of the Discovery Well on Bear Island. It was located at a point since named Norman Wells about 53 miles down the Mackenzie from Fort Norman and about 85 miles south of the Arctic Circle.

Actually the presence of oil in the area had been noted in 1789 by Sir Alexander Mackenzie who explored the whole of the great river that bears his name. The Indians, of course, were aware of the oil seepages previously and used an oil residue to smear and waterproof their canoes. In spite of this knowledge and because of the inaccessibility of the area it was many years before attempts were made to explore and develop its mineral resources.

In 1911 J.K. Cornwall of the Northern Trading Company investigated the oil seepage at Norman Wells but could not arouse any interest in developing the area. In 1914 Dr. T.O. Bosworth, Chief Geologist of the Imperial Oil Company, surveyed the area but no work was carried out there during the war years.

In 1919 two geologists and a 6 man drilling team were sent in and a showing of oil was found at a depth of 100 feet. In 1920 efforts were resumed under geologist Theodore A. Link and when the drill reached 700 feet on 23 August oil was reported standing in the casing within a few feet of the surface. When 783 feet was reached oil flowed out for 40 minutes before the well was capped.

A major problem in the drilling operation was transportation to, and communication with, civilization. In the short summer season it took a long time by boat and the journey included several portages and in the winter a much longer time was required under conditions of great hardship. In fact G.A. Thompson wrote that the winter journey "was almost un-



Fort Norman, July 1921: Junkers JL-6 G-CADP (Vic) of Imperial Oil Ltd., with pilot G.A. Thompson on wing and mechanic W. Hill on float — Imperial Oil.

THE RENÉ AND VIC

KEN M. MOLSON

thinkable to any but trappers and such folk." The contact with civilization was the town of Peace River, "the end of steel" which was served by the Edmonton, Dunvegan and British Columbia Railway and the route north to Norman Wells covered a distance of about 1,400 miles following the water way.

There are a number of contemporary statements on the time required for surface travel along the route and, of course, they vary considerably. Probably the Hudson's Bay Company's employee, F.C. Jackson, statement that Fort Simpson was "some eight weeks dog journey from the nearest rail-head" (Peace River) is a fair indication of the problems of winter travel of this 900 mile portion of the route. In the short summer season R.H. Mulock estimated the journey from Peace River to Norman Wells took 5½ days northbound and 9 days southbound but this may be optimistic.

Charles E. Taylor who was in charge of the Imperial Oil Company's development program in western Canada was determined to try to improve communication with the crews working in the north and resolved to try the use of aircraft. Just when this idea was approved and implemented is not known but it would seem to be in late August or early September and too late to arrange fuel shipments by water to points on the route north.¹ However he engaged W.R. May and G.W. Gorman who had been operating May-Gorman Aeroplanes Ltd., a typical general aviation company of the period, at Edmonton, to do the flying.

George Washington Gorman was placed in charge of Imperial Oil's aviation department. Gorman had learnt to fly at Camp Borden and went overseas to serve in France where he was brought down and taken prisoner. On his return to Edmonton he joined May who was operating May Aeroplanes Ltd. and the company became May-Gorman Aeroplanes Ltd. Wilfred Reid "Wop" May had also flown overseas and served with 209 Squadron where he had the doubtful distinction of being selected by the famous Baron von Richtofen as his intended 81st victim but fate intervened and Richtofen's score stopped at 80. On May's return he formed May Aeroplanes Ltd. and obtained the loan of the Curtiss JN-4(Can), "Edmonton" from the city. Also joining Imperial Oil at that time were S.C. Derbyshire and J.R. Allan Jr. Stanley Cecil (Pete) Derbyshire² was a mechanic who had joined the RFC/RAF (Canada) and after the war had joined May in his aviation venture and obtained his air engineer's, No. 6, in July 1920. John Roberts Allan Jr. had flown overseas but what his role was to be in the new venture is not clear; however, it seems probable he was intended to be a reserve pilot, a role later to be filled by G.A. Thompson.

In August 1920 May obtained contracts to fly at fairs at both Grande Prairie and Peace River, Alberta. He left Edmonton late on 19 August in his Canuck, now registered G-CAAI, accompanied by Col.G.W. McLeod. They got as far as Whitecourt where they spent the night and went on to Grande Prairie next morning. May gave flying exhibitions on the 20th and 21st and carried many passengers on both days and on the following Sunday as well. They stayed on to service the machine and then flew to Peace River on the 25th or 26th. It was reported that he was to carry mail on this flight. May flew at the Fair on the 27th and 28th. The return flight to Edmonton was uneventful.

In early September, May (this time accompanied by Derbyshire) flew non-stop³ from Edmonton to Peace River. Just what the purpose of this flight was and its exact dates is not known but it seems very likely that May had been com-

missioned by Imperial Oil to select a suitable base for their proposed service. On the return flight they had a forced landing about 40 miles from Whitecourt and 4 miles from the Athabasca River. The trouble was fixed with "some tape and several pieces of wire" and a difficult take off was successfully made. A fuel stop was then made at Sangudo where Derbyshire was left and May continued on to Edmonton alone.

An aerodrome site was selected on the bank of the Peace River and arrangements were made for the erection of a hangar large enough to house two aircraft with their wings removed and attached to the hangar. Living quarters were also to be provided for the aviation personnel.

The big job was to select the most suitable type of aircraft to operate the air service to Norman Wells. The Junkers JL-6 was decided upon and there could not have been a better choice. Gorman would have had the responsibility for this but the puzzling thing is how he came to make this selection. The prototype had only been tested about a year previously and it had not been extensively written up in the British or American aeronautical press and in addition there was a lingering animosity towards things German. Moreover J.M. Larsen had only just obtained the North American rights to the type and at this time this was not widely known.

John Miller Larsen, who was shortly to appear on the Canadian scene, was a Dane who had been in the dairy machinery and ice-making machine business and had taken up flying as a sport in 1913. After the war he came to the United States, bought a Curtiss Seagull, and returned to Europe with the intention of selling them there. During a tour of the Baltic Sea he found people talking most enthusiastically about the Junkers F-13. He soon became convinced of the excellence of the type and obtained the North American sales and manufacturing rights from Junkers. In an attempt to get around any animosity, he redesignated the aircraft as the JL-6 (for Junkers-Larsen) and said, or implied, that it was in some way modified and improved by him in the U.S.A. However, apart from being fitted with the American Hartzell propeller the JL-6 appears to have been identical to F-13. Just when Larsen started selling the JL-6 is not known but it must have been very shortly before the Imperial Oil Company bought its two machines and in fact it may well be that they were the first of the type to be sold in North America.

About the end of November, May, Gorman, Derbyshire and Allan left Edmonton by train to New York to take delivery of the two machines. Just when they started back is not known but they flew by way of Bellefonte, Cleveland, Huron, Chicago, Minneapolis, Grand Forks, Brandon, Virden, Saskatoon to Edmonton. Both aircraft were in Minneapolis by 27 December where they stayed until 30 December. May got as far as Virden, Manitoba, on 3 January where he was held up by bad weather while Gorman caught his tail skid on a fence wire when taking off at Brandon, Manitoba, which brought him down and held him there until repairs could be made.

May arrived at Edmonton at 5.20 p.m. on 5 January after a flight from Saskatoon. On board in addition to May were J.R. Allan Jr., S.C. Derbyshire, H.S. (Dick) Myers and Ernest H. Buehl. Myers and Buehl were a pilot and mechanic respectively from Junkers-Larsen.

