GOLD AT JUPITER CREEK

A guide to the historic gold diggings

MINES AND ENERGY
SOUTH AUSTRALIA

INTRODUCTION

Gold mining greatly contributed to the development of Australia in the second half of the 19th century. However gold finds in South Australia were too small to play a major part in the economic development of the State. Though they stimulated much local excitement and caused significant short term population movements, they could not compete with mineral discoveries in other States which led to mass exodus from South Australia on several occasions.

Even the first major discovery only 16 km from Adelaide at Chapmans Gully, near Echunga, in 1852 could not halt a general exodus to the Bendigo Goldfields in Victoria. The initial rush to Echunga only delayed miners for a short period on their journey to the Victorian goldfields, but intermittent gold mining activity was maintained in subsequent years by a succession of new discoveries and minor rushes. By the turn of the century the Echunga Goldfields had become South Australia's major producer of gold, mainly won from an area extending from the initial find at Chapmans Gully southwards down Long Gully to Jupiter Creek.

The Jupiter Creek diggings has an estimated production of between 25 000 and 50 000 ounces of gold.

Little remains of the Jupiter Creek diggings. The temporary nature of the stores and miners' dwellings, plus the need to recover some of the assets of failed companies, resulted in rapid disappearance of all but some stonework and the diggings themselves.

The diggings are located on a Forest Reserve which has been zoned for recreation, including fossicking, but entry is subject to the conditions shown on the entrance sign. The site has been exempted from mining operations and placed on the register of State Heritage Items.

HISTORY OF THE DIGGINGS

In 1852 the South Australian Government induced most of the men who had left for the Bendigo Goldfields to return by introducing a Bullion Act which offered armed escorts for returning diggers and made their gold legal tender at a higher value than in Victoria. One of the armed constables was Thomas Plane who later settled near Echunga as a farmer, serving also as butcher and blacksmith to the goldfields and using his spare time for gold prospecting. In July 1868, Thomas Plane and Henry Saunders found payable alluvial gold a few kilometres from Chapmans Gully at Jupiter Creek and subsequently received rewards from the Government.

Mining and prospecting of the Jupiter Creek diggings took place during four main periods:

1868-1871
The excitement created by news of the first gold discovery drew men from virtually every village and town as far south as Cape Jervis, and by September 1868 there were about 1 200 people on the diggings. A township was established which included general stores, butchers, refreshment booths, wineshops, a stable and a hotel. Up to 200 tents and crude huts were scattered throughout the diggings. The richest areas were Whites Gully, Fosters Gully, Golden Point and Surface Point and several small nuggets were reported. However, the area was a 'poor man's diggings' by comparison to the Victorian fields, with no fortunes being made.

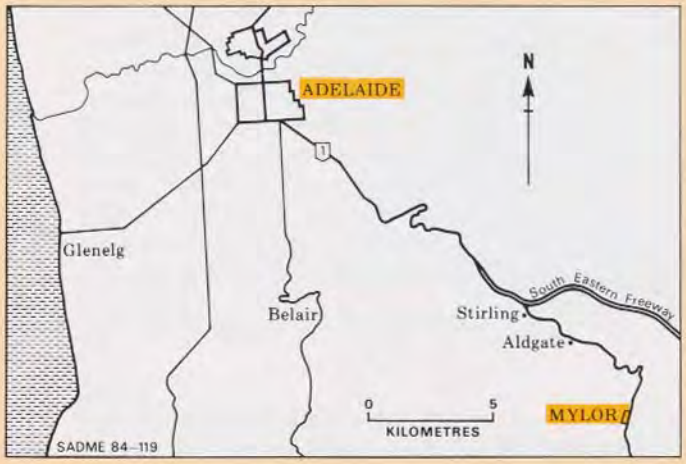
By the end of 1868 the population had dwindled to several hundred persons and when the alluvium had been largely worked over by mid-1869, reef mining became the great hope for the continued prosperity of the field. Although prospects were discovered and small companies, such as the Beatrice, were formed to exploit them, all had gone into liquidation by 1871 without producing a significant amount of gold. A small number of alluvial prospectors stayed on the field but further company operations ceased.

