

Yachtmaster Ocean Passage

Watch Leader: Megan Pawsey

On-board: Whirlwind 2, Farr 65

Quinta de Lorde, Madeira – Puerto de la Duquesa, Spain

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Passage Overview

Quinta de Lorde

Distance: 623.9 shortest nav route, excluding TSS

ETA: 104 hours from first way point travelling at 6 knots

Weather sources: Passage weather, previous overview of the weekly synopsis, during passage will be sourcing from Inmarsat C Nav Area 2 - Maderia, through to Casablanca and then São Vicente



Referring to Gib Straits on the Met Area Sat C report upon approach and entrance to TSS, which is every 1030 and 2230 UTC each day

Tidal Gates: Gib Straits

Hazards on route - Banco del Hoyo TSS traffic, Straits of Gib TSS and the weather funnelling through there. Occasional sighting of whales in the Straits

(Apr- Aug)

Pilotage plan for both exit of Maderia and entrance in Gib Straits and Puerto de la Duquesa

Ports of Refuge en route: Tanger Morocco, Cadiz, Spain

Food plan during the week: Menu plan

Water and fuel: refuelled and topped up all water tanks in Maderia, 150 litres of extra water

80 litres of extra fuel due to motoring a lot lack of wind.

Watch one-Will, Rory and Oliver

Watch two- Meg, Hugo and George

Watch three- Matt, Harry and Ross

This rotation was set to 3 hours on watch and 6 hours off, but the 3 hours prior to your watch you would be on standby for any situation which would require extra hands.

Updated chart publications for the voyage: charts used and pilotage books.

Waypoint list	LAT	LONG
WPT 1	32°43'2N	016°39'05W
WPT 2	33°18'75N	014°47'25W
WPT 3	33°52'9N	012°54'0W
WPT 4	34°27'7N	011°00'95W
WPT 5	35°00'5N	009°07'1W
WPT 6	35°32'5N	007°15'.0W
WPT 7	35°50'0N	006°04'4W
WPT 8	35°59'2N	005°45'00W
WPT 9	36°06'1N	005°20'0W
WPT 10	36°15'0N	005°16'8W
WPT 11	36°21.2N	005°13'7W

Between WPT2 and WPT5 achieved the 200nm of travel over 50nm from land.

Charts and Publications

The charts that were used throughout the duration of the passage were a combination of Admiralty charts:

1685

1831

5095

773

1689

2717

3132

1689

Imray c20 used for a closer view on the Straits of Gibraltar

For the uses of our pilotage plans and general knowledge of the areas we were travelling to or passing through Reeds Almanac 2014 became very usual, especially for background information on tidal streams and how the traffic flows through the TSS in the Straits of Gibraltar.

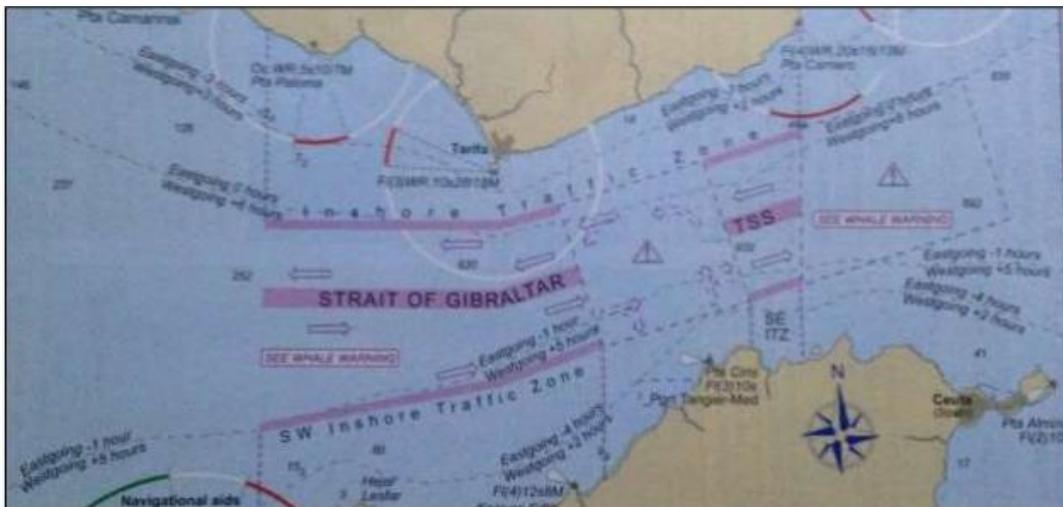
In addition to this we also required Imray Pilot Books, the one specific for this particular passage we Mediterranean Spain, Coastas del Azahar Dorada and Brava, to cover Puerto de la Duquesa and Straits of Gibraltar.

