

Sunday 18th September 1988

Sill Howe Whinstone and Boulby Alum Quarries

As all the members present were staying locally, an earlier than normal start to the day had been arranged with our hosts. Our moor top meeting point lay on the whinsill dyke and evidence of back filled open workings could be seen extending into the distance to both sides of the car park. Formal permission for our visit to the mine had had to be obtained in advance by John Owen from the agent for the Duchy of Lancasters Estate, (an accident disclaimer also being required).

Access to the mine is through an elegant portal and along high roofed level (where there was a need for this level to be lined, good quality dressed stone has been used). The height of the entry level (which is roughly at right angles to the vein) was only a foretaste of things to come as this place is BIG

At it widest the whinstone is over 20 metres thick and has been work in these locations as two parallel drives leaving the central section to support the roof. Each drive is thirty feet high, stone being worked by three ten foot high benches. Drives were made on two and in places three horizons connected by inclines. Our visit was only to the more modern half of the mine, the workings which are about half a mile in extent. The _other half of the mine had been partially sealed off after an accident in the 1920s. Our hosts explained the geology of the mine and the system of 'underground quarrying' though the working are so extensive little mechanization seems to have been employed.

After about two hours we again returned to daylight the underground part of the meet no over, all very clean and dry by comparison with what we are used to, though Sill Howe did have some viscous ochreous mud which may have made those from the south of Cumbria feel at home.

We then set off toward the coast and the cliff tops (highest in England) nearby the Boulby potash mine, but taking a short deviation to look at an ironstone outcrop in a deep stream valley near Grossmont.

The Alum Shales outcrop in the cliffs here with a limestone overburden which had to be removed and was dumped in the sea. The quarried shale then collected into large heaps and burnt, additional fuel was required only to start the process the carboniferous material in the shale maintaining combustion. The burnt shale was then leached with water, the resulting liquor being run off along leats to settling tanks where the Alum precipitated out in the form of crystals

The quarry workings & areas used for burning ore are still evident, as is the remains of the leat system. (Actually our very last visit underground in Cleveland was in a 50m tunnelled section where it follows the cliff edge). Improvements in the production of sulphuric acid & the development of aniline dyes superseded the use of alum in dyeing & tanning & the industry was dead by 1870.

An excellent weekend, good weather, very knowledgeable and friendly guided, interesting places to visit....

Don Borthwick