

MINERAL NAMES			
Ac actinolite	cv covellite	mk malachite	sm smectite, montmorillonite
Ad adularia	cr cuprite	mn manganese oxides (general)	ss smithsonite
Aa agate		mr marcasite	sp sphalerite
Ab albite	di diopside	mi mica (general)	sf sphene
Aw allanite	do dolomite	mc microline	st staurolite
Af allophane	dr dravite	ml mineral (general)	sb stibnite
Ai almandine		mo molybdenite	sx sulphates (general)
Ai alunite	en enargite	mz monazite	su sulphides (general)
Am amphibole (general)	ep epidote	mu muscovite	
Ax anatase	er erythrite		tc talc
An andalusite		ne neotocite	tt tetrahedrite
Ae andradite	fx feldspar (general)	nf nepheline	tn tennantite
Ag anglesite	fe ferric iron oxides, (goethite, hematite, limonite)	nt nontronite	tz topaz
ah anhydrite	fm ferromagnesian mineral (general)	ol olivine	tm tourmaline
ak ankerite	fl fluorite	op opaline silica	tr tremolite
ay anthophyllite	fu fuchsite	oc orthoclase	tb torbanite
at antigorite		ox orthopyroxene	ur uraninite
ap apatite	gh gahnite		ux uranium minerals (general)
ar aragonite	ga galena	pn pentlandite	
as arsenopyrite	gn garnet	pp phlogopite	vc vein carbonate
ao asbestos	gi garnierite	ph phosphate (general)	vq vein quartz
au auridium, gold	gl glauconite	pi pitchblende	vs vesuvianite
az azurite	go goethite	pl plagioclase	vl violarite
ba barite	gp graphite	pt platinum	
bi biotite	gs grossularite	pr prehnite	wl willemite
bs bismuthnite	gt grunerite	ps psilomelane	wo wollastonite
bn bornite	gy gypsum	py pyrite	wf wolframite
ca calcite	hm heavy minerals (general)	pz pyrolusite	
cn carbon (as in carbonaceous)	hd hedenbergite	pm pyromorphite	ze zeolite
cb carbonate (general, see also "vein carbonate")	he hematite	pf pyrophyllite	zo zoisite
ci carnotite	hb hornblende	px pyroxene	
ct cassiterite		po pyrrhotite	
cg cerargyrite	im ilmenite		
ce cerussite	ja jarosite	qz quartz (see also "silica" and vein quartz)	
cj chabazite		qc quartz-carbonate mixture	
ck chalcedony	ka kaolin	rc rhodochrosite	
cc chalcocite	kf K-feldspar	rd rhodonite	
cp chalcopyrite	ky kyanite	rb riebeckite	
cs cherty silica		ru rutile	
cl chlorite	lx leucoxene		
cd chloritoid	le lepidolite	sa sanidine	
cm chromite	li limonite	sc scapolite	
chrysocolla	lc limonite after carbonate	sh scheelite	
cq chrysoprase	lp limonite after pyrite	so scorodite	
cy clay (general)	ls limonite after sulphide	sr sericite	
cz zinozoisite	lz lizardite	se serpentine	
cx clinopyroxene (general)		sd siderite	
cf coffnate	mg magnesite	si silliminite	
cu copper, native	mh maghemite	si silica (general as in silification: see qz, cs, op)	
co cordierite	mt magnetite		

QUALIFIERS			
Composition			
acd acid	shy shaley	ear earthy	sfx spinifex textured
alk alkaline general	sly silty	eqg equigranular	skl skeletal
amb amphibolitic	sty slatey	euh euhedral	sph spherulitic, spherules
and andesitic	sny sandy	fgm fragmental or as fragments	stg sorting good
			THX_Logging_Codes

