

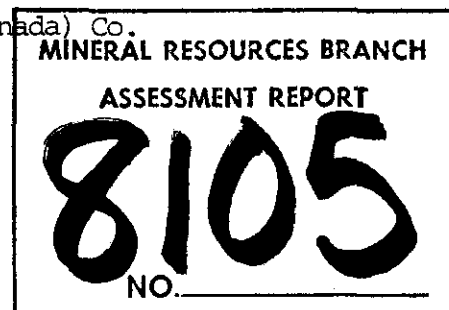
Diamond Drilling Report on DONEN (43 - 46, 61 - 64, 281 - 320); FUKI (1 - 40) and PNC (1, 3, 5 & 6) and DONEN (93,95,99 - 104, 108, 110 and 112) Mineral Claims (Uranium); Greenwood Mining Division; NTS 82E/10W; 49° 30' N Lat., 118° 45' W Long.

and

Aerial Photography on PB (180 - 198, 208, 209, 212 - 214, 250 - 289); and DONEN 361 (6 units) Mineral Claims (Uranium); Osooyoos, Vernon and Greenwood Mining Divisions; NTS 82E/14E and 82E/11E; 49° 45' N. Lat, 119° 00' W. Long and NTS 82E/10W; 49° 30' N. Lat, 118° 45' W. Long.

Claims owned and operated by PNC Exploration (Canada) Co. Ltd. of Vancouver, B.C.

Assessment Report by Larry Nicoll, B.A., B.Sci., M.Sci.;  
Project Geologist for PNC Exploration (Canada) Co.  
Ltd.



March 18, 1980

part 1 of 2

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## Introduction

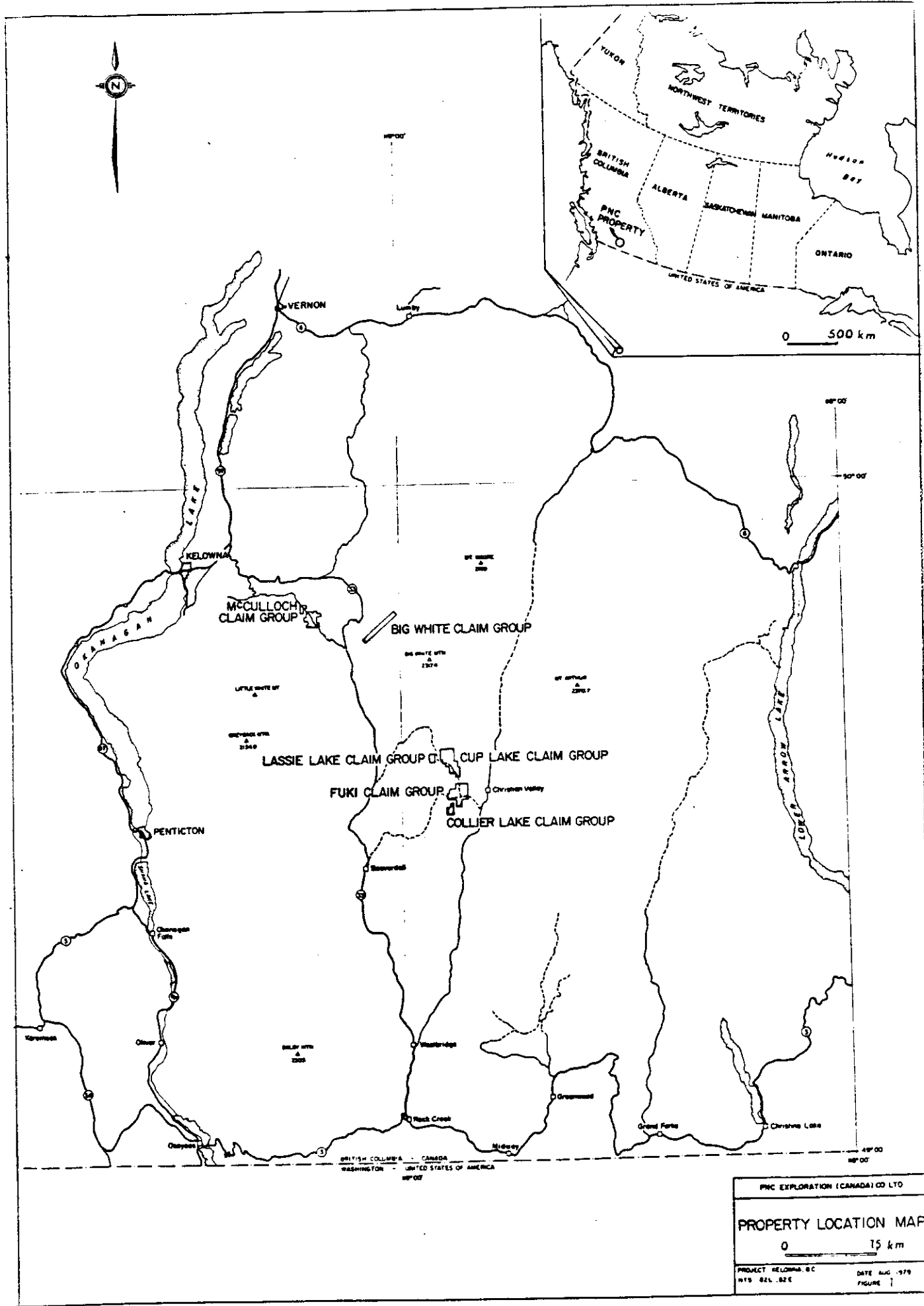
The diamond drilling assessment work for DONEN (43 - 46, 61 - 64, 281 - 320); FUKI (1 - 40) and PNC (1, 3, 5 & 6) and DONEN (93, 95 99 - 104, 108, 110 and 112) MINERAL CLAIMS, GREENWOOD MINING DIVISION, B.C. was done during the period March 20 - July 30 and August 20 - November 13, 1979. As well, aerial photography and preparation of topographic maps was completed for the above mineral claims. Aerial photography for the McCulloch, Big White and Lassie Lake (Donen) Mineral Claim Groups was flown at the same time as for the previously mentioned groups. Geologic mapping of the Donen Mineral Claims (Cup Lake) was undertaken during the last part of October.

The diamond drilling assessment work was carried out under Surface Exploration Permit MX 6/79 issued by the Atomic Energy Control Board on January 29, 1979 and revoked August 24, 1979 under Section 6(1) (b) of the Atomic Energy Control Regulations.

## Location and Previous Work

Figures 1 - 3 are index and claim location maps of the mineral claim groups.

The Donen and Fuki Mineral Claim Groups are located in the Greenwood Mining Division approximately 24 to 32 km northeast of Beaverdell. Access to the properties is by the Beaver Creek Road at Beaverdell or by the Trapping Creek Road which joins Highway 33 about 16 km north of Beaverdell. Access is also possible by the Christian Valley Road from Westbridge. These roads are gravel.



PNC EXPLORATION (CANADA) CO LTD  
**PROPERTY LOCATION MAP**  
 0 15 km  
 PROJECT KELOWNA, BC DATE AUG - 1979  
 WTS 82L 82E FIGURE 1

The Donen and Fuki Mineral Claims are located on the northeast flank of the Beaverdell Range and have a topography typical of plateau basalts with a moderately undulating surface comprising the plateau top and steep sides around the edges of the plateau. Elevation is between about 1200 and 1350 metres. Recent overburden covers about 70% of the land to a maximum depth of six metres on the top of the plateaus, thickening to about 20 metres on the plateau flanks. Vegetation is mainly small jackpine although large areas of the northern portion of the Cup Lake Mineral Claims has been cleared by logging within the last 20 years.

Previous diamond drilling by PNC (Japan) was done in 1969, 1970 and 1971 on the Fuki Mineral Claims (Assessment Reports 2013, 2484 and 3135), and 1972 and 1973 on the Cup Lake Mineral Claims (Assessment Reports 3775 and 4630). Previous work on the Lassie Lake (Donen) Group appears in Assessment Report 5982 (1976).

The McCulloch and Big White Mineral Claim Groups are located in the Greenwood, Osoyos and Vernon Mining Divisions and are between 20 and 25 km southeast of Kelowna. Access to the McCulloch group is by Highway 33 and the McCulloch Road. The Big White group is reached by Highway 33 and the Big White ski area access road. The elevation is from 1160 to 1500 metres.

Previous diamond drilling by PNC (Japan) was done in 1975 (Assessment Report 5570) on the Big White group and in 1974 and 1976 (Assessment Reports 5090 and 5972) on the McCulloch group.

Table I lists the mineral claims in each group.

TABLE I

POWER REACTOR AND NUCLEAR  
FUEL DEVELOPMENT CORPORATION  
MINERAL CLAIMS - McCULLOCH

No.	Mineral Claim	Record No.	Mining Division	Recorded	Expires
1	PB 180	30542	Osoyoos	Sept. 11/73	Sept. 11/81
2	PB 181	30543	Osoyoos	Sept. 11/73	Sept. 11/82
3	PB 182	30544	Osoyoos	Sept. 11/73	Sept. 11/82
4	PB 183	30545	Osoyoos	Sept. 11/73	Sept. 11/82
5	PB 184	30546	Osoyoos	Sept. 11/73	Sept. 11/82
6	PB 185	30547	Osoyoos	Sept. 11/73	Sept. 11/82
7	PB 186	30548	Osoyoos	Sept. 11/73	Sept. 11/82
8	PB 187	30549	Osoyoos	Sept. 11/73	Sept. 11/82
9	PB 188	30550	Osoyoos	Sept. 11/73	Sept. 11/82
10	PB 189	17323	Vernon	Sept. 11/73	Sept. 11/81
11	PB 190	17324	Vernon	Sept. 11/73	Sept. 11/81
12	PB 191	30551	Osoyoos	Sept. 11/73	Sept. 11/81
13	PB 192	30552	Osoyoos	Sept. 11/73	Sept. 11/81
14	PB 193	30553	Osoyoos	Sept. 11/73	Sept. 11/81
15	PB 194	17325	Vernon	Sept. 11/73	Sept. 11/81
16	PB 195	17326	Vernon	Sept. 11/73	Sept. 11/81
17	PB 196	17327	Vernon	Sept. 11/73	Sept. 11/81
18	PB 197	17328	Vernon	Sept. 11/73	Sept. 11/81
19	PB 198	17329	Vernon	Sept. 11/73	Sept. 11/81
20	PB 208	17339	Vernon	Sept. 11/73	Sept. 11/81
21	PB 209	17340	Vernon	Sept. 11/73	Sept. 11/81
22	PB 212	17343	Vernon	Sept. 11/73	Sept. 11/81



No.	Mineral Claim	Record No.	Mining Division	Recorded	Expires
23	PB 213	17344	Vernon	Sept. 11/73	Sept. 11/81
24	PB 214	17345	Vernon	Sept. 11/73	Sept. 11/81
25	PB 250	31200	Osoyoos	Sept. 9/74	Sept. 9/84
26	PB 251	31201	Osoyoos	Sept. 9/74	Sept. 9/84
27	PB 252	31202	Osoyoos	Sept. 9/74	Sept. 9/84
28	PB 253	31203	Osoyoos	Sept. 9/74	Sept. 9/84
29	PB 254	31204	Osoyoos	Sept. 9/74	Sept. 9/84
30	PB 255	31205	Osoyoos	Sept. 9/74	Sept. 9/84
31	PB 256	31206	Osoyoos	Sept. 9/74	Sept. 9/84
32	PB 257	31207	Osoyoos	Sept. 9/74	Sept. 9/84
33	PB 258	31208	Osoyoos	Sept. 9/74	Sept. 9/84
34	PB 259	31209	Osoyoos	Sept. 9/74	Sept. 9/84

POWER REACTOR AND NUCLEAR  
FUEL DEVELOPMENT CORPORATION

Mineral Claims - Cup Lake (North)

All claims are situated within the Greenwood Mining Division

No.	Mineral Claim	Record No.	Recorded	Expires
1	DONEN 293	35293	Aug. 4/71	Aug. 4/83
2	DONEN 295	35295	Aug. 4/71	Aug. 4/83
3	DONEN 296	35296	Aug. 4/71	Aug. 4/83
4	DONEN 297	35297	Aug. 4/71	Aug. 4/83
5	DONEN 298	35298	Aug. 4/71	Aug. 4/83
6	DONEN 299	35299	Aug. 4/71	Aug. 4/80
7	DONEN 300	35300	Aug. 4/71	Aug. 4/80
8	DONEN 305	35305	Aug. 4/71	Aug. 4/83
9	DONEN 306	35306	Aug. 4/71	Aug. 4/83
10	DONEN 307	35307	Aug. 4/71	Aug. 4/83
11	DONEN 308	35308	Aug. 4/71	Aug. 4/83
12	DONEN 309	35309	Aug. 4/71	Aug. 4/83
13	DONEN 310	35310	Aug. 4/71	Aug. 4/83
14	DONEN 311	35311	Aug. 4/71	Aug. 4/80
15	DONEN 312	35312	Aug. 4/71	Aug. 4/80
16	DONEN 315	35315	Aug. 4/71	Aug. 4/83
17	DONEN 316	35316	Aug. 4/71	Aug. 4/83
18	DONEN 317	35317	Aug. 4/71	Aug. 4/83
19	DONEN 318	35318	Aug. 4/71	Aug. 4/80
20	DONEN 319	35319	Aug. 4/71	Aug. 4/83
21	DONEN 320	35320	Aug. 4/71	Aug. 4/83

POWER REACTOR AND NUCLEAR  
FUEL DEVELOPMENT CORPORATION

Mineral Claims - Cup Lake (South)

All claims are situated within the Greenwood Mining Division

No.	Mineral Claim	Record No.	Recorded	Expires
1	DONEN 43	30063	July 30/69	July 30/80
2	DONEN 44	30064	July 30/69	July 30/80
3	DONEN 45	30065	July 30/69	July 30/80
4	DONEN 46	30066	July 30/69	July 30/80
5	DONEN 61	30081	July 30/69	July 30/80
6	DONEN 62	30082	July 30/69	July 30/80
7	DONEN 63	30083	July 30/69	July 30/80
8	DONEN 64	30084	July 30/69	July 30/80
9	DONEN 281	35281	Aug. 4/71	Aug. 4/80
10	DONEN 282	35282	Aug. 4/71	Aug. 4/80
11	DONEN 283	35283	Aug. 4/71	Aug. 4/80
12	DONEN 284	35284	Aug. 4/71	Aug. 4/83
13	DONEN 285	35285	Aug. 4/71	Aug. 4/83
14	DONEN 286	35286	Aug. 4/71	Aug. 4/83
15	DONEN 287	35287	Aug. 4/71	Aug. 4/83
16	DONEN 288	35288	Aug. 4/71	Aug. 4/83
17	DONEN 289	35289	Aug. 4/71	Aug. 4/83
18	DONEN 290	35290	Aug. 4/71	Aug. 4/83
19	DONEN 291	35291	Aug. 4/71	Aug. 4/83
20	DONEN 292	35292	Aug. 4/71	Aug. 4/83
21	DONEN 294	35294	Aug. 4/71	Aug. 4/83
22	DONEN 301	35301	Aug. 4/71	Aug. 4/83
23	DONEN 302	35302	Aug. 4/71	Aug. 4/83
24	DONEN 303	35303	Aug. 4/71	Aug. 4/83
25	DONEN 304	35304	Aug. 4/71	Aug. 4/83
26	DONEN 313	35313	Aug. 4/71	Aug. 4/80
27	DONEN 314	35314	Aug. 4/71	Aug. 4/83

POWER REACTOR AND NUCLEAR  
FUEL DEVELOPMENT CORPORATION

Mineral Claims - Fuki (North)

All claims are situated within the Greenwood Mining Division

No.	Mineral Claim	Record No.	Recorded	Expires
1	Fuki 5	27847	Aug. 14/68	Aug. 14/81
2	Fuki 6	27848	Aug. 14/68	Aug. 14/80
3	Fuki 9	27851	Aug. 14/68	Aug. 14/80
4	Fuki 10	27852	Aug. 14/68	Aug. 14/80
5	Fuki 11	27853	Aug. 14/68	Aug. 14/80
6	Fuki 12	27854	Aug. 14/68	Aug. 14/80
7	Fuki 13	27855	Aug. 14/68	Aug. 14/80
8	Fuki 14	27856	Aug. 14/68	Aug. 14/80
9	Fuki 15	27857	Aug. 14/68	Aug. 14/80
10	Fuki 16	27858	Aug. 14/68	Aug. 14/80
11	Fuki 17	27859	Aug. 14/68	Aug. 14/81
12	Fuki 18	27860	Aug. 14/68	Aug. 14/81
13	Fuki 19	27861	Aug. 14/68	Aug. 14/81
14	Fuki 20	27862	Aug. 14/68	Aug. 14/81
15	Fuki 21	27863	Aug. 14/68	Aug. 14/81
16	Fuki 22	27864	Aug. 14/68	Aug. 14/81
17	Fuki 23	27865	Aug. 14/68	Aug. 14/80
18	Fuki 24	27866	Aug. 14/68	Aug. 14/80
19	Fuki 25	27867	Aug. 14/68	Aug. 14/80
20	Fuki 26	27868	Aug. 14/68	Aug. 14/80
21	Fuki 27	27869	Aug. 14/68	Aug. 14/80
22	Fuki 28	27870	Aug. 14/68	Aug. 14/80

No.	Mineral Claim	Record No.	Recorded	Expires
23	Fuki 29	28047	Sep. 13/68	Sep. 13/80
24	Fuki 30	28048	Sep. 13/68	Sep. 13/80
25	Fuki 31	28049	Sep. 13/68	Sep. 13/80
26	Fuki 32	28050	Sep. 13/68	Sep. 13/80
27	Fuki 33	28051	Sep. 13/68	Sep. 13/80
28	Fuki 34	28052	Sep. 13/68	Sep. 13/80
29	Fuki 35	28053	Sep. 13/68	Sep. 13/80
30	Fuki 36	28054	Sep. 13/68	Sep. 13/80
31	Fuki 37	28055	Sep. 13/68	Sep. 13/80
32	Fuki 38	28056	Sep. 13/68	Sep. 13/80
33	Fuki 39	28057	Sep. 13/68	Sep. 13/80
34	Fuki 40	28058	Sep. 13/68	Sep. 13/80
35	PNC 1	892	Oct. 25/77	Oct. 25/80
36	PNC 3	915	Nov. 25/77	Nov. 25/80

POWER REACTOR AND NUCLEAR  
FUEL DEVELOPMENT CORPORATION

Mineral Claims - Fuki (Southwest)

All claims are situated within the Greenwood Mining Division

No.	Mineral Claim	Record No.	Recorded	Expires
1	Fuki 1	27843	Aug. 14/68	Aug. 14/81
2	Fuki 2	27844	Aug. 14/68	Aug. 14/81
3	Fuki 3	27845	Aug. 14/68	Aug. 14/81
4	Fuki 4	27846	Aug. 14/68	Aug. 14/81
5	Fuki 7	27849	Aug. 14/68	Aug. 14/80
6	Fuki 8	27850	Aug. 14/68	Aug. 14/80

POWER REACTOR AND NUCLEAR  
FUEL DEVELOPMENT CORPORATION

MINERAL CLAIMS - COLLIER LAKE

All claims are situated within the Greenwood Mining Division

No.	Mineral Claim	Record No.	Recorded	Expires
1	DONEN 93	30113	July 30/69	July 30/80
2	DONEN 95	30115	July 30/69	July 30/80
3	DONEN 99	30119	July 30/69	July 30/80
4	DONEN 100	30120	July 30/69	July 30/80
5	DONEN 101	30121	July 30/69	July 30/80
6	DONEN 102	30122	July 30/69	July 30/80
7	DONEN 103	30123	July 30/69	July 30/80
8	DONEN 104	30124	July 30/69	July 30/80
9	DONEN 108	30128	July 30/69	July 30/80
10	DONEN 110	30130	July 30/69	July 30/80
11	DONEN 112	30132	July 30/69	July 30/80

POWER REACTOR AND NUCLEAR  
FUEL DEVELOPMENT CORPORATION

MINERAL CLAIMS - "BIG WHITE"

All claims are situated within the Greenwood Mining Division

No.	Mineral Claim	Record No.	Recorded	Expires
1	PB 260	37507	Sept. 9/74	Sept. 9/80
2	PB 261	37508	Sept. 9/74	Sept. 9/80
3	PB 262	37509	Sept. 9/74	Sept. 9/80
4	PB 263	37510	Sept. 9/74	Sept. 9/80
5	PB 264	37511	Sept. 9/74	Sept. 9/80
6	PB 265	37512	Sept. 9/74	Sept. 9/80
7	PB 266	37513	Sept. 9/74	Sept. 9/80
8	PB 267	37514	Sept. 9/74	Sept. 9/80
9	PB 268	37515	Sept. 9/74	Sept. 9/80
10	PB 269	37516	Sept. 9/74	Sept. 9/80
11	PB 270	37517	Sept. 9/74	Sept. 9/80
12	PB 271	37518	Sept. 9/74	Sept. 9/80
13	PB 272	37519	Sept. 9/74	Sept. 9/80
14	PB 273	37520	Sept. 9/74	Sept. 9/80
15	PB 274	37521	Sept. 9/74	Sept. 9/80
16	PB 275	37522	Sept. 9/74	Sept. 9/80
17	PB 276	37523	Sept. 9/74	Sept. 9/80
18	PB 277	37524	Sept. 9/74	Sept. 9/80
19	PB 278	37525	Sept. 9/74	Sept. 9/80
20	PB 279	37526	Sept. 9/74	Sept. 9/80



No.	Mineral Claim	Record No.	Recorded	Expires
21	PB 280	37527	Sept. 9/74	Sept. 9/80
22	PB 281	37528	Sept. 9/74	Sept. 9/80
23	PB 282	37529	Sept. 9/74	Sept. 9/80
24	PB 283	37530	Sept. 9/74	Sept. 9/80
25	PB 284	37531	Sept. 9/74	Sept. 9/80
26	PB 285	37532	Sept. 9/74	Sept. 9/80
27	PB 286	37533	Sept. 9/74	Sept. 9/80
28	PB 287	37534	Sept. 9/74	Sept. 9/80
29	PB 288	37535	Sept. 9/74	Sept. 9/80
30	PB 289	37536	Sept. 9/74	Sept. 9/80
		30 mineral claims total		

POWER REACTOR AND NUCLEAR  
FUEL DEVELOPMENT CORPORATION  
MINERAL CLAIM - LASSIE LAKE

No.	Mineral Claim	Record No.	Mining Division	Recorded	Expires
1	DONEN-361 (6 Units)	114	Greenwood	Sept 8/75	Sept 7/86

### Summary of Work

Table II lists the PNC personnel involved in the 1979 program.

Aerial photography on a scale of 2,400 feet per inch was flown, ground control surveyed and aerotriangulation completed on all six of the mineral claim groups by McElhanney Surveying and Engineering Ltd. In addition, preparation of topographic maps at a 1:5,000 scale and 5 metre contour interval was done for the Cup Lake (2821 acres) or 1142.5 hectares, Fuki (2458 acres) or 995.9 hectares and Collier (718 acres) or 290.8 hectares mineral claim groups.

Geologic mapping on a 1:5,000 scale with the emphasis on outcrop position and lithologic contacts of the basement, sediments and plateau basalt was completed on the Cup Lake mineral claims during October.

The diamond drilling program was done in two sections; the first from March 20 to July 30 consisted of 63 holes for 3006.0 metres on the northern part of the Cup Lake group. The second part from August 20 to November 13 consisted of 51 holes for 3149.7 metres on the Collier (5 holes - 304.9m), Fuki (6 holes - 238.7m) and Cup Lake (40 holes - 2606.1m) groups. Figures 2 and 3 give the drill hole locations for the Cup Lake, Fuki and Collier groups, respectively. The drilling was by Cameron McCutcheon Drilling Limited located at 745 Clark Drive, Vancouver, B.C. Table III lists the holes drilled, total depth, maximum radioactivity and depth of the maximum radioactivity.

Appendix I, II and III contain the drilling logs of the Cup Lake, Fuki and Collier Mineral Claim Groups. These logs contain lithologic descriptions, gamma radiation logs and chemical analyses of anomalous drill core. The core is NQ size (1.875" or 4.76 cm). Core storage is at the residence of H. O. Thomas; Westbridge, B.C.

Gamma radiation was measured by a G.M. GP-27U detector during both the spring and autumn drilling programs. As well, a Mt. Sorpis scintillation G375A detector was used to measure gamma radiation in some of the holes in the spring program and in all of the holes of the autumn program.

H. O. Thomas of Westbridge was contracted by PNC to handle road construction, drill site preparation, reclamation and drill rig moves. An International Harvester TD20 bulldozer was used for the road and drill site construction and the reclamation. A total of 17.8 km of new trails were constructed or old trails re-opened (Cup Lake 14.4 km, Fuki 2 km and Collier 1.4 km). The trails are about 6.0 m in width and generally consist of dirt and boulders from the overburden. Moving of the drill rig was usually by a John Deere 540 skidder.

In compliance with Ministry of Forests regulations, trees which had been partially felled during road and drill site construction, were subsequently decked by slashers employed by H. O. Thomas. In addition to the drill sites, a total of 4.3 km of trails were decked (Cup Lake 3.5 km, Fuki 0.3 km and Collier 0.5 km).

Both the PNC Exploration and Cameron McCutcheon crews stayed in a camp located on the Lassie Lake Road about 1.6 km south

of Lassie Lake. The camp consisted of 2 bunk trailers, an office trailer, a kitchen and a wash-house. One of the bunk trailers and the office trailer were rented by PNC Exploration, the others were owned or rented by Cameron McCutcheon.

PNC Exploration's concern for the environment and health resulted in the contracting of Envirocon Ltd., #1400 - 777 Hornby Street, Vancouver, B.C., to undertake an air and surface water quality monitoring program in the Cup Lake and Fuki areas. Six water sampling stations, three for each area, and eight air sampling stations, four for each area, were established. The locality map of the sampling stations and the results of the water sampling program are given in Appendix IV. The air sampling program was not completed as of December, 1979.

TABLE II

PNC (Canada) Personnel

<u>Name</u>	<u>Position</u>	<u>Period</u>
W. Bulmer	Geologist	Mar. 13 - Jul. 31
L. Nicoll	Geologist	Aug. 21 - Dec. 31
M. McDonald	Helper	Mar. 13 - Aug. 31
C. Bourne	Helper	June 8 - June 30
R. Switzer	Helper	Jul. 13 - Sept. 14

PNC (Japan) Personnel


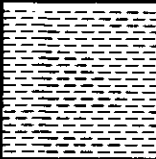

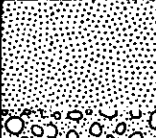
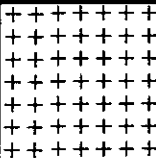

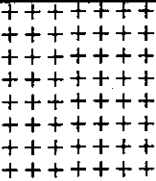
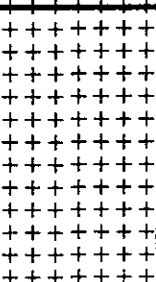
T. Obara	Engineer	Mar. 19 - May 3
K. Yanagizawa	Geologist	Apr. 22 - Nov. 15
N. Meguro	Geochemist	June 15 - Aug. 24
H. Sakuma	Geochemist	Aug. 20 - Nov. 15
S. Tajima	Surveyor	Sept. 6 - Nov. 12

Geology

The characteristic geology of the Cup Lake, Fuki and Collier Mineral Claim Groups has an overburden-basaltic caprock-claystone + layer basalt-sandstone-conglomerate-plutonic basement rock sequence as is shown in Figure 4.

Figure 4

STRATIGRAPHIC COLUMN

Column	Description	Age
	Overburden: gravel, sand, brown mud matrix.	Quaternary
	Upper Plateau Basalt: fine to coarse grain, greyish black basalt with olivine phenocrysts; vesicular in part. May be interbedded with volcanic ash and/or welded tuff.	Miocene - Pliocene
	Sediments: dark brown claystone with plant fragments; upper contact with basalt usually baked black.	
	Lower Plateau Basalt: similar to upper Plateau Basalt.	
	Sediments: fine to coarse grain, grey to greenish arkosic sandstone usually overlying pebble-boulder conglomerate.	
————— Unconformity —————		
	Coryell plutonic rocks: syenites or Monzonites, reddish weathering; high background radiation.	Eocene - Oligocene
	Phoenix Group: biotite andesite and tuff breccia.	
	Valhalla plutonic rocks: porphyritic quartz monzonites and granites with large pink feldspar phenocrysts with smoky quartz.	
	Nelson plutonic rocks: biotite-hornblende quartz diorites, granodiorite and granites with a well developed gneissic foliation.	Cretaceous or Eocene

## I Cup Lake Mineral Claim Group

Valhalla monzonites and granites appear to be the principal rock type in the northwest and central areas of the claim group. These rocks typically contain large pink potassium feldspar phenocrysts, smoky quartz, partially chloritized biotite and muscovite with epidote (zoisite) along shear zones. The northeastern portion consists mainly of Nelson granites, granodiorites and diorites which have a faint to moderate foliation. These rocks consist of abundant quartz, plagioclase, microcline, chloritized biotite and muscovite and trace amounts of sphene, apatite and zircon. Epidote is present along shear zones. In the southern part of the claim group are Coryell syenites and monzonites composed of potassium feldspar, chloritized biotite and hornblende with minor amounts of plagioclase and quartz and traces of apatite and sphene.

Figure 2 is the cross-section and drill hole location map. The fold out cross-sections are located after page 446. Figures 5 - 9 are the geology, basalt isopach, sediment isopach, basement structure contour and weight per cent  $U_3O_8$  maps, respectively.

The plateau basalt, usually containing olivine phenocrysts, caps the poorly consolidated fluvial and lacustrine uranium-bearing sediments. The basalt is usually fine grained although a coarser grained, nearly diabasic, variety was observed in some of the drill core. Much of the basalt in the drill core is fractured as the result of jointing or faulting. Maximum thickness is about 60 metres in the northeastern portion of the claim group and around drill holes BCF 45, 61, 64, 66, 67 and 72. Along the ridge east of Cup Lake the basalt thickness is 40 - 50 metres. In a few drill holes in the southern portion a lower basalt between 10 - 40 metres thick is present. It is separated from the upper basalt by a 4 - 10 metre thick claystone interbed which contains numerous carbonaceous fragments. A black, baked claystone zone up to 1m. thick is at the upper contact underlying

the basalt. At the base of the lower basalt, or underlying the claystone if the lower basalt is missing, is an arkosic sandstone and occasionally a pebble-to-boulder size conglomerate unconformably overlying the basement rocks. The arkose is grey to light green in colour and fine to coarse grained. The conglomerate is a grey colour and consists primarily of granitic boulders. The maximum thickness of the sediments (20-25 metres) is found approximately along paleostream channels eroded into the surface of the igneous basement rocks. The main trend of the paleostream channels is from the northwest towards the south. In the north-central and northwest areas of the claim groups, a thin veneer of Tertiary sediments extends outwards from beneath the basaltic caprock. These sediments are covered by Quaternary overburden consisting of gravel and sand with a brown mud matrix.

## II Fuki Mineral Claim Group

This has a geology similar to that of the Cup Lake group, having a basaltic caprock overlying fluvial sediments which were deposited on igneous basement rocks. The maximum thickness of the caprock is in excess of 45 metres in the area of drill holes BCF 29 and 32. The sediments are thickest in a north-south elongated pattern with the maximum thickness of 25 metres at drill hole Fuki 205. From the 1969, 1970 and 1971 PNC Exploration drilling programs, the basement rocks had been identified as a biotite andesite belonging to the Phoenix Group, however, feldspar staining of thin sections of basement rock samples from the 1979 drilling program has shown the feldspar to be predominantly a potassium feldspar. Mafic minerals present are hornblende and biotite. This would indicate the basement rock to be trachyte which may be the extrusive equivalent to the Coryell syenite. Figures 10 - 13 are the basalt isopach, sediment isopach, basement structure contour and the outline of mineralization (measured by a G.M. GP - 27U detector) maps, respectively.



### III Collier Mineral Claim Group

This group also has a geology similar to the Cup Lake and Fuki groups. The plateau basalt reaches its greatest thickness (50 metres) in an elongated trend between drill holes BCF38 and Collier 202 which then extends westward towards Collier 204. The sediments are in excess of 10 metres thick along a paleostream channel extending from drill hole Collier 205 north to BCF15. The sediments pinch out near drill hole Collier 203 which lies to the west of the channel, but 13 metres of sediments were cored at Collier 204 which is 100 metres west of Collier 203. The basement rocks are monzonites and trachytes containing phenocrysts of potassium feldspar, plagioclase, traces of quartz and with a ground mass consisting largely of chloritized hornblende and biotite. Figures 14 - 16 are the basalt isopach, sediment isopach and basement structure contour maps, respectively.

#### Mineralization

##### I Cup Lake Mineral Claim Group

In the southern portion of the Cup Lake group, uranium mineralization follows a paleostream channel along the surface of the Coryell basement rocks. Figure 9 shows the weight per cent  $U_3O_8$  in 0.01 - 0.03%, 0.03 - 0.1% and 0.1% + anomaly zones. This map was constructed from drill core chemical analyses where available and from drill hole gamma radiation counts measured by the G.M. 27U detector. Mineralization is found in the fluvial sandstones and conglomerates but, as well, in some drill holes mineralization is in the base of the basalt and in the uppermost part of the basement rocks. Mineralization is absent in the claystone beds. The maximum mineralization in the southern portion is about 0.1%  $U_3O_8$  with an average of 0.028%  $U_3O_8$  and average mineralized thickness of 0.7m.

The northwestern portion of the claim group contains the highest uranium mineralization on the property (0.1% +  $U_3O_8$ ). This anomaly appears to follow a poorly defined paleostream channel which extends from drill hole Cup 104 southeast to drill holes 114, 181, 120, 118, 123 and BCF66 and 45 (drilled in 1973 and 1972). The average mineralization in this portion of the claim group is 0.049%  $U_3O_8$

and the average mineralized thickness is 1.8m. Mineralization in the northern portion is associated with a variety of rock types, the chief occurrence being in Tertiary sandstone and conglomerate and in the regolith immediately overlying the basement rock. A minor occurrence of mineralization is found in the plateau basalt and in the mudstone layers. Away from the protective cover of the basaltic caprock, "hotspots" (i.e. Cup 104) or uranium mineralization in presumably Tertiary sediments may be remanent of paleochannel deposits. These hotspots are very localized and no continuous trend seems apparent. Norcen Energy Resources Limited reports that at the southern end of their Blizzard deposit, a similar type of small, localized hotspots was discovered in drilling in areas where the basaltic caprock was missing. The sediments these hotspots are found in may have escaped the glacial erosion which has removed much of the surrounding sediments or weathering and oxidation and subsequent uranium migration could have been less intense in these hotspot locations.

The total Cup Lake reserve estimates were calculated to be 990.12 tonnes of  $U_3O_8$  with a mean grade of 0.044%  $U_3O_8$  and average thickness of 1.57 metres.

## II Fuki Mineral Claim Group

As shown in Figures 12 and 13, the uranium mineralization approximately follows a paleochannel trending to the southwest. The maximum chemical analyses (0.203%  $U_3O_8$ ) was measured at Fuki 202. As shown in the cross-sections B-B' and C-C', Fuki 202 appears to be on a "high" rather than in a channel. The presence of a trachyte dike into Tertiary sediments in Fuki 205 may indicate faulting and a structural trap which could be causing some uranium enrichment. Total reserve estimates were calculated to be 186.21 tonnes of  $U_3O_8$  with a mean grade of 0.039%  $U_3O_8$  and an average thickness of 1.36 metres. The  $U_3O_8$  content values used in these calculations

are average gamma radiation drill hole values and where available, the averages of chemical analyses across the anomaly width.

### III Collier Mineral Claim Group

The only mineralization detected in the five holes drilled in 1979 on this group, was a small anomaly (about 0.02%  $U_3O_8$  and 0.35m thick) in Collier 204. All other drill holes indicated background radiation only.

#### Recommendations

Additional drilling in the northwest and north central portions of the Cup Lake Mineral Claim Group would help locate the position of the geological contact between the Tertiary sediments and plutonic basement rocks. However, as mentioned in the section on Cup Lake mineralization, much of the Tertiary sediments not lying beneath the basaltic caprock may have been removed by erosion and/or any uranium mineralization could have been removed by oxidation and groundwater movement thus leaving only small, localized hotspots. Therefore, the possibility exists that further drilling may only provide geological information and little uranium mineralization capable of being extracted economically.

In the southern portion of the Cup Lake Claims, a well defined paleochannel exists and in the last line of drill holes in that area, Cup 256 shows an increase in mineralization which could continue southwards. Therefore it is recommended that drilling be continued south along the ridge to the end of the basaltic caprock.

In the Fuki Mineral Claim Group a north-south paleochannel or valley is present which shows mineralization especially in the vicinity of Fuki 202. A closer spaced drilling program could show the extent of this mineralization and better define the paleochannel and possible presence of

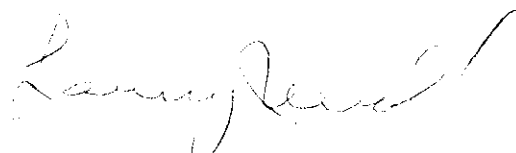
a structural trap near Fuki 202.

The small amount of mineralization found in the Collier Lake Mineral Claim Group does not favour any further drilling in this group.

STATEMENT OF QUALIFICATIONS

I, Larry Nicoll, of Vancouver, B.C., hereby certify that:

1. I am a graduate of the University of Calgary, Calgary, Alberta (B.Sc., Geology 1972; M.Sc., Geology, 1974).
2. I have been practising my profession since 1974 in Canada and the United States.
3. I have no direct or indirect interest in the property nor do I anticipate receiving any such interest.
4. The information in this report is original data and is applicable to the properties described within this report.



Larry Nicoll

March 18, 1980

STATEMENT OF EXPENSES

I, Larry Nicoll, M.Sc., Project Geologist, hereby certify that the expenses for the work described in this report are as follows:

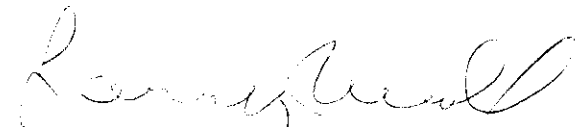
Mineral Claim Groups

Cup Lake* (North) \$	Cup Lake* (South) \$	Fuki** (North) \$	Fuki** (Southwest) \$	Collier \$	McCulloch \$	Lassie Lake (Donen) \$	Big White \$
305,478.56	305,478.56	27,209.47	5,441.90	36,145.85	4,299.68	801.57	2,551.33

The itemized costs and their breakdowns are on the following pages.

\* To comply with grouping regulations, the Cup Lake group is split into Cup Lake (North) and Cup Lake (South). A nearly equal amount of exploration work was done on the North and South groups and the total Cup Lake costs were divided equally between the two groups.

\*\* To comply with grouping regulations, the Fuki group is split into Fuki (North) and Fuki (Southwest). As five of the six drill holes were located in the Fuki (North) group, 83 1/3% of the total Fuki costs are allotted to that group and 16 2/3% of the total Fuki costs are allotted to the Fuki (Southwest) group.



Larry Nicoll, M.Sc.  
Vancouver, B.C.  
March 18, 1980

ITEMIZED COST STATEMENT

The detailed breakdown is on the following pages.

Name of Mineral Claim Group

Expense Item	Cup	Fuki	Collier	McCulloch	Lassie Lake (Donen)	Big White	Total
Diamond Drilling	402,444.39	16,401.04	24,679.65				443,525.08
H. O. Thomas	78,299.81	2,553.25	4,255.43				85,108.49
Aerial photography & map preparation	17,788.42	5,424.54	2,012.25	4,299.68	801.57	2,551.33	32,877.79
Environmental Study	4,485.05	4,485.05					8,970.10
Drillcore chemical analyses	5,371.53	336.60	18.45				5,726.58
Drillhole probing instruments	16,616.60	695.24	888.16				18,200.00
Truck Rentals	11,631.39	675.41	1,188.75				13,495.55
Living Quarters	8,046.02	263.29	436.80				8,746.11
Food and Miscellaneous	3,163.40	103.15	171.93				3,438.48
Gasoline and Oil	4,469.76	145.75	242.92				4,858.43
Core shed construction	20,261.84	847.76	1,083.00				22,192.60
PNC Wages	37,478.91	670.29	1,118.51				39,267.71
Cost of pre- paration of report	900.00	50.00	50.00				1,000.00
TOTAL	610,957.12	32,651.37	36,145.85	4,299.68	801.57	2,551.33	687,406.92

Itemized Costs: DIAMOND DRILLING

I Cup Lake	Footage	Cost \$	Standby \$	Drilling Material \$	PNC Board \$	Power and Propane \$	Shutdown \$	Bombardier Rental \$	Water Truck Delivery \$	Core-splitter Rental \$	Mobilization & Remobilization \$	Credit \$	Total \$
Mar 20-Jul 30	9862 ft.	162,685.72	25,887.73	23,928.75	5511.32	1483.44	9500.84	1585.45	518.50		3000.00	(1311.97)	232,789.78
Sep 8-Nov 13	8550 ft.	136,831.05	11,282.72	15,042.04	6665.28	291.17				171.00		(628.65)	169,654.61
<b>Total</b>	<b>18412 ft.</b> (5612.0m)	<b>299,516.77</b>	<b>37,170.45</b>	<b>38,970.79</b>	<b>12,176.60</b>	<b>1774.61</b>	<b>9500.84</b>	<b>1585.45</b>	<b>518.50</b>	<b>171.00</b>	<b>3000.00</b>	<b>(1940.62)</b>	<b>402,444.39</b>
NOTE: September drilling split Cup Lake 78% and Fuki 22% based on footage drilled.													
II Fuki													
Sep 1-7	783 ft. (238.7m)	12,410.55	1,350.89	1,886.25	654.72	82.13				16.50			16,401.04
III Collier													
Aug. 20 - 31	1000 ft. (304.8m)	15,850.00	6,329.73	1,274.64	1206.00	19.28							24,679.65



ITEMIZED COSTSH. O. Thomas - Bulldozer Contractor

## 1. Rental of equipment between March 8 to November 21, 1979 -

				\$
Bulldozers:				
International Harvester - TD 20	622 hrs.	@ \$43/hr	=	26,746.00
John Deere 550	3½ hrs.	@ \$35/hr	=	122.50
Skidder:				
John Deere 540	142 days	@ \$210/day	=	29,820.00
John Deere 540	54 days	@ \$260/day	=	14,040.00
Standby rental on equipment April 13 - 16 (Easter break)				400.00
"	"	"	month of May	200.00
"	"	"	June 3	125.00
4 x 4 3/4 ton truck				100.00
18 ft. storage van (March 21 - November 21)				<u>1,666.00</u>
				\$73,219.50

## 2. Transportation of Equipment -

TD20 and JD 540 from Westbridge to Cup Lake	..	..	..	..	300.00
JD550 from Westbridge to McCulloch and return	..	..	..	..	191.88
Plastic pipe from Osoyoos to Cup Lake	..	..	..	..	50.00
Core boxes from Cup Lake to Westbridge	..	..	..	..	80.00
Second TD20 from Westbridge to Cup Lake	..	..	..	..	127.75
Second JD540 from Westbridge to Cup Lake	..	..	..	..	109.50
Moving drill rig from Cup Lake group to Collier Lake group (August 21)	..	..	..	..	292.00
New JD540 skidder from Vernon to Cup Lake	..	..	..	..	275.00
Camp shutdown: TD20, JD540, one bunkhouse trailer, storage van, fuel tanks, etc. from Cup Lake to Westbridge	..	..	..	..	<u>647.25</u>
					\$2,073.38

## 3. Material Supplied by H. O. Thomas

\$

(Plastic pipe, cement, surveyor's posts, skirting boards for trailers, etc.) 966.22

## 4. Wages for labour performed by H. O. Thomas -

May 22 & 23; falling trees and skidding in seed block; 2 days x \$125.00/day 250.00

May 24, Aug. 5, 16 & 20; flagging drillholes and trails; 4 days x \$100.00/day 400.00

May 28, 31 and June 1; aerial photo ground target locating, drill hole cementing; 3 days x \$120.00/day 360.00

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\$1,010.00

## 5. Decking of trees in compliance with Ministry of Forests regulations.

Sept. - 1 slasher; 32 hrs. x \$8.50/hr. 272.00  
Saw and 4 x 4 truck rental 908.00

Oct. - 2 slashers; 340 hrs. x \$8.50/hr. 2,890.00  
Saw rentals 555.00

Nov. - 3 slashers; 264 hrs. x \$8.50/hr. 2,244.00  
Saw rentals 370.00

W.C.B., U.I.C. and C.P.P. payments 600.39

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\$7,839.39

Total of items 1 to 5 \$85,108.49

which is split amongst the groups as follows:

Cup Lake 92% or \$78,299.81

Fuki 3% or \$2,553.25

Collier 5% or \$4,255.43

ITEMIZED COSTS, AERIAL PHOTOGRAPHY AND MAP PREPARATION

The following expenditures are divided amongst their respective mineral claim groups on the bases of percentage of total area: Cup Lake 2821 acres or 18.19%, Fuki 2458 acres or 15.85%, Collier 718 acres or 4.63%, Kallis Creek 4138 acres or 26.68%, McCulloch 3020 acres or 19.47%, Lassie Lake (or Donen) 563 acres or 3.63% and Big White 1792 acres or 11.55%. The Kallis Creek expenses are reported in a separate assessment report and therefore are omitted from this report.

	Cup Lake \$	Fuki \$	Collier \$	McCulloch \$	Lassie Lake (Donen) \$	Big White \$
Field and office in locating drillholes	11,317.06	-	-	-	-	-
Aerial photography	601.12	523.77	153.00	643.53	119.97	381.85
Orthomapping (1:5000 scale and 5 metre contour interval)	2,489.99	1,955.49	998.91	-	-	-
Aerotriangulation	301.93	263.07	76.85	360.68	67.24	214.03
Surveying ground control for aerial photography	2,728.24	2,377.18	694.39	2,920.70	544.49	1,733.07
Relocation of aerial targets and related control work	350.08	305.03	89.10	374.77	69.87	222.38
	<u>17,788.42</u>	<u>5,424.54</u>	<u>2,012.55</u>	<u>4,299.68</u>	<u>801.57</u>	<u>2,551.33</u>

ITEMIZED COSTSEnvironmental Study

	<u>Cup Lake</u>	<u>Fuki</u>
	\$	\$
Professional Services (for baseline air and water quality monitoring including secretarial services and laboratory analyses)	2,580.41	2,580.41
Helicopter rental, travel, subsistence, printing, dustfall stands, etc.	1,517.98	1,517.98
Attendance of Envirocon Ltd. representative at Bates Commission uranium hearings	386.66	386.66
	<u>\$4,485.05</u>	<u>\$4,485.05</u>

Itemized Costs: Assays and Chemical Analyses

I Cup Lake Mineral Claim Group

296 assays of drillcore for $U_3O_8$ @ \$10.00/sample	=	\$2960.00
72 assays of drillcore for $ThO_2$ @ \$12/sample	=	864.00
24 assays of drillcore for $V_2O_5$ at \$10/sample	=	240.00
161 fluorometric chemical analyses of drillcore for U @ \$2.75/sample	=	442.75
158 neutron activation chemical analyses of drillcore for U @ \$3.50/sample	=	553.00
22 fluorometric chemical analyses of waters for U @ \$2.75/sample	=	60.50
2 neutron activation chemical analyses of drillcore for Th @ \$3.50/sample	=	7.00
10 neutron activation chemical analyses of drillcore for Th @ \$5.00/sample	=	50.00
3 chemical analyses of drillcore for V @ \$3.00/sample	=	9.00
28 chemical analyses of drillcore for F @ \$3.50/sample	=	98.00
1 - 30 element semi quantitative spectrographic analyses	=	37.00
294 rock preparation for chemical analyses @ \$1.75/sample	=	514.50
		<u>\$5835.75</u>
Minus 10% discount		583.58
		<u>\$5252.18</u>
100 x 200 ml plastic bottles @ \$1.00/ each	=	\$100.00
2 x 500 cc $HNO_3$		10.00
6 cardboard boxes @ \$.75/ each		4.50
Greyhound Lines invoice G881279; Vancouver to Beaverdell, B.C.		4.85
		<u>\$5371.53</u>

II Fuki Mineral Claim Group

17 assays of drillcore for $U_3O_8$ @ \$10.00/sample	=	\$170.00
17 assays of drillcore for $ThO_2$ @ \$12.00/sample	=	204.00
		<u>374.00</u>
Minus 10% discount		37.40
		<u>\$336.60</u>

III Collier Mineral Claim Group

2 chemical analyses of drillcore for U @ \$3.50/sample	=	\$7.00
2 chemical analyses of drillcore for Th @ \$5.00/sample	=	\$10.00
2 rock preparation for chemical analyses @ \$1.75 sample	=	\$3.50
		<u>\$20.50</u>
Minus 10% discount		2.05
		<u>\$18.45</u>

ITEMIZED COSTSDrillhole Probing Instrument Rental

Two Mt. Sorpis 1000 c loggers and G375 probes were purchased by PNC Exploration during 1979. The monthly rate PNC would have been charged if these units had been rented is about \$2,600 per unit per month.

1st Mt. Sorpis unit

Rental period from July 1 - November 15

4½ months x \$2,600/month	=	\$11,700.00
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2nd Mt. Sorpis unit

Rental period from September 1 - November 15

2½ months x \$2,600/month	=	\$6,500.00
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Total		<u>\$18,200.00</u>
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This total was divided amongst the mineral claim groups as follows:

Cup Lake	(91.30%)	\$16,616.50
Fuki	(3.82%)	\$695.24
Collier	(4.88%)	\$888.16

ITEMIZED COSTS  
Living Quarters

	<u>Cup Lake</u> \$	<u>Fuki</u> \$	<u>Collier</u> \$
One 10' x 44' staff quarters trailer mobilization and demobilization	1,875.32		
Rental from March 14 - November 17	4,501.94	139.53	231.48
One 10' x 52' 8 man bunkhouse trailer Rental from July 24 - November 15	1,668.76	123.76	205.32
TOTAL	<u>8,046.02</u>	<u>263.29</u>	<u>436.80</u>

ITEMIZED COSTS  
Truck Rentals

	<u>Cup Lake</u>	<u>Fuki</u>	<u>Collier</u>
Bow Mac Truck Rentals (one 4 x 4 3/4 ton PU, two 4 x 4 Jimmys)	5,260.20	539.51	944.13
Phillips Chevrolet Olds Ltd. (one 4 x 4 1/4 ton PU)	2,337.45	135.90	244.62
Siva Truck Rentals (Avis)	4,033.74	-	-
TOTAL	<u>11,631.39</u>	<u>675.41</u>	<u>1,188.75</u>



ITEMIZED COSTS

	<u>Cup Lake</u>	<u>Fuki</u>	<u>Collier</u>
	\$	\$	\$
PNC food and miscellaneous purchases from Okanagan merchants	3,163.40	103.15	171.93
Coreshed construction (at the residence of H.O. Thomas, Westbridge, B.C.)	20,261.84	847.76	1,083.00
Gasoline and Oil	4,469.76	145.75	242.92

ITEMIZED COSTS  
Wages

	<u>Cup Lake</u>	<u>Fuki</u>	<u>Collier</u>
	\$	\$	\$
W. Bulmer, geologist, \$1750.00/month plus field bonus, March 13 - July 31	13,886.44		
L. Nicoll, geologist, \$1900.00/ month plus field bonus, August 20 - December 31	10,011.15	326.45	544.08
M. McDonald, helper, \$1350.00/month plus field bonus, March 13 - August 31	9,758.32		
R. Switzer, helper, \$1000.00/month, July 13 - September 15	1,550.65	240.24	393.13
C. Bourne, helper, 148½ hours @ \$8.50/hour between June 8 and June 30	1,262.25		
J. Switzer, Cook, extra wages paid to Cameron McCutcheon cook for PNC cookhouse privileges	1,010.10	103.60	181.30
	<u>37,478.91</u>	<u>670.29</u>	<u>1,118.51</u>

TABLE III  
Drill Hole Data

Hole No.	Probing Date	Actual Depth	Probing Depth	Max count	Depth of max count (m)	Thickness of anomaly zone (m)
Cup 101	3/23	42.4 m	42.0 m	130 cpm		
102	25	38.7	38.3	130		
103	27	33.8	33.6	180		
104	29	29.6	29.3	36000	14.7	1.00
105	30	45.1	44.7	170		
106	31	25.5	25.5	130		
107	4/ 3	32.6	32.3	4300	17.5	0.50
176	5	32.3	32.3	140		
177	7	41.4	41.4	190		
108	8	41.4	41.2	1150 650	9.5 11.3	0.40 1.50
109	9	20.1	20.0	270		
178	10	26.2	26.0	4200	9.8	1.00
179	11	23.2	23.0	180		
110	19	26.2	25.8	150		
111	18	47.9	47.5	2100	33.5	1.70
112	20	32.6	32.3	700	24.5	0.60
113	21	29.3	29.0	1150	20.0	1.50
114	22	25.3	24.1	27000	16.0	0.40
115	25	35.4	35.0	480		1.50
117	24	41.4	41.4	3700	29.5	0.40
118	26	53.9	53.9	7200	39.0	0.40
180	23	17.1	17.0	190		
122	23	41.8	41.5	270		
129	28	35.4	35.2	180		

Hole No.	Probing Date	Actual Depth	Probing Depth	Max count	Depth of max count (m)	Thickness of anomaly zone ( m)
Cup 127	5/ 7	23.2 m	22.8 m	160 cpm		
133	6/11	64.0	64.0	150		
131	6/12	18.6	17.8	230		
119	6/12	55.2	55.2	720	47.9	1.2
				680	53.6	3.5
132	6/12	42.1	38.9	190		
135	6/12	21.6	21.6	180		
130	6/12	17.0	17.0	200		
128	6/14	30.8	30.3	7600	23.3	1.0
				4150	21.9	1.8
134	6/16	86.9	86.9	290		
126	6/19	50.3	50.3	170		
124	6/21	52.1	52.0	150		
123	6/22	72.5	72.5	1600	23.0	2.0
				793	28.5	1.2
				560	34.4	3.0
				7130	40.3	0.5
125	6/23	78.3	76.9	560	34.8	1.2
121	6/24	45.1	45.1	290		
181	6/26	51.5	51.5	3800	22.0	1.7
				3570	28.0	2.5
				4430	30.8	0.8
120	6/26	59.4	59.3	16400	22.1	1.1
				16000	36.2	2.0
146	6/28	39.0	38.5	220		
152	6/29	73.5	73.5	170		

Hole No.	Probing Date	Actual Depth	Probing Depth	Max count	Depth of max count (m)	Thickness of anomaly zone ( m)
Cup 161	6/30	83.2 m	82.7 m	180 cpm		
162	7/ 3	100.2	100.0	840 740	70.6 79.3	1.5 2.3
163	4	89.0	89.0	120	75.6	
164	6	83.2	83.2	160	71.6	
165	8	87.2	87.1	1800	77.0	0.9
166	10	89.0	89.0	590	82.8	1.0
158	12	81.0	81.0	610	75.0	
159	14	73.5	73.5	110		
157	15	58.2	58.2	100		
156	16	58.5	58.4	110		
155	18	70.7	70.7	440	61.3	
154	19	74.0	74.0	1360	66.9	0.9
153	22	70.6	70.6	250		
147	23	34.1	34.0	120		
148	24	65.9	65.9	230		
149	25	77.4	77.4	420	72.4	
182	26	14.6	14.5	150		
183	27	21.3	21.2	120		
116	28	33.5	33.4	720 490	12.0 20.0	2.3 2.8
184	29	27.7	27.6	150		
185	30	24.6	24.6	140		

Hole No.	Date Completed	Depth	Aloka c/m	Mt. Sopris c/s	Depth of Mineralization ( ) thickness
Collier 201	24 Aug.	43.3	200	64	
Collier 202	27 Aug.	69.5	345	88	
Collier 203	28 Aug.	61.4	255	48	
Collier 204	30 Aug.	79.9	1230	590	73 (0.35)
Collier 205	31 Aug	47.0	150	82	
Fuki 201	4 Sep.	33.6	1200	400	20.2 (0.60)
Fuki 202	3 Sep.	32.5	24000	9100	27.9 (0.45)
Fuki 203	2 Sep.	62.0	360	154	
Fuki 204	6 Sep.	33.2	300	81	
Fuki 205	7 Sep.	51.6	8650	3300	24.4 (0.30)
Fuki 206	5 Sep.	22.8	276	64	
Cup 231	9 Sep.	59.4	243	46	
Cup 230	11 Sep.	73.1	525	56	68.2 ( )
Cup 229	12 Sep.	82.6	2150	1180	75.0 (2.4 )
Cup 228	14 Sep.	61.5	138	38	
Cup 227	16 Sep.	31.0	144	34	
Cup 235	17 Sep.	50.5	3300	1380	44.2 (0.4 )
Cup 232	19 Sep.	84.1	208	44	
Cup 233	20 Sep.	62.7	460	35	58.8 ( - )
Cup 234	22 Sep.	60.4	120	30	
Cup 236	23 Sep.	68.8	920	320	65.0 (1.2 )
Cup 237	27 Sep.	81.0	5350	1920	72.5 (1.0 )
Cup 238	30 Sep.	91.7	8200	3600	87.8 (0.5 )
Cup 239	1 Oct.	59.8	195	60	
Cup 240	2 Oct.	59.5	240	75	

Hole No.	Date Completed	Depth	Aloka c/m	Mt. Sopris c/s	Depth of Mineralizati ( ) thickness
Cup 241	3 Oct.	64.6	264	62	
Cup 248	5 Oct.	73.2	234	35	
Cup 247	8 Oct.	87.2	278	72	
Cup 252	10 Oct.	71.9	1710	650	62.0
Cup 253	11 Oct.	64.3	680	215	60.5
Cup 251	13 Oct.	111.2	3700	1280	105 (0.4)
Cup 250	15 Oct.	62.7	470	121	57
Cup 257	17 Oct.	72.7	174	71	
Cup 256	20 Oct.	105.8	2180	900	104.5
Cup 255	22 Oct.	101.8	360	365	91.2
Cup 244	23 Oct.	24.7	138	41	
Cup 243	23 Oct.	30.1	260	75	
Cup 242	24 Oct.	25.2	237	75	
Cup 245	25 Oct.	9.7	252	82	
Cup 249	26 Oct.	10.0	450	105	3.0
Cup 226	27 Oct.	37.4	138	35	
Cup 259	28 Oct.	78.4	445	158	73.6
Cup 262	30 Oct.	83.2	175	62	
Cup 265	1 Nov.	81.1	165	74	
Cup 263	3 Nov.	97.6	240	133	
Cup 264	4 Nov.	83.5	345	102	
Cup 260	6 Nov.	89.0	965	440	69.0
Cup 261	9 Nov.	92.1	455	67	90.7
Cup 258	11 Nov.	68.3	315	122	
Cup 220	12 Nov.	20.4	147	40	
Cup 221	13 Nov.	32.6	158	40	

APPENDIX I

CUP LAKE DRILL HOLE LOGS



Drill Hole Logs Legend and Explanation (Cup Lake; Spring 1979).  
Drill hole logs for Cup 115, 125 and 155 are not included.

