Where the Otago gold rush started: Geology of Gabriels Gully

The gold at Gabriels Gully is alluvial or placer gold: the gold grains were washed out of quartz veins in the extensive Otago Schist about 100 million years ago. The gold became concentrated in gravel deposits that accumulated in large river fans in a depression caused by fault movement. More recent erosion of these old gravel deposits recycled the gold into the modern stream sediments.

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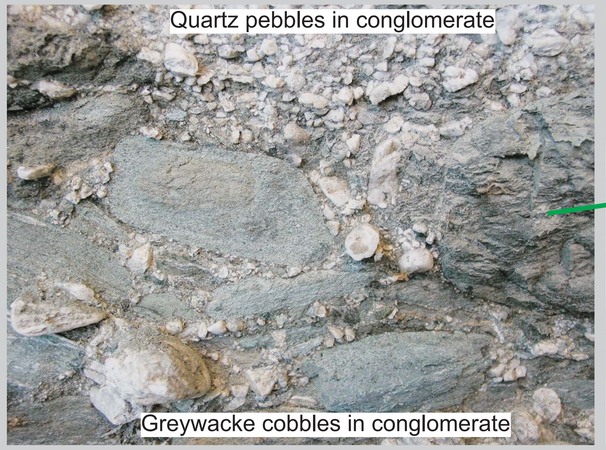
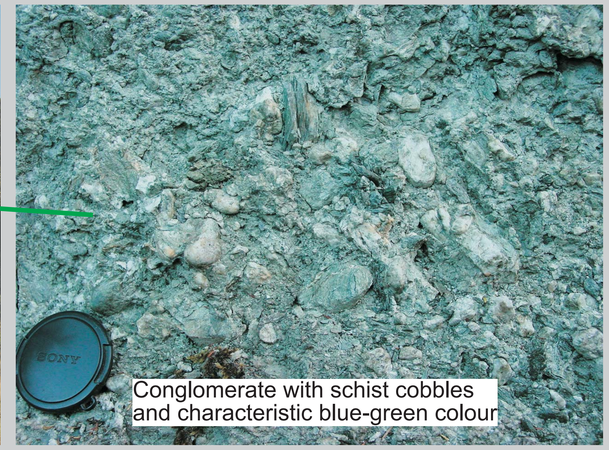
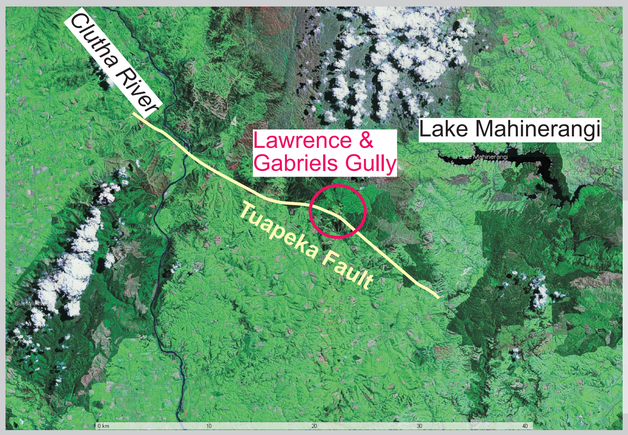
The gravels are a mixture of white quartz pebbles (Central Otago), greywacke (west), & schist (nearby).

The original vein source of the gold is unknown







Several other gold-bearing gravel deposits occur along the Tuapeka Fault

The 100 million year old gravel is called the Blue Spur Conglomerate. The deposit is cemented, like concrete, with calcium carbonate and a blue-green clay mineral that gives the bluish colour.

Much of the gold from Gabriels Gully was mined from the modern stream sediments. The old gravels are hard and cohesive, and the gold is more sparsely distributed. However, some miners used sluice hoses, tunnels, and crushing equipment to work the old gravels.