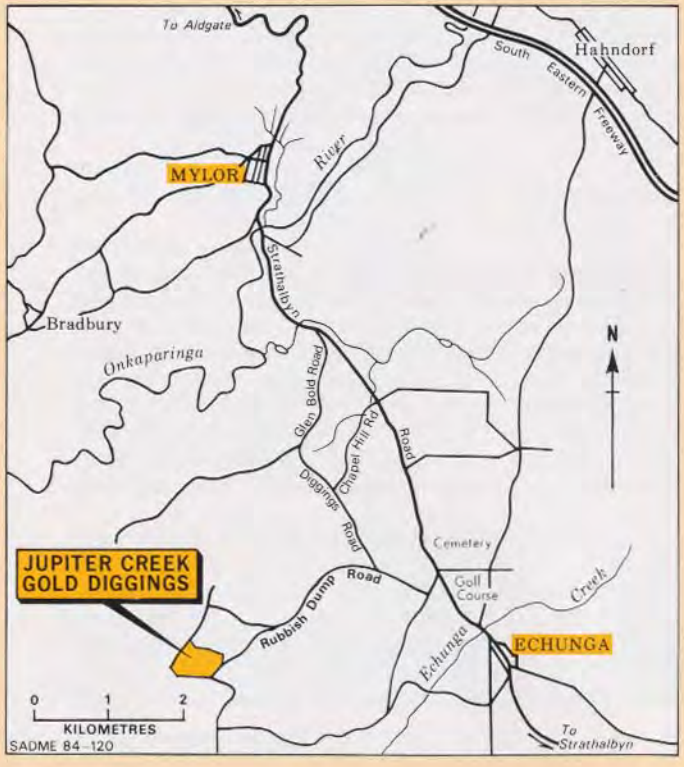
1884-1890s
In 1884 several small nuggets were discovered on the dump of an abandoned shaft, sparking renewed interest in reef prospecting at Jupiter Creek. The Crystal, South Crystal, and Phoenix mines were established but never yielded gold in payable quantities.

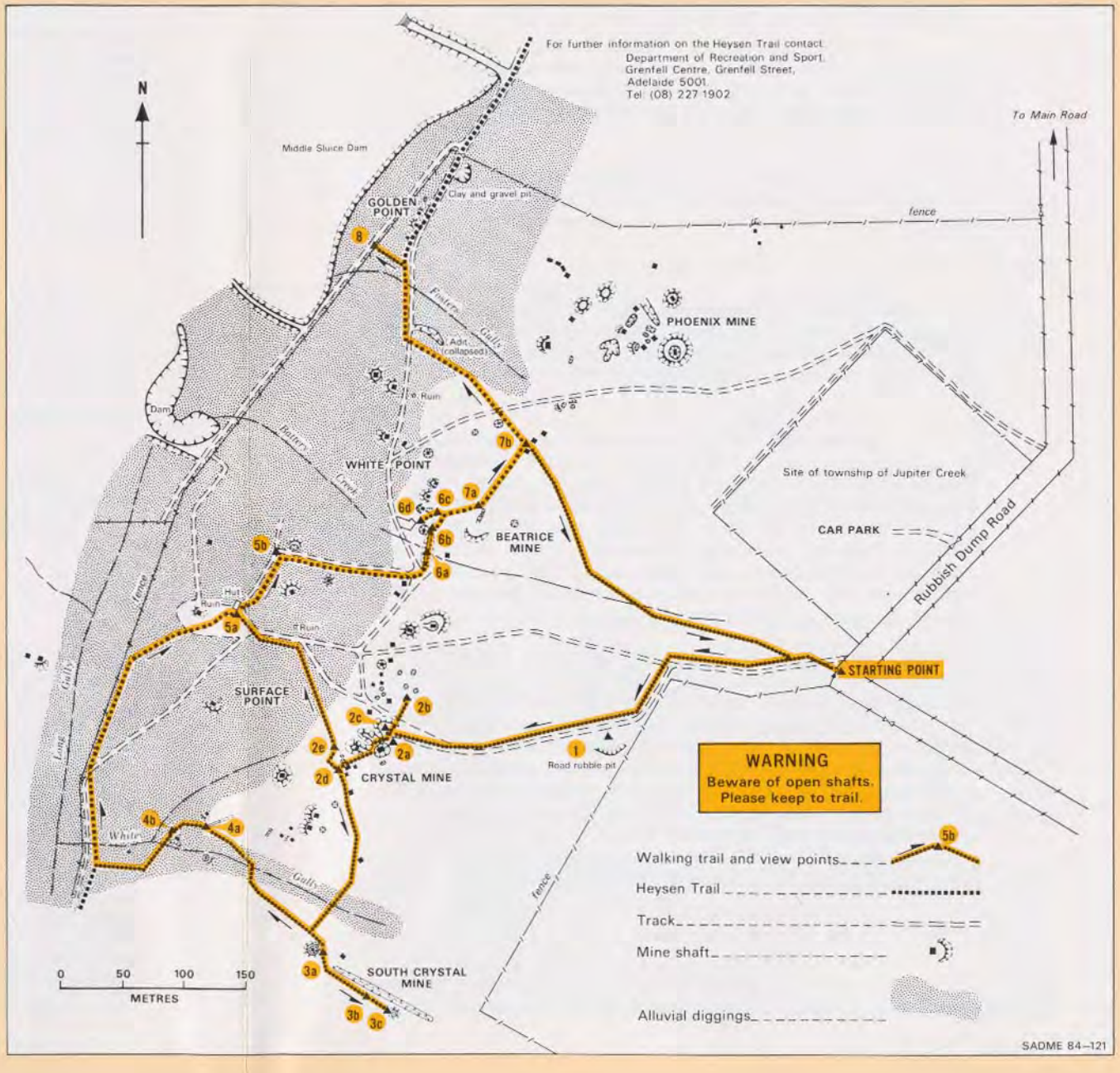
1904-1907
An attempt to treat the alluvial deposits in bulk, by large scale hydraulic sluicing was unsuccessful owing to the low grade of the material.

