Estimated Positions

with Poole Sailing

Estimated Positions

- If we sail out of sight of land, we must keep an adequate navigators log like the one shown below.
- If we have a known 'Point of Departure' and know the time, new bearing and log reading at each change of direction, then we can work up an Estimated Position or EP.
- The log extract below is taken from a sailing yachts passage between Poole and Yarmouth.
- The last known position, or point of departure, is the Bar Buoy, which the yacht passed 'close to' at 12.00.
- The Bar Buoy is marked on the chart, so we can draw the courses steered on our chart from that point.

VOYAGE FROM ***Poole*** **TO** ***Yarmouth***

TIME	COURSE STEERED	LOG	WIND	BAR	EVENT
11.00	*P*	*1025.5*	*E - 4/5*	*1010*	*Depart Marina, 2 reefs no.4*
12.00	*P*	*1030*	*E - 4*	*1010*	*Passing Bar Buoy*
12.30	*050 M*	*1033*	*E - 4*	*1011*	*Tacked, 1 reef out.*
13.00	*140 M*	*1036.5*	*E - 4*	*1011*	*EP 1 See Chart, Tacked*

From Tidal Atlas Tide Stream from 12.00 to 13.00 077 degrees 1.5 Knots

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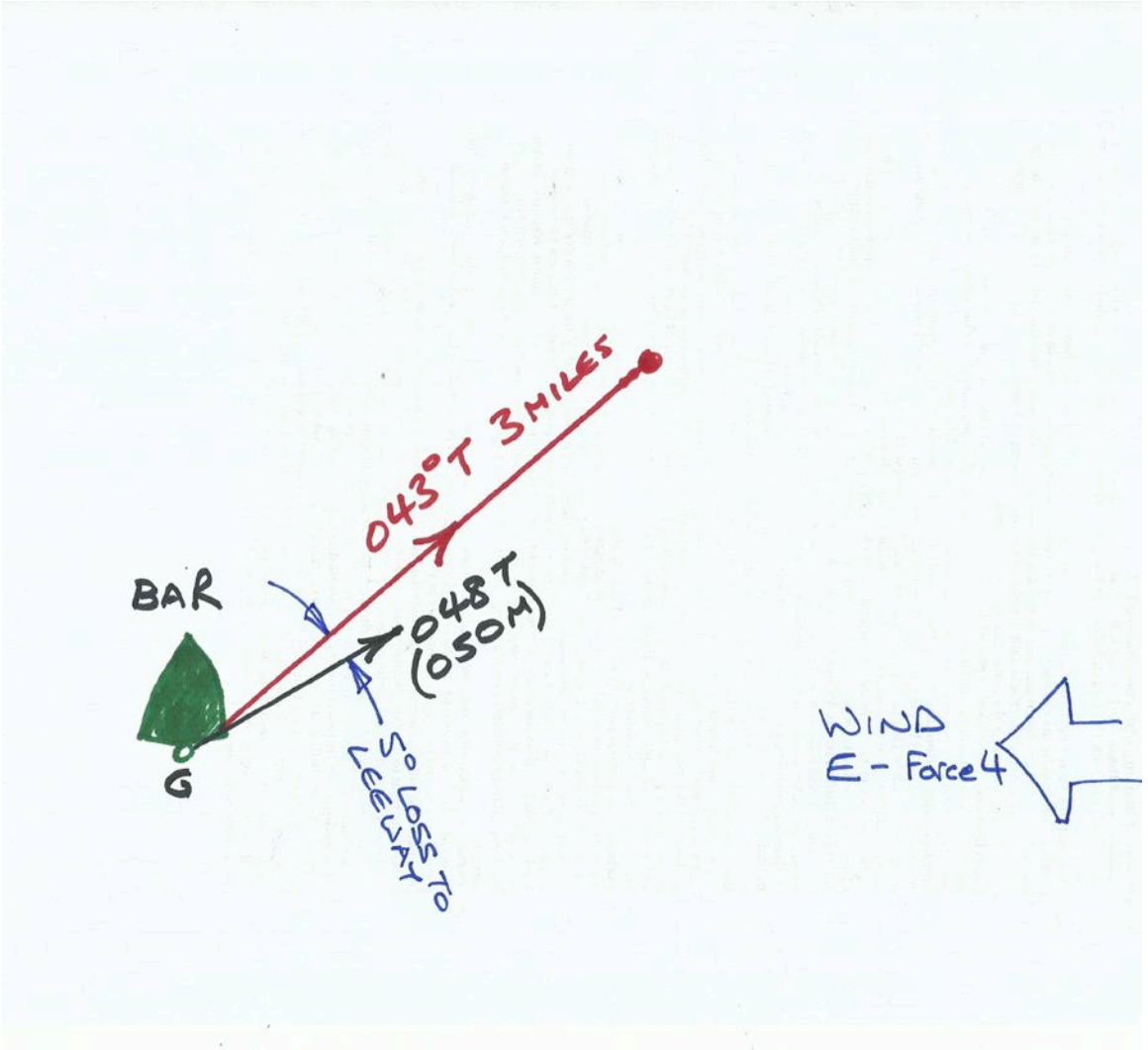
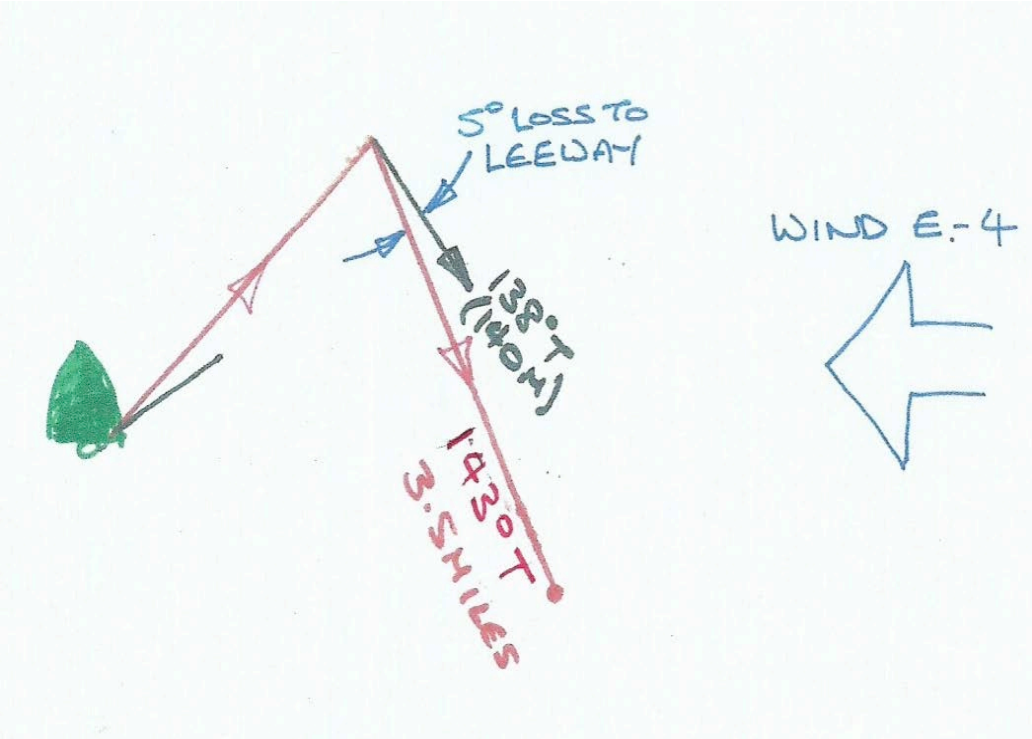
- Between 12.00 and 12.30 our yacht has been steered at 050 M and has covered 3 miles.
- Our chart says that there is 2 degrees of west variation so the 050 M course line will be drawn at 048 T on the chart.
