

CAN'T believe the cold. It's an icy, deep cold that saps the last spark of warmth from every bone in my body. The thermometer on the windscreen shows -38°C but to prevent my breath from freezing on the inside of the plexiglass I have to fly with both windows open. I'm in a down suit and jammed into my seat, able only to wiggle my toes and fingers. A 10-knot breeze is whistling through the cockpit of my helicopter, giving a chill factor of -60°C on my face, the only exposed part of my body, and I can feel my nose becoming frost-nipped.

I am at 10,000 feet - more than three kilometres high - above the Canadian Arctic. In the past nine exhausting days I've flown over 3000 nautical miles and seen the occasional cities of southern Canada give way to the isolated outposts of the far north. And all the time the temperature has fallen steadily, until now it's like living in a deep-freeze day after day. Below me, under a blanket of cloud, are the mountains of Ellesmere Island. Here and there a snowbound peak thrusts through the cloud 2000 ft below. I have no idea what the terrain under the cloud is like but I do know that if my engine fails I will have very little chance of landing safely. I think back to the highly suspect fuel I loaded into my tanks an hour ago from a rusty drum left for me at a remote lake. If there's water in the fuel the little Allison engine will cut out and there will be no way to restart it. The thought makes me shudder.

FOOTNOT

The nautical mile (1 nm = 1.852 km) is the standard measure of distance in eviation as well as at sea. Heights in aviation are measured in feet. To conform with this, non-metric measurements have been used in this article where appropriate. In addition, fuel capacity in this instance is measured in US gallons (1 US gallon = 3.79 litras).





Over the past 20 minutes my two still cameras, my radios and my navigation instruments have failed one after the other in the cold. First a red light flashed to tell me the Omega navigation unit was not giving accurate fixes. Then the high-frequency long-range radio failed, followed by the other two radios, which stopped transmitting. I take my hand out of its glove to try changing the frequency on one of the radios but find that my finger sticks to the knob. When I pull it away some skin is torn off and it begins to bleed.

My magnetic compass indicator swings lazily – because I am more than 300 nautical miles north of the North Magnetic Pole it just wants to point straight down – and as I lean forward to adjust the gyrocompass I

Left: The remote coastline of Ellesmere Island on the edge of the Arctic Ocean slips past only 500 feet below me. I usually fly at this height above terrain so as to be able to see animals and navigate more easily.

Landing to obey a call of nature on the coast of Ellesmere Island, I notice a figure approaching. To my alarm I discover it is a polar bear. I leap into the cabin and get airborne in 40 seconds, snapping these pictures with a standard 50 mm lens. In the inset photo the bear is 20 m away.

notice that it too is misreading, which means that from now on I must navigate by dead reckoning.

The frozen land I am flying over is one of the remotest and least populated areas in the world. This, combined with all the equipment malfunctions, intensifies my loneliness and deepens my gloom. But the final blow comes when one of my movie cameras, the faithful companion I pour out my problems to when I'm in the air, goes the way of the other instruments: the film, made brittle by the cold, snaps in the sprockets.

A knot of terror tightens in my stomach as questions whirl in my head. Will the cloud clear by the time I get over the mountains? Should I keep going or should I turn back? My destination is Ward Hunt Island, just off the coast of Ellesmere Island and the last stepping stone for many polar expeditions in the past. There I will refuel before heading out across the frozen Arctic Ocean in a bid to become the first person to fly solo to the North Pole in a helicopter. What if the cloud doesn't clear? What if I can't find the island?

I decide to push on and 10 minutes later descend, hoping I've crossed the mountains. In a moment I find myself flying in ice fog. The little engine of my Bell Jetranger helicopter Delta India Kilo (from its Australian registration letters VH-DIK), which has already carried me 35,000 nm around the world, is singing away faultlessly. As I drop into the shroud of fog I find myself pleading: "Delta India Kilo, don't fail me now!"

