

Geological Codes

SAMPLE QUALITY & REGOLITH

Sample Quality

3 letter code, select from below.

Water Content		Recovery	
Dry	D	Good (>80%)	G
Moist	M	Moderate (40-80%)	M
Wet	W	Poor (<40%)	P
Rotary mud	R		

Top of fresh rock	TOFR
Water table	WT

Colour

Up to 2 colours can be selected, intensity optional.

Intensity		Colour	
Light	L	Blue	BL
Dark	D	Brown	BR
		Buff	BU
		Black	BK
		Cream	CM
		Green	GN
		Grey	GY
		Khaki	KH
		Mauve	MA
		Orange	OR
		Pink	PK
		Purple	PP
		Red	RD
		Tan	TN
		White	WH
		Yellow	YE

Regolith Profile

Regolith derived overburden code is a maximum of **3 letters**, select left to right.

Select the **dominant** type for the interval.

	Grain size		Dominant Composition		Depositional Environment	
Regolith Derived Overburden	Clay and silt	C	Quartz	q	Soil	s
	Silt and sand	S	Pisolite/nodules	f	Elluvial	e
	Sand and gravel	G	Lithic	l	Colluvial	c
	Coarse gravel	B	Organic/peat	o	Alluvial	a
Creted Products and Silica Cap	Calcrete	CC			Lacustrine	l
	Ferricrete	FC				
	In situ Laterite	LI				
	Transoid Laterite	LT				
	Silcrete	ZC				
	Silica cap	ZCP				
	Ironstone	IS				
Interpreted Regolith	Saprolite (undiff.)	SAP				
	Upper Saprolite	USAP				
	Lower Saprolite	LSAP				
	Saprock	SAPRK				
	Fresh	FRESH				

Regolith Overprints

The regolith overprint is a superimposed feature that may be used **above** or **below** the unconformity.

Calcreted	CC	Silicified	ZF
Pedogenic carbonate	CP	Silcreted	ZC
Ferricreted	FC	Leached	LD
Ferruginous	FE	Gypsiferous	GP
Goethitic	GO	Kaolinitic	KO
Gossanous	GS	Magnesite rich	MG
Haematitic	HE	Manganiferous	MN
Hardpanised	HP	Nontronitic	NO
Ironstone	IS	Reduced horizon	RE
Mottled	MO	Liesegang	LG

Geological Events

To be recorded for mining purposes.

Base of transported overburden	BOA
Base of complete oxidation	BOCO
Redox front	REDOX

Geological Codes

LITHOLOGY

Lithological Legend

Leave this column blank until below the unconformity. Select the **dominant** bedrock type for bedrock1 column. Use bedrock2 where applicable eg if unsure of the rock type or at a contact where two rock types may be present.

Only codes listed below can be used, **except** for ultramafics and schists, for which more codes can be made from the minerals table.

Felsic Rocks

Undifferentiated	F
Rhyolite	FR
Dacite	FD
Rhyodacite	FRD
Quartz keratophyre	FOK
Porphyry (undiff.)	FP
Porphyry - quartz dom.	FQP
Porphyry - feldspar dom.	FFP
Porphyry - quartz-biotite	FQBP
Lamprophyre - biotite-phl	FBL
Aplite	FAP
Volcaniclastic (undiff.)	FV
Pyroclastic / TUFF - unwelded	FPY
Pyroclastic / TUFF - welded	FPYW
Volcanogenic (reworked)	FVO
Crystal Tuff	FXT

Intrusive

Granitoids (undiff.)	FG
Granite	FGT
Quartz rich (>60% quartz phenocrysts)	FGQG
Granodiorite	FGGD
Pegmatite	FGPEG
Syenite	FGS

Quartz veins

Undifferentiated	QV
Translucent/semi-translucent	QVT
Opaque	QVO
Milky white	QVM
Milky white and carbonate	QVMCA
Grey	QVG

Intermediate Rocks

Undifferentiated	I
Andesite	IA
Basaltic andesite	IBA
Boninite (high mag basaltic/andesite)	IBO
Trachyte	IT
Trachyandesite	ITA
Quartz trachyte	IQT
Keratophyre	IK
Phonolite	IPL
Porphyry (undiff.)	IP
Lamprophyre	IL
Volcaniclastic (undiff.)	IV
Pyroclastic / TUFF (undiff.)	IPY
Volcanogenic (reworked)	IVO
Diorite (with <5% quartz)	ID
Quartz diorite	IQD
Monzonite (plag-alkali)	IM
Monzodiorite	IMD
Tonalite (quartz-plag diorite)	ITL

Mafic rocks

Undifferentiated	M
Basalt	MB
High mag basalt	MHMB
Tholeiitic basalt	MTB
Nepheline basalt	MNB
Dolerite	MD
Quartz dolerite	MQD
Granophyric dolerite	MGD
Lamprophyre	ML
Volcaniclastic (undiff.)	MV

Pyroclastic / TUFF (undiff.)	MPY
Volcanogenic (reworked)	MVO
Porphyry - feldspar dom.	MFP
Gabbro	MGB
Plagioclase Gabbro	MPLGB
Quartz gabbro	MQGB
Gabbro-norite	MGN
Norite (opx only)	MN
Anorthosite (no pyrox)	MAN
Troctolite	MTR

