

88-1 122.3-122.4Brecciated Metamorphosed Siliceous Mudstone
with patches of Pyrite and Hematite(?)

The rock is a moderately contorted and brecciated, and shows a variety of textures. It is dominated by extremely fine to very fine grained quartz, with much less sericite/muscovite and kaolinite, and with disseminated patches of opaque (probably pyrite and hematite). Textures suggest that the original rock was a siliceous mudstone.

| | |
|--------------------|--------|
| quartz | 80-82% |
| sericite/muscovite | 5- 7 |
| kaolinite | 5- 7 |
| pyrite | 3- 4 |
| hematite | 1- 1½ |
| Ti-oxide | minor |
| tourmaline | trace |
| zircon | trace |

Patches in the rock consist of extremely fine grained aggregates of quartz with much less kaolinite and sericite, and with minor dusty Ti-oxide. These grade sharply into coarser grained patches dominated by quartz, quartz-sericite, or sericite/muscovite. Deformation textures are most prominent in mica-rich patches, where moderate to tight folding is suggested. Grain size of quartz ranges from 0.03-0.15 mm in the coarser grained patches. Sericite/muscovite forms disseminated flakes in these patches averaging 0.03-0.07 mm in length. In sericite/muscovite-rich patches, ragged clusters of flakes are up to 0.15 mm in grain length.

Kaolinite also occurs in interstitial patches and veinlike zones up to 0.4 mm in width. In these, it forms unoriented aggregates of equant flakes averaging 0.01-0.02 mm in size.

Pyrite forms disseminated, equant to irregular grains and aggregates, mainly less than 0.3 mm in size, with a few up to 3 mm across. The largest, subhedral grain contains abundant silicate inclusions.

Several clusters of elongate platy grains up to 1.5 mm in length may be of hematite. Some elongate grains may also be of pyrite.

Ti-oxide forms dusty disseminations in the finest grained rock and in sericite/muscovite-rich patches.

Tourmaline forms disseminated, equant grains averaging 0.01-0.05 mm in size. It is pleochroic from pale to light yellowish green.

Zircon forms a very few anhedral grains from 0.01-0.02 mm in size.