

ROUGH DRILL LOG -- PELLY 78 - 1

<u>METRES</u>	F-1 Reported between - 0 <sup>0</sup> - 70 <sup>0</sup> to core F-2 75 <sup>0</sup> to F-1 (2 cm piece)
0 - 6.7	Overburden - sand and gravel
6.7 - 9.0	Quartz and graphite - siliceous and hard, scattered thick brown rust.
9.0 - 11.0	Sericite schist
11.0 - 11.5	Graphite
11.5 - 16.4	Sericite - light grey altered - no buff alteration noted.
16.4 - 16.6	Graphitic schist
16.6 - 26.1	Quartz, sericite and graphite
26.1 - 63.1	Siliceous and graphitic - 48-51 is 5 - 10% Py.
63.1 - 66.1	Lost Core - siliceous and graphitic sludge.
66.1 - 69.2	Quartz sericite schist plus graphite
69.2 - 75.3	Lost core - Sludge 90% quartz, and graphite and sericite with $\approx$ 2% pyrite.
75.3 - 76.8	Quartz and graphite - 1% Py.
76.8 - 78.3	Lost core - quartz and graphite sludge. About 5% pyrite.
78.3 - 82.6	Quartz and graphite 1% - 2% Py.
82.6 - 84.1	Quartz, graphite, and sericite - Minor Py.

Ao	H	Structure of original plant matter, fully destroyed.
		Near surface mineral soil within the zone of direct effect from organic matter.
A1	Ah	Accumulation of organic matter from biological activity, generally dark colour.
A2	Ae	Maximum eluviation of clay, iron oxide and/or organic matter generally white in colour.
		Mineral soil within the zone of chemical activity.
A3	Bh	Accumulation largely of organic acids. Rusty colour, generally thin if present at all.
B1	Bf	Maximum accumulation of Iron and other sesquioxides.
B2	Bm	Slightly enriched or altered but less so than Bf.
C	C	Mineral horizon comparatively unaffected by pedogenic process.
	R	Rock

NOTE: This table is very brief and consequently somewhat oversimplified. It is judged sufficient for the purposes of most geologists/geochemists, but much greater detail and more precise definitions can be gained from the Canada Department of Agriculture reference.

gretted that soil scientists saw fit to adopt a different nomenclature and thus destroy the modern trend which is towards international uniformity of scientific terminology and systems.

#### A<sub>0</sub> Horizon

The A<sub>0</sub> horizon is in essence composite biogeochemical samples (raw humus) reflecting closely the geochemistry of the vegetation. Several workers have suggested that the A<sub>0</sub> horizon be used for routine exploration geochemistry. The use of this technique has already been described in part Six — "Areas of Continental Glaciation" and as the same comments apply to valley glaciated and non-glaciated areas no further discussion will be given here.

#### A<sub>1</sub> Horizon

This horizon is dominantly loam plus various amounts of humus. Where the actual content is related to the humus, considerable variations can be measured depending on organic content. Except in special circumstances, it is not generally recommended that this horizon be routinely sampled.

#### A<sub>2</sub> Horizon

The A<sub>2</sub> horizon, when fully developed

in e.g., podalic soils, is an intensely leached zone devoid of virtually all clay minerals, organic matter and sesquioxides. Consequently the geochemical response, even in well mineralized areas, is generally weak and can be non-existent in this horizon. Sampling of the A<sub>2</sub> horizon could result in a negative response even in favourable areas. Mixed sampling of the A<sub>2</sub> horizons, even in background areas, is normally 2 to 4 fold. Such an example is shown in Fig. 32 where a routine survey was conducted in an area of New Brunswick with a pronounced A<sub>2</sub> horizon development. The A<sub>2</sub> horizon varies in thickness from about 0 to 9 in. and in spite of the fact that the field crew were warned against this hazard, routine sampling and follow-up sampling resulted in inaccuracies similar to those shown. The A<sub>2</sub> horizon was sampled particularly where it was thick and where it was necessary to take samples at approximately 18 in. depth to get down to the B horizon. This situation is by no means typical, and points to the need for careful supervision of sample collection. In this case the difference in colour between the A<sub>2</sub> (white) and B (brown) horizons is so apparent that an examination of samples at base camp

gished from the underlying C horizon by darker colour and a more "silky" or "clayey" texture. This smoother texture is a result of an accumulation of amorphous iron and manganese oxides and a break down of the silicates to a relatively smaller grain size as well as alluviation of silt and clay size particles from the A horizon.

