

area to explain the anomaly. The Lake Dora prospect is located on a magnetic high (Figure 15) which can be explained by the presence of the Tyndall Group rhyolite.

The regional and detail magnetic data show that over the Proprietary Peak and Adit Knob area there is an isolated magnetic anomaly coincident with the Proprietary Peak mineralisation. There is no similar anomaly associated with the Adit Knob deposit. The source of the response is related to the chlorite alteration zone in the contact between the quartz -feldspar -phyric volcanics of the Eastern Sequence and the Central Sequence rhyolite. There are porphyry dykes in the area of the Proprietary Peak occurrence which may explain the magnetic anomaly however, a similar dyke near Adit Knob is definitely non-magnetic.

The detail magnetic data over the Hyde's Prospect area (Plate 7), demonstrates a magnetic anomaly similar to Proprietary Peak. In this area the anomaly is located between two mineralised chlorite alteration zone. The western zone was drilled and a 24 metre intersection of 0.50 to 1.25 percent copper was recovered. A gossan from the eastern chlorite alteration zone recorded 6.10 percent copper however I.P. tests indicated that the source was shallow with limited strike extent. An airborne EM anomaly (Conductor 28, Ruddock 1974), was recorded over the northern extent of the eastern chlorite alteration zone with no follow-up work documented.

Allan's Creek and Findon's mineralisation are located on the northern anomalies associated with the South Darwin Peak Granite system. The occurrences in this area do not appear to be related to magnetic features even though they are in a chlorite alteration zone of the Central Sequence rhyolite. Further to the south, the South Darwin Peak occurrences are located in chlorite alteration zones in the same rhyolite sequence with coincident magnetic anomalies.

To summarise, the magnetic data over the southern zone of Mt. Read Volcanics have shown that the majority of deposits located in the contact between the Central Sequence rhyolite and the Eastern Sequence, have a coincident magnetic anomaly. The sources of the anomalies are quartz -hematite -magnetite veins reported by Corbett, (1981). In other areas a similar geological setting failed to give a magnetic anomaly.

North of the Henty Fault the regional data indicates a change in the magnetic signature. There are no large amplitude anomalies which could be due to quartz-hematite-magnetite veins. The area is mainly composed of relatively non-magnetic Central and Western Sequences of the Mt. Read Volcanics.

The magnetic data over the Que River deposit (Figure 17), demonstrates the lack of a regional magnetic anomaly. Webster and Skey (1979) presented ground magnetic data which showed a 200nT response coincident with the "P" lens, however they concluded