

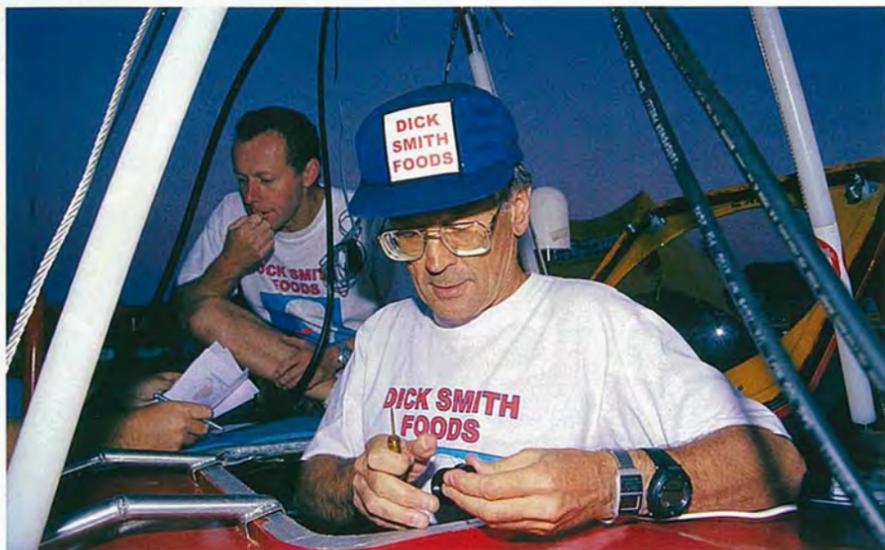


West across the Tasman



In February, AUSTRALIAN GEOGRAPHIC founder Dick Smith and fellow adventurer John Wallington attempted what many said was impossible – to fly a balloon east–west across the Tasman Sea.

TEXT BY JOHN WALLINGTON



IM FEEiNG quite nervous. What about you?" Dick asked from the shadowy torch-lit pilot's seat in the corner of our tiny balloon gondola. "Definitely," I replied, thinking that this was the first moment that day we'd stopped long enough to allow the inevitable feelings of fear and uncertainty to catch up with us. It was nearing 11 o'clock on an unseasonably cold night at the rugby field in Kaitaia, on the northern tip of New Zealand. Since arriving five hours earlier, we'd been surrounded by dozens of local volunteers who were to help us launch the first attempt at a trans-Tasman balloon flight. During that time, Dick had been attending to final checks of the navigation and communications systems, while I'd been working with local weather observer Bruce Buckby and forecasters from the Bureau of Meteorology (BOM) in Australia.

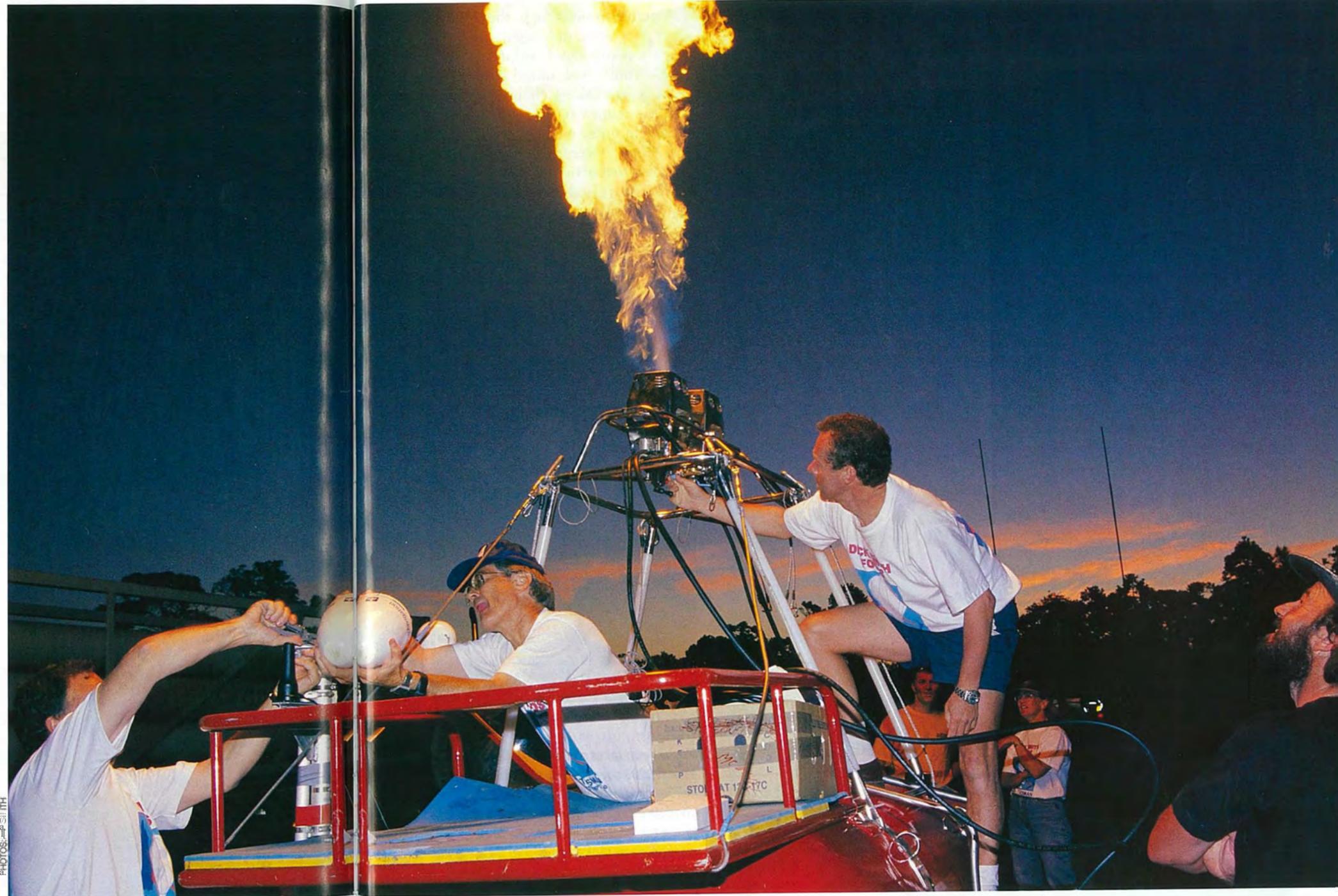
We'd hoped to launch around midnight - on the basis of the bureau's forecast flight trajectories, we'd anticipated flying north for 6-12 hours before reaching the winds that would hopefully carry us across the Tasman (see *Against the wind*, page 84). But with a weak front crossing New Zealand, there was some risk that if we took off too early the low-level winds would take us over the Pacific rather than towards Australia. Armed with this information, I'd entered the gondola to talk to Dick about delaying the launch until dawn.

