

# **SURFICIAL DEPOSITS and WEATHERED PROFILE**

## **ROCK CODES**

### **SURFICIAL (UNCONSOLIDATED)**

TALL	-	Alluvium (undif.)
TELV	-	Eluvium (undif.)
TCOL	-	Colluvium (undif.)
TGRV	-	Gravel
TLAT	-	Transported Laterite Gravel
TSND	-	Running Sand – quartzose
TSL	-	Soil, Residual (undif.)
TSLC	-	Soil, Calcareous
TSLT	-	Silt
TMUD	-	Mud
TCBM	-	Carbonaceous Mud
TCY	-	Clay
TSAL	-	Salina, playa lake gypsum deposits
TLIG	-	Lignite/brown coal
TSPG	-	Spongolite
TIL	-	Tillite
TMOT	-	Mega Mottles – transported material
TCYP	-	Smectitic (plastic) clay with pisoliths

### **SURFICIAL (INDURATED) - DURICRUSTS**

DFER	-	Ferricrete
DSIL	-	Silcrete
DSLX	-	Silcrete, Ex Ultramafic
DCAL	-	Calcrete laminated
DCAN	-	Calcrete nodular
DCAM	-	Calcrete massive
DHPN	-	Hardpan
DFST	-	Ironstone/segregations
DMOT	-	Mottled Saprolite
DLAT	-	Lateritised surficial material



## IN SITU

- XLP - Pisolitic Laterite
- XLN - Nodular Laterite
- XML - Massive Laterite
- XUS - Upper Saprolite
- XUSx - x=U (ultramafic), M (mafic), F (Felsic), G (Granitic), S (sedimentary),  
I (Intermediate)
- XLS - Lower Saprolite
- XLSx - x=U,M,F,G,S,I
- XGOS - Gossan
- XCY - Saprolitic Clay
- XCYx - x=U,M,F,G,S,I
- XRDX - Goethetic Redox Zone; palaeowater table



# FELSIC and INTERMEDIATE

## ROCK CODES

### FELSIC VOLCANICS

#### & INTRUSIVES

Derwent 10

FV	-	Felsic Volcanic (undif.)
FRA	-	Alkali Rhyolite
FR	-	Rhyolite
FD	-	Dacite
FRD	-	Rhyo-dacite
FAP	-	Aplite
FPG	-	Pegmatite (undif.)
FP	-	Felsic Porphyry (undif.)
FQP	-	Quartz Porphyry (undif.)
FSP	-	Feldspar Porphyry (undif.)

### INTERMEDIATE VOLCANICS

Derwent 44

IV	-	Intermediate Volcanic (undif.)
IA	-	Andesite
IL	-	Latite
IT	-	Trachyte
ITA	-	Trachy-andesite

### GRANITOIDS

Derwent 14

G	-	Granitoid (undif.)
GA	-	Alkali Granite
GQ	-	Quartz Granite
GR	-	Granite ( <i>sensu stricto</i> )
GD	-	Granodiorite
GT	-	Tonalite
GP	-	Granitoid, Porphyritic (undif.)

### SYENITOIDS

Derwent 14

AS	-	Syenitoid (undif.)
AAS	-	Alkali syenite
ASY	-	Syenite ( <i>sensu stricto</i> )
AMO	-	Monzonite

### DIORITOIDS

Derwent 44

DT	-	Dioritoid (undif.)
DM	-	Monzodiorite
DI	-	Diorite
DMG	-	Monzogabbro



# MAFIC – ULTRAMAFIC

## ROCK CODES

### MAFIC INTRUSIVES

Derwent 45

M - Mafic (undif.)  
MG - Gabbroid (undif.)  
MGB - Gabbro  
MGH - Hornblende Gabbro  
MGQ - Quartz Gabbro  
MGG - Granophyric Gabbro  
MGHH- Hornblendite  
MGN - Gabbro Norite  
MGO - Olivine Gabbro-norite  
MGNO- Norite  
MGT - Troctolite  
MGP - Anorthosite  
MD - Dolerite/Diabase

Derwent 32

### MAFIC VOLCANICS

Derwent 46

MB - Basalt (undif.)  
MBT - Tholeiitic Basalt  
MBIA - Andesitic Basalt  
MBAK- Alkali Basalt  
MBK - Komatiitic Basalt (high Mg basalt)

Derwent 51

### Metamorphic Derivatives

MA - Amphibolite (undif.)  
MAP - Para-Amphibolite  
MAO - Ortho-Amphibolite  
MAA - an + hb/cm ± ga ± ep Amphibolite  
MAB - ab/og + hb + ch + ep Amphibolite  
MAC - ab + ac + ch + ep Basalt

### ULTRAMAFIC

Derwent 27

U - Ultramafic (undif.)