Further publications we required for the likes of our celestial navigation on this passage was the Nautical Almanac 2014 and the Admiralty Rapid Sight Reductions Tables Volume 2 (0-40 Degrees Latitude) and Volume 3 (39 and 89 Degrees Latitude).

Also to benefit my knowledge for a reference point, while at sea for a long period of time I would like to carry on board Admiralty Publication NP 100- The Mariner's Handbook.

Pilotage plans and Navigational Hazards on route

Most importantly during our passage as watch leaders our concern was the Straits of Gibraltar, for its large amount of traffic flow and also the tidal gates and streams through it. With the use of the Reeds Almanac and the pilot books, we were able to gather knowledge that the Straits of Gibraltar always have surface currents which are easterly, going into the Med. It is strongest centrally then decreases more inshore, and a 2 knots of easterly current towards the end. Our plan was to enter to the ITZ (Inshore Traffic Zone) where the flow was easterly; however from the Reeds Almanac we received knowledge of the current flows during +4 and -4 hours Gibraltar HW times. Therefore going through the Straits in between those times was going to be ideal for us.

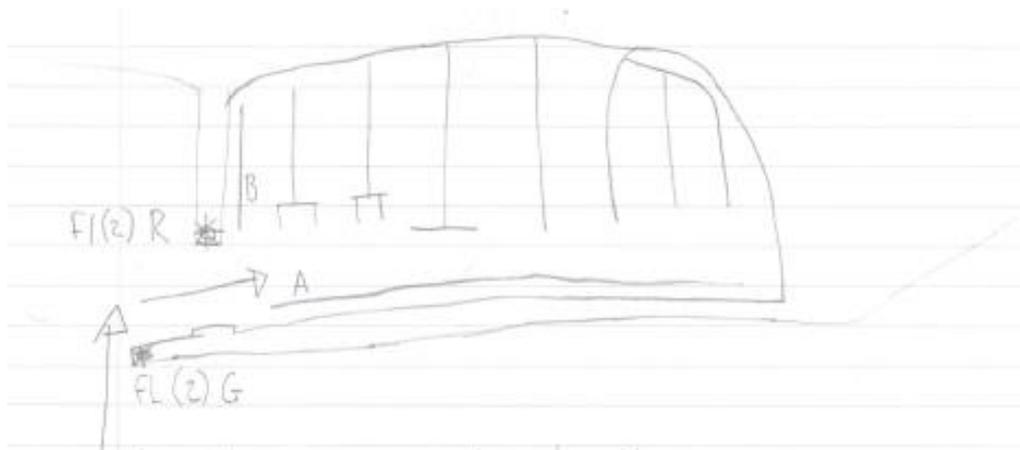


It is essential on a passage to ensure if for any reason of urgency or emergency you have ports of safe have throughout. Here is a list of the Ports of refuge would of encountered on route if necessary.

Ports of refuge	LAT	LONG
Porto Santo	33°03'5N	016°19'W
El Jadia	33°15'4N	008°30'5W
Casablanca	33°37'2N	007°35'4W
Tanger	35°47'4N	005°47'5W
Gibraltar	36°08'N	005°22'W
Puerto Soto Grande	36°17'2N	005°16'3W

As these were additional ports, if only required I would have made a pilotage plan on route using the Reeds Almanac prior to entrance time of the ports of refuge. However to be prepared for those ports we were departing and arriving to I prepared pilotage plans.