Eventually, although still very much on the ground, we were alone in the gondola and the reality of our pro-

Previous page: Just before the final descent in their trans-Tasman flight, pilots Dick Smith and John Wallington float within a maze of cumulus clouds, their 26-metre-tall balloon dwarfed by the billowing towers. The pair knew it was best to avoid entering clouds on their journey towards Australia - the swirling currents of air within would make the balloon difficult to control.

Final preparations. Soon after arriving at the rugby grounds at Kaitaia, on the northern tip of New Zealand, Dick (above, at right) uses his expert knowledge of electronics to install an Inmarsat satellite navigation system while John receives a weather update from the Australian Bureau of Meteorology (BOM). John also tested the balloon's propane burners (right), which would be fired to increase the balloon's height if necessary.

ject seemed to hit us both at the same time. We were about to attempt to fly from New Zealand to Australia. For most of each year the prevailing winds blow west-east and to be successful we needed a period of sustained east-west winds. This required a large high-pressure system to remain in position over the Tasman Sea for at least four and possibly up to seven days - the maximum amount of time that the crossing should take. Our likely course would be over remote



ocean well north of any regular shipping or aircraft lanes and if the high-pressure system broke down we'd have to ditch in the ocean to avoid flying over the dangerous southern Tasman towards Antarctica.

TWELVE MONTHS PREVIOUSLY, Dick rang me and said: "I need a new adventure, what about a flight across the Tasman?" Ever since our record-setting flight across Australia in 1993 (AG 34) Dick had been offering

to sponsor me in a trans-Tasman balloon attempt. I'd always joked: "Only if you come too." On the other end of the line I heard Dick telling his wife, Pip, who had obviously just entered the room, that it was I who had phoned and was trying to persuade him to come on another balloon adventure!

During the year of planning that followed, the flight evolved to include three significant goals. It would promote the spirit of adventure by attempting something that had never

before been achieved. The flight would be difficult but would be made in a responsible, risk-minimising manner and this endeavour was generously supported by AUSTRALIAN GEOGRAPHIC. It would also ensure a donation of at least \$100,000 to the Exodus Foundation as the result of a wager between Dick and businessman John Singleton that we couldn't achieve the Tasman crossing from east to west. Finally, it would symbolise the difficulty of bringing ownership of Australian products

back home, as was being attempted by Dick Smith Foods.

Four hours after deciding to delay the launch, we were back at the rugby fields getting ready for a dawn inflation. Bruce Buckby was still concerned that the front hadn't passed. The BOM was confident that the wind direction would be suitable, but to be certain we'd have to wait until 6 a.m. eastern summer time in Australia (8 a.m. New Zealand time) for the next set of computer-generated trajectories. By then

there was a strong likelihood that the surface wind speeds would be in excess of 5 knots, which would make it very difficult, perhaps impossible, to inflate the 26-metre-high balloon.

If we waited until evening we were risking the possibility that the high-pressure system would move further east, and the latter part of the flight would be south towards Antarctica, missing Australia altogether. Finally, after numerous phone calls to Australia, we could wait no longer and I

