



STANDARD FORMAT CODE REFERENCE SHEETS

GEOLOGICAL LOGGING OF RAB, AC, RC and DDH HOLES

PERCENTAGE FIELDS

DH Lithology table fields Total_OrePct,
Lith_pc

0.1	Trace
1	1%
2	2%
3	3%
4	4%
5	5%
10	5 - 10%
15	10 - 15%
20	15 - 20%
25	20 - 25%
50	25 - 50%
75	50 - 75%
100	75 - 100%

INTENSITY FIELDS

DH Alteration table fields Alt_Int
DH Minerals table fields Min_Int
DH Lithology table fields Lith_Strc_Int

i-	intense
w-	weak
t-	trace
s-	strong
m-	moderate

GRAINSIZE

DH Lithology table fields Lith_GrainSize

aph	aphanitic
vfg	very fine grained
fg	fine grained
fmg	fine medium grained
mg	medium grained
mcg	medium coarse grained
cg	coarse grained
vcg	very coarse grained

COLOUR

DH Lithology table fields Lith_Colour1-2

bu	blue	mv	mauve
bk	black	or	orange
br	brown	pk	pink
cr	cream	pp	purple
gn	green	rd	red
gy	grey	wh	white
kh	khaki	ye	yellow

DH Lithology table fields Lith_Colour_Tone

l	light
d	dark

ST BARBARA LIMITED - ROCK LEGEND

Low-strain rocks; primary textures and structures preserved; mainly in but not confined to greenschist and sub-greenschist facies settings		Schistose rocks; deformed and recrystallised under greenschist to amphibolite facies conditions c (schist)		Non-schistose rocks recrystallised and/or deformed under amphibolite to granulite facies conditions							
VOLCANIC, SUB-VOLCANIC		PLUTONIC		m (amp)		n (gneiss)	r (granulite)				
ULTRAMAFIC ROCKS U Ultramafic rocks, undivided											
Uf	fragmental	Upx	pyroxenite	Uc	ultramafic schist, undivided	Umac	tremolite-chlorite rock	Un	gneiss	Ur	granulite
Uk	komatiite	Upd	peridotite	Ucac	trm(-cht) schist	Umat	tlc-trm(-crb) rock				
Ux	breccia	Ud	dunite	Ucat	tlc-trm(-crb) schist	Umaf	trm-for rock				
		Us	serpentinite	Uctc	tlc-cht-crb schist	Umfa	tlc-for-ant rock				
				Uctb	tlc-crb schist	Umtf	tlc-for rock				
				Ucts	tlc-srp(-crb) schist						
MAFIC ROCKS M Mafic rocks, undivided											
Mb	basalt	Mg	gabbro	Mc	mafic schist, undivided	Mm	amphibolite	Mn	gneiss	Mr	granulite
Mbm	high magnesium basalt	Mgl	leuco-gabbro	Mcac	amp-cht schist	Mmq	quartz amphibolite				
Mf	volcaniclastic	Mgq	quartz-gabbro	Mccb	cht-crb schist	Mmac	amp-cht (-plg) rock				
Mfm	volcaniclastic mudstone	Ma	anorthosite								
Mfs	volcaniclastic sandstone	Mh	hornblendite								
Mfc	volcaniclastic conglomerate	Mt	troctolite								
Mx	breccia										
Md	dolerite										
Mdl	leuco-dolerite										
Mdq	quartz dolerite										
INTERMEDIATE ROCKS I Intermediate rocks, undivided											
Ie	extrusive (andesitic)	Ig	granitoid, undivided	Ic	intermediate schist, undivided			In	gneiss	Ir	granulite
It	tuff (andesitic)	Igd	diorite	Icab	plg-amp-bio (-qtz) schist						
Il	lapilli tuff (andesitic)	Igdq	quartz diorite	Icbc	plg-bio-cht (-crb-qtz) schist						
Ix	breccia (andesitic)	Igz	monzodiorite/ monzogabbro	Icmc	plg-mus-cht (-crb-qtz) schist						
If	volcaniclastic (andesitic)	Igzq	quartz monzodiorite/ quartz monzogabbro								
Ifm	volcaniclastic mudstone										
Ifs	volcaniclastic sandstone										
Ifc	volcaniclastic conglomerate										
Iv	(sub) volcanic - coherent, andesitic										
Ii	intrusive (dyke, sill; including porphyry)										
Iia	intrusive (andesite porphyry)										
Iid	intrusive (diorite porphyry)										
Iiz	intrusive (monzodiorite/monzogabbro)										

