WELCOME TO ALDERLEY EDGE AND ENGINE VEIN MINE

The Derbyshire Caving Club has opened Engine Vein Mine for the day to allow members of the general public to see for themselves the world of the copper mines below Alderley Edge.

Members of the Club will be on hand before, during and after your trip to help you enjoy your trip safely. Tours of the mines are led by Club members and take place at regular intervals during the day.

FOR YOUR OWN SAFETY, PLEASE FOLLOW ALL INSTRUCTIONS CAREFULLY AND KEEP TO THE MAIN PATHS IN THE MINE. KEEP CHILDREN AND DOGS UNDER CONTROL

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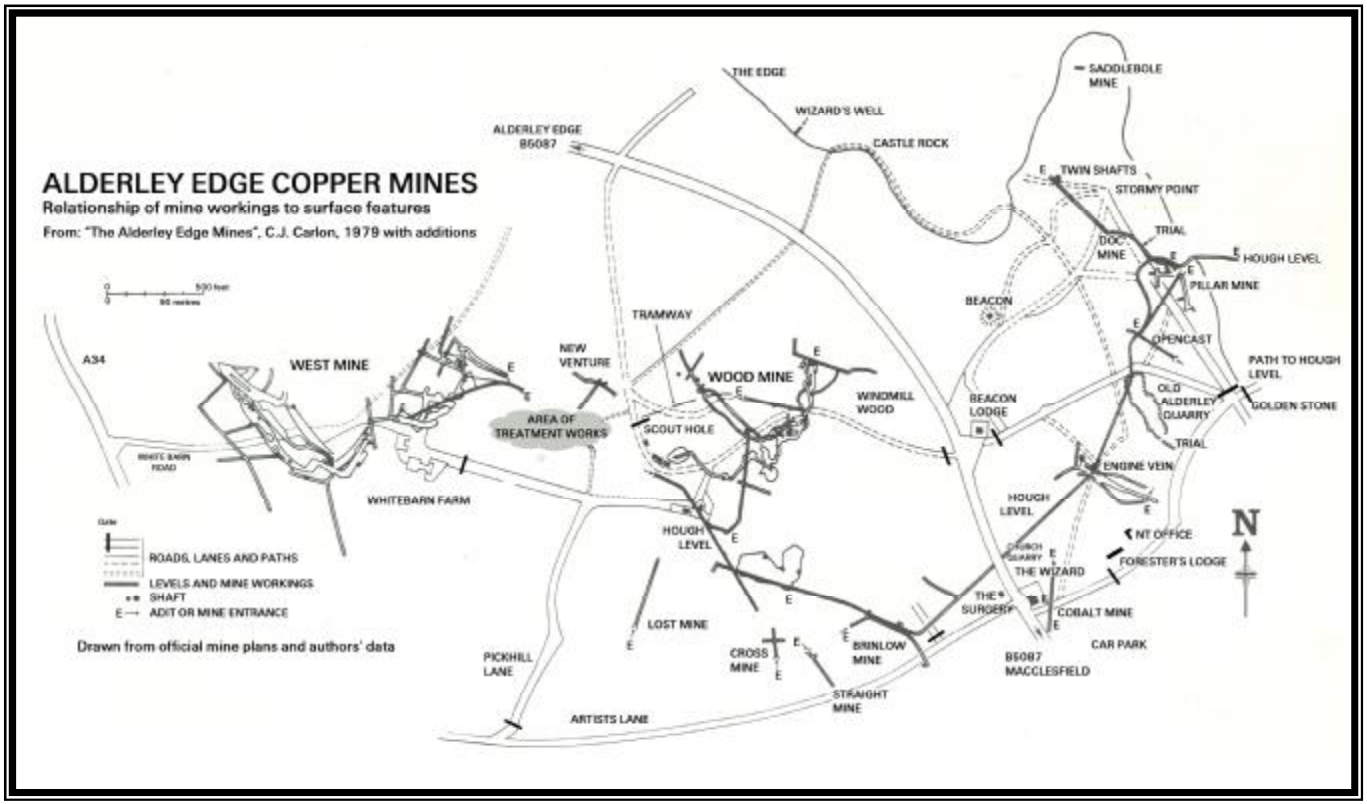
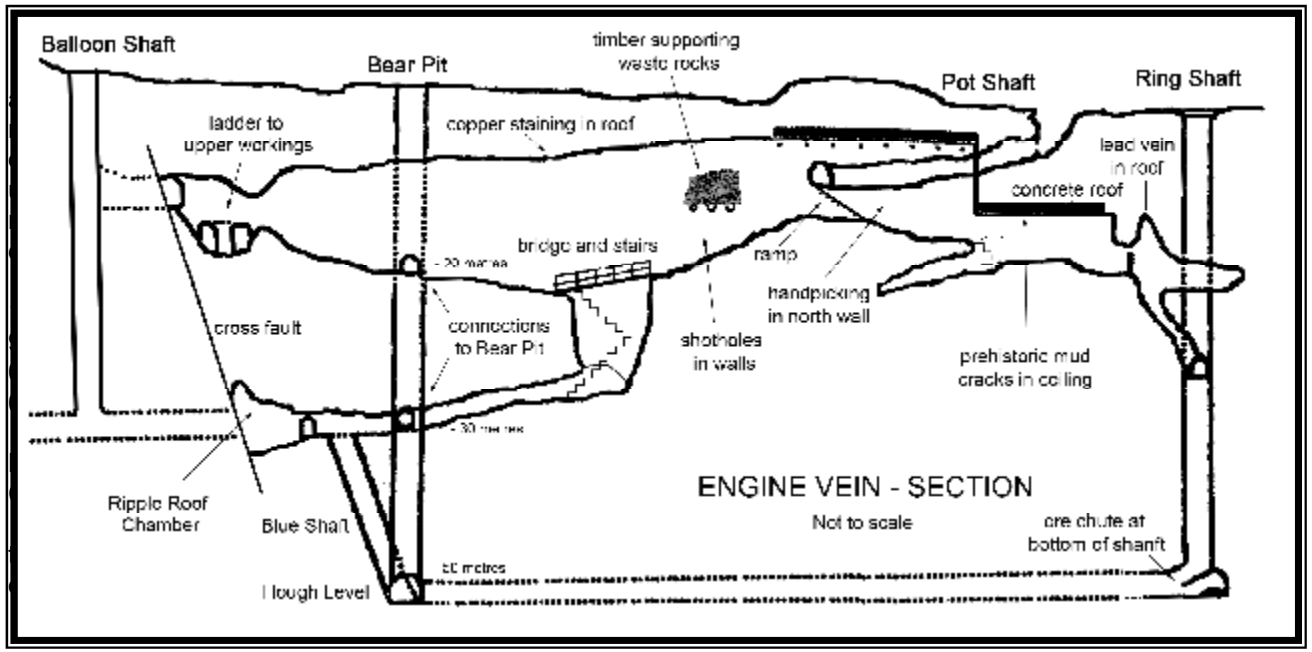
ENGINE VEIN MINE

