

REGOLITH UNITS	COLOUR	GRAIN SIZE	FABRIC TYPE	LITHOLOGY- Unconsolidated sediments	LITHOLOGY- Intense regolith overprints only		
Surficial unconsolidated regolith R residual units T transported units Lateritic Duricrusts DF lateritic duricrusts DO other duricrusts Lateritic weathering horizons LM Mottled zone LP Pallid zone LU Upper saprolite, strongly weathered LL Lower saprolite, moderately weathered LW Saprock, weakly weathered LV Very weakly weathered rock	(Include one Intensity and up to two Hues) Intensity l Light (Pale) m Medium d Dark Hue:Colour bk Black (Noir) br Brown (Umber) bl Blue pu Purple rd Red pk Pink ye Yellow or Orange gn Green gy Grey wt White kh Khaki	a not visible in 10x lense vf <0.2 mm f 0.2- 0.5 mm m 0.5- 2.0mm c 2.0- 4.0 mm vc >4.0 mm	(Include both Intensity and type) Intensity n Massive r Relict fabric, strength unknown v Very weak w Weak m Moderate s Strong i Intense Type s Foliation (foliated fabric, undiff.) sh Schistosity (pure shear fabric) sc ShearFabric (Simple shear fabric) ln Lineated lm Laminated rc Recrystallised br Brecciated bd Bedding	RS Soils, residual, undifferentiated RSC Lithic scree RSR residual soil with lithic fragments RSS residual soil, sandy RSL residual soil, loam RSP pisolithic loams over lateritic duricrust TS Transported clastic sediments, undiff. TSG Colluvium - local (coarse) TSS Colluvium - sands TSC Colluvium - distal (fine clay and silt) TSA Alluvium TSD Desert dunes TSE Eolian sands TL Transported lacustrine sediments, undifferentiated TLE Evaporitic sediments TLC Clays TLS Running sands TG Gravels, undifferentiated TGQ Gravels, predominantly quartz grit TGP Gravel, pisolithic with clay, silt and sand TGL Gravel, with lithic fragments	DC Calcrete (only if 100% destruction of precursor) DS Silcrete (only if 100% destruction of precursor) DF Ironstone, undifferentiated DG Gossan DLM Lateritic duricrust, massive DLX Lateritic duricrust, fragmental DLP* Lateritic duricrust, pisolithic- consolidated DLN* Lateritic duricrust, nodular - consolidated LX Solution cavity- Collapse Breccia Fill LC Saprolitic clays** *L= loose ** use only as a last resort!!		
**NB: Regolith is defined as the weathering overprint on lithology. Where weathering is intense and precursor destroyed use "LC" in Lithology as a last resort.							
LOGGING CODES MASTER							
LITHOLOGY- Felsic Field F acid rocks, undifferentiated Felsic Volcanic Rocks FV Felsic volcanic, undifferentiated FVL Lava, undifferentiated FVL* Lava, porphyritic FVLA Lava, amygdaloidal FVA Agglomerate, pyroclastic breccia FVP Lapillistone (2- 64mm) FVT Tuff (<20mm, undifferentiated) FVT* Tuff, crystal = phenocrysts as below FVTC Tuff, cherty FVTW Tuff, ash fall FVTW* Tuff, ash flow with phenocrysts FVTI Ignimbrite, composite pyroclastic flow (* = q,f,a,k,p,h,x,b,m: quartz,feldspar undiff; sodic, potassic,plag,hornblende,pyroxene, biotite, muscovite phenocrysts)		Andesitic Field I intermediate rock, undifferentiated IV Andesitic volcanics, undifferentiated IVL Lava, undifferentiated IVL* Lava, porphyritic IVLA Lava, amygdaloidal IVA Agglomerate, pyroclastic breccia IVP Lapillistone (20- 64mm) IVT Tuff (<20mm, undifferentiated) IVT* Tuff, crystal IVTC Tuff, cherty IVTW Tuff, ash fall IVTW* Tuff, ash