## Ultramafic Cumulates

Derwent 27

- UPX - Pyroxenite (undif.)
- UPO - Orthopyroxenite
- UPC - Clinopyroxenite
- UPW - Websterite (2 pyroxene)
- UPL - Lherzolite (ol + 2 pyroxenes)
  
- UOA - Olivine Adcumulate (>95% cumulate ol) (undif.)
- UOAO- Olivine Adcumulate – Igneous ol, minor chromite (stichtite)
- UOAS - Olivine Adcumulate – serp dominant (serp-chl-mag-ol-chr-st)
- UOAC- Olivine Adcumulate – carbonate alt (qz-ms-tlc-mag-ol)
- UOAM- Olivine Adcumulate – high mm grade (ol, antig, px)
  
- UOM - Olivine Mesocumulate (75-95% cumulate ol) (undif.)
- UOMO- Olivine Mesocumulate – Igneous ol, minor chromite (stichtite)
- UOMS- Olivine Mesocumulate – serp dominant (serp-chl-mag-ol-chr-st)
- UOMC- Olivine Mesocumulate – carbonate alt (tlc-chl-ms-dol-mag-ol)
- UOMM- Olivine Mesocumulate – high mm grade (ol, antig, px)
  
- UOO - Olivine Orthocumulate (50-75% cumulate ol) (undif.)
- UOOO- Olivine Orthocumulate – Igneous ol, minor chromite (stichtite)
- UOOS - Olivine Orthocumulate – Serp dominant (serp-chl-amp-mag-ol)
- UOOC- Olivine Orthocumulate – carbonate alt (tlc-chl-dol-ms-ol)
- UOOM- Olivine Orthocumulate – high mm grade (ol, antig, px)

## Ultramafic Non-Cumulates

Derwent 27

- UK - Komatiite (undif.)
- UKOX- Komatiite - Olivine Spinifex Texture
- UKPX - Komatiite - Pyroxene Spinifex Textured
- UKPS - Komatiite - Pyroxenitic (act-chl)
- UKOO- Komatiite – Ol Phyric – remnant Ol common
- UKOS - Komatiite – Ol phyric – Serp dominant (trem-chl-serp-mag)
- UKOC - Komatiite – Ol phyric - carbonated (tlc-chl-dol-amp-mag)
- UKOM- Komatiite – Ol Phyric - hg metamorphic (ol-antig-trem-px)



**Alkaline Ultramafic Rocks**

Derwent 27

UA - Alkaline ultramafic (undif.)

UAK - Kimberlite

UALP - Lamprophyre

UALT - Lamproite

**Magmatic Sulphides**

\$MS - Massive Sulphides (>75%)

\$MX - Matrix Sulphides (40-75%)

\$SS - Stringer Sulphides (10-75%)

\$SX - Breccia Sulphides (Sulphide matrix)

\$SD - Heavily Disseminated Sulphides (10-40% Sulphides)



# SEDIMENTARY

## ROCK CODES

### EPICLASTIC

#### Rudites (*Conglomerates*)

Derwent 57

SR - Rudite (undif.)  
SRP - Polymictic Rudite  
SRM - Monomictic Rudite

#### Sandstones

Derwent 6

SST - Sandstone (undif.)  
SAN - Arenite  
SQZ - Quartzite  
SW - Wacke  
SGW - Greywacke  
STB - Turbidite

#### Argillites

Derwent 64

SAG - Argillite (undif.)  
SSL - Siltstone  
SMD - Mudstone  
SSH - Shale  
SBS - Carbonaceous Shale

### PYROCLASTIC-EPICLASTIC MIXES

Derwent colours as above

VSST - Tuff Sandstone  
VSSL - Tuff Siltstone  
VSSH - Tuff Shale  
VSC - Tuff Conglomerate

### PYROCLASTIC

Derwent 10 for felsic

Derwent 44 for Intermediate

VAT - Ash Tuff (undif.)  
VAXT - Crystal Tuff  
VALT - Lithic Tuff  
VLPT - Lapilli Tuff  
VAGG - Agglomerate  
VPM - Pumice  
VOB - Obsidian



## **CHEMOGENIC**

Derwent 22

SCT - Chert  
SIF - Iron Formation (undif.)  
SIFM - Oxide Facies – Magnetite  
SIFH - Oxide Facies – Hematite (Jaspilite)  
SIFC - Carbonate Facies (Siderite)  
SIFS - Silicate Facies (Grunerite/Hedenbergite)  
SIFF - Sulphide Facies (Pyrite)  
SRD - Radiolarite

## **CARBONATES**

Derwent 40

SCB - Carbonate (undif.)  
SD - Dolomite/Dolostone  
SDL - Dolomite Limestone  
SLM - Limestone  
SML - Marl  
SCSL - Calcareous Siltstone  
SCSD - Calcareous Sandstone  
SCSH - Calcareous Shale





# METAMORPHIC

## ROCK CODES

### GNEISSES

Derwent 18

- GN - Gneiss (undif.)
- GNF - Felsic Gneiss (undif.)
- GNM - Mafic Gneiss (undif.)
- GNG - Granitic Gneiss
- GNGD - Granodioritic Gneiss
- GNT - Tonalitic Gneiss
- GND - Dioritic Gneiss
- GNxx - xx = Diagnostic Mineral Code (ie GNcd – Cordierite Gneiss)

### SCHISTS

Derwent 70

- SH - Schist (undif.)
- SHF - Felsic Schist (undif.)
- SHI - Intermediate Schist (undif.)
- SHM - Mafic Schist (undif.)
- SHC - Calc Schist
- SHxx - xx = Diagnostic Mineral Code (ie SHct – Chloritoid Schist)

### PELITES

Derwent 64

- SHP - Pelite (undif.)
- SHL - Phyllite
- SHS - Slate
- SHI - Mica Schist

### CALCAREOUS

Derwent 40

- CCM - Marble
- CCC - Calciphyre (Calc-silicate)
- CCH - Hornfels
- CCS - Skarn

### GRANULITES

Derwent 69

- GRN - Granulite (indif.)
- GRM - Mafic Granulite
- GRF - Felsic Granulite
- GRxx - xx = Diagnostic Mineral Code (ie. GRfs - Feldspar Granulite)

### OTHER

- MIG - Migmatite (undif.)
- SQZ - Quartzite
- MYL - Mylonite
- ECL - Eclogite

