SPRINGS WOOD LEVEL
STARBOTTON

KETTLEWELL **YORKSHIRE**

N.G.R. S.D. 95837434

Edited by
D.T. RICHARDSON A.R.I.C.

INDIVIDUAL SURVEY SERIES

Publication No. 1

Published
DECEMBER 1966

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PROJECT COMPLETED
7th November, 1965

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FOREWORD

A new publication should, in our minds, not be introduced without a few words of explanation, particularly if it is the first edition of a series. Most of us have, at some time, met with the problem of requiring data about a particular cave, mine, caving or mining area and have been disillusioned by the fact that we could not find such a collection of material within a single pair of covers. In addition, a vast amount of data remains locked away in notebooks of private individuals and libraries of organisations who have no means of advertising the fact or publishing what they possess.

These facts alone have prompted the Society to bring together as much information as possible about a particular site or area by making an individual study of the site or area and searching literature for historical and other data.

As these surveys are completed they will be published in the Society's INDIVIDUAL SURVEY SERIES.

Each survey will be dated and it is hoped that these Individual Surveys will be of assistance to future investigators and in particular prevent unnecessary duplication of work.

The fact that a mine has been chosen for our first Individual Survey should not be taken that the emphasis is to be on mining, several speleological surveys are under way at the present moment.

A mine was chosen for the first survey as it was realised that the conditions which would be met below ground would be less severe than those of an average cave system and would therefore give us the opportunity to overcome each difficulty as it presented itself before attempting something more severe. An additional incentive was that this particular mine presented some unusual biological aspects which were considered worthy of immediate attention.

The actual field work was carried out in a very short time, only two major visits being necessary to complete the physical survey, biological work and mineralogical survey. This was accomplished by briefing survey and other teams in advance of the work that was to be carried out. The collection of mining and historical data took somewhat longer, but this was to be expected as there is almost no written information about the area and what little there is scattered through numerous manuscripts, books and journals.

The Society extends its thanks to all who have assisted in bringing this project to a successful conclusion and in doing so have laid the way open for future projects of a similar nature.

Skipton.
December, 1966.

D.T. Richardson
Honorary Editor.

CONTRIBUTORS

J.M. Dickinson Sutton-in-Craven	Area Map and Survey
Jean M. Dixon, A.I.S.T. University of Bradford	Biological Survey
J.R. Foster-Smith, F.G.S., M.I.M.M. Middleton-in-Teesda1e	Notes on the Lead Mines on the East Side of Wharfedale between Buckden and Kettlewell. Outline of Geology of the District History Details of the Starbotton Mines
R.S. Harker, B.Sc. University of Leicester	Geology of the Springs Wood Level
D.T. Richardson, A.R.I.C. Skipton-in-Craven	Relative Humidity, Air and Water Temperatures. Water Analyses

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SPRINGS WOOD LEVEL

(Starbotton Moor End Mine)

NAME

We have been unable to ascertain the original name of the level. For the sake of clarity we have given the name SPRINGS WOOD LEVEL to the mine as it is situated in Springs Wood (Ordnance Survey Yorkshire West Riding) Sheet XCVIII. 16. 1/2500 Scale. 1909 Edition). In addition We have included the name Starbotton Moor End Mine as reference is made to Starbotton Moor End Mine or Wharfedale Mine in some of the still available documents.(1,2)

Ref: 1 - Yorkshire Past and Present by Thos. Baines (undated).
2 - Backhouse MSS - Central Library, Leeds.

POSITION

Level entrance is in Springs Wood some 700 yards South East of the village of Starbotton, near Kettlewell, Yorkshire. Entrance approximately 975 ft. O.D. National Grid Reference: SD 95837434.

