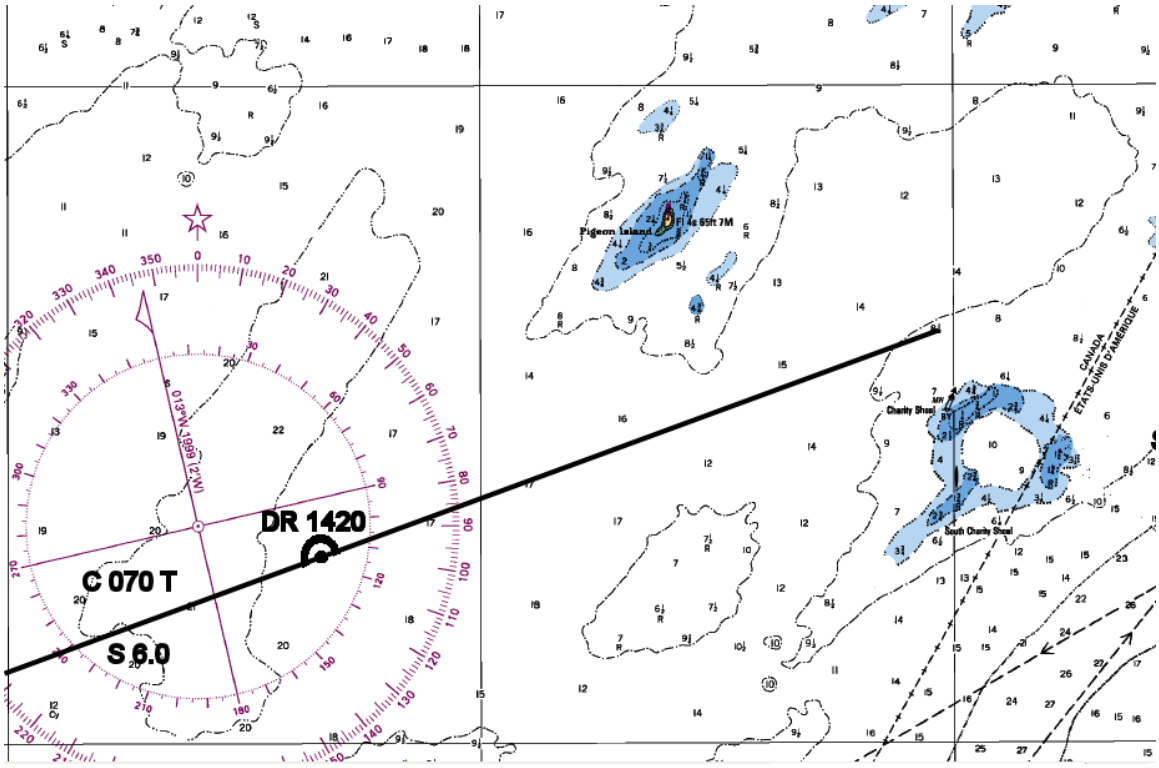
Wavelength

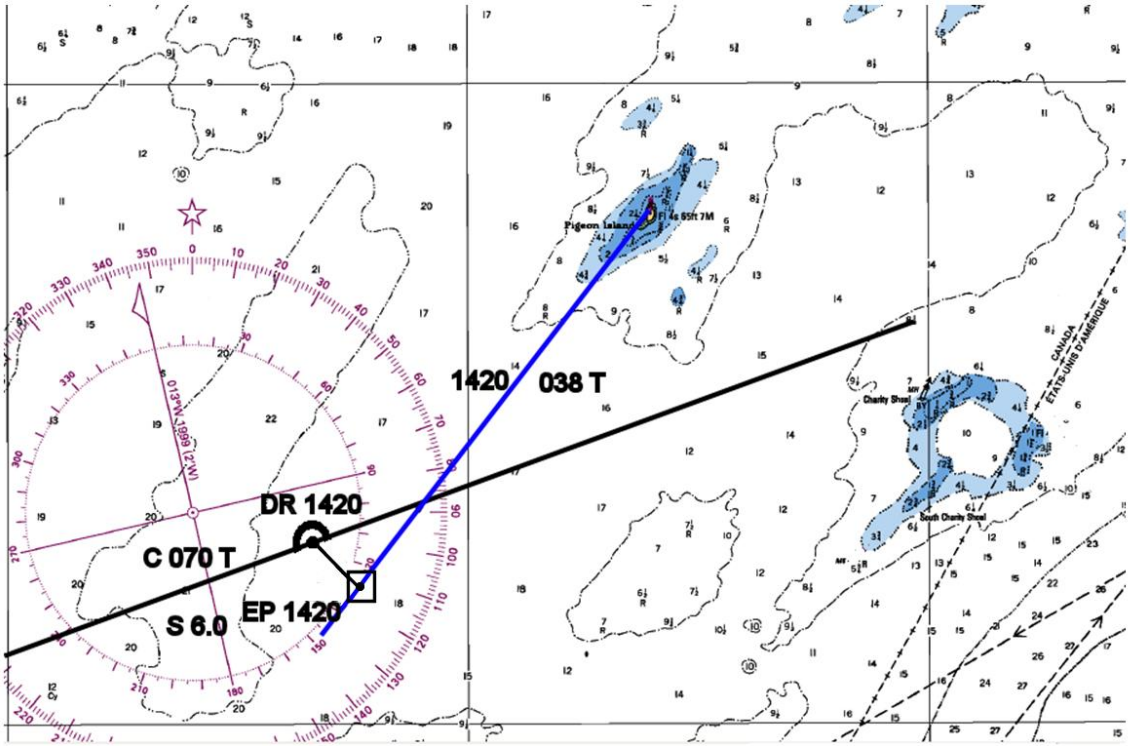
Running Fix

A running fix is a way of getting a fix when only one object is visible. In this example we use the light on Pigeon Island. We are on a course 070 ^{o} T with a speed of 6 knots. At 1420 our DR is 44 deg 0.0 min N, 76deg 36.7min W.



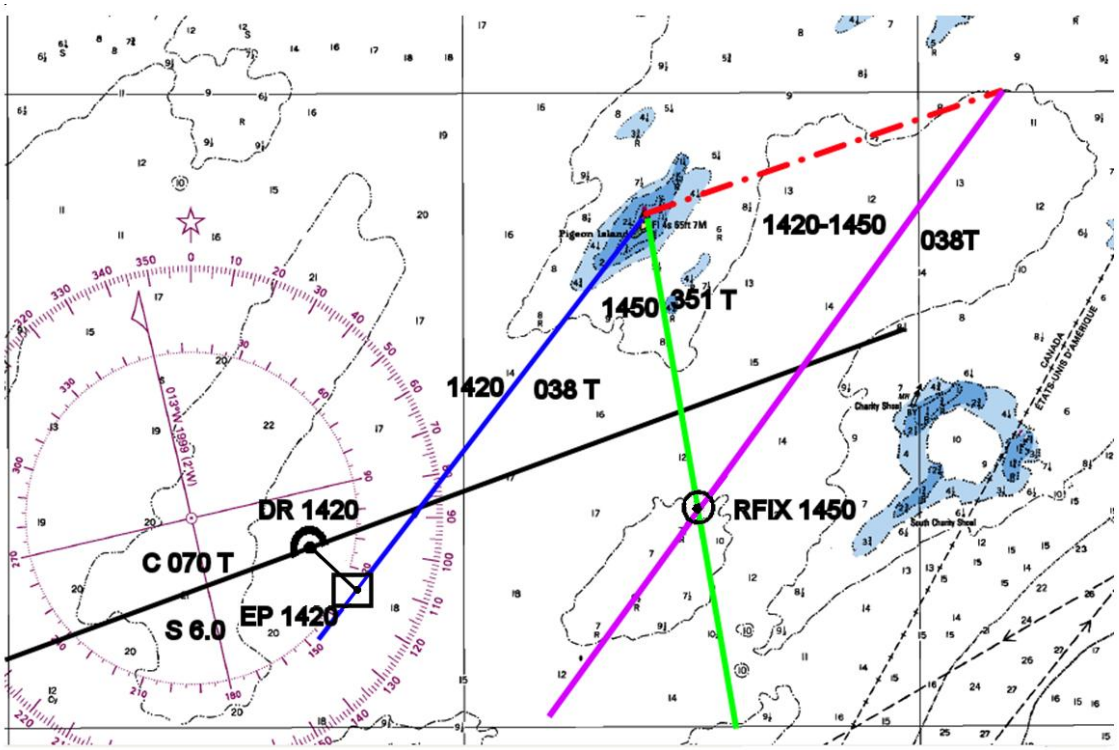
Wavelength

At this time (1420) we take a bearing on PI light and record it as 051M. Since the variation in this area is 13W the true bearing is 051-13=038^{o} T. We can plot this line of position and determine an Estimated Position as in the next diagram. The EP is the closest point on the LOP to the DR position. To find this draw a perpendicular from the LOP through the DR position. The intersection of this line with the LOP is the estimated position. The EP is plotted as a dot within a square outline and labeled with the time.



We appear to be south of our DR position but we continue to plot our course from the DR.

Half an hour later at 1450 we take a second bearing on PI light after allowing for variation this is calculated to be 351 T. This is plotted in green in the next figure. We can know plot a running fix. We assume in this half hour that we have traveled 6 X 1/2 =3 miles on a course of 070T. Therefore we advance the first line of position by 3 miles in a direction of 070T. for ease of plotting we can draw a line from the object (PI light) which is 3 miles long in a direction of 070 and draw a line parallel to the 1420 LOP through the end of this line. This advanced LOP is labeled as below. The intersection of the advanced LOP and the LOP at 1450 is the position of the boat. It is labeled RFIX and is deemed a fix so we would resume our DR plot from this position and change course to avoid Charity shoal!



Note for this example navigational aids on Charity Shoal have been erased (these in reality would permit a fix)