2000Km by Ray Lynskey

On 14th December 1990 Marlborough Gliding Club member Ray Lynskey flying his Nimbus 2 Golf Lima Alpha became the first glider pilot to acheive 2000km non stop. In fifteen hours his marathon flight took him from Blenheim's Woodbourne airport to his southern turn point of Lumsden (in Southland), then north up the Southern Alps and onto the North Island to his most northerly point near Wairoa in Hawke Bay. From there he returned to Blenheim after some 15 hours of flying covering a total of 2026 km. His average speed was 135km/hr at heights of up to 28,500ft . As part of this epic journey he crossed the notorious Cook Strait twice in one trip. Ray went on to become World Champion at the 1995 Worlds held at Oamarama in southern part of the South Island.
This competition is featured in the video Champions of the Wave.

This is Ray's account of this record breaking flight.

The soaring season had started well in the South Island, but November arrived and surprised everyone with its low temperatures and frequent heavy rain. The westerlies which followed in early December were very disturbed, ruling out long flights but often providing excellent soaring conditions for relatively short distances.

On Saturday the 8th of December a moist north—westerly flow spread onto New Zealand, giving heavy rain on the West Coast and hot dry Foehn conditions to the east of the ranges. This heat wave lasted about 5 days, scorching eastern plains while ironically rivers fed from the high country were in flood, closing some roads. Rain spread east off the mountains at times with the passing of each front, but dried out quickly.

On the evening of December 13 the forecast indicated that the wind had generally backed further to the west, and appeared to be less disturbed by fronts than had been the case previously during this weather system. An active cold front was not due to move onto the South Island until later on Friday. It looked a possibility for a 2000 kilometre attempt, so we raced around getting rigged and making the usual preparations for an early start.

Up at 0430 on Friday morning, the wind was blowing at about 10-15 knots north-west, and first light at Woodbourne showed 2/8 stratocumulus on the tops and some scruffy roll cloud in the Waihopai Valley, but no high cloud or lenticulars. It was worth a go.

We were airborne at 0600; Jamie Halstead seeing me off and John Sinclair towing in the old Cessna 172. We really appreciated the length of Woodbourne’s runway as the Cessna worked at getting the heavy Nimbus into the air.

Releasing overhead the field at 3000 feet, I headed directly for the ridges to the south, following a vaguely marked wave which allowed a slight climb. I was then able to climb slowly in ridge lift and turbulent wave—induced thermals to 4000 before moving across to the western end of Blarich and climbing to 6000. Normally from here the choice is to drop downwind into the Awatere wave or follow the ridges further west, but the best option appeared to be to head straight north-west to the roll cloud in the Waihopai and hope to get there high enough to contact the wave. I actually reached the rough lower part of the wave at 4000, and thermalled back to 6000, straightened up into wind and climbed rapidly, at up to 8

knots, until lift weakened markedly at FL 140. Looking to the south, waves were marked by lines of cloud which were more like stratus than roll cloud, but it looked reasonable. It took about an hour to get established in the wave.

The wave clouds were aligned more to the west than north-west, and did not parallel the upwind ridges. I flew south just west of the Awatere, descending to 10000 before climbing to FL 150 over the Acheron River. Continuing on, I hoped that conditions would be stronger to the south, allowing a higher average speed

My track took me east of Hamner and out over the Culverden Basin, remaining between FL 120 and FL 170, but it was not possible to cruise fast in steady lift for very long. Alas I was forced to stop and climb frequently.

Entering Lees Valley heading up slowly through FL 165 above all the cloud except some cirrus. Suddenly I flew into violent clear air turbulence. This unnerving and very unpleasant air took me by surprise and for a few minutes the cockpit was a mess with all sorts of things flying around. I immediately slowed down but it was impossible to hold any set speed - it was fluctuating between about 40 and 90 knots. This "rolling" turbulence made it difficult to descend, and in fact I was climbing. 1 guessed that it was the shear between 2 different wind velocities or interference between a higher and a lower wave system. Whatever it was, I just wanted to get the hell out of it. Back down at FL 150 it was smooth again.

