

Carrock Mine

Wolfram mining in Cumbria was confined to one site - Carrock Mine - situated in Grainsgill, a tributary of the River Caldew, 4.5 miles south of Caldbeck and 12 miles west of Penrith. Carrock was the only locality outside of Cornwall and Devon to have produced wolfram. Along with Castle-an-Dinas Mine, near St Austell in Cornwall, it was the only mine in the country where wolfram was the sole ore produced. Wolfram and scheelite are the chief ores of tungsten. The mine has worked spasmodically since 1854, but never for very long, as mining is only viable when the price of tungsten is at its peak. The last period of working finished in October 1981.

The mine is situated in the steep sided valley of the Grainsgill Beck, with the main adit at a height of 1,115 feet. The three principal veins, going from west to east, are the Smith Vein, the Harding Vein, and the Emerson Vein. These cross the beck at approximately 90 degrees, rendering the mine easily worked by a series of adit levels driven north and south into the valley sides. No workings have been developed below the main adit, but as it is above the valley bottom it was not necessary to resort to pumping or winding to work the mine. Ore from upper workings was scraped and tipped down a series of internal ore-passes into hoppers on the main adit level, and then run into tubs and hauled out of the mine to the mill. The country rock is competent and the majority of the stopes and levels are self-supporting. Only small quantities of timber were required where the levels pass through the overlying boulder clay.

The first major period of activity followed the formation of the Carrock Mining Syndicate in 1913. The work was partly government financed and almost 14,000 tons of ore were mined, 10,116 tons milled, which produced almost 100 tons of 16% concentrate. The concentrates were roasted in a half-ton capacity hand-raked furnace to remove the arsenic, which was collected from the flues. Power was supplied by generators driven by pelton wheels, assisted during times of water shortage by a gas engine.

With the end of the First World War government support was withdrawn, while at the same time the market was swamped with stocks of tungsten concentrates as governments off-loaded their strategic stock piles. By late 1918 the workforce had dropped from around 100 to 25 at the time of the closure of the underground workings. In 1919 a few workers were involved in washing zinc blende prior to the mill being dismantled later that year.

Interest in the mine returned again during both World War Two and the Korean War when supplies of tungsten were threatened, but despite exploratory work no ore was produced. After a number of changes of ownership the mine reopened in April 1977 and produced around 16,000 tonnes per annum until closure in October 1981. The price of wolfram concentrates had fallen again. The mine was put into mothballs on a care and maintenance basis.

Following the abandonment of the lease in 1988 the mill and associated buildings were cleared completely, and the site, along with the tailings lagoon, was bulldozed and graded back to a close approximation of the original contours. The adit portals were destroyed and sealed, although mine drainage water still finds its way to day through the main adit to the mine. The only remains of buildings left on the site are those on the south side of Grainsgill Beck, the concrete bases of hoppers constructed in 1913 by the Carrock Mining Syndicate.

It is notable that in the past the threat or actuality of war has brought Carrock Mine into production. It is to be hoped that this course of events will not be responsible for the mine's future working.