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VOLCANIC, SUB-VOLCANIC	PLUTONIC		m (amp)	n (gneiss)	r (granulite)
FELSIC ROCKS <div>F felsic rocks, undivided</div>					
<div>Fe extrusive</div> <div>Fer extrusive - rhyolite</div> <div>Fed extrusive - dacite</div> <div>Ft tuff</div> <div>Ftr tuff - rhyolite</div> <div>Ftd tuff - dacite</div> <div>Fl lapilli tuff</div> <div>Flr lapilli tuff - rhyolite</div> <div>Fld lapilli tuff - dacite</div> <div>Fx breccia</div> <div>Fxr breccia - rhyolite</div> <div>Fxd breccia - dacite</div> <div>Ff volcaniclastic</div> <div>Ffr volcaniclastic - rhyolite</div> <div>Ffd volcaniclastic - dacite</div> <div>Ffm volcaniclastic mudstone</div> <div>Ffs volcaniclastic sandstone</div> <div>Ffc volcaniclastic conglomerate</div> <div>Fv (sub-) volcanic - coherent</div> <div>Fvr (sub-) volcanic rhyolite - coherent</div> <div>Fvd (sub-) volcanic dacite - coherent</div> <div>Fi intrusive (dyke, sill; including porphyry)</div> <div>Fir intrsive - rhyolite porphyry</div> <div>Fig intrusive - syenogranite, monzogranite, alkali feldspar granite (porphyry)</div> <div>Fid intrusive - dacite porphyry</div> <div>Fit intrusive - tonalite (porphyry)</div> <div>Fiz intrusive - monzonite (porphyry)</div>	<div>Fg felsic granitoid, undivided</div> <div>Fga aplite</div> <div>Fgp pegmatite</div> <div>Fgg syenogranite/monzogranite /alkali feldspar granite</div> <div>Fgd granodiorite</div> <div>Fgt tonalite/trondhjemite</div> <div>Fgz monzonite</div> <div>Fgzq quartz monzonite</div>	<div>Fc felsic schist, undivided</div> <div>Fcqb qtz(-fpr)-bio(-mus) schist</div> <div>Fcqm qtz (-fpr)-mus schist</div>		<div>Fn gneiss</div> <div>Fgn granite gneiss</div>	<div>Fr granulite</div> <div>Fgr granulitic granitoid (eg charnokite)</div>

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VOLCANIC, SUB-VOLCANIC		PLUTONIC		m (amp)		n (gneiss)	r (granulite)	
ALKALINE ROCKS A Alkaline rocks, undivided								
Ae extrusive		As syenite				An gneiss	Ar granulite	
Ax breccia		Asq quartz syenite						
Af volcanoclastic		Ac carbonatite						
Afm volcanoclastic mudstone								
Afs volcanoclastic sandstone, siltstone								
Afc volcanoclastic conglomerate								
Av (sub) volcanic rocks - coherent								
Ai intrusive (dyke, sill; including porphyry)								
Ail lamprophyre								
Ais syenite porpyry								
Ak kimberlite								
SEDIMENTARY ROCKS S Sedimentary rocks, undivided								
Sic claystone/mudstone		Sx sedimentary breccia		Sc sedimentary schist, undivided		Sml pelite - non-schistose	Sn gneiss	Sr granulite
Ssh shale		Sxo sedimentary breccia - oligomictic		Ssy phyllite		Smp psammite - non-schistose		
Sshg black (graphitic) shale		Sxp sedimentary breccia - polymictic		Scl pelitic schist		Smq quartzite		
Spt siltstone		Sic chert (Sic or Sct)		Scp psammite (schistose)		Smb marble		
Sps sandstone		Sif iron-formation						
Sw wacke		Sbl limestone						
Sg conglomerate		Sbd dolomite						
Sgo conglomerate - oligomictic								
Sgp conglomerate - polymictic								
MISCELLANEOUS CODES				DEPOSITIONAL UNITS		MISCELLANEOUS SURFICIAL UNITS		
# massive sulfide		Hx magmatic-hydrothermal breccia		Ca alluvium		Cv evaporite		Cx contaminated, disturbed ground
X unknown rock		Hxa magmatic-hydrothermal breccia - andesite		Caq alluvial - quartz sand, grit, gravel		Cw aeolian deposit		Ei erosional lag
Xx breccia - unknown origin		Hxd magmatic-hydrothermal breccia - dacite		Cc colluvium				Eo erosional soil
Xxo breccia - unknown origin-oligomictic		Hxf magmatic-hydrothermal breccia - felsic		Ccl colluvial lag				Eof erosional soil - lateritic
Xxp breccia - unknown origin-polymictic		Hxi magmatic-hydrothermal breccia - intermediate		Cco colluvial soil				Xo soil - undifferentiated
V vein		Hxm magmatic-hydrothermal breccia - mafic		Cg glacial deposit				
Tm mylonite		Hxr magmatic-hydrothermal breccia - rhyolite		Cl lacustrine deposit				
		Xc unknown schist		Cm marine deposit				
OC- no core				Cp playa deposit				
OD- waste dump material								