In many parts of the Yukon, British Columbia and the Maritimes there are residual soils with a well developed and easily recognized B horizons. In these areas, soil sampling can be carried out with few complications provided: the soil profile is residual; the samples are correctly collected; the samples are correctly analysed.

Interpretation of the result from B horizon sampling will only be difficult or misleading in certain areas, e.g., the soil profile has developed on top of a thick volcanic ash layer or alluvium or glacial material; seepage areas are inadvertently sampled; and rock type changes effecting the metal content in the soil are correctly interpreted. These specific points are discussed in more detail.

There are specific instances when sampling of a different horizon may be preferable, consequently, an orientation should always be conducted where possible. However, if an orientation is not possible the B horizon is normally the best to select.

#### Boulder clay

The occurrence of a boulder clay, (or any other material), may result in the "blanking out" of a geochemical response, particularly if normal soil horizons have developed on top of this material. This condition is difficult to detect.

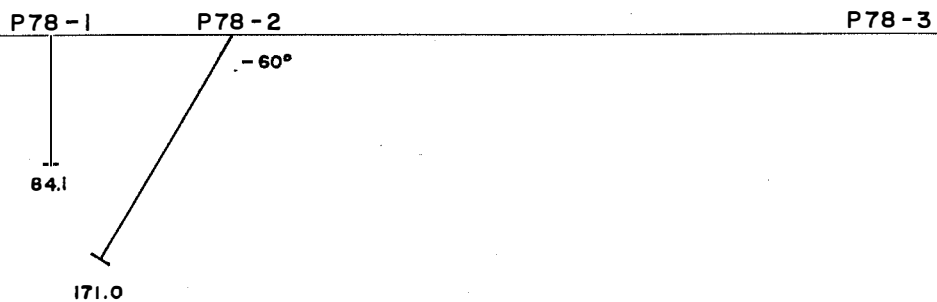
Noranda Exploration reports such an example was encountered in the Newman Copper property near Babine Lake, B.C., (Fig. 33.) In parts of this area is a compact boulder clay varying between 0 and 70 feet thick overlying residual material. A moderate soil profile developed on top of the boulder clay. The residual material boulder clay contact acts as a natural aquifer and where porosity permits, hydro-morphic anomalies can penetrate several inches into the transported material.

A<sub>0</sub> - raw humus  
A<sub>1</sub> - dominantly loam  
A<sub>2</sub> - leached horizon  
(white)

B - brown, iron & mang. oxides  
silky or clayey texture

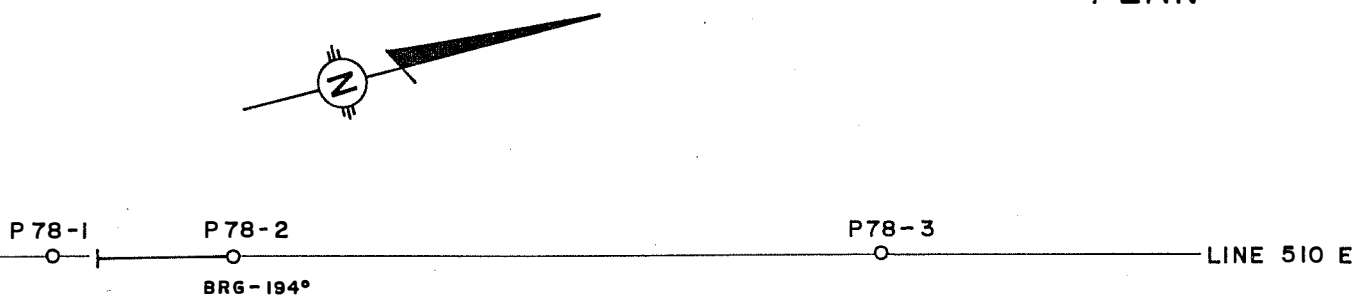
C - grey, contains rock chips  
in clay.

SECTION



BASE LINE

PLAN



KERR ADDISON MINES LTD

PELLY CLAIMS

DDH LOCATIONS

SCALE - 1:5,000 metres

DATE : OCTOBER, 1978

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