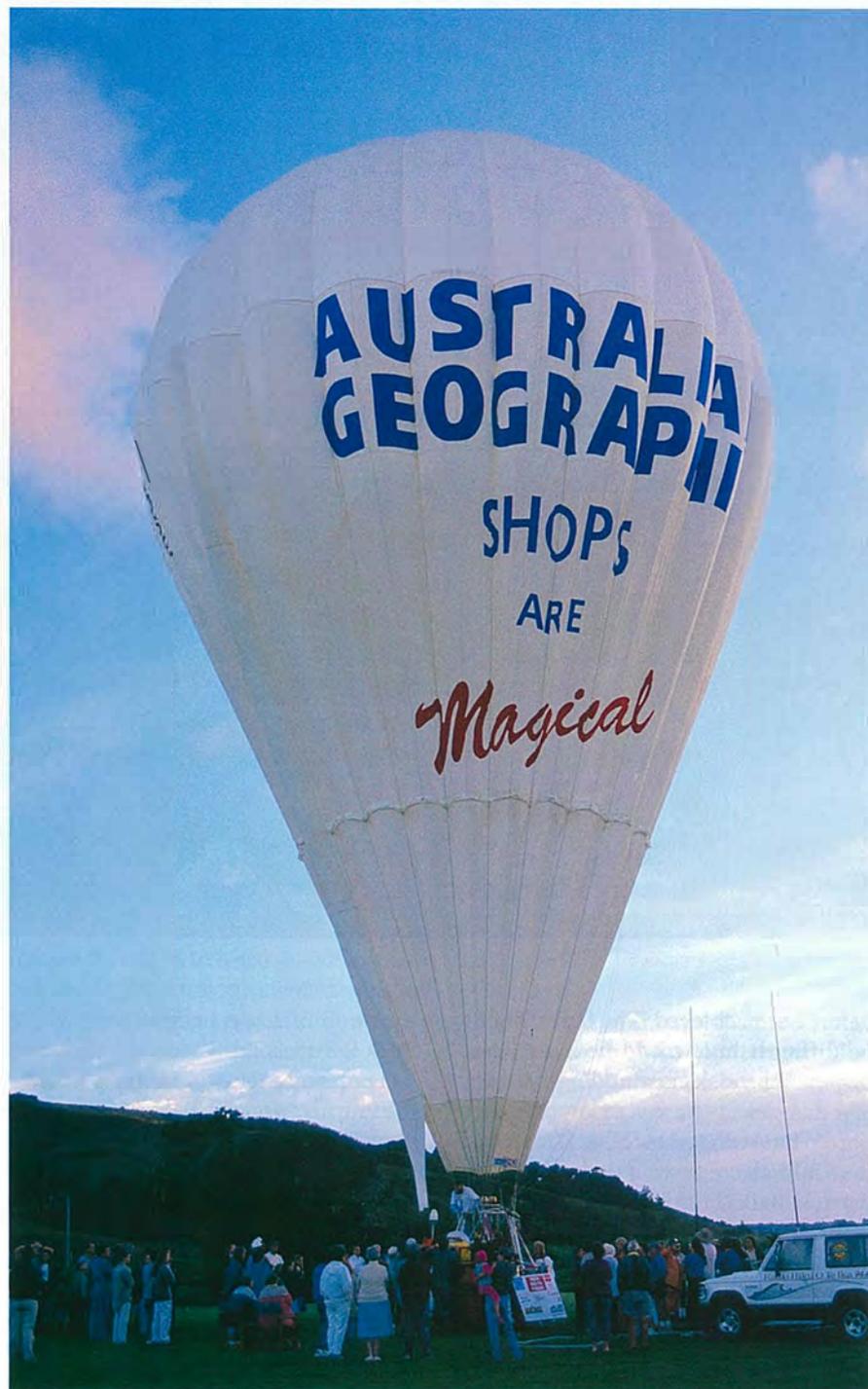
told Dick that I was happy to take the calculated risk. "Let's go," was his immediate reply, and almost at once the dawn tranquillity was shattered by the roar of released helium as the balloon started to fill.

Moments later came a loud bang, followed by silence. The gas regulator had self-destructed while trying to deliver helium at more than 1000 cubic metres an hour. A second regulator was fitted but it too failed, leaving the balloon only 10 per cent full and ve_ry

vulnerable to twisting in the wind.

"Fill it without a regulator ... we want a really rapid inflation," said Frank Young, one of our supporters, as he began taking charge, stripping fittings from the 50-tonne helium tanker in order to by_pass the regulator. Frank, a very experienced pilot, was also part of our team in 1993, and could be relied upon for a calm approach, no matter what happened.

The remainder of the inflation went well except for one heart-stop-



The balloon takes shape as it's filled with almost 2000 cu. m of lighter-than-air helium gas (left). John is standing on the gondola attaching the control lines that run to the top of the balloon. Eight stainless-steel propane tanks also had to be attached to the base of the balloon during take-off they couldn't be loaded onto the gondola on the ground as their weight would have crushed it. The pair's portable toilet (above) sat outside the gondola on the area affectionately known as "the sundeck".



ping moment when my wife Christie thought we'd put one of the artwork's 1 m high letters on upside down. The launch was smooth but exhilarating as we climbed steeply out over the rugby fields to avoid hitting the floodlights on the small wooden stadium. We quickly left the cheering group of locals and press behind as we flew over small tree-lined fields and kauri plantations.

WE'RE GOING DOWN, throw out another potato," Dick said with a laugh. It was mid-afternoon, about 7 hours after we'd launched, and we'd passed Cape Reinga and flown out over the Tasman Sea. High cirrus cloud had appeared and reduced the solar heating of the balloon, causing it to descend. Pilots of helium-filled balloons traditionally use water and dry sand for ballast because they can be dropped without risk of injury to people on the ground. Even though Roziere balloons like ours normally use propane burners to heat the helium for added lift, a few bags of sand are still carried.

