

<b>Lithologic Codes</b>	<b>Description</b>
<b>Regolith (R*)</b>	
R	undifferentiated regolith
RCAC	calcrete
RSIC	silcrete
RFEC	ferricrete
RL	undifferentiated laterite
RLG	lateritic gravel
RLI	in situ laterite
RLT	transported laterite
RCLY	in situ clay
RSAP	undifferentiated saprolite
RGOS	gossan ("iron cap") = iron oxide rock formed by weathering of sulphide rick rock. Textural or mineral prefix as appropriate (e.g. aciRGOS = acicular gossan, mcRGOS = malachite gossan)
<b>Unconsolidated Sediments (S*)</b>	
S	undifferentiated sediment
SLG	lateritic gravel
SGVL	unconsolidated gravel
SPCS	unconsolidated pebbly or cobbly sands
SAND	unconsolidated sand
SILT	unconsolidated silt
SMUD	unconsolidated mud
SCLY	unconsolidated clay (transported)
cyRB	regolith breccia with clay matrix
<b>Sedimentary Rocks (S*)</b>	
SS, qzSS, volcSS, lithSS, ccSS	>75% sandstone (undifferentiated) over minimum 5m logging interval, prefixes qz = quartz, lith = lithic, volc = volcanogenic, cc = calcareous
SM	>75% mudstone over minimum 5m logging interval
ST	>75% siltstone over minimum 5m logging interval
SSM	25-75% sandstone & mudstone over minimum 5m logging interval
SST	25-75% sandstone & siltstone over minimum 5m logging interval
SMH	shale
SML	slate
SMA	argillite (weakly metamorphosed mudstone)
SMP	phyllite
SGRT	grit
SSPC	pebbly or cobbly sandstone
SSIC	intraclastic sandstone and conglomerate
SCG	conglomerate
SCGR	mud chip conglomerate (rip-ups)
SCGM	monomict conglomerate
SCGP	polymict conglomerate
SBRM	monomict breccia
SBRP	polymict breccia
SCB, ooSCB, stSCB, bcSCB	undifferentiated carbonate, prefixes oo = oolitic, st = stromatolitic, bc = bioclastic
SLST	limestone
SDOL	dolomite
STIL	tillite
STUF	tuffite (redeposited)
SLAP	redeposited lapilli-stone
SCHT	chert
SBIF	banded iron formation
SLIG	lignite
<b>Igneous Rocks (U* for Ultramafic, M* for Mafic, I* for Intermediate, F* for Felsic)</b>	
UM	undifferentiated ultramafic
UDUN	dunite
UHAR	harzburgite
UPX	pyroxenite
USERP	serpentinite
UKIM	kimberlite
ULAP	lamproite
ULAY	ultramafic lamprophyre
UK	komatiite (undifferentiated)
UKSTX	spinfex textured part of komatiite flow
UKoOC	olivine orthocumulate part of komatiite flow
UKoMC	olivine mesocumulate part of komatiite flow
MG	gabbro
MGL	leucogabbro
MD	dolerite
MB	basalt

Lithologic Codes	Description
MBHM	high-magnesium basalt
MBP	pillow-basalt
MBHY	basaltic hyaloclastite
MLAP	mafic lapilli-stone
MTUF	mafic tuff
IA	andesite
ID	diorite
F	undifferentiated felsic rock
FG	undifferentiated granitoid
FGRA	granite
FGRD	granodiorite
FDIO	diorite
FMOZ	monzonite
FSYE	syenite
FTUF	felsic tuff
FV	undifferentiated felsic volcanic rock
FRHY	rhyolite
FDAC	dacite
<b>Metamorphic &amp; Metasomatic Rocks (Z*)</b>	
ZSCH	undifferentiated schist
mZSCH	undifferentiated mafic schist, typically dominated by amphibole, chlorite and/or biotite with lesser feldspar, quartz, accessory leucoxene etc...
