

## DIAMOND DRILLING GEOLOGICAL LOGGING CODES

Stratigraphy	
T	Tertiary Sedimentation/soil
TROB	Transported Overburden
CRE	Bathurst Island Fm (Cretaceous)
OPD	Oenpelli Dolerite
MMS	Mamadawerre Sandstone
NRG	Nabarlek Granite
NBM	Nimbuwah Metamorphics
CF	Cahill Formation
KQ	Kudjumarndi Quartzite
NAGN	Archean Gneiss

Regolith Zone	
RPLZ	Pallid Zone
RMTZ	Mottled Zone
RRXZ	Redox Zone
RSAP	Saprolite
RSRK	Saprock
RFRE	Fresh
DURI	Duricrust

Regolith Overprint	
RMCA	Calcrete - Watertable
RMSC	Calcrete - Soil
RMFR	Ferricrete
RMGP	Gypcrete
RMSI	Silcrete

Colour	
BK	Black
BL	Blue
BN	Brown
CR	Cream
GN	Green
GNGY	Green grey
GY	Grey
GYBN	Grey brown
OR	Orange
PK	Pink
PKG	Pink grey
PU	Purple
PUGY	Purple grey
RD	Red
RDBN	Red brown
RDGY	Red grey
RDPU	Red purple
WH	White
YG	Yellowish-Green
YL	Yellow
YLB	Yellow brown

Colour Intensity	
D	Dark
L	Light
M	Medium
MT	Mottled
NR	Not Recorded

Grainsize	
Y	Very fine (62.5 - 125µ)
F	Fine (0.125-0.25 mm)
M	Medium (0.25-0.5 mm)
C	Coarse (0.5-1 mm)
V	Very Coarse (1-2 mm)
G	Granule (2-4 mm)
P	Pebble (4-64 mm)
O	Cobble (64-256 mm)

Texture & Alteration Intensity	
T	Trace
W	Weak
M	Moderate
S	Strong
VS	Very Strong
ES	Intense

Hardness	
FR	Friable: Crumbles easily (fingers)
L	Low: Crumbles with scribe scratch
M	Moderate: "Deep" scribe scratch
H	Hard: "Shallow" scribe scratch
VH	Very Hard: "Mark" scribe scratch
NR	Not Recorded

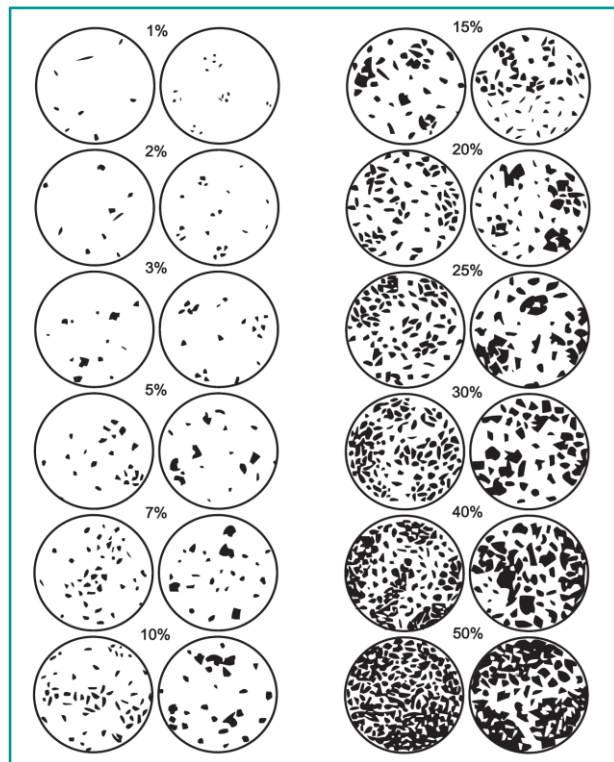
## DIAMOND DRILLING GEOLOGICAL LOGGING CODES