Gorman got away from Brandon on 24 January and flew to Saskatoon in 2 hours 50 minutes. The next day he completed the flight to Edmonton. With Gorman were Myers, Buehl and Derbyshire who had all returned to help with the repairs. This concluded the long, approximately 2,400 mile, delivery flight



W.R. "Wop" May stands with a new Model T and the equally new Junkers JL-6, G-CADP ("Vic"), in Edmonton presumably in February 1921 a month after delivering the aircraft. McDermid coll., Glenbow NC-6-6063



G-CADQ, "René" (sistership to "Vic") warms up while awaiting ski installation at Edmonton, possibly late January 1921. McDermid coll., Glenbow NC-6-6015



"DQ a few months later in June 1921, stranded at Fort Simpson. The Roman Catholic church and hospital is in the background.

L.T. Burwash.

of the two machines which in itself was a significant achievement for the time.

In the meantime it had been announced by E.L. Janney⁴ of Northern Canada Traders Ltd. that another air service was to be established over the route north to the oil fields. While this never materialized, a few details are known. Originally it was to use lighter-than-air machines, undoubtedly surplus blimps, which were to be obtained in Cleveland. When this arrangement fell through it was then hoped to get them from the Government of Newfoundland. In July Janney was reported arrested in Vancouver, apparently due to money raising efforts there for the air service. In September he was in jail in Lethbridge, then on a hunger strike there and finally he was reported as being in a hospital at which point news of him and his company petered out.

After the ferry flight May left Imperial Oil to pursue his own flying activities and J.R. Allan Jr. also left. Elmer Garfield Fullerton, George Anson Thompson and William J. Hill were then hired. Fullerton had transferred to the RNAS from the army at the end of January 1918 and after learning to fly and taking an instructor's course served as an instructor. He was hired to replace May. Thompson too had served overseas with the RAF as a pilot and had flown a portion of the first trans Canada flight in October 1920. He was hired as a reserve pilot and probably would have taken over most of Gorman's flying duties when Gorman's managerial duties became more demanding. In the meantime Thompson was sent to Peace River to supervise the base there; later he was to pilot the next trip north after the machines returned in August which, of course, never materialized. Bill Hill, like Derbyshire, had served with the RFC/RAF Canada and obtained his air engineer's license, No. 102, on 6 February 1921. He was appointed "senior mechanic".

Skis were designed and built at Edmonton for the two machines. Each ski was made of one piece of 3/4" ash covered with brass sheet and the pedestal was made of steel tubing. Initial ski tests were carried out on 9 February at Edmonton — the first ski flights in western Canada — and more extensive tests were scheduled to follow at Big Lake, seven miles west of Edmonton. About the same time the two machines were christened by Mrs. A.M. McQueen, the wife of Imperial Oil's Vice President. G-CADP was christened "Vic" for Charles Taylor's daughter Victoria and G-CADQ christened "René" for Taylor's secretary.

Tests were concluded and wheels re-installed for the trip to Peace River. Both machines left Edmonton at 11.55 on Sunday, 27 February and arrived at Peace River three hours later. William H. Waddell, a Dominion Land Surveyor and Imperial Oil employee, went along as navigator; also on board were Hill, Derbyshire, Buehl, Myers and Allan. There the engines were checked over and the skis re-installed in preparation for the trip north. Also it was known that a lower grade of gasoline would have to be used on the trip north but it was determined that the engines would run quite satisfactorily on it with enlarged carburetor jets. So Bill Hill had to make modified jets for the two engines.

It had been decided that both machines would fly together so one could help the other in the event of trouble. Also it was thought prudent to establish a fuel cache at the Upper Hay River Hudson's Bay Post which was about half way to Great Slave Lake from Peace River. So 100 gallons of fuel and 4 gallons of oil were loaded in each aircraft and the two of them set off on 22 March. The flight was completed without incident, the cache established and the machines returned the

same day. The 190 mile return flight was accomplished in 2 hours and 20 minutes flying time. It is not recorded who accompanied the pilots on the trip but it is likely that both Waddell and Hill were along.

On inspecting one of the aircraft following the flight a small hole was found in both the upper and lower skins of the rear fuselage. They resembled bullet holes and it was assumed that an Indian had fired at them during the journey.

Now all was ready for the first flight to Fort Norman but they had acquired an additional passenger in the meantime. The Edmonton office requested that they take Sgt. Hubert "Nitchie" Thorne of the RCMP back to his regular post at Fort Simpson. Sgt. Thorne had just brought out a prisoner, Albert Lebeau who was charged with murder, from Fort Providence.

On 24 March the party set out in the two machines on the first flight north and they intended to continue to Norman Wells — almost to the Arctic Circle. On board were pilots Fullerton and Gorman, navigator Waddell, the two air engineers, Derbyshire and Hill, and passenger Sgt. Thorne. It was intended to stop for fuel at the cache just established at Upper Hay River Post but after following the Peace River to where they intended to cut across land to the Post the weather had deteriorated and they were confronted with low clouds and poor visibility. So plans were changed and they continued along the Peace River to Fort Vermilion, a further 40 miles. They landed in a field near the H.B. Post and the machines were pulled into the shelter of a barn to wait for clearing weather.

The party stayed in the Post and it was not until the 27th that the weather improved enough so that they could continue. In the meantime the enlarged carburetor jets had been installed to suit the fuel they would use from then on and the tanks were filled. They took off in the afternoon and, with full tanks, it was decided to by-pass Little Hay River Post and go straight through to Hay River Post on Great Slave Lake. They flew the approximate 200 miles straight across country and landed at the Post after 2 hours and 40 minutes flying.

They refuelled and stayed at the Post overnight. The next morning they took off for Fort Providence and headed north westerly along the south shore of Great Slave Lake. The 20 mile an hour head wind that they were bucking turned into a blizzard after about three quarters of an hour flying so they landed on the ice to wait for it to clear. They had landed where the great Mackenzie River takes its rise from Great Slave Lake and in about half an hour the storm cleared and they continued to Fort Providence where they landed in a field adjoining the H.B. Post. The snow there was over three feet deep, the deepest so far encountered.

They refuelled and attempted to take off but with the deep snow the machines could only accelerate to about 20 miles an hour so the attempt was abandoned. That night the party donned snowshoes and walked abreast up and down the take off area to compact the snow and they were joined in this by a number of the natives. However a broken ski fitting was found and Hill had to make repairs so it was not until March 30th that a new attempt was made. This time both machines got away and headed directly for Fort Simpson.

An hour and 45 minutes after leaving Fort Providence the two machines were over Fort Simpson in a light snowstorm. The surface of the Mackenzie River was found to be extremely rough and quite unsuitable for landing and while other possible landing spots were not plentiful a field on the edge of the settlement looked suitable although there were some

snowdrifts. 'DP with Fullerton at the controls got down safely but 'DQ broke through the snow crust, swung into a drift, and broke a ski and the propeller. The snow was found to be four feet deep, not counting the drifted areas, and heavily encrusted.

It was soon determined from the local inhabitants that there was a "snye" (a small subsidiary channel) about a mile away with a smooth surface and this was confirmed by an inspection trip on foot. Then 'DP was lightened of all unnecessary equipment and flown out by Fullerton to the snye. However on the way it was found that its engine had become badly carboned up by the use of the low grade fuel. 'DQ's engine had less time since overhaul, so the propeller and a ski were removed from 'DP and transferred to 'DQ and then it was flown to the snye also.

There are conflicting reports of the plans for the next flight. Both Fullerton and Hill state that it was planned to continue the trip north to Fort Norman in 'DQ piloted by Gorman. However the Imperial Oil Review of July 1921 states "On April 3rd just as they were about to start (for Fort Norman) word was received through travellers that the men left at the well had failed to make any gas which failure constituted an essential break in the plans as the flyers had been relying on "gassing up" there before turning south again. . . . So far as further progress northward was concerned it was a case of abandoning the effort or tying up the machine at the well until boats came down next summer or, possibly, until some gas could be made. Capt. Gorman, in charge, decided to return". It is believed that the Imperial Oil Review's account is correct and that Fullerton and Hill had forgotten about the last minute change in plans.

