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19th June, 1985

REPORT CMS 85/6/9

YOUR REFERENCE:	Letter dated 30.5.1985
DATE RECEIVED:	7th June, 1985
SAMPLE NOS.:	355129 - 355135
SUBMITTED BY:	A.M. Hespe
WORK REQUESTED:	Petrology

H.W. Fander, M. Sc.

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MC-12

REPORT CMS 85/6/9

Seven drill core samples from DDH-MC 12 in the Mt. Charter area were received for petrological examination. Representative thin-sections were prepared and examined together with their respective offcuts, with carbonate stain tests performed as warranted. Attached tabulated descriptions summarise the microscopic data and include interpretative comments.

Summary

This suite comprises altered basaltic to andesitic and leuco-andesitic/dacitic volcanics with subordinate sediments.

Volcanics are variously massive to flow-brecciated and subaqueously brecciated/sediment-matrixed types, typically chlorite-sericite-altered with patchy quartzofeldspathic alteration overprints, partly vein-controlled, resulting in mottled grey to pinkish mesoscopic colour variations.

Relict features are consistent with a variation from chromiferous basaltic to non-chromiferous pyroxene-porphyritic andesitic and relatively ferromag-deficient (leuco-)andesitic facies typical of the Que River/Hellyer volcanic complex. The intercalated pelite (355129) is carbonaceous, syngenetic-pyritic and probably reworked-tuffaceous in part, although finer details are obscured by low-grade regional metamorphic effects.

D. Cowan, B. Sc.

CENTRAL MINERALOGICAL SERVICES

Sample No.	Classification - Composition	Fabric	Accessories	Comments
355-129 (T.S. 53632) 99.1m	Carbonaceous Pelite. Semi-sericitic white mica with pervasive ultrafine carbonaceous matter, abundant silt-sized relict detrital muscovite flakes, subordinate to minor quartz, sericitised feldspar grains. Disseminated pyrite.	Silty clastic, banded on sub- to fine millimetric scale. Weakly concordantly cleaved, high-angle microcrenulated.	Minor clastic leucoxenic semi-opaques. Minor clots, late veinlets of cloudy calcite, chlorite.	Incipiently sheared/microcrenulated argillaceous siltstone/silty shale, carbonaceous and syngenetic-pyritic. No tangible facing criteria.
355-130 132.7 m	Perlitic Pitchstone. Semi- to sericitic white mica aggregates with sporadic interspersed films, foliae of calcite, minor microcrystalline quartz. Conspicuous leucoxenised opaques. Disseminated fine pyrite.	Phyllitic. Relict coarsely lithic fragmental with perlitic felsitic clasts, matrix.	Sporadic sericitised/leucoxene-stained ferromag, silicified-sericitised feldspar phenocrysts in clasts,	Thoroughly sericitised vitric clastic lava ("tuff lava"), "andesitic" characteristics. Quartz, calcite, pyrite as accessory alteration phases. matrix.
355-131 190.4 m	Andesitic Breccia. Clasts of chloritic/epidote-stained to silicified-feldspathised, porphyritic/variably felsitic andesitic lava. Sparse interclast matrix, minor veinlets of quartz, albite, adularia, calcite.	Random millimetric to centimetric, moulded to quartz-feldspar-calcite-matrixed, andesitic-textured clasts.	Pervasively disseminated fine to ultrafine pyrite, rare pale sphalerite (in interclast vugs).	Chlorite(-sericite-epidote)-altered andesitic lava breccia with a quartz-feldspar-carbonate alteration overprint, partly veinlet-related.
355-132 289.4 m	Andesitic Breccia. Clasts of variably chloritic to silicified-albitised, porphyritic/variably perlitic andesitic lava. Sparse tuffaceous dolomitic impure chert matrix. Minor vugs of quartz, late calcite veinlets.	Analogous to 355131.	Minor pyrite disseminations, minor traces galena, pale sphalerite in silicified zones, matrix.	Close affinities with 355131, with relatively pervasive silicified-feldspathised zones; faintly Fe-pigmented and mesoscopically pinkish.
355-133 343.2 m	Basalt Breccia. Clasts of sericitised/calcitised, variously (altered) feldspar-pyroxene-porphyritic to amygdaloidal scoriaceous lava. Matrix of weakly dolomitic chloritic impure chert/cherty argillite.	Pelite-matrixed breccia with slaty to phyllitic overprint. Random orientated clasts (<1 mm - 1cm+).	Fine pyrite in clasts, ultrafine pyrite in matrix. Relict primary leucoxenised opaques and chromite in clasts.	Variably "scoriaceous" to andesitic-textured altered basaltic clasts, pyritic pelite/impure chert matrix. Subaqueous basaltic breccia characteristics.
355-134 345.9 m	Basalt Breccia. Clasts of variously strongly augite-porphyritic to strongly chlorite-quartz-adularia-amygdaloidal, chlorite-carbonate-stained lava with a sparse interclast matrix of recrystallized calcite.	Random angular to irregular semi-moulded to calcite-matrixed clasts.	Minor sheared-recrystallized calcite veinlets. Disseminated fine to ultrafine pyrite, chromite, traces of epidote.	"Andesitic"-basaltic, chromiferous, flow-marginal breccia characteristics. Chlorite-calcite-altered with chloritic quartz-adularia vesicle infillings.
355-135 (T.S. 53638) 370.7m	Leuco-andesitic Breccia. Zones of chloritic-sericitic to sericitic/partly silicified, albitised plagioclase-porphyritic, leuco-andesitic lava with ill-defined displacive cherty quartz-healed fractures.	Flow-banded, weakly perlitic; fractured, mildly sheared.	Leucoxenised opaques, rare quartz phenocrysts, sporadic sheared, variably chloritic calcite veinlets.	Fractured, altered, weakly veined and sheared, but primarily a relatively massive lava. Leuco-andesitic/dacitic in contrast to 355131, 355132; similarly altered.