$$R = \frac{V_R \, (t_{Ra} - t_{Rt})}{A_a + A_t}$$

R = apparent rate of drift

V_R = velocity of refractor being used for calculations

t_{Ra} = total travel time between initial buoy positions via refractor V_R when buoy drifting away from recording vessel.

t_{Rt} = total travel time via V_R when buoy drifting towards recording vessel.

A_a = profile recording time buoy drifting away from vessel.

A_t = profile recording time buoy drifting towards vessel.

Individual velocity segments were corrected by adding to the observed time an amount calculated by the formula -

$$t = \frac{aR}{V}$$

t = correction to be added

R = rate of drift ($^{+ve}$ if towards shooting vessel $^{-ve}$ if away from shooting vessel)

a = time elapsed from start of profile to position of observation.

v = refractor velocity

When corrections were made as above it was found that total travel times in each direction via the same refractor were approximately equal thus showing that the apparent drift calculated was correct.