Texture	
<b>Sedimentary</b>	
IND	Indurated
FIS	Fissile
BD	Bedded (Horiz.)
IB	Interbedded
EQ	Equigranular
CS	Clast Supported
MP	Matrix Supported
PE	Pebble Beds
<b>Metamorphic</b>	
FO	Foliated
SL	Slatey
SS	Schistose
CR	Crenulated/Folded
GN	Gneissic
MM	Migmatitic
MY	Mylonitic
GRB	Granoblastic
PB	Porphyroblastic
AG	Augen
<b>Igneous</b>	
AH	Aphanitic
AMY	Amygdaloidal
VE	Vesicular
ORP	Ophitic
FP	Feldspar-Phyric
GRP	Granophyric
PG	Pegmatitic
PHA	Phenocrysts
PR	Porphyritic
<b>Structural fabrics</b>	
BRE	Brecciated
FRC	Fractured
SH	Sheared
CA	Cataclastic
<b>General textural terms</b>	
GU	Granulose
BN	Banded
LM	Laminated
LN	Lenticular
RN	Ribboned
MMIC	Monomictic
PM	Polymictic
HTL	Heterolithic
MX	Massive
STY	Stylolitic
VN	Veined
VU	Vuggy

Structure Type	
<b>Foliation Types</b>	
BED	Bedded
BND	Banded
FOL	Foliation
FSC	Slaty cleavage
FFC	Spaced fracture cleavage
FSH	Schistosity
FGN	Gneissosity
FMY	Mylonitic foliation
FCC	Crenulation cleavage
<b>Fault Types</b>	
FT	Fault
SBR	Semi-Brittle Fault
SH	Shear
<b>Other Features</b>	
UC	Unconformity
MXQZV	Massive Quartz Vein
QHF	Quartz-healed fracture

Metamorphic Hydration State	
PRO	Prograde assemblage
TRAN	Transitional assemblage
RTO	Retrograde assemblage
UM	Unmetamorphosed

### Guide for estimating percentage compositions



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Lithology 1 & 2			
Unconsolidated Sediment		Metamorphic Rock	
ALL	Alluvium	PH	Phyllite
OB	Overburden	PSM	Psammite
ULAM	Loam	QTZ	Quartzite
USOL	Soil	SPb	Semipelite - Bio, Feld, Qtz
UPIS	Pisolites	SPbm	Semipelite - Musc, Bio, Feld, Qtz
UASD	Aeolian sand	SPgb	Semipelite - Garn, Bio, Feld, Qtz
UPLA	Playa Clay	SPGW	Semipelite - Weakly graphitic
UOGM	Organic-rich mud	SPC	Semipelite - calcareous
UOGS	Organic-rich silt	PLb	Pelite - Bio, Feld, Qtz
UFMD	Mud	PLbm	Pelite - Bio, Musc, Feld, Qtz
UFSL	Siltstone	PLcb	Pelite - Cord, Bio, Feld, Qtz
UQC	Quartz-clay sediment	PLgb	Pelite - Gar, Bio, Feld, Qtz
USAK	Arkosic sediment	PLms	Pelite - Musc, Sill, Feld, Qtz
UCQ	Clay-quartz sediment	PLGW	Pelite - weakly graphitic
USS	Sand	PLG	Pelite - graphitic
UGCG	Gravel	PLC	Pelite - calcareous
		AMP	Amphibolite
		MRB	Marble
		CS	Calcsilicate
		GAR	Garnetite
		GNE	Gneiss
		GNF	Felsic gneiss
		GNIN	Intermediate gneiss
		GBGN	Mafic gneiss
Sedimentary Rock		Migmatite Rocktypes	
FMD	Mudstone	ANA	Anatexite
FSL	Siltstone	MTXT	Metatexite
SST	Sandstone	DTXT	Diatexite
ARK	Arkose		
SLA	Lithic arkose		
SFL	Feldspathic Litharenite		
SLI	Litharenite		
SFL	Feldspathic Litharenite		
SAK	Arkosic Sandstone		
CON	Conglomerate		
QPC	Quartz Pebble Conglomerate		
FAN	Fanglomerate		
GBX	Sedimentary Breccia		
DOM	Dolomite		
LM	Limestone		
COAL	Coal		
CHT	Chert		
Igneous - Plutonic/Intrusive Rocks		Contact Metamorphism	
GRA	Granite	HNF	Hornfels
QM	Quartz Monzonite	MRB	Marble
MZ	Monzonite	SKN	Skarn
GRD	Granodiorite		
QD	Quartz Diorite		
TN	Tonalite		
DOL	Dolerite/Diorite		
GB	Gabbro		
PO	Porphyry		
PEG	Pegmatite		
FDK	Felsic Dyke		
MDK	Mafic Dyke		
		Other	
		BRE	Breccia
		BXQ	Quartz Breccia
		FLZN	Fault Zone
		MSS	Massive Sulphide
		QVN	Vein Quartz - bucky
		UAP	Unidentified altered protolith
		UWP	Unidentified weathered protolith
		UX	Uranium Intersection

