

This mosaic is a stylised representation of the central area of the main Bendigo Goldfield based on a geological map. It shows the lines of reef, including the famous Hustlers, Garden Gully and New Chum.

The differing background colours indicate the different ages of the rocks. The small black squares represent the concentration of mine shafts in particular areas, and the Compass rose near the outer edge of the mosaic indicates the position of this poppet head. The blue-grey tiles represent the shallow alluvial gullies which cut across the lines of reef. These were rushed in 1851-1852, yielding small fortunes to many lucky diggers.

A typical cross section of the Bendigo Goldfield is portrayed here. It shows the layers of sediments of Ordovician age folded into anticlines (up-folds) and synclines (down-folds). Also represented, picked out in white quartz, are the saddle reefs for which Bendigo was so famous. The grey granite linear feature represents a mine shaft in cross section, with short horizontal openings to the ore bodies.

The saddle reefs were mined from hundreds of deep shafts, several of which were over 1000 metres in depth, with the deepest (Victoria Quartz on the New Chum line) being over 1400 metres deep.

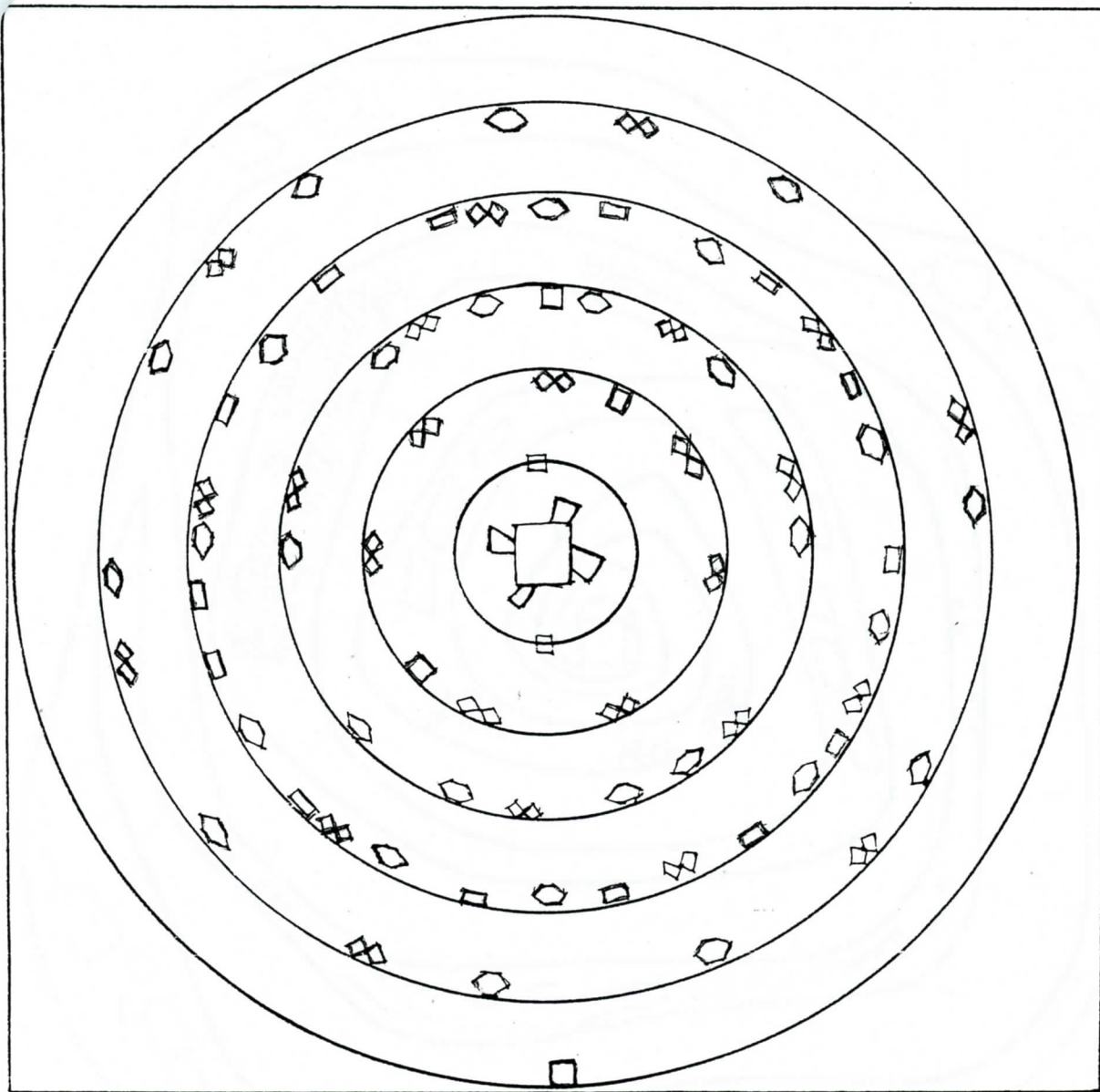
These mosaics are based on actual mine layouts. On the left, the design is of the Ironbark Mine on the Sheepshead reef. It has an interesting pattern of drives, stopes and winzes. The mosaic on the right shows the Great Southern Group, which was part of the Garden Gully system. The two deep shafts, Great Southern and Ulster, 749m and 623m respectively, were connected at two levels by drives running north and south for 724m. The Poppet head was re-located to this site from Garden Gully United --- Bendigo's richest mine on Bendigo's richest reef.

