Flying Over the Arctic for a Medical Evacuation

By Dominique Prinet

Editor's Note: *Dominique Prinet obtained his Canadian commercial licenses in 1965, and his ATR in 1970.*

He flew for a year along the B.C. coast, and then for Gateway Aviation, in Yellowknife (NWT), from 1966 to 1971, with Beavers, Otters and Beech 18s, on floats, wheels and skis. Between flights, he obtained an engineering degree from UBC and an MBA from McGill.

Dominique became VP of Nordair (Montreal) in the seventies, and joined Canadian Airlines (Vancouver) as VP Marketing in 1987. He then spent five years in Africa, turning-around and-managing the national airline Air Tanzania. He obtained his helicopter license at 70. In 2021, he published Flying to Extremes *(Hancock House), describing his adventures as a bush pilot in the Arctic during the late sixties.*

This is part 2 of his exciting story of flying over the Arctic for a medical evacuation to Yellowknife.

Before presenting part 2, please note we regret some errors in describing this story in last month's edition. Corrections are as follows:

- The Marten Hartwell story is not taken from the book Flying to Extremes. *This is an unpublished story by Dominique Prinet and does not appear in the book.*

- The caption under the image of the Beech 18 says that the story is in Flying to Extremes*, however it is not. Photo credit is to Dominique Prinet.*

- For the photo of the book cover, credit should have been to Linda Mistusi, who designed both front and back covers, and to Hancock House, the book publisher.

- Any photo credits made to Coldwater Communications should have been credited to Dominique Prinet.

A Gateway Avaition Beech 18 like the one Marten Hartwell was flying.
(Courtesy Dominique Prinet)

Marten Hatwell being taken to hopsital by the RCMP after his rescue.
(Courtesy Edmonton Journal)

The crash site, East of Great Bear Lake. The shelter is on the right; the broken fuselage of the Beech 18 is on the left.
(Courtesy Edmonton Journal)

Shelter built of sleeping bags. Aircarft seat in fron of the tent. The Beech 18 fuselage is on its left side, with part of the right wing sticking up.
(Courtesy News of The North)

The pilot always has a right to refuse or interrupt the flight, but if he does this too often, he risks losing his job and being replaced by a young innocent and enthusiastic pilot. At the beginning of my career, when I was looking for work as a pilot, I was thus offered a job regularly transporting dynamite and passengers for a mine in the Brazilian jungle. When I asked why the previous pilot was no longer flying, I was told that he and his passengers had been blown to smithereens when the 500kg of dynamite he was carrying exploded. It was put down to the local heat and humidity causing the nitro-glycerine to ooze from the dynamite sticks. I was prepared to take the job, but found another one in the meantime. If I was going to be transporting dynamite, which I did many times, I would ultimately rather do so in the coolness of the Great North.

Responsibility for an accident therefore almost always falls on the pilot, and almost never on the company. It's very unfair, and it's inconceivable that a charter company could send pilots and passengers to their deaths without suffering the wrath of the Department of Transport, on the grounds that pilots are solely responsible when they accept the plane and the flight. During the inquiry that followed Marten Hartwell's accident, Gateway Aviation, as always, explained that it had done nothing wrong: no one had forced the pilot to accept the flight; on the contrary. The managing director of the company, Doug Rae, clearly explained that he had just recently reminded the pilot to "be careful and only do visual flights in the daytime". In the Arctic and in winter? That would mean staying grounded for six months without pay, or rather getting fired after a week! Just before Marten Hartwell, the company had hired an Australian pilot. He had killed himself and his passengers in a Beaver after three months, when he crashed into a hill in bad weather about 100 kilometres from Yellowknife. Again, it was the pilot's fault: he had been asked to make the flight, but he should simply have refused.

