

Sequence 4 (\approx Rsf1), (with Sequences 5, 6, 7 and 8 corresponding to the Rsq, Rm, Rp and Pj unit respectively).

The distribution of Sequences (principally 1, 2, 3 and 4) in drill holes is shown in Table 5.

4.1.2. Description of Sequences

The following description of these sequences is based mainly on the work of Forsyth (1984), and full acknowledgement is made to that author.

4.1.2.1. SEQUENCE 1

This Sequence averages 69% sandstone, 18% mudstone, 7% coal, 6% siltstone and volumetrically minor tuffs and silicified wood.

The sandstones range from fine to coarse grained, and typically occur as thick (3 to 32m) cross bedded units, although the intra coal seam intervals of arenite with minor mudstone/siltstone range 5 to 40m in thickness.

Composition of the sandstones is distinctive, with acid - intermediate volcanic lithic grains, in addition to basalt, chert, mudstone and quartzite grains; other components are quartz, feldspar and mica. The arenites are occasionally quartz rich, and usually have a carbonate cement.

Mudstones range in colour from brown to grey to black, and occur in beds < 1 to 15m thick; shales are included with mudstones in the 18% average, and are very minor in proportion. Mudstones forming "lutite envelopes" to coal seams may be both grey to carbonaceous, and a transition from grey to carbonaceous mudstone to heavy dull coal to coal is frequently seen.

Siltstones form a minor part of the sequence, and are typically interbedded with mudstones in the floors of coal seams.

Coal seams, although volumetrically small overall, form 22% of the non arenite fraction; seam widths range < 0.1m to \approx 4m, with a median value of 0.6m. (Figures 26 and 27).

The sequence is \approx 160m thick in the York Plains area, and \approx 240m near Melton Mowbray. Forsyth (1984) estimated his Rg sequence to be Karnian in age (in part).