flow with phenocrysts IVTI Ignimbrite, composite pyroclastic flow (* phenocrystic phases as per felsic field)		Mafic Rocks M Mafic undifferentiated Mafic Intrusives MO Mafic intrusive, undifferentiated MOD Dolerite MOG Gabbro MON Norite MOGN Gabbro Norite MOGQ Quartz Gabbro MOGG Granophyre MOGZ Monzo Gabbro MOT Troctolite MOA Anorthosite MOP Mafic pegmatite Mafic volcanics MV Mafic volcanic, undifferentiated MVT Tholeiitic lava MVT* Tholeiitic lava, pillow MVTV Tholeiitic lava, vesicular MVTX Tholeiitic vent breccia, flow top or pillow breccia MVTT Tholeiitic tuff, ash fall MVK Komatiitic basalt undiff. MVKV Komatiitic basalt, pyroxene spinifex MVKX Komatiitic basalt, varicoid textured MVKAC actinolite- chlorite schist after h mag basalt (* l= leuco, s= meso, m= melano- cratic)		Ultramafic Rocks U Ultramafic undifferentiated Ultramafic Intrusives UP Ultramafic Intrusives, undifferentiated UPD Peridotite UPN* Dunite UPX* Pyroxenite UPO* Wehr-, Hartzburg-, Lherzo- l UPH Hornblendite (* = o,c,w,n: opx,cpx,webste) Ultramafic Volcanics UK Ultramafic volcanic, undifferentiated UKX Spinifex Textured, undifferentiated UKYC Chilled flow top breccia (A1 zone) UKXF Fine grained feathery texture (A2 zone) UKXB Coarse grained bladed texture (A3 zone) UKC Cumulate, undifferentiated UKCB B1 zone- aligned hopper olivine UKCO Orthocumulate olivine UKCM Mesocumulate olivine UKCA Adcumulate olivine UKCOS Olivine-sulphide cumulate UKCS Sulphide cumulate Metamorphic equivalents (low CO2, inc. MgO) UKAC Tremolite-Chlorite rock UKACS Trem-Chlor- Serp rock UKS Serpentine Metamorphic equivalents (high CO2, inc. MgO) UKTAC Talc-Trem-Chlorite(+/- Carb) rock UKTC Talc Chlorite UKTS Talc- Serp rock UKTM Talc-Magnesite rock UKTD Talc-Dolomite rock	
Felsic Intrusive Rocks (fine grained) FI* Felsic Intrusive, undifferentiated FIQ Quartz porphyry FIF Feldspar porphyry FIQF Quartz feldspar porphyry FIL Aplitite (* phenocrystic phases as per felsic field)		Intermediate Intrusive Rocks II* Intermediate Intrusives, Undifferentiated IIH Hornblendite porphyry IIF* Feldspar porphyry IIP Intermediate pegmatite (* phenocrystic phases as per felsic field)		Sedimentary Rocks Chemical Sediments C chemical sed., undifferentiated CH Chert CB Calcareous Rocks (>50% Carb), undifferentiated CBC Limestone CBD Dolomite CBM Marl CE Evaporitic rocks, undifferentiated CES Sulphates CEH Halides CI Banded iron formation, undiff. CIF Ferruginous iron formation CIC Carbonate iron formation CIS Sulphide iron formation CIJ Jasperitic iron formation CIA Amphibole iron formation Clastic Sediments, Organic SO sediments, organic SOL lignite SOS spongilite SOF fossiliferous sediments SB Sedimentary breccia ST Composite turbidite succession SA/SL Sub-metre scale interbedded sand/silt			
Use the COMMENTS column to note actual percentage of veining and mineralisation, note anything unusual, excessive water flows, drilling problems geological contacts etc. NB. If a particular rock does not fit easily into the Lithology codes or there are some unusual features about the rock, assign the closest code and add suffix "*" to denote that extra comments are recorded in the COMMENTS column. You then must use COMMENTS to describe the unusual features of the rock.							