ST BARBARA LIMITED - REGOLITH CODES

RESIDUAL UNITS

Lf laterite, ferruginous duricrust developed in-situ over bedrock

WEATHERING OF BASEMENT UNITS: EROSIONAL

QUALIFIERS

b calcareous
f ferruginised
i ferruginised and silicified
s silicified
m mottled, ferruginous

Lm mottled zone

Lc clay zone

Lk clay saprolite

Ls saprolite

Lr saprock

Lg gossan

Lb bauxite

c clay on joints
j oxidised on joints
o disseminated oxidation
f oxidised on fractures

SECONDARY DURICRUSTS

Chc calcrete-pedogenic (vasdose)

Chf ferricrete

Chs silcrete

Chv calcrete-groundwater (phreatic)

Chx Hardpan, undivided

MISCELLANEOUS

Xf ferficrete - unknown origin

WEATHERING OF DEPOSITIONAL UNITS

Cb calcareous

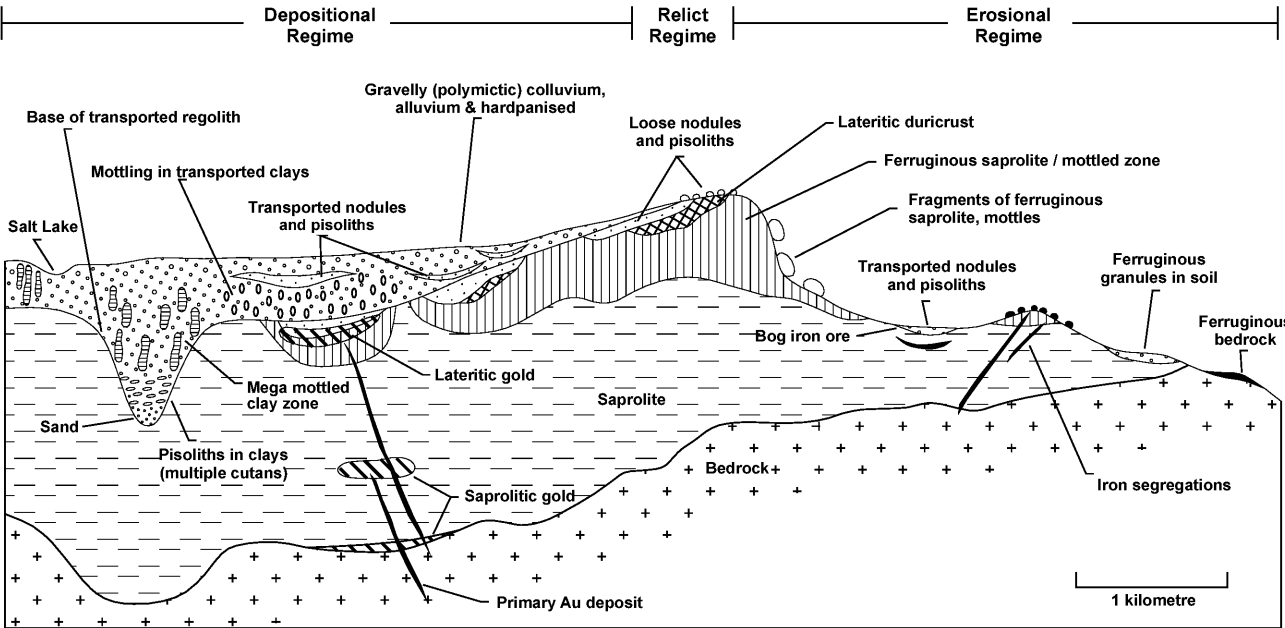
Cf ferruginised

Ci ferruginised and silicified

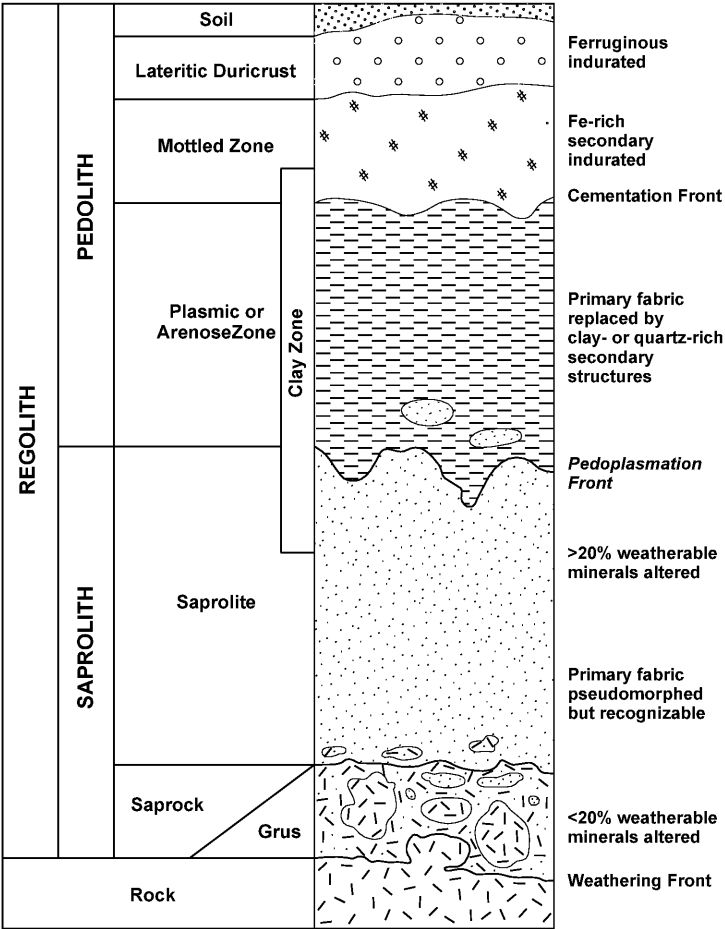
Cs silicified

Cm mottled, ferruginous

DIAGRAM SHOWING RELATIONSHIP BETWEEN LANDFORM AND REGOLITH IN THE YILGARN CRATON, W.A.



REGOLITH TERMINOLOGY





WEATHERING

DH Lithology table fields Weathering

j	Oxidized Joints
Lb	Bauxite
Lc	Clay Zone
Lcb	Clay Zone - Calcareous
Lcf	Clay Zone - Ferruginized
Lci	Clay Zone - Ferruginized+Silicified
Lcs	Clay Zone - Silicified
Lf	Laterite
Lfb	Laterite - Calcareous
Lff	Laterite - Ferruginized
Lfm	Laterite - Mottled
Lfs	Laterite - Silicified
