

Forecast for the Vic Maui Yacht Race 2010

Prepared for [REDACTED]

Saturday, July 3rd 2010.

General Situation

Slight upper level ridging in the eastern North Pacific will move south and the flow become more zonal on Sunday as a short wave trough moves across the Aleutian peninsula from the upper low in the Bearing sea.

The 1035mb Pacific high centred on 40N 150W will be pushed eastwards Sunday to 140W as a new low pushes eastwards along 50N. On Monday the low will force the Pacific high to stretch into a narrow band north of the rhumbline from 30N 160W to 50N 130W and weaken to 1028mb. With subsequent lows moving across the northern Pacific the Pacific high will remain in this stretched position until around July 10th before it can start building westward again. This will be the situation for the majority of the race.

The strong thermal trough over California is pushing out to the coast over San Francisco, which will persist until July 10th. Winds up to gale strength will be experienced over offshore water between the thermal trough and the Pacific high east of 130W from 36-44N.

In the southeast corner of the North Pacific, between Hawaii and Mexico and south of the thermal trough over California, there is an area of very little pressure gradient and an absence of the trade winds. After July 10th the Pacific high is again able to fill out to the NW, which will also allow the area of weak pressure gradient to move westward. Lighter trades are therefore expected east of the course line, favouring a more westerly approach to the finish.

Juan de Fuca

With high pressure building offshore the strong westerly inflow winds which decreased overnight will fill down the strait again this afternoon, peaking in the late afternoon/evening. Wind direction will be from the west on the west side of Race Rocks but will be more from the southwest on the eastern side.

Tides: Tides are near neap with a small ebb until 1330, which should get you around race rocks and across to the American side. The current will be against the wind, but because the ebb is weak the waves should not get too steep. After 1330 until 2130 the tide will be flooding and it will likely pay to tack up the American shore to keep out of the tide.

Wind:

July 3rd

0600 270-290 12-16kts

1200 270-290 16-20kts

1800 270-290 18-22kts gusting 25

Waves: 2ft wind waves becoming 4ft this afternoon

Weather: Mostly sunny. Temperature high of 20C inland. Water temperature 12C

Washington and Oregon Coasts

Once out of the funnelling effect of the strait the westerly winds will decrease and will likely remain lighter and westerly as you sail down the coast through the ridge before getting into the stronger northerlies along the Oregon coast as you start to feel the increased pressure gradient between the ridge/Pacific high and the thermal trough over California. Once into southern Oregon there will be a strong velocity gradient in the east west direction. You will likely have enough wind along the course line to wpt1 that a gybe onto port is unnecessary but is an option if you're not up to hull speed.

Wind:

July 4th

0000 270-290 10-14kts possibly 260 8-12kts through the ridge

0600 290-310 10-14kts

1200 310-330 12-16kts

1800 330-350 16-20kts

Routing

Although it is a long way off to predict, I have moved wpt2 further west in response to my concerns of lighter trades in the eastern tropical Pacific.

Leg 1 Tatoosh to Routing Waypoint #1: 38N 135W

(Approx Rng/Brg : 765nm/220°T)

Sailing fast on starboard tack to this waypoint with a focus on maximizing VMC to the mark. Minimize port tack gybes as that will take you away from the route.

Wind:

July 5th 000-020 18-22kts Two days of great running between the tight gradient between high and trough.

July 6th 000-020 18-22kts

July 7th 010-030 15-20kts

Leg 2 to Routing Waypoint #2: 32N 150W

(Approx Rng/Brg : 820nm/250°T)

On the leg from wpt1 to wpt2 will be downwind VMG running. Wpt2 is setting you up for the long port gybe to the finish. The strategical decision here is whether to stay on starboard and sail a shorter course but get lifted into the high, or gybe early onto port to get south into more wind but a longer route.

Wind:

July 8th 030-050 15-20kts Velocities very dependant on chosen route. Winds will be closer to 10-15 if you

July 9th 030-050 15-20kts take the starboard gybe west towards the high. Gybing to find the best wind

July 10th 040-060 15-20kts lane is ok during this leg.

July 11th 040-060 15-20kts

July 12th 060-080 10-15kts

Tip: Observe the relationship between wind speed, barometric pressure, and cloud amount/height to determine the ideal distance from the high. Record the obs hourly if possible. Generally you want to stay at least 4-8mb distance away from the high centre and be wary of clouds dissipating as you near the high centre.

Leg 3 to finish

(Approx Rng/Brg : 750nm/210°T)

Wpt2 should be in the vicinity of your port gybe layline to the finish. By sailing leg 1 on starboard and leg 3 on port you will have maximized the north to east wind shift around the high. The only reason to gybe onto starboard during this leg would be to correct a faulty layline call or temporarily to maximize the squalls.

