TNT MINES LIMITED

Lithology Logging Legend

Felsic Rocks

Code	Description
Fv	Felsic volcanic
Fvl	Latite
Fvr	Rhyolitic volcanic
Fvt	Trachytic volcanic
F	Felsic rock undifferentiated
Fg	Granitic rock undifferentiated,
Fga	Aplite
Fgd	Granodiorite
Fgl	Leucrogranite
Fgm	Monzonite
Fgmq	Quartz monzonite
Fgn	Felsic Gneiss
Fgo	Granophyre
Fgp	Pegmatite
Fgt	Tonalite
Fph	Phonolite
Fpo	Porphyry
Fry	Rhyolite
Fsc	Felsic schist
Fsy	Syenite
Ftj	Trondhjemite
Ftr	Trachyte
Fvd	Dacitic volcanic

Intermediate Rocks

Code	Description
Iv	Intermediate volcanic
Iva	Andesitic volcanic
I	Intermediate rock unclassified
Iad	Adamellite
Ida	Diorite
Idaq	Quartz diorite
Isc	Intermediate Schist
Iva	Andesite
Ivd	Dacite

Alkaline Rocks

Code	Description
Ac	Carbonatite
Akm	Kimberlite
Alm	Lamprophyre

Mafic Rocks

Code	Description
Mv	Mafic volcanic
Mvb	Basalt
Mvm	High Magnesium Basalt
Mvt	Tholeiitic volcanic
M	Mafic rock undifferentiated
Md	Dolerite
Mg	Gabbro
Mgq	Quartz gabbro
Mm	Amphibolite
Mn	Anorthosite
Mnr	Norite
Msc	Mafic schist
Mt	Troctolite

Ultramafic Rocks

Code	Description
Uv	Ultramafic volcanic
Uvk	Komatiite
U	Ultramafic general
Ud	Dunite
Uhb	Hornblendite
Uhz	Harzburgite
Upd	Peridotite
Upx	Pyroxenite
Upxc	Clinopyroxenite
Upxo	Orthopyroxenite
Usc	Ultramfic Schist
Usp	Serpentinite

Misc.

Code	Description
nsb	Not rock – backfilled stope
nsc	Not rock – contamination
nsh	Not rock – hole
nsr	Not rock – no sample return
nss	Not rock – stope

Tuff qualifers

Code	Description
tl	lapilli
tc	crystal
ta	ash fall
t	general
tw	welded

Sedimentary Rocks

Code	Description
S	Sediment general
Sbx	Sedimentary breccia
Sco	Coal
Sdi	Diatomite
Slg	Lignite
Sph	Phosphorite
Sva	Tuffisite
Sag	Argillite
Sak	Arkose
Sar	Arenite
Sca	Calcarenite
Scg	Conglomerate
Scy	Claystone
Sdm	Diamictite
Sgr	Grit
Sgw	Greywacke
Slt	Slate
Sml	Marl
Sms	Mudstone
Spe	Pelite
Sph	Phyllite
Sqo	Orthoquartzite
Sqt	Quartzite
Ssh	Shale
Sst	Sandstone
Ssl	Siltstone Sslc = calcereous
Stb	Turbidite
Sti	Tillite
Sct	Chert
Sdo	Dolomite
Sex	Exhalite
Sic	Iron formation carbonate facies
Sif	Iron formation general
Sil	Iron formation silicate facies
Sio	Iron formation oxide facies
Sis	Iron formation sulphide facies
Sjs / Sjp	Jaspilite, jasper / Jasperoid
Sls	Limestone
Smb	Marble
Smg	Magnesite rock (sedimentary)
Sbo	Boundstone (carbonate)
Sgs	Grainstone (carbonate)
Spa	Packstone (carbonate)
Srd	Rudstone (carbonate)

Surfical Rocks

Code	Description
Oal	Alluvium
Occ	Calcrete
Ocl	Colluvium
Ocp	Caprock
Ocy	Clay
Oel	Eluvium
Oik	Recent Karst Fill
Ofc	Ferricrete
Ogo	Gossan
Ogv	Gravel
Ogy	Gypcrete
Ohm	Humus
Ohp	Hardpan
Ois	ironstone
Olc	Lacustrine Clays
Olg	Lag (gravel)
Olt	Laterite (transported)

