

THE INNISFAIL 1:250 000 SHEET AREA

The recorded total production of 56 500oz of gold was obtained almost exclusively from the five goldfields shown. Alluvial deposits yielded most of the output; lode mining, though widespread, was less successful. The ore shoots in the quartz lodes were generally found to be small, irregular, widely spaced, and not very high-grade, and offer little scope for large-scale development. The deposits are located in rough terrain covered with dense rain-forest, and transport costs in the old days were so high that each group of workings relied on its own small stamp batteries rather than send its ore to some central treatment plant.

Of the goldfields the *Russell River Field* (later expanded to the Russell Extended) took first place with 47% of the total output, and has been the most intensively surveyed geologically. According to Broadhurst (1955-1958) these alluvial deposits form a number of narrow terraces along the slopes of the steep-sided valleys of the Coopooroo Creek-Wairambah Creek drainage system, and were buried by late-Cainozoic basalts. They have been exposed by re-incision during recent rejuvenation of the drainage.

The gravel was worked by hydraulic sluicing from adits. Among the difficulties experienced were the lack of accessible water (notwithstanding the high rainfall), the rough terrain, the soft, decomposed ground which caved-in readily, and the fact that parts of the gravel are firmly cemented by iron hydroxides. Other adverse conditions are the low grade and irregularity of the scattered deposits, and the thick overburden. Broadhurst, with the help of an engineer Garth, made thorough geological and economic investigations of the area, and came to the conclusion that the remaining reserves could not be profitably mined.

For a short period, auriferous quartz lodes were mined in the vicinity of Towalla, some 2½ miles south of the Russell River terraces. The originally reported grades of two to three ounces per ton were apparently not sufficient to counterbalance the high cost of transport and the inadequacy of the reserves, and the field was deserted from the year 1905.




In the *Jordan Creek Gold Field*, many of the thin quartz leaders in which the gold is contained are manganiferous, and a little pyrite and arsenopyrite are also present. The geological map shows the workings in the Wyreema group arranged in a north-north-east belt; the north-east lodes here are apparently arranged en echelon, and may have been produced as tension cracks caused by a dextral shear couple in a north-north-east zone. Some prospecting has been carried out on a few deep leads under the basalt covering the granite, but the gold values are not high, and tunnels need much timbering on account of the soft ground.

Production from the *Mount Peter Field* was exclusively from about half a dozen irregular quartz lodes trending north-east and east-south-east across the regional strike of the enclosing Barron River Metamorphics. Values of 4½ oz per ton were reported from some of the sheets, though the average recovery grade of the field was 1oz 18 dwt per ton.

The *Mulgrave River* field is the oldest in the Innisfail Sheet area. Both alluvial gold and lode gold were won, but lode mining was never successful.

Alluvial deposits of pre-basalt age and similar to those of the Russell River Field occur at the eastern edge of the basalt-covered Atherton Tableland, 8 miles east of Pearamon. They contain at least three levels of 'wash' and the basalt cover is thin in places, or even stripped off locally. It



 Mine, abandoned
 Prospect, abandoned
 Alluvial workings, abandoned
 Au Gold
 Cu Copper

Mo Molybdenum
 Pb Lead
 Sn Tin
 W Tungsten, significant production
 + Mineral occurrence