Getting an updated forecast prior to the final gybe to port will be important to assess the difference in wind strength to the east or west side of the course. Models are currently favouring a western approach.

Wind

July 13th 060-080 12-18kts

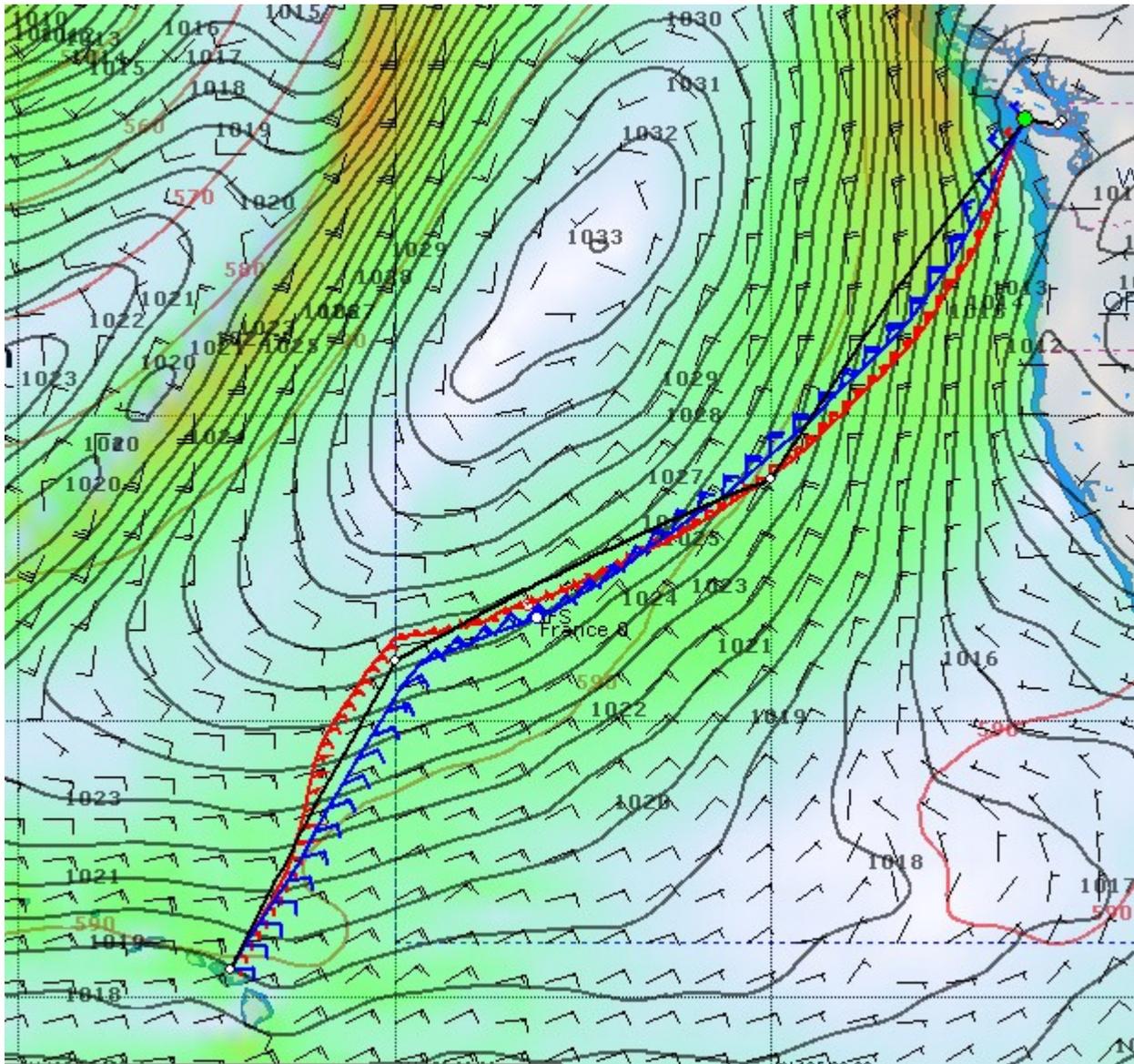
July 14th 070-090 8-12kts

July 15th 070-090 10-15kts

July 16th 070-090 10-15kts

Models

There is increased confidence in the predictions for at least the first third to half of the race as the weather models are showing very similar conditions. The GFS, which is the model you will be relying on mostly appears to be handling the situation well. Predicting the strength of the trades at the time you reach them is difficult this far out so that is where the most uncertainty lies in the forecast.



Routing with July 10th GFS weather