Pilotage of Quinta de Lorde



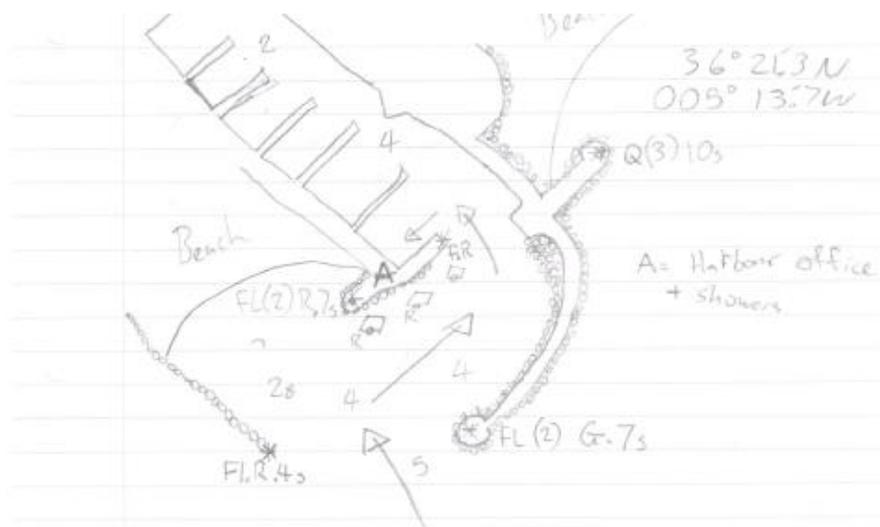
A= The Visitors Quay according to Reeds Almanac

B= Fuel/ Visitors pontoon as a replacement of A was destroyed in a storm a few months ago.

The channel into the marina is reported as 12m, the dangers of coming into the marina that you have to be aware of are:

- Beware of squalls rolling of the hills from the North and mountainous surroundings into the marina
- NE Winds coming from Ponto Sao Laurence

Pilotage of Puerto de la Duquesa



36°21'.3N 005°13'.7W

Secure on fuel berth Ch 9 to ask for a berth or call 952 89 01 00

Under water obstructions are marked by small buoys within the marina, it is advised to give 2.5m clearance from the break water.

There is also a good anchorage NE 150m off, which we have access to.

Fuel, Water and Food

Before we set off on our passage we ensured that we had filled up all the tanks.

Fuel:

Maximum fuel allowance in the tanks we had on board was 700 Litres, we additionally had 80 litres of contingency fuel in jerry cans, as a backup if the engine was to be used regularly due to lack of wind. On board Whirlwind 2, we cruised between 1500 to 1800 RPM which would use up 1 litre of fuel per mile. On this passage particularly, we wanted to save enough fuel to get through the Straits of Gibraltar if necessary, in order to have enough we had 10% as our minimal fuel reserve not including jerry cans to keep at least the 70 litres tank full. This meant we could save 35 litres for the Straits and a little extra.

Water:

Right before all 3 passages commenced the tanks were flushed through with Milton to purify the tanks in preparation for the passages. Our tanks at full which they were before our passage meant we had 680 litres in the boats tanks, we had 40 litres of extra/emergency water in jerry cans. In addition to this we also had 150 litres of bottled water as contingency.

Passage Narrative

Tuesday 28th October 2014

Exit of Madeira

Charts used, 1685, 1831, 5095, 773, 1689, 2717, c20, 3132, 1689.

Head out of Madeira head south until meet a depth contour of 50m, then keep depth above 50m keeping more to starboard of the coast if to go lower, or on a true course of 115.

Waypoint 1 32,43,2N 016,39,05W

Variation through the passage will be 5 degrees west 2010, (8'e) = 2014
4° 28 w

Weather forecast from Sat C 28th Oct 1015 UTC

Met area 2- n or northwest 3 or 4, locally 5 in west today, decreasing n 2 to 4 at end moderate, some rain or showers.

Tides for 28th in Quinta do Lorde

0428 3.5

1035 1.1

1654 3.3

2204 1.1

All food, water and fuel topped up

Crew moral high as managed to stop and shower refresh before next leg.

Used visual fixes to leave marina via buoyage then a series of running fixes and 3 point fixes until depth is met and can start heading on our voyage course of 075 true. This course will take us to the entrance of Gibraltar Straits.

Once turned around the headland steering 075(C) to Gib Straits.

Prevailing current is 5/10th of a knot at 216° (T) source Atlantic pilot atlas.

Variation until second compass rose on route: 5°00W 2010 (8'E) = 4°28'W 2014

Checked gnomonic charts for greater circle route between WPT1 and WPT7 but nominal course

Corrections needed, added WPTs every 100nms to ensure holding a safe course.