Lg	Gossan
Lgf	Gossan - Ferruginised
Lgi	Gossan - Ferruginised+Silicified
Lgs	Gossan - Silicified
Lk	Clay Saprolite
Lkb	Clay Saprolite - Calcareous
Lkf	Clay Saprolite - Ferruginized
Lki	Clay Saprolite - Ferruginized+Silicified
Lks	Clay Saprolite - Silicified
Lm	Mottled Zone
Lmb	Mottled Zone - Calcareous
Lmf	Mottled Zone - Ferruginized
Lmi	Mottled Zone - Ferruginized+Silicified
Lms	Mottled Zone - Silicified
Lr	Saprock
Lrb	Saprock - Calcareous
Lrf	Saprock - Ferruginized
Lri	Saprock - Ferruginized+Silicified
Lrs	Saprock - Silicified
Ls	Saprolite
Lsb	Saprolite - Calcareous
Lsf	Saprolite - Ferruginized
Lsi	Saprolite - Ferruginized+Silicified
Lss	Saprolite - Silicified
Chf	Ferricrete
Chs	Silcrete
Chv	Calcrete-groundwater (phreatic)
Chx	Hardpan
Ci	Transported Cover - Ferruginized+Silicified
Cm	Transported Cover - Mottled/Ferruginous
Cs	Transported Cover - Silicified
Cu	Transported Cover - Unconsolidated material



na	Not applicable - no sample
o	Oxidized
f	Fresh
c	Clayey Joints
Cb	Transported Cover - Calcareous
Cf	Transported Cover - Ferruginized
Chc	Calcrete-pedogenic (vadose)
Xf	Ferricrete - Unknown origin

OXIDATION

DH Lithology table fields Lith_Oxidation

f	fresh
jo	oxidised on joints
mo	moderately oxidised
o	oxidized
so	strongly oxidised
r	reduced clays
wo	weakly oxidised