apl aplitic	spl spilitic	fb fibrous	stm sorting moderate
arg argillaceous	srp serpentinitic	fis fissile	stp sorting poor
ark arkosic	syt syenitic	fib flow banded	stl stylotitic
arn arenaceous	thl tholeiitic	flg flaggy	sug sugary
ash ash bearing	ton tonalitic	flt flattened	thk thick, large
bas basic	ubc ultrabasic	fri friable, loose	thn thin, small
bic bioclastic	umf ultramafic	fst felsitic	trc trachytic
bst basaltic	vcl volcanolithic	glp glomeroporphyritic	trn transitional
cgt conglomeratic	vit vitnc	gls glassy	ufx uniform textured
cln clean (washed)		gns gneissic	var variolitic
cly clayey	Texture	grb granoblastic	ves vesicular or in vesicles
cmt cemented, cement	acc acicular	het heterogeneous	vgd variegated
cty cherty	adc adcumulate textured	hfl hornfelsic	vrm vermiciform
dct dacitic	agg agglomeratic	hom homogeneous	vug vuggy
drd dioritic	alt alternating	hrd hard, hardened	wld welded
dir doleritic	amd amygdaloidal or as amygdules	imb imbricated	xen xenolith or xenolithic
dlm dolomitic	ams amorphous	ing intergranular	xtl crystalline
dty dirty	ang angular	inq inequigranular	
dun dunitic	anh anhedral	irr irregular (but not bedding, see "bdr")	
fel felsic	aph aphanitic	ist interstitial	
fer ferruginous	apy aphyric	knt knotted	
fsp feldspathic	bdb bedded, banded	lap lapilli textured, lapilli	
fst felsitic	bdc bedded, convoluted	len lenticular or as lentiles	
gab gabbroic	bdg bedded, graded	mas massive ("but not bedding, see "bds")	
gph graphitic	bdi interbedded	mct mesocumulate textured	
grd granodioritic	bdk bedded, thick	mig migmatitic	
grn granitic	ndl bedded, laminar	mlk milky	
grp granophytic	bdm bedded, medium	mtx matrix (in or of)	
hmg high magnesium (basalt)	bdn bedded, thin	mxs matrix supported	
int intermediate	bdr bedded, irregular	nod nodular or as nodules	
kom komatiitic	bds bedded, massive	ocl ocellar, ocelli	
lab labile	bdt bedded, turbiditic	oct orthocumulate textured	
leu leucocratic	bdu bedded/bedding general	pil pillowded	
lim limey as in limestone	bdv bedded, varved	plt peletoidal	
lth lithic	bdw bedded, wavy	por porphyritic or as phenocrysts	
maf mafic	bdx bedded, cross	ppb porphyroblastic or as porphyroblasts	
mag magnetic	blk blebs	prd predominant or main	
mel melanocratic	blk blocky	prs porous	
mgw magnetic but weakly, lomag	bot botryoidal or as botryoids	ptc perithic	
mmc monomictic	brn branchings, anastomosing	rad radiating	
mnz monzonitic	cch conchoidal	rdd rounded	
mud muddy	cls clastic or as clasts	rel relict	
olg oligomictic	cnv convoluted (but not bedding - see "bdc")	rex recrystallised	
ooll oolitic, oolites, ooliths	con concretionary, concretions	rip rippled, ripples	
peg pegmatic	cry cryptocrystalline	rod rodded, columnar	
pel pelitic	csp clast supported	sba subangular	
plm polymictic	ctg coatings	sbh subhedral	
pot potassic	dis disseminated/disseminations	sbo subordinate	
rhy rhyolitic	dir doleritic	sbr subrounded	
ryd ryodacitic			

QUALIFIERS			
Regolith	Structure	Veining	Genetic
ars arenose (weathering profile term)	aug augen textured or as augen	vcb carbonate veined	aeo aeolian
blc bleached	bou boudinaged	vlc vein on lithologic contact	agg agglomeratic
bxw boxworked (as in limonite-after-sulphide)	bxx brecciated	vlt veinlet	all allochthonous
cap cap or capping	cbx crackle brecciated	vmr massive vein, reef	alv alluvial
ccr calcreted	clv cleaved, cleavage	vqc quartz carbonate veined	aqu aqueous
fcr ferricreted	crn crenulated	vqz quartz veined	aug authigenic
frs fresh	cta cataclastic	vsk stockworked or as stockworks	aut autochthonous
gly gley	cnt geological contact	vst stringers	clp collapse (as in collapse breccia)
gos gossanous	ctt contorted	vsv vein subvertical	col colluvial
	fau faulted, fault		dep depositional
	fld folded, folds		dig diagenetic
		Grain Size ("mm" classes only)	THX_Logging_Codes

