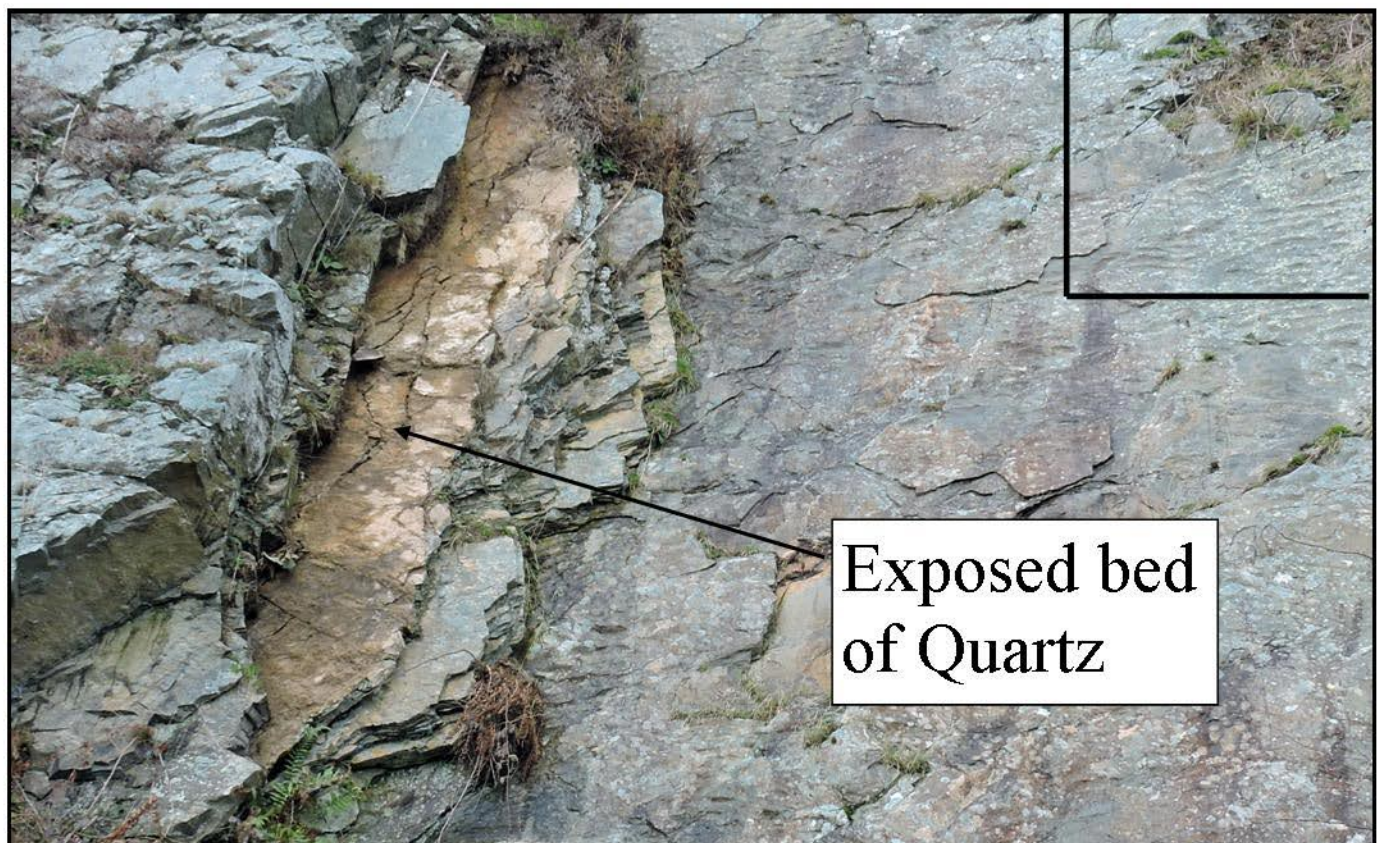


Hydrothermal Exposure near Llanidloes

All the mines in the Llanidloes and Central Wales area are based on minerals which have been hydrothermally deposited. Deep underground various minerals are carried in a hot circulating fluid. When the fluids get nearer to the surface they cool, and the various minerals are deposited by precipitation in cracks and faults in the rock. Copper, Lead, Zinc, and Barite are minerals of commercial use, but also unwanted Quartz is usually present in large Quantities. A small rock collapse in the rough car park, just below the Clywedog dam viewing point has exposed Quartz which was deposited from the circulating fluid



This insert taken from the first photograph shows ripples in what was once a sea bed.



Over 400 million years ago, when Wales was below the equator this would have been perfectly flat, but over time the rocks have been uplifted and rotated by tectonic plate movement.

Another view of the exposure shows that below the bed of quartz there are many thin beds of sandstone, while above the quartz, the beds of sandstone are quite thick.



There were several loose pieces of the Quartz bed in the rubble at the foot of the collapse. This is one of those pieces. It is uniform in thickness, about 3cm.



This much smaller specimen shows a cross section, which appears to have several layers.

