

THE UNIVERSITY OF ADELAIDE
DEPARTMENT OF ECONOMIC GEOLOGY

A petrological study of Kalgoorlie greenstones

A PETROLOGICAL STUDY OF KALGOORLIE
GREENSTONES

HONOURS THESIS, 1956

by P. S. Forwood.

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ABSTRACT

The petrological study was undertaken to utilise the drill core obtained from a deep diamond drilling programme to the south of Kalgoorlie. These rocks are structurally most closely related to the greenstones of the "Golden Mile" yet have not been subject to such an intensity of the ore-forming processes.

However, these rocks are also highly "altered", and are best described as greenstones. Igneous characters are hard to find and should not be taken as conclusive.

Certain results have been obtained, which, I think, should be sufficient to modify present ideas on the history of these rocks, and I hope to convey the meaning of these results in this report. The chief such result is that the study has led me to discount albitisation as a major process in the evolution of rock types.

While not professing to be an expert operator of the microscope, I also seriously doubt the efficiency of the microscope as a tool in ultimately solving the problem.

I recognise that considerations of chemical changes are essential to the understanding of the problem; my own knowledge of chemistry is of an elementary character entirely unappropriate to the problem, and I have left this approach out of my report.

ABBREVIATIONS

Certain abbreviations convey more meaning than the name in full to those associated with Kalgoorlie. These are

Q.D.	quartz dolerite
Q.D.G.	quartz dolerite greenstone
C.S.	calc. schist
B.F.	black flag (sediments)
B.I.F.	banded iron formation.