

in the eastern half, including some with well-rounded clasts, and also the Lower Cambrian Sediments, suggest sub-aqueous deposition in a shallow trough between the volcanic arc and the Precambrian rocks of the Tyennan Block to the east.

This contrast in environment may explain the differences between the western pyrite zone and the eastern pyrite zone, although there is no strong structural evidence to suggest that the two zones are time-equivalent.

4. Jukes Formation

The bulk of the Mt. Selina massif consists of a massive coarse hematitic volcanoclastic conglomerate which is correlated with the Jukes Formation of the Upper Cambrian Tyndall Group. Contacts with the surrounding volcanics and Owen Conglomerate are not well exposed and so their nature (whether unconformable, faulted, etc.) is unclear.

The unit is highly hematitic, both in the matrix and as clasts, and magnetite is also present. Outcrops form two N-S trending ridges either side of the baseline between lines 168N and 136N. An inferred E-W fault truncates the western ridge at 136N but the eastern ridge continues. However, the conglomerate south of 136N appears to be different in that there is less hematite, the grain size is finer and well-rounded quartzite pebbles become prominent. This unit may be a correlate of the Dora Conglomerate which underlies the Jukes Formation in the Dora-Spicer area to the south.

Mapping in 1972 (McKibben, 1972) located outcrops of Jukes Formation rocks in Quinn Ck, about 1.5 km north of the Selina Grid, apparently conformable beneath Owen Conglomerate. Thus it appears that the Jukes Formation continues north from the grid area along the eastern side of the steep Owen Conglomerate cliffs and is largely obscured by scree from the Owen.

5. Owen Conglomerate

The Owen Conglomerate occurs as pink massive very coarse-grained siliceous conglomerate along the western ends of lines 160N to 184N. The conglomerate was also intersected by D.D.H. LS7 beneath line 112N, indicating a faulted contact with the volcanics, obscured by swampy moraine and alluvial cover (Figure 27).

Because of the massive nature of the Conglomerate bedding is difficult to determine but where recorded it dips westerly at around 30° - 50° except near minor folds where northeasterly dips have been recorded.

6. Structure

The structure of the Selina area is poorly known because of the lack of bedding readings. Several E-W faults (Figure 27) have been inferred from outcrop patterns and airphoto interpretation. A major NNW-trending fault is inferred to occur beneath the swamp on the western side of the grid. The western block has been downthrown to bring Owen Conglomerate into contact with the volcanics and truncated the western pyrite zone at around line 112N. The fault continues south through the Rolleston Grid, where it was intersected by drill holes LS1-3. From airphotos it is interpreted to continue in a NNW direction up the slopes of Mt. Murchison.