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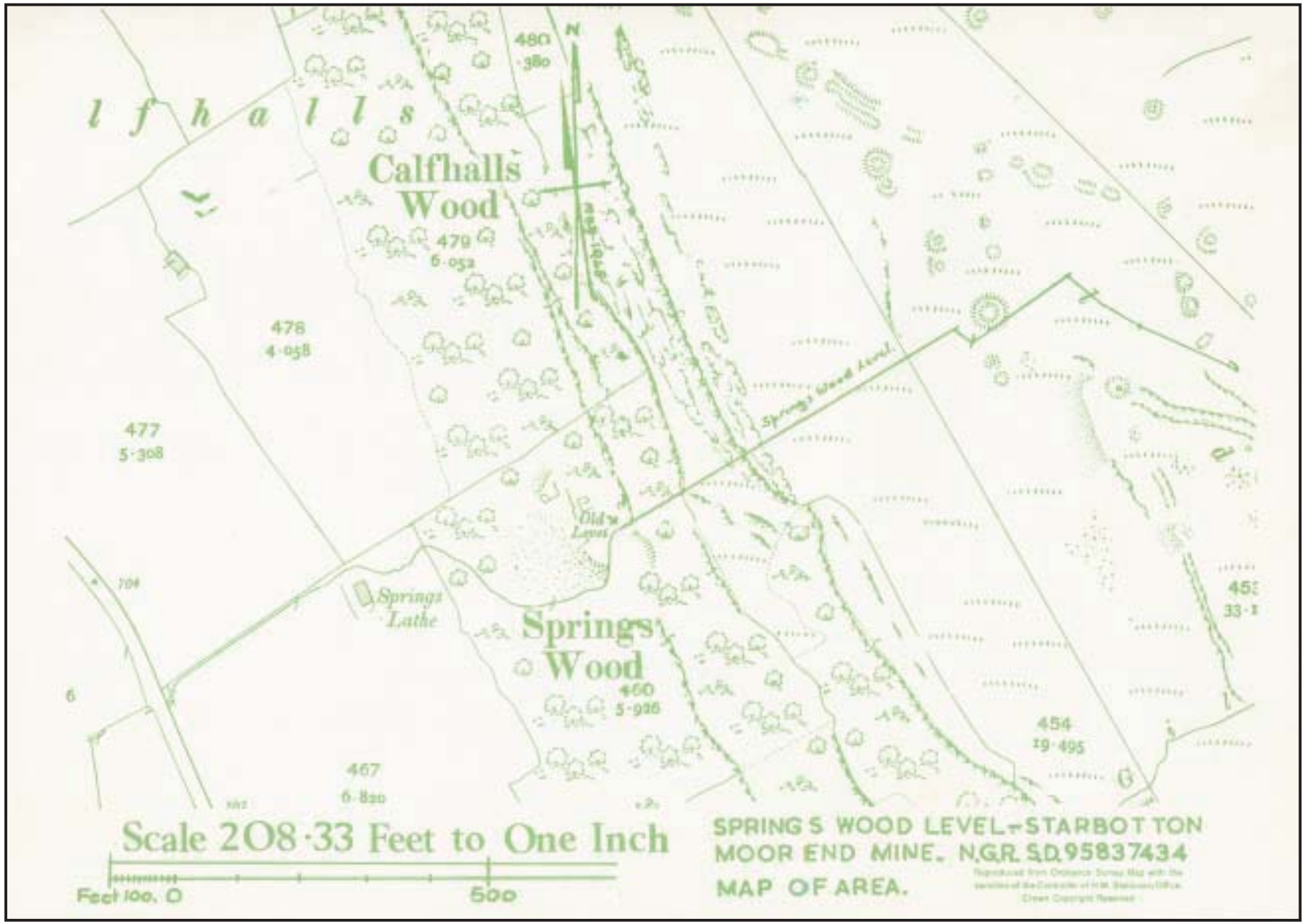
l f h a l l s
Calfhalls Wood
480
·380
N
479
6·052
478
4·058
477
5·308
Springs Wood Level
Old Levels
Springs Lathe
Springs Wood
460
5·926
467
6·820
454
19·495
Scale 208·33 Feet to One Inch
Feet 100. 0
500
SPRINGS WOOD LEVEL - STARBOTTON
MOOR END MINE. N.G.R. SD 95837434
MAP OF AREA.

GENERAL NOTES ON LEAD MINES ON THE EAST SIDE OF WHARFEDALE BETWEEN BUCKDEN AND KETTLEWELL.

The mines described in these notes, of which Springs Wood Level was one, Were all worked for the production of lead ore at some time and lie upon a system of veins and replacement deposits which traverse strata of Lower Carboniferous age. Although the workings are fairly widespread and superficially seem to be quite extensive, the veins of this area are not considered to form major ore deposits and it is believed that the mines, though worked over an extended period, were never very large producers.

The nature and situation of the veins here indicates that they may be classed as "fringe deposits" to the main parts of the orefield, which lies to the South and East, at Grassington and Greenhow Hill. Furthermore the geographical situation of the mines, lying as they do in rather inaccessible places, has militated against large-scale efforts at further development into virgin ground, especially in view of the somewhat feeble mineralisation in large stretches of the veins.

OUTLINE OF THE GEOLOGY OF THE DISTRICT

The strata involved in this area extends from the lower part of the Millstone Grit Series, through some of the Yoredale sediments of d^3 age, to the Lower Limestone Series, of d^2 age.

The Millstone Grit Series are here represented by beds of massive grit interbedded with shales and some thin cool seams. This Series is transgressive Southwards over the underlying Yoredale beds, so that the higher beds of the latter series are progressively cut out in going Southwards.

The Yoredale (d^3) beds here consist of alternations of limestone, sandstone and shales, and the ore deposits are generally confined to the limestones and to a lesser extent, the sandstones.

The Lower Limestone Series (d^2) consist of massive white or grey limestones mainly and these are well exposed along the lower slopes of the valley of the River Wharfe.

The veins which contain the mineral deposits are infilled openings along the lines of joints in the limestones, or along faults. The movement associated with these faults is generally small. The minerals in the veins seem to have been deposited, at least in part, by a process of metasonatism, replacement of the limestone being quite usual. This process has also resulted in the dolomitisation of the limestone along the walls of the veins, (the resulting dolomite being called "dun limestone" by the old miners,) and in places this process has also penetrated more or less horizontal jointing or bedding planes in the limestone, resulting in what are known locally as "flots", or in more general mining parlance, flat deposits. In fact much of the past production of lead ore, especially in the Buckden and Bishopdale Gavel mines, was derived from such deposits.

The vein system of the area shows that the main veins have a strike