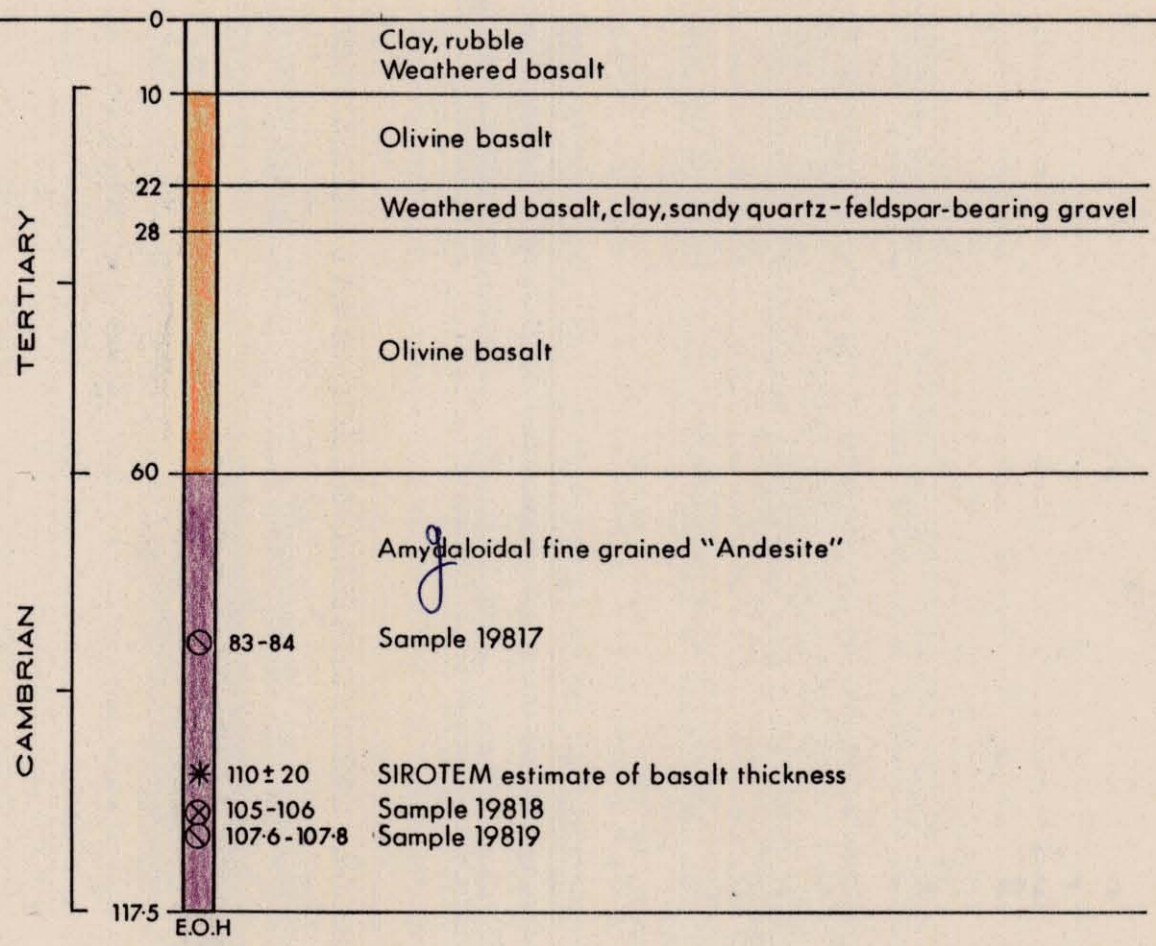

5 cm

LEGEND

COLLAR CO-ORDS:
12000N 10800E

VERTICAL

Hammered : 0-72

Cored : 72-117·5

O SAMPLE LOCATION

⊘ PETROLOGICAL EXAMINATION

⊘ LITHOGEOCHEMICAL ANALYSES

PANCONTINENTAL MINING LIMITED
EXPLORATION DIVISION

MT. CATTLEY PROJECT
E.L. 14/85 - TASMANIA

LITHOLOGICAL SECTION
HOLE Nº MCPD 2

0 10 20 30 40 50
1:1000 METRES

Compiled W.H.	Date October, 1986	Dwg. Nº
Report Nº	Map Ref. SK 55-3	FIGURE 2

944042

MT CATTLEY EL 14/85 TASMANIA

WALTER HERRMAN - 24.9.1986

GEOLOGICAL LOG: DRILL HOLE - MCPD2

Collar Co-ordinates: 12000N/10800E
Drilled: 22-24/9/1986

0-10m : 6.5" Down Hole Hammer
10-72m : 4.5" Down Hole Hammer
72-117m : NQ Core

0-10m	Brown Clay, weathered basalt, very wet. (Not sampled).
10.13m	(Dry) Dark grey medium to fine grained olivine basalt.
13-16m	(Dry) Dark grey olivine-pyroxene? basalt.
16-19m	(Dry) Fine grained grey olivine basalt with dark glassy interstitial patches and fragments.
19-22m	(Wet) Dark grey to brown partly oxidised fine grained olivine basalt. Olivine partly altered.
22-25m	As above.
25-28m	Fine grained grey olivine basalt with some dark glassy fragments or patches. Also considerable (~ 40% of sample) of coarse quartz-feldspathic sandy gravel and soft greenish clayey material. Suspected gravelly layer between basalt flows?
28-31m	Fine grained grey basalt, some dark glassy interstitial patches and pale greenish grey filled amygdales, no olivine visible.
31-34m	Fine grained dark grey olivine basalt. 2% aqua green mineral in sample ex amygdales? Also some coarse quartz-feldspathic sand suspected to be caving in from 25-28m zone. Drillers had trouble with sandy slurry bogging up hammer during rod change. Forced to pull up rods and clean hammer three times.

