

MINERALOGICAL NOTES. No. VI.*

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Wolframite.

New South Wales.

(Figs. 1-10.)

Two contributions have been made to the classification of the minerals of the wolframite series in New South Wales. Mr. George Smith (1936, p. 132) makes the general statement that "it then appears that wolframite which contains a larger percentage of manganese than iron has only been identified as occurring in one part of the State [apparently Yalgogrin—T.H.S.] and the tungsten mineral so plentifully distributed should be classified as ferberite". He points to the difficulty in deciding when a mineral should be classed as wolframite or as ferberite and states that "it is difficult to draw a line of division between what are really variations of the one mineral".

Mr. E. J. Kenny (1928, p. 178) states that: "The principal ores of tungsten worked in New South Wales are: Wolfram, tungstate of iron and manganese. . . . Other less important ores are: Ferberite, tungstate of iron; Hubnerite, tungstate of manganese. . . . The ore from Torrington may be classified as 'Ferberite'."

It is obvious from these two statements that there is no agreement as to the classification of the wolframite series in New South Wales.

E. S. Dana (1892, p. 933) states that in wolframite, Fe:Mn chiefly 4:1 and 2:3, but varying from 9:1 to 2:3.

F. L. Hess (Hess and Schaller, 1914, p. 37) defines ferberite as "a monoclinic iron tungstate having when pure the composition FeWO_4 . It may contain not more than twenty per cent. of the hubnerite molecule MnWO_4 ", and hubnerite as MnWO_4 containing not more than twenty per cent. of the ferberite molecule. While wolframite contains the hubnerite molecule in all proportions between twenty per cent. of FeWO_4 and eighty per cent. of MnWO_4 , and eighty per cent. of FeWO_4 and twenty per cent. of MnWO_4 .

A. K. Boldyrew and E. J. Liasky (1929, p. 242) divide the series into hubnerite containing up to five per cent. of FeWO_4 ; ferrohübnerite from five to twenty-five per cent. of FeWO_4 ; manganowolframite from twenty-five to forty per cent. of FeWO_4 ; wolframite from forty to sixty per cent. of FeWO_4 ; ferrowolframite from sixty to seventy-five per cent. of FeWO_4 ; manganoferberite from seventy-five to ninety-five per cent. of FeWO_4 ; and ferberite more than ninety-five per cent. of FeWO_4 .

* For No. V, see RECORDS OF THE AUSTRALIAN MUSEUM, xix, No. 3, 1934, p. 165.