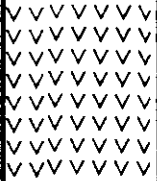
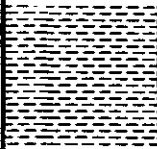

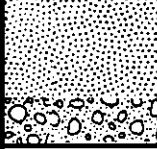
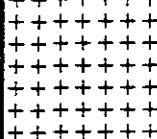

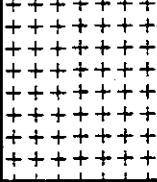
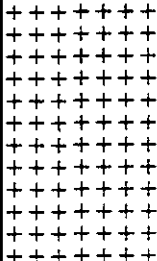
### LEGEND

PoV or PrV	Post / Pre Volcanism Sediments (+ Regolith)	
	i.e. PoV - 1 or Bg = Boulder gravel	256 mm
	-2 or Cg = Cobble gravel	64-256
	-3 or vcPg = very coarse Pebble gravel	32 - 64
	-4 or cPg = coarse Pebble gravel	16 - 32
	-5 or mPg = medium Pebble gravel	8 - 16
	-6 or fPg = fine Pebble gravel	4 - 8
	-7 or Gg = Granule gravel	2 - 4
	-8 or vcSd = very coarse Sand	1 - 2
	-9 or cSd = coarse Sand	1/2 - 1
	-10 or mSd = medium Sand	1/4 - 1/2
	-11 or fSd = fine Sand	1/8 - 1/4
	-12 or vfSd = very fine Sand	1/16 - 1/8
	-13 or St = Silt	1/256 - 1/16
	-14 or clay = clay	1/256
	Cbn = Carbonaceous	H = Hematite
		S = Sulphide
		Peg = Pegmatite
LV	Late Volcanics	
	LV - 1 or olB = massive olivine Basalt and related dykes and sills, may be vesicular	
	- 2 or Pum = Pumice	
	- 3 or TfS = Tuffaceous Sediments	

### EXPLANATION

PoV	<b>POST VOLCANISM SEDEMENTS</b> recent sand and gravels generally brown in colour matrix sandy, loosely bound	INTRUSIVES ( increasing age )  <b>CORYELL</b> Coy fine to medium grained dark reddish monzonite quartz syenite. High background radiation
LV	<b>LATE VOLCANICS</b> olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments	<b>VALHALLA</b> Vah medium to coarse grained white prophyrite biotite granite large pink feldspar phenocrysts common
PrV	<b>PRE VOLCANISM SEDIMENTS</b> generally grey in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material	<b>NELSON</b> Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite
Reg	<b>REGALITH LAYER</b> may or may not be well developed, and may or may not contain overlying sediments	<b>EARLY VOLCANICS</b> EV fine grained chloritic greenstone- generally badly fractured and contains abundant hematite stringers throughout

Drill Hole Logs Legend and Explanation (Cup Lake, Fuki and Collier Lake; Autumn 1979)

Column	Description
	Overburden: gravel, sand, brown mud matrix.
	Upper Plateau Basalt: fine to coarse grain, greyish black basalt with olivine phenocrysts; vesicular in part. May be interbedded with volcanic ash and/or welded tuff.
	Sediments: dark brown claystone with plant fragments; upper contact with basalt usually baked black.
	Lower Plateau Basalt: similar to upper Plateau Basalt.
	Sediments: fine to coarse grain, grey to greenish arkosic sandstone usually overlying pebble-boulder conglomerate.
	Coryell plutonic rocks: syenites or Monzonites, reddish weathering; high background radiation.
	Andesite or Trachyte (Coryell?) Welded tuff
	Valhalla plutonic rocks: porphyritic quartz monzonites and granites with large pink feldspar phenocrysts with smoky quartz.
	Nelson plutonic rocks: biotite-hornblende quartz diorites, granodiorite and granites with a well developed gneissic foliation.

# PNC EXPLORATION (CANADA) CO. LTD.

47

Hole No. : 79-CUP-101  
 Latitude : 6734.88  
 Departure : 408.84  
 Elevation : 1298.8 m.

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 42.3 m.

Property : DONEN 317  
 Dip Tests :  
 m.  
 End of hole

Collared : MARCH 20, 1979  
 Completed : MARCH 23, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m. ft.	Columnar Section	From & To Assay	Unit	Description	Rock Sample No.	From	To	Width	Assay		
									U <sub>3</sub> O <sub>8</sub>	Th	
0-20				0 - 20 Tricone							
20-25.3			5-9 ±13 PoV								
25.3-26.4			4-8	25.3 - 26.4 coarse pebbly gravel, coarse sand matrix							
26.4-30.7			11-13 PrV	26.4 - 30.7 fine brown sand/silt, no detectable carbonaceous fragments							
30.7-31.0			12, 16 Reg	30.7 - 31.0 fine pebble gravel with few cobbles							
31.0-32.5			9, 14 Reg	31.0 - 32.5 coarse sand with interstitial mud epidotised granite cobble included							
32.5-33.2			Req	UNCONFORMITY 32.5 - 33.2 granite regolith							
33.2-42.3			Vah	33.2 - 42.3 coarse grained white porphyritic biotite granite, broken, fractured and epidotised. Phases of orange spars throughout.							

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour matrix clay - has good binder Silty portion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (increasing age)**  
**CORYELL**  
 Coy fine to medium grained dark reddish monzonite quartz syenite High background radiation

**VALHALLA**  
 Vah medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or gneissiorite

**EARLY VOLCANICS**  
 eV fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (- Regolith)**

PoV - 1 or Bg	= Boulder gravel	256 ± m
- 2 or Cg	= Cobble gravel	64 - 256
- 3 or vcPg	= very coarse Pebble gravel	32 - 64
- 4 or cPg	= coarse Pebble gravel	6 - 32
- 5 or mPg	= medium Pebble gravel	8 - 16
- 6 or fPg	= fine Pebble gravel	4 - 8
- 7 or Gg	= Granite gravel	2 - 4
- 8 or vcSd	= very coarse Sand	1 - 2
- 9 or cSd	= coarse Sand	2 - 1
- 10 or mSd	= medium Sand	1/4 - 2
- 11 or fSd	= fine Sand	1/8 - 1/4
- 12 or vSd	= very fine Sand	1/16 - 1/8
- 13 or St	= Silt	1/256 - 1/16
- 14 or cl	= clay	1/256

Cbn = Carbonaceous    H = Hematite    S = Sulphide    Peg = Pegmatite

**Late Volcanics**

LV - 1 or olB	= massive olivine Basalt and related dykes and sills, may be vesicular
- 2 or Pum	= Pumice
- 3 or TFS	= Tuffaceous Sediments

# LOG AND PROBE SHEET

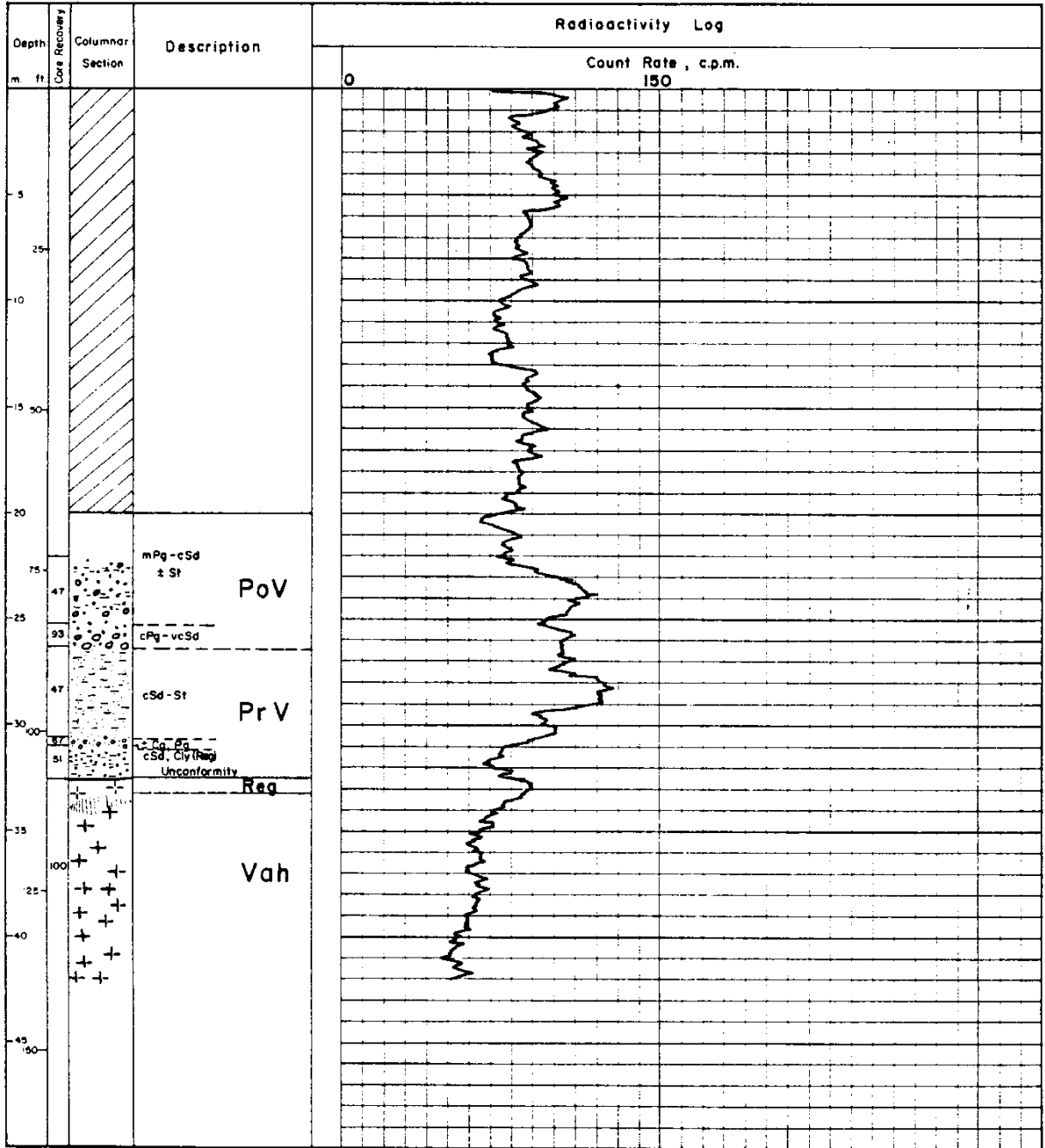
48

Method : D.D.  
 Hole N<sup>o</sup> : CUP-101  
 Location : DONEN 317  
 Probe Depth : 42.0 m.

Hole Angle : VERTICAL  
 Core Size : N.Q.  
 Core Recovery : 76% - Total,  
 53% - Sediment,  
 100% - Reg., 100% - Granite

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 70 cpm  
 Time Constant : 10 Sec.

Date : MARCH 23, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

49

Hole No. : 79-CUP-102	Project : CUP LAKE	Property : DONEN 317	Collared : MARCH 23, 1979
Latitude : 6742.84	Azimuth :	Dip Tests :	Completed : MARCH 25, 1979
Departure : 506.61	Dip : -90°	m.	Core Size : N.Q. 3
Elevation : 1299.5 m.	Depth : 38.7 m.	End of hole	Logged by : W. BULMER

Depth m. ft	Columnar Section	From B To	Unit	Description	Rock Sample No.	From	To	Width	Assay	
									U <sub>3</sub> O <sub>8</sub>	Th
0-5				0 - 9 Tricone						
0-25				0 - 20 Casing						
9-10		9	7-9	9 - 12.3 Granule gravel to coarse sand medium grey matrix						
12.3-15		12.3	PrV	12.3 - 16.3 very coarse pebble gravel						
16.3-20		16.3	PoV	16.3 - 21.6 fine to coarse pebble gravel medium brown matrix						
21.6-23.7		21.6	?	21.6 - 23.7 very coarse pebble gravel matrix washed away						
23.7-26.13		23.7	PrV	23.7 - 26.13 granule gravel with very coarse sand matrix-brown grey colour						
26.13-26.23		26.13	PoV	26.13 - 26.23 coarse pebble gravel						
26.23-27.3		26.23	?	26.23 - 27.3 coarse to fine sand-grey brown matrix						
27.3-29.9		27.3	PrV	27.3 - 29.9 fine to medium pebbly sand						
29.9-32.5		29.9	unconform.	UNCONFORMITY						
32.5-38.6		32.5	Reg	29.9 - 32.5 green epidotised Regalith zone						
		38.6	Vah	32.5 - 38.6 broken Valhalla Granite						

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
Recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS**  
olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
generally grey in colour matrix clay in the good binder. Silty portion light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )**
- CORVELL**  
fine to medium grained dark reddish monzonite quartz syenite high background radiation
- VALHALLA**  
medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
moderate to strongly foliated grey biotite hornblende quartz diorite or granodiorite
- EARLY VOLCANICS**  
fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (- Regalith)**
- |           |                             |            |
|-----------|-----------------------------|------------|
| 1 or Bg   | = Boulder gravel            | 256 mm     |
| 2 or Gg   | = Cobble gravel             | 64 - 256   |
| 3 or vPg  | = very coarse Pebble gravel | 32 - 64    |
| 4 or cPg  | = coarse Pebble gravel      | 6 - 32     |
| 5 or mPg  | = medium Pebble gravel      | 6 - 6      |
| 6 or fPg  | = fine Pebble gravel        | 4 - 6      |
| 7 or Gg   | = Granule gravel            | 2 - 4      |
| 8 or vSd  | = very coarse Sand          | 1 - 2      |
| 9 or cSd  | = coarse Sand               | 2 - 1      |
| 10 or mSd | = medium Sand               | 1/4 - 1/2  |
| 11 or fSd | = fine Sand                 | 1/8 - 1/4  |
| 12 or vSd | = very fine Sand            | 1/16 - 1/8 |
| 13 or Sl  | = Silt                      | 256 - 1/16 |
| 14 or cl  | = clay                      | 1/256      |
- Legend:** Cbn = Carbonaceous H = Hematite S = Sulphide Reg = Regalith
- Late Volcanics**
- |              |  |
|--------------|--|
| LV - 1 or oB | = massive olivine basalt and related dykes and sills, may be vesicular |
| 2 or Pum     | = Pumice   |
| 3 or TS      | = Tuffaceous Sediments   |

# LOG AND PROBE SHEET

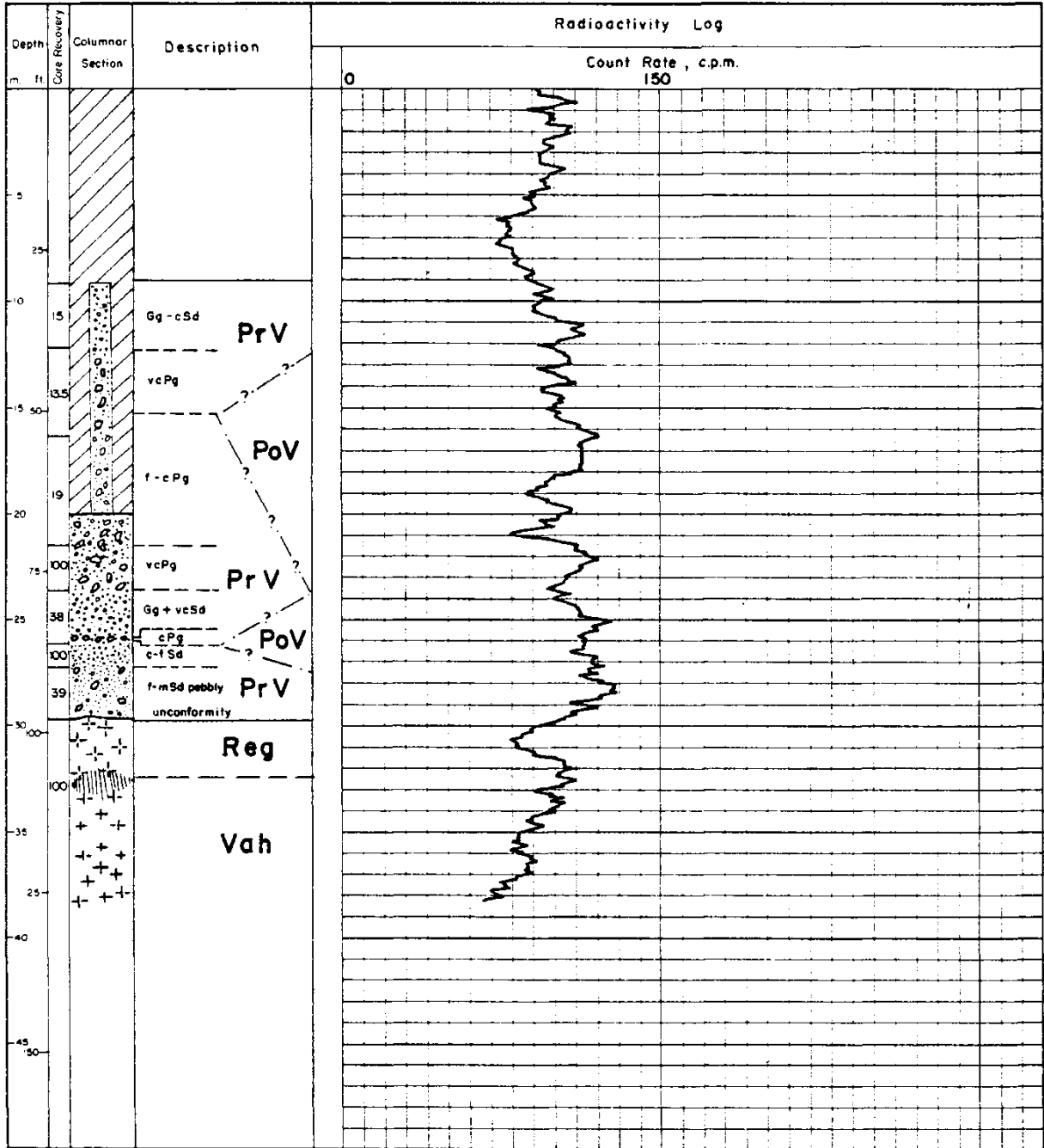
50

Method : D.D.  
 Hole N° : CUP-102  
 Location : DONEN 317  
 Probe Depth : 38.3 m.

Hole Angle : VERTICAL  
 Core Size : N.Q.  
 Core Recovery : 42%-Total,  
 35%-PcV+PrV sediment,  
 100%-Reg., 100%-Granite

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 70 cpm  
 Time Constant : 10 Sec.

Date : MARCH 25, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

51

Hole No. : **79-CUP-103**  
 Latitude : **6739.66**  
 Departure : **613.65**  
 Elevation : **1300.7 m**

Project : **CUP LAKE**  
 Azimuth :  
 Dip : **-90°**  
 Depth : **33.8 m**

Property : **DONEN 309**  
 Dip Tests :  
 m.  
 End of hole

Collared : **MARCH 25, 1979**  
 Completed : **MARCH 27, 1979**  
 Core Size : **N.Q. 3**  
 Logged by : **W. BULMER**

Depth m ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0 - 9				0 - 9 Tricone							
0 - 18				Casing							
9 - 12.72		5-4		9 - 12.72 medium to coarse pebble gravel-brown colour to matrix							
12.72 - 18.8		3	PoV	12.72-18.8 very coarse pebble gravel-matrix not recovered							
18.8 - 23		5		18.8 - 23 medium pebble gravel-pebbly top							
23 - 23.5			23 - 23.5 fine sand								
23.5 - 23.9			23.5 - 23.9 granule gravel								
23.9 - 25.3			23.9 - 25.3 fine pebble gravel								
25.3 - 33.7			25.3 - 33.7 broken greenish epidotic Valhalla granite								

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy loosely bound

**LATE VOLCANICS**  
 fine basalt massive vesicular or as thin silt may be associated with pumice and related tufaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour matrix clay to good silt. Silty light grey to brown in colour contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (increasing age)**

**CORNE**  
 fine to medium grained dark reddish magnetite quartz syenite high background radiation

**VALHALLA**  
 medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 moderate to strongly foliated grey biotite hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 fine grained chloritic greenstone generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

Post / Pre volcanism Sediments - Regolith

0 - 1 or Bg = Boulder gravel  
 2 or Gg = coarse gravel  
 3 or VCPg = very coarse pebble gravel  
 4 or CPg = coarse pebble gravel  
 5 or MPg = medium pebble gravel  
 6 or FPG = fine pebble gravel  
 7 or Gg = Granite gravel  
 8 or VCSd = very coarse Sand  
 9 or CSd = coarse Sand  
 10 or MSd = med. fm. Sand  
 11 or FSd = fine Sand  
 12 or VFSd = very fine Sand  
 13 or Sst = Silt  
 14 or clay = clay

Cbn = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite  
 LV = Late Volcanics  
 LV - 1 or o1B = massive olivine Basalt and related dykes and sills, may be vesicular  
 - 2 or Pum = Pumice  
 - 3 or TFS = Tufaceous Sediments

# LOG AND PROBE SHEET

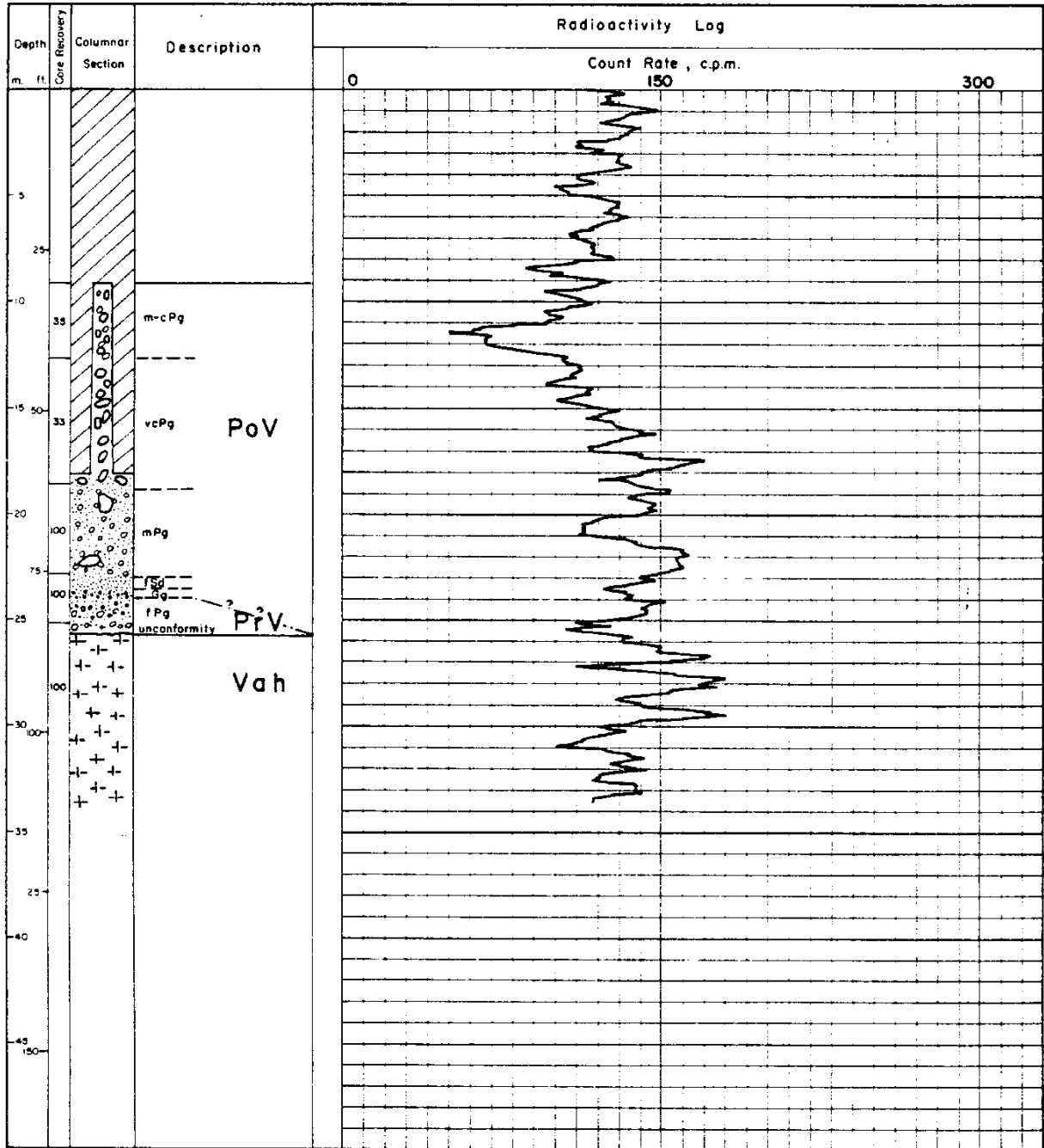
52

Method : D.D.  
 Hole N<sup>o</sup> : CUP-103  
 Location : DONEN 309  
 Probe Depth : 33.6 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 74% - Total  
 61% - Sed., 100% - Reg.,  
 100% - Granite

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 10 Sec.

Date : MARCH 27, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER





# PNC EXPLORATION (CANADA) CO. LTD.

53

Hole No. : 79-CUP-104  
 Latitude : 6534.56  
 Departure : 405.12  
 Elevation : 1302.8 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 29.5 m

Property : DONEN 317  
 Dip Tests :  
 m.  
 End of hole

Collared : MARCH 27, 1979  
 Completed : MARCH 29, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m. ft	Columnar Section	From & To ASSAY	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0				0 - 18 Tricone							
18.0			Reg	18 - 21 Granite Regalith							
21.0			Vah	21 - 29.5 Valhalla Granite							
22.0				21 - 22 broken Valhalla Granite							
29.5				22 - 29.5 good Valhalla Granite							
30.0											
35.0											
40.0											
45.0											
50.0											

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, coarsely bedded

**LATE VOLCANICS**  
 dyking basalt massive, vesic. 1/4" or less thin sills, may be associated with porphyry and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**

**CORYELL**  
 Coy fine to medium grained dark reddish melanocratic quartz syenite. High background radiation

**VALHALLA**  
 Vah medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 EV fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (- Regalith)**

1 - 1 or Bg = Boulder gravel	64 - 256
2 or Cg = Cobble gravel	32 - 64
3 or vCg = very coarse Pebble gravel	16 - 32
4 or cPg = coarse Pebble gravel	8 - 16
5 or mPg = medium Pebble gravel	4 - 8
6 or fPg = fine Pebble gravel	2 - 4
7 or Gg = Gravel	1 - 2
8 or vSd = very coarse Sand	1/2 - 1
9 or cSd = coarse Sand	1/4 - 1/2
10 or mSd = medium Sand	1/8 - 1/4
11 or fSd = fine Sand	1/16 - 1/8
12 or vFSd = very fine Sand	1/32 - 1/16
13 or Sfl = Silt	1/256 - 1/4
14 or cl = clay	1/256

Cbn = Carbonaceous    H = Hematite    S = Sulphide    Peg = Pegmatite

**Late Volcanics**

LV - 1 or olB = massive dyking Basalt and related dykes and sills, may be vesicular

- 2 or Pum = Pumice

- 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

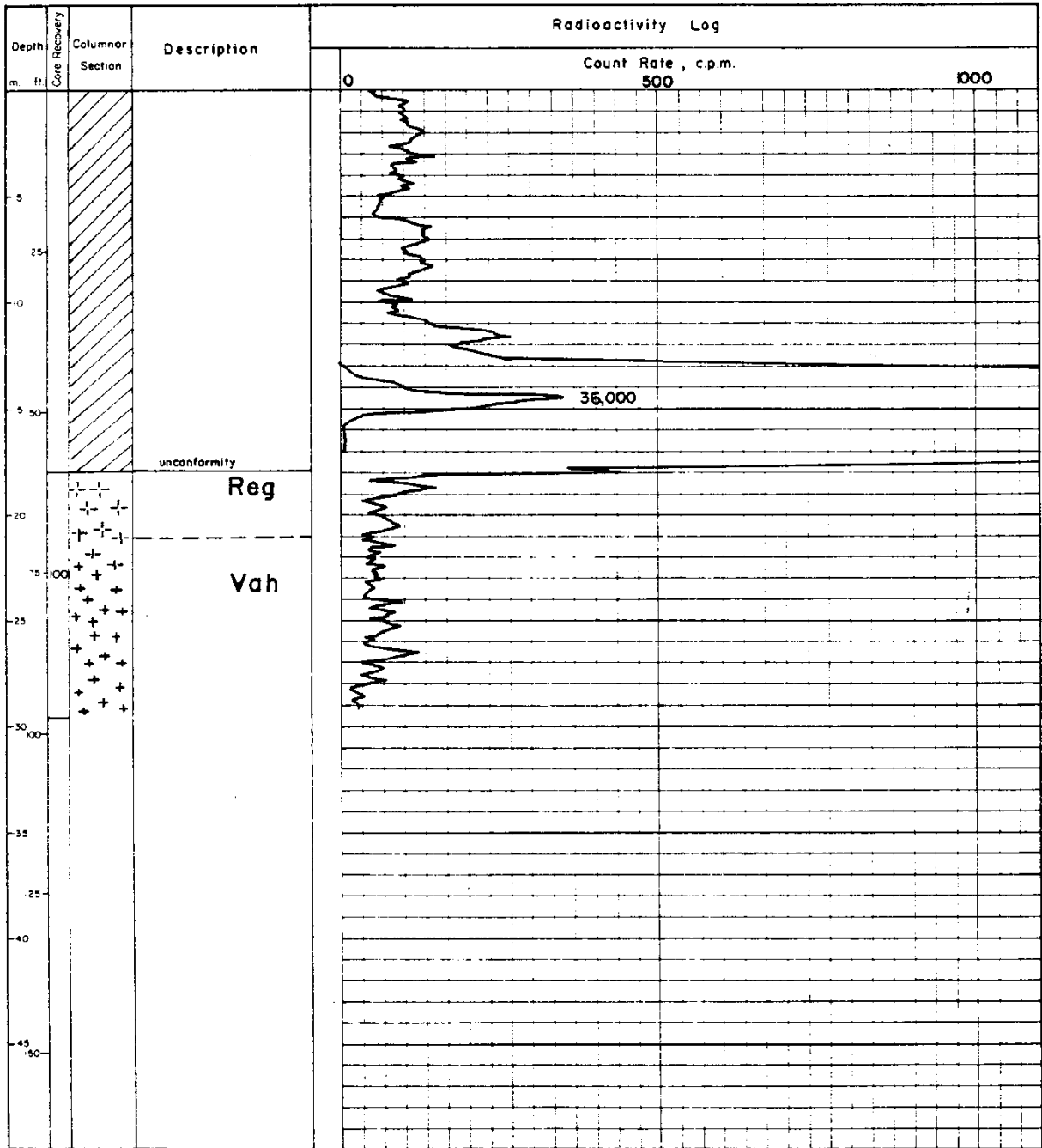
54

Method : D.D.  
 Hole No : CUP-104  
 Location : DONEN 317  
 Probe Depth : 29.3 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 100% - Total  
 100% - Reg., 100% - Granite

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 6 Sec.

Date : MARCH 29, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

55

Hole NR : 79-CUP-105  
 Latitude : 6531.09  
 Departure : 501.93  
 Elevation : 1305.0 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 45.1 m

Property : DONEN 317  
 Dip Tests :  
 m.  
 End of hole

Collared : MARCH 29, 1979  
 Completed : MARCH 30, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m. ft.	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample NR.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0-9				0 - 9 Tricone							
9-11.2		7 25-4		9 - 11.2 Granule gravel-moderately sorted-few medium to coarse pebbles-brown colour							
11.2-14.2		10-11		11.2 - 14.2 medium-fine sand, few pebbles							
14.2-18.5		10-11 24	PoV	14.2 - 18.5 medium to fine sand-few coarse pebbles							
18.5-20.2		4		18.5 - 20.2 coarse pebble gravel							
20.2-23.2		3+ 10-11		20.2 - 23.2 very coarse pebble gravel higher brown colour-medium to fine sand matrix							
23.2-24.7		7		23.2 - 24.7 granule gravel-few pebbles grey-brown matrix							
24.7-27.2		1,2 10,9		24.7 - 27.2 boulder/cobble gravel medium to coarse sand matrix=grey colour							
27.2-32.2		4-3		27.2 - 32.2 coarse to very coarse pebble gravel-some basalt pebbles-grey colour							
32.2-33.0		9	PrV	32.2 - 33.0 coarse sand							
33.0-34.2		10-11		33.0 - 34.2 medium to fine sand grey colour							
34.2-34.6		Vah 10-11 5		34.2 - 34.6 granite boulder							
34.6-36.1		10-11 5 4		34.6 - 36.1 medium to fine sand-clay matrix-few pebbles							
36.1-37.5		unconformity 4		36.1 - 37.5 medium to fine sand with coarser pebbles							
37.5-40			Reg	37.5 - 40 green epidotised regolith							
40-45.1			Vah	40 - 45.1 Valhalla Granite							
				40 - 41 broken Valhalla Granite							
				41 - 45.1 Valhalla Granite							

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, coarsely bound

**LATE VOLCANICS**  
 olive basalt massive vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay-like, good binder. Silty partion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (increasing age)**  
**CORYELL**  
 Coy fine to medium grained dark reddish monzonite quartz syenite high background radiation

**VALHALLA**  
 Vah medium to coarse grained white porphyrite biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or gneiss

**EARLY VOLCANICS**  
 eV fine grained chloritic gneiss - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

PoV - 1 or Bg = Boulder gravel	256 mm
- 2 or Cg = Cobble gravel	64 - 256
- 3 or vCg = very coarse Pebble gravel	32 - 64
- 4 or cPg = coarse Pebble gravel	16 - 32
- 5 or mPg = medium Pebble gravel	8 - 16
- 6 or fPg = fine Pebble gravel	4 - 8
- 7 or Gg = Granule gravel	2 - 4
- 8 or vcSd = very coarse Sand	1 - 2
- 9 or cSd = coarse Sand	1/2 - 1
- 10 or mSd = medium Sand	1/4 - 1/2
- 11 or fSd = fine Sand	1/8 - 1/4
- 12 or vSd = very fine Sand	1/16 - 1/8
- 13 or Sl = Silt	256 - 1/16
- 14 or cl = clay	1/256

Cbn = Carbonaceous    H = Hematite    S = Sulphide    Reg = Regolith  
 eV = Late Volcanics  
 vV - 1 or oV = massive olive basalt and related dykes and sills, may be vesicular  
 - 2 or Pum = Pumice  
 - 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

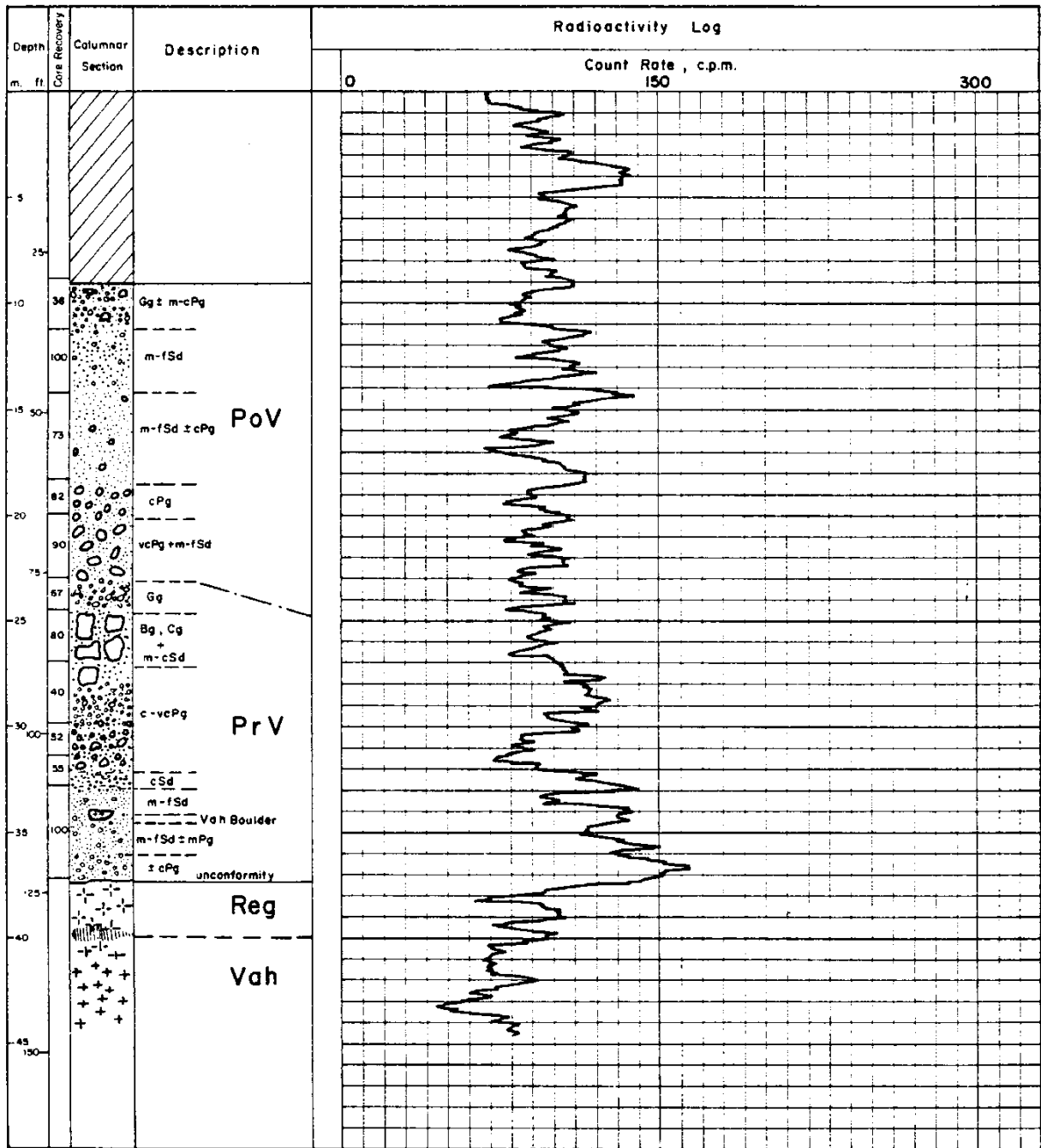
56

Method : D.D.  
 Hole N° : CUP-105  
 Location : DONEN 317  
 Probe Depth : 44.7 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 82% - Total  
 80.6% - PoV sed, 100% - Reg,  
 100% - Granite

Detector : Geiger GP 27U  
 Monitor : TCS 603 R  
 Background : 80 cpm  
 Time Constant : 10 Sec.

Date : MARCH 30, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

57

Hole No. : 79-CUP-106  
 Latitude : 6534.36  
 Departure : 610.64  
 Elevation : 1305.0 m

Project : CUP LAKE  
 Azimuth :  
 Dip :  
 Depth : 25.5 m

Property : DONEN 309  
 Dip Tests :  
 m.  
 End of hole

Collared : MARCH 30, 1979  
 Completed : MARCH 31, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0				0 - 9 Tricone							
0				0 - 14 Casing							
9.0			2	9 - 12.57 Cobble gravel							
12.57			5-4 10-9 PoV	12.57 - 18.5 medium to coarse pebble gravel - few boulders - medium to coarse sand matrix brown colour							
18.1			3-1 11-10	18.5 - 20.1 very coarse pebbly gravel fine to medium sand matrix							
20.1			1-5	20.1 - 20.5 medium pebble gravel - brown colour to matrix							
20.85			1-4 1-3 1-2 1-1 1-0 Vah	20.5 - 20.85 fine brown sand							
22.6			4 3 2 1 Unconform	20.85 - 22.6 poorly sorted coarse pebble gravel - coarse sand matrix brown-grey colour							
22.6			Vah	22.6 - 26.5 broken white biotite Valhalla granite							

### EXPLANATION

**POST-VOLCANISM SEDIMENTS**  
 - recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 - Shive Basalt massive vesicular or as thin sills may be associated with surface and related tufaceous sediments

**PRE-VOLCANISM SEDIMENTS**  
 - generally grey in colour, matrix clay - red, good binder. Silty parting light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 - may or may not be well developed, and may or may not contain vesicular sediments

**INTRUSIVES (increasing age)**  
**CORVELL**  
 Coy - fine to medium grained dark reddish monzonite quartz syenite - high background radiation

**VALHALLA**  
 Vah - medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel - moderate to strongly foliated grey biotite - hornblende quartz diorite or gneiss

**EARLY VOLCANICS**  
 EV - fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post-Pre Volcanism Sediments - Regolith**

1 - 2 or Bg	= Boulder gravel	256 - 512 mm
2 or Gg	= coarse gravel	64 - 256 mm
3 or vCPg	= very coarse pebble gravel	32 - 64 mm
4 or cPg	= coarse pebble gravel	8 - 32 mm
5 or mPg	= medium pebble gravel	4 - 8 mm
6 or fPg	= fine pebble gravel	2 - 4 mm
7 or Gg	= Granite gravel	4 - 8 mm
8 or vCSd	= very coarse sand	1 - 2 mm
9 or CSd	= coarse sand	2 - 1 mm
10 or mSd	= medium sand	4 - 2 mm
11 or fSd	= fine sand	4 - 2 mm
12 or vFSd	= very fine sand	16 - 18 mm
13 or St	= silt	256 - 716 mm
14 or cl	= clay	12.5 mm

CBn = Carbonaceous    H = Hematite    S = Sulphide    Peg = Pegmatite

**Late Volcanics**

LV - 1 or 0B	= massive shive Basalt and related dykes and sills, may be vesicular
2 or Pym	= Pumice
3 or TFS	= Tufaceous Sediments

# LOG AND PROBE SHEET

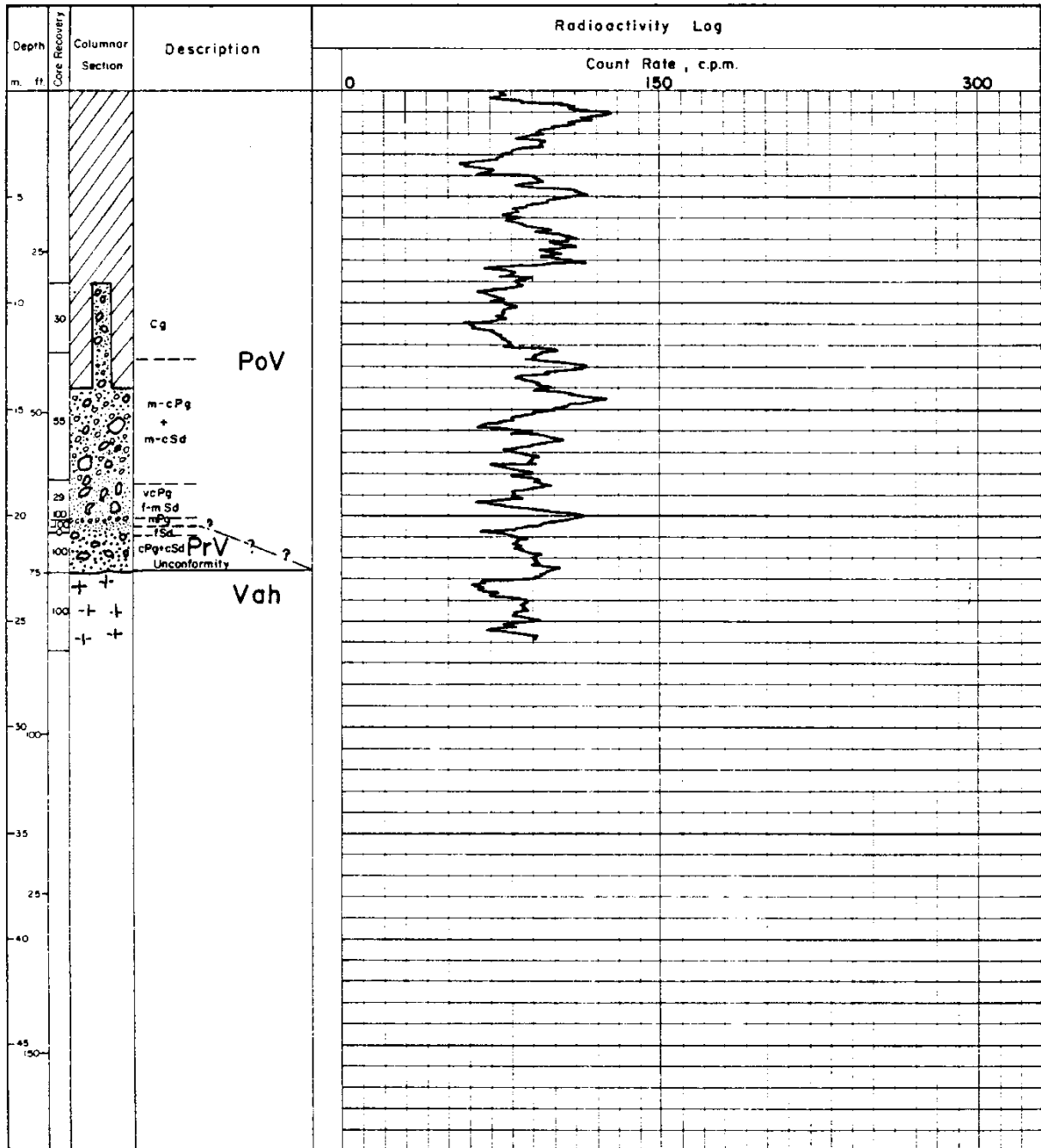
58

Method : D. D.  
 Hole No : CUP-106  
 Location : DONEN 309  
 Probe Depth : 25.5 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 64%-Total  
 53%-Sed., 100%-Granite

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 50 cpm  
 Time Constant : 10 Sec.

Date : MARCH 31, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

59

Hole No. : 79-CUP-107  
 Latitude : 6314.15  
 Departure : 397.30  
 Elevation : 1306.1 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 32.6 m

Property : DONEN 316  
 Dip Tests :  
 m.  
 End of hole

Collared : MARCH 31, 1979  
 Completed : APRIL 3, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m, ft	Columnar Section	From Assay To	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U, ppm	Th	
0 - 6.7				0 - 6.7 Tricone								
6.7 - 17.7			LV	6.7 - 17.7 medium grained olivine basalt		107-1	17.0	17.1	0.1	3.5 ppm		
						2	17.1	17.2	"	50 "		
						3	17.2	17.3	"	33.5 "		
						4	17.3	17.4	"	0.20%		
						5	17.4	17.5	"	0.82 "		
						6	17.5	17.6	"	0.77 "		
						7	17.6	17.7	"	0.67 "		
						8	17.7	17.8	"	1.08 "		
						9	17.8	17.9	"	1.46 "		
						10	17.9	18.0	"	3.24 "		
						11	18.0	18.1	"	3.28 "		
						12	18.1	18.2	"	1.03 "		
						13	18.2	18.3	"	0.27 "		
						14	18.3	18.4	"	3.8 ppm		
						15	18.4	18.5	"	57 "		
17.7 - 18.0			13/14 Cbn Based	17.7 - 18.0 black baked silt/clay (originally medium brown) contains finely disseminated organic matter								
18.0 - 23.4			13/14	18.0 - 23.4 brown (non-baked) silt/clay								
23.4 - 23.6			PrV	23.4 - 23.6 woody matter		107-16	23.46	23.47	0.01	6.5 ppm		
23.6 - 26.0			9 13,14 unconform.	23.46 - 26.0 coarse sand-brown mud matrix-sand is grey colour								
26.0 - 29.1			Reg	26.0 - 29.1 broken epidotic coarse grained regolith								
29.1 - 32.6			Vah	29.1 - 32.6 porphyritic saussauritised Valhalla granite								

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with andesite and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay-like good binder. Silty portion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (increasing age)**

**CORYELL**  
 Coy fine to medium grained dark reddish monzonite quartz syenite. High background radiation

**VALHALLA**  
 Vah medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 eV fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (- Regolith)**

107-1 or Bg = Boulder gravel 295 mm  
 -2 or CG = Cobble gravel 64-256  
 -3 or vCPg = very coarse Pebble gravel 32-64  
 -4 or cPg = coarse Pebble gravel 16-32  
 -5 or mPg = medium Pebble gravel 8-16  
 -6 or fPg = fine Pebble gravel 4-8  
 -7 or Gg = Granite gravel 2-4  
 -8 or vCSd = very coarse Sand 1-2  
 -9 or cSd = coarse Sand 2-1  
 -10 or mSd = medium Sand 4-1/2  
 -11 or fSd = fine Sand 4-1/4  
 -12 or vFSd = very fine Sand 4-1/8  
 -13 or Sd = Silt 7/256-1/8  
 -14 or cl = clay 1/256

**Cbn = Carbonaceous H = Hematite S = Sulphide Reg = Regolith**

**Late Volcanics**

LV -1 or olB = massive olivine Basalt and related dykes and sills, may be vesicular  
 -2 or Pum = Pumice  
 -3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

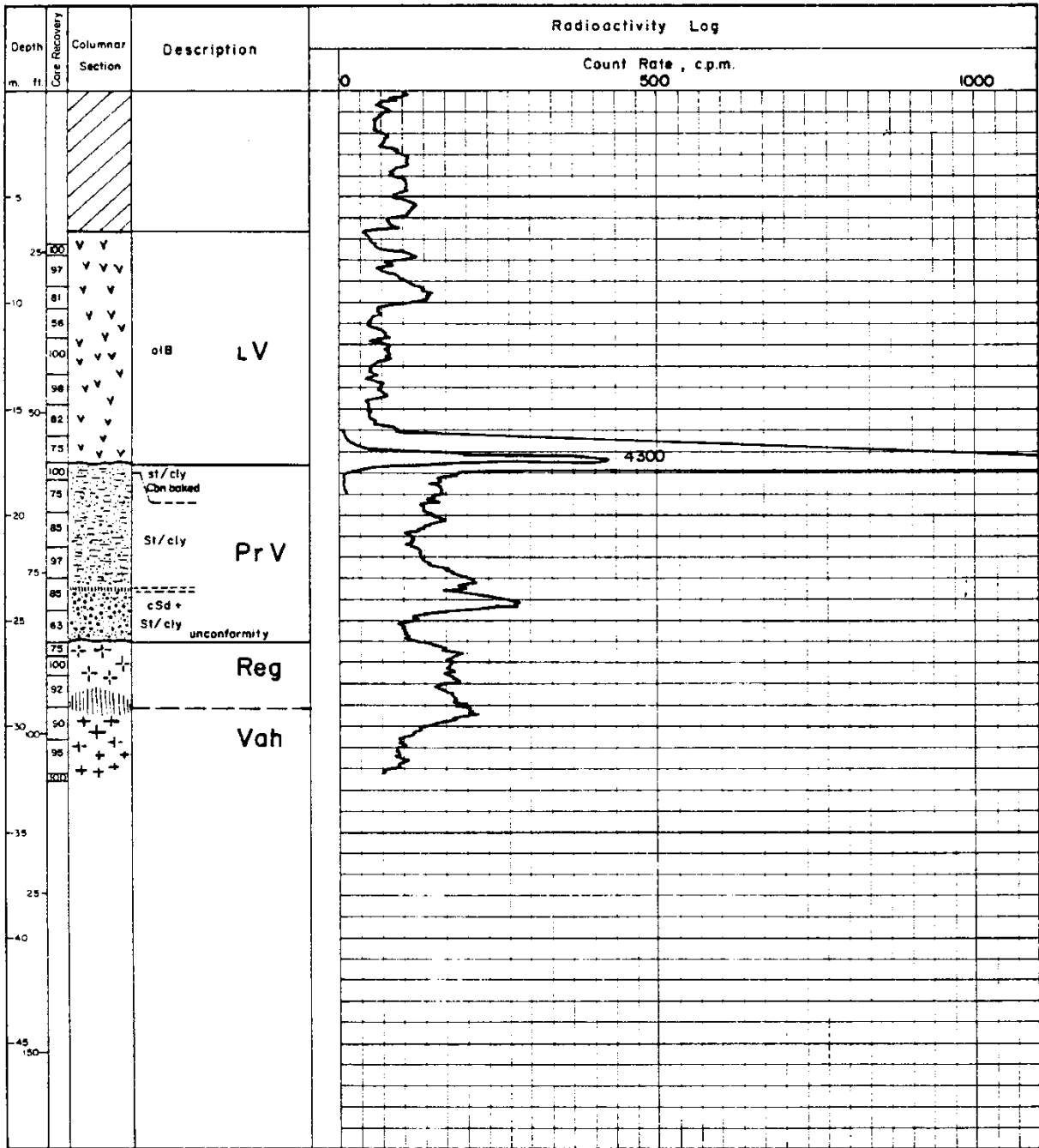
60

Method : D.D.  
 Hole N° : CUP-107  
 Location : DONEN 316  
 Probe Depth : 32.3 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 83.5% - Total  
 85% - Basalt, 82% - Sed.,  
 92% - Granite + Reg.

Detector : Geiger GP27 U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 10 Sec.

Date : APRIL 3, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER





# PNC EXPLORATION (CANADA) CO. LTD.

61

Hole No. : 79-CUP-108  
 Latitude : 6328.85  
 Departure : 593.63  
 Elevation : 1308.6m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 41.4 m

Property : DONEN 309  
 Dip Tests :  
 m  
 End of hole

Collared : APRIL 7, 1979  
 Completed : APRIL 8, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m. ft.	Columnar Section	From Assay & To	Unit	Description	Rock Sample No.	From	To	Width	Assay		
									U, ppm	Th	F, ppm
0		1.8		0 - 1.8 Tricone							
5		1.8	LV	1.8 - 9.6 olivine basalt	108-1	8.83	8.93	0.1	33		800
				1.8 - 8.83-fine grained	2	8.93	9.03		30		
					3	9.03	9.13		31		
					4	9.13	9.23		3.5		510
					5	9.23	9.33		36		
				8.83- 9.4 -calcareous vein material and mineralisation	6	9.33	9.43		29		820
					7	9.4	10.6		34		
					8	10.6	10.7		69		
					9	10.7	10.8		52		
					10	10.8	10.9		25		450
15			Reg	9.6 - 21.8 green coarse regolith sand							
20											
25			Peg	21.8-23.1 white pegmatite-very siliceous							
25			Coy	23.1 - 27.7 green chloritic fine grained rock-altered spars-broken scattered about-all saussauritised-possible 'coryell dyke'							
30			Vah	27.7 - 41.4 Valhalla Granite							
35				27.7 - 38.4 crumbly fractured soft epidotic granite							
40				38.4 - 41.4 white biotite Valhalla Granite							
45											

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally  
 brown in colour matrix sandy,  
 loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular  
 or as thin sills, may be associated  
 with quartzite and related tuffaceous  
 sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix  
 clay like, good binder. Silty  
 portion light brown in colour,  
 contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed,  
 and may or may not contain  
 overlying sediments

**INTRUSIVES ( increasing age )**

**CORYELL**  
 Coy fine to medium grained dark reddish  
 nepheline quartz syenite. High  
 background radiation

**VALHALLA**  
 Vah medium to coarse grained white  
 porphyritic biotite granite large pink  
 feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey  
 biotite - hornblende quartz diorite  
 or granodiorite

**EARLY VOLCANICS**  
 eV fine grained chloritic greenstone -  
 generally badly fractured and  
 contains abundant hematite stringers  
 throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

1-4 Bv or Prv  
 1-4 Bv - 1 or Bg = Boulder gravel 256 mm  
 2 or Cg = Cobble gravel 64-256  
 3 or vCg = very coarse Pebble gravel 32-64  
 4 or cPg = coarse Pebble gravel 16-32  
 5 or mPg = medium Pebble gravel 8-16  
 6 or fPg = fine Pebble gravel 4-8  
 7 or Gg = Granite gravel 2-4  
 8 or vCsd = very coarse Sand 1-2  
 9 or cSd = coarse Sand 1/2-1  
 10 or mSd = medium Sand 1/4-1/2  
 11 or fSd = fine Sand 1/4-1/4  
 12 or vFsd = very fine Sand 1/4-1/4  
 13 or Sl = Silt 1/250-1/4  
 14 or cl = clay 1/250

**Carbonaceous** Cbn  
**Hematite** H  
**Sulphide** S  
**Pegmatite** Peg

**Late Volcanics** LV  
 LV - 1 or oLB = massive olivine Basalt and related dykes  
 and sills, may be vesicular  
 2 or Pum = Pumice  
 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

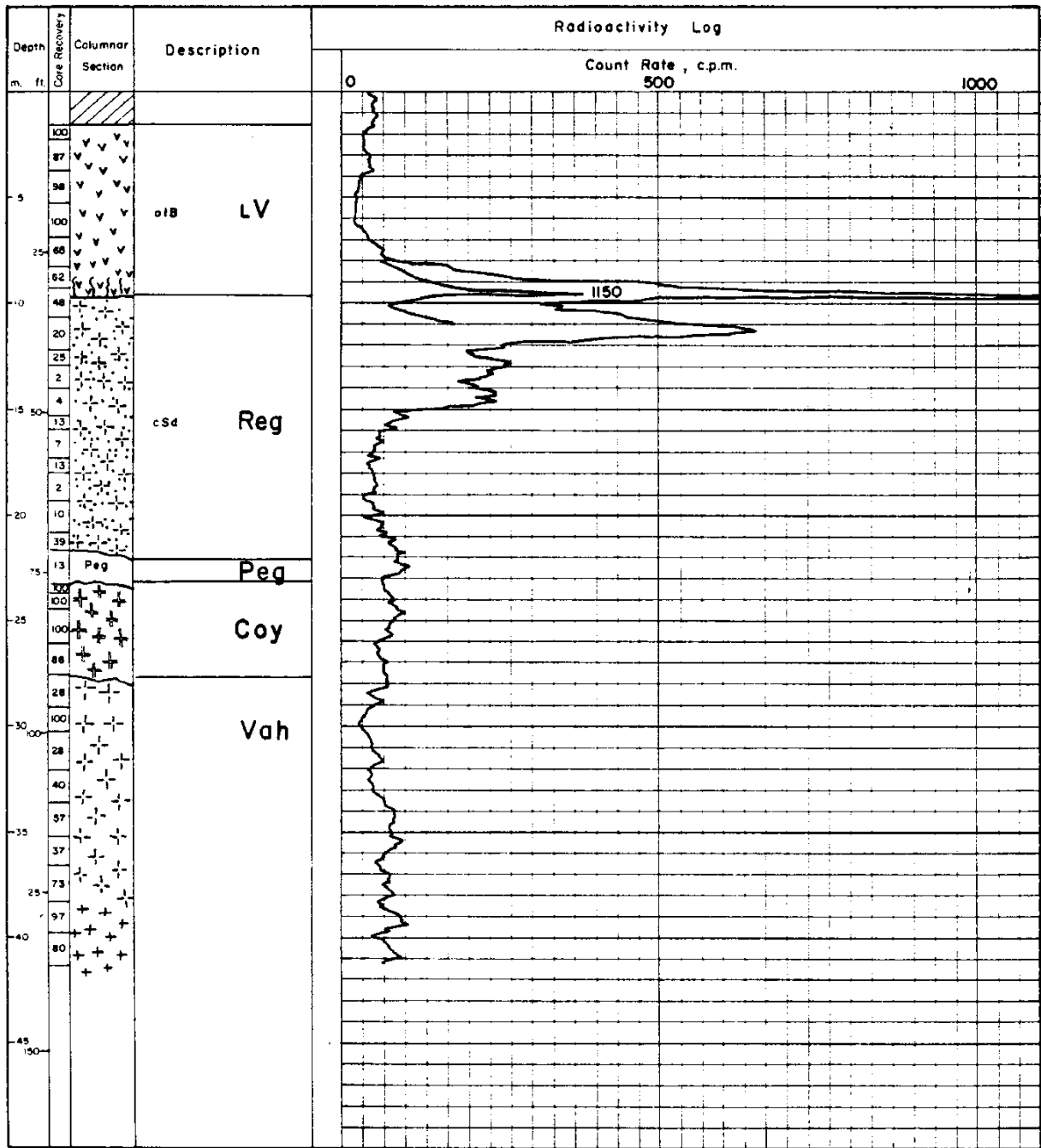
62

Method : D.D.  
 Hole No : CUP-108  
 Location : DONEN 309  
 Probe Depth : 41.2 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 52.7% - Total  
 83.6% - Basalt, 15.6% - Regalm,  
 62.8% - Coryell dyke, 88.3% - Granite

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 80 cpm  
 Time Constant : 10 Sec.