In any event, 'DQ was readied for flight and Gorman taxied it into position for take-off with Waddell and Hill⁵ on board. Gorman then began his take-off run. There are two accounts of what happened next. Fullerton said, ". . . the take-off was made . . . she had reached an altitude of more than 50 feet when, for some reason, it stalled and crashed on the ice". While Hill said, "So he started; opened the throttle wide; bounced on a few hummocks — then the axle broke and away went the undercarriage and propeller". Hill's account seems the more likely but, no matter what the details were, the party was now stranded with both machines unserviceable.

The situation was discussed that evening at the Post. Fortunately, 'DP's ski, which had been loaned to 'DQ, was undamaged so with a top overhaul of the engine 'DP could be made serviceable if they had a new propeller. Spare propellers were held at the Peace River base but it was eight weeks away by dog team and then the propeller would still have to ship north by boat.

At the post were two Hudson's Bay employees, Phillip H. Godsell and F.C. Jackson, who had just arrived back on the evening of 31 March from an inspection trip of several northern H.B. posts. Also present was Walter Johnson who served in the summer as engineer on the H.B.C.'s boat Liard River and as general handyman at Fort Simpson in the winter. Johnson was the son of an English immigrant to western Canada and he had been sent to England to receive his education which included apprenticeship to a cabinet maker. He returned to Canada in 1902 and joined the H.B.C. to follow in his father's footsteps in their steam boat service.

Godsell recalled the events that occurred that night and the following morning as follows —

"Until the small hours of the morning Gorman and I talked the situation over. "Wouldn't it be possible," I suggested, "to

make another propeller". "I don't think" interjected Walter Johnson, "it should be so damned hard to make one after all".

"Fred Camsell⁶ chuckled, Elmer Fullerton laughed outright, but Walter was not to be deterred. Fixing them with a baleful stare he grunted "I've never seen a wood-working job I couldn't handle yet".

"Next morning I got Gorman to accompany Walter and myself to the scene of the mishap where Walter examined the broken props minutely. Each was composed of nine laminated strips of black walnut glued into a solid block cut to shape by the most accurate machinery, then finished off by trained workmen and tipped with copper.

"Well, Walter," I queries, "what's your verdict?"

"I don't know," he gave me a long reflective look, "I still believe I could make one if only I had the proper kind of wood!"

"How about using those oak sleigh boards I had shipped in last fall⁷ to make a dog-carriole with?" I suggested. "They're all straight grained for I selected them myself and we've lots of moose parchments in the fur loft that could be boiled down into glue.

"Gorman shook his head though I noticed that Walter was intrigued by my suggestion. Examining the pitch of the propeller he took some measurements. "How about letting me off for a few days?" he asked. "I'd like to see what I could do".

"Go to it," I said, "take all the time you like."

"To the aviators, the idea of a sleigh board, moose-glue prop seemed ridiculous. Only Hill, Gorman's mechanic, greeted the suggestion with the faintest display of grudging enthusiasm."

When Father Decoux who was in charge of the Roman Catholic Mission at Fort Simpson heard of the proposed propeller manufacture he offered the use of the Mission workshop and tools. The tools available were — a number of large clamps, an adze, an axe, an auger, a plane, drawknives, spokeshaves, chisels, hammer and files. However the number of clamps were not sufficient to securely hold the boards over their whole length for gluing so Hill recalled, "We collected bolts from boats, jacks from river steamers, and everything that could be pressed into clamping service."

Examination of the oak boards showed that they could indeed be used for the new propellers. Godsell recalled — "The sleigh boards were a factory-made product shipped by the Hudson's Bay Company to many of their Northern posts to be steamed and bent into the conventional freight toboggans. They consisted of machine-planed, straight grained oak boards, twelve feet in length, eight inches wide⁸ and one inch in thickness". They were, in fact, not quite wide enough but fanning the boards out took care of the width needed for the blades proper. However at the hub the width was still short although it took in the diameter of the bolt centers so a piece of wood about one inch wide was glued on that this point to round out the outside shape of the hub.

Six boards were prepared for laminating together to form the block for the propeller — the original had nine thinner laminations. Some hand planing was necessary and when the boards were flat they were scraped with a tool specially made to produce fine serrations in the wood to ensure a good glue bond.

While the laminations were being readied, the glue was being prepared, apparently under the supervision of, if not actually by, Phillip Godsell. Commenting on this Godsell wrote. "Later, reports stated that the marooned aviators had hid themselves into the woods and converted the *fresh* skin



1

RENÉ AND VIC EARLY FLYING ALONG THE MACKENZIE



2



3

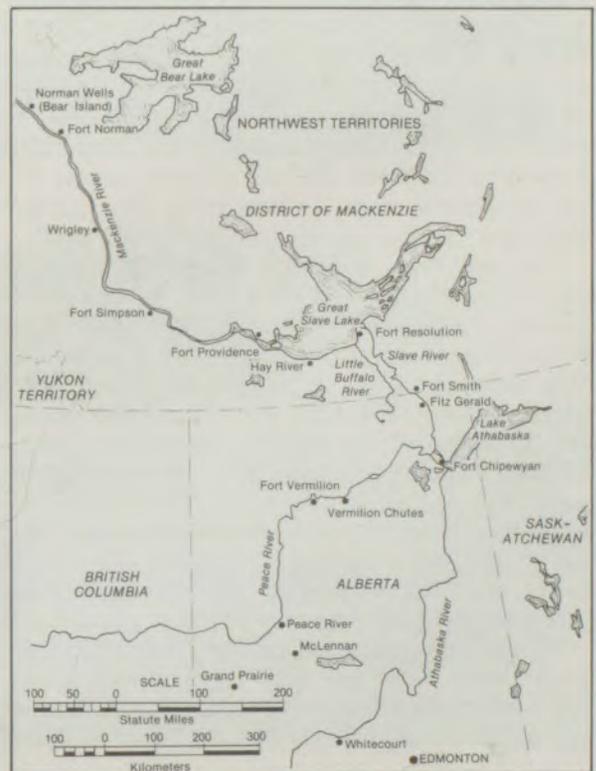
1. The two ferry pilots, W.R. (Wop) May left and G.W. Gorman right. W.R. May Coll.
2. 'DP' photographed during its ferry flight. Note presentation of registration and absence of the Imperial Oil flag. W.R. May Coll.
3. Group after christening ceremony. Standing left to right — C. Taylor, Mrs. McQueen, T. Draper, A.M. McQueen, H. Myers. Kneeling G.W. Gorman, W.R. May. W.R. May Coll.
4. Another group after christening ceremony. Left to right — E.H. Buehl, H.S. Myers, Mrs. C.E. Taylor, G.W. Gorman, W.R. Hill, E.G. Fullerton. via E.H. Buehl



4

The District of Mackenzie

drawn by Brad McLellan



stretch there was more or less open water except for innumerable floating ice cakes. Even the remaining ice was steadily breaking up — decreasing the length of our runway almost every minute.”

Oil and water were quickly heated and poured into the machines. Gorman in 'DQ was first to taxi off but in doing so “the tail skid struck a depression and broke off.” Later in the day 'DQ was hauled up on the bank by oxen to be safe from the ice to await later salvage and repair. While Fullerton was warming up 'DP, a local trapper, Jack Cameron, enquired if he could be of help. He knew the country very well so he was invited on board to guide Fullerton back from the lake.

