Bulletin of the Peak District Mines Historical Society. Vol.9, no.3, 1985

A Trial Excavation on High Tor Rake, Matlock

John Pickin

High Tor Rake is the south easterly extension of Ringing Rake and has been worked for a distance of 230 m between SK.297591 and SK.298588. It is one of the most impressive opencast rake veins in Derbyshire and reaches a maximum depth of 25 m; its southern section is known as Fern Cave and, in conjunction with the interconnected Roman Cave, has operated as a show cave since the 1860s (Flindall and Hayes, 1974).

As the name Roman Cave implies, these workings have been traditionally associated with early mining activity but, in common with so many other mine - caves in the Matlock Bath area, there is absolutely no evidence to substantiate the claim.

In May 1983 a trial excavation was undertaken on the rake in an attempt to gain some dateable material. Fern and Roman caves were regarded as impracticable for excavation because of constant public access to the workings, and so attention was centred on that section of the rake between the summit cafe and its exposure in the face of High Tor (Fig.1).

EXCAVATION

In the cliff face the vein has been worked opencast to a depth of almost 25 m. At the base a fissure entrance leads, via a steep rubble slope, to a large stope worked in isolation below the main opencast; the stope is 14 m high and has a maximum width of 3 m with evidence of slickensiding on the eastern wall. At the foot of the slope a level driven on toadstone can be followed for 13 m, at which point is has silted up (Fig. 2).

Returning to the foot of the slope a climb of 5.50 m leads into a continuation of the main stope; this high level working is on the vein directly above the bottom level and is choked by a boulder fall after 7 m. The high level stope was chosen for excavation for two reasons:

a) the deposits appeared to be dry and undisturbed;
b) this stope appeared to have been truncated by the lower workings and main stope, indicating that it was earlier.

Two sections were excavated into the floor deposits. Section A was cut across the entrance to the high stope directly above the slimb (Fig. 3A). The floor at this point was 1.70 m wide. The deposits covered a V-shaped trench dug into a predominantly calcite vein and were as follows:

1 - black clay
2 - orange clay with some calcite
3 - crushed calcite
4 - grey clay with stone fragments
5 - grey clay, with stone rubble against west wall.
6 - grey clay with crushed calcite and small stones.

Section B was excavated 1.80 m behind Section A (Fig. 3B). Because of restricted working room and the unexpected water-logged state of the deposits, only half of the floor width was opened up. The section is described below and the bracketed numbers relate to the corresponding layers in Section A:

7 - black clay (1)
8 - grey clay with stone and occasional calcite (4)
9 - small stones with grey clay (5?)
10 - calcited stones
11 - compacted small stones

Although there is some difference in stratigraphy between the two sections, the deposits can still be interpreted as the normal debris and waste from vein extraction. The occurrence of a number of distinct layers suggests that mining in this particular spot may have taken place over a prolonged period, although accidental tipping of waste from another, but contemporary, working could account for such differential layering. The calcited stones in layer 10 could be an earlier surface but it is as likely to be the result of long term water percolation. Calcite was the main vein material in the layers and no galena was observed.

No artefactual material was recovered from the excavation but two shot holes were revealed on the east wall in Section A; they were 25 mm wide and 140 mm long. Little work has been done on the use of shot holes for dating, and although the diameter of these is within the range for those observed in the Greatorex-Bedehouse branch of Cromford Sough driven in 1676 (Rieuwerts 1983, p.319) they could equally belong to the 18th or early 19th centuries.

CONCLUSION

The evidence from limited excavation indicated that this particular part of the rake is post-Medieval, and the assumption that the high level stope is earlier than the other workings should be revised. The probable sequence of mining is that a level was driven to reach the vein below the opencast, which had reached too great a depth to be safely worked; this level is represented by the passage beyond the main stope which follows the toadstone, with the original entrance being in the hollow that can be seen some 6 m below the present fissure entrance (see Fig. 1). At a later date the first 12 m of this level was re-worked as an overhand stope which removed all the vein material below the floor of the opencast. This created the present fissure entrance and it is likely that high level stope was excavated during this period too. A ledge can be observed cut into the east wall of the main stope at the same level as the floors of the present entrance and high stope. This may have

