

**Icon Resources Ltd
LOGGING CODES**

COLLAR

Hole Numbering System (eg. IPD001)

- Two letter prefix with I for Icon and next letter for prospect/project (eg. Professor = IP)
- One or two letter drilling type code (eg. D = diamond)
- Minimum 3 digit hole number (eg. 001)
- No spaces

Project Codes for hole number

Code	Project	Code	Project
P	Professor	G	Golden Crystal
B	Bingara	T	Tara
C	Crow King	H	Hiawatha
R	Trilby	E	Grenfell
A	Baldwin	Z	Elizabeth Creek
W	Weabonga	N	New Century
N	Niangala	K	Burketown
U	Upper Hunter	L	Leichhardt
S	Splinter		

Drilling type code for hole number

Code	Definition
AC	Aircore
D	Diamond
P	Pit
R	RAB
RC	Reverse Circulation

EFFECTIVENESS (record if hole reached target)

Code	Definition
1	Noneffective geochemical test, or hole did not reach target
2	Effective geochemical test – hole reached at least lower saprolite zone
3	Hole reached planned geological target

DHAssay

SAMPLETYPE

Code	Definition
BULK	Bulk sample
DS	Dry split
WS	Wet split
GRAB	Spear, scoop or other grab sample
WC***	Whole core (HQ3, NQ2 etc..)
HC***	Half core
QC***	Quarter core
NONE	Complete loss of sample
NICHE	Niche sample
MESH	Sieved sample
NS	Not sampled

H2O (Water content of sample)

Code	Definition
D	Dry
M	Moist
A	Water inflow from rod change
W	Wet
I	Injected water
F	Injected water & additive
T	Top of water table

CONTROL (definition of quality control samples)

Code	Definition
BLANK	
ST*	Standard & standard number
DUP	Duplicate of previous sample
SPLIT	Re-split sample of original composite
RA	Re-assay

DHGeology

ROCK1/ROCK2

(use one ? as suffix if uncertain)

Age (rock type prefix – no space)

Code	Definition
Q	Quaternary
T	Tertiary
K	Cretaceous
J	Jurassic
R	Triassic
M	Permian
C	Carboniferous
D	Devonian
S	Silurian
O	Ordovician
E	Cambrian
P	Proterozoic
A	Archaean

WEATHERING PRODUCTS AND TRANSPORTED ROCK TYPES (prefix L)

Code	Definition
LSO	soil
LCY	clay
LST	silt
LSD	Sand
LGR	Gravel
LGP	Lateritic gravel
LCC	Calcrete
LSIC	Silcrete
LFE	Ferricrete
LGY	Gypsum
LCF	Iron segregations
LGO	Gossan

BASEMENT ROCK TYPES

SEDIMENTS (PREFIX S)

Code	Definition
S	Undifferentiated sediments
SQ	Quartzose sediments
SQT	Quartzite
SL	Lithic sediments
SF	Feldspathic sediments
SFE	Ferruginous sediments
SG	Greywacke
SC	Conglomerates
SP	Polymict conglomerates
SM	Monomict conglomerates
SFG	Fanglomerate
SS	Arenites
ST	Siltstones
SU	Mudstones
SB	Carbonaceous/graphitic sediments

CARBONATES (PREFIX R)

Code	Definition
R	Undifferentiated carbonates
RD	Dolomite
RS	Siderite
RM	Mudstone <10% grains, matrix supported
RW	Wackestone >10% grains, matrix supported
RF	Floatstone >10% large grains
RP	Packstone >10% grains, grain supported
RR	Rudstone, >10% large grains
RG	Grainstone, no mud, grain supported

