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Departmental equipment for the production of polished sections of ore minerals has been found to be quite inadequate. Some sections have been prepared from which desired information was obtained, but generally it can be said that polished sections cannot be prepared in this Department. Repeated attempts by various hands have been unsuccessful. On two occasions commercial firms dealing with abrasives offered to polish mounted specimens, but were not able to do so. Other people, notably at the University of Tasmania and at B.H.P. Petrological Laboratory, Whyalla, have reported difficulties, in trying to polish ore minerals with equipment similar to ours.

Therefore if work on polished sections of ore materials is to be continued it will be necessary to obtain the better grinding and polishing machinery now available. The machine recommended is that produced by Durenner Maschinenfabrik und Eisengesserei, Duren, West Germany, together with special abrasives and all accessories to produce polished sections 26 mm. diameter. This machine is compact and would be easy to instal; it can be operated by an unskilled operator (so it is claimed); and it has given satisfactory service at the Department of Mining and Metallurgical Engineering of the University of Queensland.

If polished section work is to be continued a microscope suitable for this work is advisable. The C.T.S. microscope now used for all purposes, has to be extensively altered in changing from thin section to ore microscopy and this reduces the efficiency of the instrument increases wear, and occupies a great deal of time.

A low power binocular microscope is also badly needed for examining hand specimens. Such an instrument would also be of great use to other officers of the Department.



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