

EARLY MINING IN THE DEVORAN AREA

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In the 18th century the Carnon Valley was the site of the most important stream works in Cornwall. The valley is fed by 45 miles of streams, 25 miles of which flow through ground rich in tin. During the late 18th century and through the 19th century, there were five attempts at mining in the lower part of the Carnon Valley and in Restronguet Creek. The first two involved building embankments to keep out the tide and the last three involved mining under the water.

The upper part of the valley had been worked by digging pits and trenches and this continued until the work was obstructed by the tide; before the invention of the steam engine it was impossible to work beyond this point.

Down to the point marked I on the map, the stream had been worked. Here, there was 10 feet of tidal water and an overburden of 20 to 30 ft of debris before the tin could be reached.

Work was then continued down stream by building dykes from point I to points 3 and 4. A channel was cut into the rocky shore on the south side (Carclew) and a smaller channel was built on the Devoran side, the excavated material being used to form the dykes. A strong dam was then built from points 3 to 4. As the overburden was removed it was added to the dykes around the workings. The navigation for the flats and barges serving Messrs Fox and Co's foundry at Ferranarworthal was improved. The work took years to complete and cost thousands of pounds; small percolations were easily disposed of by the use of a steam engine.

Writing in 1797, Maton says "The number of men and boys employed here amounted to 150 . . . gold in minute quantities is continually found, we actually saw several particles among some ore that had just been washed."

Henwood gives a more vivid description: "It was at this point of the stream that I first visited the works and I shall never forget its singular appearance; a machine in a desert of red sand heaped into vast piles and hollows, the only herbage being a few tufts of sea daisy, while here and there in the trenches might be seen tanners working knee deep in water and a few squalid, half-clad boys wheeling the tin ore to the stream head in barrows."

The method was to take a 'stope' (a certain area) and remove the overburden. As soon as the tinstuff was reached it was taken to the 'floor' (the place of examination) and inspected by a person conversant with tin in its natural state, nice judgement and long experience being required; hence the

expression 'he knows tin' applied to a shrewd individual. If there was any doubt, a 'van' was made by bruising the tinstone on a polished shovel and washing off the lighter particles until only the tin remained; men capable of doing this received higher wages.

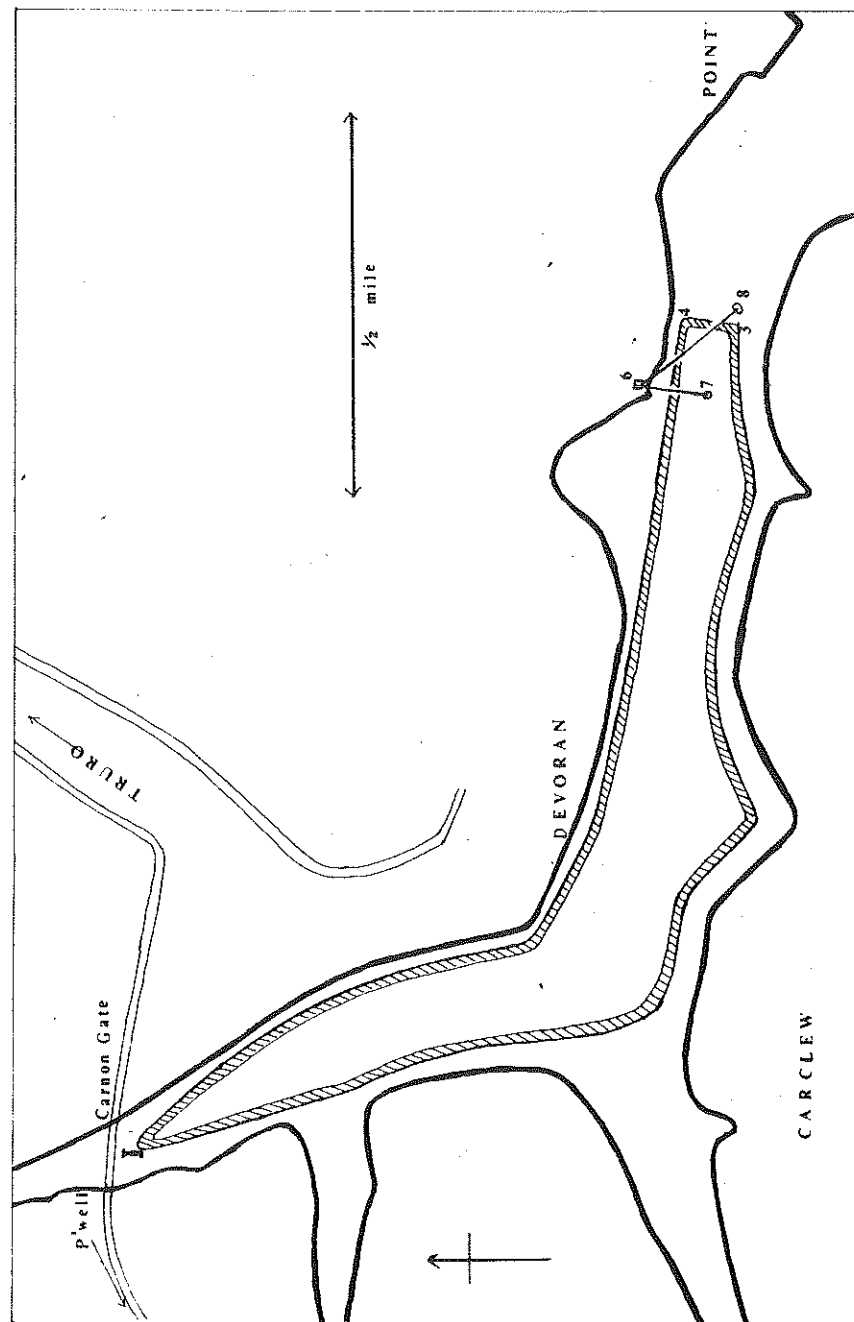
Sometimes small particles of gold were found, known as 'prills', which were seldom bigger than a grain of wheat and usually the size of a pinhead or smaller. These were considered the perquisites of the tanners, who carried a quill with one end cut off and fitted with a plug of wood into which they dropped the 'prill'. Where gold did exist the miners received lower wages. The largest nugget found weighed 11 dwts 6 grs. Amongst other interesting finds made by the miners was a shovel formed of the knotty part of a heart of oak to which a leather thong was still attached, probably preserved by the tanning property of the oak. The handle had gone but had evidently fitted into a hole in the spade and been tied in by the thong. This is now in the Truro museum. Another find was a pick made from one of the prongs of a stag's antler. It is now in private ownership.

