ERRATA Andre Birkeland

Figures and tables caption numbering in the text:

- (Fig. 1.2) page 2. This figure did not make it to the thesis in time.
- (Fig. 1.3) page 3. This figure did not make it to the thesis in time.
- (see figure X) page 6. This should be (Figure 1.2) from page 9.
- (see figure) (mentioned three times) page 7. This should be (Figure 1.2) from page 9.
- (Figure 4.17) page 36. This should be (Figure 4.16) from page 36.
- (Figure 4.27) page 70. This should be (Figure 4.28) from page 52.
- (Figure 4.28) page 70. This should be (Figure 4.29) from page 53.
- (Fig. X2) page 72. This should be (Figure 5.2) from page 73.
- (Figure 4.29) page 74. This should be (Figure 4.32) from page 59.
- Figure 6.1 in Appendix I page 78. This should be Figure 1.
- Table 6.1 in Appendix II page 79. This should be Table 2.
- Table 6.2 in Appendix II page 79. This should be Table 3.

Citation in the text:

- (Gee et al., 2007) page 3. This should be (Gee et al. 2008)

Missing references:

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Appendix III

Detection limits for lithogeochemestry

Major elements

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit	0,01	0,01	0,01	0,001	0,01	0,01	0,01	0,01	0,001	0,01		0,01

Trace elements

Analyte Symbol	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr	Zr	Nb	Mo
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	5	20	1	20	10	30	1	0,5	5	1	2	1	0,2	2

Analyte Symbol	Ag	In	Sn	Sb	Cs	Ba	Hf	Ta	W	Tl	Pb	Bi	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0,5	0,1	1	0,2	0,1	2	0,1	0,01	0,5	0,05	5	0,1	0,05	0,01

REE

Analyte Symbol	Sc	Y	La	Ce	Pr	Nd	Sm	Eu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	0,5	0,05	0,05	0,01	0,05	0,01	0,005

Analyte Symbol	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0,01	0,01	0,01	0,01	0,01	0,005	0,01	0,002

