



Plate 21 Planar lamination from unit 4 in the Whitfield - Whitlands lower road cutting plates 21 - 24 are related to areas covered in plates 9a & 9b p.92

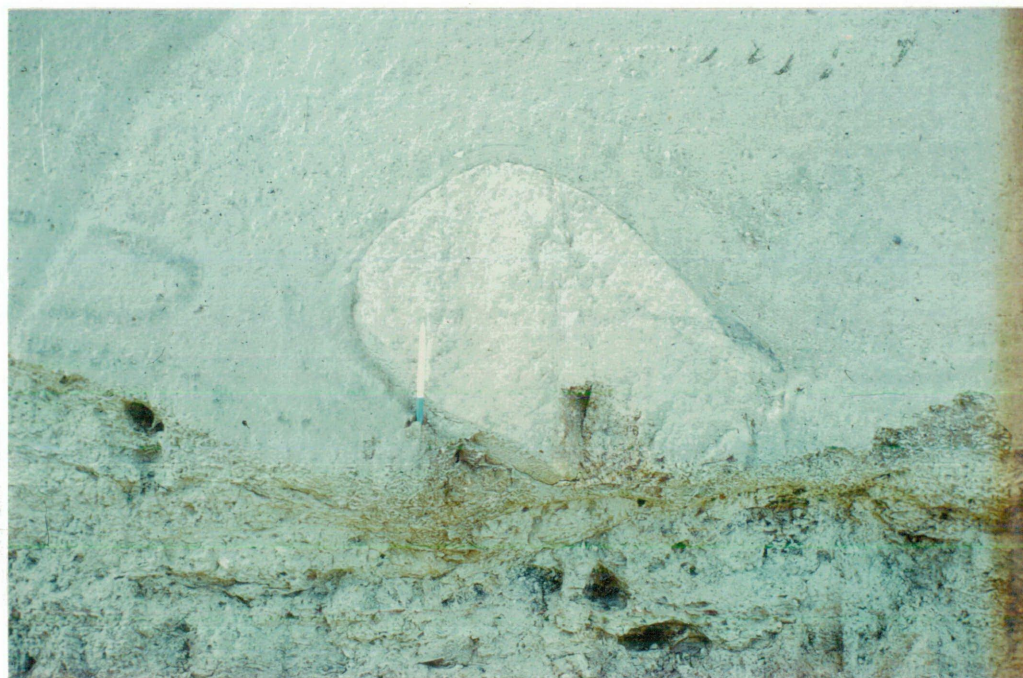


Plate 22 (?) Deformed or draped lamination at the base of unit 4, lower road cutting



Plate 23 Large erratic opposite lower road cutting



Plate 24 Cross - bedded sediments in unit 5 overlying the more laminar unit 4, lower road cutting