RB	Boundstone, grains bound post-deposition
RI	Bindstone
RA	Framestone
RC	Crystalline carbonate
CHERTS (prefix C)	
C	Undifferentiated chert
CM	Massive chert
CI	Banded iron formation
CJ	Jasperitic chert
CL	White, gery/black banded chert
GRANITIDS (prefix G)	
G	Undifferentiated granitoids
GQ	Quartz-rich granitoids
GK	Syenogranite/quartz syenite
GS	Syenite
GG	Granite
GM	Monazite/quartz monazite
GI	Monzodiorite/quartz monzodiorite
GT	Granodiorite
GO	Tonalite
GD	Diorite/quartz diorite
MINOR INTRUSIVES (prefix P)	
P	Undifferentiated intrusives
PF	Feldspar dominant, felsic porphyry
PQ	quartz dominant, felsic porphyry
PB	biotite/phlogopite dom lamprophyre
PM	amphibole dom. lamprophyre
PI	andesitic porphyry
PD	dacitic porphyry
PA	aplite
PP	pegmatite
FELSIC VOLCANICS (PREFIX F)	
F	undifferentiated felsic volcanics
FT	trachytes
FR	rhyolite
FD	rhyodacite
FS	felsic volcanoclastic sediment
FC	felsic agglomerate
FV	tuff
INTERMEDIATE VOLCANICS (PREFIX I)	
I	undifferentiated intermed volc
IA	andesites
IT	latite/trachy-andesite
IB	basaltic-andesite
ID	dacite
IV	intermed. volcanoclastics, tuff
MAFIC VOLCANICS (PREFIX B)	
B	undifferentiated mafic volcanics
BI	andesitic-basalt
BM	high-mg basalt
BT	tholeiitic basalt
BL	plagioclase dominant basalt
BA	amphibole dominant basalt
BC	chlorite dominant basalt
BP	porphyritic basalt
BV	basaltic volcanoclastics, tuff
MAFIC INTRUSIVES (prefix D)	
D	undifferentiated mafic intrusives
DD	dolerite
DQ	quartz dolerite
DG	gabbro

DT	quartz gabbro
DN	gabbro-norite
DA	anorthosite
ULTRAMAFIC VOLCANICS (prefix K)	
K	undifferentiated ultramafic volcanics
KA	aphanitic komatiite
KS	spinifex textured komatiite
KC	cumulate textured komatiite
KCA	adcumulate
KCO	orthocumulate
KCM	mesocumulate
ULTRAMAFIC GENERAL (prefix U)	
U	undifferentiated ultramafic intrusives
UP	peridotite (40-90% olivine)
UD	dunite (>90% olivine)
UR	pyroxenite (>50% pyroxene)
UA	hornblendite (>50% hornblende)
US	serpentinised ultramafic
UT	talc dominated serpentinite
UC	chlorite dominated serpentinite
UM	tremolite dominated serpentinite
SCHISTS (prefix Z)	
Z	undifferentiated schist
ZB	biotite dominated schist
ZC	chlorite dominated schist
ZM	muscovite dominated schist
ZS	sericite dominated schist
ZT	talc dominated schist
ZP	feldspar dominated schist
ZQ	quartz dominated schist
ZA	amphibole dominated schist
ZU	fuchsite bearing schist
ZQF	quartz-feldspathic schist
GNEISS (prefix N)	
N	undifferentiated gneiss
NF	quartzo-feldspathic gneiss
NA	amphibolitic gneiss
NC	calc-silicate gneiss
NM	migmatic gneiss
AMPHIBOLITES (prefix M)	
M	undifferentiated amphibolite
MM	actinolite dominated amphibolite
MU	tremolite dominated amphibolite
MB	hornblende dominated amphibolite
MX	pyroxene dominated amphibolite
MXC	clinopyroxene-plagioclase rocks
MXO	orthopyroxene-plagioclase rocks
MYLONITES (prefix Y)	
Y	undifferentiated mylonite
YM	mafic to ultramafic derived mylonite
YI	intermediate to mafic derived mylonite
YF	felsic to intermediate derived mylonite
YG	granitoid-derived mylonite
YS	sericite dominated mylonite
SULPHIDE BEARING ROCKS (prefix X)	
X	undifferentiated sulphide bearing rock
XPY	>50% pyrite rock
XA	>50% arsenopyrite rock

OTHER	
V	Vein (list type in Vn_TYPE)
NS	no sample
STOPE	void/stope
VOID	void/cavity
BX	breccia (unknown host rock)
BXA	breccia with angular clasts
BXR	breccia with rounded clasts
AZ	altered zone with loss of texture and no parent rock type determined

