

Passage - New Caledonia to NZ (includes from Vanuatu).

DAVID SAPIANE BSc Gulf Harbour Radio
SV CHAMELEON 20 SEPT 2012

The following are some ideas for Chameleon to consider when planning our passage. These are based on averages only plus experience. Reality may be vastly different because the speeds and shapes of travelling surface features change and can defeat the following concepts of averages.

GENERAL

1. We do not want the presence of a Depression at the longitude of Tasmania when at ~30S or roughly 2.5 to 3 days from NZ.
2. We do not want a cold front passing Tasmania when at ~30S.
3. If the passage necessitates encountering a front, do so at ~30S.
4. If a Depression crosses NZ when we are 3 days out are we positioned for prevailing winds from the next High? Is Norfolk Island a reasonable waypoint.
5. If a Depression is over NZ we can expect 4 days or more for the next.
6. When at 30S ideal is to see a High over NZ. Subsequent winds will back from SE to NW.
7. For this High to be over NZ, on average it would be centered ~135E 5.5 days prior. This is about the middle of the Australian bight. It also implies a High is over NZ as well. This means the departure date from Noumea would be when the High in the Bight reaches about 145/150E if you average about 6 kts.
8. Closing with NZ the ideal is for a Depression to be ~160E, in mid Tasman. North to NW winds would ideally carry you into Opuia.
9. When at 30S this Low might roughly lie near 130E
10. Chameleon has made this trip numerous times without encountering a Cold Front; except for once when we were 6 hours in error. The Admiral never lets me forget.
11. The ideal passage indeed avoids a cold front and the ingredients for this involve a very broad and flattened High. One where the isobars run nearly zonal or west/east.
12. If we find one of these a cold front may have passed by and we would be leaving as this broad High builds; usually making the first day or so hard on the wind with rhumb line impossible; so we go with the flow. Bear west for the wind angle but get back on course as quick as we can. We tend to go for rhumb line, monitor the situation and apply easting or westing as required. This will become obvious after a few days. On at least 2 passages we have been west of Norfolk, others east of Norfolk.

AVERAGES

1. A deep Low ~50S/130E (Bight) would be centred at 170E in 3.5 to 4 days.
2. A low forming on a front running from Brisbane to NZ will slide down the front and arrive in NZ ~2.5 days.
3. A Front passing through Tasmania will cross 30/165E in 2 days. And if it has the usual NW/SE slant that puts it over NZ as well.
4. Fronts travel 20 to 25 knots or 8-10 degrees per day.
5. Developing Low moves 30-35kts, 12-14 degrees/day.
6. Occluding Low moves 20-25 kts, 8-10 degrees/day.
7. High Centres move 21kts, 8 degrees/day.
8. Ridges tend to rotate CCW.

BE AWARE OF

1. Cold Highs south of Tasmania are faster moving and preceded by cold southerlies.
2. Complex Lows are slow moving.
3. If a High to the west of a Low intensifies so will the Low and Front.
4. Highs over 1030 are nasty. Expect gale winds on the perimeter.
5. A High Centre west of NZ ridging to the east of the country will see a new High form on the ridge.
6. If a very deep Low moves to south of NZ a series of Lows may follow at intervals of 12-36 hrs on the original cold front.
7. If a Low forms on an inter-anticyclonic front, west of NZ, the Low will tend to move SE along the front passing south of NZ. But a Low forming over NZ may take 48 hrs to clear.
8. If we encounter a trough the wind will back as it passes. But if the wind then veers inexplicably expect a secondary trough or front to follow.
9. Common to see multiple troughs in the cold air behind a cold front.

USE OF MODELS AND FAXES

1. Try to get two models to reasonably agree before committing. 144hrts max.
2. Work the models backwards. Eg, if the passage will take 6 days look at model output on the 6th day at your arrival location. Is this the weather you want? This is the most important point of the entire exercise. Six days for GFS is a reasonable expectation, but get the latest run as close to leaving as you can.
3. Ideally the model should have the same scenario for 2 or 3 days running. If it changes radically every day read a book.
4. Model wind speed should be given a band of 5kts plus and minus. For Gusts add 50%.
5. Do not fail to receive NZ Met service anal and 30,48 and 72hr progs.
6. Do not curse the model if it's wrong, curse yourself for unrequited belief in it.
7. Check in daily with Taupo Maritime Radio as this safety step also facilitates changes in arrival timing or destination. Call Freqs 4125,6215,8291,12290.

NOTES FOR LEAVING FROM VANUATU.

1. On departure day look for a High almost over NZ and another High ~135E.
2. Be at about 30S when a High is over or just west of NZ. Your goal is to arrive in NZ in about 2 days from 30S.
3. Be wary of secondary wave depressions forming on Tasman troughs and sliding SE toward NZ.
4. You need about 6 degrees of easting to make Opuia. Should you have more? Too much is not good if the next front comes early. And not enough if the High is late leaving. One idea is a waypoint near 28/173E. Once there re-evaluate which way to go.