fZSCH	undifferentiated felsic schist, dominated by quartz & feldspar, muscovite, & accessory mafic minerals
btZSCH, btclZSCH, tcZSCH, etc...	biotite schist, biotite-chlorite schist, etc... using mineral code prefixes for only the distinguishing minerals
ZGNS	undifferentiated gneiss
btZGNS, kspZSCH, etc...	biotite gneiss, k-feldspar gneiss, etc... using mineral code prefixes for only the distinguishing minerals
ZAMP	undifferentiated amphibolite
ZHF	hornfels, up to 2 lower case mineral prefixes as appropriate (eg. muZHF, andZHF etc...)
amZHF	
btZHF	biotite hornfels, fine grained brownish hornfels, brownish colour caused by microcrystalline biotite, should give brown scratch
pxZHF	pyroxene hornfels, fine grained whitish to whitish green hornfels
axZHF	axinite hornfels, fine grained purplish hornfels
qzZHF	hard bronze grey microcrystalline quartz with common to abundant pyrrhotite hornfels, should give black scratch
ZMRB, gtZMRB, olZMRB, doZMRB, etc...	marble, with 1 key mineral prefix as appropriate, eg gtZMRB, olZMRB, srZMRB, doZMRB. <10% px
gtZXS	porphyroblastic garnets in pyroxene+calcite matrix (if <10% px then it will be a gtZMRB), commonly also minor amphibole, magnetite, pyrrhotite etc... in matrix. Vesuvianite commonly partly replaces garnet and this lith is completely gradational with veZXS
veZXS	tabular, porphyroblastic, and orbicular vesuvianite in pyroxene-calcite matrix.
olZXS	skarn with >50% granular olivine, typically partly replaced by serpentine with abundant fine disseminated magnetite, commonly also irregular patches of whitish to pale green pyroxene.
lpZXS	leopard skarn = olivine skarn with highly irregular granitic blobs & dyklets rimmed by pink garnet, then pale green pyroxene, then locally green phlogopite. Granitic blobs & dyklets are typically partly replaced by pyroxene (=endoskarn)
amZXS	skarn with >50% amphibole as massive felted bands and/or pseudomorphs of garnet set in other minerals. Lesser carbonate, magnetite, pyrrhotite, vonsenite.
amvoZXS	amphibole-vonsenite skarn, 25-50% vonsenite & 25-50% amphibole. Vonsenite typically occurs as mass of radiating needles forming matrix between amphibole and/or vesuvianite after porphyroblastic garnet.
ammtZXS	amphibole-magnetite skarn, 25-50% amphibole & 25-50% magnetite typically as matrix flood around ex-garnet porphyroblasts
ampoZXS	amphibole-pyrrhotite skarn, 25-50% amphibole & 25-50% pyrrhotite
mtZXS	skarn with >50% magnetite. Grading from matrix replacement around garnet pseudomorphs to massive bands. Minor amphibole, pyrrhotite and carbonate.
voZXS	>50% vonsenite, typically occurring as clusters of radiating needles.
poZXS	>50% banded semi-massive to massive pyrrhotite.
pyZXS	>50% banded semi-massive to massive pyrite.
sdZXS	>25% siderite skarn, includes sideritic skarn with prismatic quartz (sqp) and magnetite atolls (s+p), common accessories cassiterite, k-feldspar
btZXS	>50% brown-black, books common in coarse examples along with fluorite.
srZXS	translucent to flakey pale & dark green serpentine skarn, formed from olivine skarn
ZGRS	Undifferentiated greisen comprising fine saccharoidal aggregate of quartz and muscovite. Feldspar phenocrysts typically replaced by pyrrhotite.

<b>Lithologic Codes</b>	<b>Description</b>
ZQT	tourmaline "greisen" = granite in which feldspar phenocrysts are replaced by tourmaline and groundmass comprises saccharoidal quartz and minor fine muscovite.