Plate 25 A general view of the Whitfield -
Whitlands lower road cutting



Plate 25 A general view of the Whitfield -
Whitlands lower road cutting



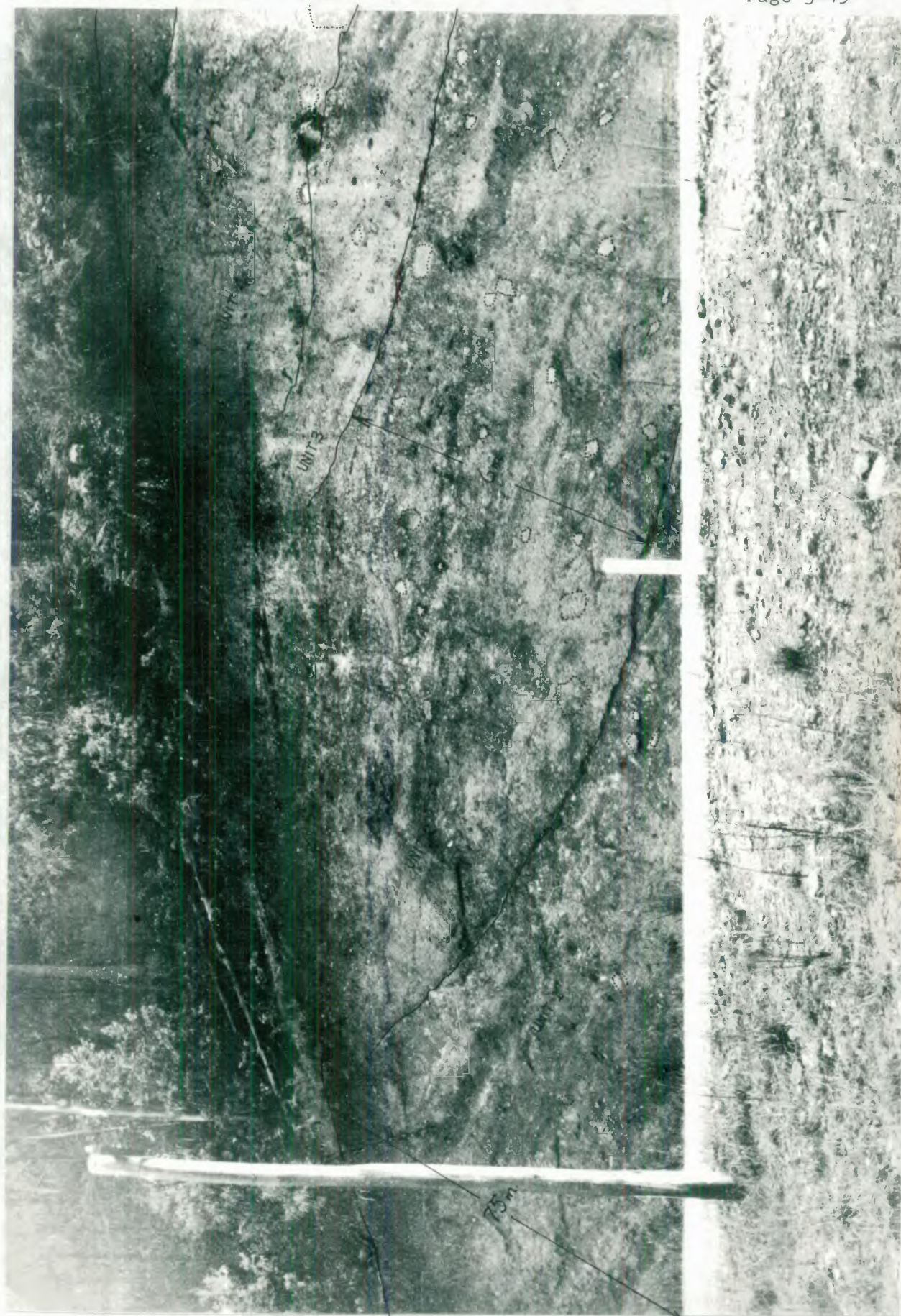


Plate 26 Detailed stratigraphy of the Whitfield -
Whitlands lower road cutting

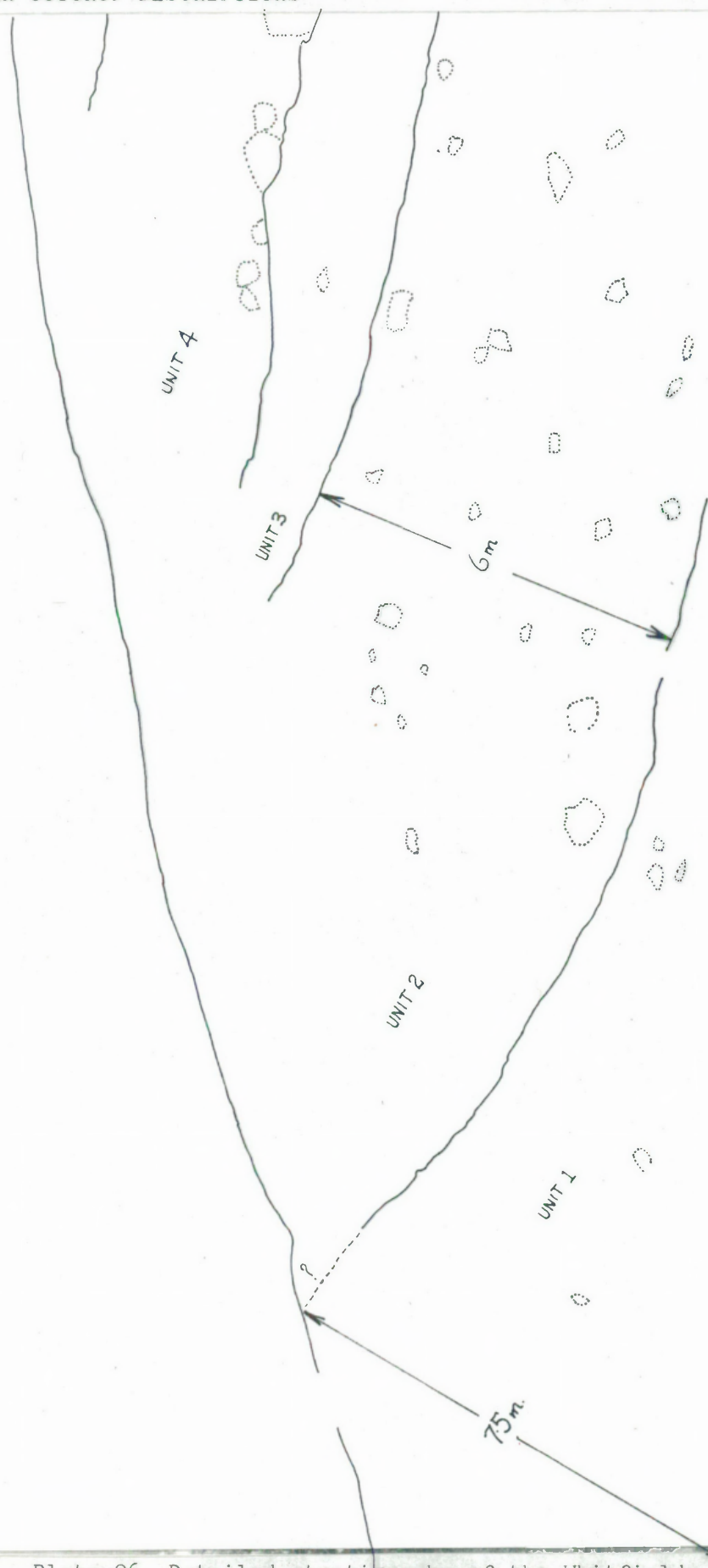


Plate 26 Detailed stratigraphy of the Whitfield - Whitlands lower road cutting

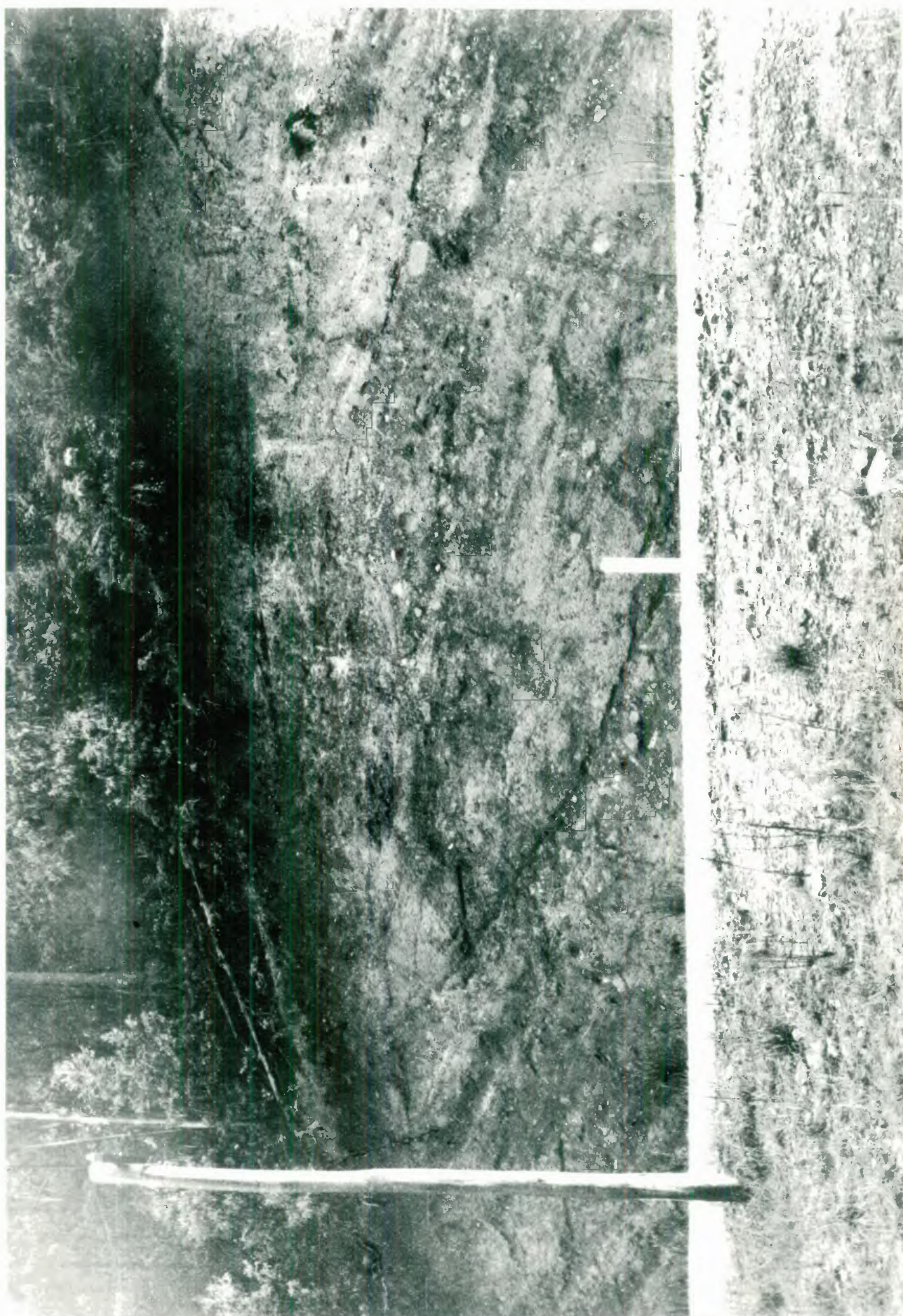


Plate 26 Detailed stratigraphy of the Whitfield -
Whitlands lower road cutting



Plate 27 Detailed stratigraphy of the Whitfield -
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six.

Units four, five and six have all been modified by the same erosional event which produced a shallow 0.5 m deep channel about 8 m wide. The erosion surface has a boulder armour like the base of unit four. The boulders are about 0.5 m diameter and are incorporated into the overlying slightly gravelly muddy sandy seventh unit. The exact texture is not defined because the bed is not accessible from either the road or the top of the cutting. Another undulating irregular surface separates units seven and eight; relief