Placed throughout the mine layouts are small individual mosaics or "emblems" which represent the community history of the Bendigo region. Included are Chinese, Irish, Scottish, Welsh, German, Dutch, Cornish, English and Aboriginal motifs, together with designs showing local flora and fauna, and items of historical interest to Bendigo.

This section features artistic interpretations by the artist using gold as her inspiration. The mosaic on the right shows quartz veins winding through the earth, containing gold in its various forms. These are nuggets, masses, plates, wires, grains and detritic patterns. The large square in the centre represents the crystal structure of gold, which is cubic.

On the left the mosaic represents the atomic structure of gold. Shown are the six shells of the atom, each with its prescribed number of electrons.


The central square up to the first electron shell, represents the nucleus of the atom. The different shapes of the electrons represent different kinds of orbits, e.g. circular, figure-of-eight etc.



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The different kind of orbits among the electrons are: 

The darker, bigger tesserae outside the shell structure represent the relatively chaotic space outside the ordered structure of the atom.

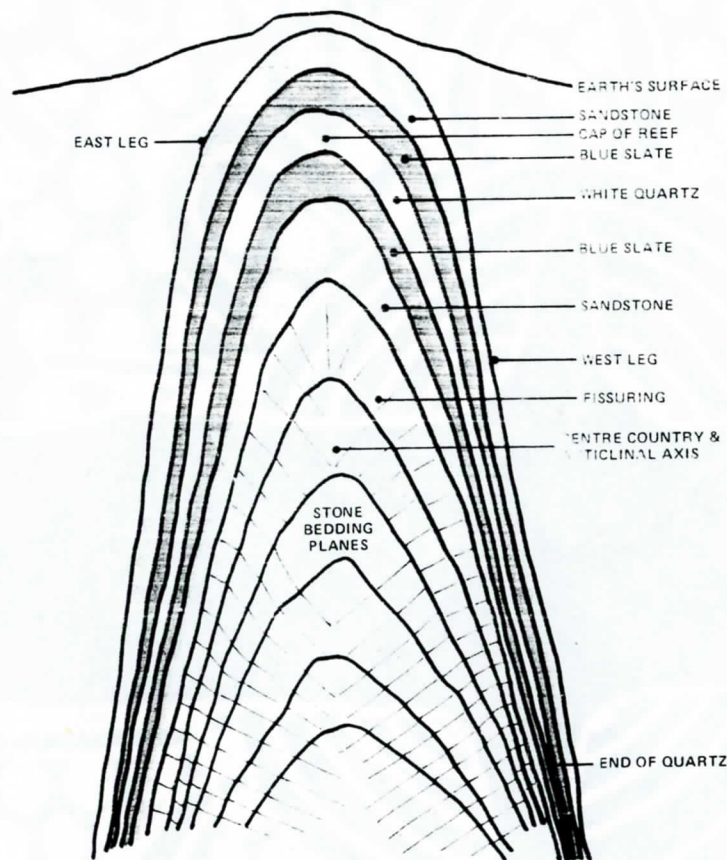


This area shows quartz veins winding through the earth, containing gold in its various forms.