The previous week in Kaitaia, Christie had noticed that 20-kilogram bags of potatoes were available for less

than \$5 - cheaper than a bag strong enough to carry sand - so we decided that because the flight was over the ocean these would do. It now seemed amusing to be feeding the fish - after checking for boats below, we tossed them an occasional potato from 4000 feet up.

The afternoon was warm, our speed was 20 knots and our track, while still with a northerly component, was turning west. We were finally heading for Australia. As the sun went down and the puffy white clouds around us became dark silhouettes, I set up a small gas stove on the sundeck and pan-fried some delicious fillet steaks for dinner. We ate at the chart table while studying the Global Positioning System (GPS), which was reassuring us of our progress. Even the remoteness of our position over the lonely ocean seemed less of a concern.

THE WARNING SIREN instantly had me bolt upright and awake. It was 2.30 a.m. New Zealand time - about 18 hours after our launch - and Dick was firing the blast valve to activate the main propane burners in an attempt to arrest our rapid descent. I climbed

Not-so-candid camera. Standing in the gondola hatch, Dick and John pose for a camera they'd suspended out from the balloon. The life raft, toilet and food cooler sit on the sundeck to their right. During the middle of the day, John and Dick were shaded by the balloon but for the rest of the time an umbrella - taped to the Inmarsat antenna - provided essential protection from the sun.

out of the windowless gondola to prepare to dump ballast if necessary. The cause of the problem was immediately apparent. Dick had been flying very precisely in a band of air about 200 ft thick where the wind's speed and direction were most favourable, just below the tops of the now moonlit clouds that surrounded us.

Without realising it, he'd allowed us to drift into a cloud and we were descending in the associated down draughts. Dick soon had the descent under control after losing about 1000 ft of altitude, but I decided that any further attempts at sleep were pointless.

As our heartbeats returned to normal, we received a call on the satellite



A fishy tale. Dick (left) packed his fishing line and took great delight in telling the media that he planned to catch his own food during the flight. In fact, he caught this fish in a Kaitia fish shop before leaving New Zealand. John (below left) found another use for New Zealand produce - potatoes, also bought in Kaitia, were used as ballast. The balloon's altitude was easily influenced by changes in weight and only a few potatoes had to be thrown overboard to stop it descending after a passing cloud reduced the solar heating of the helium.



phone from Kevin Gale, our mission controller, based at Australian Geographic Mission Control in Sydney. "You need to stay high and keep tracking northward throughout most of today," he said matter-of-factly. "The latest trajectory is right on target for the southern Queensland-northern New South Wales area, but if you go low you may get caught in a west-Tasman flow of air to the south." He was encouraging, but it was now the early hours of the second morning of the flight, and while Dick and I always thought there was about a 50 per cent chance of "getting our feet wet", we hadn't really considered it since taking off.

Kevin's warning turned the conversation between Dick and I to the possibility of a mid-ocean ditching. We'd spent considerable time rehearsing procedures for landing in the water and thanks to the assistance of adventurers Don and Margie McIntyre (AG 44), highly experienced sailors and providers of very specialised marine-safety equipment, we were incredibly well equipped. In addition to the gondola, which was designed to float and had a top hatch that could be closed to keep out water, we had an eight-person life raft, four emergency-location beacons, flares, mirrors, waterproof marine and aircraft radios and drysuits.

All this had seemed very reassuring on land but in the middle of the ocean, listening to the waves breaking several thousand feet below, the potential difficulties of landing at 20 knots took on a whole new meaning. If we stayed inside the gondola we

THIS ADVENTURE
WAS SPONSORED BY
AUSTRALIAN GEOGRAPHIC

Mission Controller Kevin Gale (right, at right) speaks to Dick on the HF radio, as radio hams Jo Harris and Stephen Pall look on. Mission Control, at the Australian Geographic Centre in Sydney, was essential not only for ensuring the safety of the flight, but for keeping the public informed of its progress. Every 30 minutes, the balloon's inmarsat system sent an automatic position report, which was plotted by Kevin's son Adam (below right).



