

- 7.3 Treatment of the ore material will be undertaken at a plant preferably sited at an elevation above the flat plain. Grizzly and revolving screen will be needed to remove the +3/8 inch stones. The -3/8 materials will be primarily processed through jigs and shaking tables. Final upgrading of the concentrates to marketable product may require a Willoughby box and a cleaning up sluice box.
- 7.4 Consideration has been given to the method of using high pressure monitors to disintegrate the ground and gravel pumps sited on the bedrock floor to deliver the slurry to the treatment outlined in the above Section 7.3. The factors weighing against this mining method are -
- requirement of large quantities of supply water and therefore entailing comparatively large virgin areas for slimes retention;
 - ineffective removal of the large quantities of course pebbles and boulders which eventually would form a cover over the bedrock floor and thereby - could prevent a very significant proportion of the cassiterite values from reaching the gravel pumps.

8. CAPITAL AND OPERATING COSTS

- 8.1 A total capital cost of approximately \$2.41 mil is required for the mining project, the breakdown of which is as follows:

	<u>\$ (mil)</u>
Further drilling/pitting to quantify accurately the tin content and feasibility study	0.06
Housing and welfare	0.69
Transport facilities	0.04
4 hydraulic crawler excavators	0.32
10 hauling trucks	1.10
Ore treatment plant	0.20
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	2.41
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- 8.2 For this preliminary economic appraisal an in-depth study or detailed synthesis of the operating costs is considered premature. However, comparing the scale of the envisaged mining operation to that at the Sandy Flat Tin Mine in Queensland (which has an almost similar type of alluvial mining operation), an operating cost of \$2.00 per cu m inclusive of overheads would be reasonable for the Arthur River project.