Fullerton reported on the take-off as follows. “We roared down the runway which, now, had dwindled to a bare 100 yards — ahead of which was plain open water, dotted with floating ice cakes. The snow which was on the ice did not help us to gain flying speed quickly, and as we approached the end of the remaining ice I was not exactly sure that flying speed was ultimately going to be attained but there was absolutely no alternative but to keep the throttle wide open and the tail well up until we actually reached the end of the ice, for to attempt to force the aeroplane into the air before it had attained sufficient flying speed was simply asking for disaster.

“We shot off the end of the ice over the water, and I then eased the control column gently back. There was still some doubt as to whether she was going to remain in the air and, although I managed to resist the temptation to (try to) climb, she threatened, at first, to settle down into the water and, in fact, the heels of the skis actually did make gentle contact with the surface. But, fortunately, we eventually gathered enough speed to keep her air-borne and I was soon gaining height at a gratifying rate. That was about as close a call as one could expect to have and get away with. I can assure anyone it was decidedly thrilling while it lasted, although Jack Cameron thought it was great fun.”

The five miles to the nameless lake were quickly covered and after landing the aircraft was taxied to a sheltered shore, tied down and drained of oil and water. A fortunate thing was that the machine had been refuelled the night before so it had virtually full tanks. Fullerton and Cameron then struck out on snowshoes for Fort Simpson. There was no trail and the ground was covered with a thick growth of small trees and underbrush which made the journey very slow, taking about three and a half hours. The trip included crossing the snye on foot by jumping from ice flow to ice flow, a procedure at which Jack Cameron proved to be particularly adept.

The party then assembled at Sgt. Thorne's house for a good meal before setting off for the aircraft. All their gear had to be carried as there was no trail over which they could pull a sleigh so everything was packed in bundles or haversacks for the trip. After saying good-bye to all their friends that had been so helpful, Gorman, Fullerton, Waddell and Hill started for the lake accompanied by Cameron. Derbyshire, it had been decided, would remain with 'DQ. Cameron took the party across the snye by boat and then returned with it. It took almost four hours to cover the remaining four miles. A tent was pitched with a mattress floor of soft pine branches, a fire started and everyone crawled into their sleeping bags for a good sleep only broken by taking turns to add fuel to the fire.

All were awake early and enjoyed a hearty breakfast around the fire while the oil and water for the aircraft heated. On the way north they had followed a circuitous route long the waterway which although longer than the direct route had advanced

tages in that the river ice provided a landing place in most areas in case of necessity and also there were Hudson's Bay Posts here and there along the route. On the trip south there would be no landing places as the ice was out and the route would be too long without refuelling for their approximately six hour endurance. A straight line to Peace River, the shortest route and measuring on a modern map about 402 miles, took them over unexplored territory, the “white” areas on the map, which provided no way to check their position. So navigator Waddell elected to set course for the 120° meridian, the boundary between Alberta and British Columbia, along which surveyors had cut a swath through the bush to define the boundary. Then when the Peace River was reached a course almost due east would be set for the town of Peace River. Fullerton stated that this involved an additional 25 miles but checked against modern maps it seems to add about 80 miles to the direct route. Nevertheless the certainty of knowing their position against the possibility of getting off course made this their preferred route although it extended their range to the limit.

They took off at eight o'clock with Fullerton at the controls and Waddell in the right hand seat to navigate. They headed on a course of about 170° and on schedule they picked up the meridian in about an hour and forty-five minutes. From then on the trip was uneventful except for a threatened attack by a large eagle but fortunately he changed his mind and called it off. As they flew south the signs of spring became more prevalent and they reconsidered their plans for landing. They had intended to land at their aerodrome but this would obviously be bare of snow so they proposed to land on Little Bear Lake after first dropping a message to Charles Woodman, the caretaker at the aerodrome. This was done and he was asked to bring fuel and wheels for the aircraft to the lake and while over the aerodrome they noted to their surprise another Junkers JL-6 there.

On passing over Little Bear Lake on the way to the aerodrome it was noted that while water was visible around the shore the ice in the center seemed satisfactory so Fullerton decided to land. He selected what appeared to be the soundest stretch of ice and deliberately set 'DP down somewhat heavily to test the ice and then was fully prepared to open the throttle to take off again if necessary. The ice seemed sound so he allowed the machine to come to rest. They then prepared to wait for the wheels and fuel to be brought by surface transport. The flight from the lake behind Fort Simpson had taken just over six hours and while they knew little fuel was left they thought probably 2 or 3 gallons remained. However a check of this while waiting by draining the tanks produced only a half gallon of fuel.

The fuel check had not long been completed when they heard the sound of an approaching aircraft. This was soon seen to be the Junkers JL-6 which landed on the ice on wheels and it had on board the wheels and fuel for 'DP. The wheels were soon fitted and 'DP refuelled and then both machines left for the Peace River aerodrome which they reached in about 10 minutes.

This was the last flight of either of the “homemade” propellers as both were then replaced by Hartzell factory-made propellers. “DP's propeller had accumulated about seven hours flying time while that on 'DQ had only the one test flight of about 20 minutes. Both propellers survived the years and through the interest and initiative of J.H. Parkin and Frank H. Ellis were located and preserved for posterity. 'DQ's propeller had remained at the Fort Simpson Mission



1



3



5



7



2



4



6

RENÉ AND VIC EARLY FLYING ALONG THE MACKENZIE

1. May's Curtiss JN-4 (Can.) at Grande Forks. W.R. May Coll.
2. Group at Saskatoon January 25, 1921. Left to right — E.M. Buehl, S.C. (Pete) Derbyshire, H.S. Myers, G.W. Gorman, H.S. McClland, L.S. Breadner. via E.H. Buehl
3. Main Street, Peace River. The end of steel and main base of Imperial Oil's aircraft. via E.H. Buehl
4. Group beside Larsen's Junkers at Peace River. Left to right — G.A. Thompson, E.C. Fullerton, unknown, J.M. Larsen, E.H. Buehl. G.A. Thompson Coll.
5. 'DQ being warmed up at Fort Simpson. G.A. Thompson Coll.
6. 'DQ being raised at Fort Simpson after its accident on 3 April 1921. via F.H. Ellis
7. 'DQ after its accident at Fort Simpson, 3 April 1921. G.A. Thompson Coll.
8. The two Junkers being prepared for their trip south at Fort Simpson, August 1921. via F.H. Ellis

and was given to the Aeronautical Museum, formed at the National Research Council, in 1938. It took much diligent work to track down 'DP's propeller which was done by Frank Ellis. It was found to be in the possession of G.W. Gorman's widow who kindly presented it to the Museum in 1945. Both propellers are presently on display at Ottawa as part of the National Aeronautical Collection and are shown together with models of the two aircraft they were made for. The models were presented by Imperial Oil Ltd. to complete the display in 1962.

The JL-6 that had surprised the Imperial Oil party by appearing at the aerodrome and so helpfully bringing aid to them at the lake, was an American one belonging to J.M. Larsen but was registered in Canada as N-CADT to permit it to fly here. It seems appropriate to backtrack at this point and tell of Larsen's coming to Canada and his proposed plans for Canadian activities.

Larsen, his interest aroused by the Imperial Oil Company's purchase of two aircraft, determined to come to Canada, establish a Canadian company and attempt to develop business here. Notice of the coming of another aircraft first appeared in Edmonton papers on 21 March. On 31 March the aircraft landed at the May-Gorman aerodrome at 3 p.m. On board were H.S. Myers, pilot, E.H. Buehl, mechanic, J.M. Larsen; and H.S. McClland of Saskatoon. They had experienced head winds all the way from Saskatoon. They had come from New York in 28 hours 20 minutes flying time over the following route:

N.Y.-Dayton	6 hrs.
Dayton-Grand Forks	10 hrs. 20 min.
Grand Forks-Virden	4 hrs.
Virden-Saskatoon	3 hrs. 50 min.
Saskatoon-Edmonton	4 hrs. 10 min.

