

2. TOPOGRAPHY

2.1 The deposit is situated in a rather broad flat valley of the upper Arthur River north of Waratah (refer Plan I). It is enclosed on both sides by hills of 25 to 30° slopes, covered with dense virgin bush which also covers the flood plain area. The surface elevations of the flat are generally within 275-300 metres above sea level. Width of the deposit varies from 180 metres in the Magnet Creek tributary to a maximum of 600 metres in the main Arthur River.

3. ACCESS

3.1 Access to the area is via the Belmont Road which branches from the Murchison Highway at Belmont Plain. Within the prospect area, the Wandle Road leads off the former and runs adjacent and parallel north-south to the Arthur River valley. Both the Belmont and Wandle Roads are gravelled all-weather logging tracks.

4. GEOLOGY AND MINERALISATION

4.1 The bedrock geology of the Arthur River Alluvials Prospect area is weathered feldspathic/mica sandstone and mudstone belonging to Triassic-Carboniferous/Cambrian ages(?). Erosion and deposition during the Tertiary and Recent periods have resulted in the formation of a tin-bearing alluvium covering the valley of Arthur River.

4.2 In the alluvium itself there are two layers, (refer Plan 3) being:-

- the upper surface layer of brown sandy clay with a mixture of some small angular stones and rounded pebbles. The depth varies from $\frac{1}{2}$ to 1m.
- the bottom zone of gravels with large quantity of water worn pebbles and some 20-40cm boulders resting on the bedrock. Thickness is 1 to 3m.

4.3 Tin mineralisation occurs throughout the alluvium, being particularly more pronounced in the basal layer. In the upper layer the cassiterite values are erratically distributed between 16 and 470 g per cu m, averaging 123 g per cu m. The distribution in the gravels is variable too, ranging from 24 to 646 and averaging 236 g per cu m over a thickness of 1.6m.

4.4 The cassiterite grains are dominantly coarser than 100 mesh BSS as shown from visual examination of the heavy concentrates recovered from the pit samples by hand panning.