The preliminary survey, made in 1805 or a little later, for the first Ordnance Survey Map, clearly shows the workings stretching from the bridge on the old road from Cannon Downs to Perranwell, as far down as the site of Old Cannon Mine. In 1812 a very severe gale combined with an exceptionally high tide breached the dam and flooded the works causing them to be abandoned. Traces of the embankments were visible well into the present century and the dyke across Narrabo creek was used as a footpath.

Profits from this streaming are given as £5,000 by Henwood; another writer mentions "upwards of £4,000".

Before 1818, applications were being made to the 'Lords', i.e. owners of the mining rights, for 'setts' (leases) to start mining in the area where the stream working ended. In a letter dated 21st February 1818, written by Henry Mancur to Sir William Lemon of Carclew, we read: "I make application on behalf of some gentlemen in London who will engage to work the mine effectively the dues shall be one twentieth until £8,000 worth of tin has been made and then to return to one fortieth. The mine is at this moment much out of order and at the least between four and five thousand pounds must be expended before any tin can be raised it is a considerable object to have the stream site to work as soon as possible as a considerable breach is now made in the centre of the embankment which in every tide is enlarging."

Writing to Francis Paynter on March 24th, 1818, Sir William says "It appears to me that you have considered the



levelling of the banks in Carnon Stream as the sole objection I had to the setting on foot again of an adventure which I am convinced will never be found to answer either to the Lords or Adventurers, I must therefore revert to the sentiments I expressed in my first letter to you, which was that I should be brought to consent only on Public Grounds of its being of Paramount Utility of finding Employment for the Miners who are out of work and in such occasion I would submit to the Inconveniences at Carclew and sacrifice my own comforts to the General Good."

The leases were granted and a powerful steam engine and water pump erected at point 6; the remains of the engine house can still be seen. Then a cofferdam was built at point 7 and a shaft sunk. Water was drawn up by the engine with flat rods - a series of horizontal beams attached to each other and suspended by triangles extending from the engine to the mouth of the shaft.

Having sunk the shaft to the depth of the tin seam, they cut a horizontal gallery about 4 feet wide and 6 feet high in the direction of the stream, carefully supporting the roof and sides with wooden planks and pillars from 7 to 11 inches thick; this was the highroad. Next they cut a similar road, not quite so high, at right angles, and working from the farthest end of this extracted the tin, gradually working back to the highroad, removing the timbers and allowing the mud to fill the worked-out space. This was repeated until all the tin within reach of the highroad had been extracted. Another shaft was sunk at point 8 where, as the river widened, they were forced to build an island which was washed away on two or three occasions. When completed, it was 30 to 40 yards in diameter, formed of sand from the bed of the river. Then the whole process of underwater mining was repeated.

According to Mr Edmund Michell who was a shareholder, the shaft was sunk in 1824 and in two or three years the experiment afforded a profit of £28,000.

Everything, however, did not go smoothly. The Gazette of February 28th 1828 reports: "The Mayor of Truro, as Law Conservator of the Fal River and Creeks, and Mr Peter Chiverton, J.P. consider the complaint of the Redruth and Chasewater Railway against the Adventurers of the Carnon Stream Mine for obstructing the navigation in Restronguet Creek in the course of working the mine and order the creek to be surveyed before March 6th." There is no report of the outcome of this, but the mine closed soon after.

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Primitive Mining Tools
in the Museum, Truro