The Larsen party was scheduled to leave for Peace River on 8 April taking as passengers Insp. Jennings, RCMP, and Col. Maynard Rogers, Supt. of Jasper Park, where presumably they stayed until the return of 'DP on 25 April.

On 12 May the Edmonton Bulletin announced the sale of the Edmonton Aircraft Co. to J.M. Larsen. The company had been formed the previous year by J. McNeill and Keith Tailyour and owned a hangar, an Avro 504K aircraft and a lease on a field just off Portage Ave. It was Larsen's intention to establish a sales and service agency for Junkers aircraft here and later to manufacture them. Later he mentioned the manufacture of marine engines also.

At this time the long flight to the Arctic was first mentioned. This was a most ambitious project which was planned for two aircraft and would extend north to Cornation Gulf and Victoria Land¹¹, well beyond the Arctic Circle. On 20 June it was reported that Larsen was at Peace River ready to leave for the Arctic and that well over \$10,000 had been spent for supplies and equipment for the flight. Unfortunately, the flight never left for had it materialized it would have been a history-making one. No reason is known for cancelling the flight. By fall Larsen apparently realized that he was premature in trying to set up an aircraft company in Edmonton and both the Avro 504K and the Junkers JL-6 were flown to the United States in October. Larsen's remaining property at Edmonton was sold or leased to Imperial Oil to store their machines.

Meanwhile there were others interested in operating an air service to the oil fields. Fred McCall, associated with Lt. W.R. Gaynor, was proposing to use three British flying boats over the route each carrying 2 crew, 4 passengers and 700 lbs.

freight but this scheme was never developed. In Eastern Canada, F.E. Davison¹² asked the respected R.H. Mulock to prepare an estimate for operating an air service to the oil fields. Mulock did this and presented it to Davison and his associate, E.W. Backus. Mulock proposed using Felixstowe F.3 flying boats on the route but again the idea was never implemented. Both these projects entailed the use of flying boats which would have limited them to operating in the brief summer season only and undoubtedly this would have been a major objection to them.

Still another proposed operation was that planned by the Great Northern Services Co. which was the company which May helped form after leaving Imperial Oil. The company's President was Col. J.K. Cornwall, its Vice President and Managing Director was James C. Gibson and W.R. May was Chief Pilot. Other Directors were W. Ross Alger, Dr. J.A. Allan, A.F. Ewing, Col. G.W. McLeod and F.A. Brandt. The company was to take over the business of May-Gorman Aeroplanes Ltd. and planned to operate three flying boats from McLennan to the oil fields. Apparently the company was not able to raise sufficient capital and it never operated.

'DP was put on floats and checked over to prepare her for the summer season. For unexplained reasons she was being kept at nearby Little Bear Lake rather than on the Peace River at the aerodrome. Towards the end of May Fullerton received orders from McQueen in Edmonton to take Imperial Oil geologist Theodore A. Link and W.H. Waddell north to Fort Norman as quickly as possible. So on 27 May at 2.30 p.m. 'DP took off from Little Bear Lake and after over-flying the town of Peace River 20 minutes later headed north along the Peace River. On board were pilot Fullerton and Bill Hill beside him in front and Link and Waddell in the cabin. The trip to Fort Vermilion was uneventful and the good weather made the mountains and rivers all easily visible so the travellers could readily follow their progress. However some forest fires were noted. They landed opposite the Lamson-Hubbard store at 5.25 p.m. and taxied downstream to tie up at the ferry dock for the night.

The next morning they refuelled and took off at 10.26 a.m. By 11 o'clock they were over the rapids at Vermilion Chutes. At this point the exhaust pipe extending up from the engine directly in front of Fullerton and Hill could be seen cracking and getting worse so they returned to Fort Vermilion and landed there at 11.35. It was then decided that Fullerton would return with Hill to Peace River to fit a new exhaust pipe while the others remained at Fort Vermilion. 'DP left at 2.15 p.m. on the return flight.

'DP returned on the 30th after a trip of 1 hour and 50 minutes with the aid of a good tail wind and was fitted with a new and shorter exhaust. After picking up Link and Waddell 'DP took off again at 5.18 p.m. Visibility was poor due to numerous forest fires. Soon they left the Peace River and cut across country — made a "portage"¹³ as they called it — to the Slave River and turned north. At this point they picked up a good tail wind and, after passing Fort Fitzgerald, Fort Smith came in sight at 7.50 p.m. and they landed there at 8.03 p.m. opposite the Post at the base of the rapids. The flying time from Vermilion was two hours and forty minutes in contrast to the one month exactly that Link spent the previous year doing the same journey.

Next day, 31 May, a strong north wind was blowing and it rained heavily during the morning. A six hour wait was required before fuel was brought over to the Junkers and so the party only got away at 2.30 p.m. Slow progress was made

against the wind and the rain and low clouds forced them to fly low. At 3.30 p.m. the weather brightened but the wind increased to slow them down further. At 3.55 p.m. Fullerton left the Slave River and headed to Great Slave Lake at the mouth of the Little Buffalo River which was reached at 4.15 p.m. They were most surprised to find the lake almost clear of ice and only a few isolated ice fields could be seen so the lake was open for navigation — the earliest in history. The aircraft followed the south shore of Slave Lake, heading west, at an altitude of only 100 feet to try to escape the influence of the strong wind. The Buffalo River was passed at 5.02 p.m. and shortly the Hay River Post was sighted. Landing in the mouth of the Hay River proved difficult with its narrow channel combined with the strong wind. Altogether three attempts were made before Fullerton successfully set 'DP down.

The party stayed at the Hudson's Bay Post and their meals were provided by Mrs. Vail at the Anglican Mission. Refuelling and, apparently, other chores, kept the party at the Post until 2.14 p.m. the next day when they took off and headed across the lake to the Mackenzie River. A small snowstorm had to be flown through near Wrigley Harbor and then 'DP circled over Fort Providence at 3.25 p.m. before continuing the flight without stopping. At about four o'clock Fort Simpson was seen and twenty minutes later they landed on the Liard River and tied up on the sand bar there.

As on the day before, refuelling and other chores kept the party busy in the morning, so it was not until 12.51 p.m., on 2 June, that 'DP got away with its target, as Link expressed it, "Fort Norman or Bust." Everything was going well when at 1.15 p.m. a radiator leak was noticed. A landing was made on the river just above the 'Two Islands' and 'DP was tied up to a large block of shore ice. About an hour's work by Hill fixed the leak. In the meantime two Indians who had seen the machine land arrived on the scene and they helped launch 'DP for a take-off at 2.40 p.m. At 3.09 p.m. the mouth of the Nahanni River was passed and the party was enjoying the magnificent scenery of the snow-capped mountains. At 3.52 Fort Wrigley was passed at a height of only about 100 feet at 120 m.p.h. (presumably after a shallow dive) and then a slow climb was started and by the time the Black Water River was reached the machine was at 2,000 feet and when old Fort Norman hove in sight 'DP was flying at 4,000 feet. A slight descent brought the party to their destination, Fort Norman, which was circled at 3,500 feet at 5.20 p.m.

Fullerton glided down for a landing on the river which was glassy smooth and then disaster struck. There are various accounts of the accident. Link recorded "The machine struck the water, but with a bump more sharp than usual. The right pontoon was cut through like an egg shell by the struts and was floating fifty feet behind us. In a few moments, we were all outside the cabin and the seats. The right wing, (which rested on the water, began filling up and slowly the machine began listing to the side Fortunately the water was just shallow enough to allow the right wing to rest on the bottom of the river and thus keep the machine from overturning. The left pontoon was in perfect condition and it, together with the wing scraping at the bottom of the river, held the machine at an angle of about forty-five degrees."

