

III SURVEY PROCEDURES AND EQUIPMENT

In September of 1966, agreement was reached between Esso Exploration Australia Inc., with registered offices at 71-79 Macquarie Street, Sydney, New South Wales, and Aero Service Limited, with registered offices at 31 Park Road, Ramsgate, New South Wales.

The purpose of the agreements was to conduct an airborne magnetometer survey over part of offshore Tasmania. The profile flight direction was at right angles to coast line with coastal tie-lines flown where practicable. Traverses were flown at an interval of two nautical miles. Tie-lines were flown in the offshore portions of the survey area.

1. OPERATIONS

The bases used for survey purposes, accommodation and fueling were St. Helens, Hobart, Smithtown and Strahan, Tasmania.

Prior to commencement of flight operations, the Doppler was calibrated over a known distance and reciprocal heading checks were established. Compensation of the magnetometer was effected and checks were made on the correlation of all three records, viz. Magnetometer, Altimeter and 35mm Tracking Film.

The survey aircraft, Aero Commander registered no. VH-MJJ carried a Gulf Mark 111 Magnetometer with the detector head housed in a tail cone installation. In flight, the magnetometer continuously measures the earth's total magnetic field thereby indicating any variations in this field as the aircraft proceeds along pre-determined flight lines. Using a recording Potentiometer coupled with the detector head, the magnetic information is automatically recorded on a graph chart. The aircraft's altitude is also graphically recorded on a chart which shows the terrain clearance. In order to validate the flight path as flown by the aircraft, an Aeropath AS-5 continuous strip 35mm camera photographs the terrain.