Volcanoclastic Rocks

Code	Description
Xvag	Agglomerate, volcanic
Xvc	Volcaniclastic
Xvcc	Cataclasite
Xvhc	Hyaloclastite
Xvig	Ignimbrite
Xvlh	Lahar
Xvob	Obsidian
Xvpx	Pyroclastic

Tectonic/ Other Rocks

Code	Description
Xcb	Carbonate rock undifferentiated
Xmy	Mylonite
Xsz	Shear zone or sheared rock undifferentiated
Zbx	Fault breccia
Zfz	Fault rock or fault zone undifferentiated
Zfzg	Fault rock or fault zone (gauge filled)
Xcs	Calc-silicate
Xgn	Gneiss
Xhf	Hornfels
Xsc	Schist
Xsk	Skarn
X	Altered, Unknown Precurser
Bx	Breccia
Bxh	Hydrothermal breccia
Bxk	Karst Breccia

TNT MINES LIMITED
Standard Logging Codes Legend

ALTERATION

GENERIC TYPE

ag	argillic
amp	amphibole
as	aluminosilcate
bio	biotie alteration
ble	bleached, bleaching
chl	chlorite alteration
cly	clay/argillic alteration
crb	carbonate alteration
cs	calc-silicate
epd	epidote
goe	goethite alteration
hem	hematitic
K	potassic (kf-bi)
mg	magnesium
mnt	magnetite
Na	sodic
Nc	sodic-calcic
pc	phyllic (mi-si-py)
pr	porpylitic (ch-ep-cb)
ser	sericite alteration
sil	silica alteration
Slf	sulphidisation
srp	serpentinised
tlc	Talc
tor	tourmaline alteration

STYLE

d	disseminated
m	massive
v	veins
s	stockworks
l	lodes
p	patches. pods
f	foliation controlled
b	bands, bedding controlled

GRAIN SIZE

vf	very fine grained (<0.1mm)
fg	fine grained (0.1-0.25mm)
mg	medium grained (0.25-0.5mm)
cg	coarse grained (0.5-1.0mm)
vc	very coarse grained (1-2mm)
pb	pebbly (2-16mm)
co	cobbly (16-256mm)
bd	bouldery (>256mm)

INTENSITY

I	intense (>50%)
S	strong (30-50%)
M	moderate (5-30%)
W	weak (1-5%)
T	trace
V	variable

H20

d	dry
m	moist
w	wet

COLOUR

gy	grey
bn	brown
gn	green
pi	pink
ol	olive
bk	black
or	orange
pu	purple
rd	red
bu	blue
wh	white
yl	yellow
l	Light
d	Dark

SAMPLE QUALITY

ns	poor recovery
lc	low contamination
hc	high contamination
is	insufficient sample
nc	no contamination

WEATHERING AND REGOLITH LOGGING :LEGEND

ew	extremely weathered
hw	highly weathered
mw	moderatley weathered
ww	weakly weathered
fr	fresh
fx	fracture oxidation

	transported cover
Rlt	laterite
Rcy	clay zone (plasmic zone)
Rsp	saprolite (undiff)
Rsu	upper saprolite
Rsl	lower saprolite
Rsr	sapprock
fr	fresh rock

bl	bleached
cc	calcreted
cp	pedogenic carbonate
fc	ferricreted
go	goethitic
gp	gypsiferous
he	haematitic
hp	hardpanised
in	indurated
ka	kaolinitic
le	leached
mg	magnesite rich
mn	manganiferous
mo	mottled
no	nontronitic
re	reduced horizon
sc	silcreted
si	silicified