Ultramafic Rocks

Undifferentiated	U
Silica cap	UZCP
Komatiite (undiff.)	UK
Basaltic komatiite	UKB
Komatiite (flow top breccia)	UKFBT
Komatiite (olivine spx)	UKoS
Komatiite (olivine random spx)	UKoRS
Komatiite (olivine blocky spx)	UKoBS
Komatiite (pyroxene spx)	UKPS
Komatiite (olivine orthocumulate)	UKoOC
Komatiite (olivine mesocumulate)	UKoMC
Komatiite (olivine adcumulate)	UKoAC
Komatiite (olivine-haristic orthocumulate)	UKoHOC
Komatiite (olivine-augite orthocumulate)	UkoaoC
Hornblendite	UHB
Pyroxenite	UPX
Peridotite	UPE

Others built from mineral table:

More can be made using the mineral table.

Chlorite rock	UCH
Talc rock	UTA
Tremolite rock	UTR
Serpentine rock	USP

Metamorphic Rocks

Gneisses

Gneiss (undiff.)	GN
Quartz-feldspathic	GNQF
Amphibolitic	GNA
Calc-silicate	GNC
Migmatitic (partial melting)	GNM

Schists

Undifferentiated	ZS
Felsic	ZSF
Intermediate	ZSI
Mafic	ZSM
Ultramafic	ZSU
Sedimentary	ZSS

Others built from mineral table (common):

More can be made from the minerals table.

Sericite	ZSSE
Qtz-sericite	ZSQZSE
Qtz-biotite	ZSQZBT
Biotite	ZSBT
Chlorite-sericite	ZSCHSE
Biotite-chlorite	ZSBTCH
Biotite-garnet	ZSBTGT
Chlorite	ZSCH
Talc	ZSTA
Talc-chlorite	ZSTACH
Tremolite	ZSTR
Tremolite-chlorite	ZSTRCH

Mylonites

Undifferentiated	YL
Granitoid	YLG
Felsic	YLF
Intermediate	YLI
Mafic	YLM
Ultramafic	YLU
Sedimentary	YLS

Amphibolites

Undifferentiated	AM
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Amphibole dominated	AMAM
Hornblende dominated	AMHB
Tremolite dominated	AMTR
Diopside dominated	AMD
Actinolite dominated	AMAC

Cherts, BIFs and Sediments

Cherts

Undifferentiated	SCH
Jasperitic	SCHJ
Massive	SCHM
Laminated	SCHL

Banded Iron Formations

Undifferentiated	SBI
Oxides (GO,HM,MT; proximal)	SBO
Carbonate (SD,AK,DO; intermediate)	SBOC
Silicates (chamosite)	SBS
Jasperitic (medial)	SBIJ
Sulphides (PY,MC; distal)	SBIU

Sediments

Undifferentiated	ST
Shale	STSH
Black shale	STBKSH
Mudstone (pelitic)	STM
Siltstone	STT
Sandstone (pssamite)	STS
Grit	STG
Greywacke	STGY
Arkose	STA
Arenite	STN
Lithic Sandstone	STL

Conglomerates (>2mm, rounded)

Undifferentiated	STC
Polymictic	STCP
Oligomictic	STCO
Felsic dom.	STCF
Intermediate dom.	STCI
Mafic dom.	STCM

Breccias

Sedimentary breccias (>2mm, angular).

Undifferentiated	STBR
Polymictic	STBRP
Oligomictic	STBRO
Felsic dominated	STBRF
Intermediate dominated	STBRI
Mafic dominated	STBRI
Volcanic autobreccia	BRVA
Tectonic	BRTE
Hydrothermal	BRHY

Cretes

Calcrete	CC
Ferricrete	FC
Silcrete	ZC
Ironstone	IS

Miscellaneous Rocks

Carbonatite	CARB
Massive sulphides	MSUI
Quartzite	OZITE
Gossan	GS

In special circumstances, the following may be applicable...

Cavities and no sample return	cavity
When drilling through old workings/stopes	void
No samples taken	no samp
No log available (samples lost etc)	no log
Fill	FILL

Geological Codes

MINERALS, VEINS, ALTERATION & TEXTURES

Quartz Vein Type

Select from the list below:

Translucent/semi-translucent	QVT
Opaque	QVO
Milky white	QVM
Milky white quartz-carbonate	QVMCA
Grey	QVG

Other Vein Type

Select minerals from minerals table.

Sulphides

Select from this list for the dominant sulphide and other sulphides in that metre.

Arsenopyrite	AS
Bismuthinite	BI
Bornite	BO
Chalcocite	CC
Covellite	CV
Galena	GA
Marcasite	MC
Millerite	ML
Molybdenite	MO
Pentlandite	PE
Pyrite	PY
Pyroaurite	PR
Pyrolusite	PS
Pyrrhotite	PO
Sphalerite	ST
Sulphides (undiff.)	SU
Violarite	VI

Sulphide Form

Select from this list for the dominant sulphide form.

