2 DDHs E of Wanokana R. 021193 ① of 5

Aug 30/93 Trav #18 DD CORE @ Island Cu Mine

QUICK LOOK

@ DDHs EC 71 & EC 72 E of Wanokana R.

(poss. a 3rd hole drilled also?) to West (172) & East (171) of Dacite quarry site.

EC 71 Δ93AP18/1

0-0 (OB) 0-127 casing

127 highly aetd v.f.g 'dacite'. Cream white & py xls ('aplitic' look).

XRD aetn ~130' 93AP18/1-136 grey patches/veins (irregular) altn rel. dk grey; Semimassive to 2". "Sericite?" Check dumortierite/pyrophyllite. ?

>150> minor quartz patches. Granular (bleached) texture (almost) looks intrusive? Totally bleached

No matrix is 50:50 +xls & matrix is aplanitic.

@ 242' distinct granularity & py accentuated (flow) banding ~ 6" sectn

>245 >clay · aetn; < siliceous

small crackle-type, brittle fracturing over short stretches.

>300 gneiss loss of graininess, overall appearance & aphanitic-matrix & 15% ≤1 mm phenos feldsp in siliceous matrix.

@ 284' typical specimen.

93AP18/1-137 eoh @ 532'

EC 72 Δ93AP18/2

0.0.0 OB (casing) 0-139'

pyrite-speckled dacite; SOS @ EC 72. White/cream aphanitic to aplitic, v. rarely Tic grains.

~300 highly fract'd, clay aetd ± CO3?

@340' Contact Fw bxd andesite. Δ colour to greenish rx

340- bsland chloritized, wkly pyrite veined. passing ~ 400 in to wkly fract'd calc ± gal. veined bsland.

@412' 93AP18/2-138 eoh @ 500' in m.g. bs and quite dark chloritic (biotitic) rock & rel. good looking fracs & py ± cpy? ± style system?

Aug 30/93 DDH 154 Mt McIntosh. (2) of 5

EC 154 vertical - top of McIntosh.

0 - 15.5' (OB) casing

15.5 - 17.0 Rhyolite? ? Mottled bx but surface-leached streaky py.? diffusely mottled / saccharoidal grains py + brownish spots

17.0 - 22.0 Qtz (pebble) sand-sized intrusive dyke (pebble/sand streaming channelway). Str. fractd & much clay internally & in wallrocks 'Rhy' has diffuse grey silic. vns & py selvages + stringers ~70° CA

pebble (Bx) dyklet is non subll CA or v. little discordance. v. s. clay smear

x̄ grain size qtz subangular 1-2mm, Σ ~ 20% clasts, clay pebbles 5% c 75% matrix. c 18.5-19 cs mottled patch (clast) - crushed v. clay alt'd flow sus

~20' coarser, more abundant clasts as layer/band c 30-80° CA but 20.5 subll sand/pebble streaks/G

→ Looks like sand injections into sc. coarser pebble bx.

~21' rounded clast supported qtz grains in sl. vuggy silica bx patch - all clasts fishnetted & limonite

c 22' qtz vnlts/limonite streaks on unsheared looking - flow structure? c 75 to C.A. contact

22 - 121.5 vuggy silica

hard contact into typical limonite impregnated 'sparkly' recrystd vuggy silica rock

Overall good vugginess in places to 20%, lesser 2-4" dense grey silica patches, there have white 'gash' qtz vnlts to 2mm - irregular

eg 32-40' locally 'pebbly' bx textures as in localized proto pebble bx streaming zones

Fracts, cracks might have rotary finer qtz but are accentuated by limonite; locally limonite totally plugs cavities to 5mm

c 57-59 v. highly vuggy, proto bx texture

59-60.5 sugary with banded, totally new brown limonite sparkly what? have c 15° to CA.

fluid streaming internal sand layers c 65° CA bifurcating? streams I think

22-121.5 cont'd

>60.5 V.S. vugginess $\bar{x}$ ~ 25 up to 50% with disrupted qtz stockworks, also veinlight & fractal. everywhere suggestions of 'pebbling' (proto fluid Streaming) dyking.