Date : APRIL 8, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

63

Hole No. : 79-CUP-109  
 Latitude : 6351.27  
 Departure : 693.81  
 Elevation : 1309.6 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 20.1 m

Property : DONEN 309  
 Dip Tests :  
 m.  
 End of hole

Collared : APRIL 8, 1979  
 Completed : APRIL 9, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m. ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
0 - 9.1				Tricone								
9.1 - 12.4		9.1 12.4	PoV unconform.	brown pebbly medium sand								
12.4 - 17.0		12.4 17.0	Reg	brown (organic colouring) granite Regalith								
17.0 - 20.1		17.0 20.1		green epidotic/chloritic granite regalith								

### EXPLANATION

- PoV POST VOLCANISM SEDIMENTS  
recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LV LATE VOLCANICS  
diorine basalt massive, vesicular or ds thin sills, may be associated with dikes and related tuffaceous sediments
- PoV PRE VOLCANISM SEDIMENTS  
generally grey in colour, matrix clay-like, good binder. Silty partion light brown in colour, contains carbonaceous material
- Reg REGALITH LAYER  
may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES (increasing age)
- CORYELL  
Cay fine to medium grained dark reddish hornstone quartz syenite. High background radiation
- VALHALLA  
Vah medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common
- NELSON  
Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite
- EARLY VOLCANICS  
EV fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (+ Regalith)
- PoV - 1 or Bg = Boulder gravel 256 mm
- 2 or Cg = Cobble gravel 64 - 256
- 3 or vCPg = very coarse Pebble gravel 32 - 64
- 4 or CPg = coarse Pebble gravel 6 - 32
- 5 or mPg = medium Pebble gravel 9 - 6
- 6 or fPg = fine Pebble gravel 4 - 8
- 7 or Gg = Granite gravel 2 - 4
- 8 or vCSd = very coarse Sand 1 - 2
- 9 or CSd = coarse Sand 2 - 1
- 10 or mSd = medium Sand 1/8 - 1/2
- 11 or fSd = fine Sand 1/16 - 1/8
- 12 or vSd = very fine Sand 1/32 - 1/16
- 13 or Ss = Silt 1/256 - 1/64
- 14 or cl = clay 1/256
- CBA = Carbonaceous H = Hematite S = Sulphide Reg = Regalith
- LV LATE VOLCANICS  
LV - 1 or oB = massive diorine Basalt and related dykes and sills, may be vesicular
- 2 or Pum = Pumice
- 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

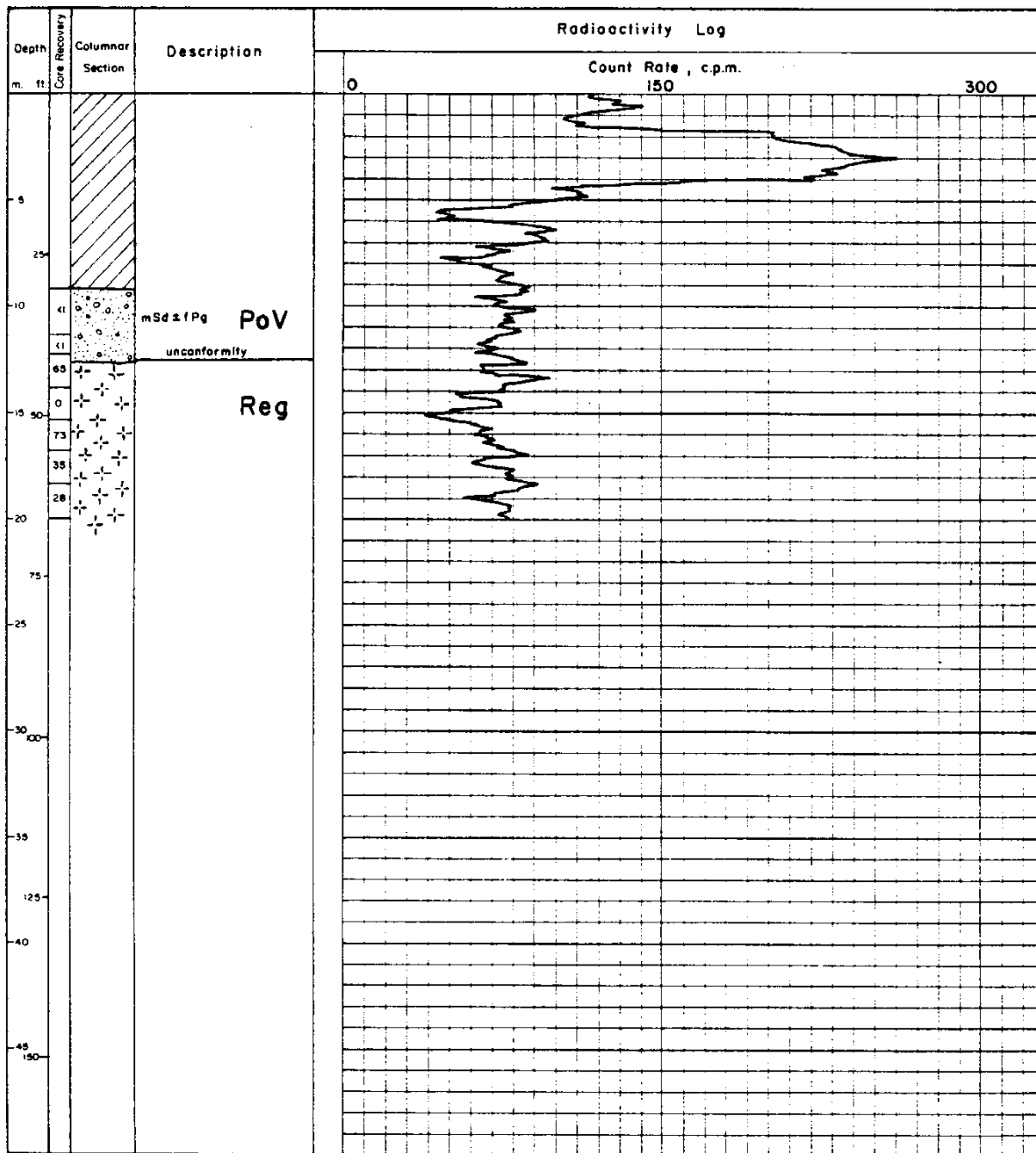
64

Method : D.D.  
 Hole N° : CUP-109  
 Location : DONEN 309  
 Probe Depth : 20.0 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 28% - Total,  
 < 1% - Sed., 40.3% - Reg.

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 10 Sec.

Date : APRIL 9, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



Hole No. : 79-CUP-110  
 Latitude : 6161.70  
 Departure : 330.23  
 Elevation : 1300.5m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 26.2 m

Property : DONEN 316  
 Dip Tests :  
 m.  
 End of hole

Collared : APRIL 18, 1979  
 Completed : APRIL 19, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m. ft.	Columnar Section	From To ASSAY	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
				0 - 3 Tricone								
				0 - 10.9 Casing								
		3.0	4-2	3 - 4.8 coarse pebble cobble gravel								
		4.8	P+V ?	4.8 - 5.4 coarse to very coarse pebble gravel								
		5.4		5.4 - 6.3 coarse cobble gravel								
		6.3		6.3 - 9.7 medium to coarse pebble gravel								
		9.7	9-14 Cbn Reg	9.7 - 14.3 coarse green granite sand with some grey mud plus organics as matrix-crude bedding 20°								
		10.9		14.3 - 15.8 coarse sand-granite pebble gravel								
		14.3	15-18 unconform.	15.8 - 26.2 Valhalla Granite								
		15.8		15.8 - 18.3 broken Valhalla granite-some grey mud at top 1cm								
		18.3		18.3 - 26.2 white biotite Valhalla granite-little epidote								
		26.2										

EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 massive basalt, vesicular or as thin sills, may be associated with tuffaceous and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay like, good binder. Silty portion - grey brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**  
**CORYELL**  
 fine to medium grained dark reddish monzonite quartz syenite. High background radiation

**VALHALLA**  
 medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 moderate to strongly foliated grey biotite - hornblende quartz diorite or gneiss

**EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

**LEGEND**

Post / Pre Volcanism Sediments (+ Regolith)

PoV or PrV

- 1a PoV - 1 or Bg = Boulder gravel 256 mm
- 2 or Cg = Cobble gravel 64 - 256
- 3 or vCg = very coarse Pebble gravel 32 - 64
- 4 or cPg = coarse Pebble gravel 16 - 32
- 5 or mPg = medium Pebble gravel 8 - 16
- 6 or fPg = fine Pebble gravel 4 - 8
- 7 or Gg = Granite gravel 2 - 4
- 8 or vSd = very coarse Sand 1 - 2
- 9 or cSd = coarse Sand 1/2 - 1
- 10 or mSd = medium Sand 1/4 - 1/2
- 11 or fSd = fine Sand 1/8 - 1/4
- 12 or vSi = very fine Sand 1/16 - 1/8
- 13 or Si = Silt 1/256 - 1/16
- 14 or Cl = clay 1/256

Cbn = Carbonaceous H = Hematite S = Sulphide Reg = Regolith

**Late Volcanics**

- LV - 1 or oB = massive olivine basalt and related dykes and sills, may be vesicular
- 2 or Pum = Pumice
- 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

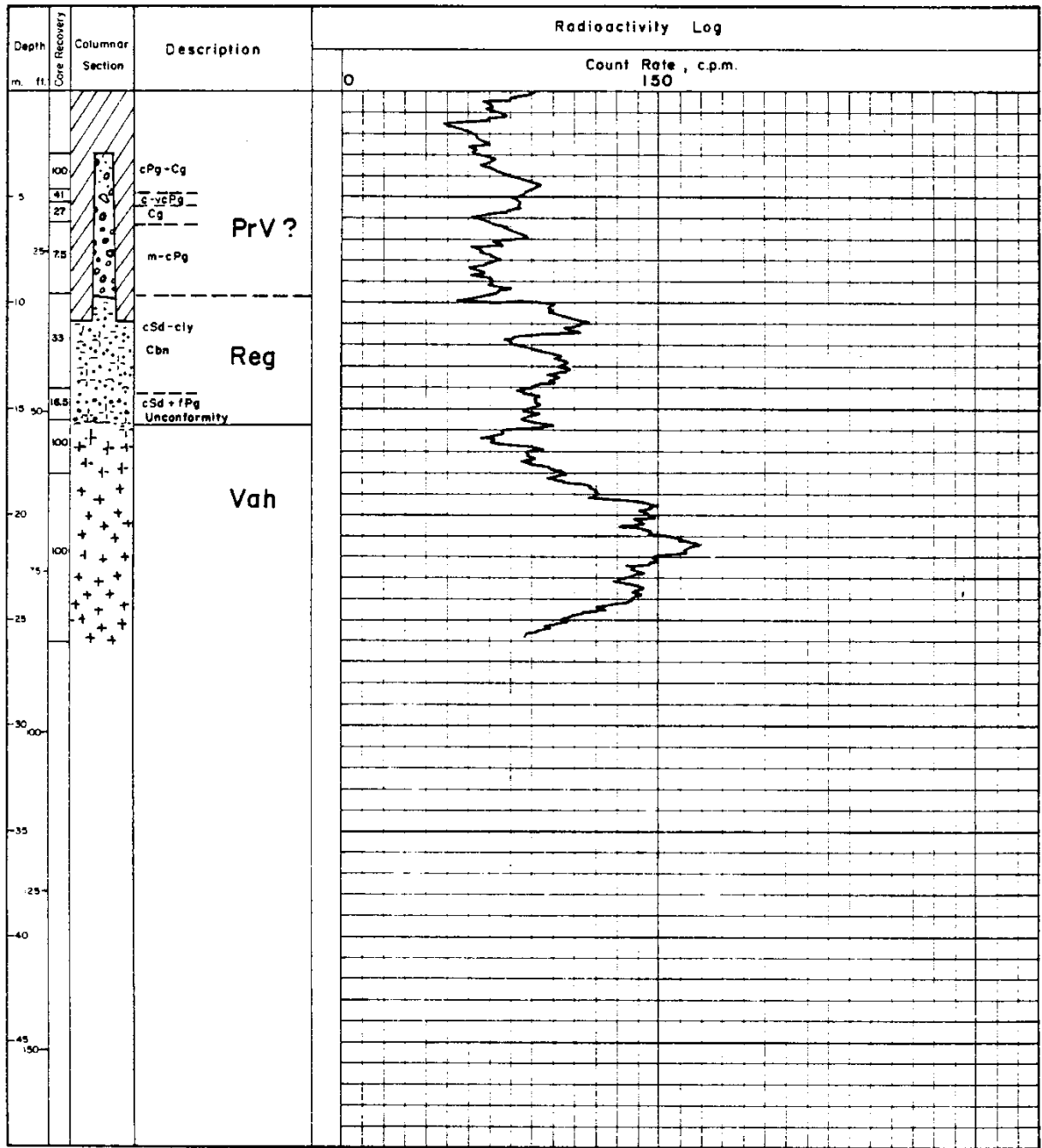
66

Method : D.D.  
 Hole N<sup>o</sup> : CUP - 110  
 Location : DONEN 316  
 Probe Depth : 25.8 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 56% - Total  
 11.5% - Sediment, 29% - Reg.,  
 100% - Granite

Detector : Geiger GP 27U  
 Monitor : TCS 603 R  
 Background : 70 cpm  
 Time Constant : 10 Sec.

Date : APRIL 19, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

67

Hole No. : 79-CUP-III  
 Latitude : 6163.85  
 Departure : 447.92  
 Elevation : 1314.2 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 47.9 m

Property : DONEN 316  
 Dip Tests :  
 m.  
 End of hole

Collared : APRIL 11, 1979  
 Completed : APRIL 18, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U, ppm U <sub>2</sub> O <sub>7</sub> %	Th ppm	F ppm
0 - 2.1	▽	2.1		0 - 2.1 Tricone								
2.1 - 31.6	▽		LV	2.1 - 31.6 medium grained olivine basalt-few sulphides								
31.6 - 33.6	+ +	13	PW	31.6 - 33.6 finely laminated brown silt/mud-contains disseminated organic matter plus few quartz grains		11-1	31.7	31.8	0.1	0.63%	1000	
33.6 - 34.1	+ +	14	Reg	33.6 - 34.1 coarse granite sand with mud matrix		2	31.8	31.9	"	28ppm	800	
34.1 - 34.7	+ +	9	Reg	34.1 - 34.7 very coarse granite sand-less mud-regalith		3	31.9	32.0	"	41 "		
34.7 - 35.9	+ +	8	Peg	34.7 - 35.9 white pegmatite dyke muscovite + garnet rich		4	32.0	32.1	"	70 "		
35.9 - 37.5	+ +		Vah	35.9 - 37.5 broken Valhalla granite weathered-epidote rich		5	32.1	32.2	"	59 "		
37.5 - 38.1	+ +					6	32.2	32.3	"	15.5 "		
38.1 - 38.8	+ +					7	32.6	32.7	"	11.5 "		
38.8 - 39.4	+ +					8	32.7	32.8	"	6.0 "		
39.4 - 40.0	+ +					9	32.8	32.9	"	16 "		
40.0 - 40.6	+ +					10	32.9	33.0	"	28 "		
40.6 - 41.2	+ +					11	33.0	33.1	"	58 "		
41.2 - 41.8	+ +					12	33.1	33.2	"	94 "		
41.8 - 42.4	+ +					13	33.2	33.3	"	0.13%	770	
42.4 - 43.0	+ +					14	33.3	33.4	"	0.18 "		
43.0 - 43.6	+ +					15	33.4	33.5	"	0.43 "		
43.6 - 44.2	+ +					16	33.5	33.6	"	0.32 "		
44.2 - 44.8	+ +					17	33.6	33.7	"	1.58 "		
44.8 - 45.4	+ +					18	33.7	33.8	"	0.59 "	290	
45.4 - 46.0	+ +					19	33.8	33.9	"	0.58 "		
46.0 - 46.6	+ +					20	33.9	34.0	"	1.16 "		
46.6 - 47.2	+ +					21	34.0	34.1	"	0.54 "		
47.2 - 47.8	+ +					22	34.1	34.2	"	0.36 "		
47.8 - 48.4	+ +					23	34.2	34.3	"	0.26 "		
48.4 - 49.0	+ +					24	34.3	34.4	"	0.14 "		
49.0 - 49.6	+ +					25	34.4	34.5	"	0.20 "		
49.6 - 50.2	+ +					26	34.5	34.6	"	0.22 "		
50.2 - 50.8	+ +					27	34.6	34.7	"	0.28 "		
50.8 - 51.4	+ +					28	34.7	34.8	"	0.27 "	330	
51.4 - 52.0	+ +					29	34.9	35.0	"	55ppm		
52.0 - 52.6	+ +					30	35.0	35.1	"	7.5 "		
52.6 - 53.2	+ +					31	35.1	35.2	"	47 "	690	
53.2 - 53.8	+ +					32	35.2	35.3	"	48 "		
53.8 - 54.4	+ +					33	35.3	35.4	"	95 "	335	
54.4 - 55.0	+ +					34	35.4	35.5	"	95 "		
55.0 - 55.6	+ +					35	35.5	35.6	"	14.5 "		
55.6 - 56.2	+ +					36	35.6	35.7	"	0.16%	16	380
56.2 - 56.8	+ +					37	35.7	35.8	"	0.40%	12	350

NOTE : SPECTROGRAPHIC ANALYSIS OF PEG.  
 IN MARCH - APRIL REPORT.

### EXPLANATION

- POST VOLCANISM SEDIMENTS  
 -sv recent sand and gravels generally brown in colour matrix sandy, lassy bound
- LATE VOLCANICS  
 -LV olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS  
 -pv generally gray in colour matrix clay-like good binder. Silty parton light brown in colour, contains carbonaceous material
- REGALITH LAYER  
 -Reg may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )  
 -CORYELL  
 -Cay fine to medium grained dark reddish mafic quartz syenite high background radiation
- VALHALLA  
 -Vah medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common
- NELSON  
 -Nel moderate to strongly foliated gray biotite - hornblende quartz diorite or granodiorite
- EARLY VOLCANICS  
 -EV fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Pv or PvV Post / Pre Volcanism Sediments (+ Regolith)
- 18 Pv - 1 or Bg = Boulder gravel 256 - 7
- 2 or Gg = Cobble gravel 64 - 56
- 3 or vCg = very coarse Pebble gravel 32 - 64
- 4 or cG = coarse Pebble gravel 16 - 32
- 5 or mPg = medium Pebble gravel 8 - 16
- 6 or fPg = fine Pebble gravel 4 - 8
- 7 or Gg = Granite gravel 2 - 4
- 8 or vSd = very coarse Sand 1 - 2
- 9 or cSd = coarse Sand 1 - 1
- 10 or mSd = medium Sand 1/2 - 1
- 11 or fSd = fine Sand 1/4 - 1/2
- 12 or vSt = very fine Sand 1/8 - 1/4
- 13 or St = Silt 1/16 - 1/8
- 14 or cty = clay 1/256
- Ch = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite
- LV Late Volcanics  
 -LV - 1 or oIB = massive olivine Basalt and related dikes and sills, may be vesicular  
 -2 or Pum = Pumice  
 -3 or TFS = Tuffaceous Sediments

SAMPLE NO. :	Lower Concentration Limit (PPM)	CUP-111-29
Antimony	50	bcl
Arsenic	50	bcl
Barium	5	200
Beryllium	5	bcl
Bismuth	5	bcl
Boron	20	bcl
Cadmium	20	bcl
Calcium	0.05%	1%
Chromium	10	100
Cobalt	10	bcl
Copper	1	1
Gallium	2	20
Germanium	20	bcl
Indium	50	bcl
Iron	0.05%	0.2%
Lead	5	10
Magnesium	0.02%	0.05%
Manganese	5	1000
Molybdenum	10	bcl
Nickel	5	bcl
Niobium	50	bcl
Silver	1	bcl
Strontium	2	100
Tellurium	200	bcl
Thorium	100	< 200
Tin	10	bcl
Titanium	5	700
Vanadium	10	< 20
Zinc	50	bcl
Zirconium	20	20
Scandium	< 5	
Yttrium	< 10	
<b>SEMI QUANTITATIVE SPECTROGRAPHIC ANALYSES</b>		
>5000 ppm = > 5000 ppm      50 ppm = 25-100 ppm 5000 ppm = 2500-10000 ppm    20 ppm = 10-50 ppm 2000 ppm = 1000-4000 ppm    10 ppm = 5-20 ppm 1000 ppm = 500-2000 ppm      5 ppm = 2-10 ppm		
500 ppm = 250-1000 ppm      2 ppm = 1-4 ppm 200 ppm = 100-400 ppm       1 ppm = 0.5-2 ppm 100 ppm = 50-200 ppm        bcl = below concentration limit Ranges for Iron, Calcium & Magnesium are reported in %		

Cup 111

Semi-quantitative spectrographic analyses of muscovite and garnet pegmatitic dike rock, 34.7 - 35.9 metres from surface.



# LOG AND PROBE SHEET

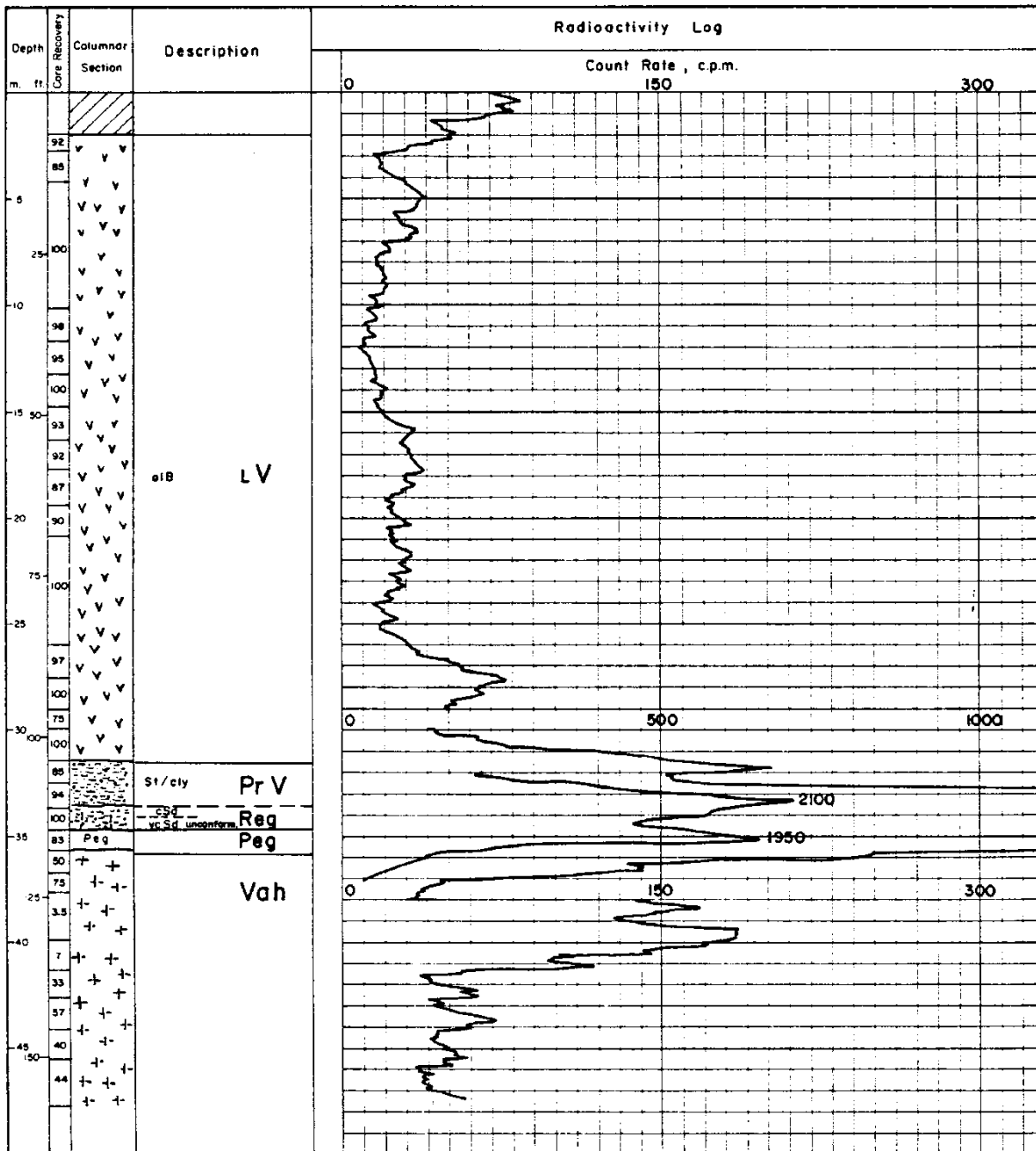
69

Method : D.D.  
 Hole No : CUP-III  
 Location : DONEN 316  
 Probe Depth : 47.5 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 76%-Total  
 90%-Basalt, 89%-PrV sed.,  
 42%-Reg.

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 10 Sec.

Date : APRIL 18, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

70

Hole No. : 79-CUP-112  
 Latitude : 6161.58  
 Departure : 549.64  
 Elevation : 1318.0 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 32.6 m

Property : DONEN 307  
 Dip Tests :  
 m.  
 End of hole

Collared : APRIL 19, 1979  
 Completed : APRIL 20, 1979  
 Core Size : N. Q. 3  
 Logged by : W. BULMER

Depth m ft	Columnar Section	From & To	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U, ppm	Th	F, ppm
	EXPLODED VIEW											
0 - 3.6	Tricone											
3.6 - 21.2	medium to fine grained olivine basalt		1 LV									
21.2 - 21.3	black baked silt/clay (originally medium brown) contains finely disseminated organic matter		13/14 Cbn		112-1	23.9	24.0	0.1	4.5			
21.3 - 22.3	semi-consolidated coarse sand-light grey mud matrix-contains granite pebbles		PrV 9.14 unconf.		112-2	24.0	24.1	"	6.0		500	
22.3 - 22.4					112-3	24.1	24.2	"	3.5			
22.4 - 22.5					112-4	24.2	24.3	"	4.0			
22.5 - 22.6					112-5	24.3	24.4	"	6.0			
22.6 - 22.7					112-6	24.4	24.5	"	4.0			
22.7 - 22.8					112-7	24.5	24.6	"	1.0			
22.8 - 22.9					112-8	24.6	24.7	"	6.0			
22.9 - 23.0					112-9	24.7	24.8	"	13.0			
23.0 - 28.6	broken epidote-rich Valhalla Granite-mostly Regalith		Reg									
28.6 - 32.6	broken Valhalla Granite		Vah									

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**E VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay like, good binder. Silty part light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**

**CORRYELL**  
 Coy fine to medium grained dark reddish melanitic quartz syenite. High background radiation

**VALHALLA**  
 Vah medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 eV fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments ( - Regalith )**

1e Poy - 1 or Bg = Boulder gravel 256 - 7 - m  
 - 2 or Cg = Cobble gravel 64 - 56  
 - 3 or vCg = very coarse Pebble gravel 32 - 64  
 - 4 or cPg = coarse Pebble gravel 16 - 32  
 - 5 or mPg = medium Pebble gravel 8 - 16  
 - 6 or fPg = fine Pebble gravel 4 - 8  
 - 7 or Gg = Granite gravel 2 - 4  
 - 8 or vCsd = very coarse Sand 1 - 2  
 - 9 or cSd = coarse Sand 1/2 - 1  
 - 10 or mSd = medium Sand 1/4 - 1/2  
 - 11 or fSd = fine Sand 1/8 - 1/4  
 - 12 or vSd = very fine Sand 1/16 - 1/8  
 - 13 or Sl = Silt 1/256 - 1/16  
 - 14 or cl = clay 1/256

Cbn = Carbonaceous H = hematite S = Sulphide Reg = Regalith

**Late Volcanics**

LV - 1 or olB = massive olivine Basalt and related dykes and sills, may be vesicular  
 - 2 or Pum = Pumice  
 - 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

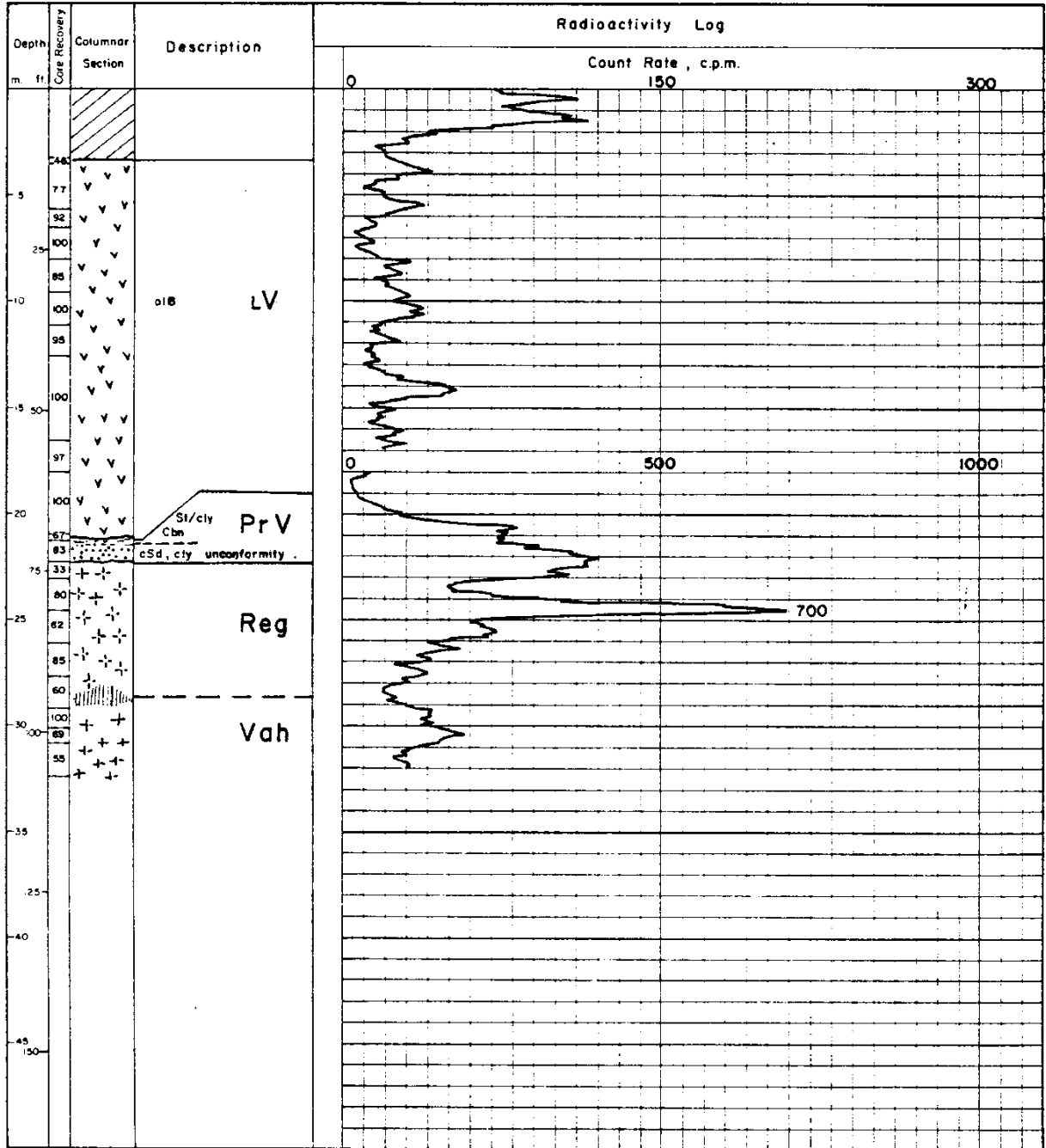
71

Method : D.D.  
 Hole N<sup>o</sup> : CUP-112  
 Location : DONEN 307  
 Probe Depth : 32.3 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 84% -Total,  
 94% -Basalt, 67%-PrV Sed.,  
 69% -Reg.

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 80 cpm  
 Time Constant : 10 Sec.

Date : APRIL 20, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

72

Hole No. : 79-CUP-113  
 Latitude : 6158.71  
 Departure : 650.12  
 Elevation : 1316.0 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 29.3 m

Property : DONEN 307  
 Dip Tests :  
 m.  
 End of hole

Collared : APRIL 20, 1979  
 Completed : APRIL 21, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m. ft.	Columnar Section	From Assay & To	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U, ppm	Th	
0 - 2.4		2.4		0 - 2.4 Trioone								
2.4 - 18.1			LV	2.4 - 18.1 Olivine Basalt								
17-18.1				17-18.1 Basalt Altered		113-1	18.9	19.0	0.1	015%		
18.1 - 20.4				18.1 - 20.4 coarse to very coarse granite sand matrix is grey mud-slightly carbonaceous		2	19.0	19.1	"	71 ppm		
20.4 - 21.8			Reg unconform	20.4 - 21.8 green coarse epidote-rich granite sand-Regalith		3	19.1	19.2	"	54 "		
21.8 - 29.8			Vah	21.8 - 29.8 white biotite Valhalla granite		4	19.2	19.3	"	87 "		
						5	19.3	19.4	"	015%		
						6	19.4	19.5	"	28 ppm		
						7	19.5	19.6	"	017%		
						8	19.6	19.7	"	027%		
						9	19.7	19.8	"	012%		
						10	19.8	19.9	"	012%		
						11	19.9	20.0	"	018%		
						12	20.0	20.1	"	020%		
						13	20.1	20.2	"	035%		
						14	20.2	20.3	"	058%		
						15	20.3	20.4	"	055%		
						16	20.4	20.5	"	58 ppm		
						17	20.5	20.6	"	033%		
						18	20.6	20.7	"	033%		
						19	20.7	20.8	"	010%		
						20	20.8	20.9	"	11 ppm		
						21	20.9	21.0	"	10 "		
						22	21.0	21.1	"	10.5%		
						23	21.1	21.2	"	12.5%		

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, coarsely bound

**LATE VOLCANICS**  
 olivine basalt massive vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay-like, good binder. Silty partion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (increasing age)**  
**CORVELL**  
 Ccb fine to medium grained dark reddish monzonite quartz syenite high background radiation

**VALHALLA**  
 Vah medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite-hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 fine grained chloritic greenstone, generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (Regalith)**

1a Pov-1 or Bg = Boulder gravel 256 mm  
 -2 or Cg = Cobble gravel 64-256  
 -3 or vCg = very coarse Pebble gravel 16-64  
 -4 or cPg = coarse Pebble gravel 8-16  
 -5 or mPg = medium Pebble gravel 4-8  
 -6 or fPg = fine Pebble gravel 2-4  
 -7 or Gg = Gravel 1-2  
 -8 or vSd = very coarse Sand 1/2-1  
 -9 or cSd = coarse Sand 1/8-1/2  
 -10 or mSd = medium Sand 1/16-1/8  
 -11 or fSd = fine Sand 1/32-1/16  
 -12 or vSd = very fine Sand 1/64-1/32  
 -13 or St = Silt 1/256-1/64  
 -14 or Cl = clay 1/256

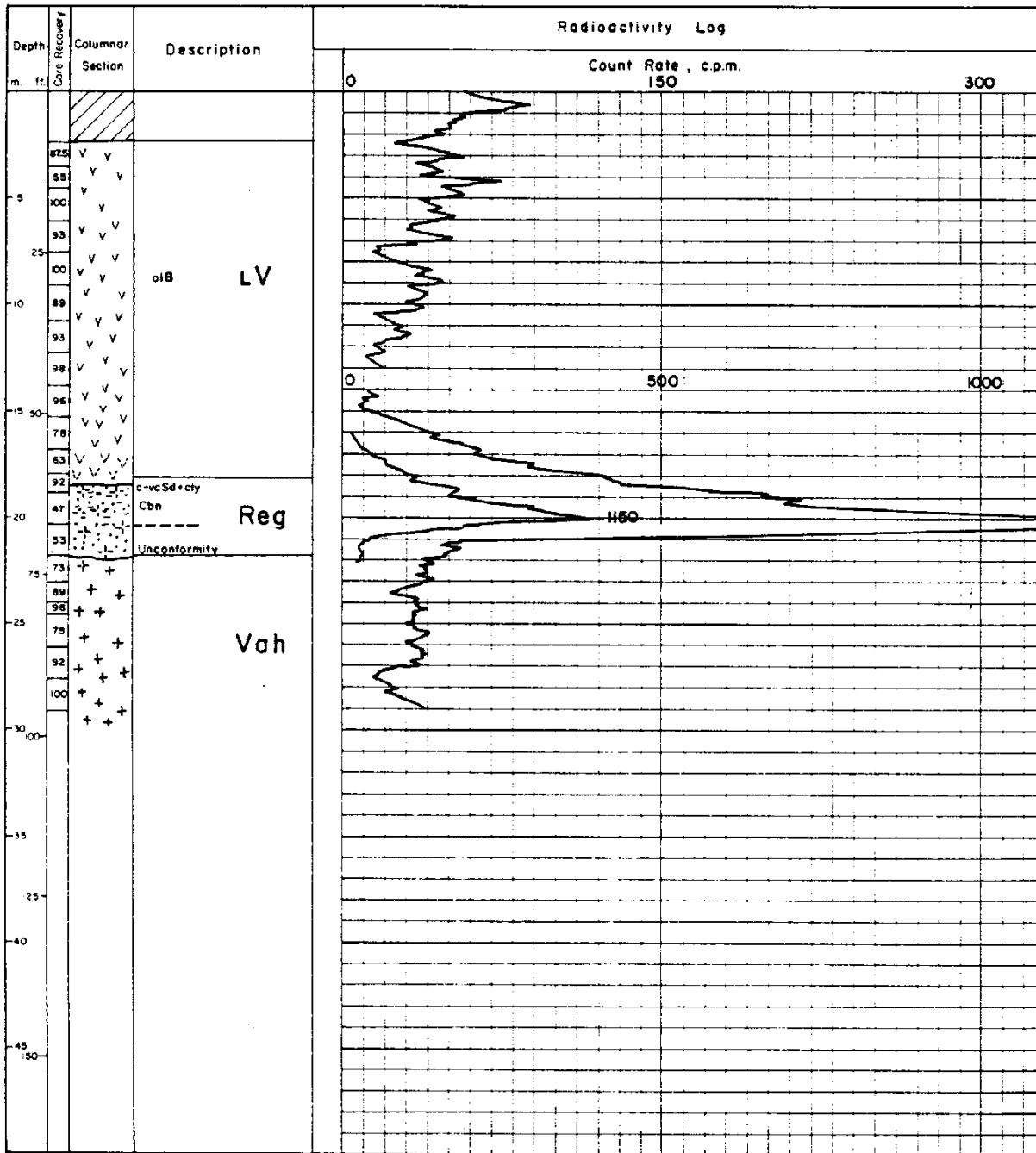
**Legend**  
 Cbn = Carbonaceous H = Hematite S = Sulphide Prg = Pegmatite

**Late Volcanics**  
 LV-1 or oLB = massive olivine Basalt and related dikes and sills, may be vesicular and sills  
 -2 or Pum = Pumice  
 -3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

73

Method : D.D.      Hole Angle : VERTICAL      Detector : Geiger GP27U      Date : APRIL 21, 1979  
Hole N° : CUP-113      Core Size : NQ      Monitor : TCS603 R      Logged & Probed  
Location : DONEN 307      Core Recovery : 83% - Total      Background : 70 cpm      by : T. OBARA  
Probe Depth : 29.0 m.      88% Basalt, 59.5% - Reg.      Time Constant : 10 Sec.      W. BULMER  
87% - Granite



# PNC EXPLORATION (CANADA) CO. LTD.

74

Hole No. : 79-CUP-114  
 Latitude : 6184.19  
 Departure : 757.04  
 Elevation : 1314.7 m.

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 25.3 m.

Property : DONEN 307  
 Dip Tests :  
 m.  
 End of hole

Colored : APRIL 21, 1979  
 Completed : APRIL 22, 1979  
 Core Size : N.Q.3  
 Logged by : W. BULMER

Depth m ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
		2.1		0 - 2.1 Tricone								
5	V		LV	2.1 - 14.5 Olivine basalt								
25	V			14.4 - 14.5 altered basalt								
40	V			14.5 - 14.9 medium to coarse grained granite sand-grey carbonaceous matrix								
15.0	V	14.4 14.9	Reg	14.9 - 16.7 very coarse granite sand- Regolith								
		16.7	Vah	16.7 - 25.2 Valhalla Granite								
20	+ +			16.7 - 21.0 broken epidote rich Valhalla granite								
75	+ +	21.0		21.0 - 25.2 good white, medium to coarse grained white biotite Valhalla granite								
25	+ +	25.2										

**EXPLANATION**

- POST VOLCANISM SEDIMENTS  
recent sand and gravels generally brown in colour matrix sandy, coarsely banded
- LATE VOLCANICS  
olivine basalt massive vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS  
generally grey in colour matrix clay-like, good binder. Silty partion light brown in colour, contains carbonaceous material
- REGALITH LAYER  
may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES (increasing age)  
CORYELL  
fine to medium grained dark reddish monzonite quartz syenite high background radiation
- VALHALLA  
medium to coarse grained white biotite granite large pink feldspar phenocrysts common
- NELSON  
moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite
- EARLY VOLCANICS  
fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

**LEGEND**

- Post / Pre Volcanism Sediments (+ Regolith)
  - 1 or Bg = Boulder gravel 256 mm
  - 2 or Cg = Cobble gravel 64-156
  - 3 or vcPg = very coarse Pebble gravel 32-64
  - 4 or cPg = coarse Pebble gravel 8-32
  - 5 or mPg = medium Pebble gravel 4-8
  - 6 or fPg = fine Pebble gravel 2-4
  - 7 or Gg = Gravel gravel 1-2
  - 8 or vcSd = very coarse Sand 2-1
  - 9 or cSd = coarse Sand 1-1/2
  - 10 or mSd = medium Sand 1/2-1/4
  - 11 or fSd = fine Sand 1/4-1/8
  - 12 or vSd = very fine Sand 1/8-1/16
  - 13 or St = Silt 1/16-1/32
  - 14 or cl = clay <1/32
- CBn = Carbonaceous H = hematite S = Sulphide Reg = Regolith
- LV - Late Volcanics
  - LV - 1 or olB = massive olivine Basalt and related dykes and sills, may be vesicular
  - 2 or Pum = Pumice
  - 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

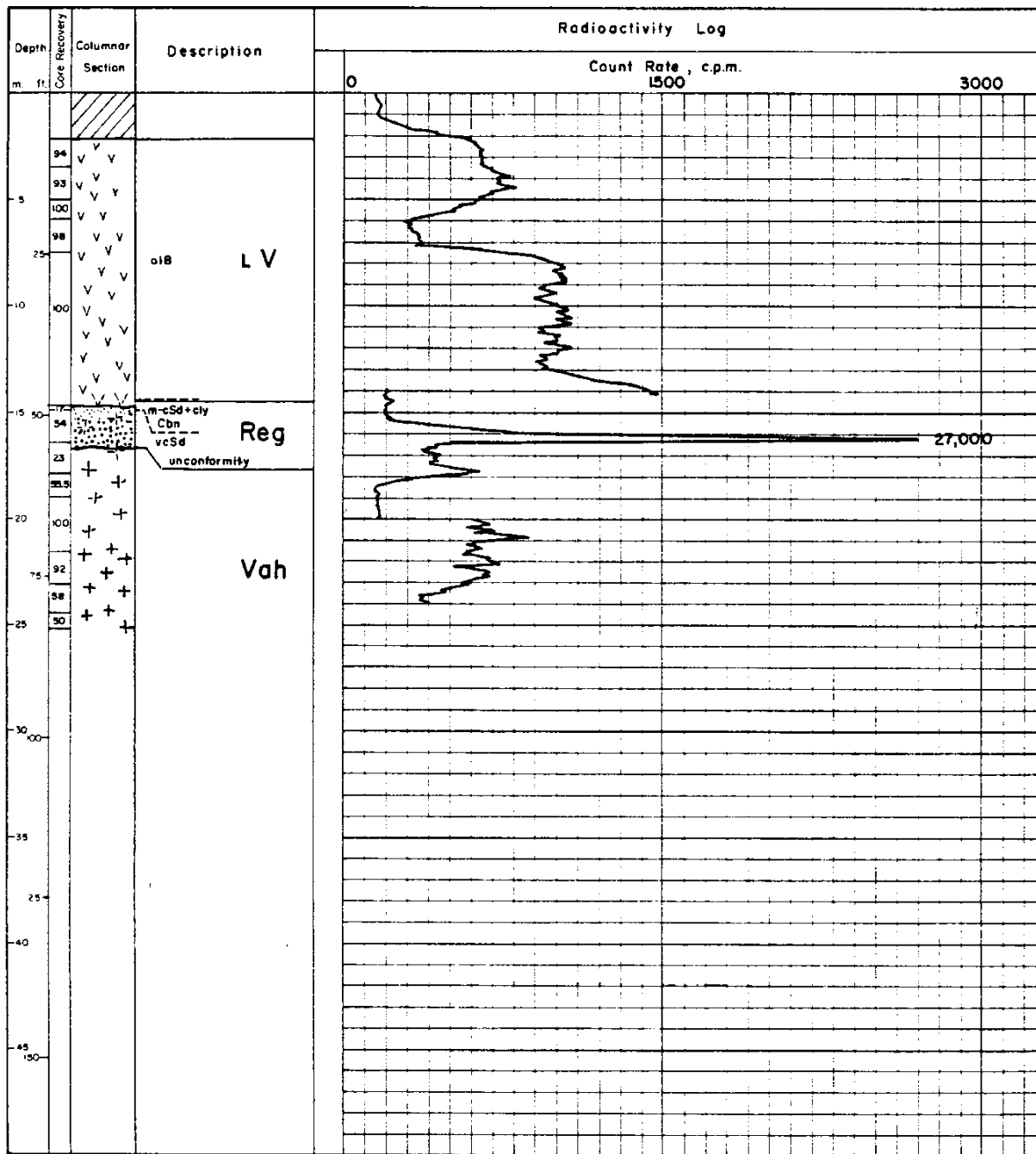
75

Method : D.D.  
 Hole No : CUP - 114  
 Location : DONEN 307  
 Probe Depth : 24.1 m.

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 82% - Total  
 98% - Basalt, 49% - Reg.,  
 68% - Granite

Detector : Geiger GP 27U  
 Monitor : TCS 603 R  
 Background : 80 cpm  
 Time Constant : 6 Sec.

Date : APRIL 22, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

76

Hole No. : 79-CUP-II6	Project : CUP LAKE	Property :	Collared :
Latitude : 5965.46	Azimuth :	Dip Tests :	Completed :
Departure : 358.92	Dip :	m.	Core Size :
Elevation : 1301.4 m	Depth : 33.5 m.	End of hole	Logged by : K. YANAGIZAWA

Depth m. ft.	Columnar Section	From & To ASSAY	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
	[Hatched pattern]			0 - 3.0 Casing								
3	[Dotted pattern]	3.0		3.0 - 6.5 brown color mud matrix with quartz, granite, basalt and gneiss granules								
25	[V-shaped pattern]	6.5		6.5 - 11.85 Basalt								
10	[Horizontal dashes]	11.85		11.85 - 12.0 coaly mud black color								
15	[Vertical dashes]	12.0		12.0 - 17.05 brown color silt with white color tuff at 14.5m quartz granule from 14.5m to 17.05m organic material								
20	[Dotted pattern]	17.05		17.05 - 21.0 gray color mud matrix with granite and gneiss pebble gravel many quartz and granite granules								
25	[Cross-hatch pattern]	21.0		21.0 - 28.7 greenish yellow color regolith								
30	[Cross-hatch pattern]	28.7		28.7 - 29.2 broken Valhalla granite, color is greenish-yellow								
35	[Cross-hatch pattern]	30.1		29.2 - 30.1 white color Valhalla granite								
40	[Cross-hatch pattern]	30.4		30.1 - 30.4 pegmatite (quartz)								
45	[Cross-hatch pattern]			30.4 - 33.5 white color Valhalla granite								

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material
- REGOLITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )**
- CORYELL**  
 Coy fine to medium grained dark reddish monzonite quartz syenite. High background radiation
- VALHALLA**  
 Val medium to coarse grained white prophyrite biotite granite large pink feldspar phenocrysts common
- NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or gneodiorite
- EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (+ Regolith)
- |            |                             |              |
|------------|-----------------------------|--------------|
| -1 or Bg   | = Boulder gravel            | 256 mm       |
| -2 or Gg   | = Cobble gravel             | 64 - 256     |
| -3 or vcPg | = very coarse Pebble gravel | 32 - 64      |
| -4 or cPg  | = coarse Pebble gravel      | 6 - 32       |
| -5 or mPg  | = medium Pebble gravel      | 6 - 16       |
| -6 or fPg  | = fine Pebble gravel        | 4 - 8        |
| -7 or Gg   | = Granite gravel            | 2 - 4        |
| -8 or vcSd | = very coarse Sand          | 1 - 2        |
| -9 or cSd  | = coarse Sand               | 1/2 - 1      |
| -10 or mSd | = medium Sand               | 1/4 - 1/2    |
| -11 or fSd | = fine Sand                 | 1/8 - 1/4    |
| -12 or vSd | = very fine Sand            | 1/16 - 1/8   |
| -13 or St  | = Silt                      | 1/256 - 1/16 |
| -14 or cl  | = clay                      | 1/256        |
- Cbl = Carbonaceous    H = Hematite    S = Sulphide    Peg = Pegmatite  
 LV = Late Volcanics  
 LV -1 or 0B = massive olivine Basalt and related dykes and sills, may be vesicular  
 -2 or Pum = Pumice  
 -3 or TFS = Tuffaceous Sediments



# LOG AND PROBE SHEET

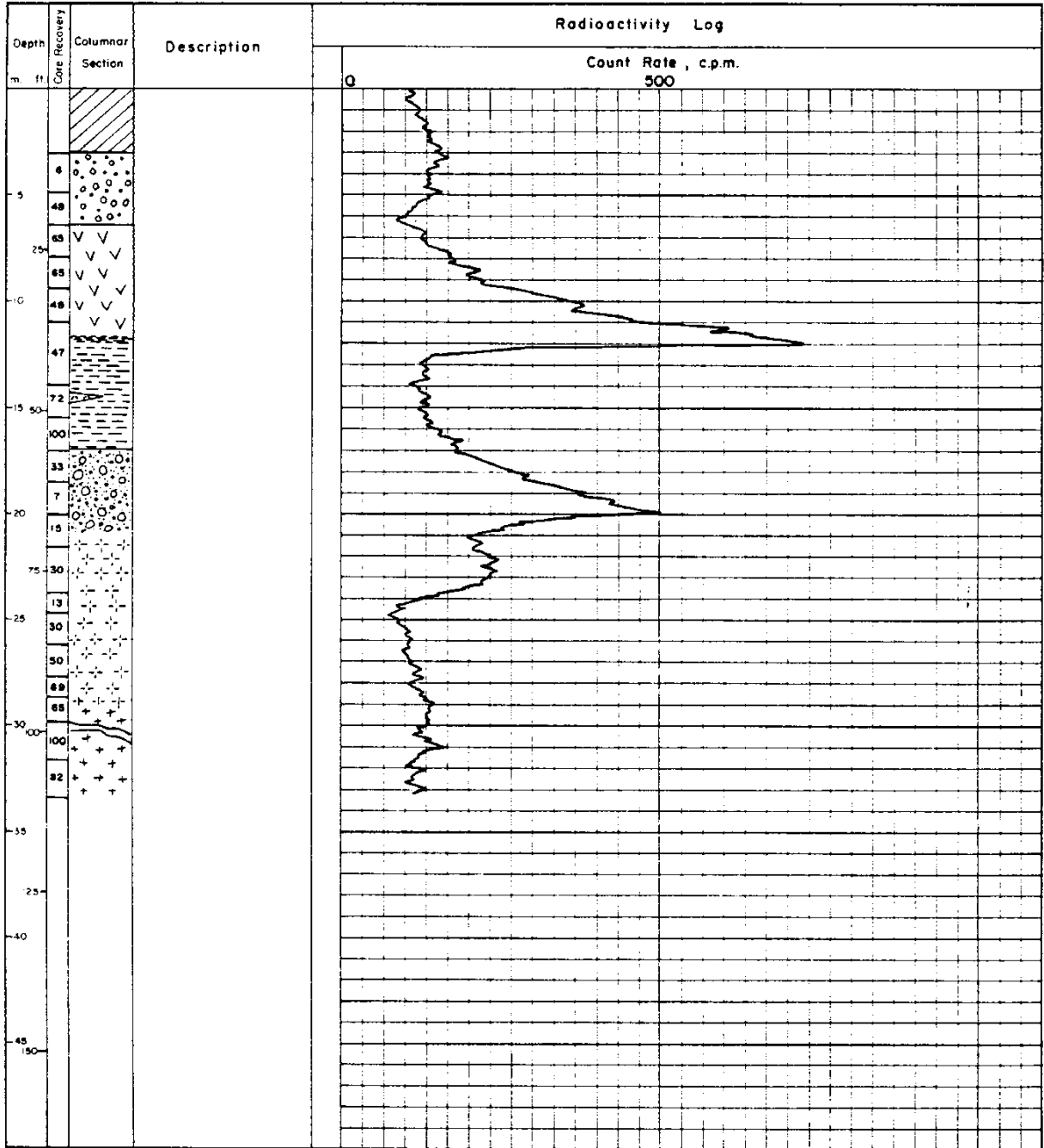
77

Method : D.D.  
 Hole N<sup>o</sup> : CUP 116  
 Location :  
 Probe Depth : 33.4 m

Hole Angle : VERTICAL  
 Core Size : NQ 3  
 Core Recovery : TOTAL 52%

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 110 cpm  
 Time Constant : 10 Sec.

Date : JULY 28, 1979  
 Logged & Probed  
 by : K. YANAGIZAWA



# PNC EXPLORATION (CANADA) CO. LTD.

78

Hole No. : 79-CUP-117  
 Latitude : 5964.41  
 Departure : 455.76  
 Elevation : 1310.8 m.

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 41.4 m.

Property : DONEN 316  
 Dip Tests :  
 m.  
 End of hole

Collared : APRIL 23, 1979  
 Completed : APRIL 24, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m. ft	Columnar Section	From 8 To	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub> %	Th %	V %
	EXPLODED VIEW											
0 - 3.6	Tricone											
3.6 - 29.2	olivine Basalt		1 LV									
23.4 - 29.2	altered basalt					1	29.1	29.2	0.1	0.11		
29.2 - 30.1	black baked silt/clay (originally medium brown) contains finely disseminated carbonaceous matter		15/14 Cbn Baked			2	29.2	29.3	0.1	0.11		05
30.1 - 31.9	non baked silt/clay-medium brown colour-as above					3	29.3	29.4	0.1	0.49		
31.9 - 33.2	light grey thinly laminated and crossbedded sandy unit contains carbonaceous material within laminations		11/12 Cbn PrV			4	29.4	29.5	0.1	0.46		05
33.2 - 33.5	brown thinly laminated silt/mud					5	29.5	29.6	0.1	0.31		
33.5 - 34.1	coarse sand/granule gravel with mud matrix		13 14 9-7 H4			6	29.6	29.7	0.1	0.20		
34.1 - 35.6	mud with abundant sand and gravel		14/10 unbaked 9 Reg			7	29.7	29.8	0.1	0.09		
35.6 - 41.4	coarse granite sand Regalith Valhalla granite		Vah			8	29.8	29.9	0.1	0.04		
						9	29.9	30.0	0.1	0.04		
						10	30.0	30.1	0.1	0.04		

### EXPLANATION

- POST VOLCANISM SEDIMENTS  
recent sand and gravels generally  
brown in colour matrix sandy,  
loosely bound
- LATE VOLCANICS  
olivine basalt massive, vesicular  
or as thin sills, may be associated  
with pumice and related tuffaceous  
sediments
- PRE VOLCANISM SEDIMENTS  
generally grey in colour, matrix  
clay-like, good binder. Silty  
portion light brown in colour,  
contains carbonaceous material
- REGALITH LAYER  
may or may not be well developed,  
and may or may not contain  
overlying sediments

- INTRUSIVES ( increasing age )
- CORYELL  
fine to medium grained dark reddish  
monzonite quartz syenite. High  
background radiation
- VALHALLA  
medium to coarse grained white  
prophyritic diorite granite large pine  
feldspar phenocrysts common
- NELSON  
moderate to strongly foliated grey  
biotite - hornblende quartz diorite  
or granodiorite
- EARLY VOLCANICS  
fine grained chloritic greenstone -  
generally badly fractured and  
contains abundant hematite stringers  
throughout

### LEGEND

- Post / Pre Volcanism Sediments (+ Regolith)
- PoV or PrV
- 1 or Bg = Boulder gravel 256 mm
- 2 or Cg = Cobble gravel 64 - 256
- 3 or vPg = very coarse Pebble gravel 32 - 64
- 4 or cPg = coarse Pebble gravel 16 - 32
- 5 or mPg = medium Pebble gravel 8 - 16
- 6 or fPg = fine Pebble gravel 4 - 8
- 7 or Gg = Granule gravel 2 - 4
- 8 or vSd = very coarse Sand 1 - 2
- 9 or cSd = coarse Sand 1/2 - 1
- 10 or mSd = medium Sand 1/4 - 1/2
- 11 or fSd = fine Sand 1/8 - 1/4
- 12 or vFSd = very fine Sand 1/16 - 1/8
- 13 or S1 = Silt 1/256 - 1/64
- 14 or c1 = clay 1/256
- Cbn = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite
- Late Volcanics
- LV - 1 or OIB = massive olivine Basalt and related dykes  
and sills, may be vesicular
- 2 or Pum = Pumice
- 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

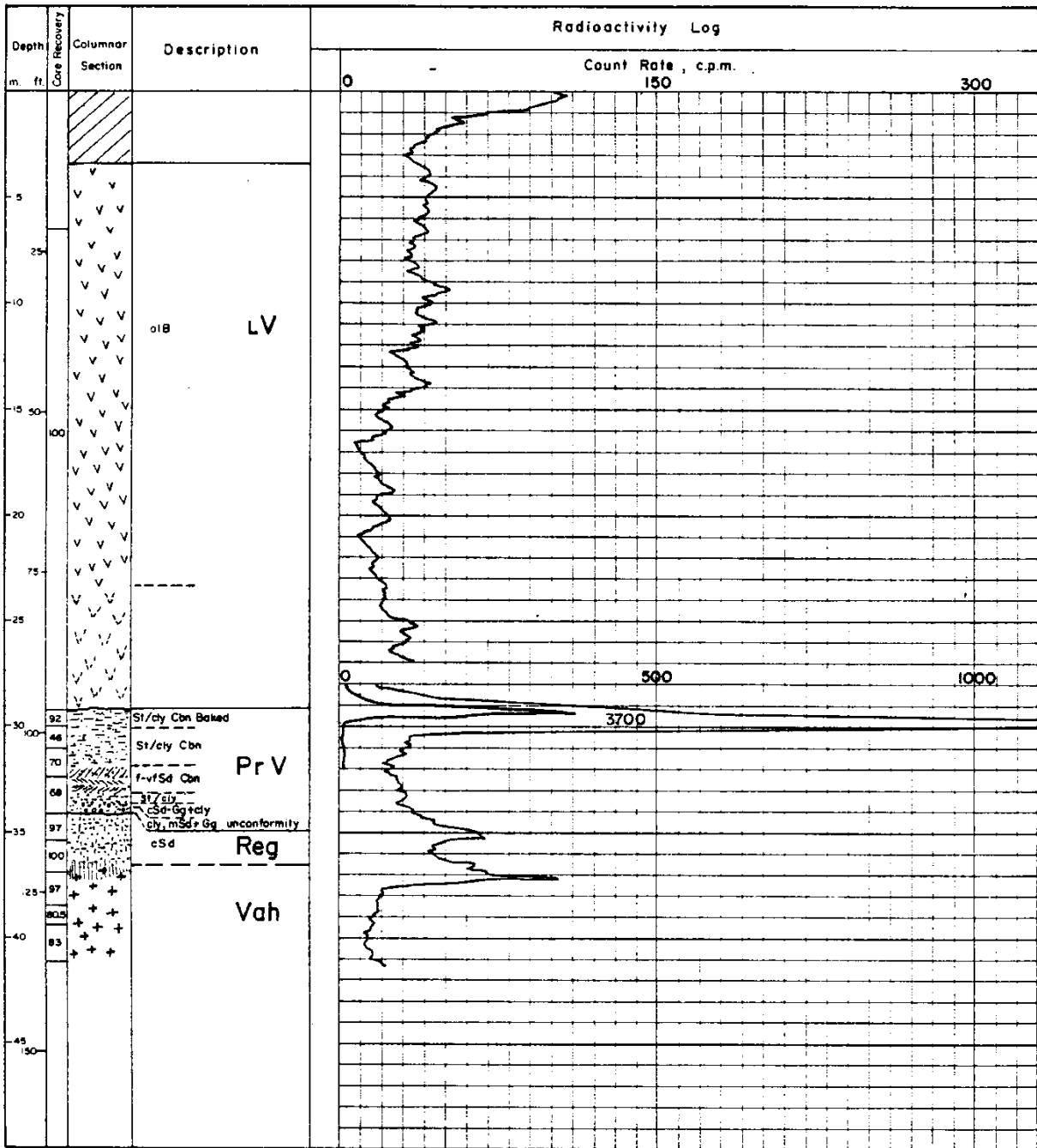
79

Method : D.D.  
 Hole N<sup>o</sup> : CUP-117  
 Location : DONEN 316  
 Probe Depth : 41.4 m.

Hole Angle : VERTICAL  
 Core Size : N Q  
 Core Recovery : 93.5% Total  
 100%-Basalt, 66%-PrV Sed.,  
 98%-Reg., 92%-Granite

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 50 cpm  
 Time Constant : 10 Sec.