<b>Veins (V)</b>	
*V	Veins, up to 2 key mineral prefixes as appropriate (eg qzV, qztuV), only use in Lith1 column
*VB	Vein breccias, up to 2 key mineral prefixes as appropriate according to mineralogy of cement (eg clccVB), only use in Lith1 column
<b>Hydrothermal Breccias, Faults and Shear Rocks (X*)</b>	
XHB	hydrothermal breccia
XMYL	mylonite
XFB	Fault breccia - incohesive >30% clastic
XFG	Fault gouge - incohesive <30% clastic
XFC	Fault cataclasite - cohesive more than >30% clastic
<b>No Recovery &amp; Cavities (N*)</b>	
NCAV	cavity
NREC	no sample recovery (unknown problems)
NSAV	sample no longer available (applies to relogging)

Mineral Codes	
ac	actinolite
ak	ankerite
ab	albite
al	almandine
and	andalusite
ano	anorthite
am	amphibole
ana	anatase
atg	antigorite
asp	arsenopyrite
as	arsenates
aug	augite
ax	axinite (Ca-Mg-Al borosilicate)
az	azurite
ba	baryte
Bi	native bismuth
bt	biotite
cb	undifferentiated carbonate
cc	calcite
ch	chalcedony
cd	cordierite
cdp	chrome diopside
cl	chlorite
cpy	chalcopyrite
cpx	clinopyroxene
cr	chromite
crp	chrysoprase
crt	chrysotile
cs	cassiterite
cv	chenevixite
cy	undifferentiated clay
da	danalite
dd	diamond
di	diopside
do	dolomite
ep	epidote
fe	fe-oxide or hydroxide
fl	flourite
fsp	feldspar
ga	galena
go	goethite
gr	graphitic
gt	garnet
he	hematite
hb	hornblende
ilit	illite
il	ilmenite
ka	kaolin
ksp	undifferentiated k-feldspar
ky	kyanite
lau	laumontite
lm	limonite (undifferentiated iron oxyhydroxide)
lo	lollingite
lw	ludwigite
lx	leucoxene
mc	malachite
mi	mica (undifferentiated)
mg	magnesite
mn	mn-oxides
mon	montmorillonite
ms	moissanite
mt	magnetite
mu	muscovite
mz	monazite
nac	nacrite
ol	olivine
or	orthoclase
ops	opaline silica
ph	phlogopite
pl	plagioclase
po	pyrrhotite
pp	pyrope
prh	prehnite
pv	perovskite
px	pyroxene
py	pyrite
qz	quartz
rd	rhodochrosite
rf	rock fragments
ru	rutile
sa	saponite
sc	scorodite
se	sercite
sd	siderite
sh	scheelite
si	siliceous
sr	serpentine
sph	sphalerite
sp	spinel
sb	stilbite
st	stannite
sx	sulphide
sxo	oxidised sulphide
tc	talc
ti	titanite (sphene)
tr	tremolite
tu	tourmaline
tz	topaz
vo	vonsenite (Fe borate)
ve	vesuvianite (idocrase)
zin	zinnwaldite
ze	zeolites
zr	zircon

<b>Texture Codes</b>	
<b>aci</b>	<b>acicular, mineral specific types coded with mineral code followed by a (eg mta = acicular magnetite)</b>
amg	amygdaloidal
anh	anhedral
bdn	boudins
bnd	banded
bxw	boxwork
col	cauliflower texture (of mineral growth)
den	dendritic
dis	disseminated
euH	euHedral
fol	foliated
gph	graphic & micrographic texture (as in granites)
<b>grn</b>	<b>granular, mineral specific types coded with mineral code followed by g (eg mtg = granular magnetite)</b>
gtp	specifically garnet or ex-garnet porphyroblastic texture
lam	laminated
mas	massive
mot	mottled
mta	acicular magnetite (after vonsonite)
mtg	granular magnetite
mzn	mineral zoning in fine laminae
oph	ophitic
<b>orb</b>	<b>orbicules of any mineral, typically concentricly layered or zoned, mineral specific types coded with mineral code followed by o (eg veo = vesuvianite orbicules)</b>
<b>pbl</b>	<b>porphyroblastic, large metamorphic or metasomatic minerals in a finer matrix, mineral specific types coded with mineral code followed by p (eg gtp = garnet porphyroblastic)</b>