GOLDFIELDS, INNISFAIL SHEET

Name of Gold Field	Dis-covered	Approximate Location	Approximate Total Production in Ounces	Description of Deposits
Russell River (also known as Russell Terraces, Topaz, Boonjie). Later expanded to: Russell River Extended	1887	Headwaters of Russell River, about 10 miles east-south-east of Malanda in Coopoaroo Creek - Wairambah Creek area. Lodes at Towalla, 13 miles south-east of Malanda	26,780	(a) (Buried alluvial deposits in late-Cainozoic terraces along sides of steep valleys, exposed by rejuvenation. Auriferous basal gravel beds overlain by up to 20 feet of sand, silt, and clay, under cover of 40-100 feet of basalt. Gold very fine-grained, associated with cassiterite. Latest workings: Astronomer, Marvel, Lady Olive (b) (Northwest quartz reefs, generally less than 1 foot thick, dipping steeply to vertical in decomposed Barron River Metamorphics. Recovery grade 2 to 3 oz/ton, but shoots very small. Deserted after 1905
Jordan Creek (or Johnstone River)	1898	Two main groups: 1. Jordan Creek - Henrietta Creek area, 10 miles south-east of Millaa Millaa, and 1-2 miles south of Palmerston Highway. The original area. 2. Myee Creek area, 7 miles south-east of Millaa Millaa, and ¼ mile north of Palmerston Highway. A much younger area of production.	12,650	(a) (Recent creek alluvium, now exhausted. Yielded much of old production. (b) (Quartz veins and leaders in decomposed granite, in places with slightly auriferous alteration haloes. Reefs trend generally north-east, ½-1 foot thick, and dip 65° to 90°. Assay values ranging up to 1 and 2 oz/ton reported, but recovery generally much less. Most intensively worked mine: Wyreema (= J.B.J. mine = Two T's lease)
Mount Peter	1915	3 miles west of Gordonvale on steep northern slopes of Mount Peter	11,000	Irregular quartz reefs in Barron River Metamorphics, dipping 60° to 75° south or north, or vertical, and trending north-east and east-south-east across regional strike of schists. Shoots small and widely spaced. Average grade of total production 1 oz 18 dwt/ton. Little activity after 1951. Largest lode was Talisman
Mulgrave River	1879	12 to 16 miles south-south-west of Gordonvale along the spur forming the watershed between Toohey Creek and Butchers Creek	5,580	(a) (Recent alluvium, now exhausted. (b) (Quartz reefs, ½-1½ feet thick, with irregular ore-shoots, and subparallel with, or oblique to, strike of enclosing Barron River Metamorphics. Low grades caused poor return notwithstanding favourable assay values. Deserted after 1905 (c) (Buried alluvial deposits similar to Russell River gold Field, but generally less overburden. Eastern rim of Atherton Basalt, on watershed between South Toohey Creek and Butchers Creek. Little information.
Bartle Frere	1937	7 miles west of Babinda, between the granite massifs of Bartle Frere and the Bellenden Ker Range	520	Quartz reefs subparallel to, or oblique to, strike of enclosing Barron River Metamorphics. 1-5 feet thick, dips steep to vertical. Assay values generally between ½ oz and 3 oz/ton, but shoots patchy and irregular. Deserted after 1942

appears that little systematic geological work has been done in this area, but C. W. Ball believed that the 'wash' forms an almost continuous sheet underneath its basalt cover.

Last in the order of discovered fields, and least successful, were the *Bartle Frere* workings situated some 7 miles west of Babinda in Barron River Metamorphics at the foot of Mount Bartle Frere, between the Bartle Frere and Bellenden Ker mountains.

Outside the goldfield areas described, a number of scattered localities have been prospected. At Mount Mascotte, about 2½ miles south of Yungaburra, gold was mined at times from a quartz lode in a small inlier of chialstolite schist amidst Atherton Basalt. Assay values ranged from a few pennyweights to a few ounces per ton. Low-grade quartz lodes were prospected, without success, at Mourilyan Harbour and Etty Bay.

Small quantities of gold occur in some of the Tinaroo workings, a few miles west of Tinaroo Dam, but were not payable. Alluvial gold was won from Culpa Creek, a tributary of the Tully River, between 1894 and 1905. The Christmas Creek area, at the head of the West Mulgrave River, is another locality from which gold was reported.

At Sandy Creek, a tributary of the North Johnstone River, some gold was won from high-level alluvium in a saddle between two hills, which apparently represents an old river channel. Sluicing prospects were tested in the middle course of the Russell River where it enters the coastal plains; in the North Johnstone River 8 miles west of Innisfail; and in creek alluvium at Eubenangee, 7 miles north-west of Innisfail.