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CHALLENGE OF THE POLE

It was the challenge of the region's remoteness - the very quality that is now demoralising me so much - that attracted me to it in the first place. The North Pole has long been a goal for explorers and adventurers but as far as I knew no one had tried to get there solo in a helicopter, mainly because no helicopter has the range. After my 1982-83 round-theworld flight I used little Delta India Kilo to get me to work and back or on family camping trips, but the urge to go on another great solo adventure soon became too great to resist. I can only explain this urge for adventure as a deep-seated need for challenge. It's a need that other adventurers understand well.

Once I had decided on the North Pole, one of my biggest tasks was to fit extra fuel tanks, boosting the aircraft's capacity from 93 to 240 US gallons and increasing its range from 350 to 900 nm. Delta India Kilo's garage under a bedroom of my Terrey Hills home became my workshop. There I worked late into the night for eight weeks, modifying it and stripping it of every superfluous screw, panel and piece of lining to reduce the weight. The weight factor made it impossible to have a heater in the cockpit; Delta India Kilo would need all its spare weight capacity to carry the fuel for the great distances involved. Even so the helicopter would be 10 per cent overweight when fully laden.

There were some items, however, that I could not forgo. These included sleeping bag and tent, cooking stove, emergency locator beacon, life raft, map cabinet and cameras. It was going to be a tight squeeze.

Planning and paperwork took 12 months. I needed the approval of the Department of Aviation in Australia to fly overweight and that of the Department of Transport in Canada to make the attempt. Maps had to be bought, contacts in Canada made,

The icy junction of the Slave and the Peace Rivers, which were the lifeblood of Canada's north in the days of the trading canoe, pictured from 1000 feet as I fly towards Great Slave Lake. Little do I know that the beautiful weather is about to break.

transportation of Delta India Kilo by ship to Vancouver arranged, navigation equipment to be bought and tested.

I was advised that the best time of year for my attempt would be April when the Arctic is relatively free of the fogs that arise in midsummer and the ice is still thick enough to land on. However, April up there is still cold. Exactly how cold I could not have foreseen.

I took off from Vancouver on 6 April 1986 with 3500 nm between me and Ward Hunt Island. My wife Pip, who was acting as ground support, would fly in scheduled or chartered aircraft to points where she could meet me, helping with flight planning and weather forecasts and arranging service for Delta India Kilo.

I headed north in beautiful weather over a landscape that was throwing off the cloak of winter. But the good conditions were not to last; I was about to experience Canadian cold for the first time.

It happened as I was flying over Great Slave Lake towards Yellowknife, capital of the Northwest Territories. Half-way across I ran into freezing rain that instantly coated the windscreen. I was flying with both windows open and was able to put my hand out and scrape the ice off with an empty film box. But this didn't help much. Soon I was in driving snow that cut visibility almost to nil at times, threatening total white-out. I slowed right down and dropped to 40 ft above the frozen lake, looking out of the win-

dow for a spot to land. I had no idea how thick the ice was but, having seen it melting farther south, I feared it would be very thin indeed. I tried to contact someone on the radio to find out about the ice, without success. But there was no choice now: I had to land.

I was hovering at 10 ft, the wind driving ice crystals horizontally past me at 20–25 knots. I just couldn't believe this was happening to me. It was absolutely terrifying. As I touched down I bounced Delta India Kilo up and down on the ice to test it. It seemed solid enough, so I set the helicopter down. The ice held, but I kept the engine running just in case.

The temperature was about -15°C, with a chill factor of -40°C in the howling wind. I jumped out, grabbed my life raft and waited on the ice, miserable and frozen, expecting the helicopter to sink through the ice into one of Canada's deepest lakes. At one point the helicopter gave a lurch as it settled into the surface snow. It was a heart-stopping moment.