Date : APRIL 24, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

80

Hole No. : 79-CUP-118  
 Latitude : 5963.03  
 Departure : 560.36  
 Elevation : 1326.7 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 53.9 m

Property : DONEN 307  
 Dip Tests :  
 m.  
 End of hole

Collared : APRIL 25, 1979  
 Completed : APRIL 26, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m. ft.	Columnar Section	From & To m. ft.	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay				
										U <sub>3</sub> O <sub>8</sub>	Th	F ppm	V %	
				<b>EXPLODED VIEW</b>										
0 - 2.4		2.4		Tricone										
2.4 - 38.7	V		LV	olivine basalt										
38.7 - 38.86				white (bleached?) silt/clay with few carbonaceous bits in:		1	37.5	37.6	0.1	5ppm		335		
						2	37.6	37.7	0.1	2.0				
						3	37.7	37.8	0.1	1.5				
						4	37.8	37.9	0.1	1.5				
						5	37.9	38.0	0.1	2.5		360		
						6	38.0	38.1	0.1	1.5				
						7	38.1	38.2	0.1	1.0				
						8	38.2	38.3	0.1	2.0				
						9	38.3	38.4	0.1	1.5				
			13/14? Cbn Baked	38.86 - 39.16 black baked silt (originally medium brown) with carbonaceous material disseminated throughout		10	38.4	38.5	0.1	0.00%				
			13/14? Cbn Baked			11	38.5	38.6	0.1	0.00%				
			13/14? Cbn Baked			12	38.6	38.7	0.1	0.09		1120	.05	
			13/14? Cbn Baked			13	38.7	38.8	0.1	0.67				
			13/14? Cbn Baked			14	38.8	38.9	0.1	2.04				
			13/14? Cbn Baked			15	38.9	39.0	0.1	1.97		730	.05	
			9 (14)	39.16 - 39.47 semi-consolidated coarse granite sand with grey mud/clay matrix		16	39.0	39.1	0.1	2.20				
			10	39.47 - 39.85 medium grained granite sand grey colour-tinge of green		17	39.1	39.2	0.1	2.02				
			10			18	39.2	39.3	0.1	0.25				
			9 Reg	39.85 - 46.63 coarse grained granite sand abundant chlorite plus epidote- Regalith		19	39.3	39.4	0.1	0.23				
			9 Reg			20	39.4	39.5	0.1	0.22				
			9 Reg			21	39.5	39.6	0.1	0.45				
			9 Reg			22	39.6	39.7	0.1	0.39				
			9 Reg			23	39.7	39.8	0.1	0.38				
			9 Reg			24	39.8	39.9	0.1	0.14				
			9 Reg			25	39.9	40.0	0.1	0.16				
46.6 - 53.9			Vah	broken white biotite Valhalla granite-few sulphides present										

**EXPLANATION**

**POST VOLCANISM SEDIMENTS**  
 (e.g. sand and gravel) generally  
 brown in colour matrix sandy,  
 locally bouldery

**LATE VOLCANICS**  
 olivine basalt with or without  
 or as thin sills, may be associated  
 with porphyry and related tuffaceous  
 sediments

**PRE VOLCANISM SEDIMENTS**  
 generally, silt in colour matrix  
 clay-like, red binder, locally  
 contains high brown in colour  
 matrix carbonaceous material

**REGALITH LAYERS**  
 may or may not be well developed,  
 and may or may not contain  
 underlying sediments

**INTRUSIVES (increasing age)**  
**CORYELL**  
 Coy fine to medium grained dark reddish  
 monzonite quartz syenite - high  
 background radiation

**VALHALLA**  
 Vah medium to coarse grained white  
 porphyry biotite granite large pink  
 feldspar phenocrysts common

**KELSON**  
 Kel moderate to strongly foliated grey  
 biotite - fine blende quartz diorite  
 or granite

**EARLY VOLCANICS**  
 Ev fine grained chloritic greenstone-  
 gneiss, locally fractured and  
 contains abundant hematite stringers  
 throughout

**LEGEND**

Post / Pre Volcanism Sediments (- Regolith)

18	Pov	1 or Bg	= Boulder gravel	250 mm
		2 or Cg	= Cobble gravel	64 - 250
		3 or vCg	= very coarse Pebble gravel	32 - 64
		4 or cPg	= coarse Pebble gravel	8 - 32
		5 or mPg	= medium Pebble gravel	4 - 8
		6 or fPg	= fine Pebble gravel	4 - 8
		7 or Gg	= Granite gravel	2 - 4
		8 or vCsd	= very coarse Sand	1 - 2
		9 or Csd	= coarse Sand	1/2 - 1
		10 or msd	= medium Sand	1/4 - 1/2
		11 or fsd	= fine Sand	1/8 - 1/4
		12 or vfsd	= very fine Sand	1/16 - 1/8
		13 or St	= Silt	1/256 - 1/16
		14 or cl	= clay	1/256

Cbn = Carbonaceous    H = Hematite    S = Sulphide    Reg = Regolith

**Late Volcanics**

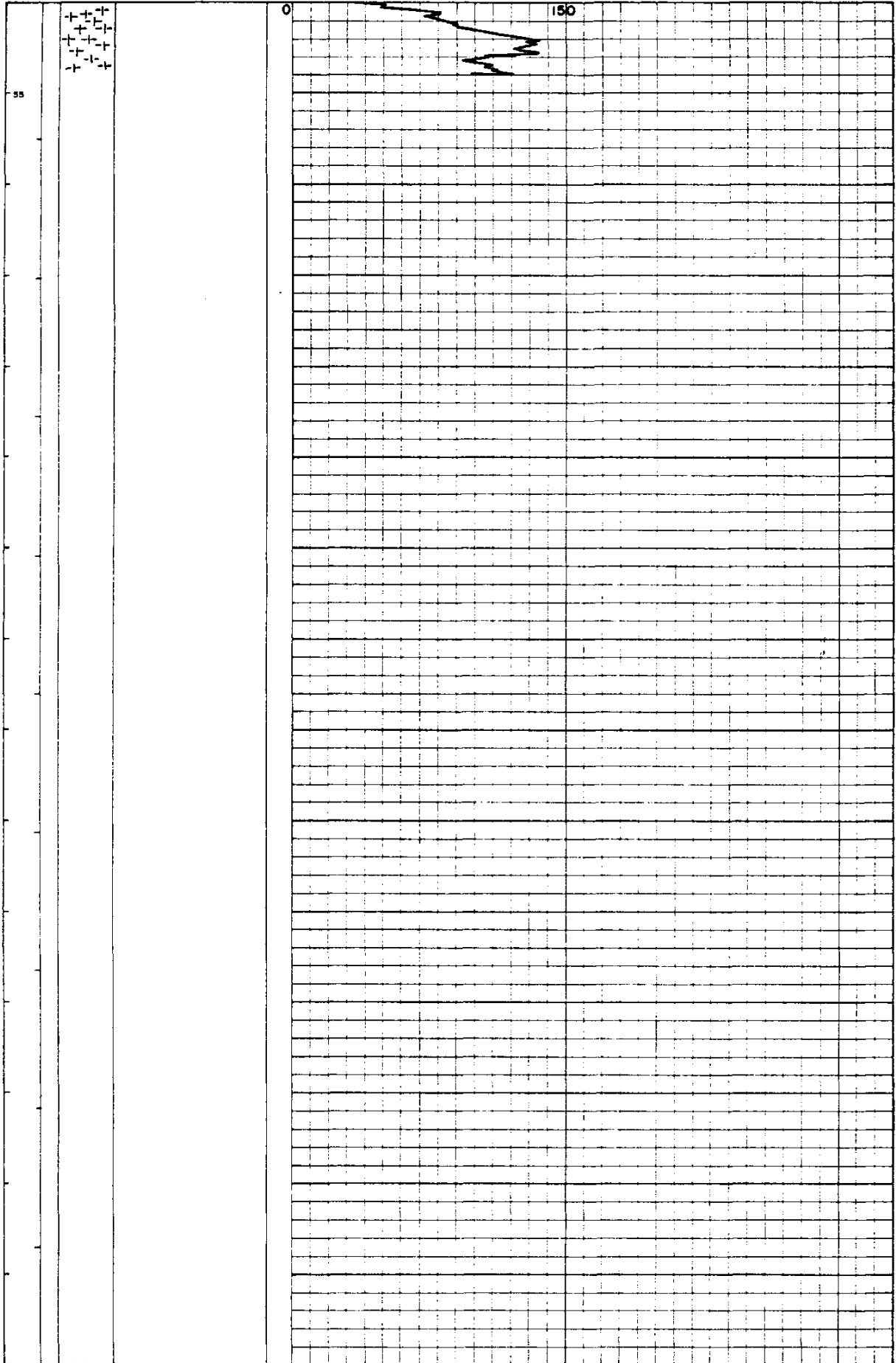
LV -1 or aLB	= massive olivine Basalt and related dykes and sills, may be vesicular
-2 or Pum	= Pumice
-3 or T15	= Tuffaceous Sediments





Continuation

79 - CUP - 118



# PNC EXPLORATION (CANADA) CO. LTD.

84

Hole No. : 79-CUP-119	Project : CUP LAKE	Property : DONEN 307	Collared : JUNE 7, 1979
Latitude : 5967.82	Azimuth :	Dip Tests :	Completed : JUNE 8, 1979
Departure : 664.85	Dip : -90°	m.	Core Size : N.Q. 3
Elevation : 1337.1 m	Depth : 55.2 m	End of hole	Logged by : W. BULMER

Depth m ft	Columnar Section	From 8 To ASSOY	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay				
										U <sub>3</sub> O <sub>8</sub> %	Th	F ppm	V %	
0-5	V			0 - 47.2 olivine basalt										
5-25	V													
25-10	V													
10-19.50	V													
19.50-20	V		LV											
20-25	V			0-38.7 coarse grained										
25-30	V													
30-35	V													
35-100	V													
100-38.7	V													
38.7-40	V			38.7-44.5 medium grained 44.5-47.24 fine grained										
40-44.5	V			47.24 - 48.6 black baked to dark brown carbonaceous silt										
44.5-45	V			48.6 - 50.29 coarse sand with abundant mud matrix in the top 3 cm grading to little matrix then a coarse pebble gravel mostly of a granitic composition at 50.29 very thin black soft material pressed in between laminations		1 2 3 4 5	47.8 47.9 48.0 48.1 48.2	47.9 48.0 48.1 48.2 48.3	0.1 0.1 0.1 0.1 0.1	.017 .020 .018 .021 .023				.05 1080 1040
45-47.24	V		PV											
47.24-48.6	V													

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
Recent sand and gravels generally brown in colour, matrix sandy, loosely bound
- LATE VOLCANICS**  
Olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
Generally gray in colour, matrix clay, fine, good binder. Silty portion light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
May or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )**
- CORYELL**  
Coy fine to medium grained dark reddish monzonite quartz syenite, high background radiation
- VALHALLA**  
Vah medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite
- EARLY VOLCANICS**  
Ev fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (+ Regolith)**
- 1e Pv - 1 or Bg = Boulder gravel 256 - mm  
 - 2 or Cg = Cobble gravel 64 - 256  
 - 3 or vCg = very coarse pebble gravel 32 - 64  
 - 4 or cPg = coarse pebble gravel 16 - 32  
 - 5 or mPg = medium pebble gravel 8 - 16  
 - 6 or fPg = fine pebble gravel 4 - 8  
 - 7 or Gg = Gravel gravel 2 - 4  
 - 8 or vSd = very coarse sand 1 - 2  
 - 9 or cSd = coarse sand 1/2 - 1  
 - 10 or mSd = medium sand 1/4 - 1/2  
 - 11 or fSd = fine sand 1/8 - 1/4  
 - 12 or vFSd = very fine sand 1/16 - 1/8  
 - 13 or Sl = Silt 1/256 - 1/16  
 - 14 or cl = clay 1/256
- Volcanics**
- LV - 1 or oib = massive olivine basalt and related dykes and sills, may be vesicular  
 - 2 or Pum = Pumice  
 - 3 or TTS = Tuffaceous Sediments
- Other Symbols:**  
 Cbn = Carbonaceous H = Hematite S & S = Sulphide Peg = Pegmatite



# LOG AND PROBE SHEET

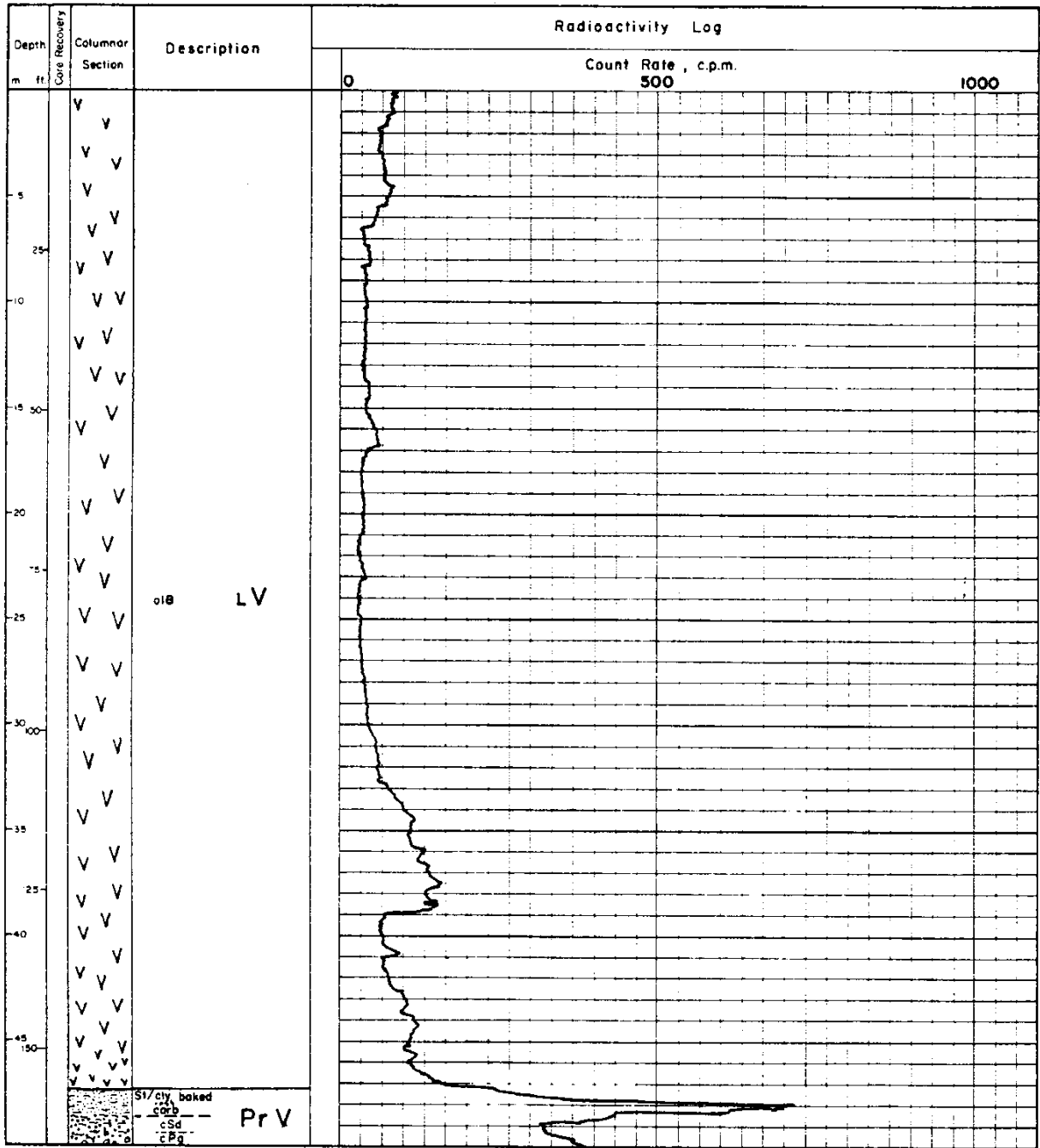
85

Method : D.D.  
 Hole N<sup>o</sup> : CUP-119  
 Location :  
 Probe Depth : 55.2 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 80 cpm  
 Time Constant : 10 Sec.

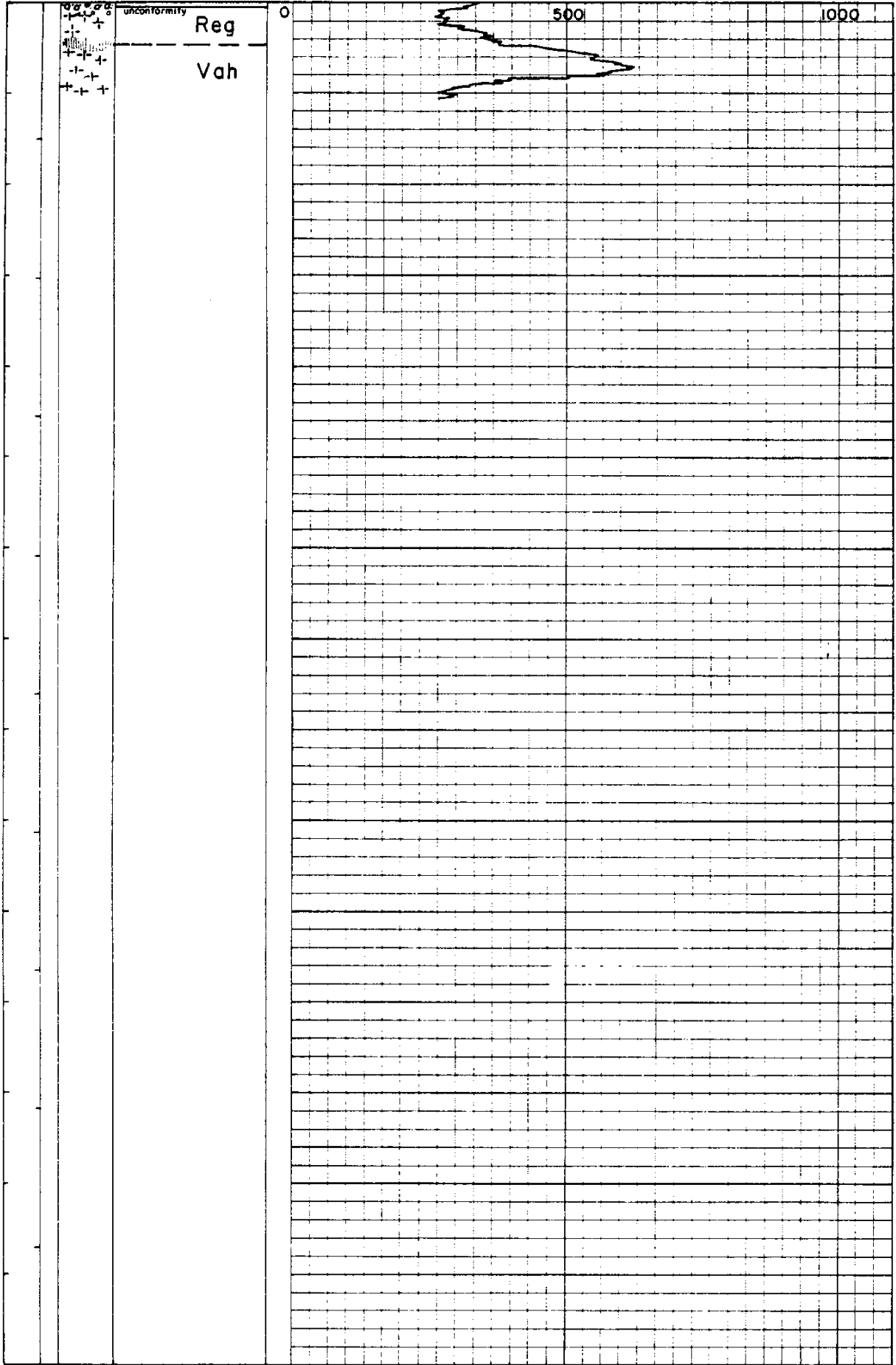
Date : JUNE 12, 1979  
 Logged & Probed  
 by : K. YANAGIZAWA





CUP-119

Continuation



# PNC EXPLORATION (CANADA) CO. LTD.

88

Hole No. : 79-CUP-120  
 Latitude : 5964.35  
 Departure : 758.67  
 Elevation : 1322.8 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 59.4 m.

Property : DONEN 307  
 Dip Tests :  
 m.  
 End of hole

Collared : JUNE 23, 1979  
 Completed : JUNE 24, 1979  
 Core Size : N.Q. 3  
 Logged by : M. McDONALD  
 Checked by : W. BULMER

Depth m ft	Columnar Section	From & To	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay			
										U <sub>3</sub> O <sub>8</sub>	ThO <sub>2</sub>	V <sub>2</sub> O <sub>5</sub>	
<b>EXPLODED VIEW</b>													
0-5						120-1	20.0	20.1	0.1	0.001	0.001	0.016	
5-25		7.0	11-9	7.0 - 10.36 poorly sorted pebbly coarse sand colour is brown-grey		10	20.9	21.0	..	0.077	0.002	0.033	
25-10		10.36	5	10.36 - 14.17 medium pebble gravel with assorted pebbles & cobbles		11	21.0	21.1	..	0.085	..	..	
10-15		14.17	PrV	14.17 - 14.93 brown organic sandy silt		12	21.1	21.2	..	0.096	..	..	
15-30		14.93	13	14.93 - 15.24 silt with little sand plus few basalt cobbles		13	21.2	21.3	..	0.073	..	..	
30-20		15.24	13-2	15.24 - 16.0 silt with pumice		14	21.3	21.4	..	0.053	..	..	
20-25		16.0	13-2	16.0 - 16.3 black baked silt with pumice rubble top		15	21.4	21.5	..	0.083	..	..	
25-20		16.3	13-2	16.3 - 17.67 white ash plus rubble with coarse sand and some silt		16	21.5	21.6	..	0.077	..	..	
20-25		17.67	13-2	17.67 - 18.25 Basalt		17	21.6	21.7	..	0.087	..	..	
25-25		18.25	13-2	18.25 - 22.55 carbonaceous silt		18	21.7	21.8	..	0.088	0.001	0.059	
25-25		22.5	13 PrV	18.25-18.37 black baked silt plus pumice rubble		19	21.8	21.9	..	0.086	..	..	
25-25		22.5	13 PrV	18.37-20.95 brown non baked carbonaceous silt		20	21.9	22.0	..	0.128	..	..	
25-25		22.5	13 PrV	20.95-22.55 black baked silt/mud		21	22.0	22.1	..	0.141	..	..	
25-25		22.5	13 PrV	22.55 - 33.86 Basalt		22	22.1	22.2	..	0.176	..	..	
25-30		33.8	13 Baked	33.86 - 35.20 mostly black baked silt mud-not as baked - bottom		23	22.2	22.3	..	0.003	..	..	
30-35		35.2	10	35.2 - 35.6 grey medium sand		24	22.3	22.4	..	0.001	0.001	0.040	
35-35		35.6	12	35.6 - 35.9 grey silt/fine sand-finely laminated possible pitchblende dust		25	22.4	22.5	..	0.001	0.001	0.043	
35-35		35.9	7-6	35.9 - 37.1 granule to fine pebble gravel with coarse grey sand matrix		26	22.5	22.6	..	0.001	0.001	0.043	
35-35		37.1	11 PrV	37.1 - 37.3 fine yellow/green regolithic sand		27	22.6	22.7	..	0.001	0.001	0.043	
35-40		37.3	9-5	37.3 - 37.94 coarse sand-medium pebble gravel		28	22.7	22.8	..	0.001	0.001	0.043	
40-45		37.94	10 Reg	37.94 - 38.1 grey/green regolithic sand		29	22.8	22.9	..	0.001	0.001	0.043	
45-45		38.1	9-5	38.1 - 38.4 coarse grey sand - medium pebble gravel - carbonaceous		30	22.9	23.0	..	0.001	0.001	0.043	
45-45		44.57	10-9 Reg	38.4 - 44.57 yellow/green regolithic sand-with pebbles and assorted cobbles of granite		31	23.0	23.1	..	0.001	0.001	0.043	
45-45		45.8	10-9 Reg	44.57 - 45.8 regolith		32	23.1	23.2	..	0.001	0.001	0.043	

**EXPLANATION**

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin silt, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**

**CORVELL**  
 fine to medium grained dark reddish massive quartz syenite. High background radiation

**VALHALLA**  
 medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 moderate to strongly foliated grey biotite - hornblende quartz diorite or gneiss

**EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

**LEGEND**

**Post / Pre Volcanism Sediments (+ Regolith)**

PoV - 1 or Bg = Boulder gravel  
 - 2 or G = Cobble gravel  
 - 3 or vPg = very coarse pebble gravel  
 - 4 or ePg = coarse pebble gravel  
 - 5 or mPg = medium pebble gravel  
 - 6 or fPg = fine pebble gravel  
 - 7 or Gg = Granule gravel  
 - 8 or vSd = very coarse sand  
 - 9 or eSd = coarse sand  
 - 10 or mSd = medium sand  
 - 11 or fSd = fine sand  
 - 12 or vSf = very fine sand  
 - 13 or Sf = silt  
 - 14 or ch = clay

Cbn = Carbonaceous H = Hematite S = Sulfide Prg = Pyrite

**Late Volcanics**

LV - 1 or oB = massive olivine basalt and related dykes and silt, may be vesicular  
 - 2 or Pum = Pumice  
 - 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

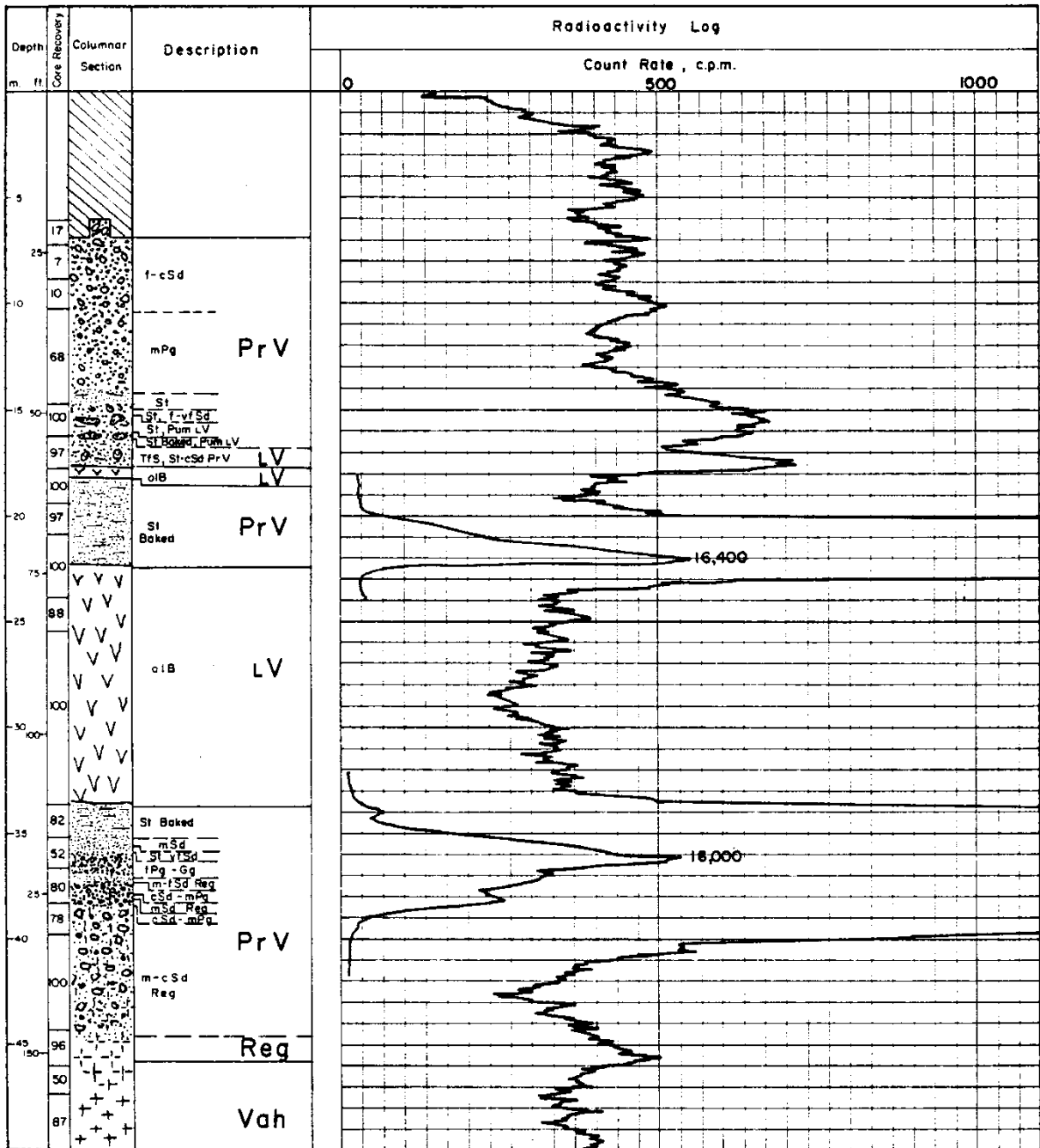
89

Method : D. D.  
 Hole N<sup>o</sup> : CUP-120  
 Location : DONEN 307  
 Probe Depth : 59.3 m.

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : Total 72.9%  
 Sediment 56%, Basalt 99%  
 Reg. 95%, Granite 89%

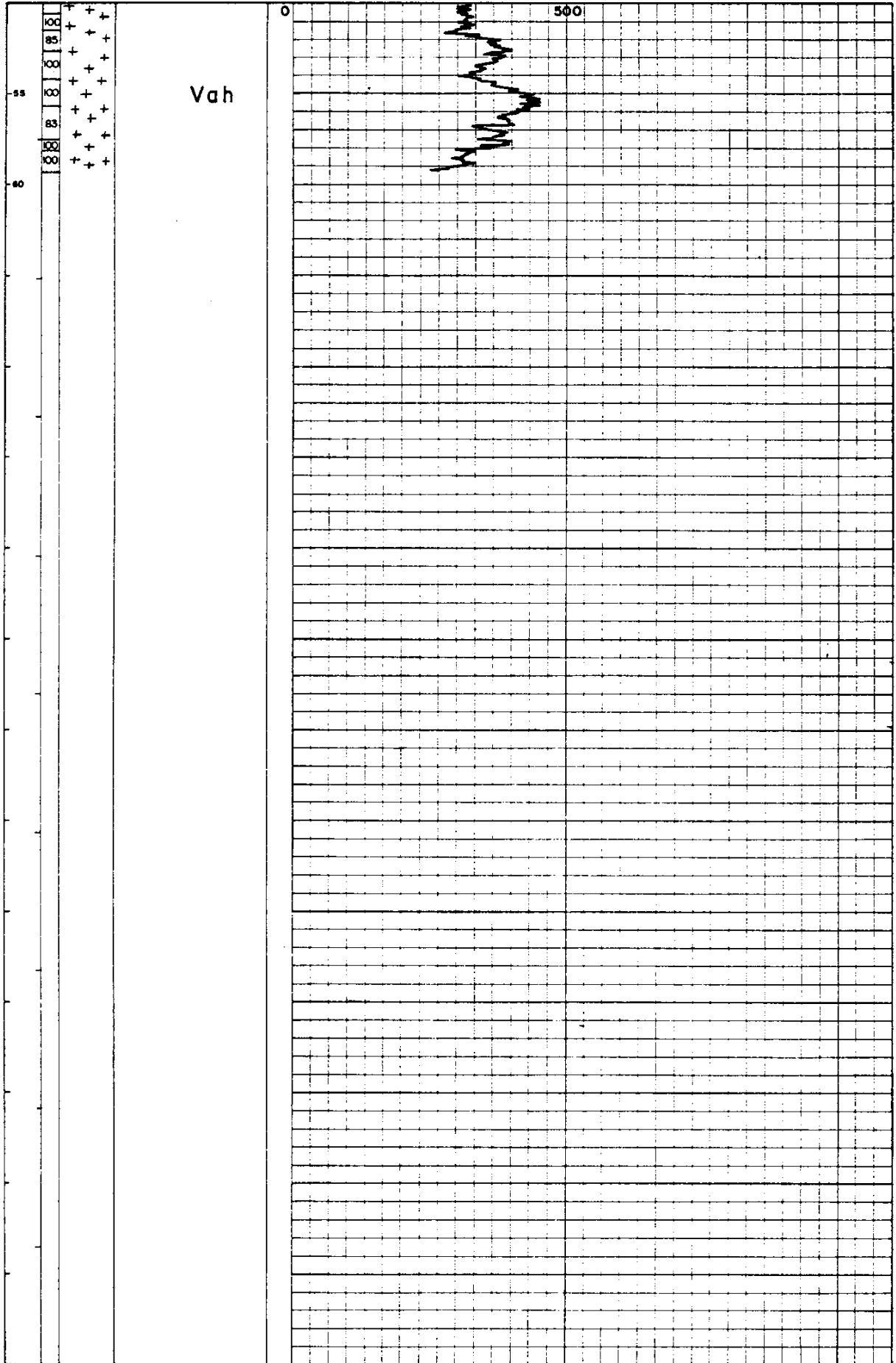
Detector : Geiger GP27 U  
 Monitor : TCS 603 R  
 Background : 130 cpm  
 Time Constant : 10 Sec.

Date : JUNE 26, 1979  
 Logged & Probed  
 by : K. YANAGIZAWA  
 M. McDONALD





Continuation CUP-120



# PNC EXPLORATION (CANADA) CO. LTD.

92

Hole No. : 79-CUP-121  
 Latitude : 5963.53  
 Departure : 854.35  
 Elevation : 1322.1 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 45.1 m.

Property : DONEN 307  
 Dip Tests :  
 m.  
 End of hole

Collared : JUNE 22, 1979  
 Completed : JUNE 23, 1979  
 Core Size : N.Q. 3  
 Logged by : M. McDONALD  
 Checked by : W. BULMER

Depth m. ft.	Columnar Section	From & To Assay	Unit	Description	Rock Sample No.	From	To	Width	Assay	
									U <sub>3</sub> O <sub>8</sub>	Th
0 - 12.1				Casing						
12.1 - 23.46		12.19	LV	olivine basalt						
23.46 - 24.9		23.46 23.67 24.68 24.9	PrV	medium brown silt top .16m baked black-carbonaceous brown organic matter between 23.62 & 23.77m						
24.9 - 26.97		26.97	10-9/7	medium to coarse pebble sand						
26.97 - 29.26		29.26	13-11	color of silt/sand is yellow-green regolithic						
29.26 - 36.27			Reg	green, medium to fine regolithic sand-occasional coarse lenses						
36.27 - 40.6		36.27	Vah	rotten Valhalla granite						
40.6 - 45.1		40.61 45.1		weathered, sausalitized Valhalla granite						

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 Olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay-like, good binder. Silty parting light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (increasing age)**  
**CORVELL**  
 fine to medium grained dark reddish monzonite quartz syenite. High background radiation

**VALHALLA**  
 medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

1 or Bg	= Boulder gravel	256 - 512
2 or Cg	= Cobble gravel	64 - 256
3 or vCg	= very coarse Pebble gravel	32 - 64
4 or cPg	= coarse Pebble gravel	16 - 32
5 or mPg	= medium Pebble gravel	8 - 16
6 or fPg	= fine Pebble gravel	4 - 8
7 or Gg	= Granite gravel	2 - 4
8 or vSd	= very coarse Sand	1 - 2
9 or cSd	= coarse Sand	1/2 - 1
10 or mSd	= medium Sand	1/4 - 1/2
11 or fSd	= fine Sand	1/8 - 1/4
12 or vSl	= very fine Sand	1/16 - 1/8
13 or Sl	= Silt	1/32 - 1/16
14 or cl	= clay	1/256

**Other Symbols:**  
 Cbn = Carbonaceous    H = Hematite    S = Sulphide    Peg = Pegmatite

**LV Late Volcanics**

LV - 1 or olB	= massive olivine basalt and related dykes and sills, may be vesicular
- 2 or Pum	= Pumice
- 3 or TFS	= Tuffaceous Sediments



# LOG AND PROBE SHEET

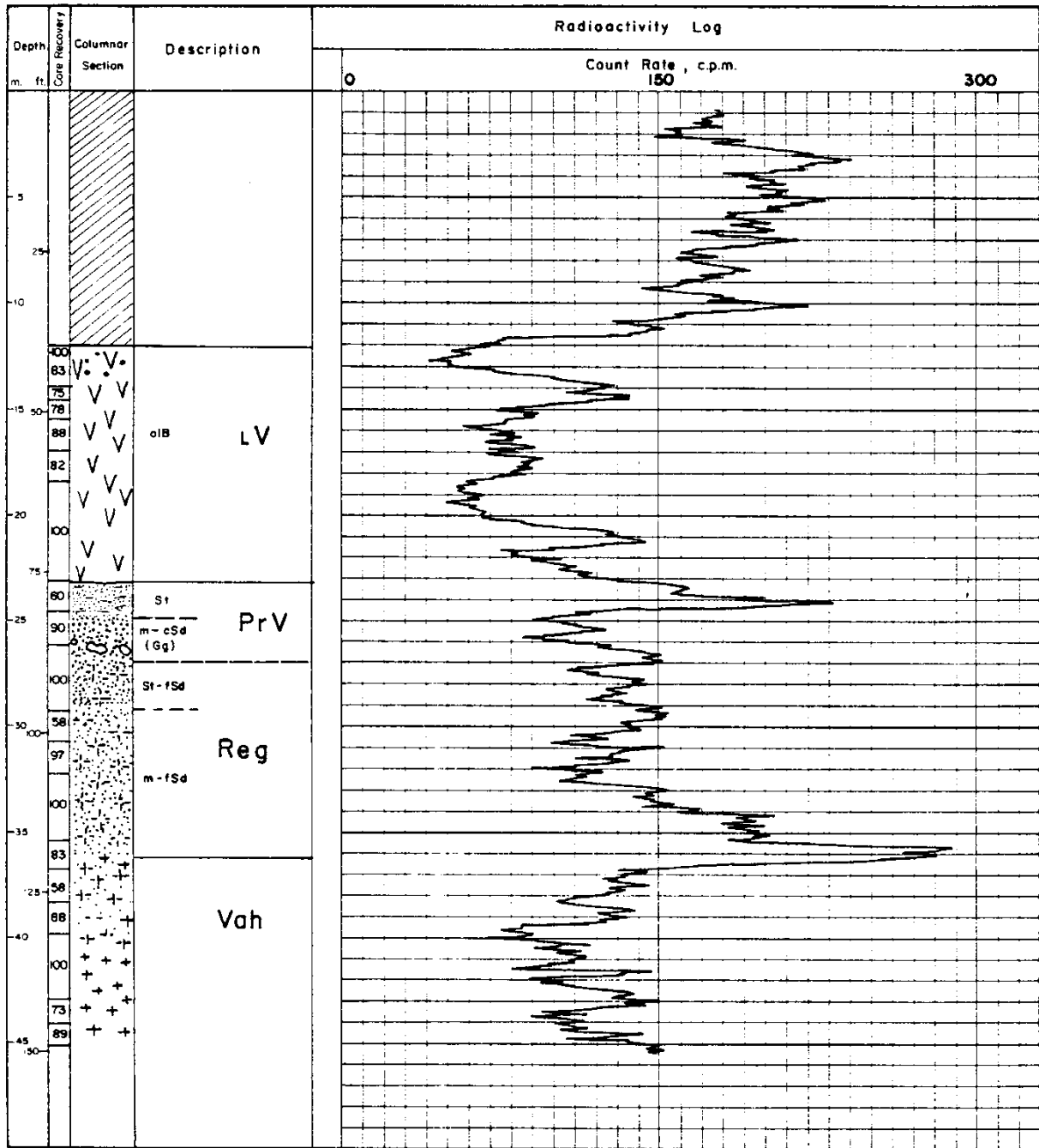
93

Method : D. D.  
 Hole No : CUP - 121  
 Location : DONEN 307  
 Probe Depth : 45.1 m.

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : Total 83.1%  
Basalt - 90%, Sediment - 80%  
Reg. - 74%, Granite - 85%

Detector : Geiger GP27 U  
 Monitor : TCS 603 R  
 Background : 110 cpm  
 Time Constant : 10 Sec.

Date : JUNE 24, 1979  
 Logged & Probed  
 by : K. YANAGIZAWA  
M. McDONALD



# PNC EXPLORATION (CANADA) CO. LTD.

94

Hole No. : 79-CUP-122	Project : CUP LAKE	Property : DONEN 315	Collared : APRIL 22, 1979
Latitude : 5766.91	Azimuth :	Dip Tests :	Completed : APRIL 23, 1979
Departure : 484.90	Dip : -90°	m.	Core Size : N.Q. 3
Elevation : 1308.0 m	Depth : 41.7 m	End of hole	Logged by : W. BULMER

Depth m ft	Columnar Section	From To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
	EXPLODED VIEW										
	0 - 3.6			0 - 3.6 Tricone							
	3.6 - 4.8		PoV	3.6 - 4.8 brown poorly sorted pebble sand-coarse basaltic pebble sand overlies basalt							
25	V V V										
10	V V V										
15	V V V		LV	4.8 - 28.2 olivine basalt							
20	V V V										
75	V V V		13 / 14 Cbn Baked	28.2 - 29.0 black baked silt/clay (originally medium brown) contains finely disseminated carbonaceous matter. cross bedding at 28.3 m & Grit layer at 28.7							
25	V V V		PrV	29.0 - 30.8 non baked silt as above-brown colour-contains organic matter incl. wood & insect? or seeds							
30	V V V		9,14 Cbn	30-8 - 31.0 coarse sand with few coarse granite pebbles-a little grey mud matrix							
30	V V V		Reg	31.0 - 32 medium grained quartz sand with little mud matrix							
30	V V V		10,14 Cbn	32 - 32.6 coarser granite sand							
35	V V V		Vah	32.6 - 41.7 Valhalla Granite							
35	+ + +			32.6 - 34.4 broken white biotite Valhalla granite							
40	+ + +			34.4 - 41.7 good white biotite granite Xenolith at 38.7m							
45	+ + +										

### EXPLANATION

- POST VOLCANISM SEDIMENTS  
recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS  
olive basalt massive, vesicular or sh thin silt, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS  
generally grey in colour matrix clay-like good binder. Silty portion light brown in colour, contains carbonaceous material
- REGALITH LAYER  
may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )  
**CORYELL**  
fine to medium grained dark reddish melanitic quartz syenite, high background radiation
- VALHALLA**  
medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite
- EARLY VOLCANICS**  
fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (+ Regolith)
- 1a PoV: 1 or Bg = Boulder gravel 256 mm
- 2 or Cg = Cobble gravel 64 - 256
- 3 or vcPg = very coarse Pebble gravel 32 - 64
- 4 or cPg = coarse Pebble gravel 16 - 32
- 5 or mPg = medium Pebble gravel 8 - 16
- 6 or fPg = fine Pebble gravel 4 - 8
- 7 or Gg = Gravel gravel 2 - 4
- 8 or vcSd = very coarse Sand 1 - 2
- 9 or cSd = coarse Sand 1/2 - 1
- 10 or mSd = medium Sand 1/4 - 1/2
- 11 or fSd = fine Sand 1/8 - 1/4
- 12 or vSd = very fine Sand 1/16 - 1/8
- 13 or St = Silt 1/256 - 1/16
- 14 or ct = clay < 1/256
- Cbn = Carbonaceous Ht = Hematite S = Sulphide Pg = Pegmatite
- LV Late Volcanics
- LV - 1 or oB = massive olivine basalt and related dykes and sills, may be vesicular
- 2 or Pum = Pumice
- 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

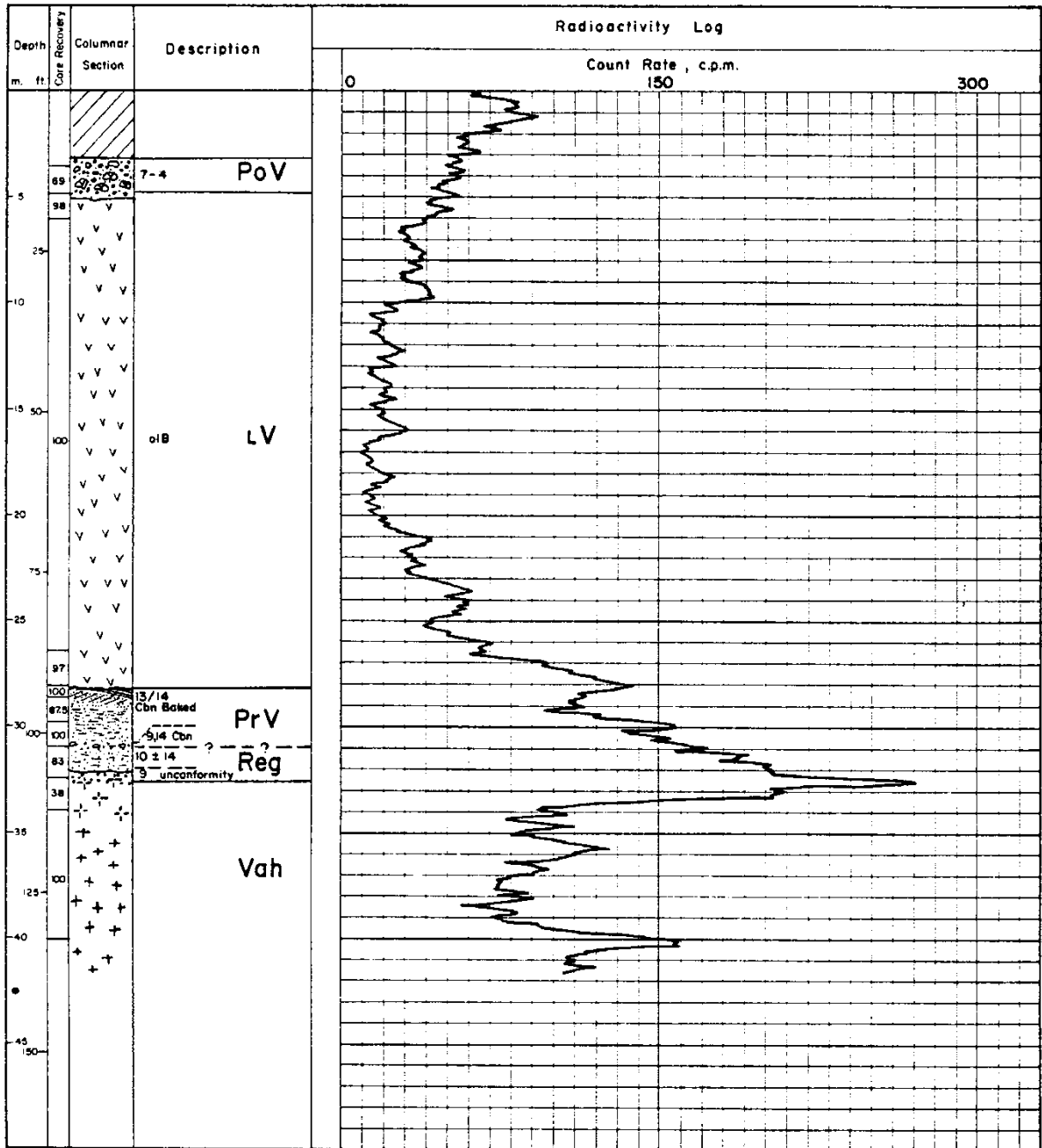
95

Method : D.D.  
 Hole N<sup>o</sup> : CUP - 122  
 Location : DONEN 315  
 Probe Depth : 41.5 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 95%-Total  
 98%-Basalt, 91%-PrV sed.,  
 40%-Reg., 88%-Granite

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 80 cpm  
 Time Constant : 10 Sec.

Date : APRIL 23, 1979  
 Logged & Probed  
 by : T. OBARA K. YANAGIZAWA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

96

Hole No. : 79-CUP-123  
 Latitude : 5790.10  
 Departure : 767.26  
 Elevation : 1329.2m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 72.54 m

Property : DONEN 305  
 Dip Tests :  
 m.  
 End of hole

Collared : JUNE 21, 1979  
 Completed : JUNE 22, 1979  
 Core Size : N.Q. 3  
 Logged by : M. McDONALD  
 Checked by : W. BULMER

Depth m. ft.	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
0 - 9.14				Tricone								
9.14 - 10.97				few cobble/pebbles plus grey mud								
10.97 - 11.30				grey medium sand with mud matrix								
11.30 - 12.1				Mahogany red color organic matter								
12.1 - 12.4				green ash/tuffaceous sediments								
12.4 - 14.9				laterite type? soil-weathered basalt to a rust-red mud								
14.9 - 20.42				olivine basalt								
20.42 - 21.64				black baked mud								
21.64 - 23.16				pumic ash plus silt		1-7	23.2-23.8	23.3-23.9	0.1	.034-.001		
23.16 - 39.4				olivine Basalt-fractured								
39.4 - 40.59				medium grained-fine sand		8-13	39.5-40.0	39.6-40.1	0.1	.077-.088		
40.59 - 41.60				coarse grey sand with little pebble gravel		14-16	40.1-40.3	40.2-40.4	0.1	.081-.046		
41.60 - 44.5				fine regolithic sand with occasional pebbles and cobbles-green colour		17-21	40.4-40.8	40.5-40.9	0.1	.015-.009		
44.5 - 52.1				yellow-green fine regolith sand								

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sands and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (increasing age)**  
**CORYELL**  
 Coy fine to medium grained dark reddish melanitic quartz syenite. High background radiation

**VALHALLA**  
 Val medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or gneiss

**EARLY VOLCANICS**  
 Ev fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

16	PoV - 1 or Bg	= Boulder gravel	256 mm
	- 2 or Cg	= Cobble gravel	64 - 256
	- 3 or cPg	= very coarse Pebble gravel	32 - 64
	- 4 or cPg	= coarse Pebble gravel	16 - 32
	- 5 or mPg	= medium Pebble gravel	8 - 16
	- 6 or fPg	= fine Pebble gravel	4 - 8
	- 7 or Gg	= Granule gravel	2 - 4
	- 8 or vSd	= very coarse Sand	1 - 2
	- 9 or cSd	= coarse Sand	1/2 - 1
	- 10 or mSd	= medium Sand	1/4 - 1/2
	- 11 or fSd	= fine Sand	1/8 - 1/4
	- 12 or vSd	= very fine Sand	1/16 - 1/8
	- 13 or S1	= Silt	1/32 - 1/16
	- 14 or c1	= clay	1/64 - 1/32

Cbn = Carbonaceous    H = Hematite    S = Sulphide    Peg = Pegmatite

**Late Volcanics**

LV - 1 or o1B	= massive olivine Basalt and related dykes and sills, may be vesicular
- 2 or Pum	= Pumice
- 3 or T/S	= Tuffaceous Sediments

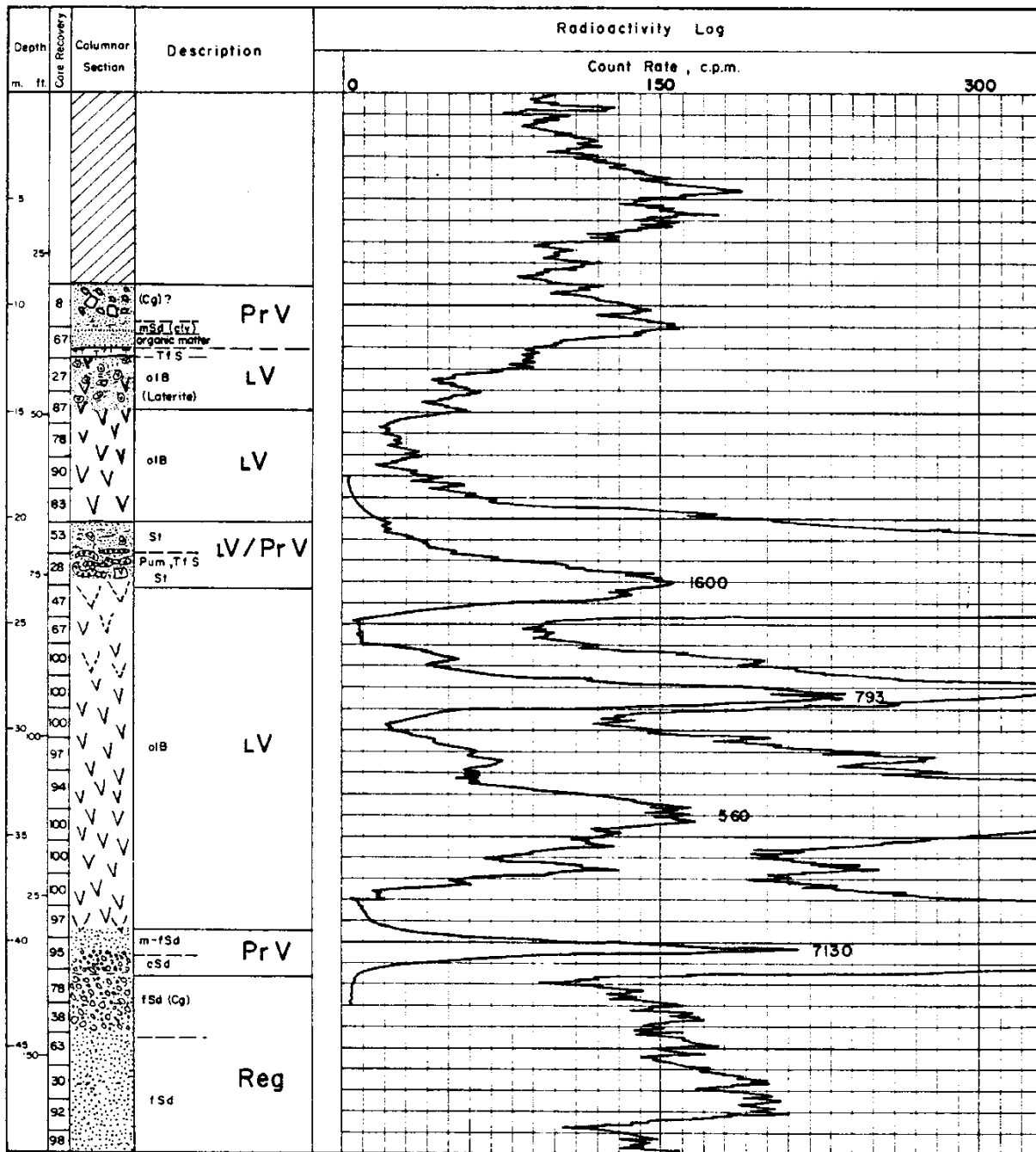
# LOG AND PROBE SHEET

Method : D. D.  
 Hole No : CUP-123  
 Location : DONEN 305  
 Probe Depth : 73.0 m.

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 80 cpm  
 Time Constant : 10 Sec.

Date : JUNE 22, 1979  
 Logged & Probed by : K. YANAGIZAWA  
 M. McDONALD



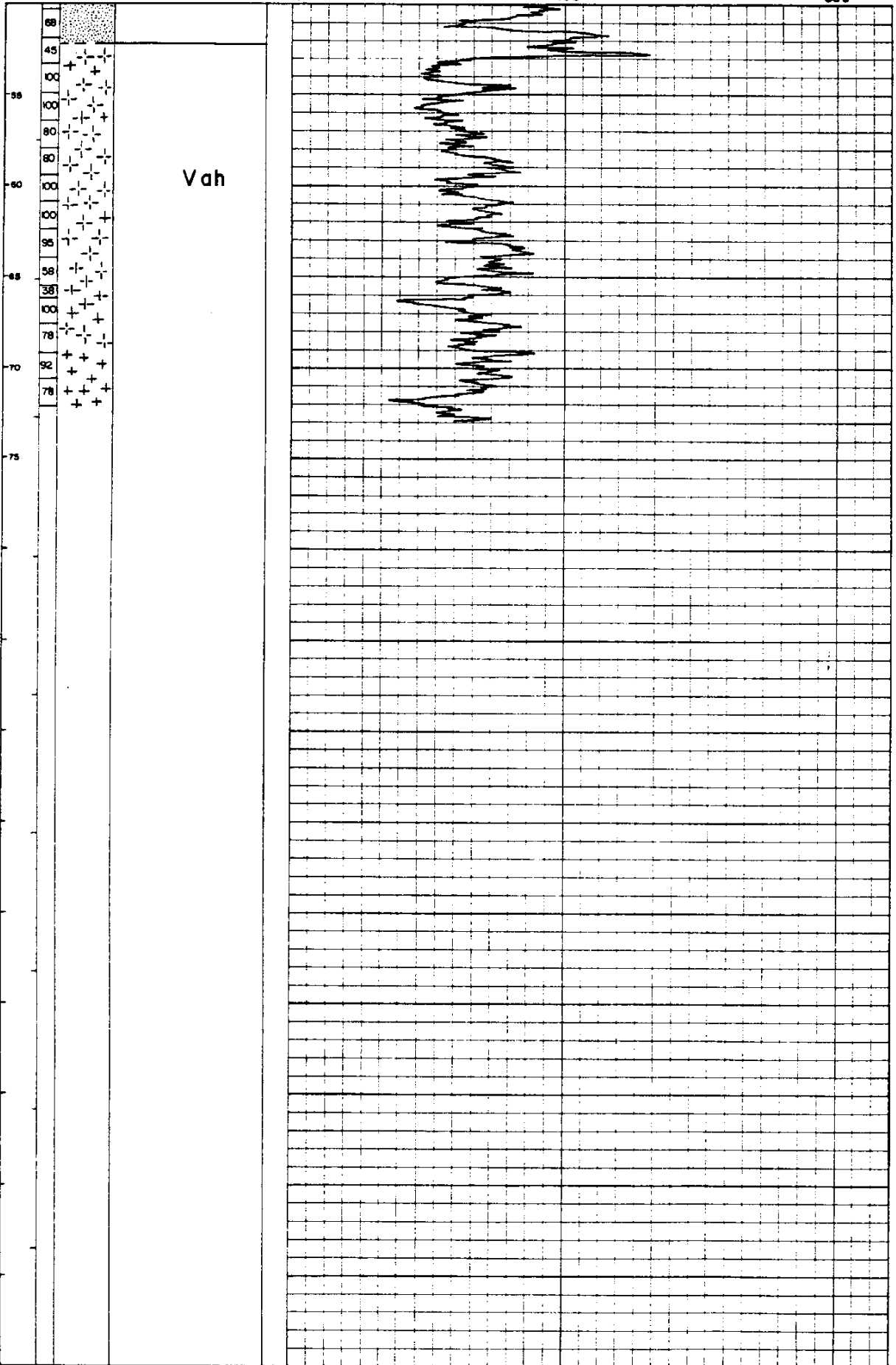


Continuation CUP-123

0

150

300



# PNC EXPLORATION (CANADA) CO. LTD.

100

Hole No. : 79-CUP-124  
 Latitude : 5772.23  
 Departure : 845.08  
 Elevation : 1328.8m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 52.1 m

Property : DONEN 305  
 Dip Tests :  
 m.  
 End of hole

Collared : JUNE 20, 1979  
 Completed : JUNE 21, 1979  
 Core Size : N.Q. 3  
 Logged by : M. McDONALD  
 W. BULMER

Depth m ft	Columnar Section	From To ASSO	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
<b>EXPLODED VIEW</b>											
0 - 9.1				casing							
9.1 - 10.0		9.1 10.0	1301 PrV	grey silt with a little sand and cobbles of broken basalt							
10.0 - 14.05			1	olivine basalt							
14.05 - 16.45			3	beige coloured volcanic ash							
16.45 - 21.48			1	olivine basalt							
21.48 - 22.47			2 LV	pumice ash with mixed brown silt-carbonaceous							
22.47 - 22.81			/	consolidated silt							
22.81 - 24.00			13 PrV	- siltstone							
24.00 - 24.99				22.8-24.0 brown silt with little pumice ash							
24.99 - 25.29				24.0-24.99 pumice ash mixed in black baked mud							
25.29 - 26.28				24.99-25.29 Basalt							
26.28 - 28.72			2 / 13 PrV	25.29 - 28.72 black baked mud with pumice ash-few grit layers as in DDH 79-Cup-125							
28.72 - 33.22			1	26.28-28.72 mainly pumice ash with little silt							
33.22 - 34.13			1	28.72 - 33.22 vesicular olivine basalt							
34.13 - 34.8				33.22 - 36.88 finely laminated brown silt carbonaceous with little medium sand mixed							
34.8 - 36.88			13 (10)	34.35-34.8 brown silt with some organic matter mixed							
36.88 - 37.49			PrV	34.8-36.88 brown silt-carbonaceous							
37.49 - 38.7			13 JO	36.88 - 37.49 grey silt with medium sand							
38.7 - 42.06			9-7 8	37.49 - 38.70 coarse sand to pebble gravel-little grey silt-carbonaceous							
42.06 - 46.02			9 Reg	38.7 - 46.02 medium to fine grained green regolith							
46.02 - 48.02			(Val?)	42.06-46.02 coarse green regolith -rotten Valhalla?							
48.02 - 52.12			Nel	46.02 - 52.12 foliated Nelson granodiorite salt & pepper textured mafic xenoliths common							

**EXPLANATION**

**POST VOLCANISM SEDIMENTS**  
 Post Volcanism Sediments ( = Regolith )  
 Post Volcanism Sediments generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 Late Volcanics  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 Pre Volcanism Sediments  
 generally gray in colour, matrix clay like, good binder. Silt portion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**

**COPYELL**  
 Coy fine to medium grained dark reddish monzonite quartz syenite high background radiation

**VALHALLA**  
 Valhalla medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 eV fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

**LEGEND**

Post / Pre Volcanism Sediments ( = Regolith )

1 = Post - 1 or Bg	= Boulder gravel	256 - mm
2 = Post - 2 or Cg	= Cobble gravel	64 - 256
3 = Post - 3 or vcPg	= very coarse Pebble gravel	32 - 64
4 = Post - 4 or cPg	= coarse Pebble gravel	6 - 32
5 = Post - 5 or mPg	= medium Pebble gravel	8 - 16
6 = Post - 6 or fPg	= fine Pebble gravel	4 - 8
7 = Post - 7 or Gg	= Gravel gravel	2 - 4
8 = Post - 8 or vcSd	= very coarse Sand	1 - 2
9 = Post - 9 or cSd	= coarse Sand	1/2 - 1
10 = Post - 10 or mSd	= medium Sand	1/8 - 1/2
11 = Post - 11 or fSd	= fine Sand	1/16 - 1/8
12 = Post - 12 or vSd	= very fine Sand	1/32 - 1/16
13 = Post - 13 or Ss	= Silt	1/256 - 1/32
14 = Post - 14 or cl	= clay	1/256

Cbn = Carbonaceous    H = Hematite    S = Sulphide    Reg = Regmatite  
 LV = Late Volcanics  
 LV - 1 or oB = massive olivine Basalt and related dykes and sills, may be vesicular  
 - 2 or Pum = Pumice  
 - 3 or TS = Tuffaceous Sediments



# LOG AND PROBE SHEET

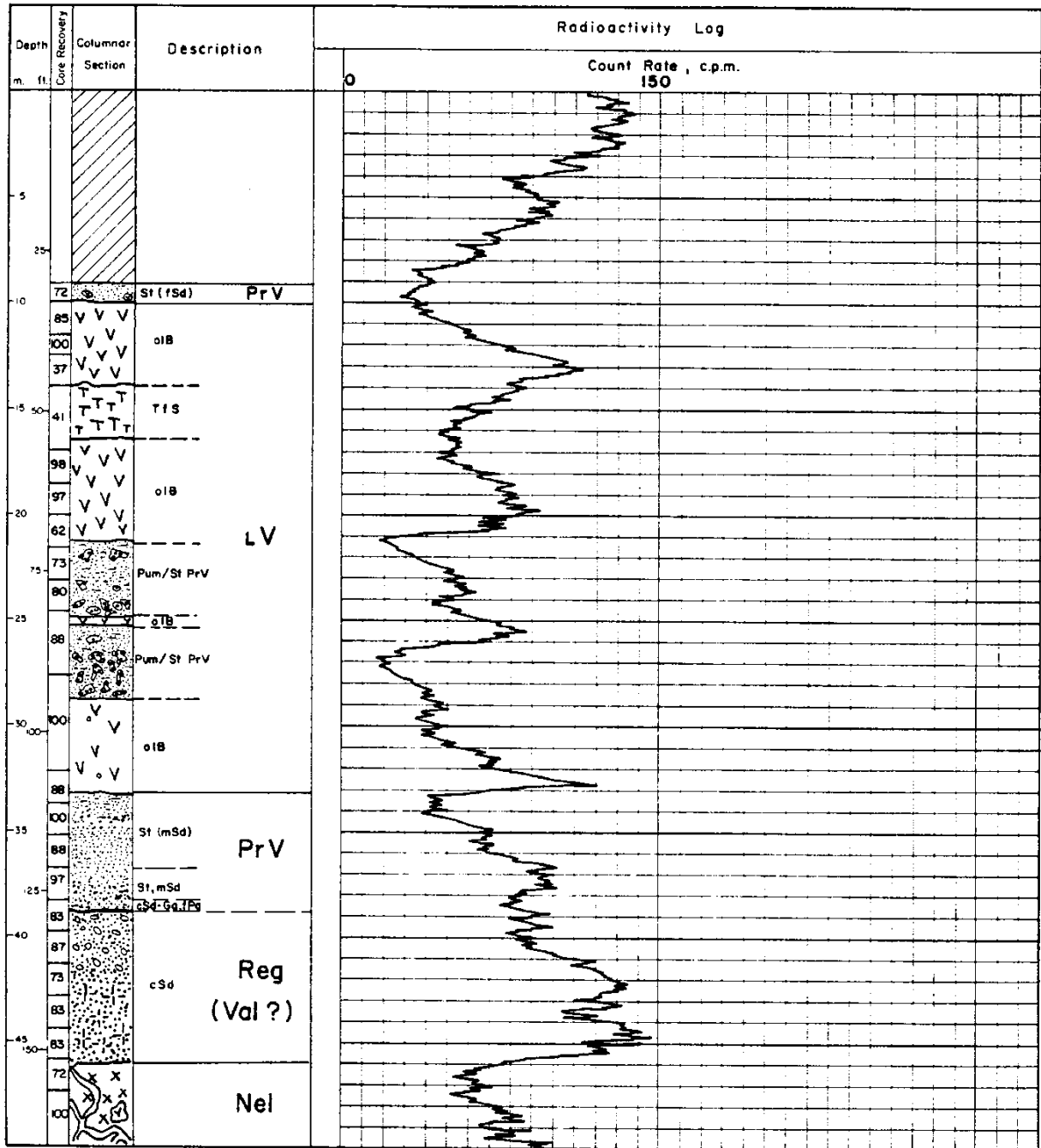
101

Method : D.D.  
 Hole No : CUP-124  
 Location : DONEN 305  
 Probe Depth : 52.0 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :


Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 50 cpm  
 Time Constant : 10 Sec.