I followed small wisps in the lee of Torlesse and Hutt, and climbed in quite strong lift to FL 210 at Mt Somers. This bit was good and it looked like an easy glide to an obviously active roll cloud in the north Fairlie Basin. I misjudged this and ended up using weak lift at 11000 behind the Ben McLeod Range to avoid getting stuck. This slow climb was frustrating, but I needed it, and as soon as possible left it for the growing roll cloud further south. It looked great, and as I sped off towards it I expected to pull up into at least 10 knots. But no Nothing. Another small wisp forming further upwind. Off again, flat out. This time yes!

Reducing speed in anticipation I flew just over the top of the developing cloud....and again nothing except less sink. Yet another wisp upwind and other small clouds drifting in a line off the top of the Two Thumbs. I was baffled. Ok no more heading upwind I tracked south at about FL 130, trying to pick out the wave by carefully observing the scattered wisps. Eventually I stumbled into a reasonably good climb near Burke’s Pass, which took me to FL 170. From here it was straight for a flattish cloud in the middle of the McKenzie Basin which was weak but allowed me to maintain height past Simons Pass.

Looking ahead things were pretty broken and mixed up so the best option, something I would have preferred to avoid, was to take the gamble that the scruffy looking Ben Ohau wave was working.

If the sink was any indication, it should be booming. Down to 7500 west of Twizel, the cloud looked very rough but there was a short straight shadow on the ground from the cloud’s leading edge. It took a few minutes in very turbulent air to climb in the strong gusts to cloud base and then settle down in a steady 8—9 knots. About time too. By FL180 iIt had reduced to about 3 knots 50 I headed to the next well—marked wave west of Omarama where another good climb allowed me to fly over the top of the extensive cloud upwind to Merivale, and on to FL 200 in the excellent Pisa wave.

A Queenstown weather report passed on by Christchurch Control earlier said that the rain had stopped and the sky was clearing. Luckily for me it was not completely clouded in further

south. It looked even better from FL 250 in the Nevis Valley.

As usual, the wind velocity in the south was markedly higher, and it took 10000 feet to penetrate the sink to cross the next lot of cloud to an edge west of Kingston. Lift here was much weaker, not quite strong enough to maintain height at the airspeeds necessary to make any progress.

My turn point at Five Rivers Garage was under cloud so I pushed on further southwest until it was visible through a gap for the photos- I did not want to descend and risk spending time trying to climb up again, it was already 1200. 6 hours and 650 kilometres so far. The trip back up the island better be faster.

Once northbound, I reduced speed to 70 knots, making good progress with the tailwind component and climbing slowly. Near Kingston lift improved to 5 knots and I climbed back to FL 160 before diving downwind over the cloudmass to the Nevis wave. This took me to FL 180. From there it was simple to run along the leading edge, go downwind into the Pisa wave, climb to FL 200 and on to the cloud west of Omarama. This was still working, but not as well as earlier.

I lost a lot of height getting back into the wave at the southern end of the Ben Ohau's. Further north the cloudmass and rain had spread out across the McKenzie, so I stopped for a top up climb to FL 170 before heading for a flat looking line of cloud at Tekapo. This marked a weak wave leading over the Tekapo skifield, but what I really wanted was stronger lift to fly faster.

With things looking poor ahead to the north, I flew east to what was now a good wave in the lee of the Two Thumbs. FL 160 here allowed me to continue north—east following wisps to the Mt Hutt wave. By now the waves were clearly marked to the north, but not strong enough to climb high, but at least it was warm and pleasant cruising along between FL 120 and 150.

As I went further, conditions began to deteriorate and the sky appeared to be just a jumbled mass of wind-blown cumulus. Wave became difficult to find but I kept going, thinking that the more defined clouds in the Clarence valley would work. I was down to 8000 before finding worthwhile lift, but once above the clouds again the lift went up to 8 knots. I stayed in this lift until reaching FL 200, then flew slowly on, maintaining height.