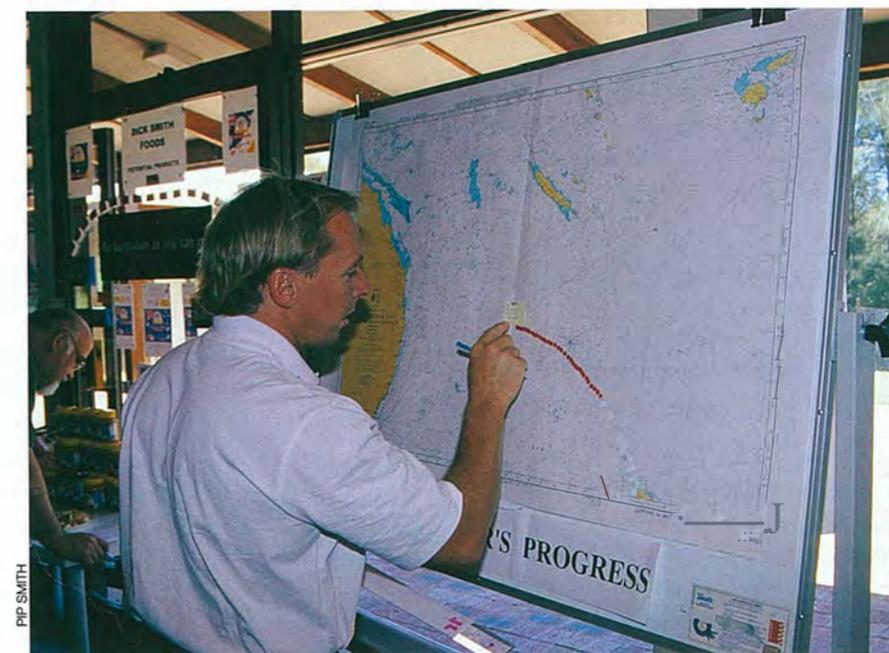
LYDIA TWIDLE

would be safe, provided we could cut the balloon away as it dragged us sideways through the waves. But I wondered if the gondola would survive such an impact. If not, it would be quite difficult to transfer ourselves to the raft which, once inflated, would be out of swimming reach within seconds. We were constantly aware of the potential dangers but our discussions always revolved around possible solutions and ways to reduce the risks.

Late that afternoon, about 35 hours after take-off, I spoke with Dr Bill Downey at Mission Control - he was coordinating the bureau's support for our flight. "If you maintain your current track and speed you could arrive in the Brisbane area as early as 6 a.m. tomorrow," he told us. The earlier uncertainty about reaching Australia had vanished. "But there's a potential problem with the weather in that area, with surface winds around 10 to 15 knots and rain showers. We'll need to monitor the situation closely for the next 12 hours and see if we can find a way for you to come in south of the bad-weather zone."

Next it was Kevin on the phone assuring us that "Recovery teams have been notified and if it's too windy to land safely on the coast, you'll quickly be picked up after ditching offshore."

Our mood was lightened when, just after dark, we saw the lights of a small boat. It was the only sign of life we'd seen on the whole journey - we hadn't even spotted birds or vapour trails from planes. It was wonderful watching the boat sail across the moonlit ocean, peering down at it through a



PIP SMITH

1 km wide corridor between billowing cumulus clouds. Dick tried to contact it by radio and flashing lights but we got no response and soon drifted away. Alone again.

That evening I managed about two hours of good sleep before waking to Dick's comment: "I don't think we're going to make it." We'd been making good progress when the wind suddenly died and turned us south. He sounded incredibly flat - he'd moved the balloon up and down through several thousand feet, trying without success to find a suitable layer of air. Bill urged us to continue searching for a wind that would give us a more westerly track - even if we had to sacrifice

speed. He said that measurements from a recent satellite overpass indicated favourable wind directions within a few hundred feet of sea level, but that the speeds would be less than 15 knots. "If you can't find better conditions by ascending then I can only suggest you go down and look for them at lower levels," he said. He sounded even more tired than I felt - the mission was wearing everyone out.

Descent through the clouds wasn't an attractive proposition - to fly so close to the sea at night allowed very little room for error. Dick climbed into the bunk but obviously wasn't going to sleep as I started to slowly drop the balloon.

Kevin Gale's Mission Control Log

21 February

- 2010: Mission Control Centre activated.
- 2025: Communications Checks complete, all CIC.
- 2045: Conditions calm at Kaitia.
- 2047: AMSA (Australian Maritime Safety Authority) alerted to launch possibility.
- 2055: Dr Bill Downey from the Bureau of Meteorology (In-1) arrives, confirms go.
- 2100: Launch prospects reassessed, delayed until early tomorrow ...

22 February

- 0330: Bill advises that all OK but cold front not yet through Auckland.
- 0424: Balloon inflation started. All emergency services alerted.
- 0454: Balloon inflated, pre-flight checks completed ...
- 0546: Cold front through Auckland; winds perfect; flight on standby ...
- 0555: Lift-off - perfect launch!
- 0614: Two-way comms established - all OK ...
- 0632: AMSA has started plot.
- 0652: Pip rang from cafe, having breakfast and watching balloon disappear in the distance, putting on a brave face ...
- 0702: Computer projection shows landfall at Coffs Harbour, 24 Feb. about midday.
- 0726: Track holding, speed 20 knots ...
- 1035: Public interest high; already more people through the Mission Control Centre than entire first day of previous flight.
- 1600: Balloon almost exactly where BCM predicted; Bill's accuracy unnerving ...
- 1720: Spirits high. John has cooked a steak dinner.

23 February

- 0023: Balloon losing height rapidly - burners not heating helium. Alert phase declared.
- 0025: Holding altitude, alert phase cancelled ... Seems they'd flown into a cloud ...
- 0412: First light for the boys. Things will seem better in the daylight.
- 0628: Position report indicates balloon is continuing to turn onto a more westerly heading.
- 0929: Low-pressure system deepening off

- 1202: Vanuatu ... balloon travelling faster ... trajectory flattening out.
- 1704: Balloon still tracking slightly northward, speed westward around 25 knots. could be within sight of the coast by mid-morning tomorrow.
- 2105: Track now has slight southerly component; concern about weather in northern NSW and southern Queensland (showers and strong winds) - contingency plans for ditching just offshore being considered.
- 2105: Gap between Track Made Good (TMG) and required track begins to widen. There's now a real risk that the balloon won't reach the coast. We begin to think of a ditching strategy off the NSW coast. We decide not to tell Dick and John.

