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Ref No 2157

GEOPEKOA DIVISION OF PEKO-WALLSEND OPERATIONS LTD.LOG. OF VOYAGER 1, D.D.H. 2. ELLIOTT BAY E.L. 27/76

coords 3776E 52430N

PLANNING

Proposer: R.R. Large  
 Depth: 30m  
 Location: Voyager 1 Area Grid

Purpose of hole: Evaluation of proposed sulphide facies mineralization zone.

Co-ordinates: 12000N, 9580E  
 Inclination: -60°  
 Bearing: 090° TN  
 Approved by: R.R. Large  
 Date: 17-3-1979

SUMMARY

Logged by: C.D. Strickland  
 Results: 13.8m - 15.0m Magnetite-chlorite  
 18.3m - 19.2m Magnetite-chlorite  
 18.0m - 19.0m 220ppm W (XRF analysis)

DRILLING

Date terminated: 20-3-1979  
 Driller: M.W. Longmore

Core: AQ 0m - 30.9m

Final depth: 30.9m  
 Reasons for termination: Intersected magnetic horizon

Water: Normal water return throughout  
 Hole drilled with sea water

## Comments on Drilling Conditions:

1. Diamond drilled from surface
2. Steady drilling in partly broken ground.

Core held 14

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## Voyager 1 D.D.H.2 Geological Log

0 - 0.3 No core

0.3m - 0.4m Quartz rubble

Dominantly rounded core pieces of secondary quartz vein rubble together with fragments of acid volcanic rubble.

4.0m - 12.0m Vitric crystal tuff

This homogeneous unit consists of a fine grained siliceous groundmass containing crystals of rounded quartz and eroded sericitized feldspars. The crystals, particularly the quartz crystals range in size from 1mm - 3mm. A dominant foliation occurs throughout this unit with distinct wispy sericite streaked parallel to the foliation. More intense foliation occurs on a local scale, often over intervals of up to 5cm where contorted crenulations are present, again outlined by sericite and also minor chlorite. Quartz veining is rare, and veins are narrow (2mm) where present.

Alignment of the foliation is as follows:

5m	60°	to	L.C.A.
6m	60°	"	"
7m	60°	"	"
10m	65°	"	"

Between 9.5m - 12.0m a marked increase in sericite occurs with the development of weathered out sericite lined veins and cavities throughout the core.

Core recovery throughout this unit is approximately 80%.

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18.3m - 19.2m Magnetite - chlorite

Dark massive magnetite - chlorite unit similar to that above however although horizons of pyrite occur it is less abundant than previously. Sample No KR 4083 (19.1m) was described in detail by W. Fander, C.M.S. (See Appendix No. 5). This unit consists predominantly of magnetite, carbonate (dolomite?), chlorite, talc and quartz with a distinctly banded distribution. This banding is aligned at  $55^{\circ}$  to L.C.A., e.g. 18.8m. Traces of scheelite (fluorescent spots) are visible, the grains are very small 20 - 60 $\mu$  and the rounded grain are associated with all the other minerals, embedded in the quartz, chlorite, carbonate, talc and on the surfaces of the magnetite crystals.

Interval 18 - 19m analysed 220ppm W (X.R.F) .  
Core recovery approximately 90%

19.2m - 30.9m Crystal tuff

This interval consists of a chloritic - semi chloritic sequence of foliated crystal tuff pyroclastics containing irregular zones of magnetite and chlorite and very rare pyrite crystals throughout. Dominantly the foliation occurs as a persistent banding throughout the core aligned at  $50 - 60^{\circ}$  to L.C.A, however at 22m an intensely crenulated example occurs appearing to related to micro faulting. The quartz crystals range in size from 0.5mm - 3mm and well formed pyrite cubes occur up to 1mm. A massive zone of quartz occurs between 20.1m - 20.4m representing either a vein or a zone of intense silicification. Sericitization is well developed, with associated broken and lost core between 22.6m - 23.0m.

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This unit continues through to 30.9m with a consistent foliation alignment of approx  $50^{\circ}$  -  $60^{\circ}$  to L.C.A.

Grain size differentiation is obvious between 28m - 30m and bands? of finer tuffs (0.5mm diam crystals of quartz) in a vitric matrix up to 15cm thick occur within the dominant coarser (1mm - 3mm diam quartz crystals) crystal tuff.

Core recovery approx. 95 - 100%.

30.9m E.O.H.