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Alteration Minerals					
Code	Mineral	Code	Mineral	Code	Mineral
AC	Actinolite	EP	Epidote	PO	Pyrrhotite
AE	Ankerite	RZGZ	Red Zone/Green Zone	PYR	Pyrite
AM	Amphibole	FL	Fluorite	QC	Quartz Carbonate
APY	Sooty Pyrite	FU	Fuchsite	QFX	Quartz Feldspar
BH	Bleaching	FX	Feldspar	QM	Quartz Tourmaline
BI	Biotite	GF	Graphite	QZ	Quartz
BR	Bornite	GOS	Gossan	QZD	Quartz Dissolution
CALC	Calcite	HEM	Hematite	SD	Siderite
CAR	Carbonate Undifferentiated	HS	Specular Hematite	SER	Sericite
CCQ	Carb-chl-qtz	I	Unknown	SIL	Silica/silicification
CC	Carb-chlorite	KF	K-Feldspar	SMQ	Smokey Quartz
CHL	Chlorite	LIM	Limonite	SPH	Sphalerite
CP	Chalcopyrite	MA	Marcasite	SUP	Sulphate
CY	Clay	MNG	Manganese	TA	Talc
DE	Desilicification	MO	Molybdenite	TO	Tourmaline
DO	Dolomite	MT	Magnetite	TR	Tremolite
DQZ	Druzy Quartz	MU	Muscovite	UX	Uranium Mineralization
DV	Dravite	OX	Oxides (Gen.)	SSP	Silica-sericite-pyrite

Alteration Style					
Code	Alteration Style	Code	Alteration Style	Code	Alteration Style
BED	Bedding constrained	HF	Healed fractures	SH	Shear
BIR	Irregular Bands	HX	Healed breccia	SPEC	Specks
BLEB	Blebs	IN	Interstitial	SPOT	Spots
BND	Banding	IRR	Irregular	SR	Selective replacement
BX	Breccia	LAM	Laminated	STR	Stringers
CLAS	Clasts	MAS	Massive	STRT	Structurally controlled
COAT	Coating	MATR	Matrix	SUR	Surface coatings
CON	Contact	MOT	Mottled	SW	Stockwork
DIS	Disseminated	NOD	Nodules	UC	Unconformity controlled
FOL	Foliation	PAT	Patches	Vb	Bedding controlled vein
FRAC	Fracture	PER	Pervasive	VN	Veining
FT	Fault	REPL	Replacement	VUG	Vuggy
GG	Gouge	RTC	Rock-type control		
HALO	Halo	SELV	Selvage		

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Oriented Structure Type					
Code	Mineral	Code	Mineral	Code	Mineral
AP	Fold Axial Plane	FFC	spaced fracture cleavage	LSTR	stretching lineation
BED	Bedding	FGN	Gneissosity	MIBX	Milled breccia
BP	Brittle Overprint	FH	Fold Hinge	MSBX	Mosaic breccia
BX	Breccia	FMY	mylonitic foliation	MY	Mylonite
C	Cleavage	FOL	Foliation	OF	Open Fracture
CABX	Cataclastic Breccia	FRAC	Fracture	OSK	Oblique-slip Slickensides
CFRAC	Contact Fracture	FSC	Slaty cleavage	PSTL	Pseudotachylite
CGG	Clay Gouge	FSH	Schistosity	QBX	Quartz Breccia
CHBX	Chaotic Breccia	FT	Fault	QHF	Quartz-healed fracture
CLPBX	Collapse Breccia	GG	Gouge	QZV	Quartz Vein
COBX	Corrosion Breccia	HBX	Healed Breccia	S0/S1	S0/S1
CON	Contact	HF	Healed Fracture	S1	S1 Cleavage
CRBX	Jigsaw or crackle breccia	HFT	Healed Fault	S2	S2 Cleavage
DFB	Deformation Band	HG	Healed Gouge	S3	S3 Cleavage
DS	Discordant	HX	Hydrothermal Breccia	SBR	Semi-Brittle Fault
DSK	Dip-slip Slickensides	IBX	Intrusion Breccia	SGG	Sandy Gouge
FA	Fold Axis	IGG	Indurated gouge	SH	Shear
FAM	fold M-symmetry	INBX	Incohesive Breccia	SK	Slickenlineation
FAS	fold S-asymmetry	JT	Joint	SSK	Strike-slip slickensides
FAZ	fold Z-asymmetry	LIN	Lineation	UC	Unconformity
FBX	Fault Breccia	LIN2	Lineation 2	UK	Unknown
FCC	Crenulation cleavage	LINT	intersection lineation	VN	Vein
FD	Folded	LMIN	mineral lineation	XB	Cross-Bedding