Rock1_Qual/Rock2_Qual

Rock1 and Rock2 descriptor field

*****NB. If using more than one qualifier, separate by a "/", eg. Y/LA

Transported/Weathered Rock type Qualifiers	
Code	Definition
Y	clayey
S	sandy
G	gravelly
A	alluvium
C	colluvium
W	aeolian
U	running sand (at base of channels)
Q	dominantly quartzose fragments
P	dominantly pisolitic fragments
R	dominantly basement rock fragments
E	dominantly pedolith/saprolite fragments
F	ferruginous lithic fragments
PU	puggy
HE	hematite stained
GO	goethite stained

Residual Rock Qualifiers			
BD	bedded	HF	hornfels
GR	graded	CR	crenulated
BX	brecciated	SA	saccharoidal
FT	foliated	GP	graphic
FO	folded	WQ	equigranular
FR	fractured	FL	flow banded
JN	jointed	SC	schistose
PO	porphyritic	HY	hyaloclastic
LA	laminated	SE	seriate
MA	massive	SP	spherulitic
IN	intruded	FU	facing upwards
BW	boxworked	FD	facing downwards
VCG	>30mm grains	GP	granoblastic
CG	5-30mm grains	LI	lineated
MG	1-5mm grains	BI	bimodal
FG	<1mm grains	PH	phyllitic
VFG	<0.1mm grains	CU	cumulate
V	vesicular	OP	ophitic
IG	intergranular	XN	xenolithic
XB	cross-bedded	LC	load cast
FM	flame struct.	RP	ripple marks
PB	pebbly	ME	mesocratic
LE	leucocratic	BC	bioclastic
ML	melanocratic	BT	bioturbated
		ST	stylonites

COLOUR (Sample Colour)

*****NB. Use multiple codes only where there is more than one colour in the rock and separate using a "/", eg. R/B

Code	Definition
R	Red
I	Pink
O	Orange
Y	Yellow
G	Green
L	Blue
P	Purple
D	Black
A	Grey
W	White
K	Khaki
B	brown
QUALIFIERS	(place after colour code, eg. B1)
1	Light
2	dark

REGOLITH (Description of weathering profile)

Code	Definition
TPD	Transported or superficial deposits
LAKE	Lake clays & associated deposits
L	Lateritic residuum: Duricrust and lateritic gravels; complete replacement of primary & secondary fabric
SOIL	Residual soil: Derived from basement material
USAP	Upper saprolite: Lack of primary rock fabric; leached or secondary cemented
REDOX	Redox front: Strong fe-rich zone between upper & lower saprolite; typically strongly goethitic if acidic or rarely hematitic if alkaline; typically <5m thick
LSAP	Lower saprolite: Clay mineral dominated; <70% secondary oxides; primary fabric preserved; chlorite typically present; sulphides absent or replaced; may preserve rock colour.
SAP	Saprolite: Use if upper or lower saprolite not determined.
SAPRK	Saprock: <20% secondary oxides; fine detail in fabric preserved; sulphides weathered; preserved felsic minerals.
FRESH	Fresh rock: Fresh sulphides & silicates

REG_QUAL (Description of regolith zone)

*****NB: separate multiple codes by a "/"

Code	Definition
F	ferruginised
C	calcified
S	silicified
H	hardpanised
W	weakly mottled, <10% mottled
M	moderately mottled, 10-30% mottles
S	strongly mottled, >30% mottles
IH	indurated hematite body
IG	indurated goethite body
GX	pervasive ferruginous boxwork
GL	laminated ferruginous boxwork

SHEAR (Estimate of percent shearing)

