

Dr. Richard Pococke on tin-mining in Cornwall, 1750

(*Travels through England of Dr. Richard Pococke*, ed. J. J. Cartwright, Camden Society, I, 1888, pp. 110-113; in D. B. Horn and Mary Ransome, eds., *English Historical Documents, Vol. X, 1714-1783*, N.Y: Oxford University Press, 1969, pp. 482-83.)

Padstow, in Cornwall,

Oct. 10th, 1750.

On the 1st of October I set forward from Truro to the west, enter'd on a wild heathy country, and came in three miles to Casewater, a country of tin and copper. I had the curiosity to see the nature of the tin works. They call a work a balle. There are to each mine two shafts or wells, which, as they are open one to another, and only some frames of wood between them, are in the working but one well; one they call the ladder-shaft, in which the perpendicular ladders are fixt by which they descend; they are about thirty feet long to a landing place, called a solear, which brings to another ladder; the other is called the wemshaft, from the wem or windlace, turned by a horse, by the help of which they let down the tub, called a kible, to bring up the ore, another coming up at the same time. Below the ladders, when they have come to the lode or vein, they burrow down in holes which they call gunnies; and at this place the wem-sbaft is an inclined plane, in which a frame is made for the kible to slide on, which is called the sliding poles. Besides these shafts there is the fire engine shaft, by which they pump up the water by means of the fire engine, which was invented about 40 or 50 year ago by Mr. Newcommen, of Dartmouth, as I mentioned, and one Captain Savory in partnership. At the bottom is a hole, about six feet deep, to receive the water which runs from all parts; this is called the prison bottom, out of which the water is pumped up 24 fathoms three feet, to the channel call'd an audit, which conveys it to a valley abroad, and this audit is about thirty fathoms from the top, the whole being about 55 fathoms, or 330 feet. The lode or vein of tin or copper may be of a different thickness to twelve feet, and they call it a big or a small lode. They commonly run near east and west, that is, about a point to the south of the east, and as much to the north of the west; but there are some which have another direction: the lode commonly dips or under lays, as they call it, to the north, and that about five feet in six; sometimes, but rarely, they are perpendicular, and very seldom horizontal. The vein has on each side of it rock or earth, that to the north they call the north wall or under laying side, the other they call the south wall. Working towards the south wall they call working towards the back; if they work to the north wall, it is called following the lode; if they work down, it is sinking the course of the lode; when they work at the end, it is called driving. The stone or earth on each side of the lode they call country; if it be a hard smooth slate, they call it keller; if it be earth or clay, they call it flechen, and there are veins of these; if it be a spar or hard stone, they call it kepel. If any of these come across the lode and alter its course, it may be ten or twenty feet, more or less, 'tis called disordering the lode; but then, tho' moved either up or down, it afterwards keeps the same direction: but a keller never alters the lode; if the wall sets in upon the vein, they call it a bulk.

The top of a lode is commonly poor, and thrown away. The parts of the mine where they have followed the lode they call bottoms, and say they are of such or such a depth; those of this mine were about thirty fathoms, that is, below the ladders. The water runs through the lode which is looser than the walls; and where there is copper or mundik it leaves a yellow slime on the walls, called a water-slime. There are also in the mines soft black stalactites, called the droppings of the water. The tools they work with are, first, a hammer, called a pick, having commonly a driving end and a sharp end; with one they work into the lode, with the other they drive an iron wedge, called a gall, from 3 to 9 inches long and about an inch and a-half one way and an inch another, ending in a point, by which they separate the ore. They have also a bar of iron, called a brosier, about 2 1/2 feet long, 2 inches broad at bottom, and sharpened as a wedge: this is used to make holes in order to blow, one holding it, and giving it a turn, after every blow given by another with a mallet or hammer, with two *[blank]* or heads, as they bore for blowing; the operation of blowing up the rock by gun- powder being well known. A succession of men are always in the mine, except on Sundays. They work eight hours, from six to two, and from two to ten, and from ten to six, and are out of the mine sixteen hours. When they come up, they call it coming to the grass. When the ore is brought up, women and children are employed in breaking it, and separating the country from the ore, and the tin from the copper. No copper is smelted here, but is bought for smelting houses at Bristol and other parts. The men are paid so much a tun for what they deliver separated from the country. In the mines