

311154

Hole No: TCD6  
 Prospect: Thomas Creek  
 Section: 369600mE  
 Co-ordinates: 369600 mE 5750 mN -220 mRL  
 Azimuth: 180 °G 167 °M Inclination -45°  
 EOH: 120.00m  
 Logged by: Robert Reid  
 Date commenced: 18/6/96 Date completed: 20/6/96

**0.00-5.80m**

greyish brown and light green feldspar-augite-phc Andesite/Micro-monzodiorite?. This distinctive unit is moderately porphyritic with euhedral cream coloured feldspar laths (40%) of 2-4mm by 1mm diameter. Green augite phenocrysts of up to 3mm constitute 10%. Phenocrysts reside in a very fine grained sandy/grainy appearing specked groundmass which varies in colour from greyish brown to sandy cream. Mag(w) in patches, < 2-3%. Epidote occurs as late veinlets(w), < 1%. Disseminated py (1%) is often seen replacing augite, which is also weakly chloritised.

**5.80-11.25m**

very pale green fine to medium grained porphyritic Diorite. feldspar-augite phenocryst crowded. Texture varies considerably from fine grained equigranular and very weakly augite-phc to medium grained, near equigranular Diorite to clearly porphyritic Diorite. Outwardly appears little altered but contains py (1%). Chilled margin at 11.25m. This unit may be later than the brown feldspar-augite Micro-monzodiorite?

**Minor Intervals**

9.00-11.25m cpy(0.5%), py(1%)

**11.25-12.70m**

light brown moderately feldspar-augite-phc Andesite/Micro-monzodiorite(As for 0.00 to 5.80m). cpy (<0.5%), py(tr-0.5%) dss. Contains grey patches (30%) near upper contact with mag(m) in these patches. Mag(w/m) overall. Late pale green (sericitic) and pinkish-red (ks < 10%) veins, overall 1%.

**12.70-36.00m**

light green (and light pink or grey locally) porphyritic Diorite. Primary textures appear highly variable and are apparently closely related to the alteration intensity expressed within minor intervals. Textural variants present include:-weak to moderately augite-phc and feldspar-augite-phc Microdiorite/Diorite displaying augite crystals up to 4mm in diameter within a fine grained fuzzy interlocking? feldspathic groundmass(with fine grained primary magnetite crystals locally), strongly porphyritic Diorite and altered nondescript Intermediate rocks. Some of these textural variants here may represent separate intrusions but are lumped together for ease of logging. This and subsequent units/intervals describe the same rock type but variations in alteration intensity are apparent.

**Minor Intervals**

- 12.70-17.00m light green, with sil(s) cpy(tr) over upper 15cm adjacent to contact.
- 17.00-19.40m light pink sil(m), ks(w) pervasive alteration. Similar alteration is repeated on the other side of the next interval; may be zonation about the following intrusive. py (< 1%), cpy(tr, 0.5% locally).
- 19.40-21.20m light green moderately feldspar-augite porphyritic diorite (intrusive?). mag(m). Displays a fine grained black magnetite speckled groundmass. Augite phenocrysts are often tan coloured due to siderite/smectite replacement. Tan (siderite/smactite)-red(ks, < 1%) veins are sporadic (< 1%). py(tr) cpy(tr).
- 21.20- 22.94m grey and pink ks-sil altered Intermediate, mag(m), pervasive sil(m/s), ks(w/m). Primary textures wiped out. Disseminated sulphides, py(1%) cpy(tr), are often evident within silica alteration adjacent to chlorite/actinolite? veins, which constitute 10%. Apple green epidote occurs on fracture planes as veins(5%), epidote flecks (<1%).
- 22.94-24.60m grey(variable intensity) strongly porphyritic Diorite. Mag(m), silicification variable w to m, py(3%), locally 5%, includes 10cm of dark grey moderately porphyritic andesite intrusive displaying feldspar laths.
- 24.6-28.10m as for 17 to 19.4m, py(1-2%, dss), pervasive ks(w)-sil(w/m). Alteration fades near end of interval.
- 28.10-36.00m light green feldspar-augite-phc And/Diorite Primary texture is often fuzzy, varying from augite+/-feldspar-phc Andesite to clearly feldspar-augite-phenocryst crowded Diorite. Appears to be very weak silicification of the groundmass. Py(tr) often as isolated veinlets (<0.5%).

**36.00- 83.0m**

grey/light green and pink feldspar-augite porphyritic Diorite. This represents a zone of variable ks(vw to s) and sil overprint(w to m/s). Ks-sil is matrix pervasive and patchy/domainal matrix pervasive. Pyrite varies from trace to mostly 1-3%, particularly in ks rich zones where py occurs as disseminated and vein(tr) form. Tan coloured siderite-smectite veinlets are evident in trace quantities with widths up to 1.5cm. Groundmass chlorite alteration is trace to very weak overall, but is present with py-ser(w)-ep(w) in diffuse replacement /veined zones.

**Minor intervals**

- 42.0-47.0m breccia texture containing pink ks altered clasts and grey magnetite altered patches.
- 63.00-71.30m pink ks(m/s) sil(m), py(1-3%), cpy(tr-0.5%), patchy distribution of disseminated sulphides.
- 73.92-76.55m ks(m), sil(m), cpy(tr-0.5%), py(1-2%), ch(+/-green tourmaline?)-py-sil+/-cpy veins constitute 15 to 20%. The veins are frequently diffuse edged.

**83.0-120.00m**

grey/light green feldspar-augite porphyritic Diorite. Similar to above but less altered overall. This unit is largely monotonous displaying a nondescript fuzzy groundmass, presumably imparted by pervasive silicification. Locally feldspar-augite phenocryst crowded Diorite and moderately porphyritic andesitic texture is evident. Patchy domainal k-feldspar alteration reaches moderate intensity, but is mostly weak to very weak.

Silicification is weak and pervasive throughout, reaching moderate intensity where ks is strongest. Narrow bleached/leached zones displaying an etched or pitted texture are infrequently evident and are comprised of silicification and disseminated pyrite with minimal k-feldspar. Disseminated pyrite concentration is variable, mostly tr to 1%, but reaches 3% over 20cm intervals locally. Cpy is extremely intermittent, typically within green tourmaline veined zones. (tr-locally 0.5% over 30cm). Two vein types occur:- ch-green tourmaline(/act?)-sil-py+/-cpy are sparsely(1%) scattered., and tan/yellow siderite-smectite veinlets are late overprinting the former (<1%). These veins are typically of <1 to 3cm in width. A diffuse edged vein occurs at 115.30-115.40m and is unlike the typical sharp edged vein form.

Epidote(w) is often evident at chlorite-tourmaline vein margins and on fracture planes.

Minor intervals

83.20-83.45m zone of pervasive silicification(s) evident as a diffuse edged vein like form of leached appearance. py(6%), green tourmaline <1%.

87.47-87.90m As above, with ks(w), cpy(<0.5%), py(1%), tourmaline(5%).

94.75-95.10m cpy(tr), associated with green tourmaline.

96.95-97.60m cpy(<0.5%), py(1%) dss.

98.35-98.50m ch-py(2%)-ks-sil-cpy(<1%) veined zone.

98.80-103.00m pink coloured zone of ks(m), sil(m), cpy(tr), py(tr-0.5%) with patchy epidote(w).

113.30-114.35m ks(m), sil(w/m), mag(m), py(1%), cpy(<0.5%). Tour-py-mag-veining constitutes ~30% with late green smectite veins (3%).

EOH @ 120.0m