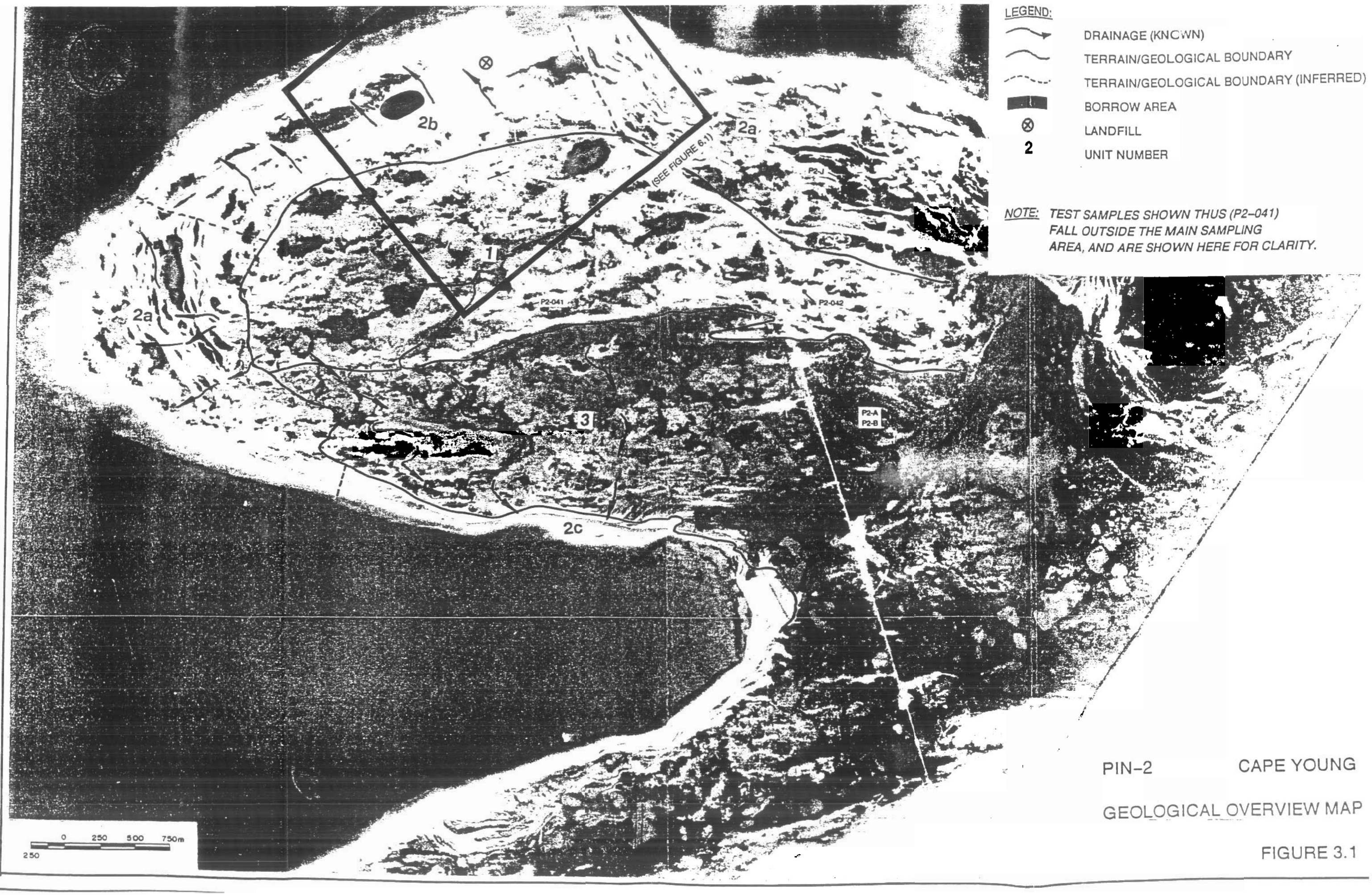

PIN–2 CAPE YOUNG

GEOLOGICAL OVERVIEW MAP

FIGURE 3.1

3.2.2.2 Terrain Unit 2

Terrain Unit 2 is the main coastal area of the Cape Young Peninsula which has been shaped by coastal processes (Figure 3.1). It may be divided into a number of subunits. Subunit 2a is characterized by curvilinear ice pressure features, which result in a pattern of small, discontinuous, sinuous ridges of sand and gravel trending towards the coast. Subunit 2b is dominated by a slightly elevated shoreline beach and a raised beach terrace. The low lying land between these two features are flat and poorly drained and contain small areas of organic terrain. The landfill site is located near the edge of one of these where a thin layer of peat (4 cm), covers a poorly drained sequence of silt and fine sand. Subunit 2c is a narrow linear beach on the lee side of Cape Young.

3.2.2.3 Terrain Unit 3

Terrain Unit 3 is comprised of the almost completely vegetated southwest portion of the Peninsula.

3.2.3 POTENTIAL BORROW SOURCES

The largest source of borrow material at PIN-2 is the beach area. Typically the soils are granular ranging from sand to cobble sizes, and are generally angular to sub-angular in nature.

Fluvial deposits which include rounded sands and gravels were encountered along the Harding River. It does not appear that this area has been exploited as a gravel source.

East of the main camp, along an east-west running ridge, the surficial deposits have been stripped until the bedrock was exposed and stockpiled for future use. Evidence of gravel extraction was also observed south of the airstrip opposite to the landfill. Volume of potential borrow material was not ascertained at this location.

While the potential for additional granular borrow materials is moderate to high, there does not appear to be a source of fine grained borrow material at this site.

3.3 HYDROLOGY

The PIN-2 station is sited in a low lying area approximately 15 to 20 m asl. The landscape is poorly drained, and is characterized by gravelly and sandy ridges of low relief, with finer textured sediments in low lying areas (Figure 3.1).

There is only one landfill at the PIN-2 station. Landfill A drains easterly toward the ocean with some ponding occurring in low lying areas between the landfill and ocean.

The station and aircraft facilities are located on a low plateau at an elevation of approximately 15 m asl. The surrounding terrain is flat and contains numerous small ponds and lakes. Surface drainage is poorly defined due to the topographical conditions.

3.4 FLORA

Two main vegetation communities existed at Cape Young. Dry, upland sites were characterized by 30 to 60 percent vegetative cover which was dominated by lichens, *Dryas* spp., *Salix* spp., and grasses. Poorly drained, low-lying sites east of the station were 70 to 90 percent covered in vegetation dominated by sedges, mosses, and *Salix* spp. Vegetation in the immediate vicinity of the site was minimal and limited to occasional clumps of grasses, *Salix* spp, and lichens.