

A STUDY OF THE "GREENSTONE" BASEMENT AT MOUNT ISA MINES,
QUEENSLAND.

by

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TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT	
1. INTRODUCTION	1
2. GEOLOGICAL SETTING	2
3. PREVIOUS WORK	4
4. THE "SILICA-DOLOMITE"	9
5. THE EASTERN CREEK VOLCANICS	12
6. THE "GREENSTONES"	14
7. SUMMARY AND CONCLUSIONS	22
ACKNOWLEDGEMENTS	24
TABLES	
APPENDICES	
FIGURES	End of thesis (Fig. 2 and 3 in back pocket).

ABSTRACT

The "greenstone" basement at Mount Isa Mines consists of basic volcanics, with minor interbedded sediments, and it appears to be a block of Eastern Creek Volcanics which has undergone intense alteration. Four basic rock types have been recognized - Altered Volcanics, Sediments, High Carbonate Rocks and Sheared "Greenstone", each with a fairly distinctive petrography and chemistry. It is considered that the Altered Volcanics, like the basalts of the Eastern Creek Volcanics, are tholeiitic in origin.

The alteration present is predominantly chloritization, accompanying the introduction of silica (+ carbonate) into the "greenstone". This alteration and introduction of silica (+ carbonate) is thought to represent the passage of mineralizing fluids through the "greenstone", during which copper was removed from the "greenstone". This copper-rich fluid then passed into the more permeable "silica-dolomite", where the copper, silica and carbonate were deposited in bulk, forming the rich and unique copper ores of Mount Isa.