

The origin of the Dora Conglomerate is dominantly epiclastic but there may have been some direct pyroclastic input.

In several places the conglomerate appears to have an interfingering contact with the Central Volcanic Sequence and interbedded flow-banded lavas have been found west of Lake Dora (Eastoe, 1981). This suggests that the Dora Conglomerate is a lateral equivalent of, and derived from, the volcanics which probably formed at a volcanic centre to the north. Other evidence to support this hypothesis is the presence of the porphyry bodies which intrude the Dora Conglomerate, and alteration which is associated with mineralisation and affects both the volcanics and the surrounding conglomerate in a trench south of line 200S, 2360E.

5. Jukes Formation

A thin hematitic volcanoclastic conglomerate underlying the Owen Conglomerate along the western margin of the grid has been correlated with the Jukes Formation of the Tyndall Group on the grounds of stratigraphic position and the high proportion of hematite in clasts and in the matrix. However, there are no sharp contacts between this unit and the underlying Dora Conglomerate nor the overlying Owen Conglomerate. The transition from Dora to Jukes is marked by a decrease in grain size and rounding of clasts, an increase in hematite content and an increase in the proportion of matrix. The transition from Jukes to Owen is marked by a further decrease in grain size, increased proportion of quartz and quartzose fragments and an increase in sorting. The entire transition from Dora to Owen takes place over a width of about 20-40 m.

In places the contact between Jukes and Owen is very hematitic, dropping off rapidly within the Owen.

6. Owen Conglomerate

The Owen Conglomerate in the Spicer area consists of predominantly siliceous quartz sandstones, hematitic sandstones and pebble conglomerates, and occurs along the western margin of the grid. Bedding is quite distinct and dips westward at about 50° - 70° . Individual beds are usually within the range of 1 m - 2 m.

A distinctive red hematitic sandstone near the base of the formation has given rise to moderate-order chargeability anomalies and also provides a marker horizon for defining structures such as several E-W trending faults.

7. Mineralisation

Several old workings occur in a zone of altered volcanics between 200S, 2360E and 152S, 2040E, and continue northwards, along the western edge of Fauld's Tarn, to line 128S of the Dora Grid (Figure 46).

The main rock types in this zone are quartz crystal tuffs and rhyolitic lavas with minor lithic-crystal tuffs. The mineralisation and chloritic alteration has given all affected lithologies a distinctive orange-coloured weathering which was an obvious focal point for the early prospectors.

The mineralisation consists of disseminated and veinlet pyrite throughout the zone, with patches of magnetite-hematite, galena-sphalerite and chalcopyrite.