

QUE-HELLYER LOGGING CODES

LITHOLOGY SECTION

STRATIGRAPHY Hellyer

Upper Rhyolitic Sequence	URS
Que River Shale	QRS
Hellyer (Upper) Basalt	PLS
Hangingwall Volcaniclastic Sequence	HVS
Hellyer Mineralised Sequence	HMS
Feldspar Phyrlic Andesite	FPS
Lower Basalt	LBS
Stringer Envelope Zone	SEZ
Stringer Zone	STZ

STRATIGRAPHY Que-River

Hangingwall Dacite	HD
Hangingwall Volcaniclastic Sequence	HVS
Que Mineralised Sequence	QMS
Footwall Alteration Zone	FAZ
Footwall Andesite	FA
Lower Basalt Sequence	LBS

ROCK TYPE

Composition Prefix

Andesite	A
Basalt	B
Barite	Ba
Base Metal Sulphide	BMS
Chert	Ch
Dacite	D
Disseminated Base Metal Sulphide	DBS
Feldspar Phyrlic Andesite	FP
Glassy silica – colloform pyrite ore	GSP
Highly Altered (no primary textures)	HA
Massive Chalcopryrite	MCPy
Massive Pyrite	MPy
No Core	NC
Fault Zone	FZ
Shear Zone	SZ
Polymict	Y
Pumice	Pu
“Quellite”	Q
Rhyolite	R
Sandstone	Ss
Shale	Sh
Semi-massive Pyrite	Semi-MPy
Vein	Vn

QUE RIVER ONLY

Chlorite –Carbonate	ClCo
Illite-Hydromuscovite-Carbonate	IHCo
Pyroclastic Breccia	PBx
Streaky Pyroclastics	SP
Sericite-Carbonate	SeCo

Volcanic Texture Suffix

Ash volcaniclastic (0-2mm)	av
Breccia volcaniclastic (>64mm)	bv
Lapilli volcaniclastic (2-64mm)	lv
Fine (2-16mm)	flv
Medium (16-32mm)	mlv
Coarse (32-64mm)	clv
Lava	l
Pillow Lava	pl
Variolitic pillow lava	vp

COLOUR

Prefix D=Dark
L=Light
B=Bright

Black	Bk
Brown	Br
Cream	Cr
Green	Gn
Grey	Gy
Orange	Or
Pink	Pk
Polychrome	Pc
Purple	Pu
Red	Rd
White	Wh
Yellow	Yw

VOLCANICLASTIC FRAGMENTS

Composition

As per rock type compositional prefix codes

Size

Size range in mm e.g. 10-50

Sorting

Well Sorted	W
Moderately Sorted	M
Poorly Sorted	P

Shape

Angular	A
Sub-angular	sA
Sub-rounded	sR
Rounded	R

CRYSTALS

Composition of any crystal component

VOLCANICLASTIC MATRIX

Composition

As per mineral code or:

Ash	av
Crystal	X
Glassy	G
Lithic	L
Vitric	V

Volume

Matrix volume in %

LOWER CONTACT

Gradation

Sharp but not faulted	S
Faulted	F
Gradational up to 1m	G1
1-10m	G2
Over 10m	G3

Style

Conformable	C
Interfingering	F
Irregular	I

ALTERATION SECTION

TEXTURE

Disseminated	D
Fragments	F
Interpillow	IP
Local	L
Matrix	M
Nodular	N
Pervasive	P
Pillow Margins	PM
Rim	R
Stockwork	K
Structure controlled	S
Veins	V

INTENSITY

As per standard intensity coding 1-5

MINERALOGY

Albite	Ab
Biotite	Bt
Carbonate	Co
Chlorite	Cl
Clay	Cy
Epidote	Ep
Feldspar	Fd
Fuchsite	Fu
Hematite	Ht
Illite	Il
K-Feldspar	Kfd
Limonite	Li
Magnetite	Mt
Pyrite	Py
Pyrrhotite	Po
Quartz	Qz
Sericite	Se
Silica	Si
Talc	Ta
Tremolite	Tr
Tourmaline	Tm