Probably the most accurate account of the accident was written by Bloom who interviewed witnesses after his arrival at Fort Norman and wrote: ". . . . when a few feet above the water the ship seemed to drop suddenly to the surface. Instantly it bounded up again, leaped forward some 60 feet but in that momentary touch of the river surface the right

pontoon was sheared off completely; Mr. Link said the accident was due to the extremely smooth and mirror-like surface of the water when they landed, making it impossible to calculate accurately the height of the machine above the water."

Canoes soon arrived and took off the men and their baggage, some of which got soaked. A line was placed on the machine and it was brought to shore with a great deal of difficulty.

Waddell and Link immediately took off with a field party and set about their work. The damaged right wing was supported by a small scow and then 'DP was slowly towed about 53 miles down river to the Discovery Well site at Bear Island where it had to await new parts. Fullerton and Hill left Fort Norman on 3 June on the Imperial Oil Motor boat Redwing and arrived at Peace River 25 days later on board the steamboat D.A. Thomas.

Needed parts were collected at Peace River, including a pair of floats for the stranded 'DQ, a new right wing¹⁴ and float for 'DP and propellers. The availability of these spares at Peace River is an indication of the thoroughness of Imperial Oil in setting up their intended air service. These were shipped north and, along with Gorman, Fullerton and Hill, arrived at Fort Simpson in the last half of July on board the Northern Trading Co.'s steamboat Pioneer. Hill remained at Fort Simpson to repair 'DQ along with the floats and other parts.

At this point the paths of the airmen and Chester A. Bloom crossed. Bloom was a reporter for the Calgary Daily Herald who had been in the north that summer writing for the paper about the oil field development. He had heard of the flying being done and had hoped originally to get a ride out with the airmen. He had then given up this idea and was on his way south on the Hudson's Bay steamboat Mackenzie River which passed the Pioneer just north of Fort Simpson. Bloom then went ashore at Fort Simpson and took the first boat north, the Liard River, on 2 August in hopes of flying out with the airmen.

He arrived at Fort Norman on 4 August and took a canoe and paddled all night to reach Bear Island and 'DP in the morning. 'DP was found to have her new float installed and test flying had started in preparation for the start of the trip south the next day. On one trip A.W. Harris, Superintendent of Imperial Oil's Arctic camps was taken up for his first trip in an aircraft.

Before leaving the next day, Saturday, 6 August, T.A. Link had to be taken up for an hour's reconnaissance flight of the surrounding district — a survey that would have taken months on foot. Afterwards the machine was loaded and refuelled and at 5.15 p.m. everybody was on board and 'DP taxied out.

Fullerton was in the right hand pilot's seat and Gorman seated beside him while in the cabin were Derbyshire and Bloom. After a few minutes taxiing they took off down river at 5.30 and continued north gaining height for about five miles before turning right and heading south. This was Bloom's first flight and he took great interest in the scene that unfolded below him. The toy-like oil well, tall trees looking like "collections of black grass", clouds which seemed "driven towards us by some frightful hurricane", the "collection of toy houses" at Fort Norman, all were noted as well as the mountain ranges and the numerous rivers that came to join the great Mackenzie.

Fort Norman was passed at 6.00 p.m. and at 7.20 they were over Fort Wrigley. At about 7.45 they were over the mouth of the North Nahanni River and turned to the east to follow the Mackenzie directly to Fort Simpson where they

touched down at 8.50 p.m., having covered the 350 miles in three hours and twenty minutes.

This was Bloom's first landing and some of his impressions may be of interest. "The first information the novice has of this (arrival at Fort Simpson) is the sudden tipping upward of the circular horizon beneath him. The rim of the world rises up and up and one is looking straight down at the ground though all sensation of any change in position is entirely absent."

"This is the moment of anxiety, the landing. Life preservers are laid out in readiness, coils of rope loosened to have at hand for use in making fast the machine and one unconsciously holds his breath as the river surface rises swiftly to meet the machine. . . . The pilot flattens her out in a long straight glide, the river again taking on that strange appearance of a smooth metal highway, under our speed of 90 miles an hour. There is the slightest sensation of a bump and splash and foam is flying up from the prows of the pontoons. The terrific speed slacks up almost instantly and suddenly the machine begins to rock up and down."

At Fort Simpson, Bill Hill was hard at work repairing 'DQ "from early dawn until it was too dark to see at 11 o'clock in the evening". The damage inflicted during the attempted take-off from the snye in April consisted of having the tail skid ripped from the fuselage and the fuselage had to be repaired. The machine in the meantime had been brought over the trail from the snye to the Post and the work was being done there.

The fuselage repairs being completed, 'DQ's skis were replaced by wheels and the fuselage rolled half a mile and down a steep bank into shallow water at the river's edge. There a large boom had been set and erected and the fuselage was hoisted from its landing gear and secured to its floats.

By Saturday, 20 August, the wings had been fitted and 'DQ was ready for a test flight. Several residents at the post who had extended kindness to Imperial Oil's personnel had requested to go along on the test. Fred Camsell, Sgt. Thorne and his siter-in-law, a Miss Lewis, were invited and they were soon seated in the cabin behind Gorman and Hill. Gorman took off from the glassy surface of the river, flew for about half an hour, landed, and then made two more short flights before returning to shore. Gorman was well satisfied with the repaired 'DQ.

The next day, 21 August, the two aircraft were fuelled, the baggage loaded and everyone got on board for the trip south. On board 'DQ were Gorman and Hill in front and Walter Johnson, Bloom, and Ronald W. MacKinnon, an Imperial Oil Co. transportation officer, were in the cabin. Also on board were two 9-day-old husky pups still with their eyes closed and Bloom was assigned to their care and feeding during the trip. In 'DP, Fullerton and Derbyshire were up front while the party's baggage and bed rolls filled the cabin.

'DP was first off and circled until 'DQ joined her, about 300 yds. away on the left, and the machines headed southeast following the river towards Great Slave Lake. Bloom continued to take an active interest in the country but Johnson, who was on his first flight and had never been in an automobile, soon wearied of the scenery and started reading an old magazine.

Shortly, a vibration started up in 'DQ and got worse until when over Fort Providence in a thunderstorm when Gorman decided to land and he was followed down by Fullerton in 'DP. Hill quickly located the trouble. The propeller had worked loose on its hub and a few moments work with a

wrench eliminated the problem.

It was now lunch time and the hospitable Mission Fathers insisted the airmen join them. They all sat down to a table covered with white linen and set with china and silver. When lunch appeared it included homemade soup, fresh vegetables, fresh eggs and fresh milk among many other items and all of which had not been seen by the airmen for some time.

With all this hospitality it was not until 3.40 that the two machines took off again and headed for the Hay River Post. In about 20 minutes the head of the lake was seen and a strong northeast wind sprang up. They headed well out over the lake on their course to Hay River and the distant horizon formed by the meeting of the grey lake and the grey sky was difficult to distinguish. At 4.40 they circled the Post prior to landing. They spent the night there while the gale wind continued to blow.

The next morning, although a strong wind was still blowing, it was decided to continue so a take-off was made at 8.30 a.m. and both machines headed east along the shore of Great Slave Lake. The wind increased in strength and rain started which stung the crew's faces in their open cockpits. A thick murk settled all around and the machines dropped to 300 ft. to keep the shoreline in sight. At 10.40 a.m. the machines turned south to make the "portage" across land from the mouth of the Little Buffalo River to the Slave River. The wind seemed to increase in strength and low clouds forced them down at times to within 500 ft. of the trees so when the Slave River came in sight at 11 o'clock the passengers heaved a sigh of relief.

