GEOLOGICAL SOCIETY SPECIAL PUBLICATION NO. 43

Evolution of Metamorphic Belts

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1989

Published for
The Geological Society by
Blackwell Scientific Publications
OXFORD LONDON EDINBURGH
BOSTON MELBOURNE

Geological Society Special Publications

Series Editor: K. COE

Published for
The Geological Society by
Blackwell Scientific Publications
Osney Mead, Oxford OX2 0EL
(*Orders:* Tel. 0865 240201)
8 John Street, London WC1 2ES
23 Ainslie Place, Edinburgh EH3 6AJ
3 Cambridge Center, Suite 208, Cambridge,
Massachusetts 02142, USA
107 Barry Street, Carlton, Victoria 3053,
Australia

First published 1989

Typeset by Setrite Typesetters, Hong Kong
Printed and bound at the University Press, Cambridge

DISTRIBUTORS

USA
Publishers' Business Services
288 Airport Industrial Drive
Ypsilanti
Michigan 48197
(*Orders:* Tel: (313) 487 9720)

Canada
Oxford University Press
70 Wynford Drive
Don Mills
Ontario M3C 1J9
(*Orders:* Tel. (416) 441–2941)

Australia
Blackwell Scientific Publications
(Australia) Pty Ltd.
107 Barry Street, Carlton,
Victoria 3053
(*Orders:* Tel. (03) 347 0300)

British Library
Cataloguing in Publication Data

Evolution of metamorphic belts.
1. Metamorphic rocks. Petrology.
I. Daly, J. S. II. Cliff, R. A.
III. Yardley, B. W. D. (Bruce W. D.)
IV. Geological Society of London
552.'4

ISBN 0–632–02503–4

Library of Congress
Cataloguing-in-Publication Data

Evolution of metamorphic belts/edited by J. S. Daly, R. A. Cliff, and B. W. D. Yardley.
p. cm. — (Geological Society special publication; no. 43)
Contains papers presented at a joint meeting of the Metamorphic Studies Group and IGCP Project 235 (Metamorphism and Geodynamics) held at University College Dublin in September 1987.
Bibliography: p.
Includes index.
1. Metamorphism (Geology) — Congresses.
2. Rocks, Metamorphic-Congresses. I. Daly, J. S. II. Cliff, R. A. III. Yardley, B. W. D.
IV. Metamorphic Studies Group. V. IGCP Project No. 235 on 'Metamorphism and Geodynamics.' VI. Series.
QE475.A2E945 1988 552'.4 — dc 1988–7462

ISBN 0–632–02503–4

Contents

Abbreviations (after Kretz 1983)

Minerals

Acm	acmite
Act	actinolite
Agt	aegirine-augite
Ak	åkermanite
Ab	albite
Aln	allanite
Alm	almandine
Anl	analcite
Ant	anatase
And	andalusite
Adr	andradite
Anh	anhydrite
Ank	ankerite
Ann	annite
An	anorthite
Atg	antigorite
Ath	anthophyllite
Ap	apatite
Apo	apophyllite
Arg	aragonite
Arf	arfvedsonite
Apy	arsenopyrite
Aug	augite
Ax	axinite
Brt	barite
Brl	beryl
Bt	biotite
Bhm	boehmite
Bn	bornite
Brk	brookite
Brc	brucite
Bst	bustamite
Cam	Ca clinoamphibole
Cpx	Ca clinopyroxene
Cal	calcite
Ccn	cancrinite
Crn	carnegieite
Cst	cassiterite
Cls	celestite
Cbz	chabazite
Cc	chalcocite
Ccp	chalcopyrite
Chl	chlorite
Cld	chloritoid
Chn	chondrodite
Chr	chromite
Ccl	chrysocolla
Ctl	chrysotile
Cen	clinoenstatite
Cfs	clinoferrosilite
Chu	clinohumite
Czo	clinozoisite
Crd	cordierite
Crn	corundum
Cv	covellite
Crs	cristoballite
Cum	cummingtonite
Dsp	diaspore
Dg	diginite
Di	diopside
Dol	dolomite
Drv	dravite
Eck	eckermannite
Ed	edenite
Elb	elbaite
En	enstatite (ortho)
Ep	epidote
Fst	fassite
Fa	fayalite
Fac	ferroactinolite
Fed	ferroedenite
Fs	ferrosilite (ortho)
Fts	ferrotschermakite
Fl	fluorite
Fo	forsterite
Gn	galena
Grt	garnet
Ged	gedrite
Gh	gehlenite
Gbs	gibbsite
Glt	glauconite
Gln	glaucophane
Gt	goethite
Gr	graphite
Grs	grossularite
Gru	grunerite
Gp	gypsum
Hl	halite
Hs	hastingsite
Hyn	haüyne
Hd	hedenbergite
Hem	haematite
Hc	hercynite
Hul	heulandite
Hbl	hornblende
Hu	humite
Ill	illite
Ilm	ilmenite
Jd	jadeite
Jh	johannsenite
Krs	kaersutite
Kls	kalsilite
Kln	kaolinite
Ktp	kataphorite
Kfs	K-feldspar
Krn	kornerupine
Ky	kyanite
Lmt	laumontite
Lws	lawsonite
Lpd	lepidolite
Lct	leucite
Lm	limonite
Lz	lizardite
Lo	loellingite
Mgh	maghemite
Mkt	magnesiokatophorite
Mrb	magnesioriebeckite
Mgs	magnesite
Mag	magnetite
Mrg	margarite
Mel	melilite
Mc	microcline
Mo	molybdenite
Mnz	monazite
Mtc	monticellite
Mnt	montmorillonite
Mul	mullite
Ms	muscovite
Ntr	natrolite
Ne	nepheline
Nrb	norbergite
Nsn	nosean
Ol	olivine
Omp	omphacite
Oam	orthoamphibole
Or	orthoclase
Opx	orthopyroxene
Pg	paragonite
Prg	pargasite
Pct	pectolite
Pn	pentlandite
Per	periclase
Prv	perovskite
Phl	phlogopite
Pgt	pigeonite
Pl	plagioclase
Prh	prehnite
Pen	protoenstatite
Pmp	pumpellyite
Py	pyrite
Prp	pyrope
Prl	pyrophyllite
Po	pyrrhotite
Qtz	quartz
Rbk	riebeckite
Rds	rhodochrosite
Rdn	rhodonite
Rt	rutile
Sa	sanidine
Spr	sapphirine
Scp	scapolite
Srl	schorl
Srp	serpentine
Sd	siderite
Sil	sillimanite
Sdl	sodalite
Sps	spessartine
Sp	sphalerite
Spn	sphene
Spl	spinel
Spd	spodumene
St	staurolite
Stb	stilbite
Stp	stilpnomelane
Str	strontianite
Tlc	talc
Tmp	thompsonite