Date : JUNE 21, 1979  
 Logged & Probed  
 by : K. YANAGIZAWA  
 M. McDONALD



CUP - 124

Continuation

										
55										

Continuation

CUP-124

0

150

X X U  
X X



Large grid area for data recording, consisting of a 15x150 grid of squares.

# PNC EXPLORATION (CANADA) CO. LTD.

104

Hole No. : 79-CUP-126  
 Latitude : 5782.66  
 Departure : 1050.20  
 Elevation : 1329.6 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 50.3 m

Property : DONEN 306  
 Dip Tests :  
 m.  
 End of hole

Collared : JUNE 18, 1979  
 Completed : JUNE 19, 1979  
 Core Size : N.Q. 3  
 Logged by : M. McDONALD  
 W. BULMER

Depth m. ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
0				0 - 16.23 Tricone								
16.23		16.23		16.23 - 16.76 Granite Boulders								
16.76		16.76		16.76 - 22.2 grey silt with carbonaceous material								
18.59		18.59	13 PrV	18.59-20.1 fine sand with grey silt/clay matrix								
20.1		20.1	13 PrV	20.1-22.2 fine sand-silt carbonaceous								
22.2		22.2	2,3 13 LV	22.2 - 23.16 mixture of white pumice ash and brown carbonaceous silt								
23.16		23.16	13 LV	23.16 - 24.9 pumice ash increase - 24.9m. mixed with brown finesand/silt								
24.9		24.9	13 LV	24.9 - 26.82 mixture of white pumice ash & carbonaceous silt								
26.82		26.82	1 LV	26.82 - 30.17 vesicular olivine basalt								
30.17		30.17	13 PrV	30.17 - 30.78 black baked carbonaceous silt								
30.78		30.78	1 LV	30.78 - 31.54 olivine basalt								
31.54		31.54	13 PrV	31.54 - 33.83 finely laminated grey brown silt								
33.83		33.83	13 PrV	33.83 - 35.58 brown carbonaceous silt								
35.58		35.58		35.58 - 35.66 very fine sand with minor silt								
36.34		36.34										
39.9		39.9	Nel / eV	35.66 - 42.6 broken green salt & pepper type rock-crushed zones could be regolith-foliation present-gneissic texture hematite disseminated-39.9m from 42.6-43.8 white siliified zone with hematite throughout								
42.6		42.6		from 42.6-43.8 white siliified zone with hematite throughout								
43.8		43.8		from 43.8 to end Nelson? granodiorite possibly Valhalla-badly altered								
46.02		46.02		many hematite stringer throughout high angle faulting evident								

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay-like, good binder. Silty, parting light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (increasing age)**  
**CORYELL**  
 Coy fine to medium grained dark reddish monzonite quartz syenite. High background radiation

**VALHALLA**  
 Valh medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nelson moderate to strongly foliated grey biotite-hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 eV fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

1-8	PoV-1 or Bg = Boulder gravel	256 mm
-2 or Cg	= Cobble gravel	64-256
-3 or vPg	= very coarse Pebble gravel	32-64
-4 or cPg	= coarse Pebble gravel	16-32
-5 or mPg	= medium Pebble gravel	8-16
-6 or fPg	= fine Pebble gravel	4-8
-7 or Gg	= Gravel gravel	2-4
-8 or vSd	= very coarse Sand	1-2
-9 or cSd	= coarse Sand	1/2-1
-10 or mSd	= medium Sand	1/4-1/2
-11 or fSd	= fine Sand	1/8-1/4
-12 or vSl	= very fine Sand	1/16-1/8
-13 or Sl	= Silt	1/256-1/16
-14 or cl	= clay	1/256

Cbn = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite

**Late Volcanics**

LV -1 or oB = massive olivine Basalt and related dykes and sills, may be vesicular

-2 or Pum = Pumice

-3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

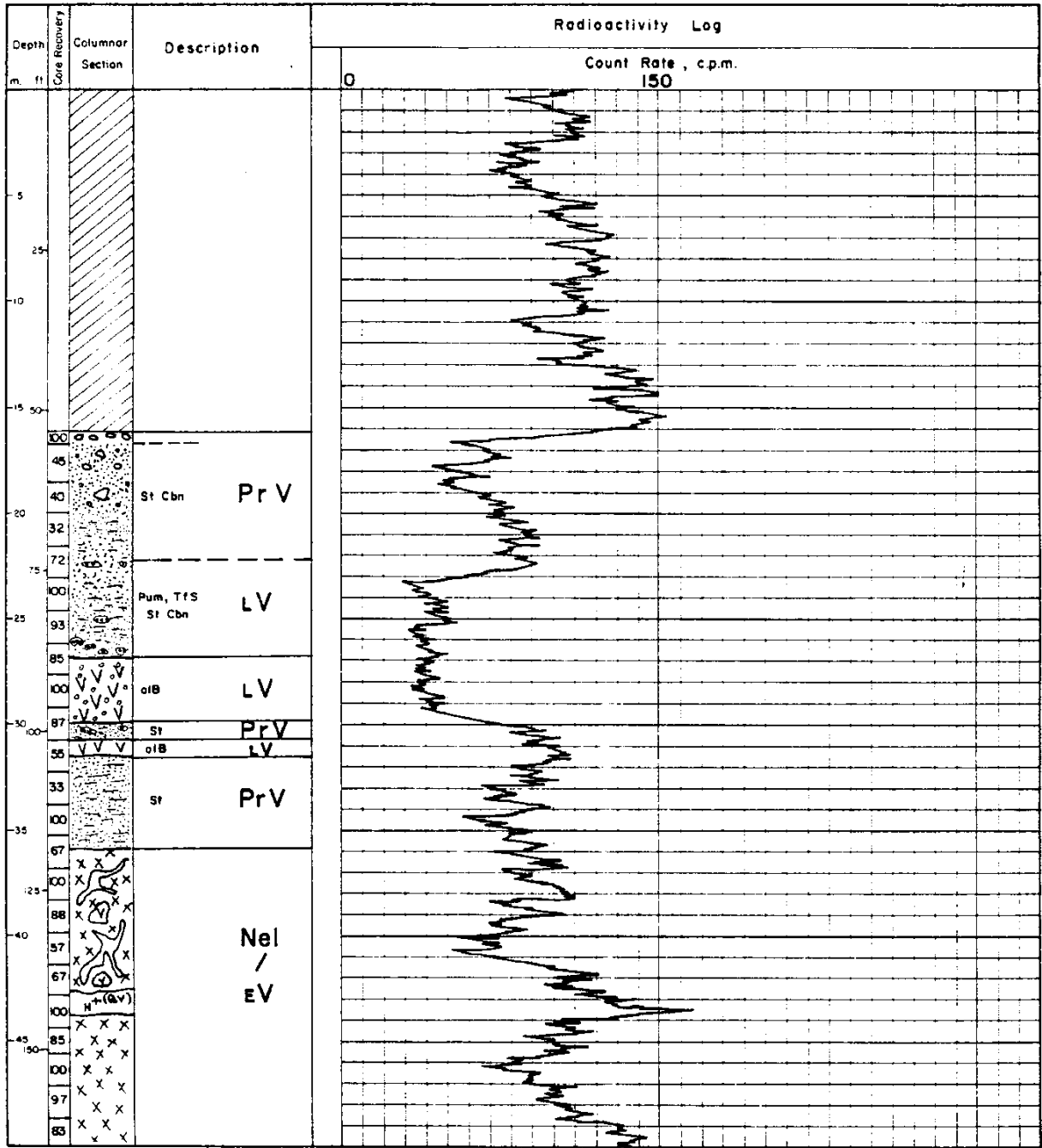
105

Method : D.D.  
 Hole N° : CUP-126  
 Location : DONEN 306  
 Probe Depth : 50.3 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 90 cpm  
 Time Constant : 10 Sec.

Date : JUNE 19, 1979  
 Logged & Probed  
 by : K. YANAGIZAWA  
M. McDONALD



# PNC EXPLORATION (CANADA) CO. LTD.

106

Hole No. : 79-CUP-127  
 Latitude : 5561.48  
 Departure : 384.05  
 Elevation : 1297.6 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 23.2 m.

Property : DONEN 319  
 Dip Tests :  
 m.  
 End of hole

Collared : APRIL 26, 1979  
 Completed : MAY 7, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m. ft.	Columnar Section	From To Assd	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
			<b>EXPLODED VIEW</b>								
0 - 15.2				Tricone							
15.24		9-7 12-2 14	PoV ?	15.2 - 18.74 coarse sand to granule gravel-brown/yellow matrix with few coarse cobbles							
18.74		14	Cbn	18.74 - 19.08 influx of grey carbonaceous mud as thin interlaminae							
19.08		9-7 +6	PrV	19.08 - 20.29 coarse sand to fine pebble to granule gravel with brown yellowish tinge							
20.29		13 / 14		20.29 - 20.49 finely laminated alternating grey & brown carbonaceous mud laminations at 45° dip. Ripples and soft sediment deformation at granite contact							
20.49			Vah	20.49 - 23.1 coarse grained white biotite granite-includes medium grained phases Valhalla Granite							

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 PoV recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 LV olivine basalt massive, vesicular or 20 thin sills, may be associated with perthite and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 PrV generally grey in colour, matrix clay-like, good binder. Silty parting - light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 Reg may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**  
 CORYELL  
 Coy fine to medium grained dark reddish monzonite quartz syenite high background radiation

**VALHALLA**  
 Vah medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 EV fine grained chloritic greenstone - generally oolitic fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

1 - PoV - 1 or Bg	= Boulder gravel	256 mm
2 or Cg	= Cobble gravel	64 - 256
3 or vCPg	= very coarse Pebble gravel	32 - 64
4 or cPg	= coarse Pebble gravel	16 - 32
5 or mPg	= medium Pebble gravel	8 - 16
6 or fPg	= fine Pebble gravel	4 - 8
7 or Gg	= Granite gravel	2 - 4
8 or vCSd	= very coarse Sand	1 - 2
9 or cSd	= coarse Sand	1/2 - 1
10 or mSd	= medium Sand	1/4 - 1/2
11 or fSd	= fine Sand	1/8 - 1/4
12 or vFSd	= very fine Sand	1/16 - 1/8
13 or St	= Silt	1/256 - 1/16
14 or cl	= clay	1/256

Cbn = Carbonaceous    H = Hematite    S = Sulphide    Peg = Pegmatite

**Late Volcanics**

LV - 1 or olB	= massive olivine basalt and related dykes and sills, may be vesicular
- 2 or Pum	= Pumice
- 3 or TFS	= Tuffaceous Sediments

# LOG AND PROBE SHEET

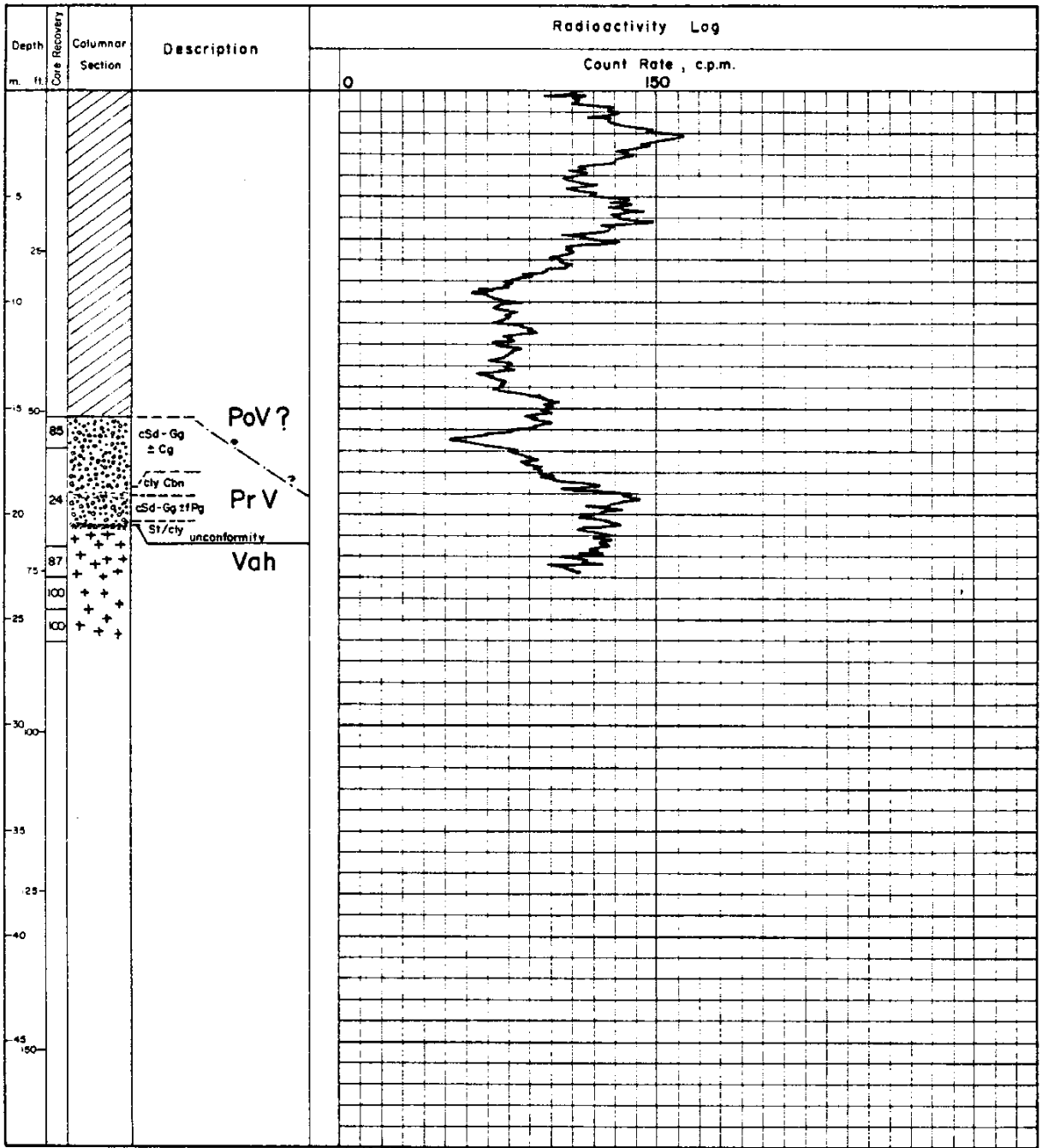
107

Method : D. D.  
 Hole N° : CUP-127  
 Location : DONEN 319  
 Probe Depth : 22.8 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : Total 58%

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 70 cpm  
 Time Constant : 10 Sec.

Date : MAY 7, 1979  
 Logged & Probed by : K. YANAGIZAWA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

108

Hole No. : 79-CUP-128	Project : CUP LAKE	Property : DONEN 319	Collared : JUNE 6, 1979
Latitude : 5497.08	Azimuth :	Dip Tests :	Completed : JUNE 7, 1979
Departure : 488.0	Dip : -90°	m.	Core Size : N.Q. 3
Elevation : 1299.8 m	Depth : 30.8 m	End of hole	Logged by : W. BULMER

Depth m ft	Columnar Section	From To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
				<b>EXPLODED VIEW</b>							
				0 - 6.1 Tricone							
5		6.1 6.4	4-2	6.1 - 8.4 poorly sorted coarse pebble to cobble gravel-grey mud matrix							
25		8.38	11	8.4 - 9.4 graded section-fine sand with few medium size pebbles scattered about to medium to coarse sand. coarse pebble gravel and cobbles are more common. possible rhythmic layering in this section.							
10		9.4 10.4	10-9 14, 2	9.4 - 10.43 granule pebble gravel with abundant grey (brown) clay matrix							
15		15.5	7-6 Prv 13, 2 (14) Cbn	10.43 - 15.54 poorly to semi sorted granule to fine pebble gravel with abundant very coarse pebbles to cobbles-grey mud matrix							
20		17.1 18.1 18.6	7 9-7	15.54 - 17.06 granule gravel 17.06 - 18.13 coarse granite sand to granule gravel and coarse pebble							
25		19.8 21.5	4 (14)	19.8 - 21.5 gravel with green chloritic clay like matrix very coarse pebbles scattered about							
30		22.7 23.4	9-8	18.13 - 18.59 coarse to very coarse sand with green clay-like matrix (probably granite derived)							
35		25.5	7-4	18.59 - 19.81 poorly sorted granule to coarse pebble gravel-matrix reduced-pebbles closely packed							
40		19.81 21.5	9 14, 2	19.81 - 21.5 coarse sand plus few coarse pebbles & cobbles scattered about							
45		21.5 22.67	10-5 (14) Cbn	21.5 - 22.67 green finely laminated medium grained sand (beach type) with little grey clay-like layers intercalated at 22.0 m							
50		22.67 23.37	5-4 Reg	22.67 - 23.37 coarse sand with few medium pebbles scattered about							
55		23.37 23.7	10-7	23.37 - 23.7 coarse pebble gravel							
60		23.7 23.9	10-7	23.7 - 23.9 fine-medium green sand							
65		23.9 24.38	10-7	23.9 - 24.38 granule gravel							
70		24.38 25.45	Vah	24.38 - 25.45 broken highly fractured white biotite granite with abundant sulphides filling micro-cracks-contact 20°							
75		25.45 30.78	Vah	25.45 - 30.78 broken white biotite granite with coarser clots of biotite -Valhalla granite							

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
Recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS**  
olivine basalt massive vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
generally grey in colour matrix clay-like, good binder. Silty, parting light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )**
- CORVELL**  
Coy fine to med in grained dark reddish monzonite quartz syenite High background radiation
- VALHALLA**  
Vah medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
Nel moderate to strongly foliated grey biotite -hornblende quartz diorite or granodiorite
- EARLY VOLCANICS**  
Ev fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (- Regolith)**
- |    |              |                             |              |
|----|--------------|-----------------------------|--------------|
| 18 | PoV -1 or Bg | = Boulder gravel            | 256 mm       |
|    | -2 or Cg     | = Cobble gravel             | 64 - 256     |
|    | -3 or vCg    | = very coarse Pebble gravel | 32 - 64      |
|    | -4 or cPg    | = coarse Pebble gravel      | 6 - 32       |
|    | -5 or mPg    | = medium Pebble gravel      | 6 - 16       |
|    | -6 or fPg    | = fine Pebble gravel        | 4 - 8        |
|    | -7 or Gg     | = Granule gravel            | 2 - 4        |
|    | -8 or vCsd   | = very coarse Sand          | 1 - 2        |
|    | -9 or cSd    | = coarse Sand               | 1/2 - 1      |
|    | -10 or mSd   | = medium Sand               | 1/4 - 1/2    |
|    | -11 or fSd   | = fine Sand                 | 1/8 - 1/4    |
|    | -12 or vSd   | = very fine Sand            | 1/16 - 1/8   |
|    | -13 or S1    | = Silt                      | 1/256 - 1/16 |
|    | -14 or clay  | = clay                      | 1/256        |
- Cbn = Carbonaceous    H = Hematite    S = Sulphide    Peg = Pegmatite
- Late Volcanics**
- |              |  |
|--------------|--|
| LV -1 or OIB | = massive olivine Basalt and related dykes and sills, may be vesicular |
| -2 or Pum    | = Pumice   |
| -3 or TYS    | = Tuffaceous Sediments   |



# LOG AND PROBE SHEET

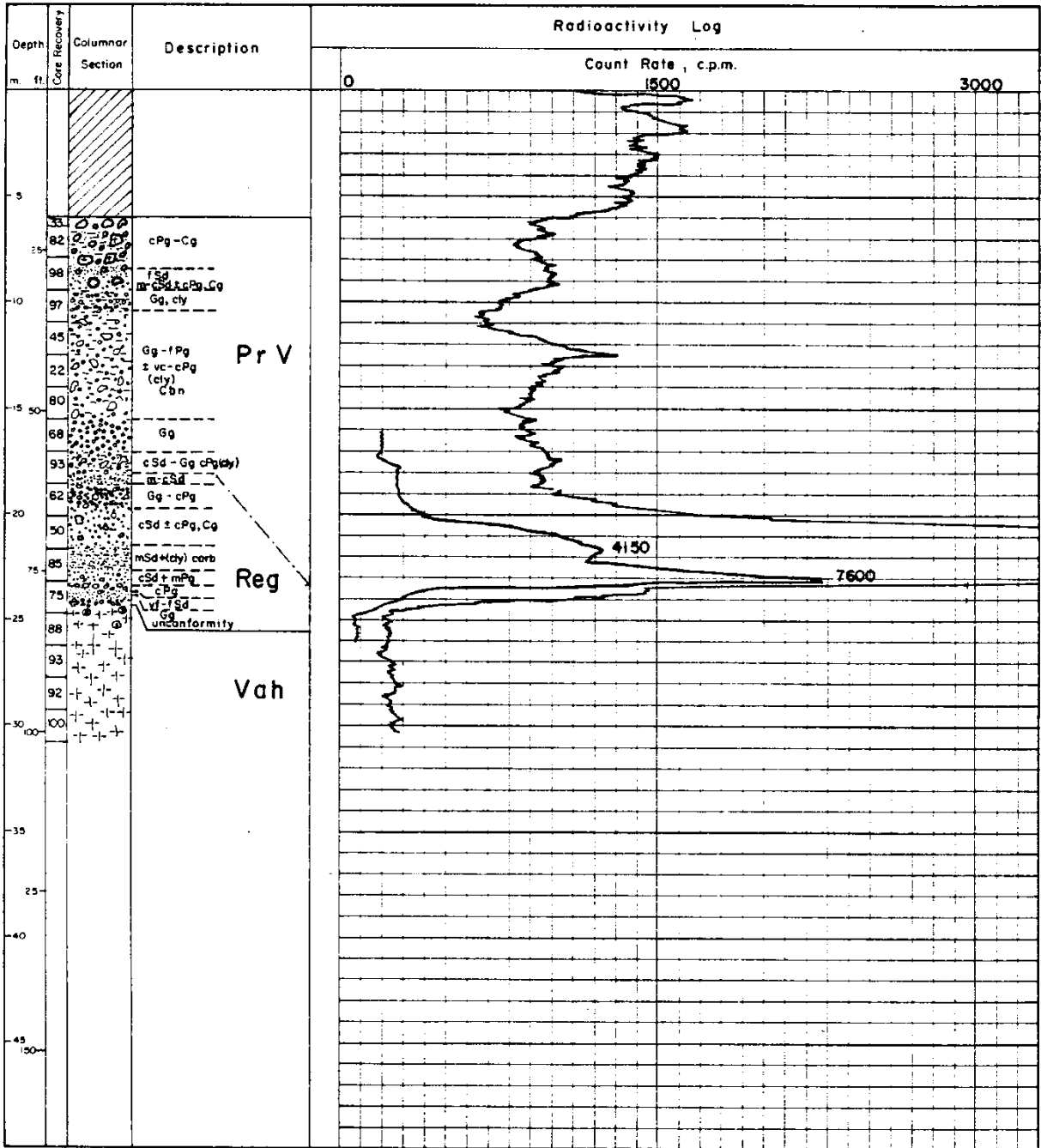
109

Method : D.D.  
 Hole № : CUP-12B  
 Location : DONEN 319  
 Probe Depth : 30.3 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : Total 76%

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 115 cpm  
 Time Constant : 10 Sec.

Date : JUNE 14, 1979  
 Logged & Probed by : K. YANAGIZAWA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

110

Hole No. : 79-CUP-129	Project : CUP LAKE	Property : DONEN 314	Collared : APRIL 27, 1979
Latitude : 5374.77	Azimuth :	Dip Tests :	Completed : APRIL 28, 1979
Departure : 495.17	Dip : -90°	m.	Core Size : N.Q. 3
Elevation : 1294.9 m	Depth : 35.4 m	End of hole	Logged by : W. BULMER

Depth m. ft.	Columnar Section	From To As of	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
				0 - 4.26 Tricone							
5		4.3									
25		6-4 ±3-2		4.26 - 14.32 poorly sorted fine to coarse pebble gravel with occasional very coarse pebble or even cobble							
10		14.3									
15		3,2 ? ±5		14.32 - 23.1 very coarse pebble to cobble gravel-few medium pebble present-matrix washed out							
20		23.1									
25		24.9 unconform		23.1 - 24.9 cobble gravel							
30			Vah	24.9 - 35.35 coarse grained white biotite Valhalla granite some spars altered to orange colour where granite is broken chlorite is developed on Fracture planes							
35		35.4									
40											
45											
50											

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
Recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS**  
olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
generally grey in colour, matrix clay-like, good binder. Silty partion light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
may or may not be well developed, and may or may not contain overlying sediments
- INTRUSIVES (increasing age)**  
**CORVELL**  
fine to medium grained dark reddish monzonite quartz syenite. High background radiation
- VALHALLA**  
medium to coarse grained white porphyritic biotite granite range pink feldspar phenocrysts common
- NELSON**  
moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite
- EARLY VOLCANICS**  
fine grained charitic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (+ Regolith)**
- 1a PoV - 1 or Bg = Boulder gravel 256 mm
- 2 or Cg = Cobble gravel 64-256
- 3 or vCg = very coarse Pebble gravel 32- 64
- 4 or cPg = coarse Pebble gravel 16- 32
- 5 or mPg = medium Pebble gravel 8 - 16
- 6 or fPg = fine Pebble gravel 4 - 8
- 7 or Gg = Gravel gravel 2 - 4
- 8 or vSd = very coarse Sand 1 - 2
- 9 or cSd = coarse Sand 1/2 - 1
- 10 or mSd = medium Sand 1/4 - 1/2
- 11 or fSd = fine Sand 1/8 - 1/4
- 12 or vSd = very fine Sand 1/16 - 1/8
- 13 or S1 = Silt 1/256 - 1/16
- 14 or c1 = clay
- Cbn = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite
- Late Volcanics**
- LV - 1 or mB = massive olivine basalt and related dykes and sills, may be vesicular
- 2 or Pum = Pumice
- 3 or TTS = Tuffaceous Sediments

# LOG AND PROBE SHEET

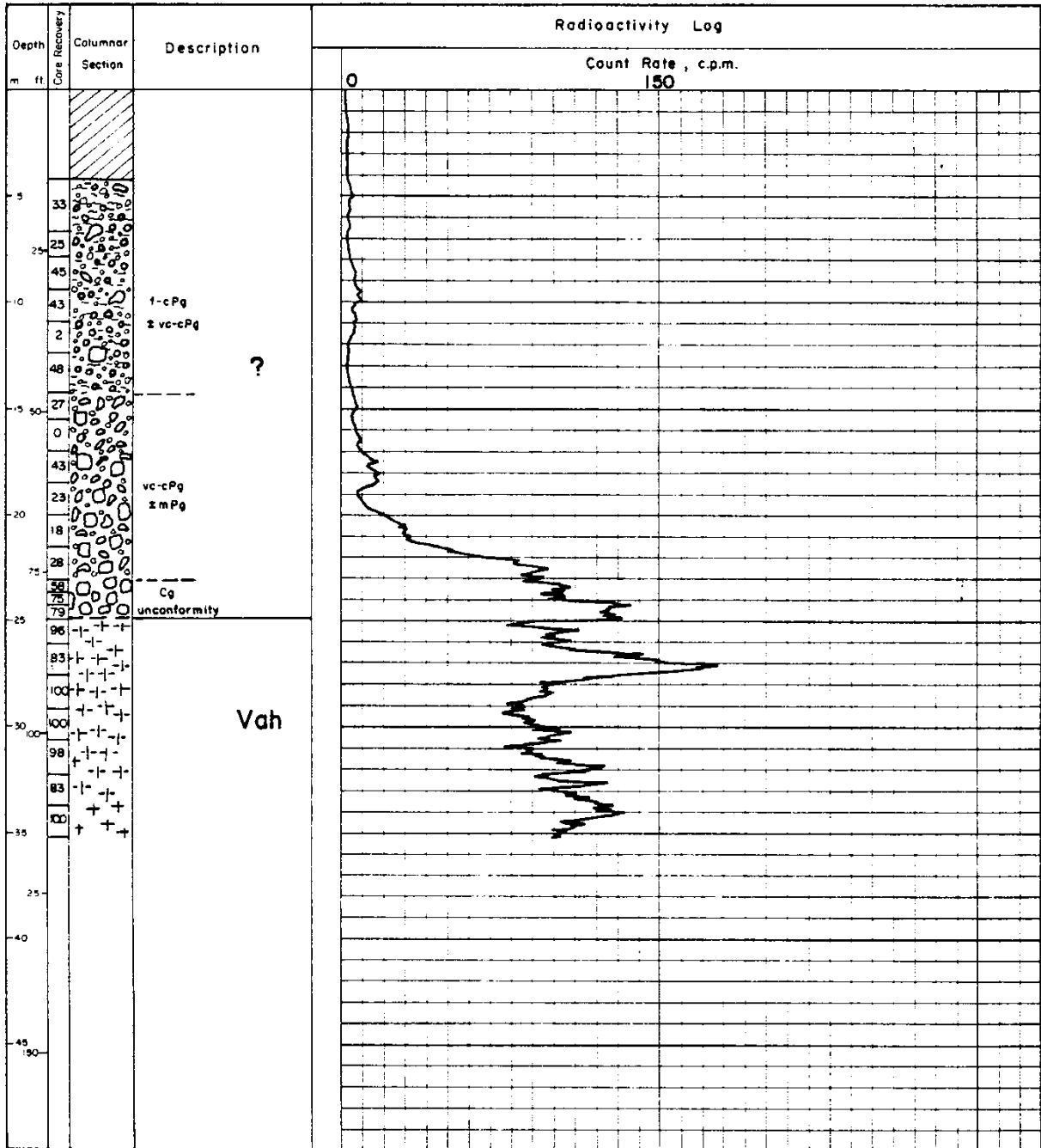
111

Method : D. D.  
 Hole No : CUP-129  
 Location : DONEN 314  
 Probe Depth : 35.2 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : Total 53%

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 10 Sec.

Date : APRIL 28, 1979  
 Logged & Probed by : T. OBARA  
W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

112

Hole No. : <b>79-CUP-130</b>	Project : <b>CUP LAKE</b>	Property : <b>DONEN 303</b>	Collared : <b>JUNE 5, 1979</b>
Latitude : <b>5345.79</b>	Azimuth :	Dip Tests :	Completed : <b>JUNE 6, 1979</b>
Departure : <b>562.58</b>	Dip : <b>-90°</b>	m.	Core Size : <b>N.Q. 3</b>
Elevation : <b>1297.4 m</b>	Depth : <b>17.0 m</b>	End of hole	Logged by : <b>W. BULMER</b>

Depth m. ft	Columnar Section	From To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
0 - 9				0 - 9 Tricone								
9.14		10-5		9 - 10.1 poorly sorted sand to medium pebble gravel with grey clay matrix								
10.1		10-5		10.1 - 10.97 granule gravel with few fine & coarse pebbles								
10.9		10-5		10.97 - 11.43 basaltic pebbles in iron-stained sandy matrix								
11.4		10-5		11.43 - 17.0 broken good white biotite Valhalla Granite								
17.0												

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
Recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS**  
diverse basaltic masses, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
generally grey in colour, matrix clay - fine, good binder. Silty portion might brown in colour, contains carbonaceous material
- REGALITH LAYER**  
may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES (increasing age)**
- CORYELL**  
fine to medium grained dark reddish magmatic quartz syenite. High background radiation
- VALHALLA**  
medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite
- EARLY VOLCANICS**  
fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (+ Regolith)**
- |                |                             |              |
|----------------|-----------------------------|--------------|
| 1a PoV-1 or Bg | = Boulder gravel            | 256 mm       |
| -2 or cG       | = Cobble gravel             | 64 - 256     |
| -3 or vcPg     | = very coarse Pebble gravel | 32 - 64      |
| -4 or cPg      | = coarse Pebble gravel      | 16 - 32      |
| -5 or mPg      | = medium Pebble gravel      | 8 - 16       |
| -6 or fPg      | = fine Pebble gravel        | 4 - 8        |
| -7 or Gg       | = Granule gravel            | 2 - 4        |
| -8 or vSd      | = very coarse Sand          | 1 - 2        |
| -9 or cSd      | = coarse Sand               | 1/2 - 1      |
| -10 or mSd     | = medium Sand               | 1/4 - 1/2    |
| -11 or fSd     | = fine Sand                 | 1/8 - 1/4    |
| -12 or vFsd    | = very fine Sand            | 1/16 - 1/8   |
| -13 or Sl      | = Silt                      | 1/256 - 1/16 |
| -14 or cl      | = clay                      | 1/256        |
- Volcanics**
- Cbn = Carbonaceous    H = Hematite    S = Sulphide    Peg = Pegmatite
- Late Volcanics**
- LV -1 or oIB = massive olivine Basalt and related dykes and sills, may be vesicular
- 2 or Pum = Pumice
- 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

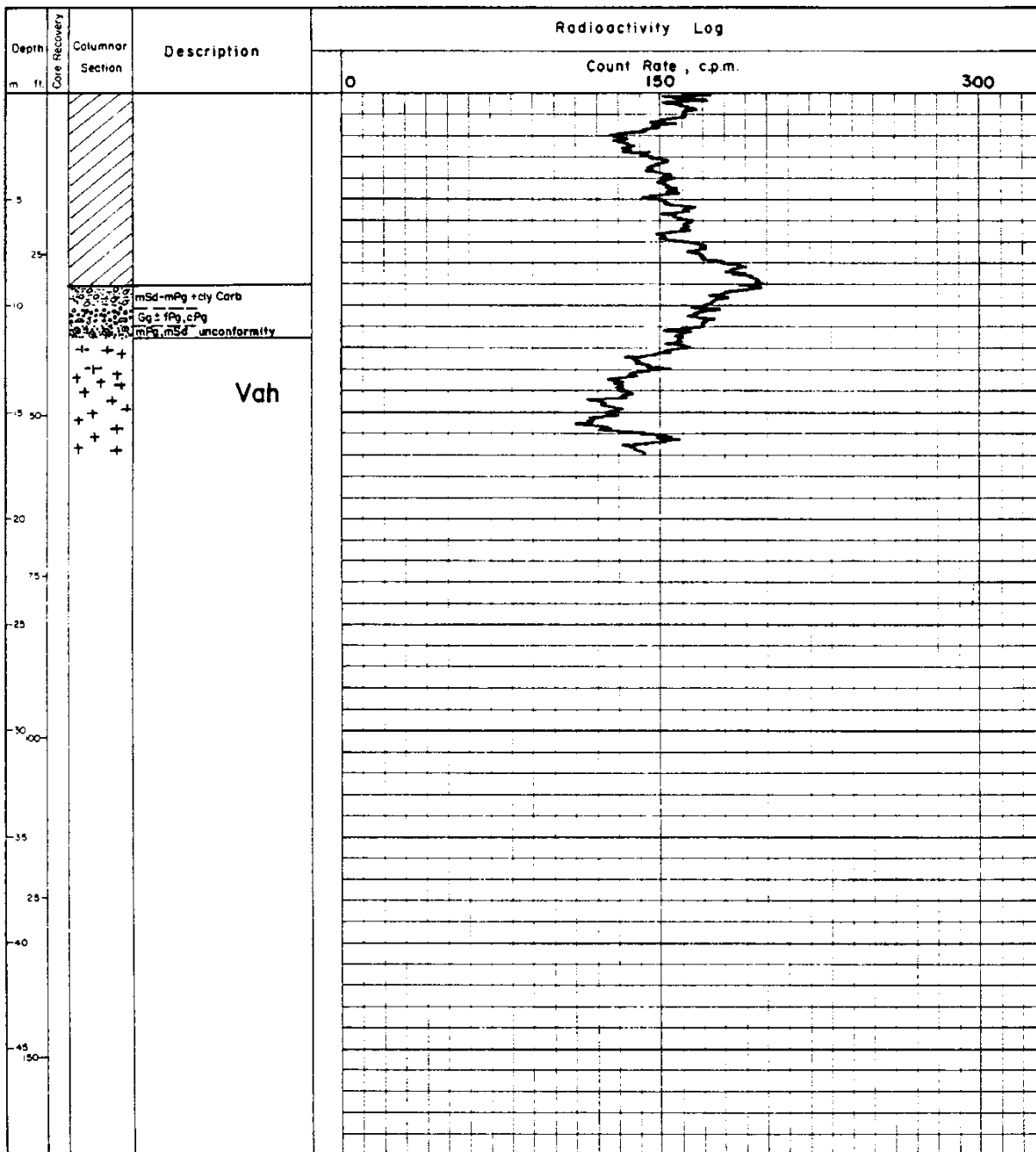
113

Method : D.D.  
 Hole No : CUP-130  
 Location : DONEN 303  
 Probe Depth : 17.0 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :

Detector : Geiger GP27 U  
 Monitor : TCS 603 R  
 Background : 130 cpm  
 Time Constant : 10 Sec.

Date : JUNE 12, 1979  
 Logged & Probed  
 by : K. YANAGIZAWA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

114

Hole No. : 79-CUP-131  
 Latitude : 5170.36  
 Departure : 588.46  
 Elevation : 1287.0m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 18.6 m

Property : DONEN 303  
 Dip Tests :  
 m.  
 End of hole

Collared : JUNE 4, 1979  
 Completed : JUNE 5, 1979  
 Core Size : N.Q.3  
 Logged by : W. BULMER

Depth m ft	Columnar Section	From & To ASSO	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0 - 6.1				0 - 6.1 Tricone							
6.1 - 12.49		6.1	7-4 +14 Cbn	6.1 - 12.49 poorly sorted granule to coarse pebbly gravel with grey mud/clay matrix							
12.49 - 18.5		12.5	Vah	12.49 - 18.5 Valhalla Granite 12.49-15.39 white biotite granite -spars altered to orange colour							
15.39 - 18.5		15.4		15.39-18.5 broken granite 45° crush zone (fault) at 16.45m							
16.4 - 18.5		16.4									
18.5		18.5									

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, coarsely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay - fine good binder. Silty parton light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**

**CORYELL**  
 Coy fine to medium grained dark reddish monzonite quartz syenite high background radiation

**VALHALLA**  
 Vah medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or gneiss

**EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

Post / Pre Volcanism Sediments - Regolith

1 or Pv-1 or Bg	= Boulder gravel	256 - 512
2 or Cg	= Cobble gravel	64 - 256
3 or vPg	= very coarse Pebble gravel	32 - 64
4 or cPg	= coarse Pebble gravel	16 - 32
5 or mPg	= medium Pebble gravel	8 - 16
6 or fPg	= fine Pebble gravel	4 - 8
7 or Gg	= Granite gravel	2 - 4
8 or vSd	= very coarse Sand	1 - 2
9 or cSd	= coarse Sand	1/2 - 1
10 or mSd	= medium Sand	1/4 - 1/2
11 or fSd	= fine Sand	1/8 - 1/4
12 or vSt	= very fine Sand	1/16 - 1/8
13 or St	= Silt	1/256 - 1/4
14 or cl	= clay	1/256

Cbn = Carbonaceous    Ht = Hematite    S = Sulphide    Peg = Pegmatite

Late Volcanics

LV -1 or oB	= massive olivine basalt and related dykes and sills, may be vesicular
-2 or Pum	= Pumice
-3 or TS	= Tuffaceous Sediments

# LOG AND PROBE SHEET

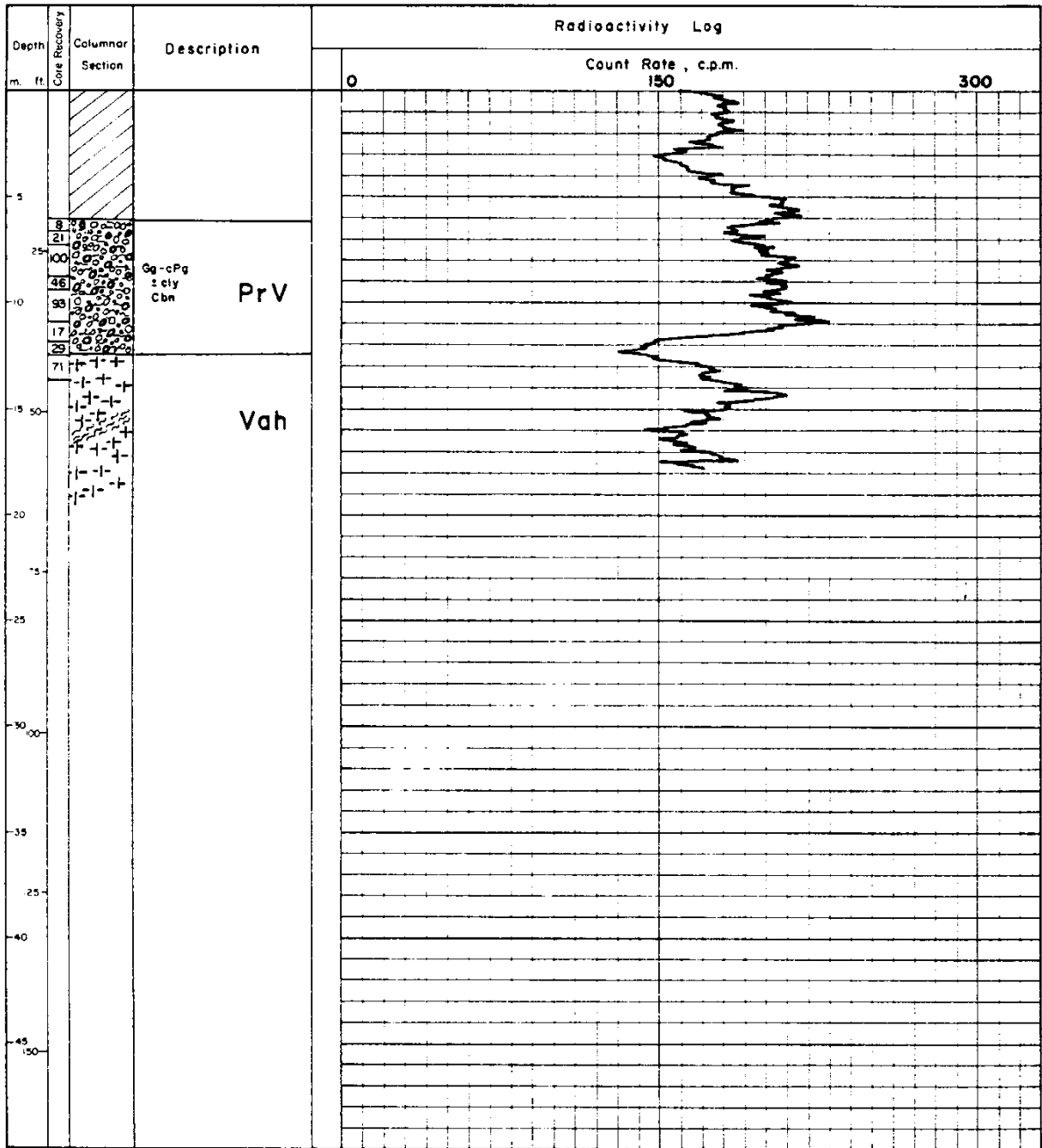
115

Method : D.D.  
 Hole N<sup>o</sup> : CUP-131  
 Location : DONEN 303  
 Probe Depth : 17.8 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 90 cpm  
 Time Constant : 10 Sec.

Date : JUNE 12, 1979  
 Logged & Probed by : K. YANAGIZAWA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

116

Hole No. : 79-CUP-132  
 Latitude : 5177.58  
 Departure : 706.64  
 Elevation : 1302.6 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 42.1 m

Property : DONEN 303  
 Dip Tests :  
 m.  
 End of hole

Collared : JUNE 8, 1979  
 Completed : JUNE 9, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m ft	Columnar Section	From & To ASSAY	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0 - 9.1				Tricone							
9.14											
9.1 - 23.46			6-2	poorly sorted fine pebble to cobble gravel with brown mud matrix-much matrix washed out							
23.46 - 26.21			PoV 7-4	poorly sorted granule to coarse pebble gravel-has few cobbles-brown sand matrix							
26.21 - 29.26			5	medium pebble gravel with much brown matrix washed out							
29.26 - 30.78			7-2 PvV unconformity	poorly sorted granule to cobble gravel-coarse to fine sand matrix contains grey mud							
30.78 - 42.06			Vah	broken white biotite Valhalla granite-spars altered to orange colour-soapstone on fracture planes-badly fractured							

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, clayey bound
- LATE VOLCANICS**  
 dylike basalt massive, vesicular or as thin sills, may be associated with Pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
 generally grey in colour matrix clay-like good binder. Silty portion light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES (increasing age)**
- CORYELL**  
 fine to medium grained dark reddish monzonite quartz syenite high background radiation
- VALHALLA**  
 medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
 moderate to strongly foliated grey biotite hornblende quartz diorite or granodiorite
- EARLY VOLCANICS**  
 fine grained chloritic greenstone-generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (+ Regolith)
- 1 or Bg = Boulder gravel
  - 2 or Tg = Cobble gravel
  - 3 or vPg = very coarse Pebble gravel
  - 4 or cPg = coarse Pebble gravel
  - 5 or mPg = medium Pebble gravel
  - 6 or fPg = fine Pebble gravel
  - 7 or Gg = Granule gravel
  - 8 or vcSd = very coarse Sand
  - 9 or cSd = coarse Sand
  - 10 or mSd = medium Sand
  - 11 or fSd = fine Sand
  - 12 or vSd = very fine Sand
  - 13 or St = Silt
  - 14 or cl = clay
- 256 - 256 mm  
 64 - 64  
 32 - 32  
 8 - 8  
 4 - 4  
 2 - 2  
 2 - 1  
 4 - 2  
 8 - 4  
 16 - 8  
 256 - 1/4  
 756
- Cbn = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite
- Late Volcanics**
- 1 or aB = massive dylike Basalt and related dikes and sills, may be vesicular
  - 2 or Pum = Pumice
  - 3 or TS = Tuffaceous Sediments



# LOG AND PROBE SHEET

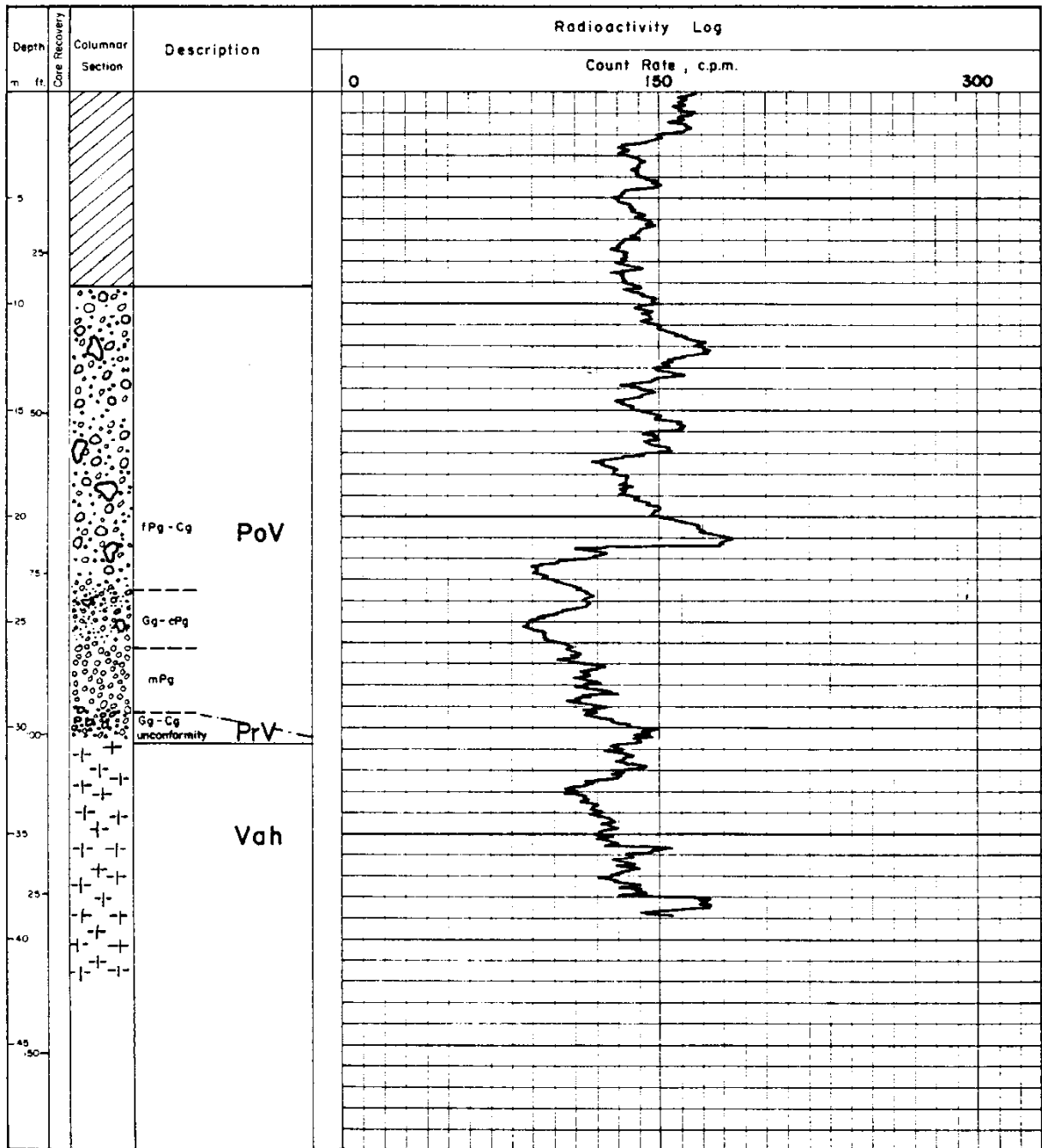
117

Method : D.D.  
 Hole N° : CUP-132  
 Location : DONEN 303  
 Probe Depth : 38.9 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :

Detector : Geiger GP 27 U  
 Monitor : TCS 603 R  
 Background : 70 cpm  
 Time Constant : 10 Sec.

