

country or the hill tops. Navigation in mountainous country with dense forest cover proved to be extremely difficult. The flight path map presented by Webster and Skey (1979) demonstrates the problem. The use of INPUT in this area would be restricted by the same limitations and would not be cost effective. Dighem or Geonic EM 33, both of which have the transmitter and receiver mounted in a boom towed under the aircraft, would be far more manoeuvrable provided the installation is in a powerful helicopter. This will be expensive to operate therefore while the helicopter is on site the maximum benefit should be obtained. The first priority would be to ensure the navigation problems are minimised and the additional cost of using a range-range radio transponder system is definitely warranted.

Another major consideration is the flight line spacing. When the decision has been made to carry out a helicopter EM survey the major cost will be the mobilisation, therefore the additional expenditure in closing the line spacing to a minimum would not be proportionally great. This has the advantage of ensuring blanket coverage of the area.

The use of induced polarisation, self potential and ground electromagnetic methods has been reported in many areas, Hallof (1967), Howland-Rose (1971), Keunecke and Tate (1954), Langron (1966) and Williams (1964a & 1964b). This would be a far from complete list of the ground geophysical surveys which have been carried out in north-western Tasmania. In all areas where I.P. was used over known mineralisation there has been a significant response which could be equated to the occurrence.

Induced Polarisation would be the most successful method used in the area and with the improvement in equipment design this technique should be used wherever possible. Self Potential was used over the tin deposits at Renison Bell and Cleveland and showed there to be a consistent relationship between the ore bodies and S.P. anomalies. Although this technique has been applied with success over two larger deposits it should not be the only method used to test potential tin ore bodies. It would be better to use the method in conjunction with an I.P. survey. Ground EM techniques are now being applied elsewhere in Australia where there are problems with conductive overburden and the west coast of Tasmania would be a primary area for using ground EM.