

A visit to the Olga Project, Gordon River

by E. Williams

Department of Mines palaeontologist M. J. Clarke and the author accompanied Hydro-Electric Commission geologist M. Andric on a visit to the Olga Project on the Gordon River in south-west Tasmania. We arrived at Hermit Camp on Monday 6 April and were taken by helicopter to the Olga Camp on Tuesday 7 April. The Gordon River had risen some 10-15 feet during the preceding few days and due to swift currents the boatman thought it unsafe to use a dinghy. We descended to the northerly-flowing stretch of the Gordon River and were unable to find any rock exposed. On the westerly flowing section of the river we descended to near localities 99 and 82 (see Byrne's map accompanying HEC Report 644-96-1) and examined outcrops on the routes to these points. Unfortunately we were unable to travel along the river banks. We returned to Hermit Camp on 8 April.

In general, little work could be done. However, a number of comments can be made to help in further investigations on more favourable occasions.

The field map of Andric gives an excellent preliminary approach, with interpretations at a minimum. Investigations should now be extended to outcrop above the river — as along the haulageway — so that variations of the rock deformation can be determined with respect to height. Styles of folds and overturning of steep beds can be established in this way.

Sedimentary structures of the type invaluable for indicating the tops and bottoms of beds are common. Examination of all outcrops should be made to establish whether or not beds are the right way up. The sedimentary structures noted at locality 99 and along the haulageway included truncated 'torrential' current bedding, whereas flute casts and festoon current bedding were frequently seen at locality 82. Observations of such structures are important in showing the relative position of horizons. For example, Byrne considers Df2 to be younger than Df1, whereas the fossils determined by Clarke strongly suggest Df1 to be the younger member — noting the tops of beds will resolve such problems.

Since an important concern in this area is with the distribution of limestone, it would be extremely helpful to determine the calcareous content of all the rock types in the area. Calcareous horizons are known in Siluro-Devonian systems, and until the calcareous nature of drill-core sequences and rock outcrop is determined the stratigraphical positioning of the rocks with respect to proven Ordovician Gordon Limestone is guess-work. How, for example, was the limestone in boreholes 7052 and 7054 proved to be Gordon Limestone? Fresh samples should be collected from surface outcrops and, along with drill core already available, submitted for dry tests for CO₂ content, and then wet tests to determine the type of carbonate present. These analyses are relatively inexpensive.

Geological information gained from bore holes seems to be limited if, as I was informed by the driller at the Olga Camp, holes are not surveyed at about every 100-200 feet. Depths at which rocks are encountered may be a great deal less than that recorded if the direction of the hole is variable, and of course bedding inclination, so necessary for structural interpretation, cannot be calculated with any precision.

It was very disappointing to find that so little could be looked at during our visit due to the recent heavy rains. However I hope there is time for Andric to continue his excellent mapping when work is resumed in the Olga area next November. I shall be glad to see the area when the river level drops.

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