Orientation Quality	
Code	Description
BED	Bed
FAILED	Failed
HIGH	High
LOW	Low
MOD	Medium
NR	Not Recorded
PROJECTED	Projected
UNKNOWN	Unknown

Structure Fill Texture	
Code	Description
1	Gouge > amp of joint surface irregular
2	Gouge < amp of joint surface irregular
3	Soft sheared - fine
4	Soft sheared - medium
5	Soft sheared - coarse
6	Non-softening - fine
7	Non-softening - medium
8	Non-softening - coarse
9	Clean/surface staining only

Movement Sense	
Code	Description
DEX	Dextral
NOR	Normal
NR	Not Recorded
ODN	Oblique Dextral-Normal
ODR	Oblique Dextral-Reverse
OND	Oblique Normal-Dextral
ONS	Oblique Normal-Sinistral
ORD	Oblique Reverse-Dextral
ORS	Oblique Reverse-Sinistral
OSN	Oblique Sinistral-Normal
OSR	Oblique Sinistral-Reverse
REV	Reverse
SIN	Sinistral

Structure Roughness	
Code	Description
K	Slickensided
NR	Not Recorded
P	Polished
R	Rough
S	Smooth

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Structure Fill Thickness	
Code	Description
0	Clean or insignificant infill
1	Thickness of infill < 1mm
2	Thickness of infill < 5mm
3	Thickness of infill > 5mm
4	Sheared, no wall contact or weath. material
1CM	1 cm wide
2CM	2 cm wide
3CM	3 cm wide
4CM	4 cm wide
5CM	5 cm wide
NR	Not Recorded

Structure Shape	
Code	Description
I	Irregular (Stepped)
NR	Not Recorded
P	Planar
U	Undulating

Kinematic Indicator	
Code	Description
CTSHB	C-Type Shear Bands
DPM	Displaced Marker
ETFRAC	Extension Fractures
ETVN	Extension Veins
FDRAG	Fault Drag
FIBLS	Fibrous Lineation Steps
FLDASY	Fold Asymmetry
MPPC	Mantled Porphyroclasts
NR	Not Recorded
RIESH	Riedel Shears
ROTM	Rotated Marker
SCFAB	S-C Fabric
SHFLD	Sheath Folds

Plane Type	
Code	Description
BDP	Bedding Plane
CLAY	Cumulate Layering
CON	Contact
CRNCLV	Crenulation Cleavage
FAP	Fold Axial Plane
FBD	Flow Banding
FLT	Fault Plane
FOLCC	Foliated Cataclasite
FRA	Fracture
GNBND	Gnessic banding
MYL	Mylonite
NR	Not Recorded
PENCLV	Penetrative Cleavage
PHY	Phyllonite
PHYFOL	Phyllitic Foliation
SCHFOL	Schistose Foliation
SLTFOL	Slaty Foliation
SPCCLV	Spaced Cleavage
SSF	Slickensided Fracture

Lineation Type	
Code	Description
FA	Fold Axis
ISL	Intersection Lineation
ML	Mineral Lineation
NR	Not Recorded
RC	Ripple Crest
SL	Stretching Lineation
ST	Striations
TA	Trough Axis