

Site Name: Ystumtuen/Penrhiw West Mines

Grid Reference: SN 733 788/ SN 734 787

RIGS Category: Educational & Scientific

Earth Science Category: Mineralogy

1:50,000 Geological: BGS Sheet 163, Aberystwyth

RIGS Statement of Interest:

The ancient mining landscape to the west of Ystumtuen village is worthy of conservation, virtually untouched as it has been since the 18th Century and the days of Lewis Morris, who described it thus:

"There is a vast quantity of Marcasite in this work, and it shoots into Chrystals of Copperas by the very heat of ye Sun, but it is of very little value here being so far from the Sea. The waste of this mine is worked over and over to profit Every eight or ten years, the Marcasite being dissolved by the Rains and Heat of the Sun Suffers the Ore to be disengaged".
Lewis Morris (in Bick & Wyn Davies, 1994)

These same heaps are still visible at Ystumtuen Mine, as mounds of bright yellow, sulphurous clay. If a sample is taken and washed in the laboratory, the sulphurous clay will be removed, leaving behind bright fragments of galena and small chips of white quartz. The reason is, as Lewis Morris alluded to, the presence of abundant marcasite net-veining in the ore. This made it difficult to obtain clean, saleable galena concentrates. However, leaving the marcasite to weather away freed the galena in time: an early form of heap-leaching, an ore-treatment process used today.

To the east lies the western end of Penrhiw Mine. These small grassy tips yielded a pocket of secondary mineralisation in the early 1990s of exceptional interest. Dominated by basic hydrated sulphates of copper and zinc, the find included the world's finest specimens of the exceptionally rare species ramsbeckite and schulenbergite – both first described as minerals as recently as the 1980s. There is further potential for locating other pockets of such mineralisation within these tips.

Surveyed by: J.S. Mason