HISTORY

Engine Vein has been recognised as one of the oldest mines on the Edge. At the surface, there are pits dug by Bronze Age men using stone hammers





get copper ore. In the first century AD, the Romans sank a shaft and drove a tunnel into the mine. About 200 years later, a hoard of Roman coins was left in the top of the Roman shaft. The hoard was rediscovered by the Caving Club in 1995. Archaeologists working here in the twentieth century found numerous hammer stones and other evidence of the long history of mining at the Edge.

Passages and caverns excavated with the use of steel picks are found throughout the mine suggesting extensive working in the seventeenth and eighteenth centuries. These could relate to the periods of working at Alderley in the 1690s and to Charles Roe's mining in the 1750s. The mine was also worked in the period 1805-15.

There is plenty of evidence of the use of drills and explosives in the mid-19th century when the Alderley Edge Mining Company worked the

whole area, from West Mine (on the west side) to Stormy Point (on the east side). There is even a small area worked in the early 20th century.

Visitors to Engine Vein today will see the various periods of mining displayed in cross-section as successive generations of miners have removed more and more rock from and parallel to the vein.

MINERAL ORIGINS

The sandstone was laid down in a broad estuary some 250 million years ago. The origin of the mineral at Engine Vein lies deep in the earth. Over millions of years, minerals from below Cheshire crystallised out in and near a fault in the earth's crust. The main minerals in the vein are galena (lead sulphide), chalcocite (copper sulphide) and barite (barium sulphate). At a later time, rainwater seeped down the vein and dissolved some of the minerals, leading to their being dispersed in the porous sandstone on each side of the fault. These deposits took the form of malachite and azurite (both hydrous copper carbonate) and cerussite (lead carbonate). Workers over the centuries have exploited the minerals of Engine Vein to obtain lead and copper ores as well as some cobalt.

THE VISIT TO THE MINE

The present entrance to Engine Vein follows a nineteenth century side passage until it emerges in the sidewall of the vein. At this point you would have seen daylight until 1981 when the workings were capped with concrete. Turning east (back towards the entrance) leads past the Roman level to a large chamber with a concrete roof dating from 1981. In this area, large mud cracks can be seen in the roof showing how the alluvial deposits dried out from time to time during their formation 250 million years ago.

Returning back to the entrance passage and beyond, the main passage slopes down steeply. In the roof is some timbering dating from the nineteenth century and put in place to hold up piles of waste rock. The sloping passage levels out at the top of a fixed bridge built by the caving club.

Beyond the bridge, the chambers continue on the same level until a cross-fault is reached which forms the end of the mineralised area accessible from Engine Vein. Below the bridge, there are large chambers on the south side of the fault excavated in the nineteenth century. On the fault itself, a small passage connects with the Bear Pit, a major shaft 50 metres deep connecting all levels of Engine Vein to the surface, and with the Blue Shaft, a sloping shaft down the fault to the Hough Level. Blue Shaft gets its name from deposits of copper minerals on the walls.

WORKING THE MINE

The earliest workings at Engine Vein were probably no more than 6 to 9 metres deep. In the 1700s and early 1800s, the mine was deepened and the Hough Level served as a drainage tunnel. Ore was probably lifted out of Engine Vein up the Bear Pit or Ring Shaft. In the 1860s, the Hough Level was enlarged in size and Engine Vein was also connected to Brynlow, Wood Mine and a main entrance near the West Mine. Ore could now be taken in trucks along this level from Engine Vein direct to the treatment works. At these works, copper was leached out of the ore using acid.

Engine Vein is not the most extensive mine at Alderley Edge but it contains many features not seen in other mines at Alderley. The range of minerals found is also extremely wide. Visits to the mine may be brief but we hope that they are no less interesting for that.

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For further information, including how to see the other mines, visit the Caving Club website at www.DerbysCC.org.uk which has sections on history, geology, exploration and other topics. There is also information about joining in with the caving and mining activities of the Club. You can also read about the mines in The Alderley Edge Mines *by Chris Carlon and Nigel Dibben.*

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The Alderley Edge Mines are owned by the National Trust and leased to the DCC.

Derbyshire Caving Club – April 2016

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ENGINE VEIN COPPER & LEAD MINE

Alderley Edge, Cheshire

SJ 8606 7746

How the minerals were formed.

Who worked the mine.

How the ore was removed.

The Engine Vein Mine is one of the oldest mines at Alderley Edge and has a 4000 year history, as long as almost any mine in England

DERBYSHIRE CAVING CLUB