VEINING SECTION

INTENSITY

As per standard intensity coding 1-5

WIDTH

Thickness range of veins in mm

MINERALOGY

As per mineralogy codes used for alteration and mineralisation

MINERALISATION SECTION

TEXTURE

Banded	Bn
Brecciated	Br
Colloform	Cm
Disseminated	Ds
Euhedral	Eu
Fragmental	Fr
Framboidal	Fb
Inter-pillow	IP

Joint plane coating	JP
Massive	Ma
Nodular	No
Pillow margin	Pm
Patches	Pa
Recrystallised	Rx
Reworked	Rw
Sheared	Sh
Shrinkage shadows	Ss
Veins	Vn
Vein selvage	VS
Boxwork veining	Bx

MINERALOGY

Mineralogy prefix, percentage suffix (Tr for trace)

Arsenopyrite	As
Barite	Ba
Chalcopyrite	Cp
Galena	Gn
Pyrite	Py
Pyrrhotite	Po
Sphalerite	Sp
Gangue	Ga

FAULTS SECTION

BASE

Downhole depth to bottom of fault

DOWNHOLE WIDTH

Downhole thickness of fault in cm

CORE AXIS ANGLE

Angle to core axis

STYLE

Brecciated	Br
Cavernous	Cv
Puggy	Pu
Rehealed	Rh
Slickensided	Sl
Carbonate	CO
Chlorite	Cl
Quartz	Si
Rubble	Ru
Sericite	Se
Sheared	Sh

FABRIC SECTION

TYPE

Bedding	Bd
Clast alignment	CA
Cleavage	Cl
Flow Banding	FB
Shearing	Sh
Sulphide banding	SB
Vesicle alignment	VA

FACING

Facing uphole	U
Facing downhole	D

WEATHERING

Type prefix, standard intensity coding suffix

Leached	L
Oxidised	O

INTENSITY CODING

1	Trace
2	Weak
3	Moderate
4	Strong
5	Intense

GRAPHIC LOG

As per attached symbols from "Volcanic Textures" by McPhie, Doyle and Allen.

SYMBOLS FOR COHERENT TEXTURES

- single line symbols for low to moderate phenocryst abundance
- double line symbols for abundant phenocrysts
- smaller symbols for fine grained phenocrysts
- larger symbols for coarse grained phenocrysts
- additional "+" symbol for coarse, phenocryst-rich granitoid texture

	basalt, poorly to moderately porphyritic basalt
	phenocryst-rich basalt
	andesite, poorly to moderately porphyritic andesite
	phenocryst-rich andesite
	dacite, poorly to moderately porphyritic dacite
	phenocryst-rich dacite
	fine, poorly to moderately porphyritic rhyolite
	coarse, poorly to moderately porphyritic rhyolite
	coarse, phenocryst-rich rhyolite
	coarse rhyolitic porphyry
	flow foliation
	spherulites, lithophysae, alteration spots, nodular devitrification texture

SYMBOLS FOR VOLCANICLASTIC TEXTURES

- closer spaced symbols for dominant grain size and grain type

	pumice or relict pumice
	angular, juvenile lava clasts
	fiamme/vitriclast or relict vitriclast
	accretionary lapilli
	angular, polymict lithic clasts
	rounded, polymict lithic clasts
	mudstone intraclast
	sand-size particles, granular texture
	mud-size particles
	distinct planar stratification
	diffuse planar stratification
	cross bedding
	micro-cross lamination
e.g.	pumice clasts in sand matrix
	angular polymict lithic clasts and mudstone intraclasts in sand matrix

SYMBOLS FOR JUVENILE-CLAST-RICH DEPOSITS

	jigsaw-fit texture of fine, moderately porphyritic rhyolite		pumice-clast-rich deposit, coarse, moderately porphyritic rhyolitic composition
	jigsaw-fit texture of coarse, moderately porphyritic rhyolite		pumice-clast-rich deposit, coarse, phenocryst-rich rhyolitic composition
	jigsaw-fit texture of coarse phenocryst-rich andesite		pumice-clast-rich deposit, coarse, moderately porphyritic dacitic composition