hpN hardpanized, hardpanned	fol foliated, foliation	for sediments)	dyk occurring as a dyke
ind indurated	frc fracture, in fractures	elv eluvial	
lat lateritic	iso isoclinal	epc epiclastic	
lch leached	jnt jointed, jointing	epg epigenetic	
lir lithorelics	lin lineated or forming lineation	ept epithermal	
lom loamy	mas massive	ext extrusive	
lsg liesegang	myl mylonitic	flt float	
mot mottled or as mottles	phy phyllitic	flv fluvial	
oxd oxidised	ptg pygmatic	flw occurring as a flow	
pal pallid	sch schistose, schistosity	glc glacigenic	
ped pedogenic	scl schlieren textured, schlieren	igb ignimbritic	
pis pisolithic, pisolites, pisoliths	shd sheared	inf intraformational	
plm plasmic	sls slickensided	ins in situ	
res residual	tec tectonic	itv intrusive	
sap saprolitic	unf unfoliated	mmc metamorphic, metamorphosed	
sfl surficial		mmg greenschist facies	
sit silcreted		mma amphibolite facies	
spg supergene		mmn granulite facies	
whl weathered, highly		mml low grade metamorphism	
wmd weathered, moderately		mmm medium grade metamorphism	
wsl weathered, slightly		mmh high grade metamorphism	
wtd weathered, weathering		ocp outcrop	
Alteration		pmy primary	
aaa advanced argillic		pyc pyroclastic	
aag argillic alteration		rew reworked	
aau alteration unspecific		sec secondary	
abi biotite alteration		sed sedimentary	
acb carbonate alteration		sil occuring as a sill	
aci chlorite alteration		stm stromatolitic	
acy clay alteration		syg syngenetic	
asi silica alteration		trn transported	
asr sericite alteration		tuf tuffaceous	
atm tourmaline alteration		tur turbiditic	
abl bleached, bleaching		vlc volcaniclastic	
agz greisenized		vol volcanic	
ahd hydrothermal			
ahp hypogene			
ams metasomatic			
apc phyllitic			
apv pervasive			
apt potassic			
app propylitic			
asp spilitic			
ase serpentинised			

ROCK TYPE

Rock type abbreviations always start with a capital. The capitals are chosen to show general categories:

B for base of oxidation categories.

G for general igneous (including unclassified varieties of igneous rock as well as intrusives) but known extrusives.

G was chosen rather than **I** because of the problems of confusion of **I** with **1** and **l**.

M for metamorphic

O for overburden related rock types which includes regolith which is transported but NOT that which is derived in situ.

R for rock names outside other categories, and for situ regolith to basement rocks.

S for sedimentary.

T for tuff (separated from other volcanics to allow a simple tuff terminology).

V for volcanic/volcaniclastic (but note special tuff terminology above).

OXIDATION			
Bow base of partial oxidation	Gql quartz latite	Overburden and Non-basement	Uncategorised & in situ Basement
Box base of total oxidation	Gqm quartz monzonite	Regolith	Rbx breccia
Igneous (non-extrusive)	Grd rhyodacite	Oal alluvium	Rcb carbonate rock undifferentiated
	Gry rhyolite	Obt bauxite	Rcc cataclasite
	Gsp serpentinite	Obx regolithic breccia	Rcp caprock
			THX_Logging_Codes

Gad adamellite	Gsy syenite	Occ calcrete	Rcy clay
Gal alaskite	Gta trachyandesite	Ocl colluvium	Rfb fault breccia
Gan andesite	Gtj trondjemite	Ocp caprock	Rfz fault rock or zone undifferentiated
Gao anorthosite	Gto tonalite	Ocy clay	Rgs greisen
Gap aplite	Gtr trachyte	Odu duricrust general	Rgx gouge
Gcb carbonatite	Gum ultramafic general	Oel eluvium	Rku rock general or uncategorised
Gcp clinopyroxenite	Guu igneous rock undifferentiated	Ofc ferricrete	Rln rock - not logged
Gdc dacite		Ogo gossan	Rms massive any mineral
Gdl dolerite	Metamorphic	Ogv gravel	Rmy mylonite
Gdn dunite	Mam amphibolite	Ogy gypcrete	Rnb not rock - backfilled stope
Gdr diorite	Mcs calc-silicate	Ohm humus	Rnc not rock - contamination
Gft felsite	Mes endoskarn	Ohp hardpan	Rnh not rock - hole
Gfu felsic rock undifferentiated	Mfs felsic schist	Ois ironstone	Rnp not rock - stope
Ggb gabbro	Mgf granofels	Olg lag (gravel)	Rns not rock - no sample return
Ggd granodiorite	Mgn gneiss	Oln lignite	Rnw not rock - wood
Ggp granophyre	Mgr granulite	Olo loam	Rph phyllonite
Ggt granite (sensu stricto)	Mhf hornfels	Olt laterite	Rsp saprolite
Ggu granitic rock undifferentiated.	Mmb marble	Omd mud	Rsr saprock
granitoid	Mmi migmatite	Omg magnesite rock (weathering related)	Rsz sheared zone or rock undifferentiated
Ghb hornblendite	Mms mafic schist	Oou overburden general	Rtt tectonite
Ghz harzburgite	Mmu metamorphic undifferentiated	Ops podsol	Ruu unidentified rock
Giu intermediate rock unclassified	Moa orthoamphibolite	Opt plinthite	Rvc carbonate vein
Gkb kimberlite	Mog orthogneiss	Orb rubble	Rvq quartz vein
Glg leucogranite	Mpa para-amphibolite	Osa A-horizon soil	Rvu vein general
Glm lamprophyre	Mpg paragneiss	Osb B-horizon soil	
Glt latite	Mph phyllite	Osc C-horizon soil	
Gmu mafic rock undifferentiated	Msc schist	Osk scree	
Gmz monzonite	Msk sarn	Osl silt, unconsolidated	
Gnr norite	Mst slate	Osn sand, unconsolidated	
Gop orthopyroxenite	Msu metasediment general	Osp saprolite	
Gpg pegmatite	Mum ultramafic schist	Osr saprock	
Gph phonolite	Mvu metavolcanic general	Ost silcrete	
Gpp porphyry	Mxs exoskarn	Osu soil general	
Gpr peridotite		Otr travertine	
Gpy pyroxenite			
Gqd quartz diorite			
Gqq quartz gabbro			

