

depositional conditions. Many of the lower sequences exhibit rhythmical deposition of clay, silt and sand as thin alternating bands.

It is possible to attempt correlation on individual sections in places only. This would not be legitimate over some parts of the area. One outstanding marker unit is a pebbly sand or gravel bed dipping from 300 ft. above sea level in P/7 to 220 ft. above sea level in Section R, two miles to the west. Carbonized wood accumulations which are common between 0-100 ft. above sea level in P/4-P/7 extend through W46 on Section R (-200 ft. to 50 ft. above sea level) and to S/12-S/13 (0-100 ft. above sea level) indicating that heavily forested swamps existed for a considerable time in the area.

Minor orange iron oxide staining occurs at depth in sands and clays throughout much of the area. Ferruginous staining below the limit of recent oxidation is present in a belt between R/8A-R/14 to S/9-S/12. In R/8A-R/14 the zone is up to 200 ft. thick, between the limit 0 ft. above sea level - 300 ft. above sea level, roughly reflecting the surface profile, and manifested as orange stained clays, silts and quartz sands. In Section S, the zone is less definable, from about 0 ft. above sea level - 250 ft. above sea level and occurs as orange to reddish brown stained clay, often containing foraminifera tests.

A number of narrow anomalous gamma radiation zones were detected in Section R/2-R/3, R/7-R/14 and T/5, (listed at the rear). A trend from R/7-R/11 shows anomalies of 40, 54, 47, 35, 32 cps (all background x 2-3) in holes R/7, R/8, R/9, R/10, R/11 respectively, between the limits of 150-200 ft. above sea level. The former three are in sands and the latter two in ferruginous stained clays. Detail holes drilled 1000 ft. either side of the section line between R/8-R/9 indicated similar order anomalies. A further hole (R/2B) was drilled  $\frac{1}{4}$  mile SE of hole R/3, (which registered 63 cps at 252 ft.) indicated a reading of 64 cps at 314 ft.

Detail holes R/5A, R/5B drilled 1000 ft. east and west of T/5 encountered narrow background x 2 anomalies only.

The source of the anomalous gamma activity is not known.

(vi) Longford-Carrick (Sections S/15-S/16, V) (Fig. Nos. 23, 24, 20)

This area represents an embayment in dolerite, where littoral conditions probably prevailed. The dolerite basement is strongly weathered and laterised in places, (V/8, V/11, V/12) and steeply undulating, suggesting the presence of fault scarps, especially between V/4B-V/5.

Sand sequences are prevalent between S/15-S/16, V/6-V/13 and V/1-V/2 with settled and occasionally swampy forest conditions indicated in a deep trough at V/3-V/4B.

A basement of Triassic pebbly felspathic sandstone or greywacke is indicated at V/1-V/2, with a thin indurated shale roof pendant in dolerite at V/6.

No gamma radiation above background x 2 was encountered in this area.