pcl	porphyroclastic
ppy	porphyritic
psm	general prismatic texture code which could apply to a number of minerals
rcz	recrystallised
ruc	rip-up clasts; distinguish in comments between Carter's-like (small, platy), and large & irregular
sch	schistose
scl	cleaved
shz	shear or shear zone
spk	dark minerals such as biotite or magnetite scattered though paler matrix
s+P	specifically salt and pepper skarn with atoll textured magnetite with microscopic qz prisms and feldspar, in siderite matrix
spt	spotted, such as spotting in a hornfels
<b>sqp</b>	<b>specifically quartz prisms in sideritic matrix</b>
stwk	stockwork
sub	subhedral
<b>tab</b>	<b>tabular, mineral specific types coded with mineral code followed by t (eg vet = vesuvianite tablets)</b>
tad	am±po spots with tales in px matrix
tuf	tuffaceous
ves	vesicular
vet	tabular vesuvianite texture
wrg	wrigglite
<b>Structure Codes</b>	
bkn	weak core broken by drilling (typically near beginning of hole)
brc	brecciated
flt	fault
frc	fracture zone
ftz	fault or fault zone
mcf	microfaults- displacement <1cm scale
sik	slickensides
ssf	small-sclae faulting (>1cm, <core diameter)
BCA	acute angle between core axis and bedding (=alpha)
SCA	acute angle between core axis and cleavage or schistosity (=alpha)
FCA	acute angle between core axis and fault (=alpha)
<b>Sedimentary Bedding Codes</b>	
lam	laminated (<10mm)
tnb	thin bedded (10-100mm)
mdb	medium bedded (100-300mm)
tkb	thick bedded (>300mm)
vtkb	very thick bedded (>1m)
<b>Sedimentary Grain size</b>	
svfg	very fine grained <64 um (mud, silt & clay)
sfg	fine grained 64 um to 0.25 mm (fine sand)
smg	medium grained 0.25 to 0.5mm (medium sand)
scg	coarse grained 0.5 to 2 mm (coarse sand)
svcg	very coarse grain >2mm (2 - 4mm granules, 4 - 16mm pebbles, 16-256 mm cobbles, >256 mm boulders)
<b>Igneous &amp; Metamorphic Grain Size</b>	
ifg	fine grained <1 mm
img	medium grained 1-5 mm
icg	coarse grained 5-30 mm
ipg	pegmatitic >30 mm
<b>Weathering Codes</b>	
vw	very weathered, BOTH PRIMARY TEXTURE & MINERALOGY DESTROYED by weathering, no sulphide, generally dominated by Fe and Al oxides and/or silica (= laterite, duricrust, lateritic gravel & massive textureless clays)
mw	moderately weathered, PRIMARY TEXTURE REMAINS but MINERALOGY SECONDARY clays (= saprolite)
ww	weakly weathered, MAINLY PRIMARY TEXTURE & MINERALOGY, low clay content, partially oxidised sulphide (= saprock & fresh rock with iron staining and clay development restricted to fractures)
fr	fresh (completely primary texture & mineralogy without significant iron staining on fractures)

<b>Moisture Codes</b>	
S	Sloppy
M	Moist
D	Dry
<b>Colour Codes</b>	
l	light (e.g. lgn = light green, lgy = light grey)
d	dark (e.g. dgn = dark green, dgy = dark grey)
bk	black
bl	blue
bn	brown
bz	bronze (e.g. sulphides such as pyrrhotite & pyrite)
cm	cream
gn	green
gy	grey
kk	khaki
og	orange
ov	olive
pk	pink
pl	purple
rd	red
wt	white
yw	yellow
<b>Sample Recovery Codes</b>	
ideally measured as weight in kg, below codes for estimates	
e	excessive
g	good
m	moderate
p	poor
n	none