Diamond drill hole LS2, Mt Mary Mine, Cygnet

Logged by J.R. Wall,
for Golden Apple Mining Syndicate, 17/8/82

Depth (metres)	Description
0-17	Altered & well pyritised pebbly **mudstone**, with chlorite.
17-22	Weathered pebbly **mudstone**.
22-41	Core Lost. Zone of clay-epidote weathered rocks, probably mostly **syenite dyke**. Cuttings intensely sampled her in case of free gold in the oxidised (cf gold in pyrite lattice) surface rocks above the water table.
41-50	**Epidote syenite porphyry** - well mineralised on the joints. Possible chalcocite (biotite?) at 46.2m. 47.7m: Core lost. 48-49.2m: Cuttings probably well mineralised. 49.2?: chalcocite on small pyritised jointed rock chip.
53.5-54.5	**Dark Grey alkaline porphyry**.
58	Lot of epidote.
59	*(bag sampling)*
63	**Dark fine grained dyke** shown on contact to be younger than light epidotised-mineralised porphyry.
64	Epidote, magnetite, chlorite
68-68.7	Excess pyrite on joints..
70-71	Joints very well mineralised with coarse grained, cubic pyrite crystals. Check bagged lab samples at 69.5, 70 & 71, where core lost.

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Depth (metres)	Description
71.3	Light green **cherts**. Pyrite vein with chalcocite & Cu/Au? too. Good core recovery here.
72.68	Possible cinnabar spot. Check sample bags at 74m for Cu.
74.2	Change in hardness.
75.6	**Dyke-mudstone contact**. Both rocktypes well mineralised here, plus chlorite.
78.44	Pyrite-chlorite vein, 1cm.
85	Good solid core recovery. Well mineralised on even joint planes.
	End of Hole

Drill Log, Drillhole No. LS2

Drilled for: The Golden Apple Mining Syndicate.
Drilled by: ?*
Logged by: John Suppree for Amoco Minerals
Date: August 1982?
Project: Mt Mary Mine, Cygnet
Location (AMG): 505525mE 5220450mN
Bearing: ~ 180° Mag
Dip: ~50° S
Core Size: NQ: 0-17.5m, BQ: 17.5-85m
Total Length: 85m

Meterage		
From	**To**	**Description**
0	12m	Fine grained grey **pebbly mudstone**. Pebbles show round-irregular habit with 0.2-4cm size range. Pebbles are composed of: 1) white- creamy qtz with brown haematite staining. 2) olive- green dolerite. A narrow light green aureole, probably epidote, does occur, enclosing both sorts of pebbles. A disseminated bronze-brownish mineral (pyrrhotite?) and granular brassy yellow pyrite were observed within this unit.
12	18	Clay seam. No core
18	42	No core - sludge sampling. At 18m: 5 cm of core, representing pebbly mudstone/ **Feldspar porphyry** interface. Porphyry groundmass is fine grained and light grey in colour. Feldspar fragments are sub-round to rectangular, 0.2 cm - 1 cm in size. They are creamy white to pale pink in colour. Reddy brown haematite and lime green chlorite occur as stains. Gn/35/5/

* Contractor drilled hole to earn interest in Golden Apple Syndicate. Bad ground cost him quite a lot. Was down to BQ very quickly.

Meterage		
From	**To**	**Description**
42m	53.3	**Qtz, feldspar, hornblende syenite**. Rounded - rectangular, creamy grey qtz, 0.2-1cm in size. Feldspar is creamy pink in colour, square - irregular habit 0.2-1cm in size. Hornblende, rounded- to acicular in habit, is of greenish black colour and generally <0.5cm. Both haematite & epidote staining occur throughout the sequence. Disseminated pyrite < 0.1cm is present as fine irregular blebs.
53.3	54.5	**Grey qtz porphyry.** Subrounded to irregular fragments of creamy white qtz, 0.2-1cm size in a fine grey groundmass. Haematite and epidote staining are present as well. PS minor black hornblende; little - no pyrite observed.
54.5	63.6	**Nepheline Feldspathoid.** Light to dark grey; irregular to sub rounded nepheline, < 0.5cm in size. Minor cream rounded (~0.5cm) qtz fragment. Both qtz & nepheline set in a fawn brown groundmass. Minor black hornblende & green blebby epidote are disseminated throughout the unit. Fine pyrite is relatively abundant towards the top of this sequence, and is replaced by haematite staining from 56.5 - 63.6 m.
63.6	72.5	**Pebbly Mudstone** Fragments of creamy white qtz, (0.1-1cm), and fawn grey dolerite (1-2cm), show rounded to irregular habit and are set within a fine jet black mudstone matrix. A fawny yellow aureole (epidote?) up to 3.5cm diameter encloses about 5% of the fragments. Pyrite blebs (0.2-1.5cm) are disseminated throughout this unit, more pronounced however from 67.5-72m. Fawny yellow epidote, lime - olive green chlorite and reddy brown haematite occur frequently as both stains within the matrix and aureoles around the various fragments.

Meterage		
From	**To**	**Description**
72.5	73.8	Olive green **pebbly mudstone** containing similar sized fragments of qtz, feldspathoid (nepheline?) and dolerite within an olive green mudstone matrix. Haematite and epidote are the main stains and small (<0.1cm) granular pyrite is disseminated throughout the sequence.
73.8	75.6	**Nepheline Feldspathoid.** Similar in appearance to the Feldpathoid unit at 54.5 - 63.6. Nepheline occurs or creamy grey, round - subrounded particles up to 0.5cm in diameter. Minor creamy white qtz fragments show irregular habit up to 1 cm in size. A zoned creamy white irregular (1cm long) feldspar was also observed. Bladed- acicular (0.5 cm) hornblende is the main accessory mineral. These fragments are set within the bluey grey groundmass. Pyrite is disseminated throughout the sequence as granular blebs and also occurs as thin veins within small fractures that cross cut this interval. Haematite and epidote are the main stain. The boundary between this and the underlying sequence appears as a thin pencil- line fracture.
75.6	85	Black **pebbly mudstone** similar to that already observed at 63.6 - 72.5m. Matrix is reddy black, and fragments are sub-rounded to irregular greyish feldspathoid (nepheline?) and creamy white qtz 0.2-1cm in size. Chunks of dolerite (up to 3cm) are the main rock fragments. This sequence has cross-cutting veins infilled with orangey-brown haematite. An unidentifiable pale maroon stain borders these fractures and also completely surrounds small <0.1cm sized fragments. Granular pyrite is disseminated thoughout the sequences.
85m		**End of hole.**