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PETROLOGICAL STUDIES

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UNIVERSITY OF ADELAID

Thesis

by Arthur Richard Alderman.

Preface.

The papers included in this thesis fall naturally into three groups.

Part I. Papers mainly on petrogenesis:

1. Sillimanite, kyanite and clay deposits near Williams-town, South Australia.
Trans. Roy. Soc. S. Aust., 66, (1), 1942.
2. Augen-gneisses in the Humbug Scrub area, South Australia.
ibid, 62, (1), 1938.
3. Eclogites from the neighbourhood of Glenelg, Inverness-shire.
Q.J.G.S., 92, (4), 1936.
4. Progressive metasomatism in the flint nodules of the Scawt Hill contact zone. (with C.E.Tilley)
Min. Mag. 23, (144), 1934.
5. Eclogites: a review.
Ig. rocks research committee, A.N.Z.A.A.S., 1940.
6. Almandine from Botallack, Cornwall.
Min. Mag. 24, (148), 1935.

Papers 3 and 6 formed the main parts of a thesis submitted for the Ph.D. degree at the University of Cambridge. Paper 4 was written by Professor C.E.Tilley, the chemical work being my own contribution to this paper. Paper 5 was written at the request of the Igneous Rocks Research Committee of the A.N.Z.A.A.S. and formed one of a series of reviews issued by that body.

Part II. Papers on meteorites and meteorite craters.

7. The meteorite craters at Henbury, Central Australia.
Min.Mag. 23, (136), 1932.
8. The meteorite craters at Henbury, Central Australia.
Smithson. Rep., 3196, 1932.
9. A siderolite from Pinnaroo, South Australia.
Trans. Roy. Soc. S. Aust., 64, (1), 1940.
10. The Henbury (Central Australia) meteoric iron.
Rec. S. Aust. Mus., 4, (4), 1932.
11. The Carraweena, Yandama and Cartoonkana meteoric stones.
ibid, 5 (4), 1936.

Paper 7 was the first description of this group of meteorite craters in Central Australia. It was reprinted (paper 8), with slight additions, at the request of the Smithsonian Institution in America.

Part III. Descriptive papers on South Australian mineralogy and petrology.

12. The vanadium content of certain titaniferous iron-ores of South Australia.
Trans. Roy. Soc. S. Aust., 49, 1925.
13. Petrographic notes on tonalite from the Palmer district and biotite-norite from South Black Hill.
ibid, 51, 1927.

14. Magmatic differentiation at Mannum, South Australia.
ibid, 53, 1929.
15. Petrographic notes on some basic rocks from the Mount
Barker and Woodside districts.
ibid, 55, 1931.

These earlier papers are submitted in support of the
main papers of the thesis

The papers included in this thesis may be regarded as
original. Where ideas are derived from other workers the
appropriate acknowledgements and references are given in
the text.

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