APPENDIX 19

INVESTIGATION OF "POST OFFICE" INDUCED POLARISATION ANOMALY - G. WESTE

INTRODUCTION.

Time domain electrical induced polarisation surveys were carried out in January 1975 and December 1976 by Comalco personnel over an area near the old Moina Post Office immediately to the east of the "Shepherd and Murphy" sheet on the adjoining "Iris River" sheet to follow up open-ended chargeability anomalies located during a Scintrex Pty. Ltd. gradient array survey: (drg Nos. 78-145 & 148)

THE SURVEYS.

A gradient array survey was carried out along lines 50 m apart from line 50 E to 350 E to cover the chargeability anomaly. Readings were taken every 25 m using a 25 m dipole and a Scintrex IPR7 receiver and a 2.5 kw transmitter. Profiles are shown on drawing Nos. 78-150 and 151.

The chargeability anomaly has a somewhat erratic west trend from approximately 50 E/210 N to 350E/150 N. The anomaly is not closed off to the west but has dropped to 24 ms. The highest chargeability is 30 ms on line 100 W. The shape of the anomaly is quite variable and appears to generally consist of multiple sources. The width of the anomaly or anomalies varies from 50 m to about 150 m. A broader anomaly of similar amplitude occurs to the north along lines 50 E to 150 E but was not followed to the east or west due to the close proximity of Lake Gairdner. The high chargeabilities do not correspond to any particular resistivity feature. Resistivity values vary from 500 to 1200 ohm metres. The apparent width of the anomalies indicates that they may be stratiform.

A pole-dipole survey was attempted over what appeared to be the simplest singlepeak of the anomaly on line 100 W at 180 m . The potential electrode spacings used were 25 m and 50 m with a 3 array spacing being maintained. The main purpose of the survey was to gain information on the depth to the chargeable material. This survey was abandonned because cattle kept chewing the electrode wires.

A pole-dipole survey over the broader anomaly to the north along line 50 E was successfully completed (profiles attached) and indicates that chargeabilities increase with depth and appear to dip to the north. The pole-dipole chargeabilities are much lower (about half) than expected. The resistivity increases with depth as expected.