I finally managed to contact Inuvik, more than 300 nm to the north, and was told the ice was at least two metres thick and quite safe. Fortunately, two hours later, the weather improved enough for me to take off and fly back to Fort Resolution, on the south side of the lake. My taped commentary that day says: "It's at times like this that I think I really shouldn't be doing the flight. I'm just so lucky the helicopter worked perfectly and

White-out conditions force me down in the middle of Great Slave Lake. Not knowing how thick the ice is, I place my life raft outside in case the helicopter breaks through into one of Canada's deepest lakes. With visibility down to 100 m and the 20–25-knot wind giving a chill factor of -40°C, I wait, miserable and frozen, until the weather improves. I discover later that the ice is 2 m thick and quite safe.





that the ice was thick enough to hold its weight."

The tyranny of temperature was to rule my life from there on. I would have to remember that if I left Delta India Kilo standing unprotected in the cold for more than an hour it would be impossible to start. Indeed, at Fort Resolution I had to buy two hairdryers to heat the engine oil, which had become as thick as molasses overnight, before I could get into the air again. It was ironic that I bought them from the local Hudson Bay Company store; the company was trading there when British explorer John Franklin returned to Fort Resolution after his tragic 1825-27 expedition to the mouth of the MacKenzie River and beyond.

When I eventually reached Yellowknife, where Pip was waiting for me, I borrowed a heater with a long cable that could be plugged into power points specially provided even in the remotest settlements to keep aircraft engines warm. Local pilots helped me modify Delta India Kilo's battery brackets to enable me to remove the battery every night and bring it in from the cold. I also replaced my normal grade oil (rated to -30°C) with a special lubricant capable of operating in -50°C and costing \$10 a litre. A quilted engine cover and 'bear paws' - snowshoe-like attachments for the skids - completed my winter kit.

Just as much as the cold, the physical burden of flying a helicopter solo in these conditions caught me unawares. Not only was the job of flying Delta India Kilo on my own laborious and exhausting, but getting the cover on and taking the battery out at night, usually in sub-zero temperatures and often in driving snow, were exacting chores, especially without help. And always, when that was done, there was the next day's flight plan to work on. It needed total self-discipline not to fall straight into bed.

Soon after crossing the Arctic Circle 240 nm north of Yellowknife on 11 April, the sixth day of my

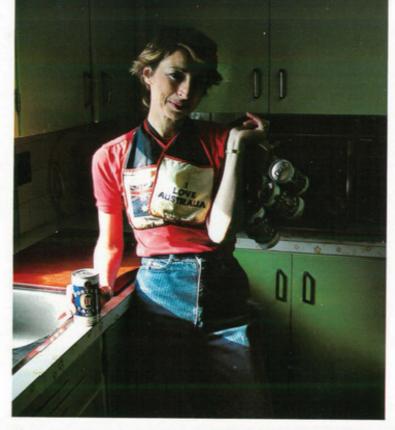


Above: If I don't remove the battery every night to prevent it from freezing, it won't start the helicopter next day. I'm in the down suit worn by AG editor Howard Whelan on Mt Everest. Below: I reach Yellowknife (pop. 9500), capital of the Northwest Territories, four days after leaving Vancouver, having flown 1375 nm. Pilots there help me 'winterise' Delta India Kilo.

journey, I left the tree-line behind. Bringing Delta India Kilo sometimes down to 100 ft, I had a close look at the wildlife: caribou, musk oxen, Arctic hares and wolves. Flying a helicopter is an incredibly exhilarating experience – like riding a magic carpet.

In Resolute (population 170), still more than 1000 nm from the Pole, Pip and I met Madras-born Bezal Jesudason, 44, and his wife Terry, who run High Arctic International Explorer Services, a staging post and logistics service for expeditioners and adventurous tourists. While Pip and I were there, Bezal and Terry's house was a hive of activity: a party of adventurers had just arrived and a radio operator was stationed there to keep track of solo French walker Jean-Louis Etienne, who was on his way to the Pole. Two other expeditions were also under way, one led by my friend, British adventurer Sir Ranulph Fiennes, and the other by American Will Steger.

From here on there would be little, if any, fuel available so I chartered a Twin Otter aircraft to fly fuel to Ward Hunt Island and to a point 206 nm out on the ice towards the Pole. My plan was to fly to Ward Hunt via Alert but as it turned out the weather at Alert forced me to divert to Lake Hazen on Ellesmere Island to refuel.



