

ROMAN BRITAIN

MINERAL MINING

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(2012)

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Introduction

Mining was one of the most prosperous activities in Roman Britain.

Britain was rich in resources such as copper, iron, lead, salt, silver, tin and some gold; and these materials were in high demand in the Roman Empire.



The abundance of mineral resources in the British Isles was one of the reasons for the Roman conquest of Britain.

The Romans were able to use advanced technology to find, develop, and extract valuable minerals on a scale unequalled until the later Middle Ages. Thus, the Romans brought in improved methods for extracting the raw materials used in manufacturing. For example, the Romans taught the Britons new ways of quarrying for stone and mining for metals like gold, silver and iron.

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Iron

Roman Britain had many iron ore mines in, and the Ordnance Survey Map of Roman Britain lists 33 iron mines: 67% of which were in the Weald, and 15% were in the Forest of Dean.

Because iron ores were widespread in Britain, and because iron was relatively cheap, the location of iron mines was often determined by the availability of wood for smelting fuel (charcoal) - another commodity that Britain had in abundance.

Consequently, great amounts of iron were needed to supply the Roman war machine, and Britain was a suitable locale to fill that need.

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Tin

Tin mining in Cornwall and Devon began in the early Bronze Age approximately 2,150 BC and ended with the South Crofty tin mine in Cornwall closing in 1998.

Tin and later also copper were the most productive of the metals extracted: some tin mining continued long after mining of other metals had become unprofitable.

Many scholars believe that the tin resources were a major reason why the Romans invaded Britain. Additionally, the Romans had control of mines in Spain and Brittany in the 1st and 2nd centuries.

Later production in Spain was curtailed, probably by raiding.

Tin production in Britain increased in the 3rd century, for use in coinage, and there was extensive use of tin in pewter manufacture, at Camerton in Somerset.

West Devon and Cornwall are areas which are less Romanised than many other parts of England and it may be tin mining was in local hands with tin purchase by the imperial authority.

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Lead

Lead was essential to the smooth running of the Roman Empire. It was used for piping for aqueducts and plumbing, pewter, coffins, and gutters for villas, as well as a source of the silver that sometimes occurred in the same mineral deposits.

The largest Roman lead mines were located in or near the Rio Tinto (river) in southern Hispania.

In Britannia the largest sources were at Mendip, South West England and especially at Charterhouse. In 49 AD, six years after the invasion and conquest of Britain, the Romans had the lead mines of Mendip and those of North West England and Wales running at full shift. By 70 AD, Britain had surpassed Hispania as the leading lead-producing province. The Spanish soon lodged a complaint with Emperor Claudius, who in turn put limits on the amount of lead being produced in Britain. However, these limits were ignored and had the opposite effect on British lead production. [

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Copper

Copper was mined to mix with tin to make bronze.

The chief British copper mines were at Alderley Edge in Cheshire, where the easily worked malachite was abundant. There were others at Amlwch, in Anglesey, also in North Wales, Shropshire, Coniston and southwest Scotland.

However, the Romans had little need of British copper since they possessed the abundant and more easily available supplies from Cyprus and Spain

However, two copper cakes were reported in 1871 from Aberffraw Parish and are now preserved in Mostyn Hall, one of which was stamped SOCIO ROMAE • NATSOL and weighed 42 lbs (19kg).

Two other copper cakes were recovered from the Parys Mine in Amlwch and now reside in the British Museum, one plain, the other stamped IVFS.

Another three copper cakes were recovered near the ancient copper-workings at Bryn-du in Llanbadrig, two of which bore the stamp IVL.S within a circular die.

(Right - copper cake found at Mynydd Parys is 12.5 inches in diameter and weighs 32 pounds)

It is thought that the ingots were being manufactured at Parys Mountain for export to other areas of Britain.



There have been some attempts to correlate the positions of the ingot finds with some of the early Romano British hut settlements on the island. However, other than the Ty Mawr site at Holyhead, little evidence of copper work has been found at the hut sites.

The mining of copper at Parys Mountain appears to have stopped when the Romans left Britain.

There were some small Roman copper mines at Llandudno, where an open-cast on Great Orme's Head yielded a coin of Aurelian (AD 270) and many more recent ones have been found in the spoil-heaps.