As we left the marina we had a calm southerly breeze 2 to 3, motored out of the marina until we met out depth and then proceeded to hoist main and AP head sail and smooth sailing on a course of 075 c.

Running Fix island de Porto Santo

0000 312°(C) = 308°(T)

Steering 075° (C)

0100 296° (C) = 292°(T)

32°55'N 15°50'W

0200 DR on a course of 075C = 071 T Log 38611 - 38603= 8 NM travelled.

0142 Engine turned off and full main and Ap up hitting 10 knots. Good sailing conditions.

0300 10° to STB ,course altered to avoid cruise ship light showers mostly clear with weak squall.

Off watch squall weather lead to 1 reef and number 4 head sail change.

Wednesday 29th October 2014

0900 sailing best to wind 90°(C) and sun sight taken for celestial fix of our position

0910 wind backed to allow a course of 075°(C)

1100 Updated 0900 EP with information from celestial fix then used the DR technique to find a more

accurate 1100 EP

Passed WPT2

1200 Celestial Nav sun run sun creates an EP of 33°20N 014°20'W

Wind varying constantly causing sail trim and at times motor sailing.

Thursday 30th October 2014

Light winds all day causing us to have a combination of motor sailing and best to wind keeping the

speed above 6 knots. Update to EPs using astro nav to get better fixes.

Friday 31st October 2014

0300 - 0600 watch hours wind picked up significantly, put 1 reef in and changed head sail, put away AP and replaced with no. 4 head sail. enabling us to helm best course to windward 45 degrees apparent wind angle and steer a course of 030 roughly with a speed of 8-9 knots which meant we could travel further north of our track line to enter gib straits from the north using the itz which is recommended in the reeds almanac

1020 am engine was turned on as no wind, changed course to head directly to gib on a heading of 095 degrees true. Until the forecast comes through and we will resume heading on a course of 030 degrees. This is to avoid the direct easterly forecast in gib straits. Gale 8. Roughly 250 miles from Gib

Evening watch hours:

still in search of forecast wind and weather, so still motor sailing in a direct route to Gib, swell conditions still no improved, swell straight on the nose of about 2-3 metres.

Watch hours 9-12

Weather forecast:

2215

North or NE 4 or 5 locally easterly 4 to 6 in south east.

Moderate to rough

Thundery showers

Saturday 1st November 2014

0100 reefs out and resume motor sailing

0900 tacked and heading on a course to the Gib straits

1000 astrofix of EP 36°43'5N 007°24'5W

Engine off to conserve fuel and good sailing conditions

1420 headsail change and engine on because of drop in wind.

1600 first sight of land

1720 moderate swell 30knots apparent wind allowing us to sail.

1800 Running fix to get EP 36°08N 006°22'5W

Constant running fixes and three point fixes to ensure our position and safe navigable waters.

1900 gusty wind conditions reef three in and storm sail up.

2000 tacked to avoid the TSS ensuring we stay in the northern ITZ

2100 swell and wind decreases as we get into the shadow of land.

2200 running backstay block broke during/after tack 2 hours spent replacing head sail down motor sailing.

Sunday 2nd November 2014

0100 heading for Tarifa light on 110°(C)

0300 steer closer inshore north of the Tarifa reef to decrease the wind and swell and to increase the speed. Constant position fixes to ascertain the position, always plotting close to danger using depth readings as well.

0400 approached Tarifa light once past changed course towards Gib.

0600 passed within 15 miles of Gibraltar

0900 Engine off sailing a beat to wind course to the next WPT

1000 Approach made to marina Puerto De la Duquesa

Passage Summary

Overall the passage was successful, all crew returned on land in one piece. We overcame any scenarios that were not foreseen, such as the running back stay snapping delaying our voyage by two hours, and the occasional heavy winds and gales which were not forecast or a drop in wind speeds. Which meant we had to monitor the day tank every hour of watches and was always topped up to over half and the battery voltage above 12.1V, also if the speed was lower than 6knots for a sustained period something was done to increase speed for example motor sailing or adjusting our course to get a better apparent wind angle. Any incident or encounter with other traffic was done under close observance of the COLREGS.

Collectively throughout this leg we managed to complete 752 NM over 5 days, navigating by no means of GPS or electronically elements and the crew all finished the voyage with high moral and happy faces in the intention of being homeward bound.