Above: Ex-Melbumian Michelle Aneroluk left Australia 10 years ago and married an Inuit, Tom Aneroluk, of Cambridge Bay. She gives me a welcome meal when I land there. Below: Adventurers at the table of Bezal Jesudason in Resolute. Pictured (left to right) are: myself; Masako Izumi, an actress who tried to skidoo to the Pole; Bezal; Mitsuro Oba, who walked to the North Magnetic Pole; Mike Dunn, Michel Franco and Martyn Williams, all adventurers.







Above: Lawrence 'Flo' Howell tries to warm my cabin on Ward Hunt Island with a stove, fixing a pot on it with wire so that the heat doesn't damage the plexiglass above. The result is a film of ice on the windscreen. Below: Scraping ice off the outside with my navigation protractor.

ACROSS THE MOUNTAINS

The ice fog envelops me as I descend. It's like flying in a bowl of milk. No horizon to fix my eye on, nothing. I keep repeating my plea: "Delta India Kilo, don't let me down now." Then suddenly I distinguish features through the plexiglass beneath my feet. They appear to be ridges on pack ice. If they are, I've made it across the mountains.

With relief surging through me, I lose more height and in a moment glimpse high mountains to my right. I'm sure this is part of Cape Columbia, the impressive outcrop that inspired Australian aviator Sir Hubert Wilkins on his 24-hour flight from Cape Barrow on the northern Canadian mainland to Spitsbergen in 1928. Sir Hubert saw the cape after 13 hours in the air. "It was a fleeting glimpse we had, but served to stir deep emotions," he wrote later.

Stirred no less myself, and knowing that Ward Hunt is not far away, I head in its vague direction, navigating by dead reckoning, and land there at 11.25 a.m. on 15 April after one of the most frightening and most exciting flights of my life.

Even with the North Pole only 430 nm away, I can't rest now. In the -30°C temperature at Ward Hunt the engine has to be started every 1½ hours to prevent it from freezing and this, coupled with the knowledge that the weather might close in at any time, persuades me to press on immediately.

Sir Ranulph Fiennes, 100 nm out on the ice, has left his radio operator, Lawrence 'Flo' Howell, on Ward Hunt to maintain communications. Using Flo's radio I tell Pip at Resolute to fly up with the Twin Otter. I decide to refuel here and then fly in tandem with the Twin Otter, land on the sea ice about half-way to the Pole and refuel again before heading on alone. Although with Delta India Kilo's 900 nm range I should have just





enough fuel for the 860 nm return journey, I might run into headwinds that could cut into my safety margin. The refuelling stop on the ice is my return ticket. But still I have deep doubts about going on in this bitter, demoralising cold, especially with my equipment out of action.

While waiting for the Twin Otter, Flo and I try to warm the cockpit with one of his kerosene cooking stoves. Although we succeed in getting the radio and navigation equipment going again, the heater creates moisture that freezes into an opaque film on the inside of the windscreen and I have to spend hours scraping it off with my protractor.

After four hours the Twin Otter arrives and I take off shortly afterwards, so heavily loaded that the helicopter struggles to lift off. Pip tells me later that this was the most nerveracking part of the whole venture for her. "I filmed the take-off to keep myself busy. Otherwise I'd watch and think, 'Will I ever see you again?"

and get terribly emotional and burst into tears."

Almost as soon as I'm in the air I'm worried. Visibility is down to 200 m in places and though I have radio contact with the Twin Otter, which took off 20 minutes after me, I can't see it. The cold is indescribable. My taped commentary says: "I think the only way to get to the Pole by helicopter is with lots of staging camps and fuel drums. And I think you've got to go with a helicopter that's properly heated."