The machines turned south at the river heading towards Fort Smith. It was hoped that they could climb to a reasonable height and then set a straight course to their destination and so eliminate the many ends in the river but the low ceiling and strong wind prevented this. So they followed the river in rough air and were sometimes forced down to within 50 ft. of the water while "torrents of rain lashed the machines and the passengers hung on desperately" to everything they could.

The passengers in 'DQ had lost sight of 'DP in the rain and were consequently suddenly startled to see her passing them on the left going in the opposite direction. They were perplexed at this until on checking the map determined the machines were following one another along the river at a point where the river took a complete 180° bend and reversed itself.

This point was not far north of Fort Smith and it was not long afterwards that the two machines settled on the choppy water near the Post at 12.05 p.m., having now covered approximately two-thirds of the distance to their Peace River base.

The passengers and crew got thoroughly soaked while tying the two aircrafts to their anchorage where they looked somewhat out of place as they rose and fell in the waves among the river steamboats, scows and motor boats on Fort Smith's waterfront. The party obtained quarters for the night on board the Alberta & Arctic Transportation Co.'s steamboat Distributor and for the first time in weeks slept on spring beds and between clean white sheets.

Next morning when they awoke they found it drizzling rain and low clouds were hanging just over the tree tops along the river banks. Gorman decided to await better weather and the day was spent at Fort Smith.

The next day, 24 August, was bright and clear so the party prepared to leave. MacKinnon however atayed behind where he was to supervise the shipments of oil machinery over the



1



2



3



4

RENÉ AND VIC EARLY FLYING ALONG THE MACKENZIE



5



7



6

- 'DP at Fort Smith on 31 May. Hill is standing on the fuselage. Mus. Sc. & Tech.
- 'DP at Bear Island (Norman Wells) 26 June 1921, waiting for a new wing after its accident on 3 June. L.T. Burwash
- Bill Hill finishing a propeller at Fort Simpson. G.A. Thompson Coll.
- 'DQ being put on floats at Fort Simpson, August 1921. via F.H. Ellis
- 'DP at Fort Norman with its right wing supported by a scow after its accident on 2 June. via Mus. Sc. & Tech.
- Bill Hill with 'DP's propeller at Peace River. via Mus. Sc. & Tech.
- E.G. Fullerton, G.W. Forman, W.R. Hill, S.C. (Pete) Derbyshire, W. Johnson at Fort Simpson. via F.H. Ellis

Smith portage and then return to the Fort Norman oil field. At 8.24 a.m. 'DP' departed and a minute later 'DQ' followed. The two machines climbed to 3,000 ft. and headed up river. Below, the rapids could be seen and in fifteen minutes the last of them, Deadman's Rapids, was passed and another five minutes brought them to Fort Fitzgerald.

The bright sunshine and white cumulus clouds were in great contrast to the weather experienced on the previous day and the machines flew southward as steady as the proverbial rock. At 9.16 a.m. they headed west across the 25 mile "portage" from the Slave to the Peace Rivers and fourteen minutes later they were flying along the Peace River. At 10.03 a.m. they passed over the steamboat Slave River stranded on a sand bar in mid-stream and in another half hour the weather started getting murky and finally the horizon was hardly visible. At 11.05 a.m. Fort Vermilion was in sight and they landed there ten minutes later.

The party lunched at the Hundson's Bay Post and shortly after 1 o'clock the crews started getting the machines ready to leave on the last leg of their trip south. Meanwhile a drizzling rain had started but the indications were that it would clear so 'DP' left at 1.26 p.m. and 'DQ' followed six minutes later.

They were forced to fly low along the river by the low clouds and in addition encountered alternate bursts of rain and hail. The hail rattled on the metal covering of the aircraft like machine gun bullets and beat painfully on the unprotected faces of the crew seated in front. Even though this was his first trip by air Bloom was easily able to follow their progress and readily recognized the railway as it entered the town of Peace River which had come suddenly into view after rounding a bend in the pouring rain. At 4.10 p.m. the machines were circling the town prior to landing.

The two aircraft swung around to land downstream on the river and 'DP' landed. However 'DQ' appeared to be in danger of colliding with a cable ferry which was then half way across the river. This forced her to go around again and she now attempted to land upstream near the mouth of the Smokey River. Those on board felt the machine touch down and then Bloom described the next events as follows. "The next instant the right hand pontoon struck some projection from a sand bar, possibly a log or stone, underneath the water's surface. There was a terrific crash; the machine spun around sideways hurling us all about the airship and she began to keel over, the long wing on the side of the machine sinking down to the bottom of the river. We could feel the end of it curl up as it crunched along the river bottom in the grip of the current. As it crumpled up the machine kept turning over and in five minutes she was upside down."

Everyone donned life preservers as the machine slowly canted to the right and got out; Walter Johnson lifted the two pups out and placed them on the wing. When the aircraft turned completely over everyone found themselves all sitting on the bottom of the left float, the only part of the aircraft then above water, and not at all sure how they had managed to get there. The two pups slid off the wing as the machine capsized. One came up squealing and swimming with its eyes still closed and Gorman rescued it but the other was never seen again.

Some apprehension was felt about whether the one float would continue to sustain the capsized aircraft but it did and motor boats came out and took off the stranded men. Then strenuous efforts were made to tow the aircraft but the boats were not powerful enough so 'DQ' drifted down river underneath the railway bridge and then came to rest on a sand bar in

little farther down stream in mid river. Salvage attempts were organized and began the next day.

Log of the Trip from Norman Wells to Peace River.

Date	Section	Mileage	Time
Aug. 6	Norman Wells-Fort Norman	53	0:30
Aug. 6	Fort Norman-Fort Simpson	320	2:50
Aug. 21	Fort Simpson-Fort Providence	165	2:00
Aug. 21	Fort Providence-Hay River	85	1:00
Aug. 22	Hay River-Fort Smith	249	2:35
Aug. 24	Fort Smith-Fort Vermilion	270	2:45
Aug. 24	Fort Vermilion-Peace River	250	2:40
	Total	1,392	14:20

The accident caused Imperial Oil to assess the performance of its new air service. On the debit side was the cost of two expensive machines together with generous spares, the construction of the Peace River hangar and the salaries of three pilots, two air engineers and a watchman. Also, the two aircraft had been unserviceable in the north through one mishap or another for almost all of the time since they commenced operations. On the credit side was that two IOL employees had been taken north after break-up but in fact they only arrived shortly before they would have by surface transport. In addition their geologist had an hour's survey flight in the Norman Wells area which would have been a useful and time saving service.

Imperial Oil decided to terminate the flying operations and 'DP' was flown to Edmonton and placed in storage in the hangar off Portage Avenue which apparently had been rented from J.M. Larsen. The salvaged parts from 'DQ' were also stored there. 'DP' was sold in 1922 and was flown again by S.A. Thompson in British Columbia but 'DQ' never flew again although some parts may have been used for spares.

This marked the end of attempts to fly along the Mackenzie until January 1929 when Western Canada Airways made the inaugural flight of what became a regular air service to the western Arctic. This new service opened up the whole western Arctic and sub-Arctic to development and exploration and, shortly, to the finding of new mineral wealth but all this is another story.

One may ask why were all these troubles experienced after having obtained the best available aircraft and airmen? Could they have been avoided? A critical examination of known facts certainly provides one with some probable answers.

The troubles experienced during the winter flying were attributed by G.A. Thompson in 1931 to unsatisfactory skis. There is little doubt that Thompson was right as close study of the first hand accounts and photos indicate the skis were weak and of inadequate area which led to breakage and breaking through the snow crust and which led to the early accidents. Whether this could have been avoided is difficult to say but it seems that if it had been possible to get F.C. Ericson to design and build the skis a better ski might have resulted. Ericson had developed the skis used by the RFC/RAF (Canada) during the winter of 1917-18 and was the only man in Canada with ski design experience at that time.