24 February

- 0035: Balloon tracking 2490 at 17 knots but gap between now and track continues to widen.
- 0230: Expecting the worst from next incoming report. Track has shifted to 247°; speed is 16 knots. Looking at ditching options off Ballina.
- 0539: BCM organises early release of meteorological balloon at Coffs Harbour. Track holding at 2500, speed 18 knots.
- 0728: Results of special flight show more favourable winds at 8000 ft. Dick and John contacted.
- 0821: Balloon has picked up a stronger onshore component around 8000 ft and optimism has been restored. SES advised for beach recovery. Fishing trawler alerted for possible sea recovery.
- 0900: RAAF Amberley contacted for a clearance to enter Evans Head Bombing Range.
- 0926: RAAF advises that proposed flights rescheduled and range deactivated ...
- 1135: Dick confirms they have started descent.
- 1234: Balloon appears to be 5 miles to sea.
- 1305: Balloon almost stationary. Only a few hundred metres to go ...
- 1312: The Dick Smith Foods/Australian Geographic Flyer has landed on Ten Mile Beach in 55 hours and 17 minutes.

During the flight, a constant flow of school children (right) visited Mission Control, where they heard about Dick and John's adventure while eating sandwiches with lashings of Dick Smith Foods peanut butter. A few kids also had the thrill of talking to Dick on the radio. The BOM's Dr Bill Downey (below) was based at Mission Control throughout the flight, interpreting the constant flow of data and computer-generated recasts and relaying this information to the pilots via satellite phone.



PHOTOS: LYDIA TWIDLE



At about 4200 ft our speed increased to about 15 knots and our direction turned slightly to the west. Was this a short-term aberration or would it last? After about an hour it seemed that the thin but favourable band of air would last, and Dick finally relaxed enough to sleep. I spent the rest of the night watching our direction on the GPS - around E 235°. We needed 215° or more to make landfall and avoid simply paralleling the NSW coast. Every minute on this track would give us a better chance of reaching land because the winds became more northerly on the western side of the high-pressure system we were flying around. It was a long but exciting night.

As the sun rose, the satellite phones started ringing with the inevitable round of television, radio and newspaper reporters wanting to talk to Dick. It was fun listening to him discussing the flight, the bet with John Singleton and our diet of Dick Smith Foods products. His enthusiasm never faltered even though, like me, he was by now incredibly tired after three virtually sleepless nights.

Shortly after sunrise, my faithful layer of air abandoned us and once again a sea landing appeared likely. Fortunately, Bill had arranged for a special early meteorological balloon flight to be made at nearby Coffs Harbour. Just after 7.20 a.m. the details were conveyed to us. Nothing up to

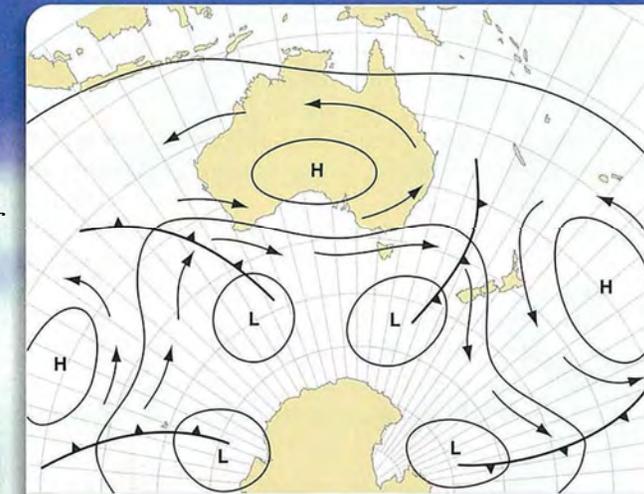
5000 ft looked helpful so we had an agonising wait until the winds to 10,000 ft were available. We were soon told that above 7000 ft the wind was around 20 knots and only slightly to the south. We had found a narrow ribbon of air that would ensure a coastal crossing of northern NSW in 6-9 hours. Dick suggested we go to 8500 ft and fired the burners to start our ascent. With renewed optimism we began to focus on the last leg of the flight.

NEVER BEFORE had a coastline looked so good. We could see it between the clouds from about 80 km out. At 40 km, Dick suggested we descend into the slower winds because Pip, Christie and Frank were now in Coffs Harbour waiting for Australian Geographic Society trustee Peter Pig-gott to collect them in his helicopter. If we stayed high we would land before they got there. I was keen to make landfall as soon as possible in case the winds abandoned us, so I wasn't enthusiastic about this plan.

