

All questionable lines were re flown.

3. Data Reduction

a) Flight Path Recovery

Although some difficulty was encountered in the use of the Doppler due to computer difficulties resolving an accurate reciprocal track, we were of the opinion that the Doppler maintained adequate straight lines.

The maps used as a basis for plotting identified fiducials or aircraft's flight path track on landfall were the published maps at 1:250,000 scale of the Tasmania Lands and Surveys Department. For compilation purposes, these maps were photographically enlarged to 1:100,000 scale.

From Doppler output information and identified fiducials on landfall, the flight path was extended out over the water and fiducials were plotted at one nautical mile increments along each of the flight lines. These preliminary positions of fiducials over water were suspect, because of random errors introduced by incorrect ground speed data which drives the fiducial firing system via Doppler.

In theory, the true ground speed is derived via Doppler from a stationary reference plane, however in these circumstances, reference was made to a moving surface, i.e. wave motion, sea state, current, spray, etc. As spacing lines of two nautical miles length were flown at the ends of the seaward lines, we knew that the distance separating these lines must be two nautical miles.

Again, on reciprocal tracks, it was found that on the seaward leg, i.e. flying in a southerly direction, a line as flown may show 50 fiducials, i.e. according to the Doppler we flew 50 nautical miles to sea. However, on the return leg, dependent upon the sea state, we were at times recording a different mileage or number of fiducials, i.e. in cases 53 or 47. As it would be assumed the aircraft flew the same distance out to sea as it flew back, we took the mean of these two distances for the average length of a pair of lines and plotted on each of these lines the fiducials as recorded.