→ * c69'-93AP18/3-139 — typ. vuggy silica & s. limonitic wash showing disrupted qtz vnlts & patchy qtz pebble proto bx (streaming).

c88-89 bx'd qtz frags, angular prob sub // CA with matrix infusion of (soft)? (rhyolite?) now totally hemag. limonite. possibly silicified limonite bx-in fill / hypogene? limonite??

eg c 89.0' check 'limonite' bx matrix

? XRD 'limonite' — 93AP18/3-140

generally sos & sl. variations in vugginess ± proto bx

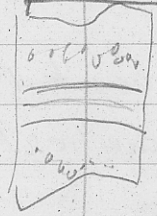
V.S. sub vertical fractured + xlline qtz band/veining & v.s. (dark) goethitic limonite

— 103 — 105.5 ~ 0 to 10° to CA Disrupted qtz vuggy vertical sheeted stockwork

>110' subtle Δ to more limonitic (darker) goethite & patchy qtz - disrupted patches of proto bx and thin streaks sugary qtz as vnlts

c 116.5 - 117 relict ash tuff? band @ 80° CA & sugary veinlight

T.S. c117' 93AP18/3-141 aphitic qtz containing bands & sparse qtz ash-sized clasts. fluid streaming or relict tuff?



vuggy qtz clast bx (original bx?) as vuggy silica rock?? & 1 @118' patches sugary (rhyolite) fragels in bx as matrix

Contact is diffuse bx zone c 121.5

> grey qtz disrupted vns/patches 5-10%, wkly vuggy & patchy kaol mottles in 'streaky' to cs. mottled type. (cont'd.)

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121.5 - 170 Mottled bx ('pyrophyllite bx')

121.5 – 127 Cs mottled, strongly silicified & dark grey matrix gb & v- irregular streaky to patchy Kaol lumps & streaks like below 'Camp Lake' outcrops. Mottling looks tan/buff & white rinds/coms. Prs 5, 34 lots a diaspore here ± pyroph.?

(This is like 15.5 - 17')



– See AP mottled texture photos

all perv limonite (orange) impregnated colours.

V.S. limonite wash + fracts 127 – 130 m⇒f mottled, more even textured 'spotted' mottle with 50% kaol ~ 2m - 5mm patches in grey siliceous matrix. Less limonite > 130'

little⇒no limonite wash, on fracts mainly

Colour Δ in 1-3 patches (gms) ^ grey (matrix) siliceous ⇒ chalky white matrix + mottles



c 145.8' Streaks & patches 'aplite' = rhyolite or v/fine diaspore / zunyite in m.g. mottled rock as fingers & dykelets that spall off tiny wall rock keps. V. irregular shapes / trend to aplite / acm injections / acms.

TS XRD dyke ~~dyke~~ ? AP 18/3 – 142 c 146'

SOS mottled bx to 170' – ± matrix ^ acm (chalky) patches. Locally 2 – 6" probx^n patches.

60°

170 Contact c 60° CA

EC154 contd

170 - 182 Dyke - milled sand. on margins to rounded qtz pebbles in core X 3-4mm, max qtz patches (fract'd) clasts to 1' (rare). base is 'bx' ≠ St. clay acts, & possibly plucked mottled clasts to 2-4" internally limonite (cross gang mgs ground clasts ~180-180.5

dyke is w/in vuggy silica (leached)

T.S. 93AP 18/3-143 contact @ 170'

170 - 216 SOS m.g. mottled limonite in fracts & in some clasts as pseu. colon large, irregular patches white clay H<3 = kaol.

216 - 229 vuggy silica in m. mottled rock patchy wk → m vuggies in typ. mottled rock as above Some clay in vugs here < limonite but still strong as 'wash' ~225 4" "aplite" patch

229 - 234 Rhyolite dyke Auto bx'd

~~c 30° CA~~ fluid streamed & clasts

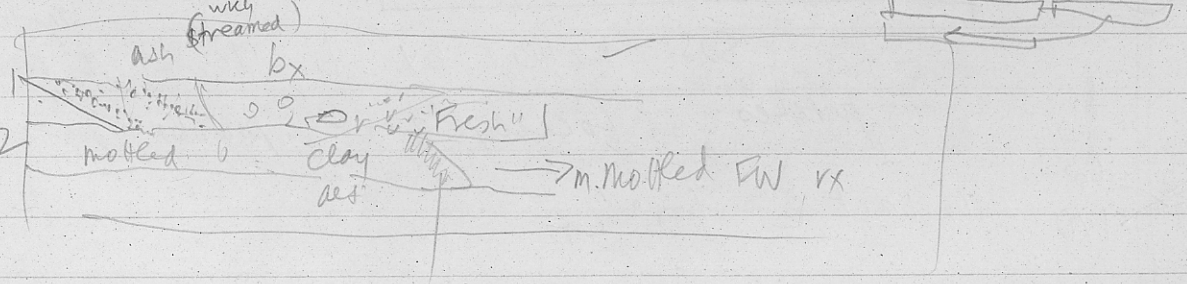
See → photograph

fg margin passing in to ash → lapilli tion (bx'd) grey rhyolite. Fresh (dark) grey rhy has incipient mottling but not chalky clay until base. Bottom is sugary & v.s. kaol. acts.