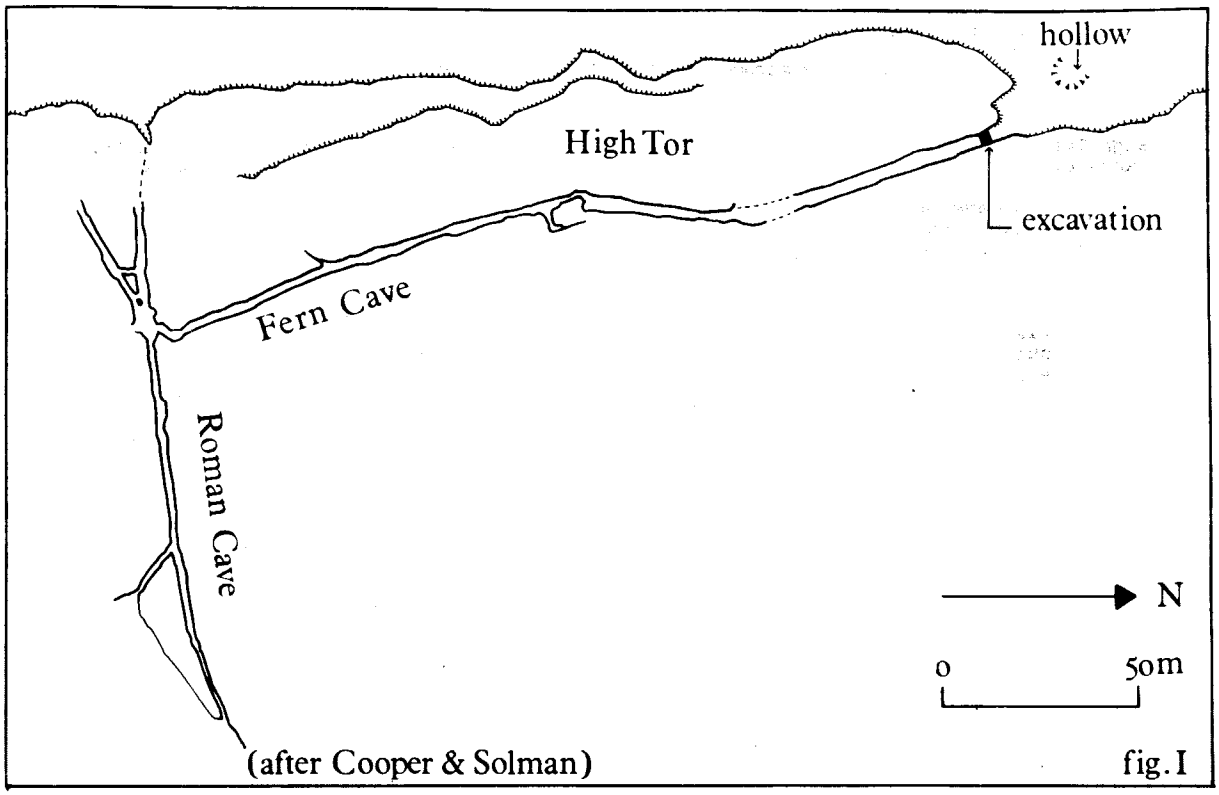
hollow
High Tor
excavation
Fern Cave
Roman Cave
N
0
50m
(after Cooper & Solman)

fig. I

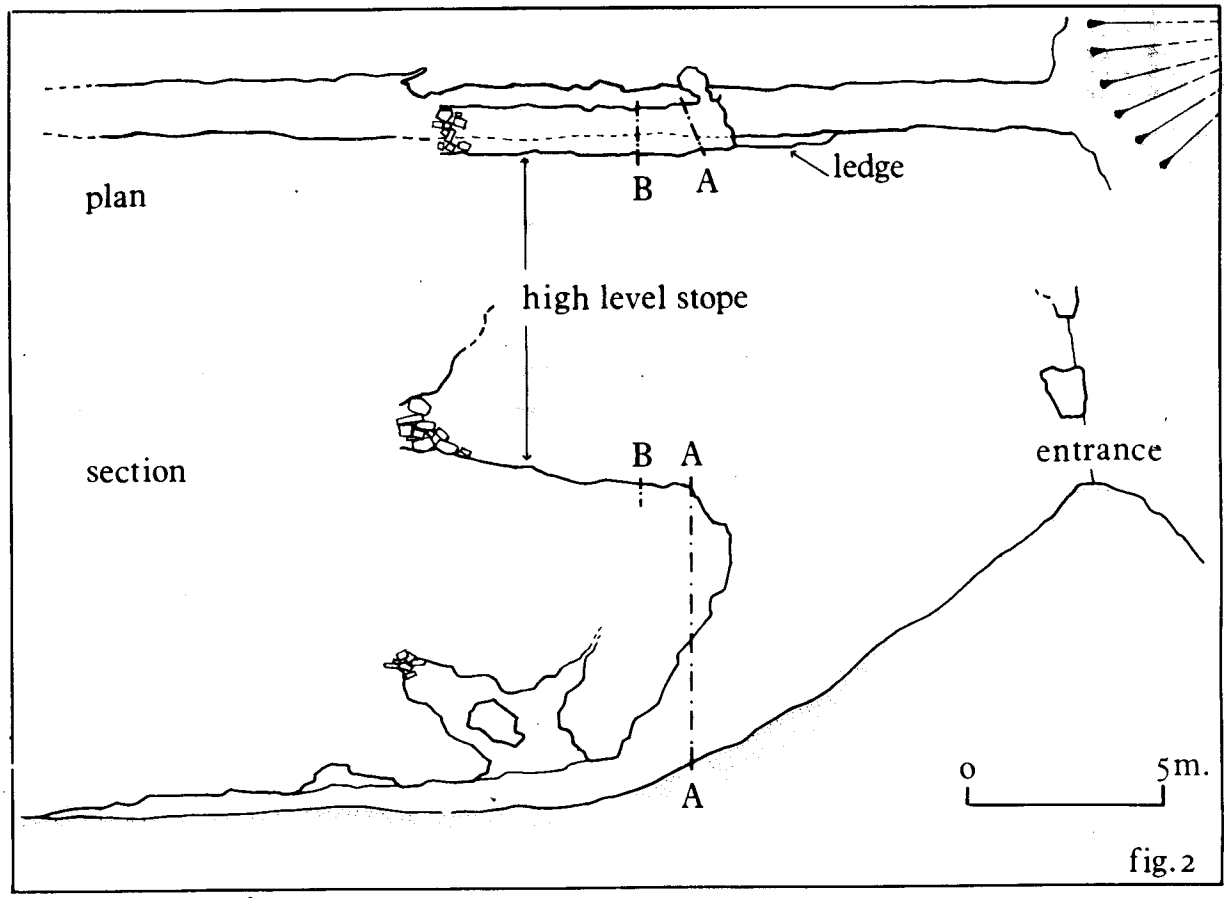
plan
B
A
ledge
high level stope
section
B
A
entrance
A
0
5m.