Date : JUNE 12, 1979  
 Logged & Probed  
 by : K. YANAGIZAWA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

118

Hole No. : 79-CUP-133  
 Latitude : 5186.28  
 Departure : 811.01  
 Elevation : 1312.9m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 64.0 m

Property : DONEN 303  
 Dip Tests :  
 m.  
 End of hole

Collared : JUNE 9, 1979  
 Completed : JUNE 11, 1979  
 Core Size : N.Q. 3  
 Logged by : M. McDONALD  
 Checked by : W. BULMER

Depth m, ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
0 - 9.1				0 - 9.1 casing-tricone								
9.1 - 27.7		9.1	9-2 PoV	9.1 - 27.7 assorted pebbles and cobbles matrix washed out								
27.7 - 29.59		27.7		27.7 - 29.59 assorted pebbles and cobbles with minor amounts of brown coarse sand/mud								
29.59 - 33.14		29.59	Nel / EV	29.59 - 64.0 gneissic mixture of Nelson granodiorite and Anarchist greenstone-Migmatite quartz and hematite veining present								
33.14 - 44.42		33.14	EV	33.14-44.42 anarchrist greenstone with quartz veins & hematite veins-also occasional pink granite clasts								
44.42 - 48.73		44.42	Nel / EV	44.42-64.0 migmatite as in 29.59-33.14								

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, coarsely bound
- LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay-like, good binder. Silty parting light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )**  
**CORYELL**  
 fine to medium grained dark reddish monzonite quartz syenite. High background radiation
- VALHALLA**  
 medium to coarse grained white porphyritic biotite granite large orthoclase phenocrysts common
- NELSON**  
 moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite
- EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (+ Regolith)  
 (e.g. PoV-1 or Bg) = Boulder gravel 256 mm  
 -2 or Cg = Cobble gravel 64-256  
 -3 or vCPg = very coarse Pebble gravel 32-64  
 -4 or CPg = coarse Pebble gravel 16-32  
 -5 or mPg = medium Pebble gravel 8-16  
 -6 or fPg = fine Pebble gravel 4-8  
 -7 or Gg = Granite gravel 2-4  
 -8 or vCSd = very coarse Sand 1-2  
 -9 or cSd = coarse Sand 1/2-1  
 -10 or mSd = medium Sand 1/4-1/2  
 -11 or fSd = fine Sand 1/8-1/4  
 -12 or vFSd = very fine Sand 1/16-1/8  
 -13 or St = silt 1/256 - 1/64  
 -14 or cl = clay 1/256
- Cbn = Carbonaceous H = Hematite S = Sulphide Pgg = Pegmatite  
 LV Late Volcanics  
 LV -1 or oH = massive olivine Basalt and related dykes and sills, may be vesicular  
 -2 or Pum = Pumice  
 -3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

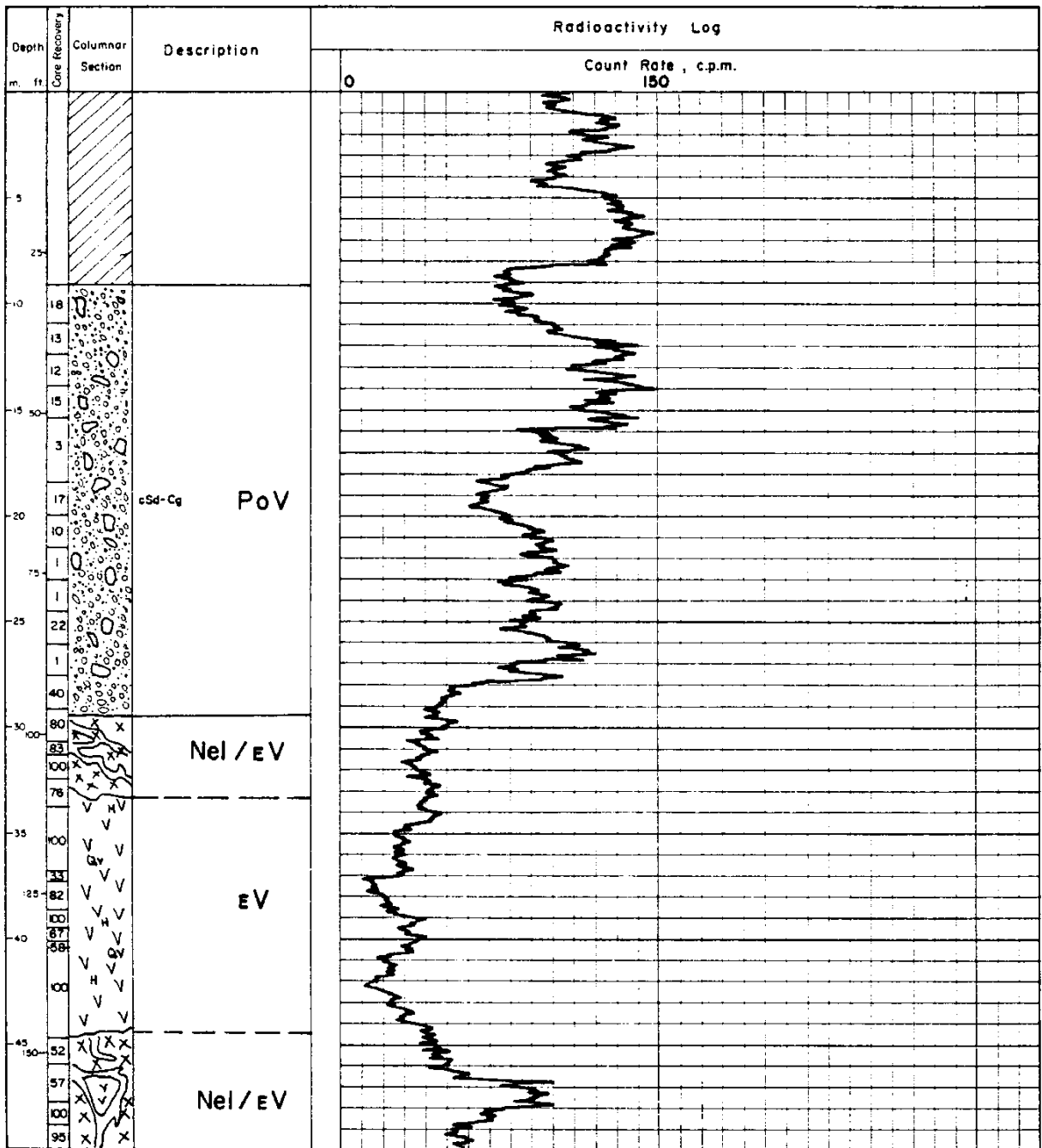
119

Method : **D.D.**  
 Hole N<sup>o</sup> : **CUP-133**  
 Location : **DONEN 303**  
 Probe Depth : **64.0 m**

Hole Angle : **VERTICAL**  
 Core Size : **NQ**  
 Core Recovery :

Detector : **Geiger GP27U**  
 Monitor : **TCS 603 R**  
 Background : **100 cpm**  
 Time Constant : **10 Sec.**

Date : **JUNE 11, 1979**  
 Logged & Probed  
 by : **K. YANAGIZAWA**  
**M. McDONALD**

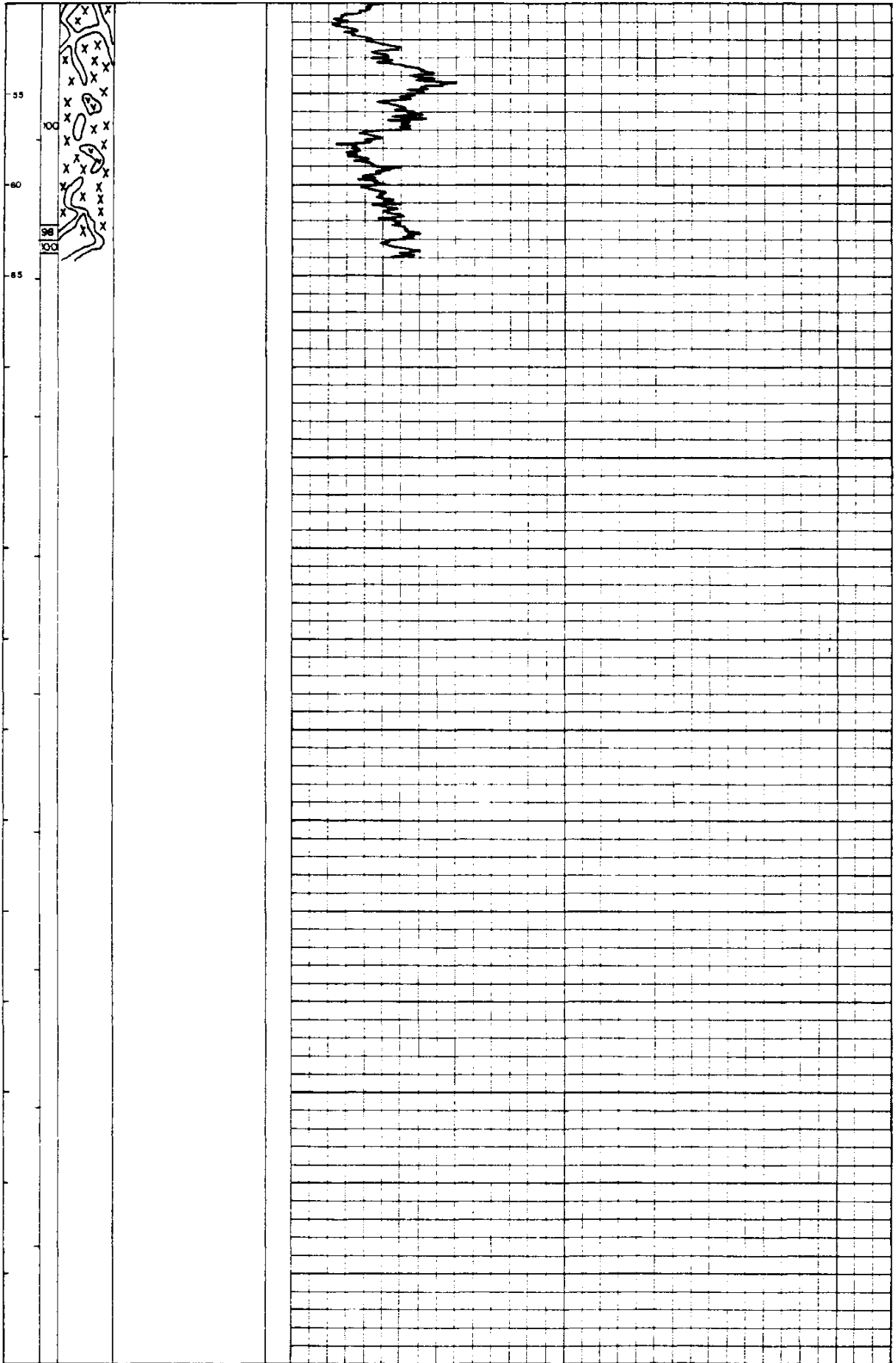




Continuation CUP - 133

0

150



# PNC EXPLORATION (CANADA) CO. LTD.

122

Hole No. : 79-CUP-134  
 Latitude : 5499.56  
 Departure : 1054.94  
 Elevation : 1340.5 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 86.9 m

Property : DONEN 306  
 Dip Tests :  
 m.  
 End of hole

Collared : JUNE 14, 1979  
 Completed : JUNE 16, 1979  
 Core Size : N.Q. 3  
 Logged by : M. McDONALD  
 W. BULMER

Depth m ft	Columnar Section	From B To	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0				0 - 4.8 Tricone							
5		4.8									
25											
10											
15											
20			LV	4.8 - 64.1 olivine basalt							
75											
25											
30											
35											
125											
40											
45											
150											

### EXPLANATION

**POV** POST VOLCANISM SEDIMENTS  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LV** LATE VOLCANICS  
 strombolian massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRV** PRE VOLCANISM SEDIMENTS  
 generally grey in colour, matrix clay - like, good binder. Silty parton light brown in colour, contains carbonaceous material

**Reg** REGALITH LAYER  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (increasing age)**

**CORYELL**  
 Coy fine to medium grained dark reddish monzonite quartz syenite. High background radiation

**VALHALLA**  
 Val medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated gray biotite - hornblende quartz diorite or gneiss

**EARLY VOLCANICS**  
 EV fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**POV or PRV** Post / Pre Volcanism Sediments ( - Regolith )

1 - Pov - 1 or Bg	= Boulder gravel	256 mm
2 or Cg	= Cobble gravel	64 - 256
3 or vPg	= very coarse Pebble gravel	32 - 64
4 or cPg	= coarse Pebble gravel	16 - 32
5 or mPg	= medium Pebble gravel	8 - 16
6 or fPg	= fine Pebble gravel	4 - 8
7 or Gg	= Gravel gravel	2 - 4
8 or vSd	= very coarse Sand	1 - 2
9 or cSd	= coarse Sand	1/2 - 1
10 or mSd	= medium Sand	1/4 - 1/2
11 or fSd	= fine Sand	1/8 - 1/4
12 or vSl	= very fine Sand	1/16 - 1/8
13 or Sl	= Silt	1/256 - 1/16
14 or cl	= clay	1/256

**CBn** = Carbonaceous    **H** = Hematite    **S** = Sulphide    **Peg** = Pegmatite

**LV** Late Volcanics

LV - 1 or eB	= massive olivine Basalt and related dikes and sills, may be vesicular
- 2 or Pum	= Pumice
- 3 or T/S	= Tuffaceous Sediments

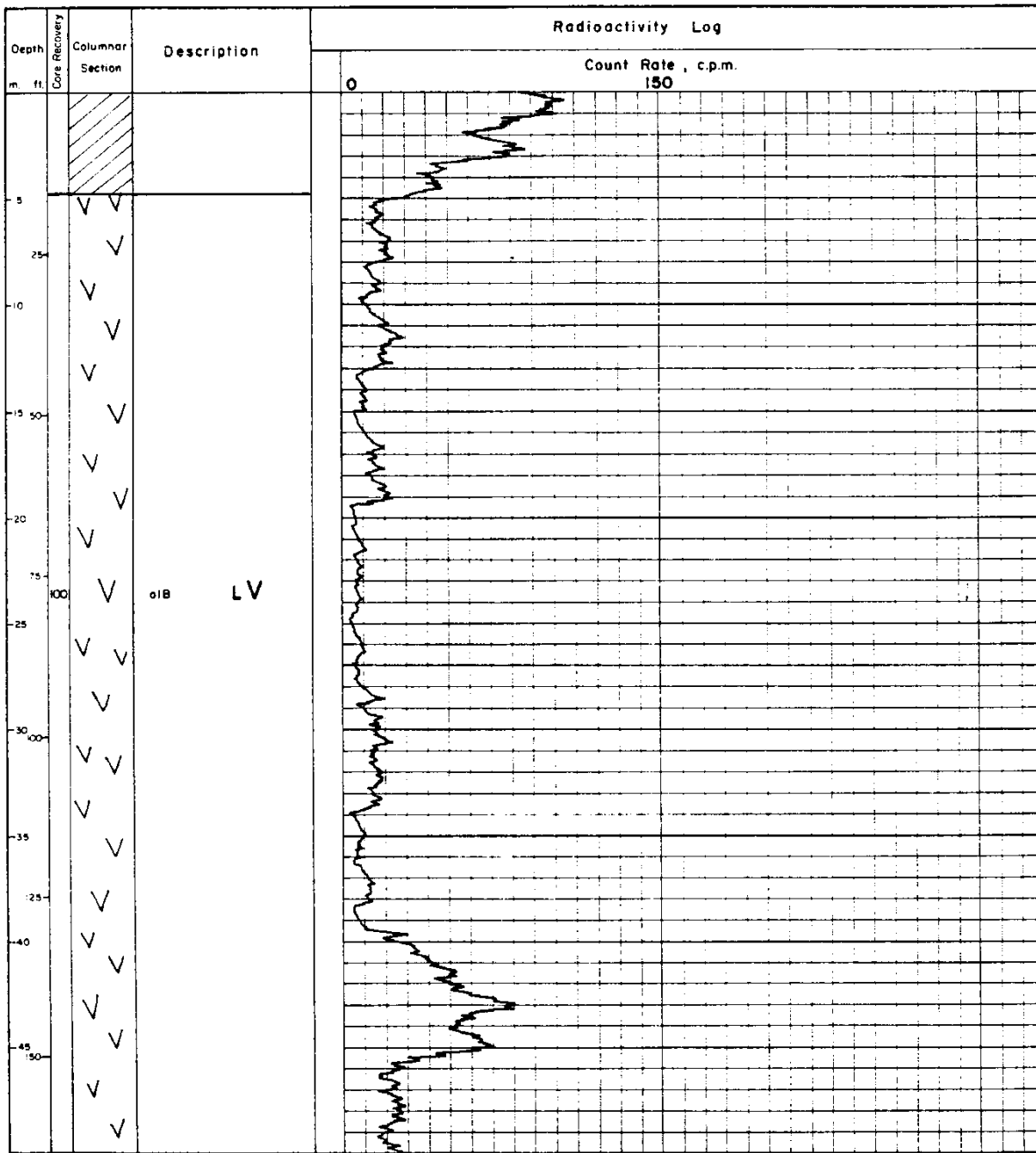
# LOG AND PROBE SHEET

Method : D.D.  
 Hole N<sup>o</sup> : CUP-134  
 Location :  
 Probe Depth : 86.9 m.

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :

Detector : Geiger GP 27 U  
 Monitor : TCS 603 R  
 Background : 70 cpm  
 Time Constant : 10 Sec.

Date : JUNE 16, 1979  
 Logged & Probed  
 by : K. YANAGIZAWA  
 M. McDONALD





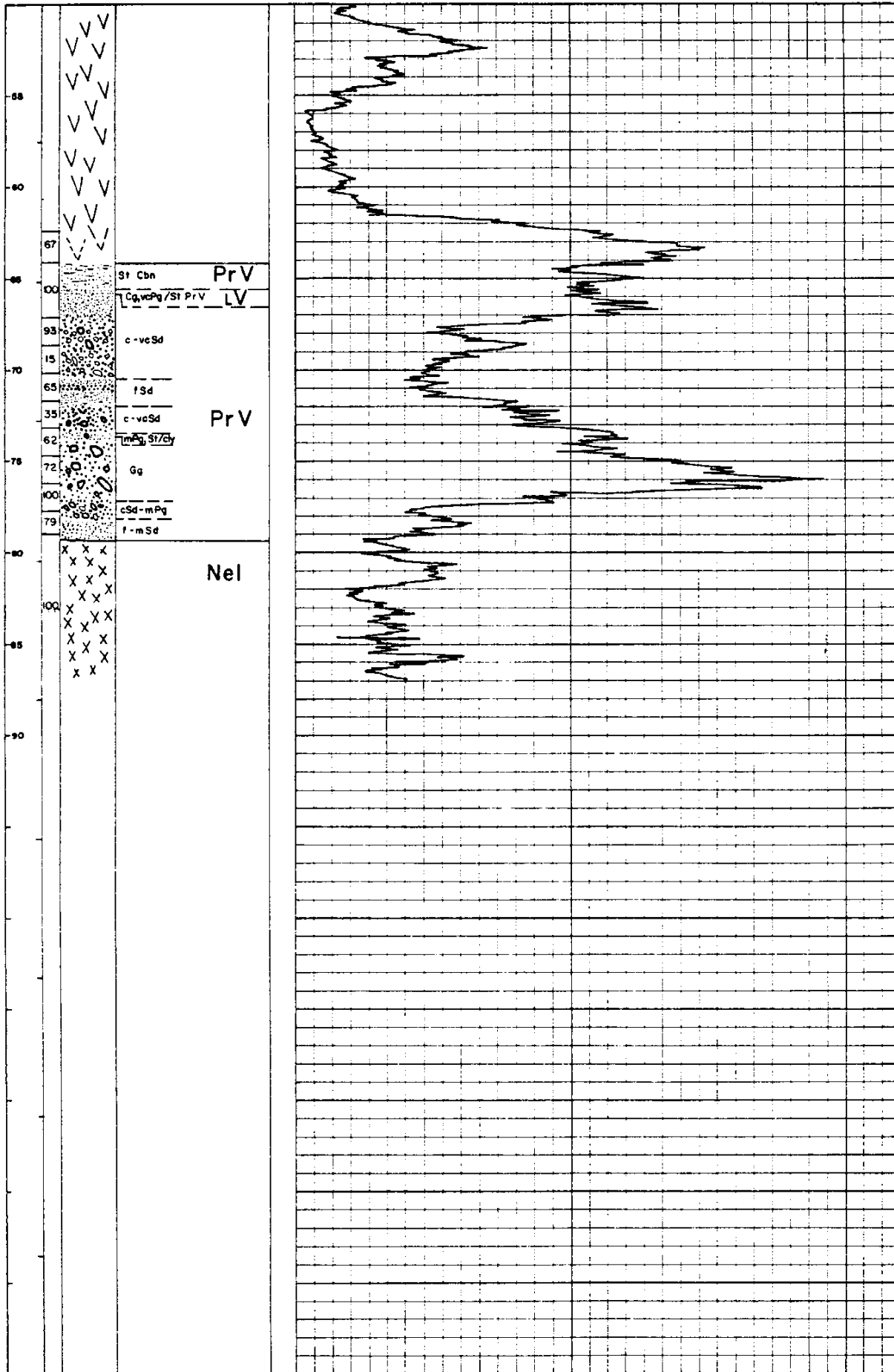


Continuation CUP-134

0

150

300



# PNC EXPLORATION (CANADA) CO. LTD.

126

Hole No. : **79-CUP-135**  
 Latitude : **5181.21**  
 Departure : **914.56**  
 Elevation : **1314.4 m**

Project : **CUP LAKE**  
 Azimuth :  
 Dip : **-90°**  
 Depth : **21.6 m**

Property : **DONEN 303**  
 Dip Tests :  
 m.  
 End of hole

Collared : **JUNE 11, 1979**  
 Completed : **JUNE 12, 1979**  
 Core Size : **N.Q. 3**  
 Logged by : **M. McDONALD**  
**W. BULMER**

Depth m / ft	Columnar Section	From & To ASSAY	Unit	Description	Rock Sample	Sample NR.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0 - 12.1				Tricone							
12.12 - 12.35			PoV 2	coarse brown sand and gravel with assorted pebbles & cobbles							
17.49 - 21.64			Nel	foliated Nelson granodiorite							

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES (increasing age)**  
**TRAYELL**  
 fine to medium grained dark reddish monzonite quartz syenite. High background radiation
- VALMALLA**  
 medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
 moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite
- EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (= Regolith)
- PoV - 1 or Bg = Boulder gravel 256 - m
  - 2 or Gg = Cobble gravel 64 - 256
  - 3 or vcPg = very coarse Pebble gravel 32 - 64
  - 4 or cPg = coarse Pebble gravel 16 - 32
  - 5 or mPg = medium Pebble gravel 8 - 16
  - 6 or fPg = fine Pebble gravel 4 - 8
  - 7 or Gg = Granite gravel 2 - 4
  - 8 or vcSd = very coarse Sand 1 - 2
  - 9 or cSd = coarse Sand 1/2 - 1
  - 10 or mSd = medium Sand 1/4 - 1/2
  - 11 or fSd = fine Sand 1/8 - 1/4
  - 12 or vSd = very fine Sand 1/16 - 1/8
  - 13 or St = Silt 1/256 - 1/16
  - 14 or cl = clay 1/256
- Cbn = Carbonaceous H = Hematite S = Sulphide Pgg = Pyromorphite
- Late Volcanics**
- LV - 1 or oB = massive olivine Basalt and related dykes and sills, may be vesicular
  - 2 or Pum = Pumice
  - 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

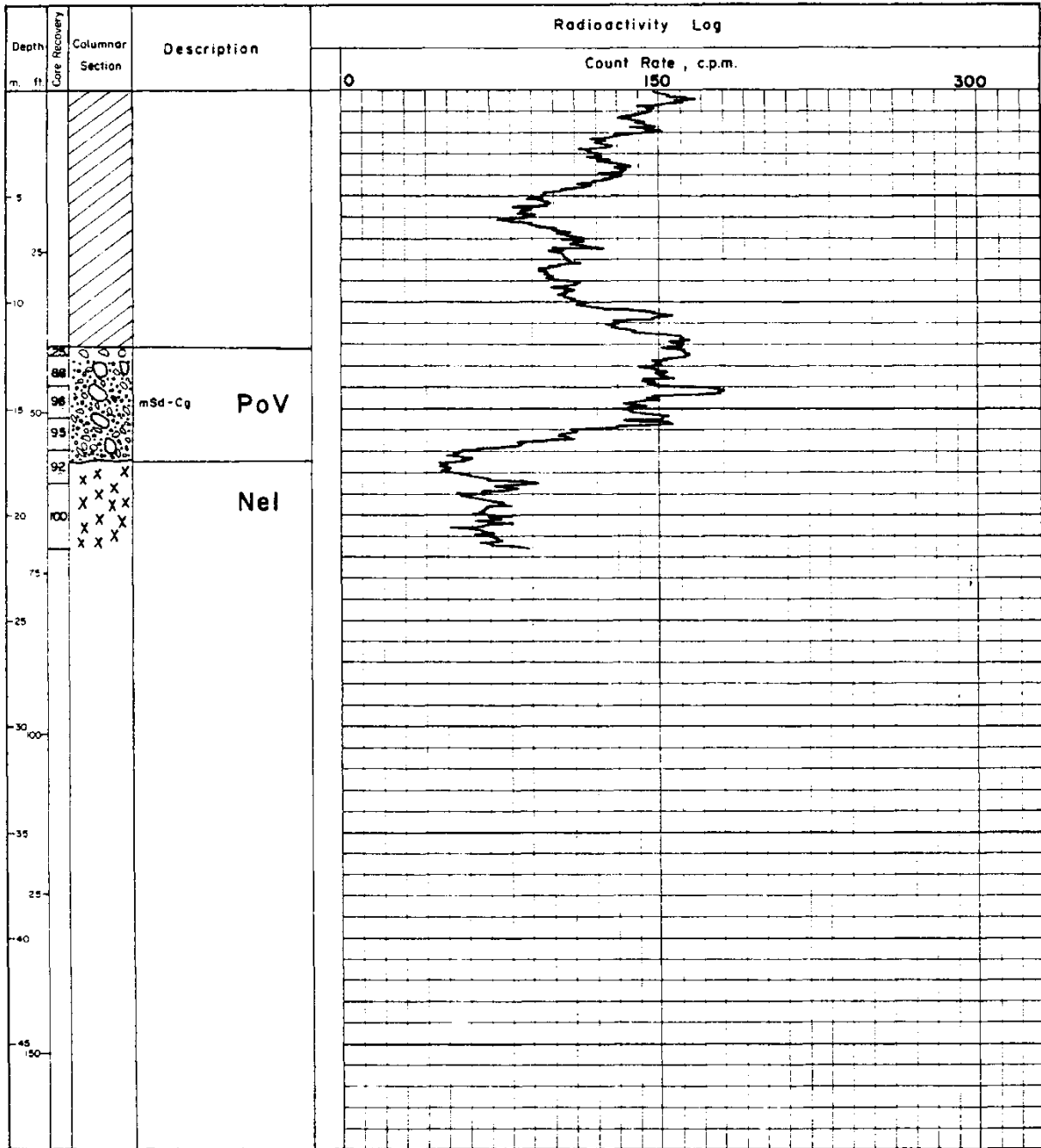
127

Method : D.D.  
 Hole N<sup>o</sup> : CUP-135  
 Location : DONEN 303  
 Probe Depth : 21.6 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 70 cpm  
 Time Constant : 10 Sec.

Date : JUNE 12, 1979  
 Logged & Probed  
 by : K. YANAGIZAWA  
M. McDONALD



# PNC EXPLORATION (CANADA) CO. LTD.

128

Hole No. : 79-CUP-146  
 Latitude : 5786.35  
 Departure : 1248.20  
 Elevation : 1330.1 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 39.0 m

Property : DONEN 306  
 Dip Tests :  
 m.  
 End of hole

Collared : JUNE 26, 1979  
 Completed : JUNE 26, 1979  
 Core Size : N.Q. 3  
 Logged by : M. McDONALD  
 W. BULMER

Depth m. ft.	Columnar Section	From B To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0 - 12.19	(Hatched pattern)			Tricone							
12.19 - 14.02	(Pebbles pattern)	12.19 14.02	10-2 PoV	mud, assorted pebbles and small cobbles-brown colour overburden							
14.02 - 20.11	(V pattern)		LV	olivine basalt							
20.11 - 21.64	(G pattern)	20.11 21.64	14(S)	grey mud few basalt pebbles and cobbles							
21.64 - 22.73	(V pattern)	21.64 22.73	13 PrV	brown carbonaceous silt							
22.73 - 23.19	(V pattern)	22.73 23.19	13 Cbn	black baked silt formaly							
23.19 - 24.68	(V pattern)		LV	olivine basalt							
24.68 - 26.21	(V pattern)	24.68 26.21	unknown	unknown - lost core							
26.21 - 28.65	(V pattern)	26.21 28.65	LV	olivine basalt							
28.65 - 30.17	(V pattern)	28.65 30.17	unknown	unknown-lost core- little grey mud recovered							
30.17 - 39.01	(X pattern)	30.17 39.01	Nel / eV	badly altered epidotized granite with hematite stringers & clots disseminated throughout. Green mafic salt and pebbler rock at 30.17-30.78 migmatite/gneiss including anarhist pieces							

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin silt, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally gray in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**  
**CORYELL**  
 Coy fine to medium grained dark reddish monzonite quartz syenite high background radiation

**VALHALLA**  
 Val medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 eV fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (- Regolith)**

10 PoV or Bg	= Boulder gravel	256 mm
2 or Cg	= Cobble gravel	64 - 256
3 or vcPg	= very coarse Pebble gravel	32 - 64
4 or cPg	= coarse Pebble gravel	16 - 32
5 or mPg	= medium Pebble gravel	8 - 16
6 or fPg	= fine Pebble gravel	4 - 8
7 or Gg	= Gravel gravel	2 - 4
8 or vcSd	= very coarse Sand	1 - 2
9 or cSd	= coarse Sand	1/2 - 1
10 or mSd	= medium Sand	1/8 - 1/2
11 or fSd	= fine Sand	1/16 - 1/8
12 or vSd	= very fine Sand	1/64 - 1/16
13 or St	= Silt	1/256 - 1/64
14 or cl	= clay	1/256

**Other Symbols:**  
 Cbn = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite

**Late Volcanics**

LV - 1 or oIB	= massive olivine Basalt and related dykes and sills, may be vesicular
2 or Pum	= Pumice
3 or TFS	= Tuffaceous Sediments

# LOG AND PROBE SHEET

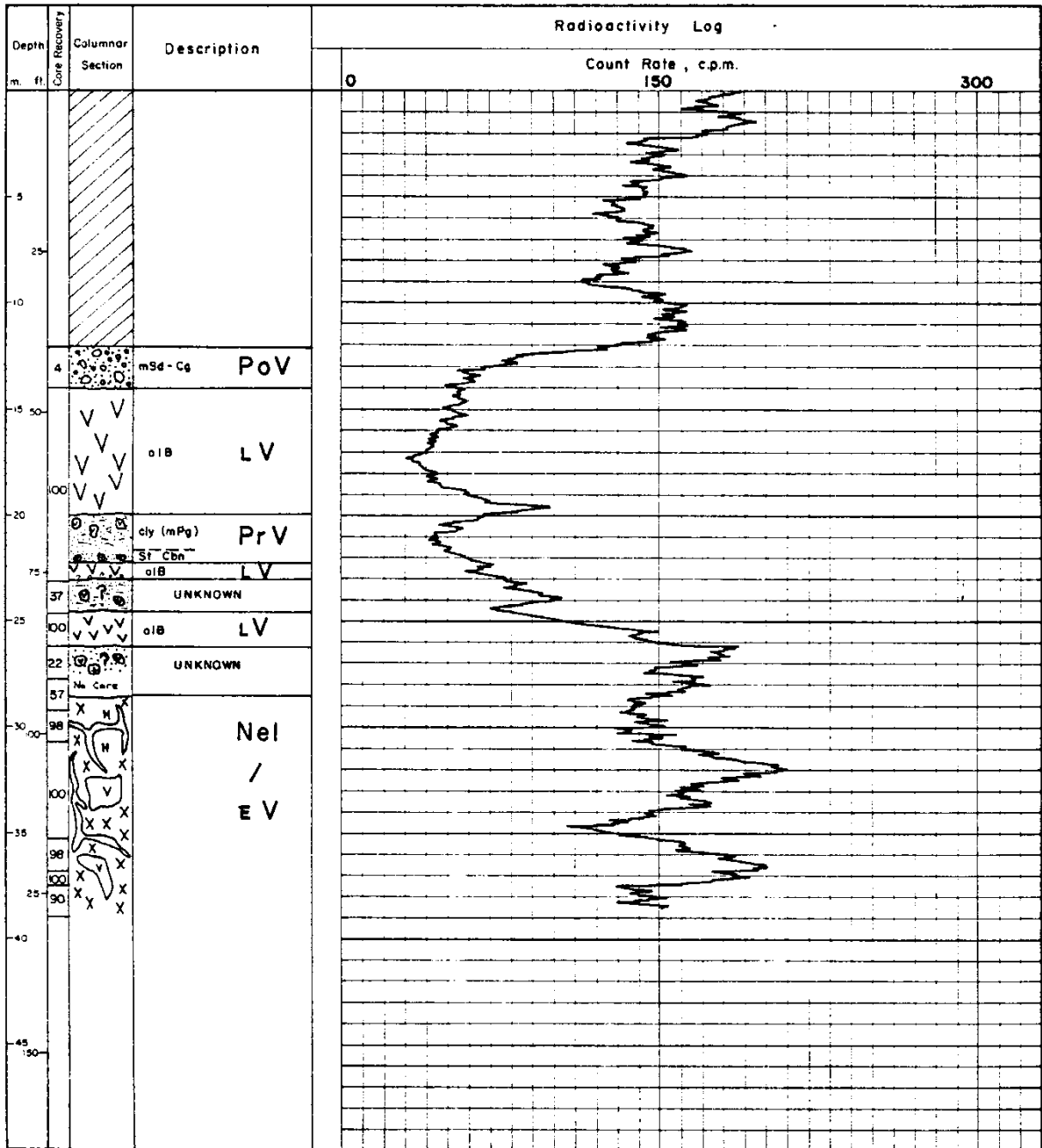
129

Method : D.D.  
 Hole N<sup>o</sup> : CUP-146  
 Location : DONEN 306  
 Probe Depth : 38.5 m.

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 95 cpm  
 Time Constant : 10 Sec.

Date : JUNE 28, 1979  
 Logged & Probed  
 by : N. MEGURO K. YAMAGIZAWA  
 M. McDONALD



# PNC EXPLORATION (CANADA) CO. LTD.

130

Hole No. : 79-CUP-147  
 Latitude : 5777.52  
 Departure : 1458.99  
 Elevation : 1332.1 m.

Project : CUP LAKE  
 Azimuth :  
 Dip :  
 Depth : 34.1 m.

Property :  
 Dip Tests :  
 m.  
 End of hole

Collared :  
 Completed :  
 Core Size : NQ  
 Logged by : YANAGIZAWA

Depth m. ft	Columnar Section	From B To	Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
											U <sub>3</sub> O <sub>8</sub>	Th	
0 - 7.3					Casing								
7.3 - 22.8				PrV	gray color mud matrix with granite pebble gravel, basalt pebble gravel granite, basalt, prophyrite cobble gravel large amount of quartz, basalt and granite granules								
22.8 - 25.6					dark brown color silt, with organic material								
25.6 - 26.1					very coarse sand, dark brown color with granite pebble gravel								
26.1 - 26.8					Regolith, green-gray color								
26.1 - 32.3				Nel	Nelson granite with calcite vein								
32.3 - 32.8					green color clay								
32.8 - 34.1					Nelson granite with calcite vein								

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 PoV recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 LV olivine basalt masses, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 PrV generally gray in colour, matrix clay-like, good binder. Silty parting light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 Reg may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (increasing age)**  
 CORYELL  
 Coy fine to medium grained dark reddish magnetite quartz syenite. High background radiation

**VALHALLA**  
 Val medium to coarse grained white prophyrite biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated gray biotite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 EV fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

1.0 PoV - 1 or Bg	= Boulder gravel	256 - mm
-2 or Cg	= Cobble gravel	64 - 256
-3 or vCPg	= very coarse Pebble gravel	32 - 64
-4 or cPg	= coarse Pebble gravel	16 - 32
-5 or mPg	= medium Pebble gravel	8 - 16
-6 or fPg	= fine Pebble gravel	4 - 8
-7 or Gg	= Granite gravel	2 - 4
-8 or vCSd	= very coarse Sand	1 - 2
-9 or cSd	= coarse Sand	1/2 - 1
-10 or mSd	= medium Sand	1/4 - 1/2
-11 or fSd	= fine Sand	1/8 - 1/4
-12 or vSd	= very fine Sand	1/16 - 1/8
-13 or St	= Silt	1/256 - 1/16
-14 or cl	= clay	1/256

**CBn = Carbonaceous H = Hematite S = Sulphide Pg = Pyromrite**

**Late Volcanics**

LV - 1 or oIB	= massive olivine basalt and related dykes and sills, may be vesicular
-2 or Pum	= Pumice
-3 or T/S	= Tuffaceous Sediments



# PNC EXPLORATION (CANADA) CO. LTD.

132

Hole No. : 79-CUP-148	Project : CUP LAKE	Property :	Collared :
Latitude : 5783.32	Azimuth :	Dip Tests :	Completed :
Departure : 1640.71	Dip : -90°	m.	Core Size : NQ
Elevation : 1343.2m	Depth : 65.9 m	End of hole	Logged by : K. YANAGIZAWA

Depth m. ft	Columnar Section	From To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay			
										U <sub>3</sub> O <sub>8</sub>	Th		
	V V	1.2		0 - 1.2 Casing									
5	V V		LV	1.2 - 51.45 Basalt									
25	V V												
40	V V												
50	V V												
75	V V												
100	V V												
125	V V												
150	V V												

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with auriferous and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
 generally gray in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )**
- CORYELL**  
 Coy fine to medium grained dark reddish monzonite quartz syenite. High background radiation
- VALHALLA**  
 Val medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz orthite or granodiorite
- EARLY VOLCANICS**  
 Ev fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments ( + Regolith )**
- PoV or PrV  
 1 or Bg = Boulder gravel 256 mm  
 2 or Cg = Cobble gravel 64 - 256  
 3 or vPg = very coarse Pebble gravel 32 - 64  
 4 or cPg = coarse Pebble gravel 16 - 32  
 5 or mPg = medium Pebble gravel 8 - 16  
 6 or fPg = fine Pebble gravel 4 - 8  
 7 or Gg = Gravel gravel 2 - 4  
 8 or vSd = very coarse Sand 1 - 2  
 9 or cSd = coarse Sand 1/2 - 1  
 10 or mSd = medium Sand 1/4 - 1/2  
 11 or fSd = fine Sand 1/8 - 1/4  
 12 or vFSd = very fine Sand 1/16 - 1/8  
 13 or St = Silt 1/256 - 1/64  
 14 or cl = clay 1/256
- Minerals**  
 Chn = Carbonaceous H = Hematite S = Sulphide Pgg = Pyrrhotite
- Late Volcanics**  
 LV - 1 or oib = massive olivine Basalt and related dykes and sills, may be vesicular  
 2 or Pum = Pumice  
 3 or TFS = Tuffaceous Sediments



# LOG AND PROBE SHEET

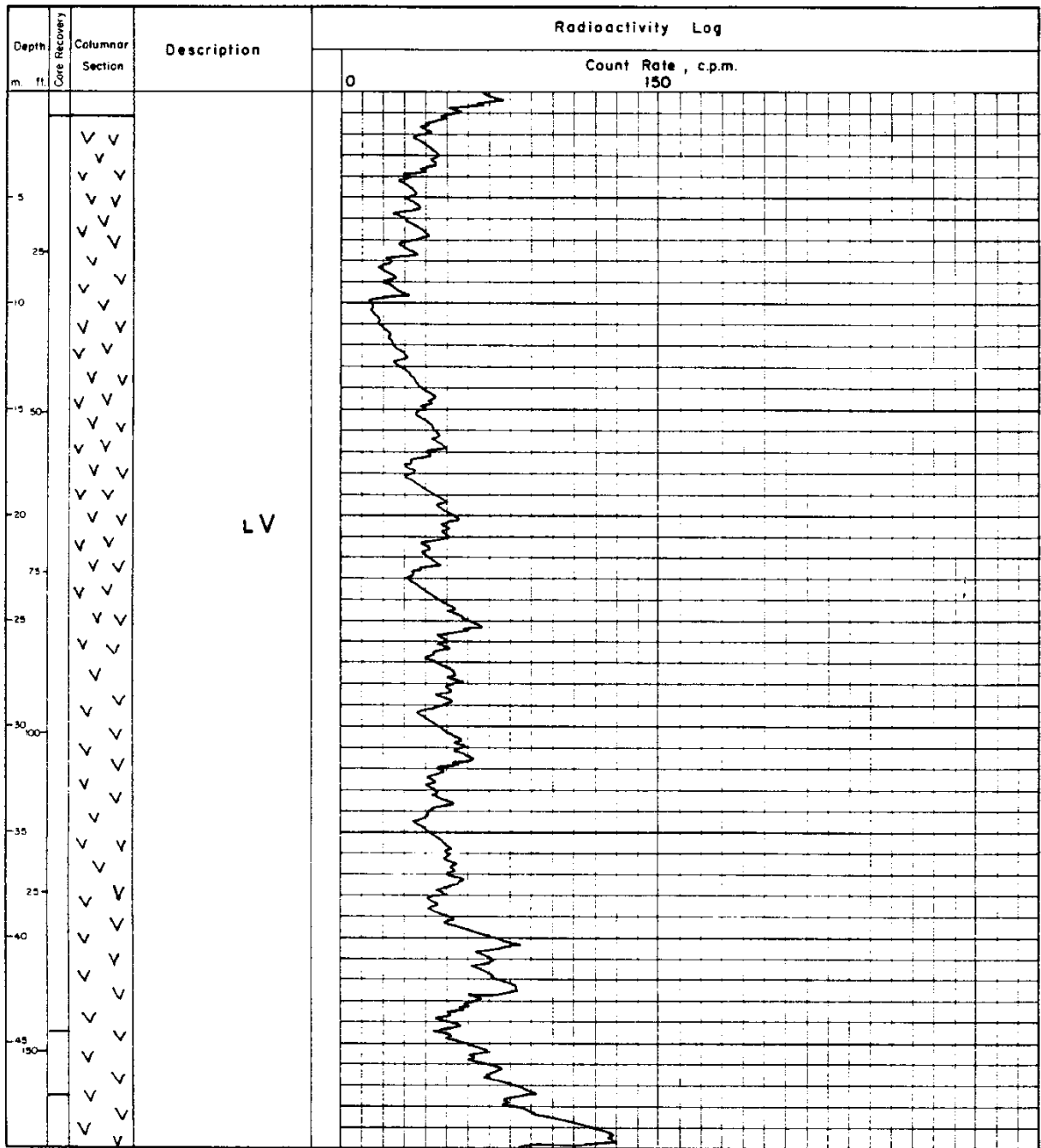
133

Method : D.D.  
Hole N° : CUP-148  
Location :  
Probe Depth : 65.9 m.

Hole Angle : VERTICAL  
Core Size : NQ  
Core Recovery :

Detector : Geiger GP27 U  
Monitor : TCS 603 R  
Background : 100 cpm  
Time Constant : 10 Sec.

Date : JULY 24, 1979  
Logged & Probed  
by : K. YANAGIZAWA



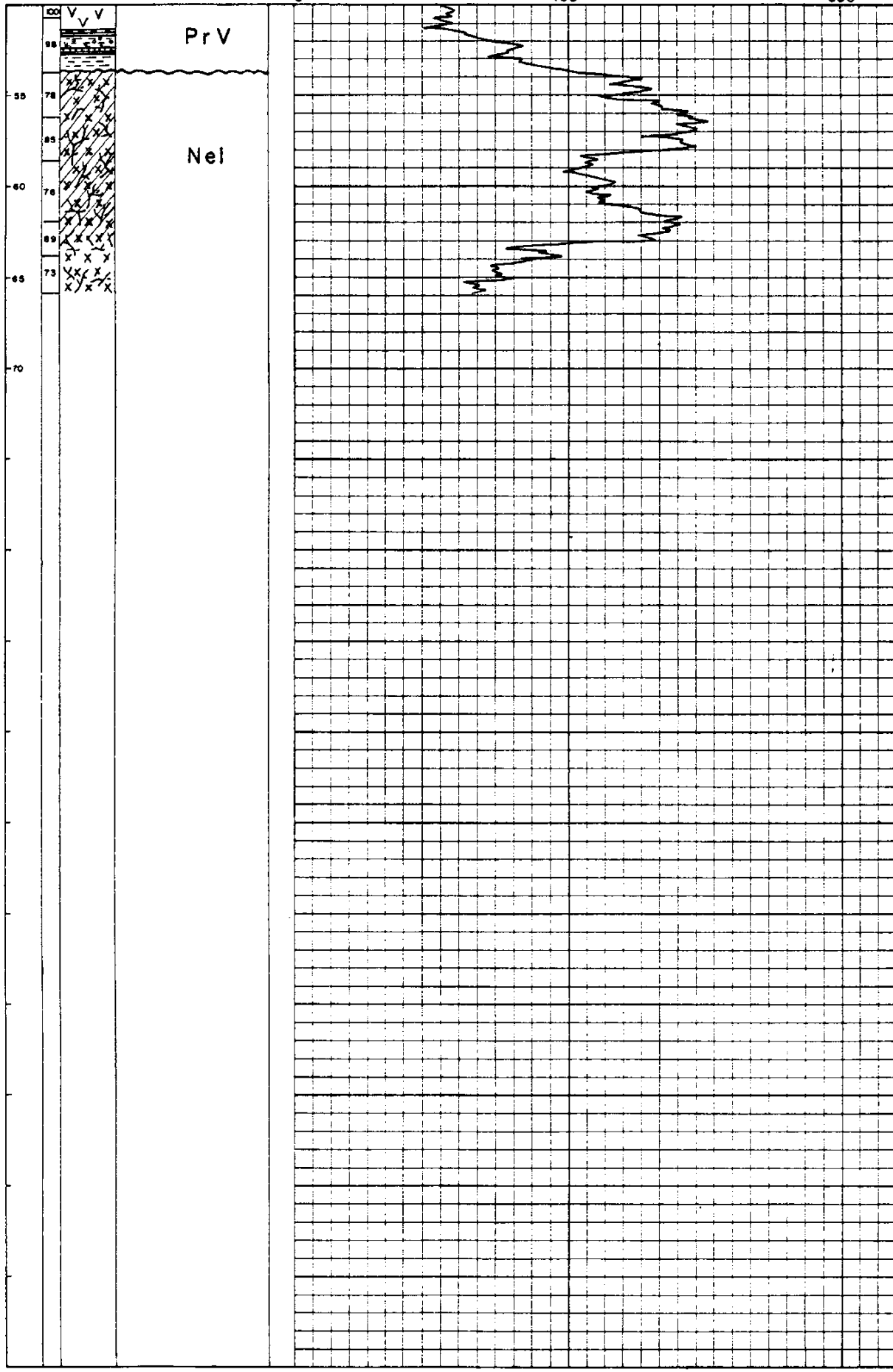


Continuation CUP 148

0

150

300



# PNC EXPLORATION (CANADA) CO. LTD.

136

Hole No. : 79-CUP-149	Project : CUP LAKE	Property :	Collared :
Latitude : 5779.34	Azimuth :	Dip Tests :	Completed :
Departure : 1780.24	Dip :	m.	Core Size : NQ
Elevation : 1352.0 m	Depth : 77.4 m.	End of hole	Logged by : MEGURO YANAGIZAWA

Depth m. ft.	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
		1.2		0 - 1.2 Casing								
3	V											
25	V											
10	V											
5	V											
5.50	V											
20	V											
75	V											
25	V		LV	1.2 - 70.95 basalt								
20	V											
35	V											
125	V											
40	V											
45	V											
150	V											

### EXPLANATION

- POV** POST VOLCANISM SEDIMENTS  
recent sand and gravel, generally brown in colour, matrix sandy, loosely bound
- LV** LATE VOLCANICS  
olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- Pr-V** PRE VOLCANISM SEDIMENTS  
generally gray in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material
- Reg** REGALITH LAYER  
may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )**
- CORVELL**  
Coy fine to medium grained dark reddish magnetite quartz syenite high background radiation
- VALHALLA**  
Vah medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
Nel moderate to strongly foliated gray biotite - hornblende quartz diorite or gneiss
- EV** EARLY VOLCANICS  
fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (+ Regolith)**
- |  |              |
|--|--------------|
| 1a Pov - 1 or Bg = Boulder gravel      | 255 - mm     |
| - 2 or Cg = Cobble gravel              | 64 - 254     |
| - 3 or vPg = very coarse Pebble gravel | 32 - 64      |
| - 4 or cPg = coarse Pebble gravel      | 16 - 32      |
| - 5 or mPg = medium Pebble gravel      | 8 - 16       |
| - 6 or fPg = fine Pebble gravel        | 4 - 8        |
| - 7 or Gg = Gravel gravel              | 2 - 4        |
| - 8 or vSd = very coarse Sand          | 1 - 2        |
| - 9 or cSd = coarse Sand               | 1/2 - 1      |
| - 10 or mSd = medium Sand              | 1/8 - 1/2    |
| - 11 or fSd = fine Sand                | 1/16 - 1/8   |
| - 12 or vFsd = very fine Sand          | 1/32 - 1/16  |
| - 13 or Ss = Silt                      | 1/256 - 1/16 |
| - 14 or cl = clay                      | 1/256        |
- Minerals:** Cbn = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite
- LV Late Volcanics**
- |  |
|--|
| LV - 1 or oib = massive olivine Basalt and related dykes and sills, may be vesicular |
| - 2 or Pum = Pumice  |
| - 3 or TFS = Tuffaceous Sediments  |

# LOG AND PROBE SHEET

137

Method : D.D.  
 Hole N° : CUP 149  
 Location :  
 Probe Depth : 77.4 m.

Hole Angle : VERTICAL  
 Core Size : NQ 3  
 Core Recovery : TOTAL 98%

Detector : Geiger GP 27 U  
 Monitor : TCS - 603 R  
 Background : 80 cpm  
 Time Constant : 10 Sec.

Date : JULY 26, 1979  
 Logged & Probed  
 by : MEGURO  
 YANAGIZAWA

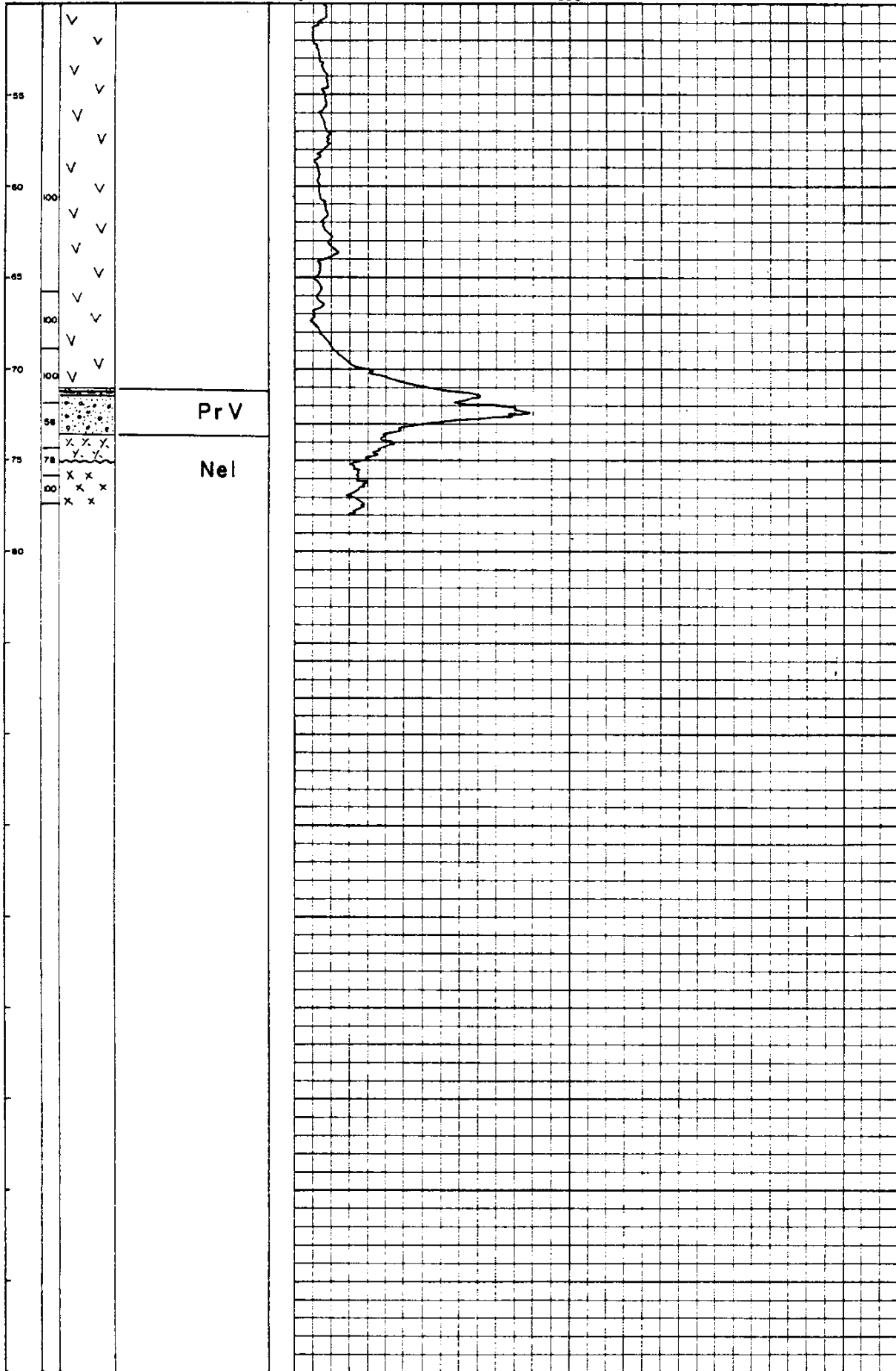
Depth m. ft.	Core Recovery	Columnar Section	Description	Radioactivity Log									
				Count Rate, c.p.m. 500									
			LV	0									
		✓											
		✓											
		✓											
5		✓											
		✓											
25		✓											
		✓											
10		✓											
		✓											
		✓											
15		✓											
		✓											
50		✓											
		✓											
20	100	✓											
		✓											
75		✓											
		✓											
25		✓											
		✓											
30	100	✓											
		✓											
35		✓											
		✓											
25		✓											
		✓											
40		✓											
		✓											
45		✓											
		✓											
50		✓											
		✓											
		✓											



Continuation CUP 149

0

500



# PNC EXPLORATION (CANADA) CO. LTD.

Hole No. : **79-CUP-152**  
 Latitude : **5588.63**  
 Departure : **1218.27**  
 Elevation : **1338.7 m**

Project : **CUP LAKE**  
 Azimuth :  
 Dip : **-90°**  
 Depth : **73.5 m**

Property : **DONEN 306**  
 Dip Tests :  
 m.  
 End of hole

Collared : **JUNE 26, 1979**  
 Completed : **JUNE 28, 1979**  
 Core Size : **NQ 3**  
 Logged by : **M. McDONALD**  
**W. BULMER**

Depth m ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0 - 7.92		7.92		Tricone							
7.92 - 43.35		30.78	LV	olivine basalt							
43.35 - 45.11		13		baked black siltstone carbonaceous contains some pumice							
45.11 - 45.68		13		very weathered basalt pebbles and silt							
45.68 - 46.86		13	LV	olivine basalt							
46.86 - 47.24		13		baked black carbonaceous siltstone plus green volcanic ash							

**EXPLANATION**

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or fine thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay - fine, good binder. Silty partings light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**

**CORYELL**  
 fine to medium grained dark reddish monzonite quartz syenite. High background radiation

**VALHALLA**  
 medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

**LEGEND**

**PgV or Pv** Post / Pre Volcanism Sediments (+ Regolith)

1 or PvV - 1 or Bg = Boulder gravel 256 mm  
 2 or CvG = Cobble gravel 64-256  
 3 or VcPg = very coarse Pebble gravel 32-64  
 4 or CpG = coarse Pebble gravel 16-32  
 5 or Mpg = medium Pebble gravel 8-16  
 6 or Fpg = fine Pebble gravel 4-8  
 7 or Gg = Gravel gravel 2-4  
 8 or vSd = very coarse Sand 1-2  
 9 or cSd = coarse Sand 1/2-1  
 10 or mSd = medium Sand 1/8-1/2  
 11 or fSd = fine Sand 1/16-1/8  
 12 or vSl = very fine Sand 1/64-1/16  
 13 or Sl = Silt 1/256-1/64  
 14 or cl = clay 1/256

**Cbn** = Carbonaceous **H** = Hematite **S** = Sulphide **Pg** = Pagnonite

**LV** Late Volcanics

LV - 1 or olB = massive olivine Basalt and related dykes and sills, may be vesicular  
 2 or Pum = Pumice  
 3 or TTS = Tuffaceous Sediments



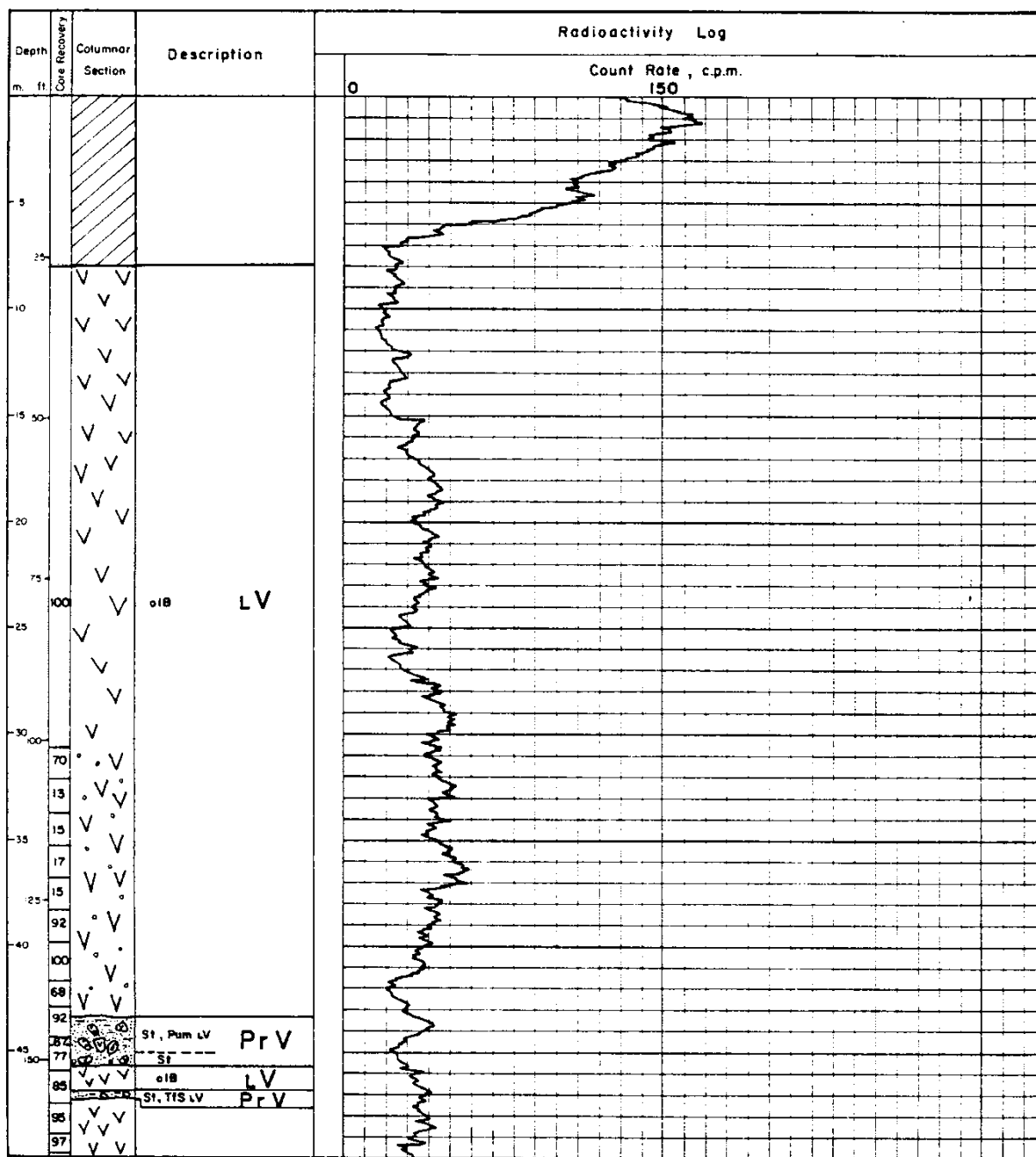
# LOG AND PROBE SHEET

Method : D.D.  
 Hole N° : CUP-152  
 Location : DONEN 306  
 Probe Depth : 73.5 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : \_\_\_\_\_

Detector : Geiger GP 27 U  
 Monitor : TCS 603 R  
 Background : 120 cpm  
 Time Constant : 10 Sec.

Date : JUNE 29, 1979  
 Logged & Probed by : N. MEGURO K. YANAGIZAWA  
M. McDONALD

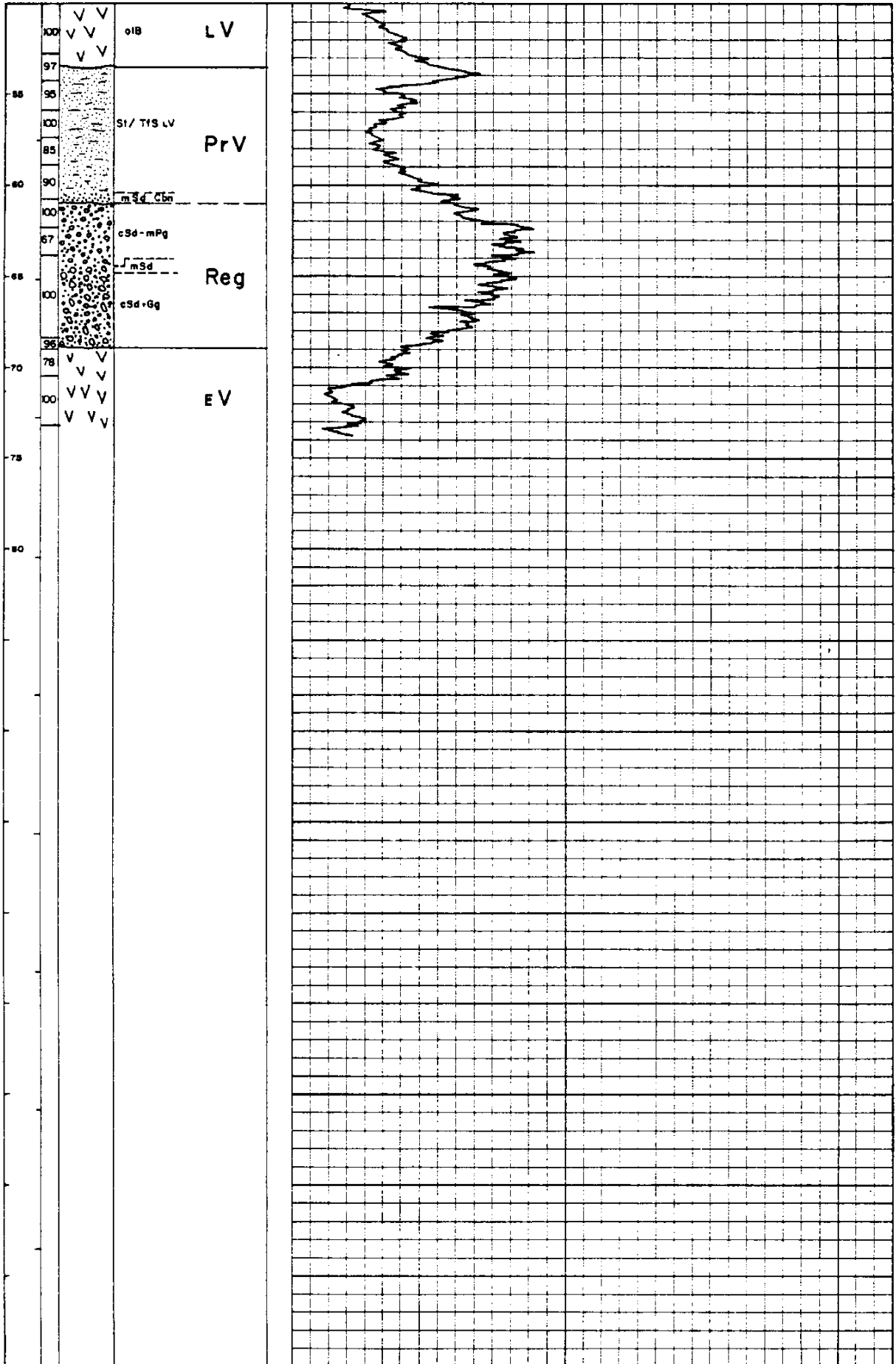




Continuation CUP - 152

0

150



# PNC EXPLORATION (CANADA) CO. LTD.

144

Hole No. : 79-CUP-153  
 Latitude : 5590.14  
 Departure : 1418.18  
 Elevation : 1336.2 m

Project : CUP LAKE  
 Azimuth :  
 Dip :  
 Depth : 70.6 m.