I'm skimming along at 100 knots about 100 ft above the pack ice through patches of ice fog and snow. To make matters worse, the windscreen has iced up completely and ice starts to form on the tail rotor. I'm depressed and worried. I feel I should never have taken off from Ward Hunt when I did. Then, with a familiar creeping horror, I notice that my gyrocompass has gone completely crazy, forcing me to rely on the Omega. Needless to say my magnetic compass is

Above: Flying south from Ward Hunt Island at 10,000 feet I look across at the Twin Otter that brought my fuel. Frozen to the bone in my unheated cockpit, I think enviously of Pip in the Otter's warm cabin. Below: Making my sun compass out of cardboard and a ball-point pen before leaving Resolute.



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useless so close to the magnetic pole.

After 25 minutes and about 50 nm from Ward Hunt, the Omega begins to give some very suspicious readings. And now, one by one, the other instruments fail too. As I stare at them I realise I have arrived at a crucial point in my journey. Do I go on, putting at even greater risk not only my life but also the lives of others who might have to rescue me, or do I abandon the attempt?

In the end the decision is not difficult to make. I reason that conditions are so terrible that it would be sheer stupidity to carry on. And though there are risks for me, I worry more than anything about Pip and my daughters, Hayley and Jenny. Besides, I have seen so many incredible sights on my journey to this point (83°58' North) that the prospect of battling on over the monotonous ice does not entice me at all.

So, 362 nm from my goal, having covered 3437 nm from Vancouver in 341/2 hours spread over 10 days, Iradio the Twin Otter that I'm turning back. Deeply disappointed despite

the logic behind my decision, I head south again.

I resort to a sun compass consisting of a ball-point pen stuck into a piece of cardboard to guide me back to Ward Hunt. As my tape says: "It seems incredible to have \$100,000 worth of electronic equipment and ending up just using a cardboard compass which is like a sundial in reverse . . "It strikes me that even if I'd reached the Pole I wouldn't have known I was there.

Beaten by the weather and failing equipment so close to my goal, I vow to come back later in the year when temperatures are higher. Detouring to the North Magnetic Pole, I eventually reach Resolute on 17 April, put Delta India Kilo into storage and fly home by scheduled airline with Pip.

Under this metre-thick ice there's nothing but water - 900 m of it. I'm at the North Magnetic Pole where it's -28°C and the wind is blowing at 15 knots, giving a chill factor of -53°C. The tattered Australian flag I'm holding was flown on the 1984 Everest expedition.

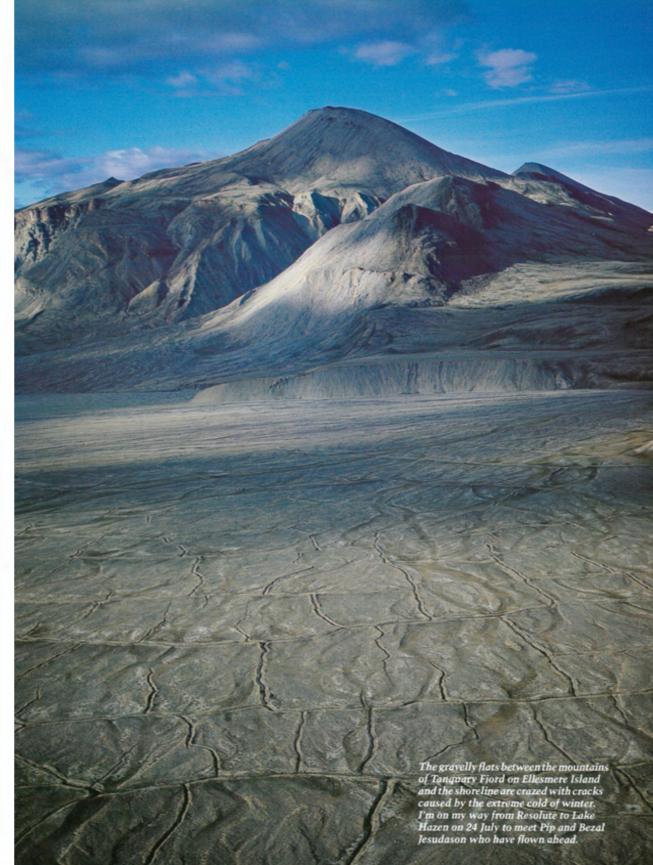
MY SECOND **ATTEMPT**

I'm staggered by the thickness and extent of the fog when I return to the Canadian Arctic in July. There's 24hour daylight at this time of the year and the temperature, which is hovering around zero, is much more bearable. But the fog, which forms when pack ice melts and relatively warm air comes into contact with cold water, poses a potentially far more serious threat than the cold.

