

## Stuart Town gold

### Mineral Resources

The gold deposits around Stuart Town occur in quartz reefs, in deep leads beneath basalt flows, and as alluvial deposits along many of the streams.

The host rocks for the quartz reefs are interbedded slates and siltstones of the Middle Devonian Cunningham Formation. Andesitic volcanics are locally abundant, particularly around Muckerwa Creek.

The slates and siltstones have been folded into a series of anticlines and synclines trending northwest to north. The reefs also generally strike northwest to north, and dip steeply east or west. However, there is some variation – for example, the reef at Manna Hill dips at 65° to the northwest, and other reefs are conspicuously curved. The Company reef near Muckerwa Creek is a saddle reef.

The reef gold generally occurs as free gold in the quartz, varying in grain size from fine to very coarse. The very coarse gold was particularly common near Stuart Town. Minerals associated with the reefs, particularly at depths greater than about 30m are pyrite, arsenopyrite, chalcopyrite, and galena. Grades of gold varied up to a reported 428 grams per tonne; values of 15-30g/t were common.

Gold-rich alluvium was found in many gullies, generally close to the reef mines. Gold here was often coarse grained (sand-sized grains). Gold-bearing gravels occurred along the Macquarie River (now flooded by Lake Burrendong). The gold-bearing gravels here varied in height from below river level to 18m above the water.

Deep leads consist of gold-bearing bodies of sand and quartz pebbles overlain by basalt lavas of Tertiary age. These deposits are very common along the length of the Macquarie River, and mark the position of the former river valley that was flooded with basalt, prior to downcutting of the present valley. The gravels have been cemented by iron oxides in places, and needed to be crushed in a stamper battery before washing to recover the gold.



*Gold mining near Stuart Town, about 1871*

### History of mining

The earliest official report of gold in the Stuart Town area was made by Edward Hammond Hargraves (discoverer of Australia's first payable gold field at Ophir), in 1851 while travelling along the Macquarie River. He recorded that alluvial gold was to be found along most of the river.

Later, in 1851, Muckerwa Creek was included in a list of places where gold had been found, and these alluvial deposits were being worked in 1852.

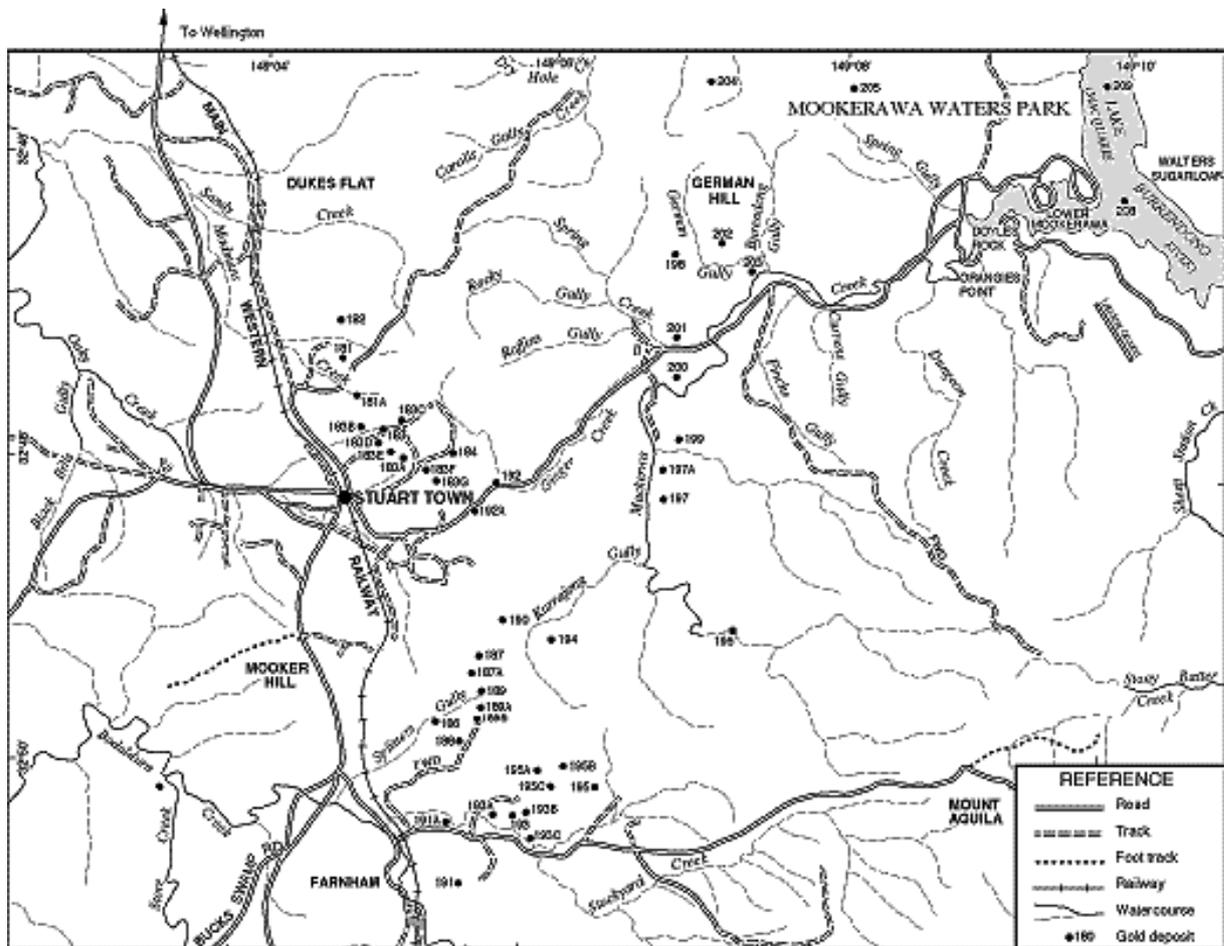
New rich finds at Muckerwa Creek, Specimen Hill, and Stoney Creek (now Farnham) caused a rush in 1855.

