

A portion of this sample was sent to Central Mineralogical Services for mineralogical description and the following report was received;

"The sample contained a fairly high portion (about 50%) of quartz, and was therefore separated in TBE to further concentrate the heavy minerals.

The heavy fraction consists dominantly of opaque grains (ilmenite, leucoxene, chromite), with major zircon; this is mostly clear and colourless, with a few grains of hyacinth (purple), and much of it is very well-rounded, though euhedral unabraded crystals also occur. Accessory amounts of rutile (rounded) and topaz (very well-rounded, with high sphericity) are present. There are traces (1%) of well rounded tourmaline, hornblende, sillimanite, kyanite and dumortierite.

One grain of gold was detected; it is 150x300 micron in size, of irregular branching shape, but with a smooth, polished surface.

Cassiterite is present, as generally cloudy, colour-zoned, brown to smoky colour, upto 150x300 micron is size, ranging from rough to subrounded grains.

Grain sizes of the opaques and zircon range between 100 and 300 microns with an average around 200 micron."

The presence of trace amounts of sillimanite and kyanite indicates a Precambrian source for some of the heavy concentrate. The rough to subrounded shape of the cassiterite suggest little reworking and therefore a local Cambrian rather than Precambrian source.

ii) Pitting

Two pits were excavated on the grid to ascertain bedrock types and background geochemistry.

PIT 1: Located at 9360N, 7340N was dug on a ridge of scattered quartz vein float. The pit measures 2mx1m and 1.5m deep. The rock exposed is a brown oxidized medium grained homogenous quartz porphyritic lava. Irregular quartz veins