FW is typical v.s. chalky kaol mottled. / HW is w/m vuggy silica! bar ~ 60° CA

!! This is threatomagmatic dyke !!!!

→ @ 231.5' 93AP 18/3-144



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EC 154 cont'd

234–261 m Mottled rock 'Andesite' – SOS – as above but paler, chalkier ± less limonite, Δ in clay to more intense clay > silica.

>240 mottling becomes seriate m→fine. Patches & streaks of clay H ≈ 3.

Limonite = hematite + coarse limonite (jarositic)

≥250 'wispy' fractures start, rare qtz vnlts as sm earlier more coherent grey vnlts to 4mm ø. darker selvages & paler cores.

261–265 'Pebble' Sand fluid streaming dykelet

261–261.5 Swirly, flowed? pure kaol "vein"

265±–289 Silica rock – not vuggy, 'dense' to sl. porous silica frame ± vuggy (l-g) patches contains some disrupted vnlts & bxd proto bx pebbles to 2–3".

e 279' 93AP 18/3-145

hydrothermal Quartzite rock & limonite stockworks

281 ≈ f faint bxd > 281–284 } qtz vnlts ~ 45° CA in faint bx/shear?

290 287–290 } v.c. clay/crush/limonite was & (prev)

289–325 Mottled (again) m-g. SOS

Some patchy bxn/fracturing, rare grey indistinct qtz vnlts, stronger crush & clay actn >320

325< WR 93AP 18/3-146

e 325' 30° to CA streamed, layered contact

photo

mottled

hyd. bx

sulphide matrix

fm 300–320'

WR of last mottled before huge hyd. bx selection

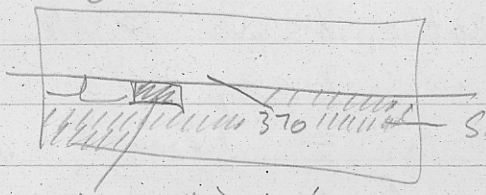
93AP

EC154 cntd

325-365 **Hydrothermal Bx.**

photo ± limonite wash, milled mottled clasts
toilet f-g stuff FW 365-372 is silicified.

photo



35°

Note v little qtz in this bx - not pebble bx type. bare contact 35° CA.

365-375 SOS mottled m-g silicified pervasively
365-372
a screen in bx

375-397 **Hydrothermal Bx.**

a few fluid-streaming layers/bands at odd/random orientations give this away vs depositional bx

WR mud bx
376-394
93AP1813-147
Hs@386'

Clay alt, not limonitic except in thin fracts

397- mottled again, m→f sericite mottling & patches bx
eg 398.5-401, 402-403 and a few 5mm streaky fracts, fluid streamed seams
± 402.

patchy "sheared" thinly banded fracts, units of clay
rare grey greasy qtz units of bx zones.
many little fluid streaming dykelets.
a few to 4" silicified massive grey qtz patches
all in mottled 1 bx has 2" mass by replacement of bx matrix

45°CA 419-420 pebble stream, v.s. milled well 45°CA

EC 154 Cont'd

397 – 432

425 – 426 "Shatter" bx & sulphide matrix + mass limonite infill.

50° 429.5 – 431 ground up bx → mass hom ochroos kaol/clay (gouge) zone laminated 4" contact with v.f.g white qtz @ 50° CA

432 – 484 Mottled again

but patchy perv to spotty/patchy f.g wispy silica

432 – 445 silica

* more siliceous vx are bx'd ! In between wispy silica skeletal matrix / framework has kaol mottles

numerous 2" bx / crackle zones & smp sulphides

(mosaic) bx textures in numerous patches ± surrounding silicification

470 – 484 – v.s. clay + perv limonite acts. – bxd

≠ fault crush 484 – 487 f

487 – 493 Rhyolite (dyke)

phreatomagmatic g/s pebble streaks in it!

93AP18/3 – 148 @ 491.5 v. fine flow banding // dyke walls !

@ ~ 10-15° CA

493 – 510 Mottled again

numerous fine pebble bx's

g/s 2" @ 45° CA poss also rhyolite dykes

@ 508'

93AP18/3 – 148

also (WR) @ 508 –

510 – 546 @ Hyd bx
v. siliceous > 528'

93AP18/3-149 @ 528'

Faucet bx/gauge loka by
546–554

>554' DRASTIC Δ in altn / Rock type.

3 ½ quick reference Samples
that's it folks!

93AP 18/3-150 @ 586'
18/3-151 @ 710'
18/3-151a @ 851'