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Standard Logging Legend

TEXTURE

IGNEOUS / METAMORPHIC

aci	acicular	pil	pillowed
adc	adcumulate	poi	poikiloblastic
amy	amygdaloidal	pct	polymictic
ana	anastomosing	por	porphyritic
aph	aphanitic	pob	porphyroblastic
apc	aphyric	rcx	recrytallised
apl	aplitic	rel	relict
asb	asbestiform	sch	schistose
bld	bladed	spx	spinifex
blk	blocky	tuf	tuffaceous
cry	crystalline	ves	vesicular
cum	cumalite	vit	vitric
dec	decussate	vug	vuggy
dir	doleritic	xen	xenoblastic
equ	equigranular		
fib	fibrous		**REGOLITH**
flb	flow banded	ble	bleached
gns	gneissic	cem	cemented/concreted
grn	granitic	ear	earthy
grb	granoblastic	fis	fissile
grp	granophyric	frg	fragmental
inq	inequigranular	fri	friable
lam	laminated	gos	gossanous
lap	lapilli	ind	indurated
lpd	lepidoblastic	lit	lithic
mct	mesocumulate	mot	mottled
mig	migmatic	nod	nodular
mct	monomictic	ool	oolitic
oct	oligomitic	pis	pisolitic
oph	ophitic	pla	plastic
oct	orthocumulate	san	sandy
peg	pegmatitic	str	stratiform
ptc	perthitic	sug	sugary
		voi	voided

SEDIMENTRY

agg	agglomeratic
bed	bedded
cla	clastic
cgl	conglomeritic
xbd	crosbedded
gbd	graded-bedded
ibd	interbedded
lay	layered
len	lenticular
mxs	matrix supported
prs	porous
rip	rippled
sor	sorted
stg	sorting good
stm	sorting moderate
stp	sorting poor
tur	turbiditic
uns	unsorted
fos	fossiliferous

VEINING

vl	vein on lithologic contact
vt	veinlet/stringers
vm	massive vein, reef
sw	stockworked or as stockworks

VEIN TEXTURE

jnt	on joints	sac	saccharoidal
skw	stockworked	sht	sheeted
bnd	banded	str	stringers
brx	breccia	sty	styolitic
col	colloformed	vug	vuggy
crs	cross-cutting	znd	zoned
crt	crustiform	con	vein on lithologic contact
mas	massive	grw	growth
rib	ribbon		

STRUCURE

aug	gaugen textured
bou	boudinaged
bxx	brecciated
cbx	crackle brecciated
clv	cleaved
crn	crenulated
ctt	contorted
cta	cataclastic
fau	faulted
fld	folded
fol	foliated
frc	fracture
iso	isoclinal
jnt	jointed
lin	lineated
mas	massive
myl	mylonitic
phy	phyllitic
ptg	ptygmatic
sch	schistose
scl	schlieren
shd	sheared
sls	slickensided
rod	rodded

MINERALS

act	actinolite	csl	cherty silica	kln	kaolin	pre	prehnite
adu	adularia	chl	chlorite	kfp	k-feldspar	pyr	pyrite
alb	albite	chr	chromite	kyn	kyanite	pyl	pyrolusite
all	allanite	cly	clay	lcx	leucoxene	pyx	pyroxene
alp	allophane	cpy	clinopyroxene	lep	lepidolite	pyo	pyrrhotite
alm	almandine	cu2	copper, native	lim	limonite	qtz	quartz
alu	alunite	crd	cordierite	lic	limonite after carbonate	rut	rutile
amp	amphibole	cov	covellite	lis	limonite after sulphide	sch	scheelite
and	andalusite	cry	cuprite	lip	limonite after pyrite	ser	sericite
any	anhydrite	cum	cummingtonite	liz	lizardite	srp	serpentine
ank	ankerite	dps	diopside	mgs	magnesite	sid	siderite
ant	anthophyllite	dol	dolomite	mgh	maghemite	sil	silica
ang	antigorite	epd	epidote	mnt	magnetite	slm	siliminite
apt	apatite	fpr	feldspar	mal	malachite	sme	smectite, montmorillonite
ara	aragonite	fer	ferric iron oxides	mng	manganese oxides	smt	smithsonite
apy	arsenpyrite	flt	fluorite	mar	marcasite	spl	sphalerite
asb	asbestos	for	forsterite	mic	mica	sph	sphene
gld	auridium, gold	fuc	fuchsite	mcl	microcline	spd	spodumene
azu	azurite	gln	galena	mol	molybdenite	sta	staurolite
bar	barite	gnt	garnet	mnz	monazite	stb	stibnite
bio	biotite	gar	garnierite	mus	muscovite	slf	sulphides
bis	bismuthinite	goe	geothite	ni2	secondary nickel minerals	tlc	talc
bor	bornite	gib	gibbsite	non	nontronite	tel	tellurides
cal	calcite	grp	graphite	olv	olivine	tth	tetrahedrite
cct	calcereous	gru	grunerite	ops	opaline silica	ten	tennantite
cbn	carbon (carbonaceous)	gyp	gypsum	otc	orthoclase	top	topaz
crb	carbonate	hal	halite	opx	orthopyroxene	tml	tourmaline
cas	cassiterite	hem	hematite	pb2	secondary lead minerals	trm	tremolite
cer	cerussite	hbd	hornblende	pen	pentlandite	vio	violarite
cha	chalcedony	ilm	ilmenite	phl	phlogopite	wlf	wolframite
cct	chalcocite	jar	jarosite	plg	plagioclase	wol	wollastonite
ccp	chalcopyrite	jsp	jaspolite	plt	platinum	zn2	secondary zinc minerals