of about 1 m occurs along the surface. The thickness of the eighth unit varies between 1 m and 2 m and contains lenses of siltstone (sample 77/27). The siltstone contains granules as well as small and medium pebbles that are very well rounded (0.7 to 0.9) but vary markedly in sphericity (0.3 to 0.7). The upper surface of unit eight is equally as undulose and irregular as its base, which might suggest soft sediment deformation. The accessible northern end of this unit is sandy and similar to units four, five and six (see plate 25, p.106).

The overlying ninth unit which is about 0.5 m thick is similar to unit three of the diamictites in the lower half of the cutting except that there is no clear layering. Unit ten is about 1.5 m thick, and slightly more sandy than unit nine. The surface between them is relatively flat without apparent erosional influence, but the top of unit ten is quite irregular and an erosional event probably separates it from the 0.5 m thick more gravelly unit eleven. Unit eleven could be more gravelly than the underlying two unit as a result of more weathering of the softer and more unstable rock types but this is mere speculation and the more likely explanation is that it is the first

deposited unit following an erosion event. A whole sample (77/28) collected from the sandy unit ten was panned (about 1.5 kg) to remove the heavy mineral fraction for analysis. The results are discussed in a following section. The last unit in the lower road cutting, unit twelve, is texturally similar to unit eleven except that it has a soil profile developed at the upper surface. Tertiary basalt unconformably overlies the Permian in the lower road cutting and is extensively weathered and forms a deep red coloured soil profile which extends into unit twelve of the Permian.

The largest clast associated with this lower cutting is directly across the road resting on debris from the cutting. The clast is quartzite and is about 2 m long and about 1 m across the shortest axis (see plate 23, p.107) and resembles Cambrian quartzites from about 30 km SSW of the study area (Dr. M.C. Brown, pers. comm.). Other clasts collected from this cutting are:

- * 79/a;
- * 79/b striated;
- * 79/c;
- * 79/d fossiliferous;
- * 77/30;
- * 79/10 whole sample from unit 9.