Appendix IIII

WHITNEY AND EVANS: MINERAL ABBREVIATIONS

Symbol	Mineral Name	IMA status*
Acm	acmite	D
Act	actinolite	A
Adl	adularia	I
Aeg	aegirine	A
Ak	åkermanite	G
Ab	albite	G
Afs	alkali feldspar	GROUP
Aln	allanite	A
Alm	almandine	G
Als	aluminosilicate (Al_2SiO_5 polymorphs)	GROUP
Alu	alunite	Rd
Amk	amakinite	Rd
Ame	amesite	G
Amp	amphibole	GROUP
Anl	analcime (analcite)	A
Ant	anatase	A
And	andalusite	G
Adr	andradite	G
Ang	anglesite	G
Anh	anhydrite	G
Ank	ankerite	G
Ann	annite	A
An	anorthite	G
Ano	anorthoclase	I
Ath	anthophyllite	Rd
Atg	antigorite	Rn
Ap	apatite	GROUP
Apo	apophyllite	GROUP
Arg	aragonite	G
Arf	arfvedsonite	A
Arm	armalcolite	Rd
Apy	arsenopyrite	A
Aug	augite	A
Awr	awaruite	G
Ax	axinite	GROUP
Bab	babingtonite	G
Bdy	baddeleyite	G
Brt	barite (baryte)	A
Brs	barroisite	Rd
Bei	beidellite	G
Brl	beryl	G
Bt	biotite	GROUP
Bxb	bixbyite	G
Bhm	böhmite (boehmite)	G
Bn	bornite	A
Brk	brookite	G
Brc	brucite	G
Bst	bustamite	G
Cal	calcite	G
Ccn	cancrinite	G
Cnl	cannilloite	H
Cb	carbonate mineral	GROUP
Car	carpholite	G
Cst	cassiterite	G
Cel	celadonite	A
Clt	celestine	A
Cls	celsian	G
Cer	cerussite	G
Cbz	chabazite	A
Cct	chalcocite	G
Ccp	chalcopyrite	G
Chm	chamosite	G
Chs	chesterite	A
Chl	chlorite	GROUP
Cld	chloritoid	G
Chn	chondrodite	G
Chr	chromite	G
Ccl	chrysocolla	A
Ctl	chrysotile	Rd
Cin	cinnabar	G
Cam	clinoamphibole	GROUP
Clc	clinochlore	G
Cen	clinoenstatite	A
Cfs	clinoferrosilite	A
Chu	clinohumite	G
Cpt	clinoptilolite	A
Cpx	clinopyroxene	GROUP
Czo	clinozoisite	G
Cln	clintonite	A
Coe	coesite	A
Coh	cohenite	G
Crd	cordierite	G
Crr	corrensite	G
Crn	corundum	G
Cv	covellite	G
Crs	cristobalite	G
Crt	crossite	D
Crl	cryolite	G
Cbn	cubanite	G
Cum	cummingtonite	Rd
Cpr	cuprite	G
Csp	cuspidine	G
Dph	daphnite	not listed
Dat	datolite	G
Dbr	daubreelite	G
Dee	deerite	A
Dia	diamond	G
Dsp	diaspore	G
Dck	dickite	G
Dg	digenite	A
Di	diopside	A
Dpt	dioptase	G
Dol	dolomite	G
Drv	dravite	G
Dum	dumortierite	G
Eas	eastonite	Rd
Ec	ecandrewsite	A
Eck	eckermannite	A
Ed	edenite	A
Elb	elbaite	G
Ell	ellenbergerite	A
Eng	enargite	G
En	enstatite (ortho-)	A
Ep	epidote	GROUP
Eri	erionite	A
Esk	eskolaite	G
Ess	esseneite	A
Eud	eudialite	A
Fas	fassaite	D
Fa	fayalite	G
Fsp	feldspar	GROUP
Fac	ferro-actinolite	Rd
Fath	ferro-anthophyllite	Rd
Fbrs	ferrobarroisite	A
Fcar	ferrocarpholite	A
Fcel	ferroceladonite	A
Fec	ferro-eckermannite	Rd
Fed	ferro-edenite	Rd
Fgd	ferrogedrite	Rd
Fgl	ferroglaucophane	Rd
Fkrs	ferrokaersutite	A
Fny	ferronyboite	H
Fprg	ferropargasite	Rd
Frct	ferrorichterite	A
Fs	ferrosilite	Rn
Fts	ferrotschermakite	Rd
Fwn	ferrowinchite	Rd
Fi	fibrolite (fibrous sillimanite)	informal
Fl	fluorite	G
Fo	forsterite	G
Fos	foshagite	G
Frk	franklinite	G
Ful	fullerite	N
Ghn	gahnite	G
Glx	galaxite	G
Gn	galena	G
Grt	garnet	GROUP
Ged	gedrite	Rd
Gh	gehlenite	G
Gk	geikielite	G
Gbs	gibbsite	A
Gis	gismondine	A
Glt	glauconite	GROUP
Gln	glaucophane	Rd
Gme	gmelinite	A
Gth	goethite	A
Gdd	grandidierite	G
Gr	graphite	G
Gre	greenalite	G
Grs	grossular	A
Gru	grunerite	Rd
Gp	gypsum	G
Hl	halite	G
Hrm	harmotome	A
Hst	hastingsite	Rd
Hsm	hausmannite	G
Hyn	haüyne	G
Hzl	heazlewoodite	G
Hd	hedenbergite	A
Hem	hematite	A
Hc	hercynite	G
Hul	heulandite	A
Hbn	hibonite	G
Hbs	hibschite	Rn
Hgb	högbomite	D
Hol	hollandite	G
Hlm	holmquistite	Rd
Hbl	hornblende	GROUP
Hw	howieite	A
Hu	humite	G
Hgr	hydrogrossular	GROUP
Hyp	hypersthene	D
Ilt	illite	GROUP
Ilm	ilmenite	G
Ilv	ilvaite	G
Jd	jadeite	A
Jrs	jarosite	Rd
Jim	jimthompsonite	A
Jhn	johannsenite	A
Krs	kaersutite	Rd
Kls	kalsilite	G
Kam	kamacite (α-FeNi)	D
Kln	kaolinite	A
Ktp	katophorite	Rd
Kfs	K-feldspar	informal
Khl	K-hollandite	H
Kir	kirschsteinite	G
Krn	kornerupine	G
Kos	kosmochlor	A
Kut	kutnohorite (kutnahorite)	G
Ky	kyanite	A
Lrn	larnite	G
Lmt	laumontite	A
Lws	lawsonite	G
Lzl	lazulite	A
Lzr	lazurite	G
Lpd	lepidolite	GROUP
Lct	leucite	G
Lm	limonite	not listed
Liq	liquid	
Lz	lizardite	G
Lo	löllingite (loellingite)	G
Mgh	maghemite	G
Marf	magnesio-arfvedsonite	Rd
Mcar	magnesiocarpholite	A
Mfr	magnesioferrite	G
Mhs	magnesiohastingsite	Rd
Mhb	magnesiohornblende	Rd
Mkt	magnesiokatophorite	Rd

Mineral abbreviations are from Whitey & Evans (2010)

