D. Coles
TCW

J.S. Cummings Inc.

LITHOLOGIC LOG

Project T9-R9 Lithologic Hole no. 99-7 Dip -45° Started 6/1/81 Elev. _____

Job no. 271 Township T9-R9 Coord. See Sketch 271-6 Direction 156° Mag Completed 6/8/81

NW 1/4 - near Mooseleuk Mn.

Lithotype

0'

10' Overburden

23' Cherty Siltstone and Chert - same as 54' - 186'

Basalt - grey, fine grained with chill zones on both sides, calcite and quartz veins are common

50'

54' Tuffaceous Cherty Siltstone and Chert -
Grey to grey-green color, generally fine grained but contains some fine grit and gritty sections, silicified sections are also present, good layers are present and are at 30° to 90° to the core axis

78'

84'

100'

78'-84' - hematitic chert and siltstone, hard with thin soft sections, maroon color

These rocks are very fine grained and it is difficult to assess the amount of ash. They appear to be at least somewhat tuffaceous (TCW)

150'

186' Felsic Tuff w/ Lapilli Fragments or Agglomerate - grey-green to black stained, contains felsic fragments (2 colors-black and grey), plagioclase and some quartz crystals and dark chloritic grains, the matrix is fine grained and soft, lapilli sized fragments are present and become common after 208', locally weakly altered*

200'

215'

Bottom of Hole

250'

*Two samples show about two varities of rounded and angular lapilli, fine grained siliceous fragments with a matrix of quartz crystals, feldspar (hard) crystals with many corners rounded, and a siliceous micro matrix (TCW)

300'

350'

400'

CL Woodard
Feb. 24, 1982

RE-EVALUATION BASED ON BINOCULAR EXAMINATION OF
DRILL CORE IN OFFICE

99-7

10 - 23 - Welded Felsic Tuff? or Rhyolite -
Drill log says this section is the same as 54'-186'. Based on available core in office I don't think so. Sample at 10.5' is mostly hard, lt. green and microcrystalline, containing a few black and white specks, and a few round qtz crystals. Sample at 20' has a grey-brown siliceous, very hard microcrystalline groundmass or matrix containing abundant chalky white grains. Both samples could be either a welded felsic tuff or rhyolite. White qtz veins cross cut section. Examine core at 10.5' and 20'.

23 - 54 - Basalt -
grey, fine grained, massive and fractured; continuing qtz, chlorite, and calcite along veins, examined core at 30', 40', and 50'.

54 - 78 - Mixed Fine Felsic Tuffs -
mixed fine felsic tuff and granular felsic tuff -
fine felsic tuff is lt. green, layered, very fine grained (microcrystalline qtz-sericite?) and varies from soft to mostly hard, contains abundant kaolin like white flecks and a few white angular feldspars and rounded calcite pods;
granular (welded?) felsic tuff is coarser grained with equa-granular welded looking sericitic feldspars, minor fine dark grains and some chalky white kaolin like grains;
lots of white calcite and qtz in veins criss-cross section, examined core at 60' and 70'

78 - 84 - Hematitic Cherty Siltstone -
granular looking, fine grained, alternating hard and soft, weakly banded red sediment, weakly tuffaceous and calcareous, examined 2 core pieces at 80'

84 - 186 - Mixed Fine Felsic Tuffs -
fine granular felsic tuff with some gritty tuff and complex broken mixed tuff (and siltstone?) sections;

Sample at 90' is a lt. green layered gritty tuff with dark green, grey, pinkish-tan and white rock fragments. Grains and fragments are layered, sub-rounded, and rounded.

99-7 (Cont'd)

84 - 186 - (Cont'd)
Samples at 100', 110', 120', and 140' are mostly soft grey-green fine granular felsic tuffs, layered with a granular or sugary texture and becoming coarser grained at 140'. At the bottom of section (samples at 160' and 180') fine granular felsic tuff is mixed with coarser gritty granular tuff and cherty siltstone (?), with layers highly fractured into complex pieces. Examined samples at 90', 100', 110', 120', 140', 160', and 180'.

186 - 215 - Proximal Felsic Agglomerate (with abundant dk. weakly altered felsic tuff matrix)
dk. grey, fine grained, sericitic-qtz matrix containing abundant angular, broken, scratchable feldspars plus some qtz crystals and minor black soft rock frags, contains some sub-rounded grey siliceous (at 200') and lt. green felsic volcanic (at 215') lapilli sized rock frags (up to 3/4"); examined core at 200' and 215'.

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SULPHIDE LOG

Project T9-R9 Lithologic Hole no. 99-7 Dip -45° Started 6/1/81 Elev.

See Sketch

Job no. 271 Township T9-R9 Coord. 271-6 Direction 156° Mag. Completed 6/8/81

NW 1/4 - near Mooseleuk Mtn.

FROM	TO	INTERVAL	EST. % SULPHIDES	EST. METAL (Cu, Pb, Zn)	ALTERATION
10	21.6	11.6'	< 1%	Pyrite	
21.6	23.2	2.4'	3%-5%	Pyrite	
23.2	215	191.8'	<1%	Pyrite and Pyrrhotite	
Bottom of Hole					