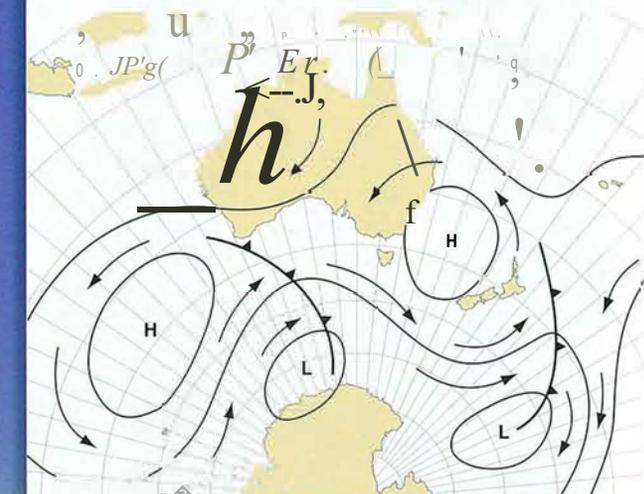
The friendship between Dick and I forged during the 1993 flight, had only grown stronger in the intervening years, and during this trip we once again made a great team. We trusted each other totally, but still checked and discussed all decisions, because we knew that even small unresolved details can cause adventures to fail. Needless to say, the present disagreement didn't last - Dick was right, it would be sad if our wives missed the landing.

Against the odds

Dick Smith and John Wallington achieved a world first when they flew a balloon across the Tasman Sea, from New Zealand to Australia. Rising to more than 8000 ft, the pair battled down draughts that caused rapid 1000 ft descents and west-Tasman airflows that threatened to send them to Antarctica. After nearly two and a half days aloft, crossing about 2200 km of ocean, they landed in northern NSW, exhilarated and exhausted. The flight was a triumph not just for the pilots, but for the team of meteorological experts and balloonists who worked round the clock to monitor and advise them.



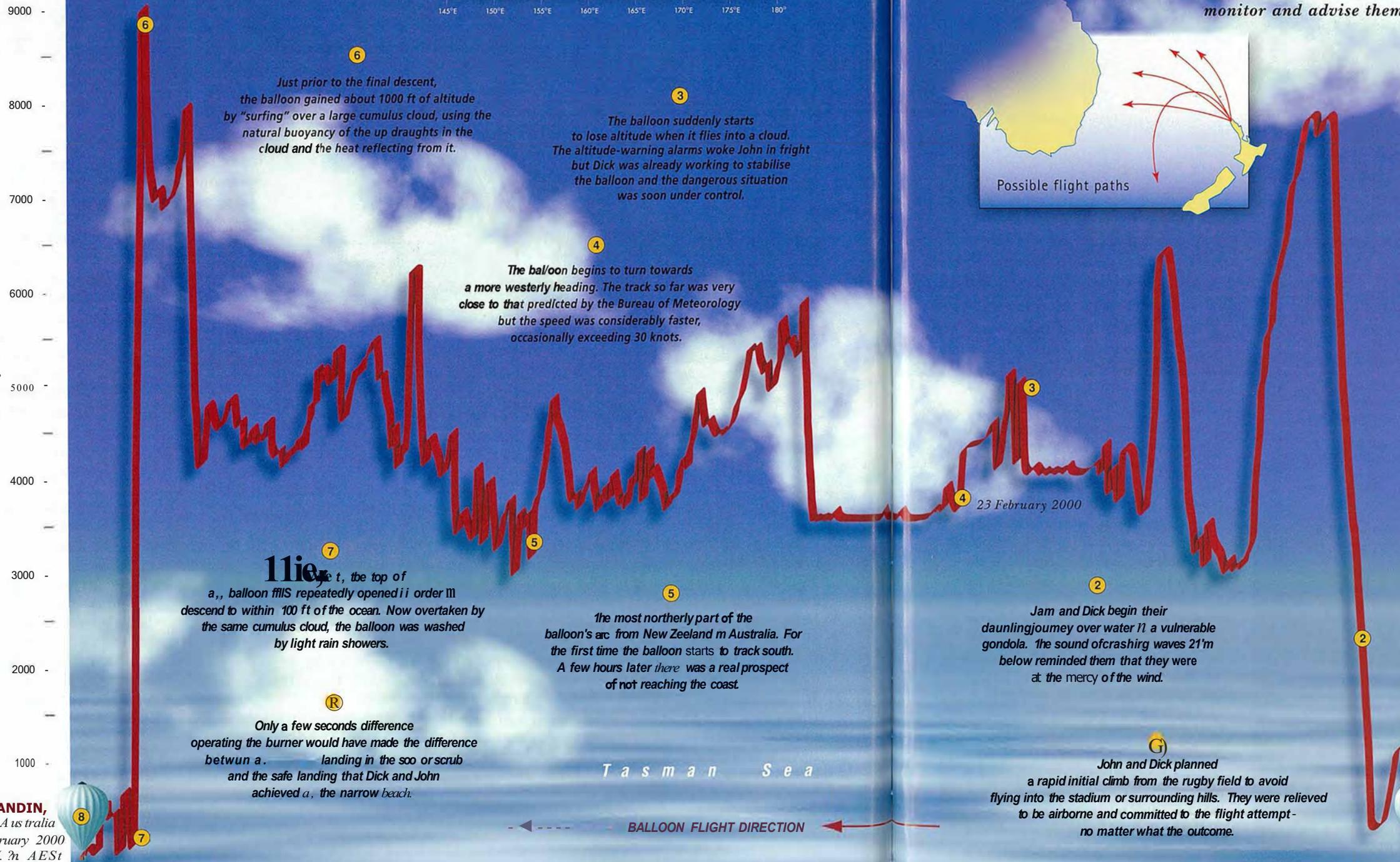
The highs ...
In the Southern Hemisphere, winds blow clockwise around low-pressure systems and anti-clockwise around high-pressure systems. For much of the year, southern Australia experiences westerly winds generated by high-pressure systems at latitudes around 30° S and low-pressure systems over the Southern Ocean. Both systems are continually forming and decaying, and generally move eastwards.



and the lows
In late summer, large low-pressure systems can develop over northern Australia and slow-moving high-pressure systems form around 40° S. The major forecasting challenge for the flight was to be able to predict - days in advance - the arrival of a slow-moving high-pressure system that would remain over the Tasman Sea for around three days. Such a system would produce the easterly winds needed to carry the balloon towards Australia.