WHITNEY AND EVANS: MINERAL ABBREVIATIONS

Symbol	Mineral Name	IMA status*
Mrbk	magnesioriebeckite	Rd
Msdg	magnesiosadanagite	Rd
Mst	magnesiostaurolite	A
Mtm	magnesiotaramite	Rn
Mws	magnesiowustite	not listed
Mgs	magnesite	A
Mag	magnetite	G
Maj	majorite	A
Mlc	malachite	G
Mng	manganosite	G
Mrc	marcasite	G
Mrg	margarite	A
Mar	marialite	G
Mei	meionite	G
Mll	melilite	GROUP
Mw	merwinite	G
Mes	mesolite	A
Mc	microcline	G
Mlr	millerite	G
Mns	minnesotaite	G
Mog	moganite	A
Mol	molybdenite	G
Mnz	monazite	A
Mtc	monticellite	G
Mnt	montmorillonite	G
Mor	mordenite	A
Mul	mullite	G
Ms	muscovite	A
Ntr	natrolite	A
Nph	nepheline	G
Nrb	norbergite	G
Nsn	nosean	G
Nyb	nyböite	Rd
Ol	olivine	GROUP
Omp	omphacite	A
Opl	opal	G
Opq	opaque mineral	informal
Orp	orpiment	G
Oam	orthoamphibole	GROUP
Or	orthoclase	A
Oen	orthoenstatite	D
Opx	orthopyroxene	GROUP
Osm	osumilite	G
Plg	palygorskite	G
Pg	paragonite	A
Prg	pargasite	Rd
Pct	pectolite	G
Pn	pentlandite	G
Per	periclase	G
Prv	perovskite	G
Ptl	petalite	G
PhA	phase A	not listed
Ph	phengite	G
Php	phillipsite	A
Phl	phlogopite	A
Pmt	piemontite	A

Symbol	Mineral Name	IMA status*
Pgt	pigeonite	A
Pl	plagioclase	GROUP
Prh	prehnite	G
Prm	prismatine	Rd
Psb	pseudobrookite	Rd
Pmp	pumpellyite-(Al)	A
Py	pyrite	G
Pcl	pyrochlore	A
Prp	pyrope	G
Pph	pyrophanite	G
Prl	pyrophyllite	G
Pxf	pyroxferroite	A
Pxm	pyroxmangite	G
Po	pyrrhotite	G
Qnd	qandilite	A
Qz	quartz	A
Rnk	rankinite	G
Rlg	realgar	G
Rds	rhodochrosite	A
Rdn	rhodonite	A
Rct	richterite	A
Rbk	riebeckite	Rd
Rwd	ringwoodite	A
Rdr	roedderite	A
Rsm	rossmanite	A
Rt	rutile	G
Sdg	sadanagaite	Rd
Sa	sanidine	G
Sap	saponite	G
Spr	sapphirine	G
Scp	scapolite	GROUP
Sch	scheelite	G
Srl	schorl	G
Scb	schreibersite	G
Sep	sepiolite	G
Ser	sericite	D
Srp	serpentine	GROUP
Sd	siderite	G
Sil	sillimanite	G
Sme	smectite	GROUP
Sdl	sodalite	G
Sps	spessartine	A
Sp	sphalerite	A
Spn	sphene (titanite)	D
Spl	spinel	G
Spd	spodumene	A
Spu	spurrite	G
St	staurolite	G
Stv	stevensite	Q
Stb	stilbite	A
Stp	stilpnomelane	A
Sti	stishovite	A
Str	strontianite	G
Sud	sudoite	Rd
Syl	sylvite	G

Symbol	Mineral Name	IMA status*
Tae	taenite (γ-Fe, Ni)	G
Tlc	talc	G
Trm	taramite	Rd
Tnt	tennantite	G
Tnr	tenorite	A
Tep	tephroite	G
Ttr	tetrahedrite	A
Thm	thomsonite	A
Thr	thorite	G
Tly	tilleyite	G
Ttn	titanite (sphene)	A
Tpz	topaz	G
Tur	tourmaline	GROUP
Tr	tremolite	Rd
Trd	tridymite	G
Tro	troilite	G
Ts	tschermakite	Rd
Usp	ulvöspinel	G
Urn	uraninite	G
Uv	uvarovite	A
Vtr	vaterite	A
Vrm	vermiculite	G
Ves	vesuvianite	A
Wds	wadsleyite	A
Wag	wagnerite	Rd
Wrk	wairakite	A
Wav	wavellite	A
Wht	whitlockite	G
Wlm	willemenite	G
Wnc	winchite	Rd
Wth	witherite	G
Wo	wollastonite	A
Wur	wurtzite	G
Wus	wüstite	G
Xtm	xenotime	A
Xon	xonotlite	G
Yug	yugawaralite	A
Zeo	zeolite	GROUP
Znw	zinnwaldite	GROUP
Zrn	zircon	G
Zo	zoisite	G

* International Mineralogical Association (IMA) abbreviations: A = Approved; D = Discredited; G = Grandfathered (generally regarded as valid mineral name); GROUP = Name designates a group of mineral species; H = hypothetical (e.g., synthetic); I = intermediate in a solid-solution series; Q = questionable; Rd = Redefinition approved by IMA Commission on New Minerals, Nomenclature and Classification (CNMNC); Rn = Renamed with approval of the CNMNC.

Mineral abbreviations are from Whitey & Evans (2010)