OXIDATION - Continued			
Sediments General		Tuff	Volcanics and Volcaniclastics other than Tuff
Sbx sedimentary breccia	Sqo orthoquartzite	Tan andesitic tuff	Vag agglomerate, volcanic
Sco coal	Sqt quartzite	Tdc dacitic tuff	Van andesite volcanic
Sdi diatomite	Srd rudite	Tll lithic tuff	Vbs basalt
Sdu sediment general, undifferentiated	Srs rudstone (carbonate)	Tlv lithic vitric tuff	Vdc dacitic volcanic
	Ssa subarkose	Tlx lithic crystal tuff	Vft felsitic volcanic
Sph phosphorite	Ssg subgreywacke	Try rhyolitic tuff	Vhc hyaloclastite
	Ssh shale	Tta trachyandesitic tuff	Vhm high magnesium basalt
Sediments Clastic	Ssl siltstone	Ttc trachytic tuff	Vig ignimbrite
Sag argillite	Ssn sandstone	Ttf felsic tuff	Vkm komatiite
Sak arkose	Stb turbidite	Tti intermediate tuff	Vkt keratophyre (volcanic)
Sar arenite	Sti tillite	Ttm mafic tuff	Vlh lahar
Sbo boundstone (carbonate)	Swk wacke	Ttu tuff general	Vob obsidian
Sca calcarenite		Tum ultramafic tuff	Vpc pyroclastic
Scg conglomerate	Sediments Chemical	Tvl vitric lithic tuff	Vpp peperite
Scl calcilutite	Sct chert	Tvv vitric tuff	Vrd rhyodacitic volcanic
Scr calcirudite	Sdc dolomite	Tvx vitric crystal tuff	Vry rhyolitic volcanic
Scy claystone	Sex exhalite	Txl crystal lithic tuff	Vsp spilite (volcanic)
Sdm diamictite	Sic iron formation carbonate facies	Tvx crystal vitric tuff	Vta trachyandesitic volcanic
Sgr grit	Sif iron formation general	Txx crystal tuff	Vtb trachybasaltic volcanic
Sgs grainstone (carbonate)	Sil iron formation silicate facies		Vtc trachytic volcanic
Sgw greywacke	Sio iron formation oxide facies		Vth tholeiitic volcanic
Smc micrite	Sis iron formation sulphide facies		Vum ultramafic volcanic
Smd mudstone	Sjs jaspilite, jasper		Vvc volcaniclastic
Sml marl	Slm limestone		Vvf felsic volcanic
Spa packstone (carbonate)	Smg magnesite rock (sedimentary)		THX_Logging_Codes

Spe pelite			Vvi intermediate volcanic
Sps psammite			Vvm mafic volcanic Vvu volcanic undifferentiated

Estimates of Abundance and Intensity

Quantitative estimates of abundance as percentages must directly follow the mineral or rock that they refer to , and consist of a two digit number ranging from 01 to 99. Qualitative estimates of intensity must consist of a number from 0 to 5, referring to a scale from absent to intense as listed below, and must directly follow the term referred to. Qualitative estimates should generally be for characteristics such as weathering for which a percentage is meaningless.

- | | | |
|--------------------|--------------------|--------------------------|
| 0 absent | 1 trace, rare | 2 weak, minor |
| 3 moderate, common | 4 strong, abundant | 5 intense, very abundant |

Colour

Colour codes have been organised to give the same descriptions as those used in the Rock-Colour Chart prepared by the Geological Society of America. The colour chart should be used for any detailed logging, but the codes can also be used for rough descriptions (eg OcyB meaning brown clay). The strongest hue is listed first, the weaker hue (if present) is listed second, and the strength/shade listed last, eg (BY5 equals moderate yellowish-brown).

Hues:	Strength/Shade
A grey	1 very pale
B brown	2 pale
G green	3 light
I pink	4 medium light
L olive	5 moderate
N black (noir)	6 dusky
O orange	7 very dusky
P purple	8 dark
R red	9 very dark
u blue	
W white	
Y yellow	