At this stage in the flight, approaching Lake Grassmere at the northern eastern most point of the South Island, I was trying to ascertain what conditions were like in the North Island.

The time was 1500; it had taken 3 hours to return to the Blenheim area. A little less than 6.5 hours of daylight left, over 700 kilometres and 2 Cook Strait crossings to go. Hmmm.

The haze made it difficult to gauge conditions. Most of the North Island appeared to be covered by an extensive cloudmass; the only clear areas being the southern coast and a gap in the eastern Wairarapa, which with a large dose of optimism took on the appearance of a roll cloud. A pilot report relayed by Wellington Control said that Napier was clear.

To me it looked terrible, but the flight was not impossible to complete at that stage. I still had time, enough oxygen, was not cold, and generally it had been going quite well up to now. There were no high lenticulars in the Wairarapa, normal a necessity to cross back to the South Island, so unless something developed the chances of finishing were remote. It certainly did not look inviting, but having completed the southern leg I decided to continue regardless, even if it meant gliding across Cook Strait and landing at Masterton. There was still a chance.

Advising Wellington Control that I intended to carry on, I set off across Cook Strait for Wairarapa. As I approached the coast it became clear just how much cloud there was. Right across the divide and out toward the east coast. Fortunately the gap over Martinborough was quite wide and looked more like wave cloud now. I crossed the coast at FL 120 and soon found weak lift, enough to maintain height at 60-70 knots. Approaching Masterton I decided that it would be better to penetrate upwind to where

a more developed cloud seemed to be working. This wave, the primary, was good for FL 140, so I continued cautiously northward, toward what looked like total overcast, the plan being to turn back to Masterton when it became obvious that it was not sensible to continue.

It was interesting that in places gently undulating stratos had formed above the bubbly-looking cloud below. This marked weak but reliable lift. At the bottoms of the layer the cloud was quite thin and had some small gaps, the main problem being that the ground was under heavy shadow and was quite dark, making it difficult to locate features. In the lee of the Manawatu Gorge there was an area with no gaps tempting me to turn back for Masterton. I decided to keep going another couple of miles to a more lenticular-shaped cloud. Luckily it worked, up to 3—4 knots. Stopping for a while to climb to FL 150, I could soon see that there were better gaps further on, within easy gliding range. In fact it looked much better, about 7/8 cover, Out to the east it was clear so I continued on between FL 130 and 160, finding lift up to 4—5 knots. This was encouraging, and I hoped that the cloud would tend to clear rather than fill in completely.

Soon the cities of Hastings and Napier came into view to the east, and cloud cover reduced to 4/8. Lift was 3—4 knots at best, but reasonably steady and well marked. Wind speed was now much lower, still with some tailwind component going north. The sun was getting lower, and the cloud shadow spread further east.

I had never seen the Willow Flat Bridge turn point before and hoped I could find it. Lake Waikaremoana came into view in the distance to the north and Wairoa was just to the east. I was sure that the winding river amongst the undulating countryside below was the Mohaka, so followed it until I spotted the bridge. It stood out clearly in the sun. Great. Turnpoint two. Took the photos from FL 130.

Right. Time was now 1720. 4 hours daylight remaining — it was actually still possible except for small things like the weather and Cook Strait.

Losing 2000 feet, I pushed back to the wave used earlier, and followed a similar track southbound. The cloud was definitely increasing. Soon it became very slow going, although the lift was still there. When I reached the Norsewood it was obviously totally closed in to the south, but I was in 4—5 knots lift —the best for some time. There were 2 wide wave clouds with small gaps between them to the east, and beyond that it clear.

And what was most intriguing was that even further downwind to the east a long thin high lenticular-shaped cloud had developed. Earlier it had appeared to be only a thin cirrus line, however now it took on the right shape. Contemplating this cloud for a few minutes the choices were clear: return north to land at Hastings or take the chance on this lenticular and if it didn’t work, well Waipukurau was not far away.