These are:

- \* nuggets 
- \* masses 
- \* dendritic patterns 
- \* plates 
- \* wires 
- \* grains 

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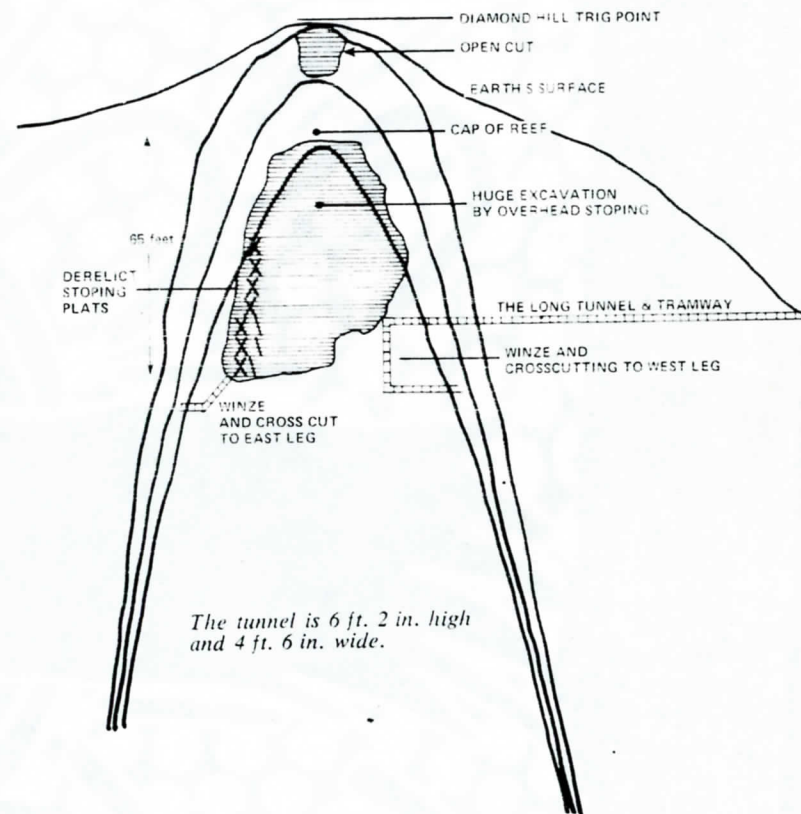


#### THE FORMATION OF THE REEFS

This is an endeavour to portray the unique quartz reefs and saddle formations peculiar only to the Bendigo Goldfield.

The quartz reefs occur between beds of sandstone and slate, being formed millions of years back from silica solutions along the axis lines in cavities formed by the bending or arching over of beds of stone differing in texture, composition, rigidity and thickness. They vary in form and recur one below the other.

The cap of the saddle is perhaps up to 30 feet thick and up to 50 feet wide, and the quartz legs taper away as the depth increases from the apex. The LAZARUS mine on the New Chum Reef proved 24 saddle reefs in its depth of 2,200 feet. This cut-away cross section of a reef and saddle is looking south.



The tunnel is 6 ft. 2 in. high and 4 ft. 6 in. wide.

#### THE DIAMOND HILL TUNNEL

From a sketch plan made underground by the Author in an endeavour to preserve the scant knowledge of the longest tunnel and immense cathedral proportion of the overhead stoping.

It is a cut-away cross section looking south along the Napoleon Reef, and the saddle reef formation is based on the sketch plan opposite.