fig. 2

supported a timber staging along which material was trammed out, and it is probable that the rubble stope is the result of waste dumped from this platform at the surface entrance to the stope.

Given the depth of the workings at this point a post-Medieval date is to be expected, with evidence of earlier mining having been destroyed by later activity. The recent discovery of a Roman mine at Roystone Grange (Hodges & Wildgoose, 1981, p.51) may indicate that attention should be centred on the smaller lead veins near areas of known Romano-British settlement such as Bonsall, Winster and Carsington, rather than the larger, heavily worked rake veins.

ACKNOWLEDGMENTS

Permission to excavate was given by West Derbyshire District Council and the owners of High Tor Grounds. Arrangements were made by Dr L. Willies and advice was given by R.Flindall. G. Pickin assisted with the excavation and report.

REFERENCES

Cooper, R.G. & Solman, K. 1976. Unpublished survey of Roman and Fern Caves.

Flindall, R. & Hayes, A. 1976. *The Caverns and Mines of Matlock Bath. Part 1* . Moorland Publishing Co., Ashbourne.

Hodges, R. & Wildgoose, M. 1981. Roman and Native in the White Peak. *Derbys. Arch. Jour.* Vol. 101, pp.42-57.

Rieuwerts, J.H. 1983. Cromford Sough and the Early use of Gunpowder. *Bull. Peak Dist. Mines Hist. Soc.* Vol.8, pp.315-329 & p.382.

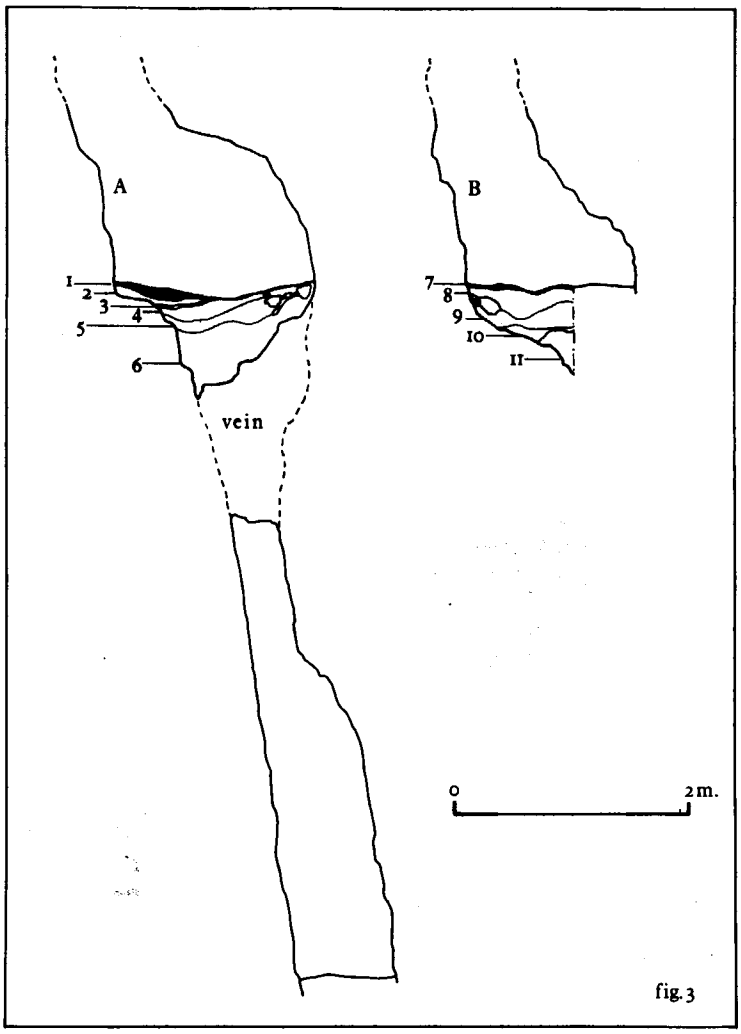

fig.3