- When starting the course line the navigator can see that the boat has sailed Close Hauled. So there will have been a loss to Leeway which the skipper estimates at 5 degrees.
- The course line is finally drawn then at 043 degrees true.
- The difference between the log readings at 12.00 and 12.30 give the distance that the yacht has moved along the course line, 3 miles.



Estimated Positions

- The second leg, after the tack, 12.30 to 13.00 can now be drawn.
- The course steered was 140 M which allowing for 2 degrees west variation will be 138 T.
- The yacht is still close hauled albeit on the other tack so leeway will again force the boat away from the wind by another 5 degrees. So the final course drawn is 143 degrees True.
- The difference in log readings between 12.30 and 13.00 tell us that the boat has travelled 3.5 miles along that course line.
- We now have the DR position for 13.00 but that's not where the boat is. We need to allow for the tide movement.



Estimated Positions

- If we take the time of the appropriate High Water from the Almanac.
- Apply it to the relevant page of the tidal atlas or tide vector block on the chart, we can establish how far and in what direction the water has moved between 12.00 and 13.00.
- That tide vector, in this case 077 degrees True at 1.5 knots can then be added to the end of the last course line.
- The tide has been flowing at 1.5 knots for one hour so it will have moved the boat by 1.5 miles.
- And that's where the boat is at 13.00. EP 1.