I myself suffered 13 engine failures in November and December 1969 on scheduled flights between Yellowknife and Fort Smith with that same Beech 18 or one or two other planes of the same model and operated by the same company, due to carburettor icing in one or the other of the engines while flying near Great Slave Lake. I had to cross the lake in both directions while it was not yet completely frozen, with about ten passengers every time. I eventually decided to cut one of these flights short when I lost the first engine ten minutes before arriving in Fort Smith. We landed normally with one engine. After the stopover, both engines started again without any problem, but I then lost the second engine shortly after take-off. With engine failures having occurred on both sides, things were getting risky, so I promptly turned around and returned to Fort Smith. During the return trip, the first engine also decided to stop. We glided down silently right onto the runway centre line, and the landing was actually very pleasant for everyone as there was no turbulence and the flight was very quiet. The passengers were delighted, though they regretted that the flight had to end there, and no one asked any questions.

Once we were on the runway with both propellers stopped, I had to wait ten minutes for the ice in the carburettors to melt and to get the engines started again to clear the runway and get to the ramp. The mechanic and the manager of the Yellowknife base I had come from were fully aware of the problem, which had been going on for weeks. But without a hangar, go try fixing an engine at night in minus 40ºC weather! Had we crashed in the forest or into Great Bear Lake, I would have been solely responsible: no one had forced me to fly.

On another regular winter flight with a Gateway Beech 18, the windshield de-icer worked only slightly on the right, clearing a tiny vertical ellipse. The windshield was completely covered in frost but for a small opening in front of the co-pilot seat. When we were trying to land on the gravel runway at Fort Resolution, on the south shore of Great Slave Lake, I was directed by the kind passenger on my right, who was happy to be of service. He was leaning forward, peeking through the small hole: "a little to the left…", "a little to the right…", "about 800 metres…", "a bit more to the right…", "400 metres…". I kept the altitude at about 15 metres above the fir trees by looking down to the left, in front of the wing, until I saw the edge of the airport pass by. Had we hit a fir tree, I would have been solely responsible.

Marten Hartwell was flying in similar conditions, with the same type of aircraft from the same company, but he had much less experience. Shortly after the search was called off, his adventure took a spectacular twist. At the insistence of the organisation Inuit Tapirisat ("Inuit Brotherhood"), friends of Marten Hartwell and, most importantly, the father of his friend Susan Hartley, a math-

Continued on Page 25

Flying Over the Arctic for a Medical Evacuation

Continued from Page 24

ematics professor at Acadia University, the search resumed after a few days. On 7 December, a military aircraft on a regular flight from Inuvik to Yellowknife that was totally unrelated to the search picked up a distress beacon signal. The Hercules changed course to better determine its origin, but the signal quickly stopped. The next day, two Hercules from the new search team flew around the region, completely outside all previous search areas, but heard no signals. On the third day, 9 December, a Hercules picked up the signal again, sustained for longer this time, and eventually spotted Marten Hartwell waving a red rocket flare in front of his tent next to the wreckage of his plane, south-east of Great Bear Lake, 300 kilometres away from the direct route from Cambridge Bay to Yellowknife. Another Hercules immediately dropped paratroopers in a small nearby clearing. It took them an hour wading through the deep snow to reach the wreckage of the Beech 18.

Marten was the only survivor. He told his story: Nurse Judy Hill, who was sitting in the co-pilot seat, had been killed on impact. The Inuit woman who was about to give birth died within a few hours. The 14-year-old Inuit boy, David, had some bruises but was not injured. As for Marten Hartwell, both his ankles and one of his knees were broken, which completely immobilised him.

Under Marten's direction, David, the young Inuit, had built a tent structure with pieces of fir tree, and covered it with the tarpaulins used to protect the engines. They had five sleeping bags on board. David starved to death after three weeks; Marten survived from the nurse's flesh. As he had a poor understanding of his distress beacon's functioning and how to operate it – he in fact had additional batteries, – he'd only activated it for brief moments, and only on the rare occasions when he heard an aircraft in the distance.

During the flight, he was unable to pick up the Yellowknife beacon which was still too far away, or even the nearby but far too weak Contwoyto Lake beacon, so he'd decided to descend from 1,200 metres to 700 metres above sea level to "better pick up the signal". Instead, he should have gained altitude. Off to his right and close to Great Bear Lake, he hit the top of a hill.