1930s
Widespread unemployment during the depression years and a change in the gold standard leading to a rise in the price of gold caused interest in old diggings, and prospectors at Jupiter Creek recovered a small amount of gold.

JUPITER CREEK GOLD DIGGINGS







The Historical Trail

1. Conglomerate: an outcrop containing worn quartz pebbles. This was originally deposited in a river bed between five and ten million years ago, during the Tertiary Period, and has since been cemented by iron oxides. The conglomerate is not gold-bearing at this locality and now occurs as a capping on the hilltop as a result of land surface uplift caused by faulting.

Crystal Mine (1884-1895): named after the locally abundant quartz crystals. Gold was mined from two pipe-like quartz shoots occurring in weathered shale; one of these yielded over 400 ounces of gold from only 25 tons of ore.

2a. The Whip Shaft: started in 1887 this is nearly 50 metres deep with two underground horizontal drives. At first material was hauled up by hand windlass and buckets were used to bail out mine water. Later, the windlass was replaced by a horsewhip as the shaft became deeper.

2b. Horse haulage run: remains of the path along which a horse walked raising and lowering the shaft bucket. The path length is approximately the same as the shaft depth.

2c. The New Crystal Syndicate Shaft was sunk in the 1930s in an unsuccessful attempt to locate the ore shoot found in the Whip Shaft.

2d. Shallow underground workings: near-vertical gold-bearing quartz veins have been mined from a stope excavated in bedrock which consists of shale that has weathered to soft clay.

2e. Horse Puddler. This circular depression is the remains of a horse puddler erected in 1888 to treat ore from the nearby shafts. Ore associated with stiff clay was placed in a water-filled circular wooden trough set into the ground. A horse was harnessed to rotate a rake through the mixture separating ore from clay which was carried away in suspension as water from the Whip Shaft drained through the puddler. Several of these devices would have been on the field during the first rush in 1869.

Proceed directly to viewing point 5 if you have limited time.

South Crystal Mine: In 1888 a long exploration trench was dug up the hillside in an attempt to uncover a payable lode. Two shafts were sunk and drives commenced, but nothing payable was found and the company went into liquidation.

3a. No. 1 Shaft is 34 metres deep with three underground drives.

3b. The exploration trench (costean).

3c. No. 2 Shaft is nearly 30 metres deep with one drive. Toe-holds cut in the sides of the shaft to provide access for the miners can still be seen.

Excelsior Adit and **White Gully:**

4a. The **adit** was begun in the 1930s to prospect under the hill between the gully and Crystal Mine reef. Owing to the hardness of the quartzite it was soon abandoned without intersecting any gold-bearing material.

4b. White Gully was a rich alluvial area in the initial rush and numerous shallow workings have been sunk through loose sediment derived from erosion of the surrounding hillsides.