METAMORPHIC AND OTHER ROCKS OF UNKNOWN OR OBSCURE AFFINITY XGR Granulite, undifferentiated XGRF* Felsic Granulite XGRM* Mafic Granulite XGRC* Charnokite XGR# # = o (opx), c (cpx), gn (garnet) XGN Griess, undifferentiated XGNF* Felsic Gneiss XGNM* Mafic Gneiss XGNG* Granitic Gneiss XGNR* Granodioritic Gneiss XGNT* Tonalitic Gneiss XGNM* Migmatite * = a augen, b biotite, gn garnet, h hornblende etc XM Amphibolite, Undifferentiated XMA hb-fs rock XMH Hornblendite XMG hb-fs-gn rock XMHG hb-gn rock XS Schists, undifferentiated XSF felsic, undiff. XSF*# feldspar- *- # XSQF# quartz-feldspar- *- # XSC# chlorite XSB# biotite (* = c chlorite, b biotite, m muscovite, s sericite) (# = gn garnet, st staurolite, cd cordierite, hn hornblende, a andalucite, k kyanite) XK Skarns, undifferentiated XKH Hornfels XKHM Hornfelsed Mafic XKHA Hornfelsed Arenite XKHH Hornfelsed Argillite XKG Garnet Skarn XKHG Hornblendite Garnet XKPG Pyroxene Garnet XCS Calc silicate rocks XP Psammite XPE Psammo- Pelite XE Pelite OTHER ROCKS Alkaline KC Carbonatite KK Kimberlite KL Lamprophyre Tectonites YF fault gouge YM Mylonite YMQ Quartz Mylonite YMS Sericite Mylonite YMQF Quartz-Feldspar Mylonite Veining (where 100% of interval) V Veining with vein minerals in "Veining" fields Mineralisation & Alteration (where 100% of the rock mass) ZS Sulphide, undifferentiated ZPY Pyrite ZPO Pyrrhotite ZPP Pyrite- Pyrrhotite ZPN Pyrrhotite- Pentlandite ZMP Millerite- Pyrite ZSG Sphalerite- Galena ZCL Chalcoite ZCP Chalcopyrite VOIDS, core loss and culture W void, undifferentiated WS stope WL core loss WB backfill WM mullock							
WEATHERING (Is implicit in the Regolith codes, as listed below) 5 Oxidised 4 Moderately Oxidised 3 Slightly Oxidised 2 Very slightly Oxidised 1 Unoxidised 0 Fresh		VEINING Described by the vein min. assemblage, volume and texture, as listed in the attached sheet. Common vein assemblages (Chalice and Higginsville) include: q quartz qc quartz calcite qp quartz pyrite qa quartz albite qaa quartz albite arsenopyrite qx quartz axinite qfd quartz feldspar diopside qf quartz feldspar qfb quartz feldspar biotite cc calcite Percentage: volume as logged Texture mas massive lam laminated coc cockade com comb shr shear crx cryptocrystalline rcx recrystallised		ALTERATION Logged by mineral phase, in order of decreasing percentage. Use regolith codes first if multiple events. Use sulphide phases as well as in mineralisation. Full list of mineral codes in master list Intensity 1 Weak 0- 20% replacement 2 Moderate 20- 60% replacement 3 Strong 60-100% replacement Type rhp Hardpan rfe Iron (undiff, regolith related) rgo Goethite (regolith related) rhe Hematite (regolith related) rmr Manganese (regolith related) rsi Silica (regolith related) rcb Carbonate (regolith related) rja Jarosite (regolith related) rka Kaolinite (regolith related) si Silica kf K Feldspar sr Serpentine tm Tremolite ms Magnesite rg Rodingite su Saussurite fu Fuchsite se Sericite ch Chlorite mu Muscovite bi Biotite ph Phlogopite ka Kaolinite cb Carbonate cc Calcite go Goethite mg Magnetite		MINERALISATION Described by the mineral and % of that mineral in rock; 3 minerals max. Then by mineralisation style Mineral car Carnotite pi Pitchblende ur Uraninite cof Coffinite au Gold sf Oxidised sulphide, undifferentiated py Pyrite cp Chalcopyrite sp Sphalerite gn Galena pn Pentlandite po Pyrrhotite as Arsenopyrite mo Molybdenite ja Jarosite mr Millerite vi Violarite bn Bornite Style gos Gossanous mas Massive mtX Matrix (40- 80%, magmatic) ds Dissar (5- 40%, magmatic) cld Cloud (1-5%, magmatic) vn Vein st Stringer/ stockwork vr Vein and selvage vs Vein selvage only rp Replacement lam Laminated/banded rm Remobilised bx Brecciated bx Brecciated Percentage as logged >= 0.5%; trace= 0.2% And other minerals as per the standard list.	
SAMPLE QUALITY - RC and Aircore Drilling g good quality sample m moderate quality sample p poor quality sample WATER RETURN - RC and Aircore Drilling d Dry Sample m Damp Sample w Wet Sample f High Water Flow SAMPLE RECOVERY - RC and Aircore Drilling % As logged, in increments of 10							