

17 DEC 1984

Central Mineralogical Services



39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. A.M. Hespe
Geologist
Aberfoyle Exploration Pty. Ltd.
P.O. Box 952
BURNIE / TAS. 7320

11th December, 1984

REPORT CMS 84/11/39

YOUR REFERENCE: Letter dated 23.11.1984
DATE RECEIVED: 26th November, 1984
SAMPLE NOS.: 315756 - 315764
SUBMITTED BY: A.M. Hespe
WORK REQUESTED: Petrology

H.W. Fander for

H.W. Fander, M. Sc.

Copy to:
The Chief Geologist
Aberfoyle Exploration Pty. Ltd.
144, Camberwell Road
HAWTHORN EAST / VIC. 3123

MC-10

REPORT CMS 84/11/39

Nine drill core samples from MC-10 in the Mount Charter area were received for petrological examination. Representative thin-sections were prepared and examined together with the respective offcuts, with carbonate- and feldspar staining tests performed as warranted. Attached tabulated descriptions summarise the microscopic data and include interpretative comments.

Summary

This suite comprises entirely altered basic to felsic intermediate lavas, with the drilled sequence, as sampled, reflecting a basic unit (basaltic to trachyandesitic, phenocrystal pyroxene-rich), flanked by relatively felsic (leuco-andesitic to trachytic) units.

The pyroxenic unit is represented by samples MC-10/49.9 m, 83.8 m and 200.9 m, and carries accessory chromite. A similar differentiation trend from basaltic to andesitic and trachyandesitic has previously been noted in the Que River pyroxenic basaltic andesites.

The underlying relatively altered felsic volcanics include minor flow-breccias and a typical multiply altered perlitic "pseudofragmental" andesite analogous to those previously described from Mount Charter and Hellyer. Strictly pyroclastic and sedimentary facies appear absent from this sequence, as sampled and examined petrologically.

D. Cowan, B. Sc.

Sample No.	Classification - Composition	Fabric	Accessories	Comments
315756 (T.S. 52171) MC-10/43-2	<u>Veined Trachyte</u> . Minor albite phenocrysts, frequent quartz amygdaloids in a pervasively chlorite-epidote-stained alkali feldspar-microlitic groundmass. Frequent irregular veinlets of quartz, chlorite, albite, adularia.	Weakly porphyritic, finely amygdaloidal, subtrachytic. Mildly displacive, crudely crustiform veinlets.	Minor epidote, traces of prehnite in veinlets.	Extensively veined/moderately altered amygdaloidal trachyte. Vein-quartz is crystallized chalcedonic in part.
315757 MC-10 49-9	<u>Amygdaloidal Trachyandesite/Trachyte Breccia</u> . Weakly silicified/quartz-adularia-epidote-amygdaloidal porphyritic trachyandesite in chilled marginal contact with a sericite-chlorite-prehnite-stained trachytic breccia.	Weakly flow-structured, marginally chilled andesitic. Lava-matrixed/locally shale-matrixed breccia.	Fine red sphalerite, chromite, traces galena, chalcocite in trachyandesite; pyrite, carbonaceous matter in	Trachyandesite is strongly augite-porphyritic, with minor silicified K-feldspar phenocrysts. Chilled sub-planar contact with ashy pelite-breccia, xenolithic trachytic breccia.
315758 MC-10 83-8	<u>Amygdaloidal Trachyandesite</u> . Frequent augite-minor albitised plagioclase, silicified K-feldspar phenocrysts, sporadic chlorite amygdaloids in a chlorite-epidote-stained subtrachytic groundmass. Minor albite-adularia-	Flow-banded, weakly flow-brecciated amygdaloidal subtrachytic. prehnite veinlets.	Relict primary chromite. Traces of pyrite, calcite, pumpellyite in amygdaloids, veinlets.	Close affinities with the 315757 trachyandesite. Accessory chromite is dark red, characteristic, consistent with differentiates of the basalt/basaltic andesite unit.
315759 MC-10 200-9	<u>Amygdaloidal Basalt</u> . Extensively cloudy carbonate-epidote-pseudomorphed pyroxene, minor albite-chlorite-pseudomorphed feldspar phenocrysts in an extensively carbonate-chlorite-altered groundmass. Sporadic epidote-	Porphyritic/weakly amygdaloidal basaltic. chlorite-calcite amygdaloids.	Chromite. Sporadic re-crystallized calcite veins with discontinuous films, selvages of quartz, epidote.	Relatively altered amygdaloidal basic lava with relict primary chromite, confirming petrographic affinities with 315757, 315758.
315760 MC-10 246-2	<u>Sericitised ?Andesite</u> . Conspicuous semi- to sericitic white mica-pseudomorphed feldspar phenocrysts in a sericitised groundmass with disseminations, clusters of fine-grained pyrite.	Flow-banded/brecciated "andesitic". Moderately sheared (fine-grained phyllitic).	Leucoxenised opaques, minor ill-defined kaolin-chlorite-pseudomorphed phenocrystal ferromags.	Primary compositional and some textural detail obscured by relatively marked alteration. Relict features consistent with an andesitic flow-breccia.
315761 MC-10 248-3	<u>Amygdaloidal ?Andesite</u> . Fine-grained muscovite-pseudomorphed feldspar, minor similarly altered ferromag phenocrysts in a sericitised feldspar microlath/chloritic mesostasis groundmass. Sporadic calcite vein-	Flow-structured/vaguely flow-brecciated. Incipiently sheared. ets.	Conspicuous leuco-xenised opaques. Minor chloritic amygdaloids with rare microscopic pyrite, galena.	Possibly strictly trachytic, but reasonably correlated with the leuco-andesite-trachyte sequence. Alteration analogous to 315760.
315762 MC-10 249-3	<u>Amygdaloidal "Trachyte"</u> . Frequent quartz micro-amygdaloids, minor albitised plagioclase phenocrysts in a feldspar-microlitic groundmass with a cloudy epidote-chlorite-stained glassy mesostasis. Patchy calcite impregnation,	Strongly amygdaloidal, weakly porphyritic, weakly flow-brecciated. veinlets.	Leucoxenised opaques. Rare quartz micro-phenocrysts. Minor cherty quartz veinlets, impregnations. Rare pyrite.	Reflects quartz-chlorite-epidote alteration, supplemented by late calcite veinlets. Felsic intermediate with finer compositional detail obscured.
315763 MC-10 254-2	<u>Sericitised Trachyte</u> . Weakly sericitised sanidine and minor albite phenocrysts in a sericitised pyrite-stained, weakly feldspar-microlitic groundmass with conspicuous fine leucoxenised opaques.	Glomeroporphyritic, vaguely flow-brecciated. Similar to 315761, moderately sheared.	Minor recrystallized pyritic quartz amygdaloids.	Close relict textural affinities with 315761; similarly, but less extensively altered. Relict phenocrystal sanidine confirms these lavas as trachytic.