Turning south—east, I stopped briefly in the 2 waves to top up to FL 160, and then kept going. The lennie was right over the east coast, and closer I got the better it looked. Sure enough just

like magic. Smooth and 6—8 knots up. I could barely believe it.

Maintaining a south—westerly heading at 55 knots, I climbed in front of the best looking part to FL 2S5. Further south it was not so well defined, but I was descending only very slowly at 80 knots. The only part of the North Island that I could see was the east coast. The rest was covered by a great glaring white mass of cloud. It took time to progress south and I was very uneasy about the lower cloud spreading further east. My intentions were to follow the lennie all the way south, and then push upwind to Lake Wairarapa to see if there was any possibility of making a return Strait crossing, but I really wanted to know if Masterton was clear enough to safely reach.

Nothing changed for some time apart from getting very cold, but passing Castle Point I was reassured to see that the southern Wairarapa had only 4/8 cover, and Masterton was no problem. With a good safe diversion available , all concentration was focused on how to "cross the ditch"

Over Lake Onoke there was a vague roll cloud/lenticular. It appeared to be "blurred" around the edges. I would head for that. There weren't many other options.

Before leaving the lenticular I climbed slowly back to FL 280. I could not yet see the South Island apart from the Seaward Kaikouras way off in the distance, due to the haze and low sun in the west. Time was almost 2000.

After the push into wind I flew just south of the wave cloud and at FL 190 found lift, 3—4 knots initially, where I stayed until it was less than one knot at FL 215. I was now becoming a little optimistic because the upper wind was not too strong, although it was around to the west, and I did not anticipate the heavy sink associated with an upper wave system. There were also clouds out in Cook Strait which could possibly help. I had made 6 double crossings previously and thought that FL 215 should be enough to get home, but without my normal safety margin. To allow the abandon decision to be left until much later I requested that I be able to use the commercial airport at Wellington as an alternate rather than returning to the Wairarapa. Not you usual glider landing spot. Within a few seconds this was approved and I was on the way.

To the left I could see Lake Grassmere shining in the sun, and ahead part of Arapawa Island, but still could not pick out the southern coastline. The glide went well for a while but soon the sink was on the stops down. I passed about 3 miles south of Karori Rock at FL 150, watching the altimeter unwind at an alarming rate, and heading for the south side of a line of cloud slightly lower than I was and aligned west—east. It appeared to be caused by some convergence effect rather than wave, but would it help? Yes!!!! Remarkably, heavy sink turned to zero sink and I could even climb a little at 65 knots. This continued for some miles and did make the glide look better. I was reasonably happy with how it looked at mid—straits, even with the headwind and more sink expected. But the fact remained that I HAD to reach one coast or other, and Wellington was getting further away. Very soon I would be committed to continuing on to the South Island.

The whole southern coast was now quite clear, and the surface of the sea showed a moderate northerly at low level.

A final glide to the south coast remained a reasonable prospect and I made the decision.

Tracking directly for the White Bluffs east of Blenheim I could see several scruffy westerly roll clouds straight ahead and they worked advertised: quite strong sink and rough but useable

lift. I stayed between 5—6000 until there was only 3 miles to go then flew at 130 knots toward the northern faces of the Bluffs. Reaching them at 3000 feet I could then slow down to maintain height before pushing into wind and onto the Wither Hills and home.

Finally it was a very short, very comfortable final glide to Woodbourne and in a couple of minutes I had made a finish and landed. The time was 2100; 20 minutes daylight left. Done!

John and Jamie were waiting, and quite a number of Marlborough Gliding Club people arrived within minutes, knocking the tops off bottles. The party was about to begin.

With the completion of this flight, it is a most appropriate time to thank all those who helped during this and previous attempts, and a special thanks to the Wellington and Christchurch air traffic controllers.

Brief details of the flight:

Distance: 2026 Kilometres.
Time taken: 15 hours.
Average speed: 135 kph.
Glider: Nimbus 2B.
Date: 14 December 1990.