The Ginger reef was opened in 1857, Post Office and Poormans reefs in 1858, and Beehive in 1859. The Beehive was one of the main deposits in the area of Farnham which had become a small town in 1860.

Other reef deposits were opened up during the 1860s including German Jack, Chump mine, Swallows Nest, and Redfern, Canadian and Chinamans reefs; many of these workings had stopped by 1870.

The alluvial workings around Farnham, Stuart Town and Burrendong were partly exhausted by 1873, and reef mining, with some sluicing along the





## STUART TOWN GOLD DEPOSITS

Macquarie River, became the main form of gold mining.

In 1877 at least 11 reefs were working, and employed 130 men. Four crushers were working in the area; the number steadily declined till by 1884 only one was in operation. Some miners gave up work during 1878 and 1879 for steadier employment constructing the railway line through Stuart Town.

The first deep lead workings were opened in 1878, and were followed by a short-lived rush at Bald Hill in 1879. Gold was initially only won from the unconsolidated deep lead alluvium, but by 1880 miners were also treating consolidated and cemented alluvium.

A cooperative was formed in 1880 to work Monks mine at depth. Previously mines had to find payable stone at depths greater than about 30m.

The attempt failed in 1881 at a depth of 41m, due to a lack of capital. Mining Warden Marsh noted in 1884 that: "The majority of reefs still remain abandoned ... in most cases the water is reached at from (18m to 21m) and at the same depth quartz that was previously impregnated with free gold is coated with pyrites."

There are no appliances to treat or even save pyrites and therefore the quartz, at the depth indicated, shows a decrease which is put down as the gold running out."

Tricketts mine, Poormans reef and Ginger reef were also being worked at the time of the deepening of Monks mine.

Large scale sluicing commenced on the Macquarie River between 1880 and 1885. The miners had to contend with lack of water, cemented alluvium, and rich leads at or below water level, making it difficult to run water down a race to sluice the lead. Steam pumps were tried in the operation at various times, but only one won sufficient gold to pay wages.

C.L. Garland commenced dredging on the Macquarie River in 1904, and was subsequently followed by a number of gold dredging companies. Dredges worked the Macquarie almost continuously from 1899 to 1921; the main period of production was 1903-1908.

From 1885 to 1900 work proceeded on reefs at Specimen Hill and Perseverance, Kaiser Wilhelm, Burthundra, Post Office reef, Splitters Gully, Tricketts mine, and Mascotte. Cyanide plants were set up to aid the operations at Post Office Reef and

Mascotte. The 'Nil Desperandum' syndicate was formed in 1904 to cyanide old mine tailings, but appears to have failed by 1905.

Apart from discoveries at Manna Hill in 1912, there was very little activity in the area after 1910. Dredging was the main activity – most of the remaining gold was produced by small-scale prospecting and fossicking.

The total production recorded by the Department of Mines is 5 364 660g. The actual production, however, would have been much greater than this, since the records only commence in 1875, and not all miners reported their finds to the Mining Registrars.

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ISSN 1832-6668

Replaces Minfact 59

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Job number 7516