Property :  
 Dip Tests :  
 m.  
 End of hole

Colored :  
 Completed :  
 Core Size :  
 Logged by : K. YANAGIZAWA

Depth m ft	Columnar Section	From & To ASBY	Unit	Description	Rock Sample No.	From	To	Width	Assay	
									U <sub>3</sub> O <sub>8</sub>	Th
0 - 5.5				Tricone						
0 - 22.6				Casing						
5.5 - 20.2			PrV	gray color mud matrix with granite cobble gravel basalt and granite pebble gravel quartz and granite granules						
20.2 - 26.2				Basalt						
26.2 - 27.7			LV	brown-black color mud with scoria						
27.7 - 27.8				coaly mud, black color						
27.8 - 30.7				Basalt						
30.7 - 30.9				greenish-gray tuff with scoria						
30.9 - 31.1				black color mud with scoria						
31.1 - 33.6				brown color silt with scoria and organic material						
33.6 - 34.4				black color mud with scoria and basalt cobble gravel at 34.2m						
34.4 - 41.45				vesicular basalt						
41.45 - 42.5				gray-white color tuff with scoria						
42.5 - 42.8				black color coaly mud						
42.8 - 44.0			basalt							
44.0 - 44.2			black color coaly mud with cooked margin at 44.0m							
44.2 - 47.25			basalt							
47.25 - 47.45			brown color cooked silt with organic material							
47.45 - 50.5			dark brown color silt with organic material							

### EXPLANATION

**POV POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PrV PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay - thin, good binder. Silty parting light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (increasing age)**

**CoV CORVELL**  
 fine to medium grained dark reddish magnesian quartz syenite. High background radiation

**Veh VALHALLA**  
 medium to coarse grained white pyroxenite biotite granite large pink feldspar phenocrysts common

**Nel NELSON**  
 moderate to strongly foliated grey biotite - hornblende quartz diorite or gneiss

**LV EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

1a Pov - 1 or Bg	= Boulder gravel	256 mm
- 2 or Co	= Cobble gravel	64 - 256
- 3 or vcPg	= very coarse Pebble gravel	32 - 64
- 4 or cPg	= coarse Pebble gravel	16 - 32
- 5 or mPg	= medium Pebble gravel	8 - 16
- 6 or fPg	= fine Pebble gravel	4 - 8
- 7 or Gg	= Granite gravel	2 - 4
- 8 or vcSd	= very coarse Sand	1 - 2
- 9 or cSd	= coarse Sand	1/2 - 1
- 10 or mSd	= medium Sand	1/4 - 1/2
- 11 or fSd	= fine Sand	1/8 - 1/4
- 12 or vSd	= very fine Sand	1/16 - 1/8
- 13 or Sl	= Silt	1/256 - 1/16
- 14 or cl	= clay	1/256

**Cbn = Carbonaceous H = hematite S = Sulphide Peg = Pegmatite**

**LV Late Volcanics**

LV - 1 or oB	= massive olivine Basalt and related dykes and sills, may be vesicular
- 2 or Pum	= Pumice
- 3 or TTS	= Tuffaceous Sediments

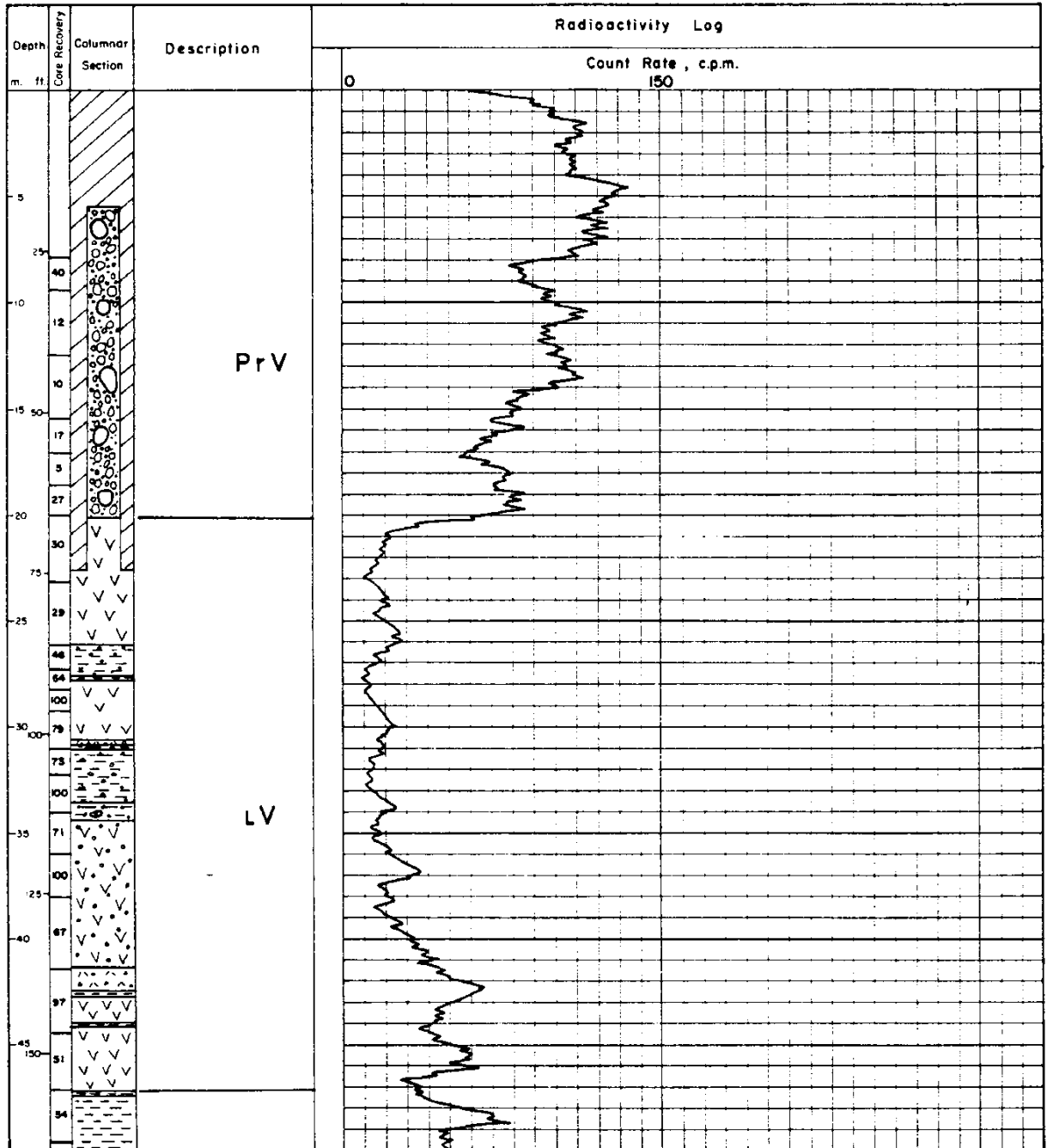
# LOG AND PROBE SHEET

Method : D.D.  
 Hole No. : CUP 153  
 Location :  
 Probe Depth : 70.6 m.

Hole Angle : VERTICAL  
 Core Size : NQ 3  
 Core Recovery : TOTAL 49%

Detector : Geiger GP27U  
 Monitor : TCS-603R  
 Background : 90 c.p.m.  
 Time Constant : 10 Sec.

Date : JULY 22, 1979  
 Logged & Probed  
 by : K. YANAGIZAWA



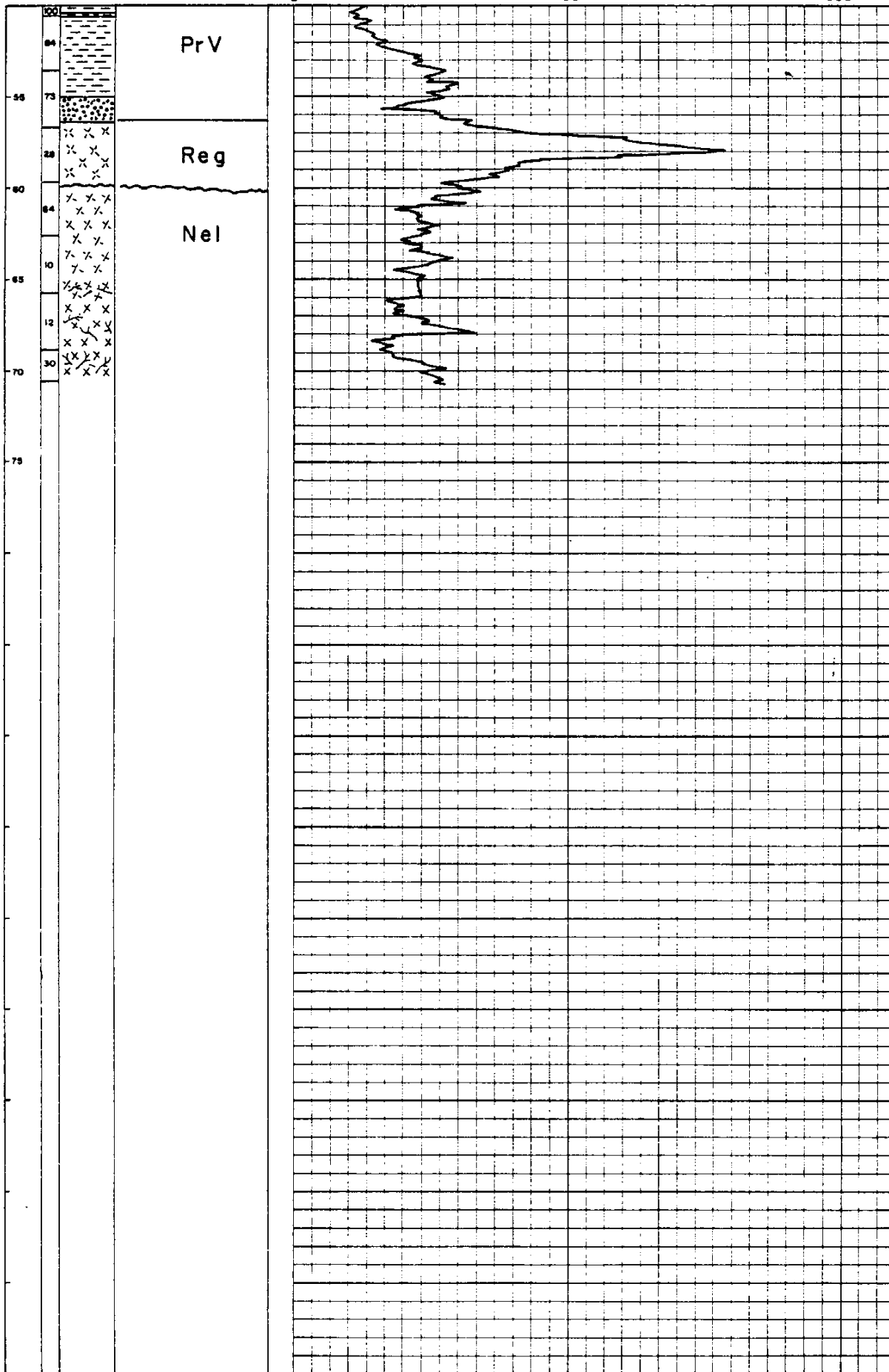


Continuation CUP 153

0

150

300



# PNC EXPLORATION (CANADA) CO. LTD.

148

Hole No. : 79-CUP-154	Project : CUP LAKE	Property :	Collared :
Latitude : 5582.26	Azimuth :	Dip Tests :	Completed :
Departure : 1625.77	Dip :	m.	Core Size : N Q
Elevation : 1339.9 m	Depth : 74.0 m	End of hole	Logged by : MEGURO YANAGIZAWA

Depth m ft	Columnar Section	From & To ASSAY	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
0 - 7.9	Casing											
7.9 - 8.05	porphyrite and granite pebble gravel matrix is washed out	7.9 8.05										
8.05 - 61.2	basalt		LV									

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
 recent sand and gravel generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS**  
 olive basalt massive, vesicular or as thin sills, may be associated with dikes and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
 generally gray in colour matrix clay like, good binder. Silty portion light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )**
- CORYELL**  
 fine to medium grained dark reddish monzonite quartz syenite. High background radiation
- VALHALLA**  
 medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
 moderate to strongly foliated gray biotite - hornblende quartz diorite or gneissiorite
- EARLY VOLCANICS**  
 fine grained chlorite granitoids - generally badly fractured and contains abundant hematite stringers throughout

- LEGEND**
- Post / Pre Volcanism Sediments ( - Regolith )
- |           |           |                           |              |
|-----------|-----------|---------------------------|--------------|
| PoV or Pv | 1 or Bg   | Boulder gravel            | 256 mm       |
|           | 2 or Cg   | Cobble gravel             | 64 - 256     |
|           | 3 or vcPg | very coarse Pebble gravel | 32 - 64      |
|           | 4 or cPg  | coarse Pebble gravel      | 16 - 32      |
|           | 5 or mPg  | medium Pebble gravel      | 8 - 16       |
|           | 6 or fPg  | fine Pebble gravel        | 4 - 8        |
|           | 7 or Gg   | Gravel                    | 2 - 4        |
|           | 8 or vcSd | very coarse Sand          | 1 - 2        |
|           | 9 or cSd  | coarse Sand               | 1/2 - 1      |
|           | 10 or mSd | medium Sand               | 1/4 - 1/2    |
|           | 11 or fSd | fine Sand                 | 1/8 - 1/4    |
|           | 12 or vSd | very fine Sand            | 1/16 - 1/8   |
|           | 13 or Sl  | Silt                      | 1/256 - 1/16 |
|           | 14 or cl  | clay                      | 1/256        |
- Cbn = Carbonaceous    H = Hematite    S = Sulphide    Pg = Pegmatite
- LV Late Volcanics
- LV - 1 or oB = massive olive basalt and related dykes and sills, may be vesicular
- 2 or Pm = Pumice
- 3 or TS = Tuffaceous Sediments



# LOG AND PROBE SHEET

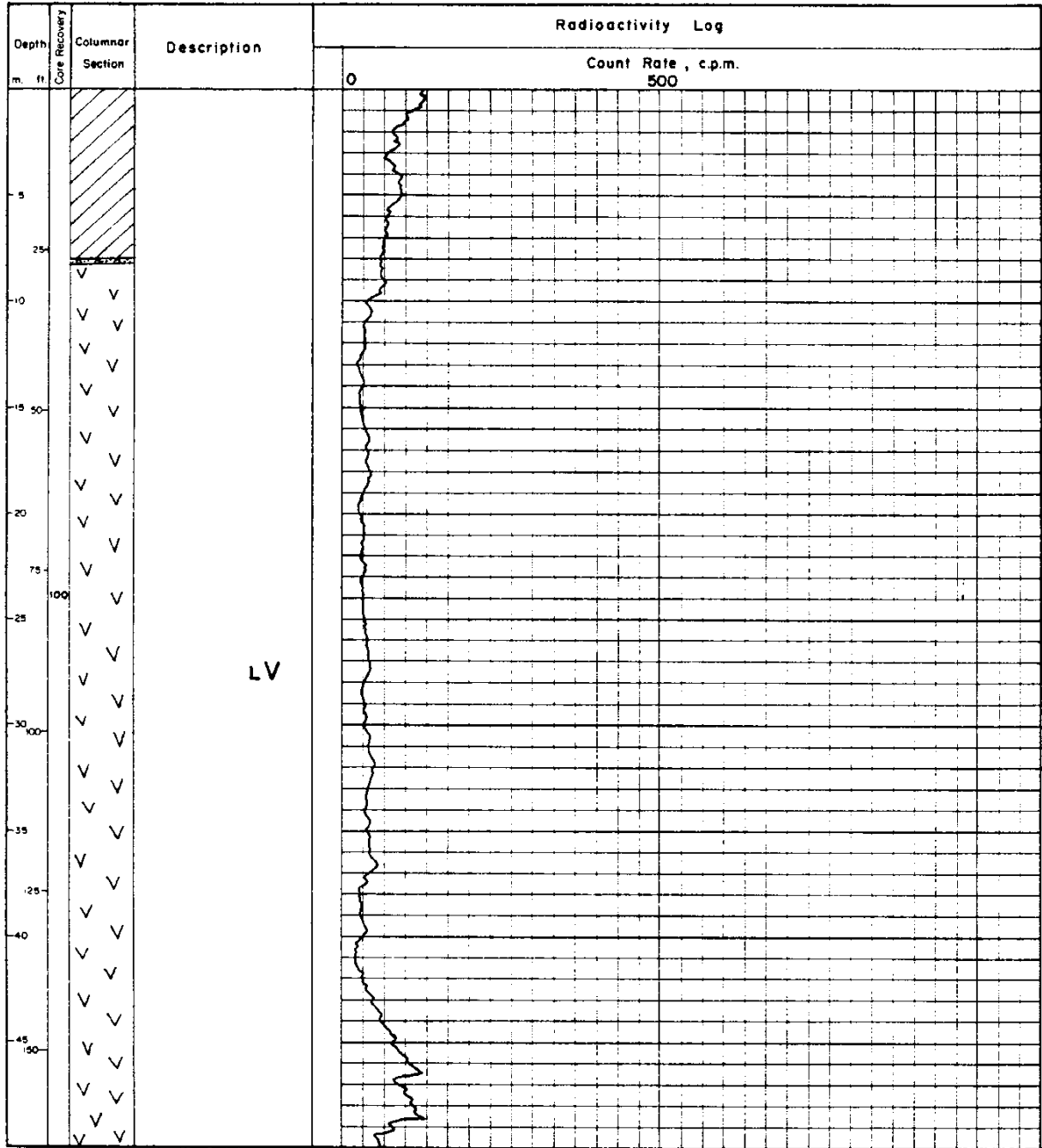
149

Method : D.D.  
 Hole N<sup>o</sup> : CUP 154  
 Location :  
 Probe Depth : 74.0 m

Hole Angle : VERTICAL  
 Core Size : NQ 3  
 Core Recovery : TOTAL 87%

Detector : Geiger GP27 U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 10 Sec.

Date : JULY 19, 1979  
 Logged & Probed by : MEGURO  
 YANAGIZAWA

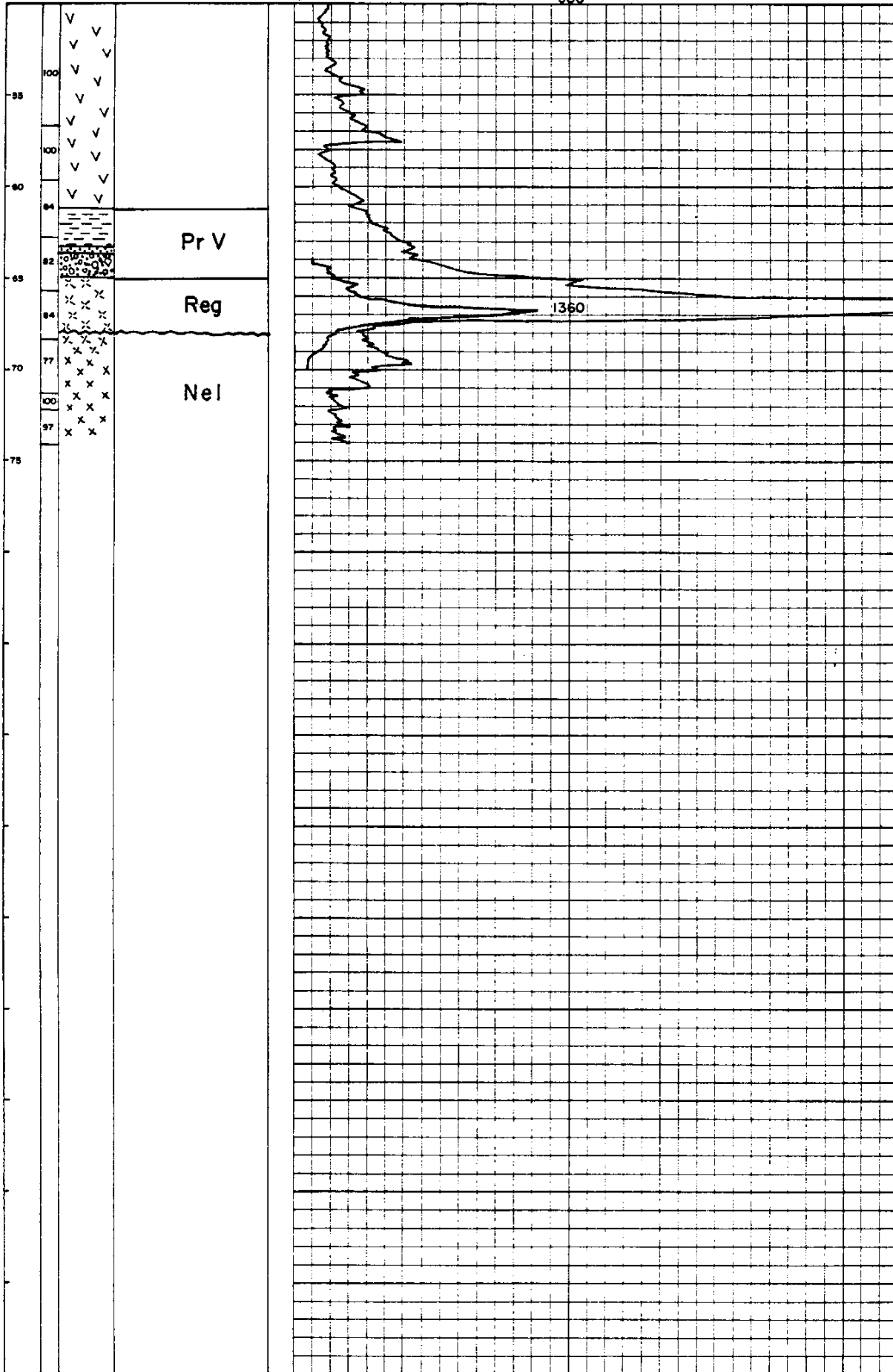




Continuation CUP 154

0

500



# PNC EXPLORATION (CANADA) CO. LTD.

152

Hole No. : 79-CUP-156  
 Latitude : 5564.58  
 Departure : 1812.72  
 Elevation : 1340.3 m.

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 58.5 m

Property : DONEN 293  
 Dip Tests :  
 m.  
 End of hole

Collared : JULY 15, 1979  
 Completed : JULY 16, 1979  
 Core Size : NQ 3  
 Logged by : K. YANAGIZAWA  
 Checked by : W. BULMER

Depth m. ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0 - 6.0				0 - 6.0 Tricone							
6.0 - 44.5			LV	6.0 - 44.5 olivine Basalt							
44.5 - 45.75		44.5	BCbn	44.5 - 45.75 dark brown carbonaceous silt							
45.75 - 46.40		45.75	PrV	45.75 - 46.40 very coarse sand to granule gravel-brown silt matrix							
46.40 - 46.65		46.40	Reg	46.40 - 46.65 green grey granite regolith pebble gravel-coarse sand							
46.65 - 58.5		46.65	Nel	46.65 - 58.5 Nelson foliated granodiorite							

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally gray in colour, matrix clay-like, good binder. Silty partings light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**

**CORYELL**  
 fine to medium grained dark reddish mafic quartz syenite High background radiation

**VALHALLA**  
 medium to coarse grained white propylite biotite granite large pink feldspar phenocrysts common

**NELSON**  
 moderate to strongly foliated gray biotite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments ( - Regolith )**

1 = Pv - 1 or Bg	= Boulder gravel	256 - mm
2 or Cg	= Cobble gravel	64 - 256
3 or vCg	= very coarse Pebble gravel	32 - 64
4 or cPg	= coarse Pebble gravel	16 - 32
5 or mPg	= medium Pebble gravel	8 - 16
6 or fPg	= fine Pebble gravel	4 - 8
7 or Gg	= Granule gravel	2 - 4
8 or vSd	= very coarse Sand	1 - 2
9 or cSd	= coarse Sand	1/2 - 1
10 or mSd	= medium Sand	1/4 - 1/2
11 or fSd	= fine Sand	1/8 - 1/4
12 or vSl	= very fine Sand	1/16 - 1/8
13 or Sl	= Silt	1/256 - 1/16
14 or cl	= clay	1/256

BCbn = Carbonaceous H = Hematite S = Sulphide Pg = Pygmite

**LV Late Volcanics**

LV - 1 or oB	= massive olivine Basalt and related dykes and sills, may be vesicular
2 or Pum	= Pumice
3 or TYS	= Tuffaceous Sediments

# LOG AND PROBE SHEET

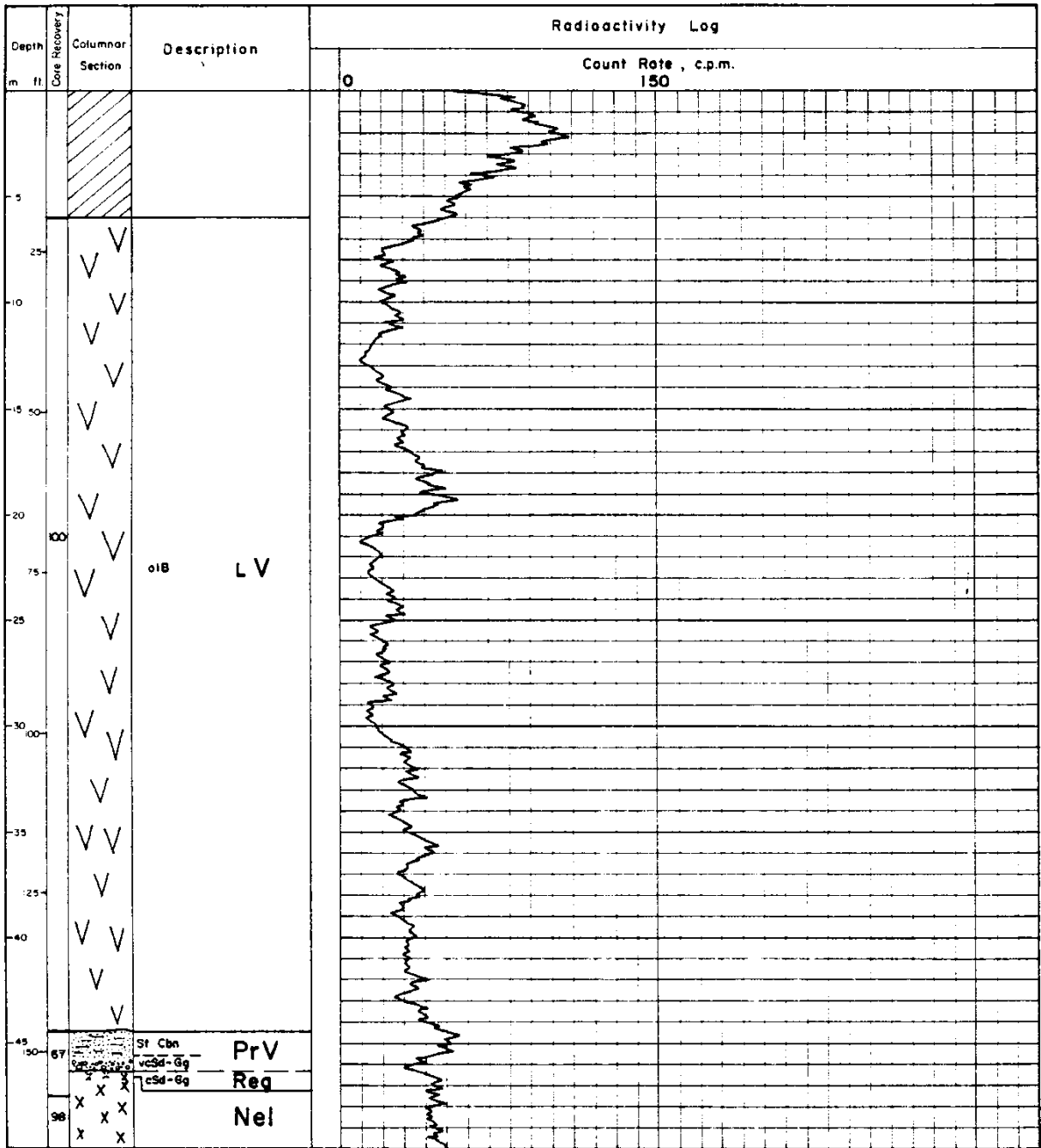
153

Method : **D.D**  
 Hole No : **CUP - 156**  
 Location : **DONEN 293**  
 Probe Depth : **58.4 m**

Hole Angle : **VERTICAL**  
 Core Size : **NQ**  
 Core Recovery :

Detector : **Geiger GP27 U**  
 Monitor : **TCS-603 R**  
 Background : **100 cpm**  
 Time Constant : **10 Sec.**

Date : **JULY 16, 1979**  
 Logged & Probed  
 by : **N. MEGURO**  
**K. YANAGIZAWA**



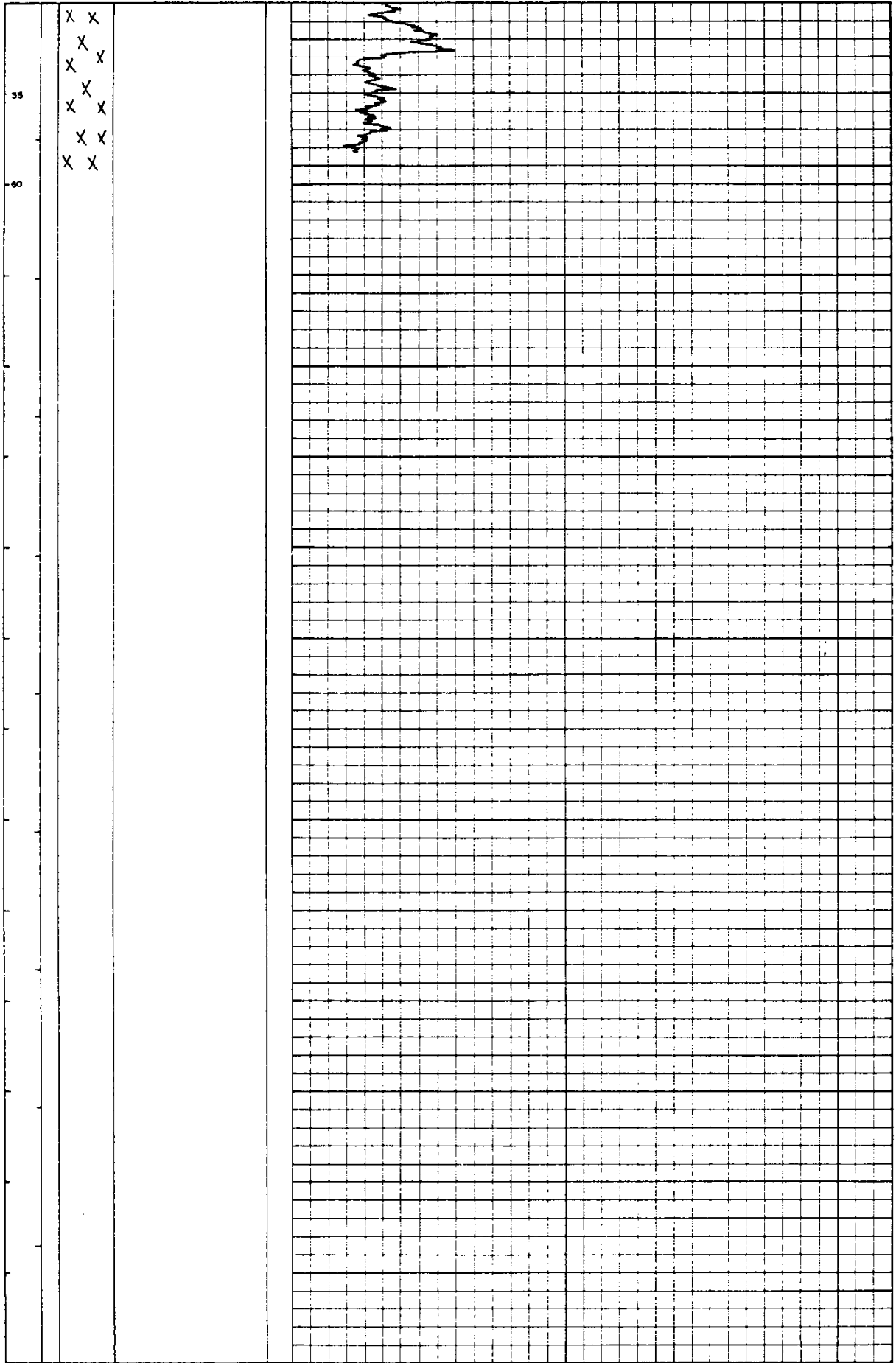


Continuation

CUP - 156

0

150



# PNC EXPLORATION (CANADA) CO. LTD.

Hole No. : <b>79-CUP-157</b>	Project : <b>CUP LAKE</b>	Property : <b>DONEN 294</b>	Collared : <b>JULY 14, 1979</b>
Latitude : <b>5583.31</b>	Azimuth :	Dip Tests :	Completed : <b>JULY 15, 1979</b>
Departure : <b>1918.17</b>	Dip : <b>- 90°</b>	m.	Core Size : <b>NQ 3</b>
Elevation : <b>1341.9 m</b>	Depth : <b>58.2 m</b>	End of hole	Logged by : <b>K. YANAGIZAWA</b>
			Checked by : <b>W. BULMER</b>

Depth m ft	Columnar Section	From & To ASSAY	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
	[Hatched]	1.8		0 - 1.8 Tricone								
5	[V]		LV									
25	[V]											
10	[V]											
15.0	[V]											
20	[V]											
25	[V]				1.8 - 41.5 olivine basalt							
30	[V]											
35	[V]											
40	[V]											
41.5	[V]											
44.0	[V]	2.3 / 13PrV	LV	41.5 - 44.0 pumice/scoria tuff mixed in black baked carbonaceous silt								
45.3	[V]	13 PrV		44.0 - 45.3 dark brown carbonaceous silt								
46.0	[V]	8.7	PrV	45.3 - 46.0 grey very coarse sand to granule gravel								
49.0	[V]		EV / Nel	46.0 - 58.2 foliated Nelson granodiorite with possible anarhist greenstone boulder between 46.0-49.0								

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
Recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
Olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
generally grey in colour, matrix clay-like, good binder. Silty partion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**

**CORYELL**  
fine to medium grained dark reddish magnesian quartz syenite. High background reddition

**VALHALLA**  
medium to coarse grained white prophyrite biotite granite large pink feldspar phenocrysts common

**NELSON**  
moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
fine grained chloritic greenstone - generally oolitic fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (- Regolith)**

PoV or PrV	1.0. PoV - 1 or Bg = Boulder gravel	256 mm
	- 2 or Cg = Cobble gravel	64 - 256
	- 3 or vCg = very coarse Pebble gravel	32 - 64
	- 4 or cPg = coarse Pebble gravel	16 - 32
	- 5 or mPg = medium Pebble gravel	8 - 16
	- 6 or fPg = fine Pebble gravel	4 - 8
	- 7 or Gg = Granule gravel	2 - 4
	- 8 or vCs = very coarse Sand	1 - 2
	- 9 or cS = coarse Sand	1/2 - 1
	- 10 or mS = medium Sand	1/4 - 1/2
	- 11 or fS = fine Sand	1/8 - 1/4
	- 12 or vFS = very fine Sand	1/16 - 1/8
	- 13 or S = Silt	1/256 - 1/16
	- 14 or Cl = clay	1/128

Cbn = Carbonaceous    H = Hematite    S = Sulphide    Pug = Pegmatite

**Late Volcanics**

LV	LV - 1 or oH = massive olivine Basalt and related dykes and sills, may be vesicular
	- 2 or Pum = Pumice
	- 3 or TS = Tuffaceous Sediments



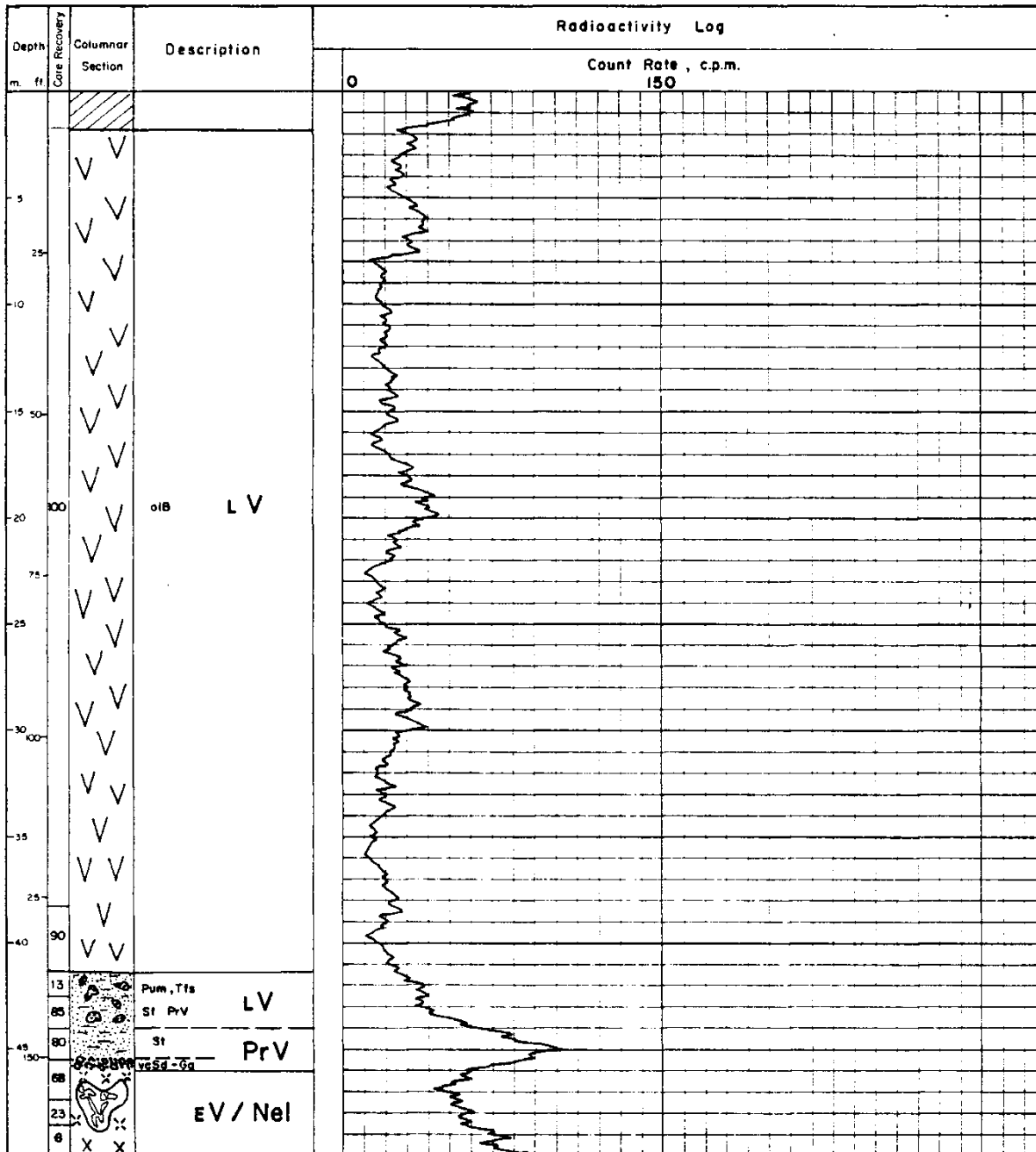
# LOG AND PROBE SHEET

Method : **D.D.**  
 Hole No : **CUP-157**  
 Location : **DONEN 294**  
 Probe Depth : **58.2 m**

Hole Angle : **VERTICAL**  
 Core Size : **NQ**  
 Core Recovery :

Detector : **Geiger GP27U**  
 Monitor : **TCS 603 R**  
 Background : **50 cpm**  
 Time Constant : **10 Sec.**

Date : **JULY 15, 1979**  
 Logged & Probed  
 by : **N. MEGURO**  
**K. YANAGIZAWA**

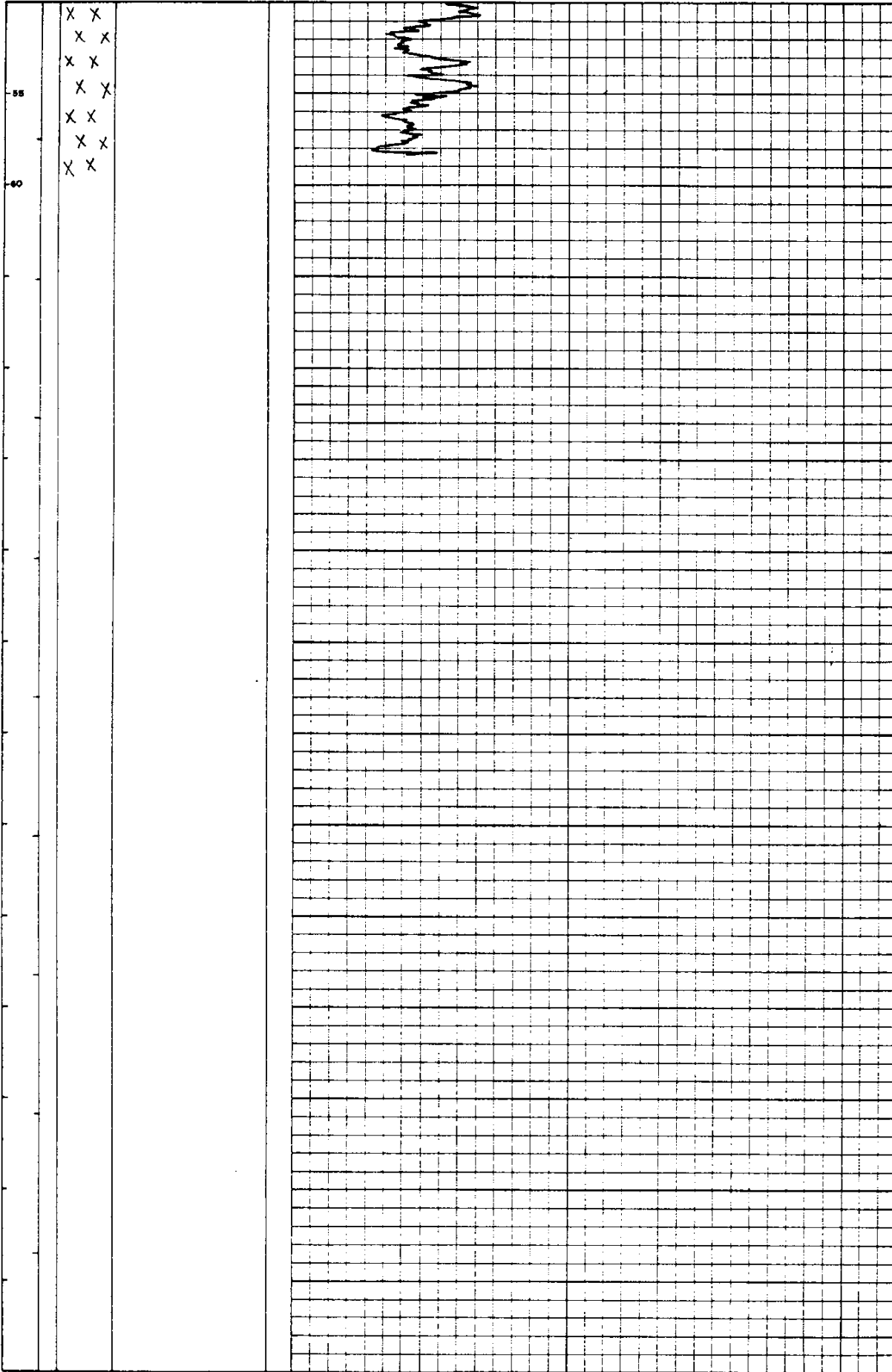




Continuation CUP - 157

0

150



159

# PNC EXPLORATION (CANADA) CO. LTD.

160

Hole No. : **79-CUP-158**  
 Latitude : **5393.38**  
 Departure : **1688.16**  
 Elevation : **1340.8 m**

Project : **CUP LAKE**  
 Azimuth :  
 Dip : **-90°**  
 Depth : **81.0 m**

Property : **DONEN 291**  
 Dip Tests :  
 m.  
 End of hole

Collared : **JULY 10, 1979**  
 Completed : **JULY 12, 1979**  
 Core Size : **N. Q. 3**  
 Logged by : **K. YANAGIZAWA**  
 Checked by : **W. BULMER**

Depth m. ft	Columnar Section	From To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0 - 2.4		2.4		Tricone							
5	✓		LV								
25	✓										
10	✓										
15	✓										
20	✓										
25	✓										
30	✓										
35	✓										
40	✓										
45	✓										
50	✓										

**EXPLANATION**

**POST VOLCANISM SEDIMENTS**  
 PoV recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 LV olivine basalt massive, vesicular or as thin sills, may be associated with tuffice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 PrV generally grey in colour, matrix clay-like, good binder. Silty particles light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 Reg may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**

**CORYELL**  
 Coy fine to medium grained dark reddish monzonite quartz syenite High background radiation

**VALHALLA**  
 Val medium to coarse grained white porphyritic basalt granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or gneodiorite

**EARLY VOLCANICS**  
 eV fine grained chaotic greenstone - generally badly fractured and contains abundant hematite stringers throughout

**LEGEND**

PoV or PrV Post / Pre Volcanism Sediments ( - Regolith )

ie. PoV - 1 or Bg = Boulder gravel 256 mm  
 - 2 or Cg = Cobble gravel 64 - 256  
 - 3 or vcPg = very coarse Pebble gravel 32 - 64  
 - 4 or cPg = coarse Pebble gravel 16 - 32  
 - 5 or mPg = medium Pebble gravel 8 - 16  
 - 6 or fPg = fine Pebble gravel 4 - 8  
 - 7 or Gg = Granite gravel 2 - 4  
 - 8 or vcSd = very coarse Sand 1 - 2  
 - 9 or cSd = coarse Sand 1/2 - 1  
 - 10 or mSd = medium Sand 1/8 - 1/2  
 - 11 or fSd = fine Sand 1/8 - 1/4  
 - 12 or vSd = very fine Sand 1/8 - 1/8  
 - 13 or S1 = Silt 1/256 - 1/4  
 - 14 or cl = clay 1/256

Cbn = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite

**Late Volcanics**  
 LV - 1 or 1B = massive olivine basalt and related dykes and sills, may be vesicular  
 - 2 or Pum = Pumice  
 - 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

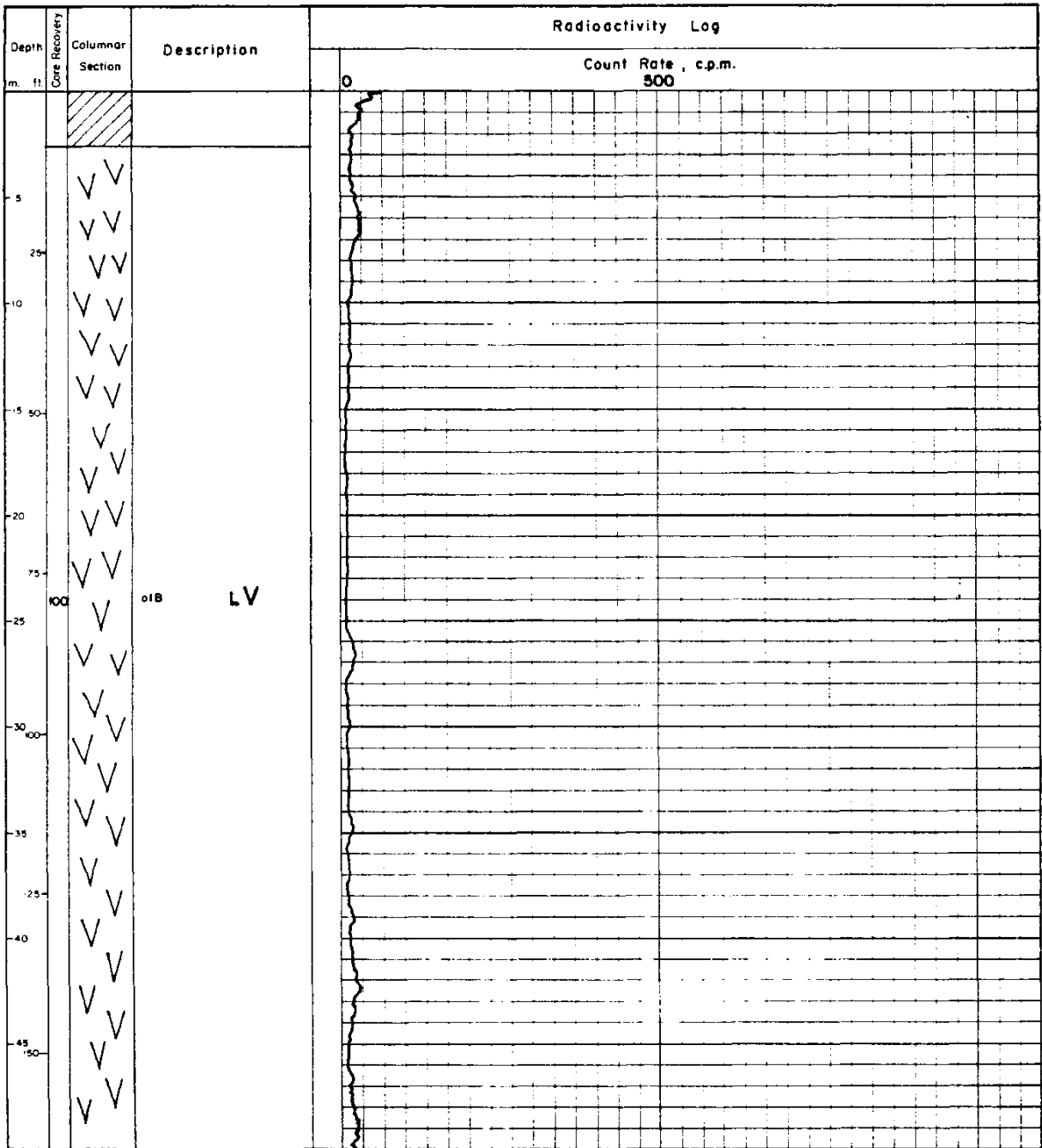
161

Method : D.D.  
 Hole N<sup>o</sup> : CUP - 158  
 Location : DONEN 291  
 Probe Depth : 81.0 m

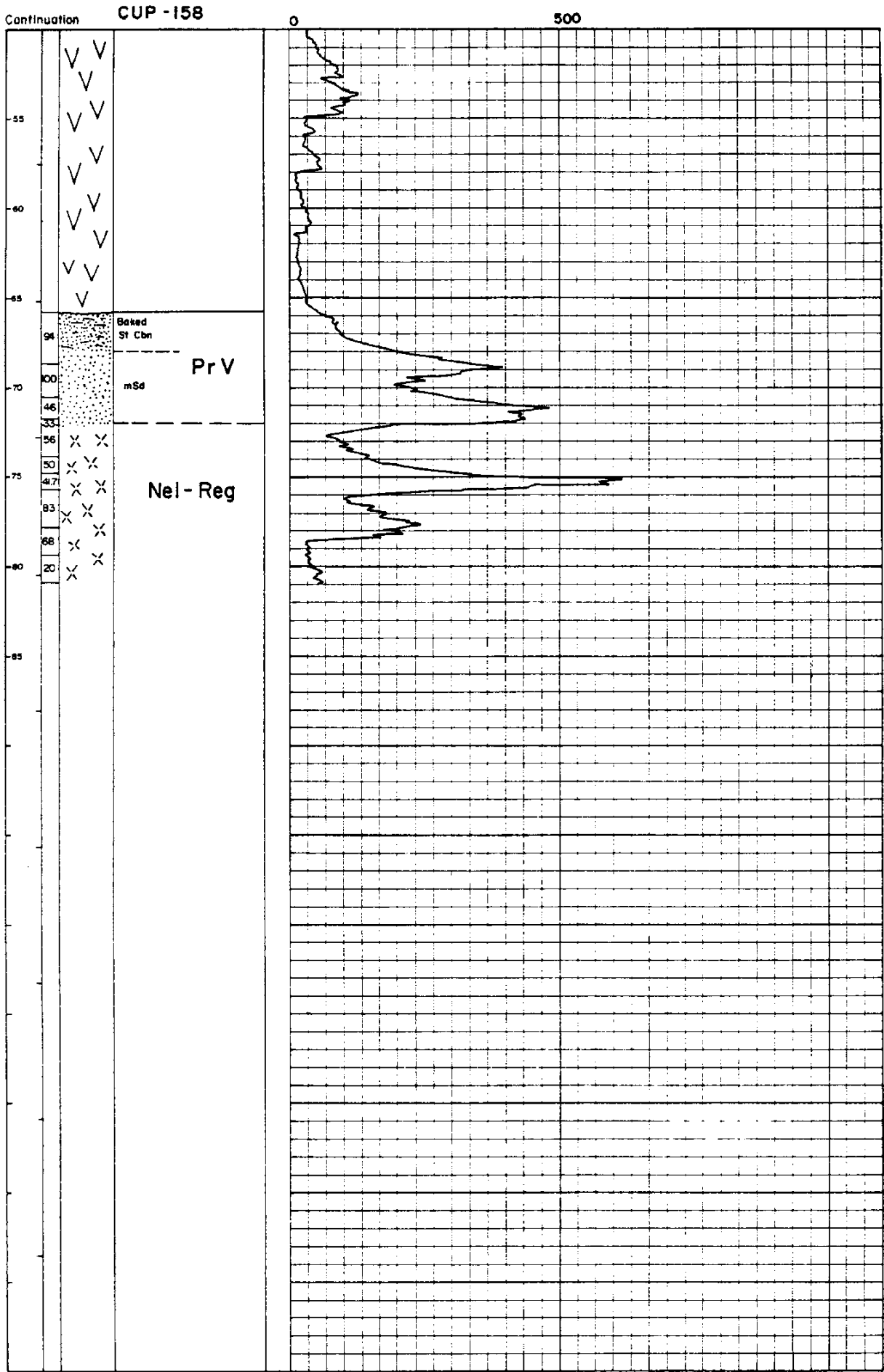
Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 70 cpm  
 Time Constant : 10 Sec.

Date : JULY 12, 1979  
 Logged & Probed by : N. MEGURO  
K. YANAGIZAWA







# PNC EXPLORATION (CANADA) CO. LTD.

164

Hole No. : 79-CUP-159  
 Latitude : 5379.49  
 Departure : 1788.59  
 Elevation : 1341.5 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 73.5 m

Property : DONEN 291  
 Dip Tests :  
 m.  
 End of hole

Collared : JULY 12, 1979  
 Completed : JULY 14, 1979  
 Core Size : NQ 3  
 Logged by : K. YANAGIZAWA  
 Checked by : W. BULMER

Depth m ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0		1.8		0 - 1.8 Tricone							
5											
25											
10											
15.80											
20											
75											
25			LV	1.8 - 62.5 olivine Basalt							
30											
35											
125											
40											
45											
150											

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally gray in colour, matrix clay - like, good binder. Silty portion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, one may or may not contain overlying sediments

**INTRUSIVES (increasing age)**

**CORYELL**  
 Coy fine to medium grained dark reddish melanitic quartz syenite. High background radiation

**VALHALLA**  
 Val medium to coarse grained white prophyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated gray biotite - hornblende quartz diorite or gneiss

**EARLY VOLCANICS**  
 Ev fine grained chloritic greenstone - generally badly fractured and containing abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

PgV or PrV

1a. PpV - 1 or Bg = Boulder gravel  
 2 or Cg = Cobble gravel  
 3 or vPg = very coarse Pebble gravel  
 4 or cPg = coarse Pebble gravel  
 5 or mPg = medium Pebble gravel  
 6 or fPg = fine Pebble gravel  
 7 or Gg = Gravel  
 8 or vSd = very coarse Sand  
 9 or cSd = coarse Sand  
 10 or mSd = medium Sand  
 11 or fSd = fine Sand  
 12 or vSl = very fine Sand  
 13 or Sl = Silt  
 14 or cl = clay

Cbn = Carbonaceous H = Hematite S = Sulphide Pg = Pagnetite

**Late Volcanics**

LV - 1 or oB = massive olivine Basalt and related dikes and sills, may be vesicular  
 2 or Pum = Pumice  
 3 or TFS = Tuffaceous Sediments



# LOG AND PROBE SHEET

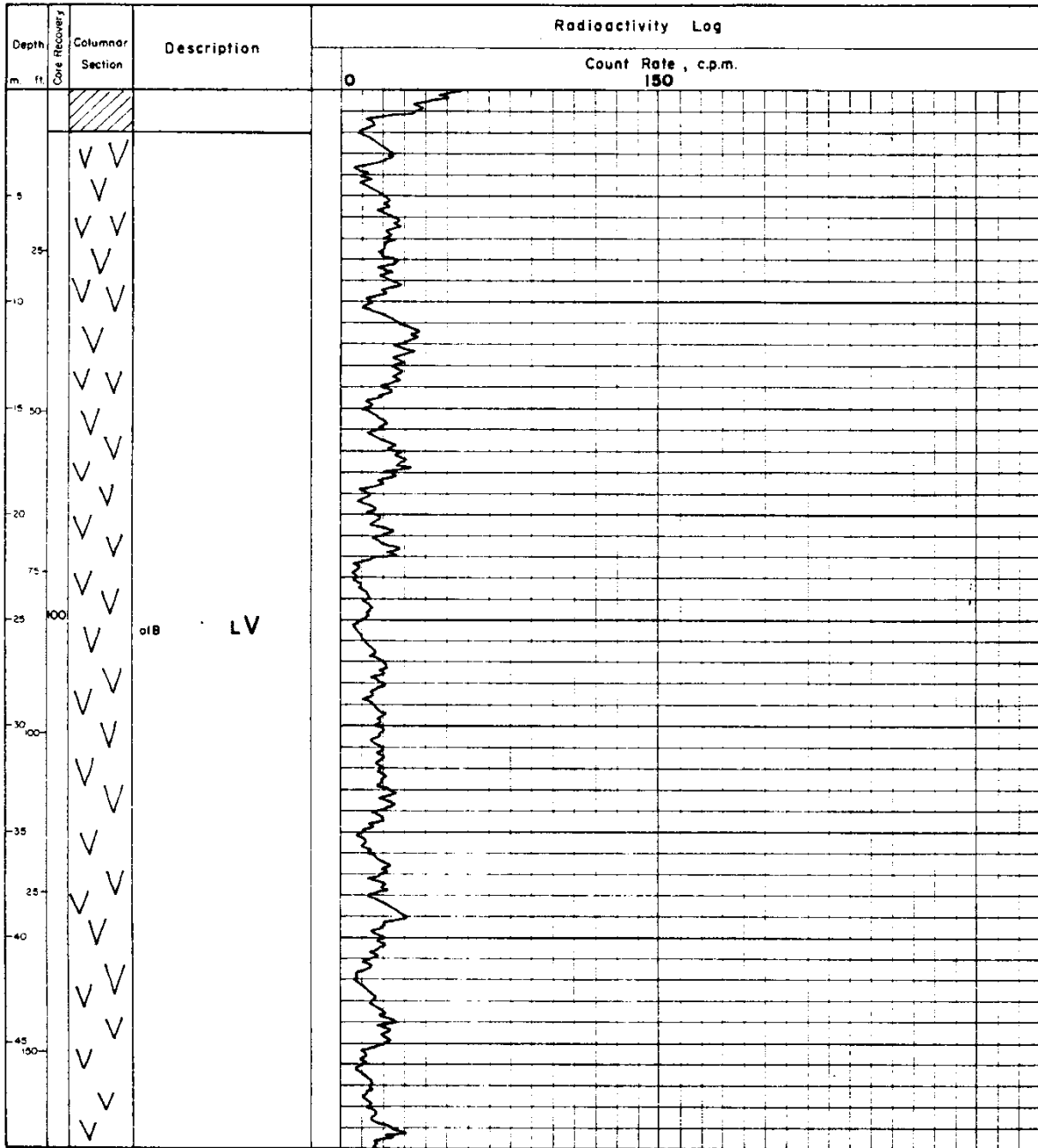
165

Method : **D.D.**  
 Hole No : **CUP-159**  
 Location : **DONEN 291**  
 Probe Depth : **73.5 m**

Hole Angle : **VERTICAL**  
 Core Size : **NQ**  
 Core Recovery :

Detector : **Geiger GP27 U**  
 Monitor : **TCS 603 R**  
 Background : **70 cpm**  
 Time Constant : **10 Sec.**

Date : **JULY 14 , 1979**  
 Logged & Probed  
 by : **N. MEGURO**  
**K. YANAGIZAWA**



Continuation

CUP-159

	58																						
	60																						
	62.5																						
	65	Boned 13																					
	66.15	PV																					
	68.9	8-7																					
	70																						
	73.45	Nel																					
	75																						

62.5 - 66.15 brown carbonaceous silt with baked layer from 62.5-64.1

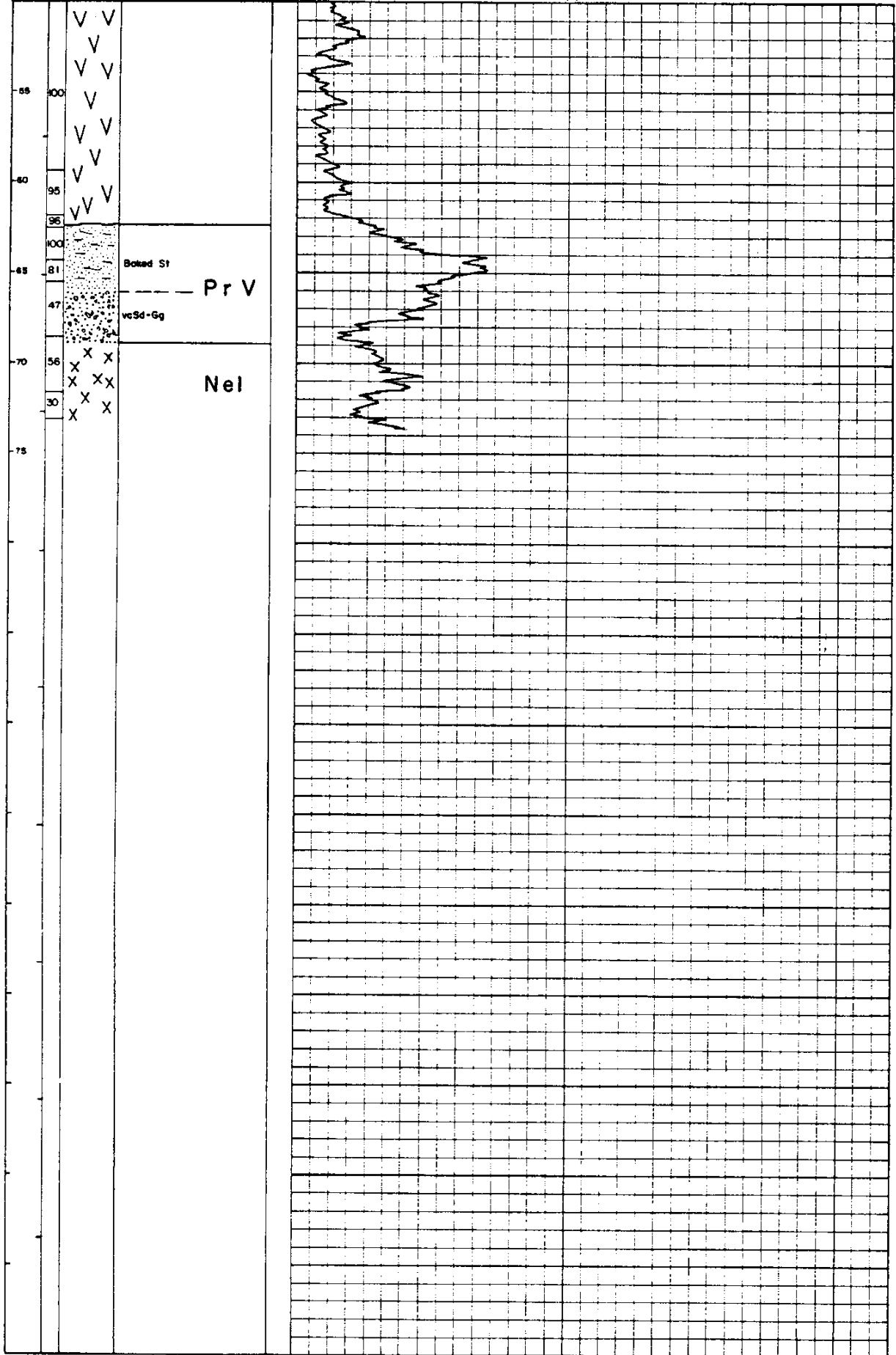
66.15 - 68.9 very coarse sand-granule gravel-green colour mud matrix

68.9 - 73.45 Nelson granodiorite

Continuation CUP-159

0

150



# PNC EXPLORATION (CANADA) CO. LTD.

168

Hole No. : 79-CUP-161  
 Latitude : 5411.66  
 Departure : 1314.24  
 Elevation : 1340.9 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 83.2 m

Property : DONEN 304  
 Dip Tests :  
 m.  
 End of hole

Collared : JUNE 28, 1979  
 Completed : JUNE 29, 1979  
 Core Size : N.Q. 3  
 Logged by : M. McDONALD  
 Checked by : W. BULMER

Depth m. ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
0 - 6.06	Tricone			0 - 6.06 Tricone								
6.06 - 62.78	LV		LV	6.06 - 62.78 essentially brown carbonaceous silt baked black with few thin sills 2-3m thick of basalt black								

### EXPLANATION

- POV** POST VOLCANISM SEDIMENTS  
-scent sand and gravels generally brown in colour matrix sandy, loosely bound
- LV** LATE VOLCANICS  
siliceous basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PrV** PRE VOLCANISM SEDIMENTS  
generally grey in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material
- Reg** REGALITH LAYER  
may or may not be well developed, and may or may not contain underlying sediments

- INTRUSIVES ( increasing age )**
- CORYELL**  
Ccy fine to medium grained dark reddish metamorphic quartz syenite high background radiation
- VALMALLA**  
Val medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
Nel moderate to strongly fractured grey biotite - hornblende quartz diorite or granodiorite
- LV** EARLY VOLCANICS  
fine grained chloritic greenstone - generally beddy fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments ( - Regalith )**
- Pov / PrV**
- Pov - 1 or Bg = Boulder gravel 256 mm
- 2 or Cg = Cobble gravel 64 - 256
- 3 or vcPg = very coarse Pebble gravel 32 - 64
- 4 or cPg = coarse Pebble gravel 16 - 32
- 5 or mPg = medium Pebble gravel 8 - 16
- 6 or fPg = fine Pebble gravel 4 - 8
- 7 or Gg = Gravel gravel 2 - 4
- 8 or vcSd = very coarse Sand 1 - 2
- 9 or cSd = coarse Sand 1/2 - 1
- 10 or mSd = medium Sand 1/4 - 1/2
- 11 or fSd = fine Sand 1/8 - 1/4
- 12 or vSd = very fine Sand 1/16 - 1/8
- 13 or St = Silt 1/256 - 1/16
- 14 or Cl = clay 1/256
- Cbn = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite**
- LV Late Volcanics**
- LV - 1 or OH = massive olivine basalt and related dykes and sills, may be vesicular
- 2 or Pum = Pumice
- 3 or TS = Tuffaceous Sediments

# LOG AND PROBE SHEET

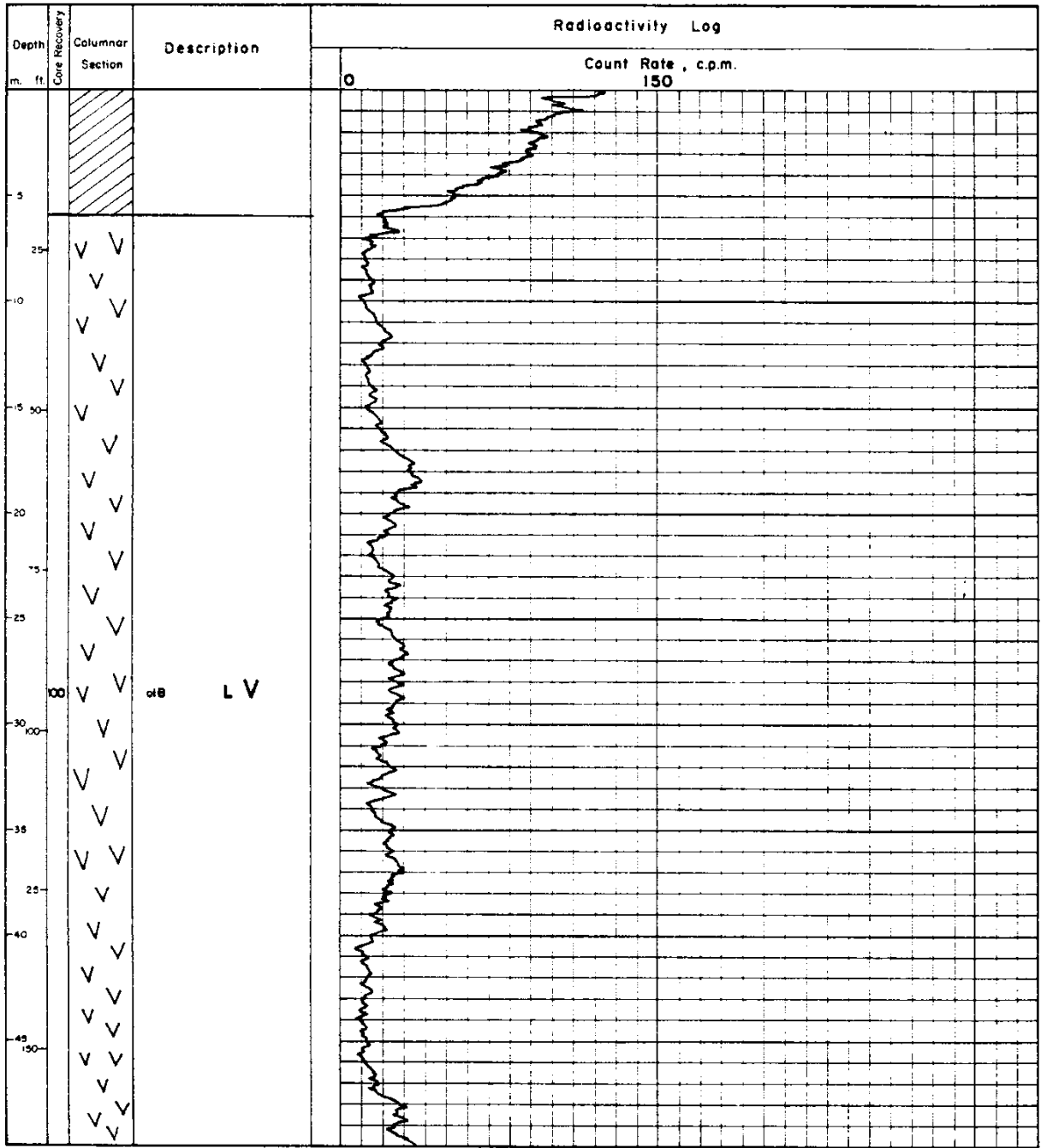
169

Method : D. D.  
 Hole N<sup>o</sup> : CUP-161  
 Location : DONEN 304  
 Probe Depth : 82.7 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :

Detector : Geiger GP 27 U  
 Monitor : TCS 603 R  
 Background : 90 cpm  
 Time Constant : 10 Sec.

