

Climbing the track up the eastern side of the Red-a-ven Brook (S8), the first signs of mining activity will be the distinctive, partly-overgrown spoil heaps between the track and the brook. To the left, a shallow valley with a small brook joins the Red-a-ven (OS Grid Ref: SX 569 917).

We have reached the open moor. Beyond, Red-a-ven Brook curves away beneath Yes Tor. Nearby isolated hawthorns struggle to survive.

At this site we are still on the 'cooked' country rocks of the metamorphic aureole, although on the horizon ahead, to the south-east, is the granite, including the 619 metre high Yes Tor.

The copper mine, first recorded in the mid 19th century, was variously known as Red-a-ven Mine, Blackdown Copper Mine, Meldon Mine, Devon Copper Mine and Okehampton Wheal Maria. This probably reflected a succession of intermittent and largely unsuccessful 19th century mining enterprises.

At one time or another the mine used three vertical shafts variously attributed to be 14 fathoms (25.5 metres) and 25 fathoms (46 metres) deep. The most obvious sealed shaft is about 50 metres from the riverbank and surrounded by spoil heaps.

This shaft was serviced by a flat-rod (see page 20) powered by a water-wheel adjacent to the brook (see image page 28). A rubble-filled wheel pit, big enough to support a wheel of 30 foot (9 metres) diameter, is still clearly visible.

The nearby gully is the collapsed entrance to an adit, a near-horizontal tunnel driven into the hillside and often connecting to a shaft.

On the west bank of the Red-a-ven Brook, a now-abandoned leat fed by the brook contours around the hillside to end abruptly at the southern aplite quarry (S7). Was the water once used at the quarry face?

Moorland



Mineral deposits at Red-a-ven Mine

Unlike the more typical mineral-lined faults worked in most mines in the region, at the Red-a-ven mine the deposit (chalcopyrite) and silvery iron and arsenic sulphide was a band in the metamorphosed cherts known as skarn.

Super-heated mineral-rich fluids circulated in the metamorphosing rocks around the granite as it heated them, and had remarkable effects at Meldon. The unstable association of limestone-rich rocks and siliceous chert set up the perfect scenario for chemical reactions and as a result bands rich in new minerals developed known as *skarns*.

Throughout the area some of the most typical skarn-minerals are green and brownish garnets, but locally massive amounts of copper, iron, arsenic and sulphur also seep in, forming deposits of golden copper sulphide (arsenopyrite).

One such band of metal-rich skarn stretches from the Red-a-ven Brook to the south side of Meldon Reservoir and was worked in three small mines, Red-a-ven, Forest and Homerton respectively. Copper-bearing chalcopyrite was probably the main mineral worked.

Red-a-ven Copper Mine - the wheelpit with its brookside end-wall