Code	Definition
0	Unfoliated & undeformed rock
10	Very weak foliation
20	Weak foliation: continuous or slaty cleavages & other primary flattening deformation involving mineral alignment
30	Moderately strong foliation: poorly developed metamorphic segregation
40	Strong foliation: development of segregation banding; micaceous minerals dominant; pervasive foliation; original rock type discernable
50	Schistosity: moderate to strong segregation banding; some primary textures preserved
60	Schistosity: strong mineral segregation into compositional laminae
70	Strong foliation with slickensiding & mineral growth on s-surfaces; broken rock
80	Protomylonite/cataclastite
90	Mylonite/cataclastite
100	Ultramylonite/cataclastite

SULPHORE_% (Estimate of percentage of diagenetic & hydrothermal sulphide or ore minerals)**SULPHORE_TYPE (record sulphide or ore minerals present, separate multiple minerals by a "/")**

Code	Definition	Code	Definition
AR	argenite	MO	molybdenite
AS	arsenopyrite	PT	pentlandite
BI	bismuth	PY	pyrite
BO	bornite	PO	pyrrhotite
CO	chalcocite	SP	spahlerite
CP	chalcopyrite	SB	stibnite
CB	cinnabar	SU	suplhide-unkn
CV	covellite	AZ	azurite
EN	enargite	MA	malachite
GL	galena		
\$G	gold		

VN_TYPE (record vein types present)

Code	Definition
Q	quartz
C	calcite
B	carbonate
G	gypsum
H	hematite
I	biotite
L	chlorite
P	epidote
A	amphibole
Y	pyroxene
T	tourmaline
F	fuchsite
W	scheelite
O	Iron oxide
U	fluorite
X	sulphide
Y	pyrite
M	molybdenum
CT	cassiterite

VN_% (0-100% estimate of all vein types present)**VN_QUAL (description of veins)**

Code	Definition
A	anastomosing
B	brecciated
C	comb textured
D	diffuse
E	massive
L	laminated
M	multistage

S	sheeted
T	stockwork
V	vuggy
W	wispy

INT_ALT (any percentage between 0 and 100%, see guide below)

Guide%	Definition
0	No alteration
10	Very weak alteration
20	Weak alteration
50	Moderate alteration
80	Strong alteration: replacement of mineralogy, fabric preserved
100	Intense alteration: total replacement of original fabric and mineralogy

ALT_TYPE (separate multiple codes by a "/", list in order of abundance. Use SULPORE_TYP to list sulphide minerals present)

Code	Definition	Code	Definition
BI	biotite	GT	garnet
CB	carbonate	GR	grunerite
CH	chlorite	HB	hornblende
CY	clay	AC	actinolite
F	fuchsite	KF	k-feldspar
FE	Iron oxide	TR	tourmaline
FL	fluorite	DI	diopside
H	hematite	SM	sulphide-mix
KA	kaolin	SS	single sulphide
MT	magnetite	AB	albite
MU	muscovite	PX	pyroxene
SI	silica	GO	goethite
SR	sericite	CC	calcite
TC	talc	EP	epidote
AK	ankerite	RT	rutile/lucoxene
SD	siderite	QZ	quartz
GF	graphite		

ALT_QUAL (textural description, nature of alteration, separate multiple codes by "/")

Code	Definition
U	Unidentified plumbing; pervasive overprint without shearing
UM	Unidentified plumbing; replacement of matrix in fragmental/clastic rock
UC	Unidentified plumbing; replacement of clast in fragmental/clastic rock
UB	Unidentified plumbing; replacement of bedding
UP	Unidentified plumbing; patchy or irregular alteration
X	Hydrothermal breccias
S	Pervasive overprint with shearing as plumbing
SSB	Selective replacement of bedding within shear zone (assume shear as plumbing)
SSD	Selective replacement of mineral component within shear zone (assume shear as plumbing)
SP	Patchy or irregular alteration within shear zone (assume shear as plumbing)
V	Selvage to vein
VSB	Selective replacement of bedding where vein acts as plumbing
VSD	Pervasive selective replacement of mineral component where vein acts as plumbing
VP	Patchy or irregular alteration where vein acts as plumbing
W	Selvage to stockwork
WSB	Selective replacement of bedding where stockwork acts as plumbing
WSD	Selective replacement of mineral component where stockwork acts as plumbing
F	fracture fill
FS	fracture fill with selvage