Ttn	titanite	Tro	troilite	Wth	witherite
Toz	topaz	Ts	tschermakite	Wo	wollastonite
Tur	tourmaline	Usp	ulvöspinel	Wus	wüstite
Tr	tremolite	Vrm	vermiculite	Zrn	zircon
Trd	tridymite	Ves	vesuvianite	Zo	zoisite

Components

fo	Mg_2SiO_4	sps	$Mn_3Al_2Si_3O_{12}$	phl	$K_2Mg_6Al_2Si_6O_{20}(OH)_4$
fa	Fe_2SiO_4	en	$Mg_2Si_2O_6$	eas	$K_2Mg_5AlAl_3Si_5O_{20}(OH)_4$
alm	$Fe_3Al_2Si_3O_{12}$	di	$CaMgSi_2O_6$	ab	$NaAlSi_3O_8$
prp	$Mg_3Al_2Si_3O_{12}$	tr	$Ca_2Mg_5Si_8O_{22}(OH)_2$	an	$CaAl_2Si_2O_8$

Symbol conventions for $P-T$ diagrams

It was the editors' belief that the value of the papers presented here would be enhanced if there was a common style for the $P-T$ diagrams. To this end authors were asked to show proposed $P-T-t$ paths for the metamorphic evolution of the rocks they described on a $P-T$ diagram with the following additional information.

1 An indication of *specific $P-T$ points* determined along the path for particular metamorphic events/stages. Authors were asked, where possible, to use a box or ellipse that reflected the errors in their estimates, although in practice few felt able to do this.

2 The relative timing of *deformation events* along the $P-T$ path, if known, indicated by a *diamond symbol* on the path, and enclosing a number corresponding to the number of the deformation event in the local structural sequence.

3 Where available, the *absolute age* of specific stages on the $P-T$ path, shown by a *circle symbol* with a letter to cross-reference with the figure caption; the age in Ma to appear beside the circle.

4 *Equilibrium curves* for phase relations among the *Al-silicate minerals*, after Salje (1986) and taking his curve b to represent andalusite–sillimanite equilibrium, *and/or* the equilibrium curve for co-existence of *jadeite*, *albite* and *quartz* after Holland (1980). These curves are shown to facilitate comparisons between different papers.

References

HOLLAND, T. J. B. 1980. The reaction albite = jadeite + quartz determined experimentally in the range 600–1200°C. *American Mineralogist*, **65**, 129–34.

SALJE, E. 1986. Heat capacities and entropies of andalusite and sillimanite: the influence of fibrolitization on the phase diagram of the Al_2SiO_5 polymorphs. *American Mineralogist*, **71**, 1366–71.