The fog is thickening on 27 July when, leaving Pip and Bezal Jesudason in an abandoned scientific camp at Lake Hazen to man my radio relay station, I fly 80 nm north-east to Alert. After refuelling I fly along the north coast of Ellesmere Island over melting pack ice. The fog is bad and visibility is down to 100 m in places.

At Cape Columbia, 75 nm from Alert, I land beside a signpost erected on the spot from which Robert E. Peary set out in 1909 to become the







first man to reach the Pole. The signpost bears the names of polar explorers and the dates and directions of their expeditions. It is extremely moving for me, on the verge of my attempt to follow in the footsteps of those Arctic pioneers, to stand where they must have stood and to have with me in this bleak and lonely place my little helicopter which normally shelters under my Terrey Hills home.

At Ward Hunt, 30 nm farther on, I find the drums left behind in April are floating in the water – when ice covered the area we couldn't tell where land ended and sea began – but fortunately I'm able to refuel from others nearby on land. With its full load of 240 US gallons aboard, Delta India Kilo is once again grossly over-loaded and only just manages to get airborne.

The prospect of flying 860 nm across this remote and hostile icecovered ocean now entirely devoid of people intensifies my already profound loneliness as I head due north. My worries increase as I find myself having to deviate around fog banks. For one nightmarish hour I try flying in the 50 ft gap between the base of the fog and the 50 ft high pressureridges on the ice. This is miserable and possibly dangerous - flying. I try to contact Pip at Lake Hazen but noisy static is the only reply I get. I'm a loner at heart, but solitude is a two-edged sword and sometimes it's good to talk to someone about one's problems. Pip's company on my ventures has provided all-important relief from despondency.

After four hours of extremely arduous flying an amber light flashes on the control panel, telling me the generator has failed. My heart sinks as memories of all the equipment failures of my first attempt flood back; I have a creeping suspicion that my hopes for a trouble-free flight are about to be dashed. Though I might be able to reach the Pole - only about 45 minutes away - without a generator, a weakening battery means that I cannot trust the Omega, so I will have to rely on the gyrocompass. But there's another problem: the gyro is not reliable unless it is reset every hour against the sun compass. The biggest catch of all is that the sun is hidden by fog.



Above: In the clear, cold (-30°C) April air it takes me an hour to pump fuel from this drum left near Johns Island on Lake Hazen. Below: Placed on what I thought was solid land on Ward Hunt Island in April, this drum is floating in a melt pool when I return in July.



Below: Litter left by previous expeditions on Ward Hunt Island is being gradually airlifted out by the Canadian Government. The hut was used as a research base during the International Geophysical Year (1957–58).



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Above: Fog. the biggest hazard in the Arctic in July, gives me a ceiling of less than 600 feet as I fly over the melting ice of the Arctic Ocean towards Cape Columbia, the northernmost point of Ellesmere Island and the American continent. US Navy officer Robert E. Peary set off from here in 1909 on his expedition to the North Pole. A glimpse of the cape inspired Australian aviator Sir Hubert Wilkins on his 24-hour Arctic flight in 1928. Left: Ice, ice everywhere . . . The Arctic, unlike Antarctica, is a frozen ocean, with ice 1-2 m thick. This is my view from 500 feet, hour after hour on my flight north.