TNT MINES LIMITED
Standard Logging Legend

General Codes

Project Codes

LEF	Lefroy

Company Codes

Grid Names

Lease Type

COW	Contract of Work
EL	Exploration License
GML	Gold Mining Lease
L	Miscellaneous License
ML	Mining Lease
PL	Prospecting License

Drilling Codes

Hole Type

AC	Air Core
AG	Auger
BH	Blast Hole
DD	Diamond Drill Hole
GRC	RC Grade Control
RAB	Rotary Air Blast
RC	Reverse Circulation
VAC	Vacumm
TR	Trench Sample

Collar Survey Method

CT	Compass and Tape
DG	Differential GPS sub 1m
GP	GPS Located
LG	Local Grid
RP	Relative position
SU	Surveyed but unknown type
TH	Theodilite
TO	Total Station
UK	Unknown

Downhole Survey

CL	Clinometer
CO	Measured From Rig Set Up
GY	Down Hole GYRO
MX	Maxibore
SS	Single Shot
UK	Unknown but surveyed

Drill Type

AC	Air Core - unspecified
AC100	Air core 100mm
AC85	Air core 85mm
AUG	Auger
BQ	Core 36.5mm
BQ3	Diamond core 33.5mm
DD	Diamond Core - unspecified
HQ	Diamond core 63.5mm
HQ2	Core 63.5mm
HQ3	Core 61.1mm
M	Multiple drilling
NQ2	Core 47.6mm
NQ3	Core 45.0mm
OH	Open Hole Percussion
PQ2	Diamond core 85mm
PQ3	Diamond core 83.1mm
RAB	Rotary air blast
RC	Reverse circulation - Unspecified
RC4_25	Reverse circulation 4.25"
RC4_5	Reverse circulation 4.5"
RC5	Reverse circulation 5"
RC5_25	Reverse circulation 5.25"
RC5_5	Reverse circulation 5.5"
RC6	Reverse circulation 6"
RC6_25	Reverse circulation 6.25"
RC6_5	Reverse circulation 6.5"
RC5_5	Reverse circulation 5.5"
RC6	Reverse circulation 6"
RC6_25	Reverse circulation 6.25"
RC6_5	Reverse circulation 6.5"

Assay Codes

Field Preperation of Samples

DD_Half	Diamond Drilling - Half core sample
DD_Quart	Diamond Drilling - Quarter core sample
DD_Full	Diamond Drilling - Full core sample
DD_Sliv	Diamond Drilling - Half core sample
RC_Spear	RC drilling - Spear Sample
RC_3Tier	RC drilling - 3 Tier Riffle Sample
RC_2Tier	RC drilling - 2 Tier Riffle Sample
RAB_Spear	RAB drilling - Spear Sample
AC_Spear	AC drilling - Spear Sample