This story made headlines all over the world. It was around the same time that an F27 crashed in the Andes, on a flight from Montevideo to Santiago, with a rugby team and their friends and families on board. Of the 45 passengers, 16 were recovered after 72 days. They too had survived by consuming the flesh of the passengers who'd died in the accident.

Marten Hartwell's rescue was followed by an inquiry that began on 11 December in a hangar at Yellowknife Airport, was put on hold, and resumed on 26 February after further delays. Along with the men in charge of the judicial inquiry itself, several representatives from different branches of government were present: the Mounted Police, The Department of Transport, the Government of the Northwest Territories, and the federal Department of Justice. There were also representatives from the Inuit Tapirisat. The inquiry was led by Walter England, and the jury was comprised of six local men, five of whom had ties to aviation, including several pilots such as Rocky Parsons, Bob O'Connor and Dunc Matheson. Marten Harwell was represented by lawyer Brian Purdy from Yellowknife.

The jury concluded that Marten Hartwell was not qualified for the flight and should have turned it down, and that the aircraft did not have the mandatory navigation and communication instruments or that they were not functioning. The jury also recommended, among other points, that the small beacon on Contwoyto Lake, halfway between Cambridge Bay and Yellowknife, be more than doubled in power, from 400 to 1,000 watts. This beacon was of virtually no use: small commercial aircraft on wheels, skis and floats operating at relatively low altitudes barely picked up signals from the beacons within a 10km radius.

Naturally, Marten should have refused the flight, and the patients should have been sent to Yellowknife that very evening, either in the Twin Otter that was already in Cambridge Bay or in the DC3 operating NWT Air's scheduled flights a few hours later. He should also have gained altitude to better pick up the signal from the Yellowknife beacon. With that being said, he was certainly influenced by insidious factors. First, at such high latitudes, gyrocompasses theoretically precess by a dozen degrees to the right every hour on a southbound (or northbound) flight, so that after three hours of flight his gyrocompass would have been steering him nearly 30 or 40 degrees to the right of his route. Second, the setting sun was just below the horizon to the west, and the sky was therefore relatively light to his right; conversely, everything was dark to his left. The appeal of light is very powerful, and a stressed pilot would naturally tend to turn at least slightly to the side of brighter skies. What's more, the tundra, pitch-dark at night and offering no landmarks from above, was to his left, whereas the forest, above which it's much easier to navigate because one can identify the white lakes from the dark forest, was to his right. A pilot will obviously tend to drift towards an area where he can find his bearings, even if it means correcting the trajectory later on. I'd actually shared these suggestions with the search leader, who, accordingly, sent out a Hercules the next day to spend eight hours west of the direct route, but nothing was found. It should have searched even further.

Marten recovered soon enough, after a few sessions of surgery to break his legs again and straighten them back into shape. He got his license back, and started flying again less than two years later in Fort Norman on the Mackenzie River, west of Great Bear Lake. He was well accepted and respected by all, especially the indigenous Dene people, as he sometimes took risks to help them when they were stranded in the forest. In October 1987, in the snow and in very bad weather, the pontoons of his floatplane hit a fir tree as he was returning to Fort Norman after taking fresh supplies to a trapper. He was only slightly injured and was picked up after walking in the forest for two days. His return to Fort Norman was a joyous celebration.

Author's Note: *I accompanied Marten Hartwell once or twice in an Otter on floats, and found him to be a very good and conscientious pilot.*

Cambridge Bay, on Victoria Island (Canadian Arctic) where the Marten Hartwell flight started.
(Courtesy Dominique Prinet)

Typical scenery along most of the route between Cambridge Bay and Yellowknife.
(Courtesy Dominique Prinet)

Yellowknife, on Great Slave Lake, the intended destination of the Marten Hartwell flight.
(Courtesy Dominique Prinet)

The autor with a Gateway Aviation Otter along the Arctic coast, a year before the time of the Marten Hartwell crash.
(Courtesy Dominique Prinet)