Vein	VN
Semi Massive	SM
Massive	MA
Disseminated	DS
Shear Plane	SH
Stringer	ST
Veinlet	VT

Minerals

Minerals from this list can be used for bedrock codes, accessory minerals and alteration types.

Actinolite	AC
Albite	AL
Amphibole (undiff.)	AM
Andalusite	AN
Ankerite	AK
Antigorite	AT
Apatite	AP
Asbestos (undiff.)	AB
Azurite	AZ
Barite	BA
Biotite	BT
Brucite	BU
Calcite	CZ
Carbon	CN
Carbonate	CA
Cassiterite	SN
Chalcedony	CL
Chlorite	CH
Chlorotoid	CD
Chrysotile	CS
Clinopyroxene	CX
Copper	CU
Cordierite	CO
Cumingtonite	CM
Cuprite	CI
Diopside	DI
Dolomite	DO
Epidote	EP
Feldspar (undiff.)	FS
Fluorite	FL
Fuchsite	FU
Garnet	GT

Glaucofane	GL
Goethite	GO
Gold	AU
Graphite	GF
Graptolite	GP
Gypsum	GY
Haematite	HM
Haematite (specular)	HS
Halite	HA
Hornblende	HB
Ilmenite	IL
Iron	FE
Kaolin	KO
K-Feldspar	KF
Kyanite	KY
Lepidolite	LP
Leucosene	LX
Limonite	LM
Lizardite	LZ
Mafic minerals (undiff)	MF
Maghaemite	MH
Magnesite	MG
Magnetite	MT
Malachite	MA
Manganese minerals (undiff.)	MN
Mica (undiff.)	MI
Muscovite	MU
Nontronite	NO
Olivine	OL
Opal	OP
Orthopyroxene	OX
Phlogopite	PG
Phosphate	PH
Plagioclase	PL
Prehnite	PR
Psilomelane	PN
Pyroxene	PX
Quartz	QZ
Rutile	RU
Scheelite	SC
Sericite	SE
Serpentine	SP
Siderite	SD
Silica	SI
Sillimanite	SL
Silver	AG
Smectite	SM
Sphene	SH
Staurolite	SR
Stichtite	STI
Stibnite	ST
Talc minerals (undiff.)	TA
Tellurides (undiff.)	TE
Tourmaline	TO
Tremolite	TR
Triolite	TB
Vermiculite	VE
Wolframite	WF
Zircon	ZR

Alteration Intensity

To be used for alteration minerals.

Trace	1
Weak	2
Moderate	3
Strong	4
Intense	5

Shearing Percentage

Note if shearing percentage is greater than 50%, the rock should be logged as a schist.

Unfoliated, undeformed rock	0
Very weak or incipient foliation	10
Weak foliation, continuous slaty cleavage, some mineral elongation	20
Moderate foliation	30
Strong foliation, original rock still identifiable	40
Moderate schistosity	50
Strong schistosity	60

Strong schistosity, slickensides, mineral growth	70
Protomylonite, protocataclastite	80
Mylonite/cataclastite	90
Ultramylonite/ultracataclastite (grainsize reduction)	100

Grainsize

To be logged as appropriate.

Aphanitic	A
Glassy	G
Very fine grained	VFG
Fine grained	FG
Medium grained	MG
Coarse grained	CG
Very coarse grained	VCG
Pegmatitic	P
Megapegmatitic	MP
Extra coarse megapegmatitic	ECP

Texture Codes

To be logged as appropriate.

Acicular	AC
Amygdaloidal	AM
Anhedral	AN
Aphanitic	AP
Banded	BD
Bladed (nematoblastic)	BL
Blebbly	BB
Clast supported	CS
Clusters	CL
Coatings	CO
Cross bedded	CB
Cumulate	CU
Disseminated	DS
Equigranular	EQ
Euhedral	EU
Fibrous	FI
Flow Banding	FW
Foliation	FL
Glassy	GL
Gneissic	GN
Graded bedding	GB
Granoblastic (equal size)	GR
Halos	HA
Inequigranular	IQ
Intergrowth	IN
Irregular	IR
Laminated (av. Thickness <1cm)	LM
Lenses	LE
Massive	MA
Matrix supported	MX
Non selective	NS
Ocellar	OC
Orbicular	OR
Overprinting	OV
Pervasive	PE
Pervasive (complete)	PC
Pervasive (incomplete)	PI
Pillowed	PW
Porphyroclasts (def. prim grains)	PR
Porphyritic	PO
Porphyroblastic (new grains)	PB
Recrystallised	RX
Replacement (asymmetric)	RA
Replacement (symmetric)	RS
Reverse bedding	RB
Rosettes	RO
Saccaroidal	SA
Selective	SE
Selvage of veins	SV
Spherulitic	SP
Spinifex	SX
Spotty	SP
Stockwork	ST
Subhedral	SU
Thickly Bedded	TH
Thinly Bedded	TB
Varfolitic	VR
Vesicular	VE
Well Bedded	WB
Well Sorted	WS
Xenoliths	XE