34-37m	Fine grained grey basalt. 1-2% pale green zeolite? ex amygdales. Sample contamination (~ 10%) from caving area.
37-40m	Mixture dark grey, purplish brown grey slightly oxidised basalt.
40-43m	Fine grained dark grey vesicular / amygdaloidal basalt amygdales filled with duck egg blue coloured zeolites?
43-46m	As above. About 50% of sample is contaminated from caving area.
46-49m	As above.
49-52m	Fine grained dark grey olivine basalt and dark grey partly vesicular glassy basalt. Minor contamination.
52-55m	Mixture fine grained dark grey olivine basalt and glassy vesicular basalt. Minor contamination of sample.
55-58m	As above. About 20% sample contamination.
(58-60m	Dark purplish grey vesicular basalt. Minor contamination.
(60-61m	Pale Dove grey granular weathered felsic rock resembling tuff?
61-64m	Pale dove grey weathered (?) felsic rock with very fine (<0.5 mm) granular fabric sometimes with rounded fine quartz granules? elsewhere with faint planar "eutaxitic" fabric suggesting tuff? About 20% uphole contamination of sample.
64-67m	As above.
67-70m	As above.
70-72m	As above. Fine acid tuff?
NQ CORE	
72-72.5M	A few fragments of weathered vesicular basalt, rounded by the bit, probably caved in from up the hole.

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72.5-84.4m

Weathered vesicular (Amygdaloidal) andesite

Typically composed of small rounded to ellipsoidal amygdales (1-6 mm dia. 2.5%/vol.) enclosed in a very fine (<0.5mm) granular/meshwork matrix of olivine brown colour and probably composed of weathered plagioclase with interstitial fine ferromagnesians or altered glass.

The rock is very weathered to soft puggy clay above 76m; below this the core is firm but extensively fractured. Amygdale concentration variable from place to place but always some present.

Transition into fresh rock fairly sharp.

84.4-117.5m

Amygdaloidal Andesite.

This rock type (fresh equivalent of above) varies from a medium-dark green grey to pale green grey colour of very even density. It is very fine grained, nearly aphanitic to the hand lens and exhibits only a very fine faint meshwork fabric possibly comprising plagioclase laths. The only mesoscopically discernible texture is the presence of rounded to ellipsoidal amygdales which are present in variable proportions but usually around 2-3% of rock volume.

There are two types of amygdales:

(1) Small (<5mm) filled with dark green soft mineral, often with radiating habit, resembling chlorite + grey silica + minor white calcite. These commonly have a weak parallel preferred orientation.

(2) Larger (5-40mm) rounded to ellipsoidal amygdales filled mainly with white or pale buff coloured carbonate (calcite?) + translucent grey or clear quartz + minor chlorite. Volumetric proportion of these vesicles is very variable but no systematic variation has been noted.

044

Above about 105m the matrix colouration is mainly darker greenish grey. Below 105m the colour is mainly pale green grey although here there are some quite local variations of uncertain significance. Possibilities include slight compositional (primary) differences, separate flows?, variations in "greenschist" metamorphic alteration or even pillow margins.

Much of the rock displays a fine brecciated texture. This is not fragmental in the sense of volcanic breccia or "agglomerate" but rather an "in situ" brecciation, perhaps auto brecciation? in which milled and finely granular material fills spaces between angular-irregular splinters and fragments of more or less massive andesite. The finer interstitial material often has a paler colour reflecting abundant carbonate in the matrix cement. Similar style of brecciation occurs in the lowest andesitic unit cored in MCPD3.

The carbonate in the breccia matrix leads to speculation on association with the abundant carbonate veinlets and veins which criss cross the core generally but also cut through brecciated zones and therefore at least partly post date breccia formation.

The veins are generally filled with white or straw coloured carbonate (calcite?), grey quartz + white chalcedonic silica + traces of fine disseminated pyrite and + reddish hematite staining.

Veins and veinlets are locally quite intense to the stage of shatter zones but overall would average 50 per metre of core.

General level of sulphide mineralisation would be <0.05% and hematite much lower than this.

Vesicles (amygdales) locally define weak linear fabric which have been measured as follows:

90.9m	-	50^0 to LAOC
93.7m	-	20^0 to LAOC
98.4m	-	40^0 to LAOC
104.5m	-	50^0 to LAOC
108.8m	-	40^0 to LAOC

117.5 E.O.H.