Once again I find myself totting up the options. If Igo on I might not make it back to land because I might have used up my spare fuel dodging fog. I would have to land on ice and await rescue. But at this time of year the ice is breaking up, with 'leads' (lines of ice-free water) appearing everywhere, making it impossible for a fixed-wing aircraft to land. Obviously no ship would be able to reach me and no helicopter would have the range, so any rescue attempt would be extremely difficult and unbelievably expensive.

But above all there's my deep reluctance to be rescued. I have always been very fortunate and prided myself on my self-sufficiency and the fact that I have never needed outside assistance on my solo flights. Besides, if something did go wrong the Australian media would pounce on it and blaze it across the front pages.

My worries have overwhelmed whatever exhilaration I felt when I set out on this venture. And to cap it all I have lost radio contact with Pip, over 400 nm away on the other side of the Ellesmere range.

So, apparently out of touch with my base and unsure of my exact position, I abandon my venture about 90 nm from the North Pole. Feeling miserable, but relieved to have made up my mind, I head back south, using only my inaccurate gyro to guide me across this forbidding wilderness of ice and water.

Three hours later, at 11 p.m., I lose the battle against the ice fog. Having flown 750 nm in miserable conditions - more than the distance from Brisbane to Adelaide - non-stop in seven hours and 23 minutes I am forced down on to the Arctic ice while still about 60 nm from land. I put up my tent and prepare to wait for the weather to improve. I have no idea how long this will be - maybe two hours, maybe two weeks. Crawling into my sleeping bag, I try to get some rest but the ice is moving constantly beneath me, creaking and cracking, making sleep impossible. Nightmare visions of little Delta India Kilo slipping into icy water 2 km deep fill my

Above: Rising ice fog ahead spells danger as I speed towards the Pole at 105 knots over the remote Arctic Ocean. Fog forms when pack ice melts and relatively warm air comes into contact with cold water. It makes flying highly dangerous and in the end, with failing equipment, I turn back. Right: Forced down by fog on the Arctic Ocean, I land on the ice by a frozen melt pool, pitch my tent and cook myself a cup of soup. Then I lie in my tent, cold and miserable, perhaps the loneliest person in the world, listening to the ice creaking beneath me, the life raft in its yellow case at the ready.

head. Unsure of my position, I send messages on my radio, hoping someone will hear. But the sound of static is the only reply.

Just before 3 a.m. the ice starts to break up. I grab my life raft and clutch it to me as I leap into Delta India Kilo's cabin, expecting the worst. But miraculously, within minutes, the fog thins enough to let me get a sun sight. After two minutes of calculations I





take off, reaching Ward Hunt Island 1½ hours later with only 20 US gallons of fuel aboard. I realise that if I'd gone on to the Pole I would have run out of fuel way out on the ice.

Having had no sleep for 35 hours, all I want to do at Ward Hunt is climb into the abandoned research hut and crawl into my sleeping bag. It doesn't matter that I've failed, that maybe I shouldn't have attempted this crazy adventure, that I've decided never to try again. The main thing is that I'm off the ice and can rest in safety.

Next day I wake refreshed and not only happy at the prospect of rejoining Pip at Lake Hazen but also thinking more clearly about my North Pole attempts. As I take off and fly along the coast towards Alert, I'm busy reviewing what I have achieved. Satisfied, I decide that twice is enough – I won't have another go at it.

Or will I ...?

Above: Summer frees Lake Hazen's mountains of their white cloak, but away from the shore the 65 km long lake remains frozen. Below: In a tent by the lake, Pip mans the radio while 400 nm away I head for the Pole, unable to hear her. Right: Ward Hunt Island squats in the distance as I fly over a mosaic of melt pools in the ice of Disraeli Fjord.



Dick Smith would like to thank the following for their assistance on his North Pole attempts: QANTAS and Collins Avionics, who supported his world flight so well and who once again gave their support; Mr Ed Schreyer, the Canadian High Commissioner to Australia; Major Bob Biggin, Canadian Forces Communication Command; Mr Bob O'Connor of Aero Arctic Helicopters at Yellowknife; Bezal and Terry Jesudason of Resolute, and Pip Smith.