Resplit Descriptors

Y	Sample has been resplit
N	Sample has not been resplit

Repeat Descriptors

0	Default
1,2,3 etc	numeric for instance of repeat

Unit of analysis

ppm	Part per million
ppb	Part per billion
pc	percent

Laboratory

Sample Type

Orig	Original sample
CHCK	Check Sample
Dupl	Duplicate Sample
NS	No Sample

Surface Geochemistry Sample Type

Sample Type

AU	Auger
CC	Channel Cut Sample
OC	Outcrop Sample
RC	Rockchip sample
BL	Bleg
SL	Soil Sample
PT	Point Location
SS	Stream Sediment

TNT MINES LIMITED
Geotechnical Logging Codes

Discontinuity Codes
Project Codes
Origin

Ind	drilling induced
Nat	predrilling fracture
Par	fracture partially across core
trc	trace of feature
Unk	Uncertain if drilling induced

Form

P	Planar
S	Stepped
U	Undulating

Texture

Ro	rough
Sl	slickensided
Sm	smooth

Discontinuity Type

B	bedding
C	Contact
F	Fault
H	Shear
J	Joint
L	Cleavage
S	Schistocity
V	Vein
X	Foliation
R	Fracture
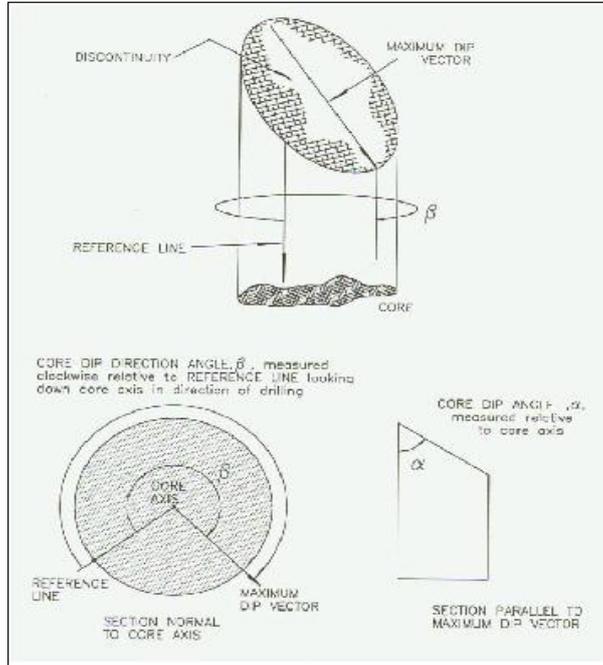
Structural Logging Codes
Structural Type

Faults /Fractures

F	Unspecified
Fj	Joint
Fr	Fracture
Ft	Fault

Lineations

L	Unspecified
Lb	Boudin
Lc	Crenulation
Lf	Fold Axis - unspecified
Lfa	Fold Axis - Antiform
Lfs	Fold Axis - Synform
Li	Intersection
Lm	Mineral Lineation
Lr	Rod
Ls	Slickenside
Lt	Stretching
Lu	Mullion

S	Foliation Unspecified
S	Unspecified
S0	Bedding
S0	Contact
S1	Axial plane 1st deformation
S1	Foliation 1st deformation
S2	Axial plane 2st deformation
S2	Foliation 2st deformation
S3	Axial plane 3st deformation
S3	Foliation 3st deformation
S4	Axial plane 4st deformation
S4	Foliation 4st deformation
Sa	Axial plane unspecified
Sb	Banding
Sc	Crenulation
Sd	Deformation
Sf	Flow
Sp	Pillow

Foliation

Sv	Cleavage - Unspecified
Svp	Cleavage - Spaced
Svs	Slaty Cleavage
Sz	Shear

Ceining

V	Vein
Vbu	Bucky Vein
Vbx	Breccia Vein
Vca	Cockade Vein
Vcf	Colloform Vein
Vcs	Crackseal Vein
Vfb	Fibrous Vein
Vlm	Laminated Vein
Vsw	Stockwork Vein