

SAND AND GRAVEL

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SAND AND GRAVEL DEPOSITS ON THE SUNSHINE COAST PORT MELLON TO POWELL RIVER (92F/9, 16; 92G/5, 12)

During the 1974 field season two months were spent on a reconnaissance survey of the surficial geology of the Sunshine Coast area between Port Mellon and Powell River (latitude $49^{\circ} 22'$ to $46'$; longitude $123^{\circ} 25'$ to $124^{\circ} 20'$). The object of the survey was to study the sand and gravel potential of the region. In brief, it would appear that small to moderate supplies of sand and gravel are available but, except possibly at the Chapman Creek delta, no large recoverable reserves are present in the area examined.

Bare bedrock is exposed over much of the area. A relatively thin mantle of glacial till or till covered by a thin layer of marine lag sand, lag gravel, clay, or stoney clay forms the surface layer over most of the remaining area. In a few places sand and gravel alluvial fans or deltas constitute the uppermost deposits. Bog and swamp deposits are minimal. Marine deltas and deposits containing marine fossils extend upward to elevations of between 170 and 200 metres above present sea level.

Sand and gravel are found in recent stream and beach deposits, in post-glacial deltas, fans, and veneers, in kames and ridgelets, and in outwash deposits older than the latest till. Most of the deltas and pre-till deposits observed have been or are being worked.

The recent stream deposits are all fairly small and most, if not all, of the beach deposits are along residentially developed seafront so it is unlikely either type can offer commercial possibilities.

Raised deltas and alluvial fans occur up to 185 metres above present sea level along the sides of most streams. These have provided much of the sand and gravel produced to date. The largest reserve of this type is contained in the wide delta complex at the mouth of Chapman Creek, just east of Sechelt. Several small pits have been operated in this delta in the past and two are now worked periodically. Unfortunately much of the deposit consists of sand or very sandy gravel. Other deltaic and fan deposits are relatively small although they now provide material for at least 12 operating pits.

Small irregular kames and ridgelets, along the upper reaches of some of the main streams at elevations above the delta deposits, contain poorly sorted sand and gravel. One or two had provided small amounts of aggregate, probably for logging roads.

The sub-till sand and gravel deposits underlie undefined but perhaps sizeable areas between Highway 101 and Gower Point, on the high land east of Northwest Bay Road 3.5 kilometres northwest of Sechelt, and at Powell River. Pits operate in all of these deposits now, but further development is confined to a large extent by residential subdivisions.