



KENNECOTT CANADA EXPLORATION INC.
LEGEND JV DIAMOND DRILL LOGS



Drill Hole:	98DH-VA01	Azimuth:	N/A
Easting:	362 350 m E (NAD 27)	Dip:	-90° to -87° at EOH
Northing:	6 355 490 m N (Z 12)	Depth (EOH):	131.67 (E.O.H.)
Collar Elevation:	~ 720 m amsl (GPS)	Diameter(s):	NQ
Grid Location:	940E 5000N	Geologist:	Richard Beck
Drill Contractor:	Aggressive Drilling	Geotech/Sampler:	Austin Young
Contracted to:	Kennecott Canada	Project Geologist:	Theo Aravanis
Drill Type:	Boyles 25A	Date Collared:	26 October, 1998
Drill Foreman:	Mitch McLelland	Date Completed:	31 October, 1998

Summary Information

Drill-hole 98DH-VA01 is the second attempt at drilling into the **Valkyrie Kimberlite** on the Kennecott / Montello Resources Legend Joint Venture in northeast Alberta. The first attempt saw 15 metres of overburden cased before the muskeg softened and the drill setup tilted causing the casing to bend. Fifteen metres of NW casing were abandoned in the hole. On the second attempt, kimberlite was intersected below 125 metres, however, in the course of events, the drill stem broke, leaving behind -26 metres of NW casing, 24 metres of drill rod and the 5 foot core barrel. No PVC was placed in the hole.

NQ core recovered polymictic sands, mudstone and approximately three metres of weathered kimberlite before the drill had to be moved. The core has been split (the approx. 3m interval of kimberlite has been sampled and this sample has been added to the appropriate interval of the 98DH-VA02 sample - (refer to end of log): half core has been sampled for detection of diamonds (by caustic fusion at Kennecott's micro-diamond facility in Thunder Bay, ON.) Visual logging has not identified any P or E -type indicator minerals / xenoliths (except olivine).

The kimberlite as logged appears to have few HM kimberlitic indicators. Magnetism thought to be a result of locally prolific serpentine + magnetite alteration of the: some (particularly the smaller) olivine grains in more magnetic intervals appear to be mantled by a black magnetite-bearing alteration rim.

Summary Log

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Detailed Log**0.0 - 98.15m****Cased Overburden**

Drill timesheets indicate boulders, clay seams and a large sand seam were common throughout tri-cone drilling to set the casing. Deeper in the hole the alternating clay and sand seams were intersected.

98.15 - 129.1 m**Cobble and Boulder Till**

Grey unconsolidated polymictic sands with quartz and few rounded cobbles of quartzite and granodiorite. The entire unit is competent stiff with mud at the top of the interval, grading into siltstone and mudstone. Some indication of bedding (banding), particularly at the end of the interval.

103.6 - 111.5m	Light brown, fine grained silty sandstone exhibiting good cross bedding with dark heavy mineral laminated banding.
111.5 - 119.9m	Light grey mud/clay with light brown to light grey interwoven laminations.
119.9 - 122.6m	Silt seam with dark heavy mineral laminations.
122.6 - 125.0m	Dark grey mudstone with banded laminations
125.0 - 129.1 m	Light brown, fine grained sand unit housing dark banded laminations @ 20 deg. tca A notable fine grained, light green kimberlite fragment @ 128.2m. Relic olivine is observed.

129.1- 131.7m**Coarse graded kimberlite**

Dark green/black, serpentinized, coarse fragmental, kimberlite. Fine grained olivine is present in matrix and abundant country rock xenoliths (angular and sub-angular mud fragments and marls). Veined carbonate and frequent carbonate in matrix is observed. Few sandy intervals throughout. This unit is similar to that of the top intervals of PH01.

129.1 - 129.3m	Rubble zone
129.3 - 129.7m	Competent hard coarse fragmental kimberlite with abundant xenoliths.
129.7 - 130.4m	Rubble zone
130.4 - 131.7m	Predominantly rubble with few whole core competent hard sections. Medium grained with a carbonate matrix and abundant veined carbonate throughout.
131.7m	E.O.H.

Representative ('Rep') Samples

#	Depth in hole	Geological Unit
1	103.3m	Cobble and Boulder Till
2	111.2m	Cobble and Boulder Till
3	115.1m	Cobble and Boulder Till
4	122.5m	Cobble and Boulder Till
5	129.5m	Coarse graded Kimberlite

Heavy Mineral /Micro-diamond Sample List

Sample No.	Hole	From (m)	To (m)	Interval (m)	Mass (kg)	Shipped
VR87858A	VA-01	122.9	129.1	6.2	10	Nov.10, 1998
	VA-02	131.06	132.0	.94		
VR87859A	VA-01	HM	COMP.	-	15	Nov.10, 1998
	VA-02	HM	COMP.	-		
VA87860A	VA-01	129.1	131.67	2.57	5	Nov.10, 1998
	VA-02	132.0	133.1	1.1		

Notable Mantle Nodules

No mantle nodules or their xenocrysts were recognized during logging. A composite sample for indicator mineral chemistry has been submitted (VR87859A).