

**6. Glaciofluvial deposits (erosion of older Au gravels by glacial meltwaters)**

- lower grade
- near surface, cheaper mining costs

**7. Post-glacial terraces (a) high level; (b) low level**

- high level typically large volume, low grade (braided stream deposits)
- low level - mainly exploited

Levson believes that settings 2 and 5 (preglacial/interglacial fluvial and alluvial deposits) are the best targets.

Although Levson's work has led to recognition of favourable placer settings, his identification of specific target areas is limited to the immediate surroundings of existing placer operations. Of these, he mentions particularly buried channel deposits exposed at the Toop Nugget and Alice Creek mines by meltwater channels. Levson thinks that the same buried channel may be exposed at both locations and that there is potential both between and beyond the existing workings.

(The Toop deposit recently produced nuggets up to 100g in lower gravels, while coarse gold was found in 'upper' gravels, probably from a local source. The Alice Creek operation - from 1986 to 1988 - yielded 1,375 ozs Au from 11,000m<sup>3</sup> washed material, but that is from a total of 135,000m<sup>3</sup> of material moved.)

- B. Clague's identification of targets is based on stratigraphic/age controls as well as the lithological considerations used by Levson.

Best placer gold targets are:

1. bedrock floors of former valleys
2. non-glacial (fluvial) unconformities within the Quaternary succession

**EXPLORATION TECHNIQUES (comments)**

**1. Geological Mapping**

Levson and Clague recommend detail mapping to identify potential gold placers - this, however, requires some familiarity with the stratigraphy and an understanding of glacio-fluvial deposition. Exposure is limited.

**2. Geophysics**

a) Seismic - recommended by Levson and Clague on paper, but in discussion Levson remarked that seismic has not been successful in detecting the potentially rich palaeogulch targets, which present too 'narrow' a target for seismic definition. Also the Shell work on the Hobson Pit failed to precisely define bedrock surface because of 'masking' by overlying gravel lenses at different levels.