TEXTURE

DH Lithology table fields Lith_Texture1-2

REGOLITH

ble	bleached
bxw	boxworks
cel	cellular
col	colloform
con	concretionary
cru	crustiform
ear	earthy
fri	friable
gos	gossanous
ind	indurated
mgm	megamottled
mot	mottled
nod	nodular
pis	pisolitic
pla	plastic
pod	poddy/lenticular
pow	powdery
stf	stratiform
ver	vermiform
voi	voided
vug	vuggy



SEDIMENTARY

bdd	bedded
bdk	thickly bedded
bdn	thinly bedded
cbd	cross bedded
gbd	graded bedding
ool	oolitic
sor	sorted
ssd	soft sediment deformation
uns	unsorted

METAMORPHIC

aci	acicular
asb	asbestiform
bld	bladed
bnd	banded
dc	decussate
fib	fibrous
gns	gneissic
grn	granoblastic
lpd	lepidoblastic
pob	porphyroblastic
poc	porphyroclastic
poi	poikilitic
sac	saccharoidal
sch	schistose
spt	spotted
adc	adcumulate
amy	amygdaloidal
bgn	bimodal grainsize network
brx	brecciated
cum	cumulate
epg	equigranular
fia	fiamme
frg	fragmental
glo	glomeroporphyritic
gls	glassy
gpy	granophyre
gsb	grainsize banding
har	harrisitic
hyl	hyaloclastic
lam	laminated
mas	massive
msc	mesocumulate
mgx	megacrystic
myr	myrmekitic
ocl	ocellar
oph	ophitic
org	orthocumulate
osp	olivine spinifex



pep	pepperitic
pgm	pegmatitic
plm	plumose
plw	pillowed
pph	porphyritic
psp	pyroxene spinifex
ser	seriate
sop	subophitic
sph	spherulitic
spn	spinifex texture
tuf	tuffaceous
ust	unidirectional solidification txt
var	variolitic
ves	vesicular
vfr	volcanic fragments
vsh	volcanic shard txt
wld	welded
xct	cross cutting
xln	crystalline



LITHOLOGY STRUCTURES

DH Lithology table fields Lith_Structure

crn	crenulated	mas	massive
fol	foliated	myl	mylonitic
frc	fractured	sch	schistose
lin	lineated	shr	sheared

ALTERATION

DH Alteration table fields Alt_Code

act	Actinolite	klm	kaolinite
alb	Albite	Kser	Potassic-Sericite
amp	Amphibolite	Km	potassic muscovite
as	Aluminosilicate	Kmc	potassic muscovite-chlorite
bc	Biotite Chlorite	Kmus	potassic muscovite
bio	Biotite	Kph	phyllic
cct	Calcite	lcx	leucoxene
cht	Chlorite	lep	lepidolite
crb	Carbonate	lim	Limonite
cs	Calc-silicate	lim	limonite
dps	Diopside	mnt	Magnetite
epd	Epidote	phl	phlogopite
Fe	Ferruginous	plg	plagioclase
flt	fluorite	pyo	Pyrrhotite
for	forsterite	pyr	Pyrite
fuc	Fuchsite	S	Sulphidation
gnt	Garnet	ser	Sericite
goe	goethite	sil	Silicification
grp	Graphite	slf	Sulphide
gru	Grunerite	slm	sillimanite
hbd	hornblende	sme	Smectite
hed	hedenbergite	srp	Serpentine
hem	Hematite	tlc	Talc
lcx	Leucoxene	tml	tourmaline
Kb	Potassic-Biotite	tra	Tremolite-Actinolite
Kcs	Potassic-Calc-silicate	trm	Tremolite



GEOLOGY CODES

VEIN COMPOSITION

DH Veins table fields Vein_Comp

QSP	Quartz pyrite vein	QCd	Qtz-carbonate +/- diopside vein
QSY	Quartz pyrrhotite vein	QL-	Quartz - chlorite - carbonate
QCP	Quartz carbonate pyrite	QCM	Quartz - carbonate - magnetite
QCY	Quartz carbonate pyrrhotite	Vd	Diopside veins
QZ-	Quartz vein	CB-	Carbonate vein
QC-	Quartz-carb vein	VCT	Carbonate talc vein

VEIN STYLE

DH Veins table fields Vein_Style

bo	boudinage
brx	breccia
bu	bucky
j-	jigsaw textured
lam	laminated
ma	massive
st	stringer
vu	fibrous
z	zoned

MINERALS

DH Minerals table fields Min_Code

apy	arsenopyrite
bor	bornite
cha	chalcocite
cpy	chalcopyrite
gld	gold
gna	galena
mol	molybdenite
pen	pentlandite
pyo	pyrrhotite
pyr	pyrite
spl	sphalerite