There was a large Roman mine at Llanymynech and another at Machynlleth, the former comprising a large number of cone-shaped pits and a great open-cast trench with a series of galleries opening into chambers. This place yielded coins of Antoninus and Faustina (AD 138).

From the Scottish source comes a cake similar to those found in Wales.

At Marazion, Cornwall, where the causeway runs out to St. Michael's Mount, a vessel of pure copper was found buried in the marsh in 1825; it contained some thousands of brass coins of about AD 260.

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Silver

The most important use of lead was the extraction of silver. Lead and silver were often found together, with the silver being encased in the lead ore. The Roman economy was based on silver, as the majority of coins were minted from the precious metal.

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Gold

There was only one gold mine in Britain, which was located in Wales at Dolaucothi.

The Romans discovered the Dolaucothi vein soon after their invasion, and they used hydraulic mining methods to prospect the hillsides before discovering rich veins of gold-bearing quartzite.

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Stone

Britain has many different types of high quality stone, which the Romans quarried and used in their building activity.

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Other Minerals

Jet, marble and shale were also found and used by the Romans in Britain. Shale and jet were used for jewellery, and shale was also used in furniture.

Coal was mainly mined from the surface, although there some deposits of coal underground, which were also mined.

Romano-Britons put Coal to Some Unusual Uses:

"Coal was also mined in Roman Britain, though it never became, as far as is known, an item of export; and British coal is only mentioned once in Roman literature, as a curiosity seen upon the altars of Sulis Minerva at Aquae Sulis (Bath). Its tendency to 'become round stone masses' will be noted with a smile. This was undoubtedly the Somersetshire cannel coal. But the Nottinghamshire coal has been noted in the Fenland villages. Local coals microscopically identical with local veins have been noted on Hadrian's Wall in a Benwell fort smithy, at Housesteads and Corbridge: and their use is dated to the second century A.D. at the first and last places and to the fourth century A.D. at the last two.

It was also used in the second century A.D. on the Antonine Wall, at Castlecary and Bar Hill forts; while less detailed observations attest coal in Roman forts at Risingham, South Shields, and Manchester. In industry coal was used for smelting lead at Pentre Ffwrndan, iron and glass at Wilderspool, and iron at Weston-under-Penyard, and for heating hypocausts at Wroxeter and Caerwent. It must, however, be recognized that wood or charcoal were the fuels much more normally employed and that coal was used only where it was handier to get than wood. In the Fenland, to quote an extreme case, it would arrive as ballast in the barges and be transported much more easily in the canal system than logs.

Three other Natural deposits provided not fuel but ornaments. The Kimmeridge shale of the Isle of Purbeck, in Dorset, was worked extensively into jewellery, decorative panels, and furniture. The personal decorations consist principally of lath-turned bracelets, from which the cores were so numerous as to win the name of 'Kimmeridge money'.

But the material could also be cut and carved in sheets, forming panels after the fashion of marble veneering, or, when lightly hollowed, flat dishes for trays. These table furnishings were modeled upon metal prototypes, just as were Victorian trays of papier-mâché, though the hardness of the shale suited the treatment better.

Even furniture was thus made, table-legs with claw-feet and sea-horse or sea-lion shoulders being known and widely distributed in southern Britain, though not common. Furniture of this kind must have been difficult and hazardous to manufacture, and consequently both expensive to buy and frail to maintain, though it could be kept in good condition by oiling.

It should be observed, however, that whenever this material is decoratively carved, its patterns run upon very strictly classical lines, as if the firm operating the concession was Roman in its emphasis, not to hazard a guess as its origin. A detailed study of this very interesting Romano-British industry is still wanting."

(Kimmeridge Coal - a hard, bituminous shale)

(Text is taken from ROMAN BRITAIN, Dr. I.A. Richmonds (1955)

Salt was a valuable commodity and was extracted from sea water. It was used in cooking and the preserving of food for long periods. Soldiers in the army were given salt rations, though this later changed to giving them the money to buy the salt themselves.

British pearls were well regarded abroad.

Marble was used for commemorative inscriptions, etc.

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