The summer troubles seem to stem from the fact that none of the pilots had any experience on water based aircraft although all were considered good pilots - but had only flown land machines. Why at least one experienced seaplane pilot was not hired is not known - there were many ex-RNAS pilots with suitable experience in Canada.

The accident at Fort Norman to 'DP' as described by Bloom was certainly caused by an incorrectly executed glassy water landing. In fact they were fortunate that the results were not

much worse for the machine could have as easily stalled at a higher altitude or flown right into the water. Gorman apparently learnt from this, although he was not flying 'DP', for he shot three glassy water landings in 'DQ' on 20 August.

One hesitates to suggest the cause of the final accident to 'DQ' for, of course, there could be a number of contributing factors. Nevertheless, it does seem odd that a machine should be landed on a sand bar when coming into its own home base. Normally, the first thing an experienced seaplane pilot would do when establishing a new base would be to ask local river men about obstructions in the area and then avoid them by a wide margin. But they were not experienced seaplane pilots so just maybe they did not do this which would account for the accident.

The assistance of the following in providing information and/or photographs is gratefully acknowledged - the late J. Beilby, Ernest H. Buehl, the late Frank H. Ellis and Denny May.

K.M. Molson
20 Ridgevalley Cresc.
Islington, Ont.
M9A 3J6

Bibliography

- Bloom, Chester A. From Peace River to Fort Norman in 14 Hours Flying Time. *Calgary Daily Herald*, July 25, 1921.
- Bloom, Chester A. Herald's Correspondent Narrowly Escapes Death When Aeroplane Crashes. *Calgary Daily Herald*, August 25, 1921.
- Bloom, Chester A. Vast Distances of Northern Travel Cut Down by Use of Latest Metal Aeroplanes. *Calgary Daily Herald*, September 10, 1921.
- Bloom, Chester A. Aeroplane Used by Geologist to Scout Country, *Calgary Daily Herald*, October 1, 1921.
- Bloom, Chester A. Northern Airmen Battle Storms on Lakes and Rivers. *Calgary Daily Herald*, October 8, 1921.
- Bloom, Chester A. Smith Rapids Seen from Aeroplanes on North Aerial Route. *Calgary Daily Herald*, October 15, 1921.
- Ellis, Frank H. Bold Venture into a Northern Winter. *Canadian Geographic Journal*, April, 1971.
- Ellis, Frank H. Canada's Flying Heritage. University of Toronto Press, 1954.
- Ellis, Frank H. Flying Dutchman of the Skies. *Canadian Geographical Journal*, December, 1973.
- Fullerton, Elmer G. Pioneer Flying in the Sub-Arctic. *Canadian Aviation*, May, June & July, 1934.
- Fullerton, Elmer G. Pioneer Flying in the Canadian Sub-Arctic. *Imperial Oil Review*, Nov.-Dec. 1934.
- Fullerton, Elmer G. & Kemp, H.S.M. Make It with Guts and Glue. *True Magazine (Canadian Edition)*, March 1960.
- Fullerton, Elmer G. Letter to Grange, E.R. October 6, 1921. In possession of the author.
- Fullerton, Elmer G. Letter to Grange, E.R. October 15, 1921. In possession of the author.
- Godsell, Phillip H. Explorer Tells Story of First Arctic Flight. *Calgary Daily Herald*, April 30, 1953.
- Godsell, Phillip H. First Flight to North Almost Comes to Grief. *Calgary Daily Herald*, May 2, 1953.
- Godsell, Phillip H. Many Trials. Overcome in First Arctic Flight. *Calgary Daily Herald*, May 5, 1953.
- Godsell, Phillip H. Mail Flown South - 1921. Postmark, February, 1954.

Godsell, Phillip H. Pilots of the Purple Twilight, Ryerson Press, 1955.

Hill, W.J. as told to Geoffrey O'Brien. *Air Pioneers of the Mackenzie*. Canadian Aviation, September, 1932.

Jackson, F.C. Home Made Propellers Bring Back Fort Norman Planes. *The Beaver*, May 1921.

Linke, Theo. A. Fort Norman or Bust. *Imperial Oil Review*, September 1921.

Miles, Eugenie Louise. *Airborne from Edmonton*. Ryerson Press, 1959.

Mulock, R.H. Rough Estimate for Aerial Transportation - Norman to Peace River Landing. April 15, 1921. F.E. Davison File, Ontario Provincial Archives.

Thompson, G.A. First Flights on the Mackenzie 1921. *The Bulletin*, Vol. 2, No. 7, June 15, 1931.

... Flying Across the Edge of the Great Unknown. *Imperial Oil Review*, July 1921.

... The Flying Man in Industry. *Imperial Oil Review*, February 1921.

... He Carved Propellers in the Wilderness. *Winnipeg Free Press Weekly Prairie Farmer*, February 13, 1952.

... The Story of the Fort Norman Well. *Edmonton Bulletin*, March 5, 1921.

... Miscellaneous news items of 1920 and 1921 in the Peace River Record, *Edmonton Bulletin*, *Edmonton Journal*, *Saskatoon Phoenix*.

¹This is from Fullerton's account. Thompson states that fuel was put in which does not seem to be correct as the carburetor jets had to be changed to suit the lower grade fuel used north of Peace River.

²Derbyshire had worked in a garage as a mechanic where there was another Stanley so he was called "Pete" to avoid confusion and he was known as Pete from then on.

³This is from *The Flying Man in Industry*, *Imperial Oil Review*, February 1921. Myles only records one flight to Peace River with May staying there until making his return flight with the forced landing.

⁴Ernest Lloyd Janney's name crops up throughout the early years of Canada's aviation history and a biography is badly needed. In the meantime, these brief biographical notes may be of interest. He headed the Canadian Aviation Corps in 1914 and was discharged shortly after arriving in England (ref. CAHS Jour. Vol. 14, No. 4). On his return he flew W.A. Dean's Curtiss E. flying boat, "Sunfish" at Toronto and wrote it off, almost if not, immediately. Next he started a flying school in north Toronto with a second-hand Farman bought in New York. The school closed after a very few weeks. He then went to the United States where he established Janney Aircraft Ltd. which completed a small biplane. He then became a commissioned officer in the RCN and received an honorable discharge at the end of the war.

He flew a Curtiss JN-4 (Can.) into Ottawa from Toronto in 1919 and was the first to land at Uplands, now Ottawa International Airport. He then formed Northern Canada Traders. Later he formed Janney Aircraft and Boats Ltd. at Kingston, Ontario, and intended to design and build aircraft. Norman McQueen was hired to carry out the design but nothing materialized. He offered his services to the RCAF in WWII but was turned down.

⁵Hill's account states that he was to stay at Fort Simpson to repair 'DQ'. This is believed to be an error by the co-author.

⁶A.F. Camsell, H.B.C. Post manager at Fort Simpson and brother of the well known Dr. Charles Camsell.

⁷Many accounts state the boards belonged to the Roman Catholic Mission but there seems little doubt they were the property of the Hudson's Bay Company as Godsell states.

⁸While these figures are believed to be correct Fullerton stated the boards were ten feet long and seven inches wide.

⁹There is some confliction on dates here. Jackson mentions the work starting on 1 April. Fullerton mentions the propeller being finished in eight days on 14 April and tested the following day. What is thought to have happened is that work started on 1 April, the blank and checking fixture completed on 5 April and the shaping of the propeller started on 6 April and finished on the 14th.

Continued on page 61