LANDED POSITION
Latitude 29° 19' S
Longitude 153° 21' E



6
Just prior to the final descent, the balloon gained about 1000 ft of altitude by "surfing" over a large cumulus cloud, using the natural buoyancy of the up draughts in the cloud and the heat reflecting from it.

3
The balloon suddenly starts to lose altitude when it flies into a cloud. The altitude-warning alarms woke John in fright but Dick was already working to stabilise the balloon and the dangerous situation was soon under control.

4
The balloon begins to turn towards a more westerly heading. The track so far was very close to that predicted by the Bureau of Meteorology but the speed was considerably faster, occasionally exceeding 30 knots.

7
At the top of the balloon, the top of the balloon repeatedly opened in order to descend to within 100 ft of the ocean. Now overtaken by the same cumulus cloud, the balloon was washed by light rain showers.

5
The most northerly part of the balloon's arc from New Zealand to Australia. For the first time the balloon starts to track south. A few hours later there was a real prospect of not reaching the coast.

23 February 2000

2
Jam and Dick begin their daunting journey over water in a vulnerable gondola. The sound of crashing waves 21m below reminded them that they were at the mercy of the wind.

G
John and Dick planned a rapid initial climb from the rugby field to avoid flying into the stadium or surrounding hills. They were relieved to be airborne and committed to the flight attempt - no matter what the outcome.

R
Only a few seconds difference operating the burner would have made the difference between a landing in the scrub and the safe landing that Dick and John achieved at the narrow beach.

8
LANDING
Iluka, Australia
24 February 2000
11.12J. n AEST

1
TAKE-OFF
Kaitiaki, New Zealand
22 February 2000, 5.55 am. AEST

BALLOON FLIGHT DIRECTION

The extra hour and a half of low flying allowed me to get a better feel for manoeuvring the balloon up and down. We were heading for northern NSW's Shark Bay, adjacent to airspace restricted to use by the RAAF. They'd kindly lifted the restrictions, allowing us to land and also permitting half a dozen helicopters, some light aircraft and a Tiger Moth performing aerobatics, to fly near us.

John drops the seaworthy gondola into the water a few metres off Ten Mile Beach, near northern NSW, then surfing it onto the beach. Beyond the sand, the scrub would have torn the fragile balloon fabric.



It's difficult to describe how excited I became during the final approach to the coast. We had to land on a very narrow beach because there was nothing but scrub behind it. The noise of all the television helicopters, and the knowledge that a bad or missed landing would probably be the most-photographed in Australian ballooning history, added to the adrenaline rush.

About 200 m from the beach the balloon levelled off at 30 ft above the sea and refused to descend because of the trail rope we'd dropped from the gondola to position it for landing. I pulled on the line that opened the helium valve in the top of the balloon and we started to descend again.



PHOTOS: PIP SMITH

Dick and I had always thought the perfect end to the flight would be to surf the gondola onto a beach and that was exactly how we did it, after 55 hours and 17 minutes in the air. Pip, Christie, Frank and Peter arrived just in time. On the beach, Brisbane balloonist Steve Griffin greeted us with: "Just in time for lunch. I've got the cheese and tomato sandwiches in the truck" - a reference to my often-disparaged favourite food. Another supporter who'd helped us after the 1993 landing, Steve had generously brought his trailer to retrieve our equipment.

Moments later, my mother arrived, having flown from Canberra to Coffs Harbour, where she was collected by Melbourne-based four-wheel-drive tour operator Mark Petering for the final 200 km drive to the beach.

Kevin Gale and another member of the 1993 team, Nick Riley, had been

Having come to rest on the narrow beach (above), the balloon begins to deflate as the helium is released. Well-wishers, media, emergency services personnel, friends and family had arrived by 4:10 and a helicopter to see the landing. The media was there in force (right), swamping John and Dick as they set foot back in Australia, before clearing customs in nearby Coffs Harbour. "Never before had a coastline looked so good," John said. The 55-hour, 17-minute record-breaking light was an inspiration to adventure everywhere.

constantly updating our likely landing site for followers on the ground and this allowed them and a couple of hundred locals in 4WDs to be there.

Surrounded by well-wishers on the beach, I was approached by a quietly spoken young mother as I reflected on our record-breaking achievement.



She'd also been there when we'd landed after the trans-Australia flight and was clutching the AUSTRALIAN GEOGRAPHIC balloon poster that Dick and I had autographed at the time. Re-signing the poster for her son, I realised the spirit of adventure had woven its magic once more.

John Wallington and Dick Smith thank the 150 people directly involved in the planning and execution of their flight, as well as AUSTRALIAN GEOGRAPHIC, Dick Smith Electronics, BJC Gases and Allied Pickfords for making their adventure possible.