Surface Point was first worked for alluvial gold in 1868 and reworked during the depression of the 1930s by about thirty men.

5a. Hewletts hut is the only survivor of a number of similar huts which formed part of a small township centred around the cleared area in the 1930s. Constructed of flattened out bitumen drums and lined with linoleum, it was abandoned in 1957.

5b. Alluvial workings: gold-bearing alluvial sand and gravel up to 5 metres below the surface was worked by short drives from the bottom of shafts.

Beatrice Mine (1869-1871): The Beatrice Company, one of the first on the diggings, exploited both the alluvial and reef deposits on their lease at Battery Creek. Four shafts were sunk along the length of the lease, the creek was dammed and machinery was erected to treat the ore.

6a. Dam erected on Battery Creek to supply water to a boiler and machinery.

6b. Beatrice Engine Shaft sunk to a depth of 30 metres in an attempt to locate a payable reef.

6c. Circular Stone Chimney: built in 1869 this is the most significant relic on the diggings. It provided updraught for a boiler and was connected to it by an underground stone flue, parts of which are still visible. The flue and chimney are of typical Cornish construction.

6d. Site of Engine House: The machinery included a Cornish tubular boiler, 20 horse-power steam engine and a 10 head stamp battery. Fuel for the boiler and timber for the shafts completely denuded the surrounding hillsides. Alluvial material was treated in two puddlers which were also powered by the steam engine. Gold-bearing rock was crushed in the stamp battery and then passed over a series of mercury-coated tables and riffles to extract the gold so liberated.

New Phoenix Adit: in 1932 a tunnel was driven nearly 80 metres into the hill from the banks of Battery Creek close to the old chimney. The tunnel passes through sandstone with thin inter-bedded shale layers and is still in excellent condition. No gold-bearing reefs were intersected until the tunnel connected with two old shafts on the southern side of Fosters Gully.

7a. Adit entrance: The trail can be followed either underground or on the surface to point 7b.

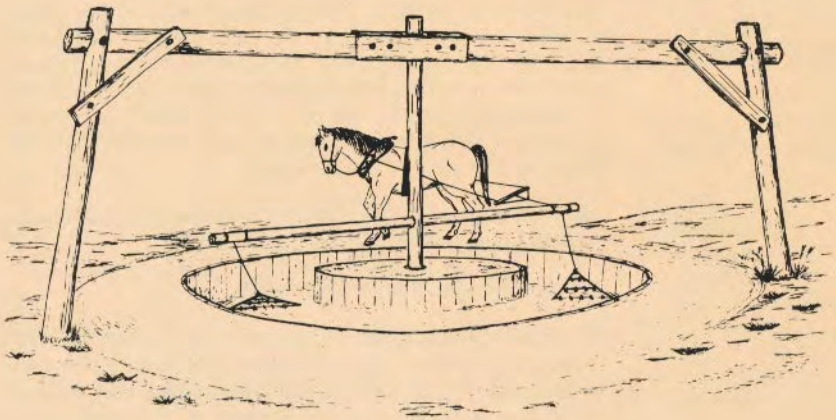
7b. Adit connects with older shaft.

8. Middle Sluice Dam: a company was formed in 1905 to treat the alluvial deposits around Golden Point on a large scale. Three dams were constructed and a barge containing a boiler, engine, pumps and washing plant was installed. The operation employed nearly 100 men but proved uneconomic and the company went into liquidation in 1908.

MINING METHODS

The alluvial gold was found at shallow depths on hillsides and at depths of several metres in the gully where it was worked from shafts. Tunnels were driven to each part of the claim and washdirt (gold-bearing alluvium) hauled to the surface by hand windlass. There the diggers carried it in drays, sacks or wheelbarrows to the creek where gold was concentrated by cradling and panning. Sometimes it was necessary to puddle the washdirt in a tub to break up any clay present.

Once the alluvial deposits had been exhausted, attention was concentrated on numerous thin quartz veins and reefs on the adjacent hillsides as these were the source of the alluvial gold. Small companies were formed to develop the reefs, which were explored by trenches, tunnels and shafts to depths of up to 60 metres. At first material was hauled to the surface by hand windlass, but later horses and small steam engines were used. Gold-bearing reef material was generally treated by horse puddler to remove clay before crushing and separation by stamp battery. However little reef gold was recovered.



HORSE PUDDLER

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