Date : JUNE 30, 1979  
 Logged & Probed  
 by : N. MEGURO K. YANAGIZAWA  
M. McDONALD



Continuation

CUP-161

	58																				
	60																				
	62.78																				
	65.83	13.9																			
	66.87																				
	67.17																				
	67.97																				
	68.88	0-3																			
	70																				
	71.93	9																			
	74.98	9-7																			
	78																				
74.98	9-2																				
78.02																					
81.07	5-4																				
83.21																					
85																					

EXPLODED VIEW

66.87 - 67.17 brown silty mud mixed with coarse sand

67.17 - 67.97 grey sand and gravel with occasional large pebble-green tinge to matrix

67.97 - 68.88 grey coarse sand with green tinge to matrix

68.88 - 71.93 grey coarse sand to granule gravel

71.93 - 74.98 yellow green assorted pebbles boulders and cobbles-Regolithic?

74.98 - 81.07 medium to coarse pebble gravel-yellow green color Regolithic?

81.07 - 83.21 foliated gray Nelson granodiorite

PyV

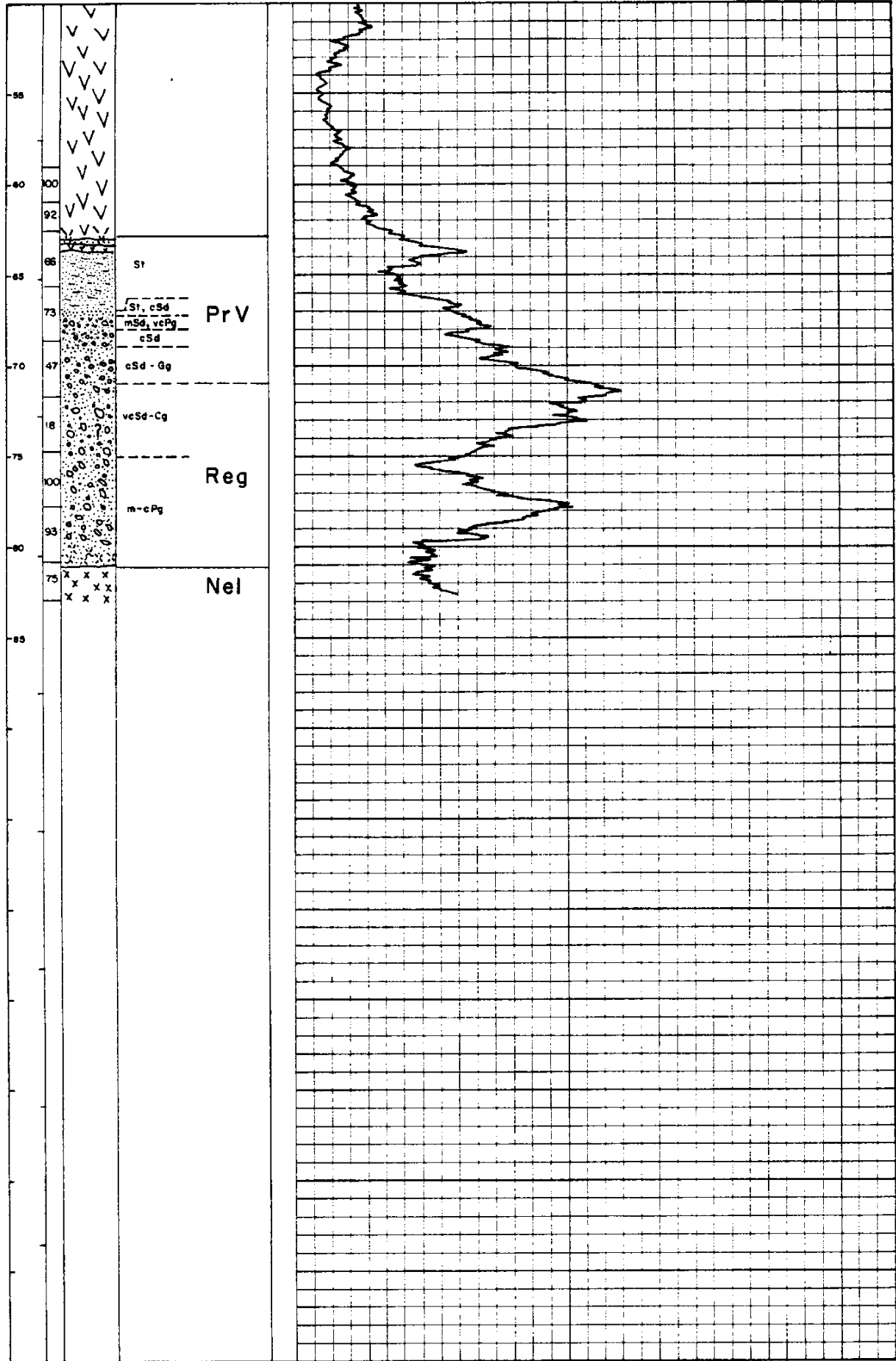
Reg

Nel

Continuation CUP-161

0

150







# LOG AND PROBE SHEET

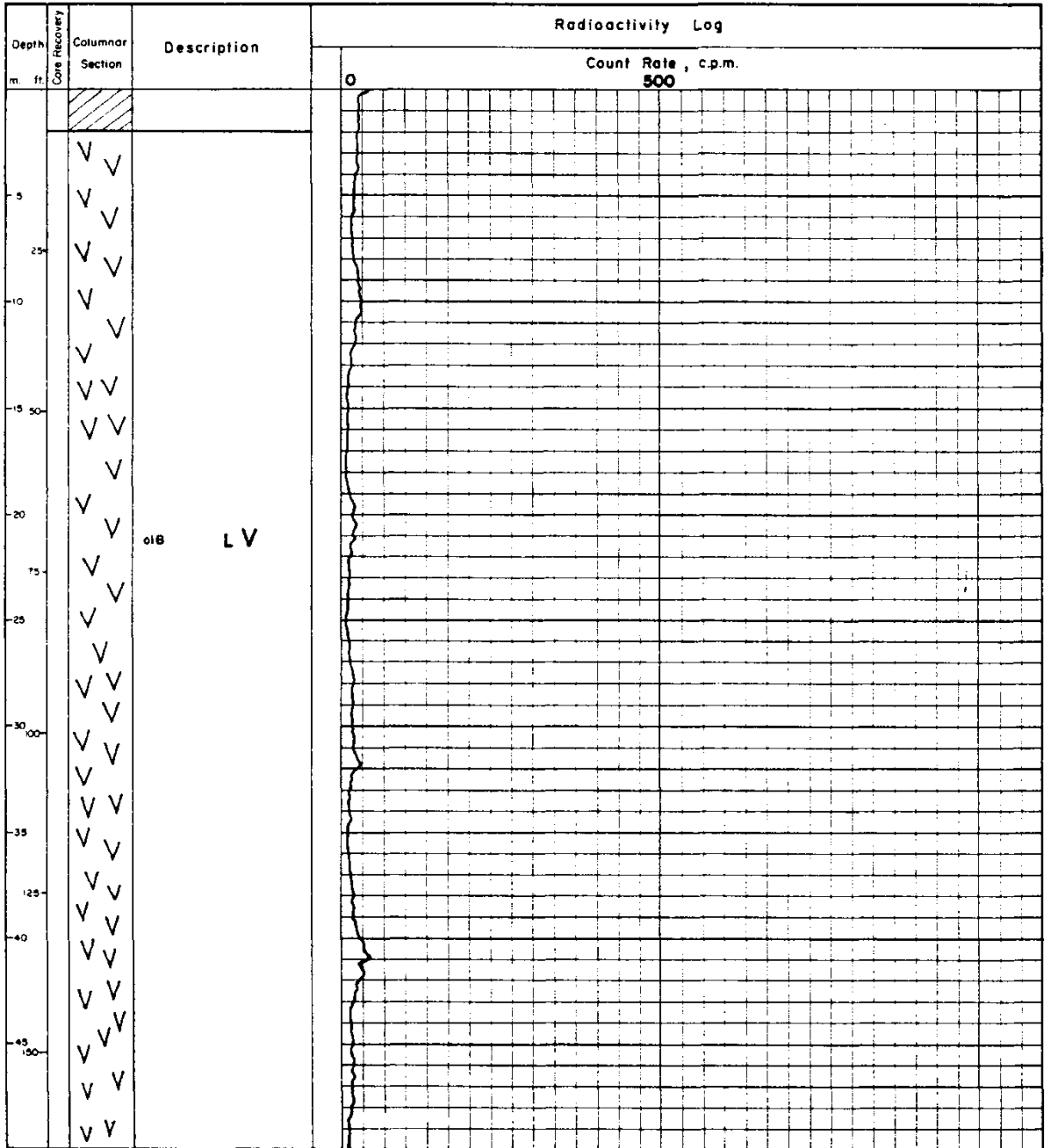
173

Method : D.D.  
 Hole No : CUP - 162  
 Location : DONEN 304  
 Probe Depth : 100.00m

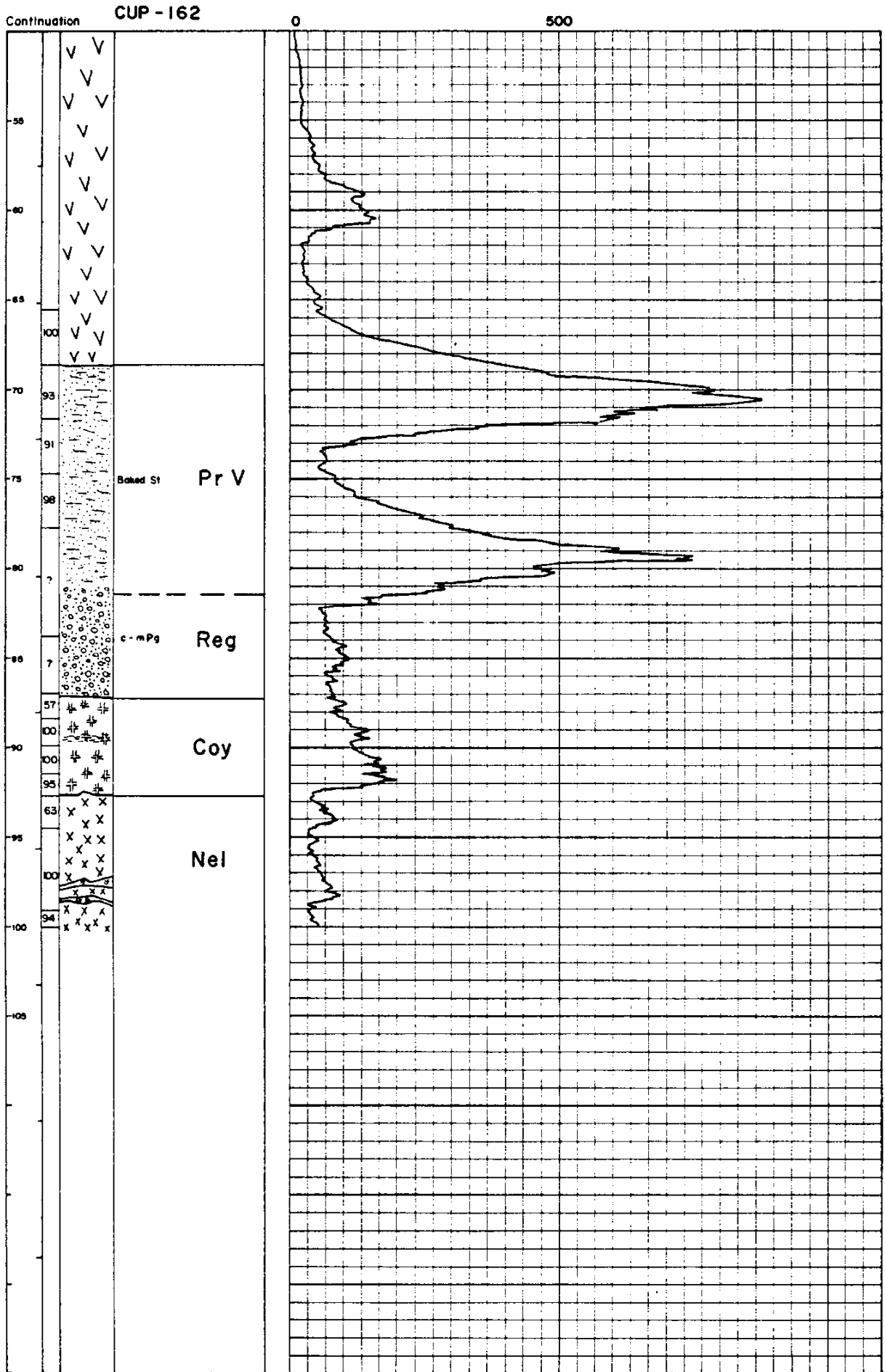
Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : \_\_\_\_\_

Detector : Geiger GP27 U  
 Monitor : TCS 603 R  
 Background : 80 cpm  
 Time Constant : 10 Sec.

Date : JULY 3, 1979  
 Logged & Probed  
 by : N. MEGURO  
M. McDONALD







# PNC EXPLORATION (CANADA) CO. LTD.

176

Hole No. : **79-CUP-163**  
 Latitude : **5180.56**  
 Departure : **1312.93**  
 Elevation : **1345.4 m**

Project : **CUP LAKE**  
 Azimuth : \_\_\_\_\_  
 Dip : **-90°**  
 Depth : **89.0 m**

Property : **DONEN 304**  
 Dip Tests : \_\_\_\_\_  
 m. \_\_\_\_\_  
 End of hole \_\_\_\_\_

Collared : **JULY 3, 1979**  
 Completed : **JULY 4, 1979**  
 Core Size : **N.O. 3**  
 Logged by : **M. McDONALD**  
 Checked by : **W. BULMER**

Depth m ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>2</sub> O <sub>8</sub>	Th	
0		2.13		0 - 2.13 Tricone								
5	V											
25	V											
10	V											
15	V											
20	V											
25	V											
30	V		LV	2.13 - 71.70 olivine Basalt								
35	V											
40	V											
45	V											
50	V											

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally gray in colour, matrix clay-like, good binder. Silty parton light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**

**COWYELL**  
 fine to medium grained dark reddish massive quartz syenite high background radiation

**VALHALLA**  
 medium to coarse grained white prophyritic basaltic granite large pink feldspar phenocrysts common

**NELSON**  
 moderate to strongly foliated gray biotite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

10	PoV - 1 or Bg	= Boulder gravel	256 mm
	2 or Cg	= Cobble gravel	64-256
	3 or vCPg	= very coarse Pebble gravel	32- 64
	4 or cPg	= coarse Pebble gravel	16- 32
	5 or mPg	= medium Pebble gravel	8- 16
	6 or fPg	= fine Pebble gravel	4- 8
	7 or Gg	= Granule gravel	2- 4
	8 or vSd	= very coarse Sand	1- 2
	9 or cSd	= coarse Sand	1/2- 1
	10 or mSd	= medium Sand	1/4- 1/2
	11 or fSd	= fine Sand	1/8- 1/4
	12 or vSl	= very fine Sand	1/16- 1/8
	13 or Sl	= Silt	1/32- 1/16
	14 or cl	= clay	

Cbn = Carbonaceous    H = Hematite    S = Sulphide    Peg = Pegmatite

**Late Volcanics**

LV - 1 or oB	= massive olivine Basalt and related dikes and sills, may be vesicular
2 or Pum	= Pumice
3 or TFS	= Tuffaceous Sediments



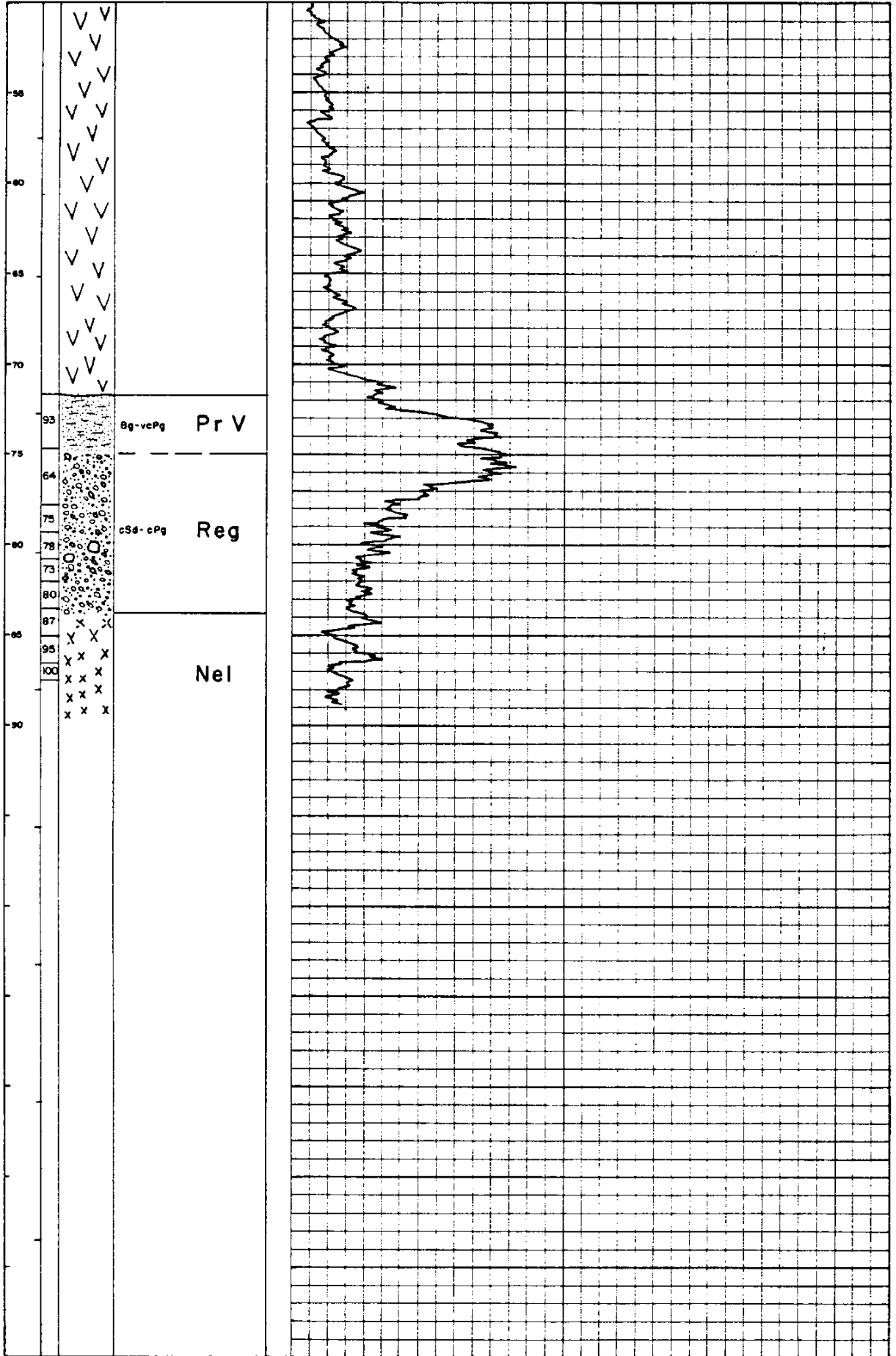


Continuation

CUP-163

0

150



179

# PNC EXPLORATION (CANADA) CO. LTD.

180

Hole No. : **79-CUP-164**  
 Latitude : **5177.37**  
 Departure : **1469.52**  
 Elevation : **1337.6m**

Project : **CUP LAKE**  
 Azimuth :  
 Dip : **-90°**  
 Depth : **83.2 m**

Property : **DONEN 291**  
 Dip Tests :  
 m.  
 End of hole

Collared : **JULY 4, 1979**  
 Completed : **JULY 6, 1979**  
 Core Size : **N.Q. 3**  
 Logged by : **M. McDONALD**  
 Checked by : **W. BULMER**

Depth m ft	Columnar Section	From & To ASSAY	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay			
										U <sub>3</sub> O <sub>8</sub>	Th		
0				0 - 4.26 Tricone									
5		4.26	LV	4.26 - 62.78 olivine basalt									
25													
10													
15													
20													
25													
30													
35													
40													
45													
150													

**EXPLANATION**

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally gray in colour, matrix clay - silty, good binder. Silty parting light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (non-peggy)**

**CORVELL**  
 Coy fine to medium grained dark reddish monzonite quartz syenite. High background radiation

**VALHALLA**  
 Val medium to coarse grained white gneiss - biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or gneiss

**EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally beddy fractured and contains abundant hematite stringers throughout

**LEGEND**

**Post / Pre Volcanism Sediments (- Regolith)**

PoV or PvV  
 i.e. PoV-1 or Bg = Boulder gravel 256 mm  
 -2 or Cg = Cobble gravel 64-256  
 -3 or vcPg = very coarse Pebble gravel 32-64  
 -4 or cPg = coarse Pebble gravel 16-32  
 -5 or mPg = medium Pebble gravel 8-16  
 -6 or fPg = fine Pebble gravel 4-8  
 -7 or Gg = Gravel gravel 2-4  
 -8 or vcSd = very coarse Sand 1-2  
 -9 or cSd = coarse Sand 1/2-1  
 -10 or mSd = medium Sand 1/4-1/2  
 -11 or fSd = fine Sand 1/8-1/4  
 -12 or vSd = very fine Sand 1/16-1/8  
 -13 or St = silt 1/256-1/64  
 -14 or cl = clay 1/256

**Carbonaceous Hematite Sulphate Peggy**  
 Cbn = Carbonaceous H = Hematite S = Sulphate Peg = Pegmatite

**Late Volcanics**  
 LV -1 or oB = massive olivine Basalt and related dykes and sills, may be vesicular  
 -2 or Pum = Pumice  
 -3 or TS = Tuffaceous Sediments



# LOG AND PROBE SHEET

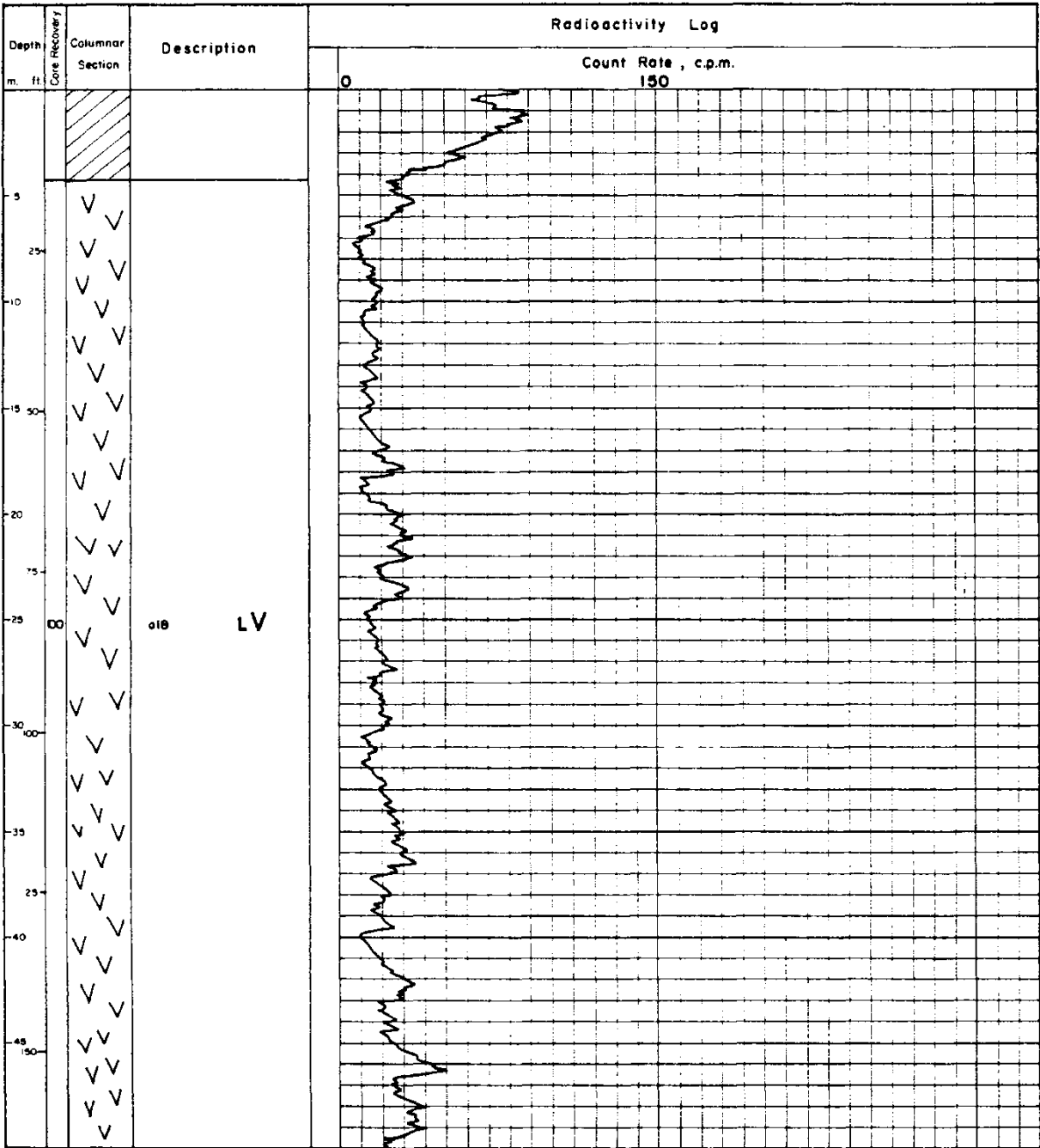
181

Method : D.D.  
 Hole No : CUP-164  
 Location : DONEN 291  
 Probe Depth : 83.2 m

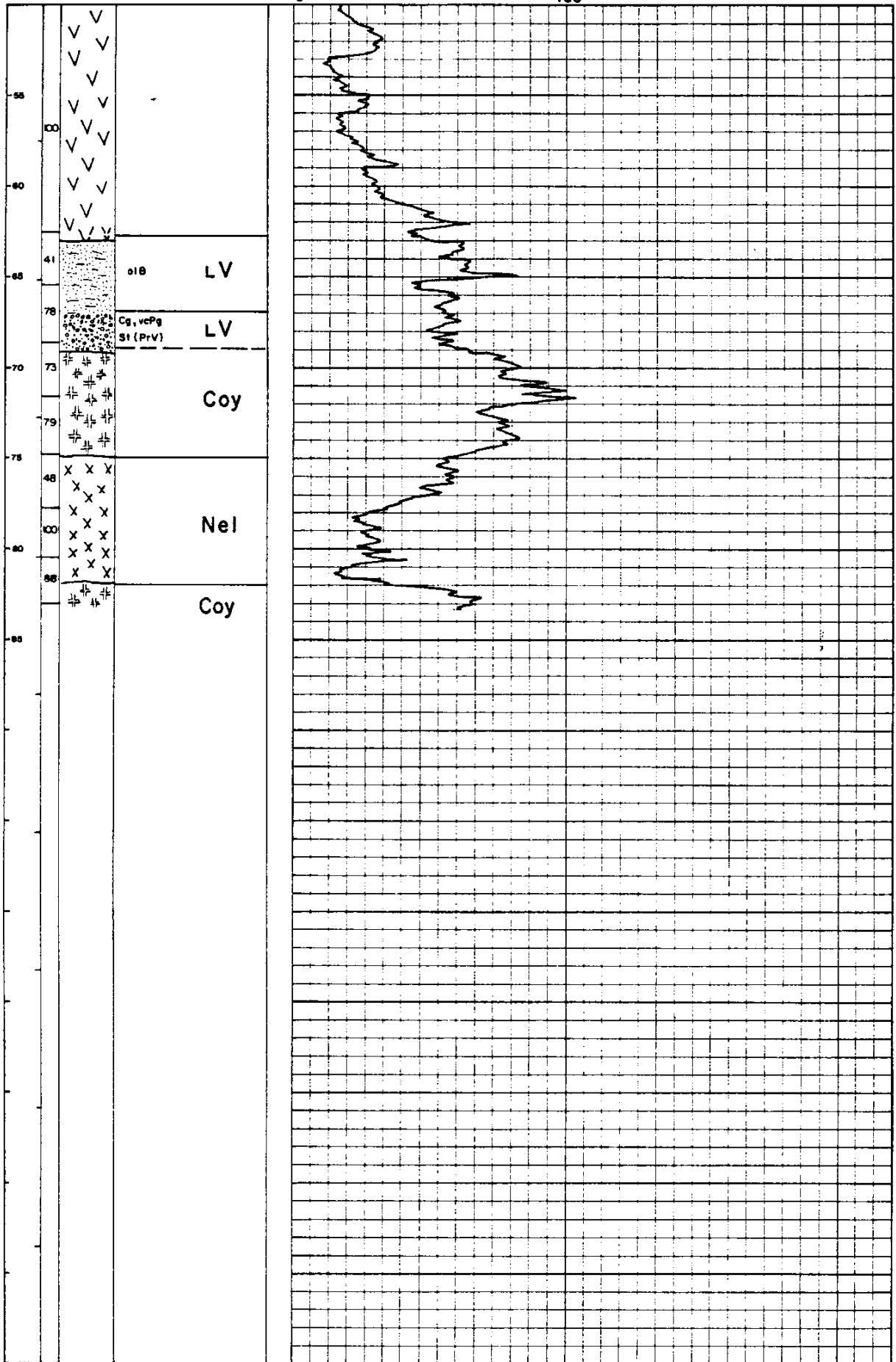
Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : \_\_\_\_\_

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 10 Sec.

Date : JULY 6, 1979  
 Logged & Probed  
 by : N. MEGURO K. YAMAGIZAWA  
M. McDONALD









# LOG AND PROBE SHEET

185

Method : D.D.  
 Hole N<sup>o</sup> : CUP-165  
 Location : DONEN 291  
 Probe Depth : 87.1 m

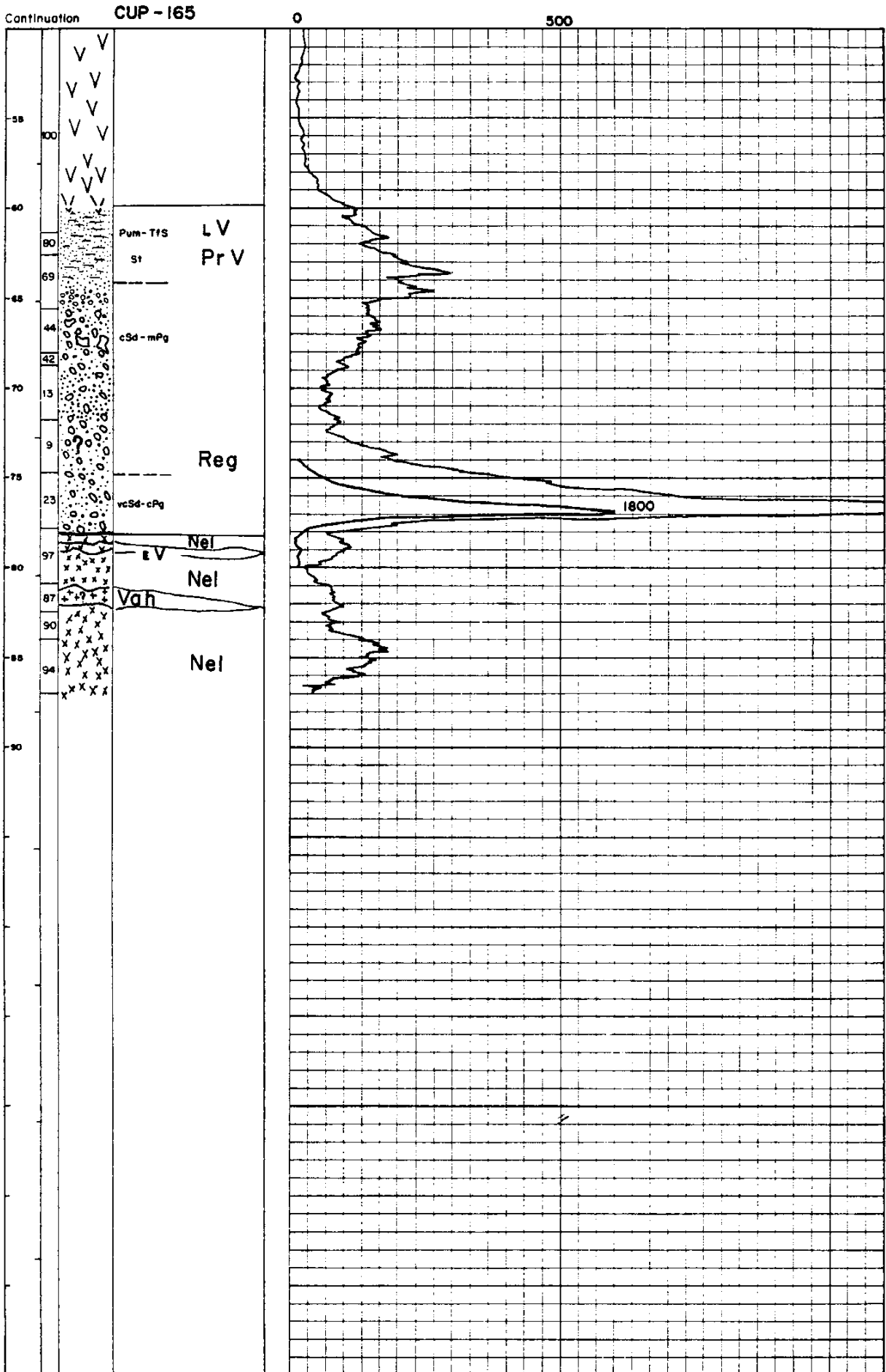
Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : \_\_\_\_\_

Detector : Geiger GP27 U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 10 Sec.

Date : JULY 8, 1979  
 Logged & Probed  
 by : N. MEGURO K. YANAGIZAWA  
M. McDONALD

Depth m. ft.	Core Recovery	Columnar Section	Description	Radioactivity Log	
				Count Rate, c.p.m.	500
		▨		0	
5		V V			
25		V V V			
10		V V V			
15		V V V			
20	100	V V V	oil LV		
25		V V V			
30	100	V V V			
35		V V V			
40		V V V			
45		V V V			
150		V V V			





# PNC EXPLORATION (CANADA) CO. LTD.

Hole No. : <b>-79 -CUP-166</b>	Project : <b>CUP LAKE</b>	Property : <b>DONEN 291</b>	Collared : <b>JULY 8, 1979</b>
Latitude : <b>5205.84</b>	Azimuth : _____	Dip Tests : _____	Completed : <b>JULY 10, 1979</b>
Departure : <b>1772.85</b>	Dip : <b>-90°</b>	m. _____	Core Size : <b>N.Q. 3</b>
Elevation : <b>1334.5 m</b>	Depth : <b>89.0 m</b>	End of hole _____	Logged by : <b>M. McDONALD</b>
			Checked by : <b>W. BULMER</b>

Depth m. ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0 - 5.79				Tricone							
5.79 - 7.16		5.79 7.16	6-2 PoV	assorted pebbles & cobbles -overburden							
7.16 - 63.24			LV	olivine basalt							

**EXPLANATION**

**POST VOLCANISM SEDIMENTS**  
recent sand and gravels generally brown in colour matrix sandy, coarsely bound

**LATE VOLCANICS**  
olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
generally grey in colour, matrix clay-like, good binder. Silty parting light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**

**CORYELL**  
Cay fine to medium grained dark reddish monzonite quartz syenite. High background radiation

**VALHALLA**  
Voh medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
Nel moderate to strongly foliated grey diorite - hornblende quartz diorite or granodiorite

**EARLY VOLCANICS**  
Ev fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

**LEGEND**

Post / Pre Volcanism Sediments (+ Regolith)

PoV - 1 or Bg = Boulder gravel 256 mm  
 - 2 or Cg = Cobble gravel 64 - 256  
 - 3 or vPg = very coarse Pebble gravel 32 - 64  
 - 4 or cPg = coarse Pebble gravel 16 - 32  
 - 5 or mPg = medium Pebble gravel 8 - 16  
 - 6 or fPg = fine Pebble gravel 4 - 8  
 - 7 or Gg = Gravel gravel 2 - 4  
 - 8 or vSd = very coarse Sand 1 - 2  
 - 9 or cSd = coarse Sand 1/2 - 1  
 - 10 or mSd = medium Sand 1/8 - 1/2  
 - 11 or fSd = fine Sand 1/16 - 1/8  
 - 12 or vSl = very fine Sand 1/32 - 1/16  
 - 13 or Sl = Silt 1/256 - 1/16  
 - 14 or cl = clay 1/256

Cbn = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite

**Late Volcanics**

LV - 1 or oIB = massive olivine basalt and related dykes and sills, may be vesicular  
 - 2 or Pum = Pumice  
 - 3 or TFS = Tuffaceous Sediments



# LOG AND PROBE SHEET

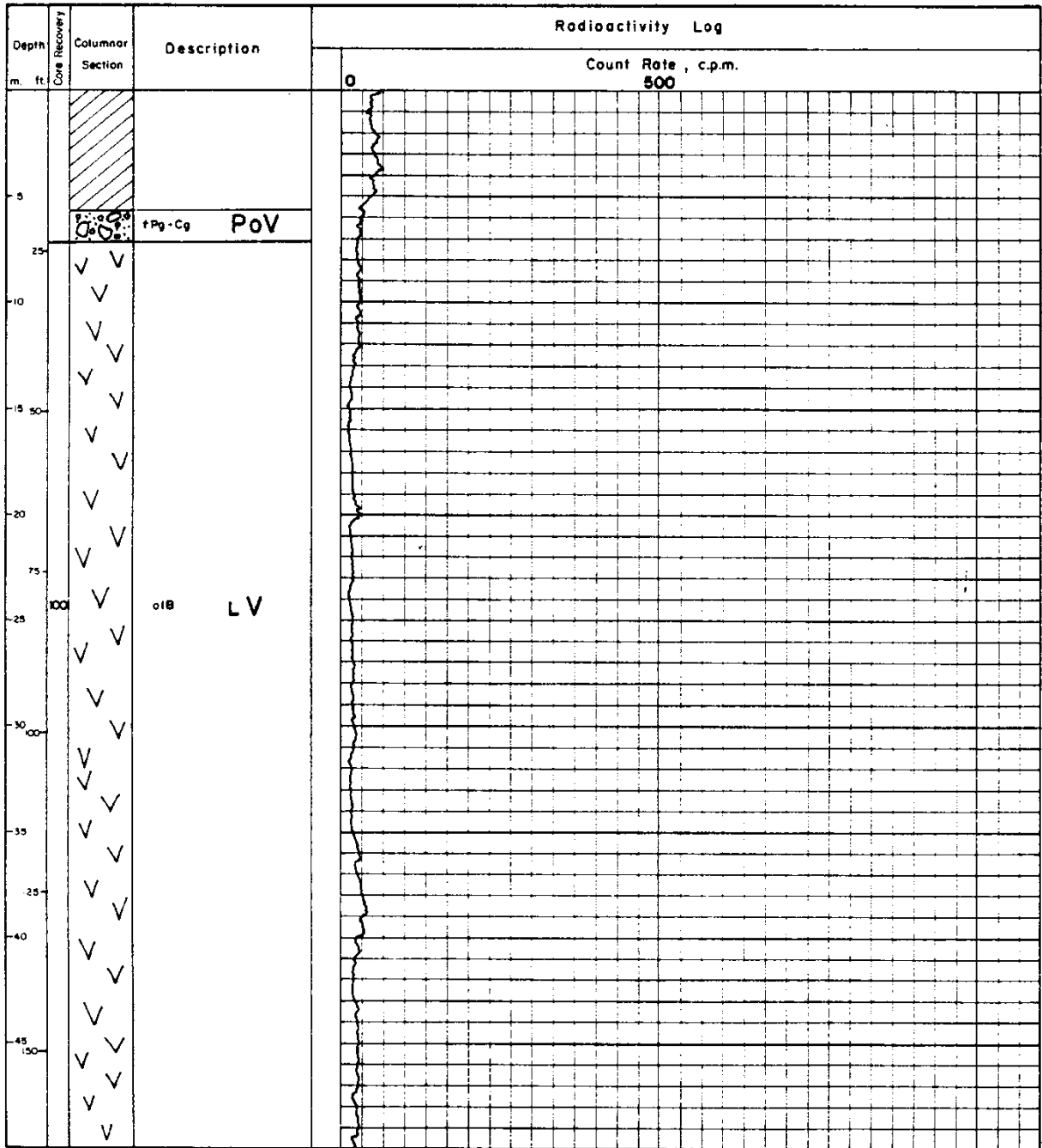
189

Method : D. D.  
 Hole N<sup>o</sup> : CUP-166  
 Location : DONEN 291  
 Probe Depth : 89.0 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery :

Detector : Geiger GP27 U  
 Monitor : TCS 603 R  
 Background : 80 cpm  
 Time Constant : 10 Sec.

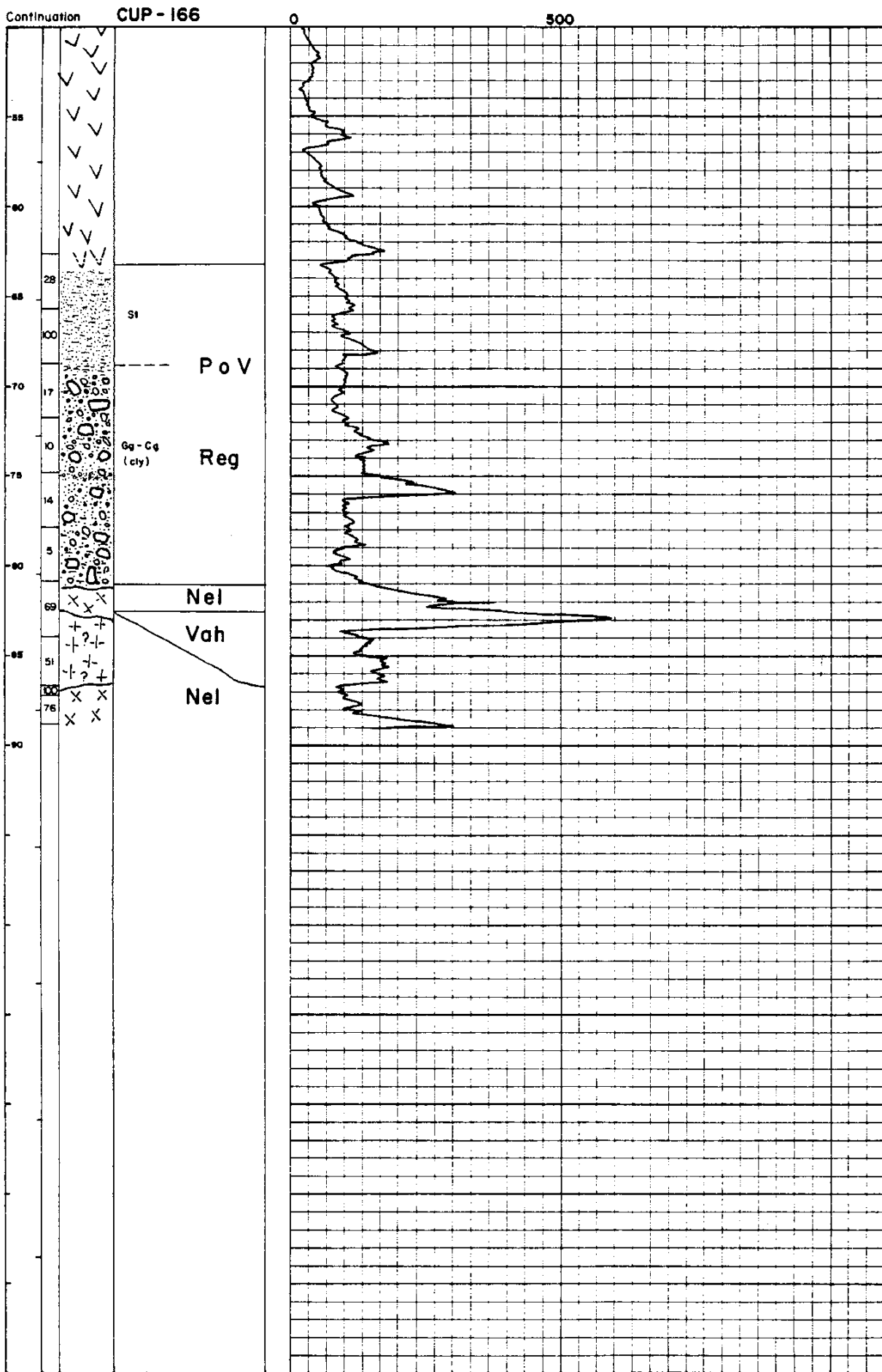
Date : JULY 10, 1979  
 Logged & Probed  
 by : N. MEGURO  
M. McDONALD



Continuation

CUP-166

85	V								
80	V								
65	V	62.78 63.09 63.24							
65		65.83	13	63.24 - 68.88 brown carbonaceous silt with black baked zone from 63.24 to approximately 65m					
70		68.88	PoV						
75		74.98	7-2 (14) Reg	68.88 - 81.07 assorted pebbles and cobbles with minor amounts of green clay at the top & bottom of the sections.					
80		78.02							U ppm
85	X	81.07	Nel	81.07 - 82.57 broken gneissic Nelson granodiorite	1	82.6	82.7	0.1	9.5
	+	84.12	Vah	82.57 - 86.86 possible Valhalla?	2	82.7	82.8	0.1	3.5
	+	86.86	Nel	86.86 - 89.0 gneissic Nelson granodiorite	3	82.8	82.9	0.1	3.0
90	X	89.0							



# PNC EXPLORATION (CANADA) CO. LTD.

192

Hole No. : 79-CUP-176	Project : CUP LAKE	Property : DONEN 317	Collared : APRIL 4, 1979
Latitude : 6734.99	Azimuth :	Dip Tests :	Completed : APRIL 5, 1979
Departure : 306.68	Dip : -90°	m.	Core Size : N.Q. 3
Elevation : 1296.5 m	Depth : 32.3 m	End of hole	Logged by : W. BULMER

Depth m. ft.	Columnar Section	From & To	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
<b>EXPLODED VIEW</b>												
0 - 9				Tricone								
9 - 12.5		5-2	Cbn	poorly sorted, light grey medium pebble to cobble gravel-carbonaceous								
12.5 - 13.9		11-10		fine to medium sand darker grey colour								
13.9 - 17.0		5-3		poorly sorted medium pebble to very coarse pebble gravel								
17.0 - 20.1		4	PrV	coarse pebble gravel-matrix washed out								
20.1 - 20.3		9-7		thinly laminated coarse sand to granule gravel-light grey mud interbeds-laminations have 5° dip								
20.3 - 21.3		11		light grey fine sand-few coarse pebbles								
21.3 - 22.5		4		coarse pebble gravel with darker grey matrix								
22.5 - 23.4		10		medium sand with few pebbles								
23.4 - 26.9		3		very coarse pebble gravel no matrix-washed out								
26.9 - 32.2			Vah	white biotite granite								

**EXPLANATION**

- POST VOLCANISM SEDIMENTS**  
recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS**  
olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
generally grey in colour, matrix clay-like, good binder. Silty parting light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )**
- CORYELL**  
fine to medium grained dark reddish monzonitic quartz syenite. High background radiothion
- VALHALLA**  
medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
moderate to strongly foliated grey biotite - hornblende quartz diorite or gneiss
- EARLY VOLCANICS**  
fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

**LEGEND**

- Post / Pre Volcanism Sediments (- Regolith)**
- 1-6 PoV - 1 or Bg = Boulder gravel 256 mm
- 2 or Cg = Cobble gravel 64-256
- 3 or vcPg = very coarse Pebble gravel 32-64
- 4 or cPg = coarse Pebble gravel 16-32
- 5 or mPg = medium Pebble gravel 8-16
- 6 or fPg = fine Pebble gravel 4-8
- 7 or Gg = Granule gravel 2-4
- 8 or vcSd = very coarse Sand 1-2
- 9 or cSd = coarse Sand 1/2-1
- 10 or mSd = medium Sand 1/4-1/2
- 11 or fSd = fine Sand 1/8-1/4
- 12 or vSd = very fine Sand 1/16-1/8
- 13 or Ss = Silt 1/256-1/16
- 14 or cl = clay 1/256
- Cbn = Carbonaceous**
- H = Hematite**
- S = Sulphide**
- Peg = Pegmatite**
- Late Volcanics**
- LV-1 or aLB = massive olivine Basalt and related dykes and sills, may be vesicular
- 2 or Pum = Pumice
- 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

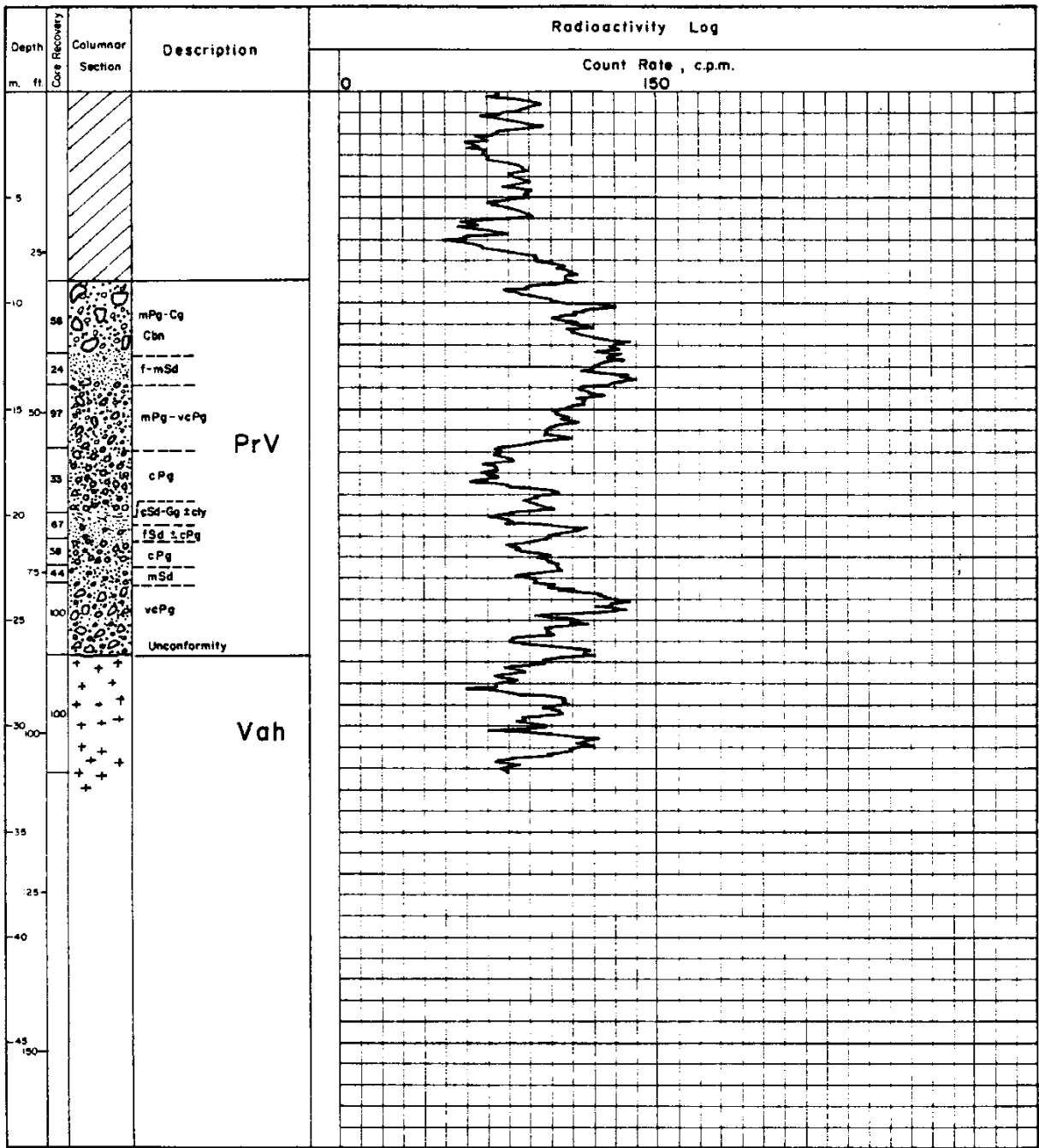
193

Method : D.D.  
 Hole N<sup>o</sup> : CUP-176  
 Location : DONEN 317  
 Probe Depth : 32.3 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 73% - Total  
 66% - PrV ? sediment,  
 100% - Granite

Detector : Geiger GP 27 U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 10 Sec.

Date : APRIL 5, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

194

Hole No. : 79-CUP-177	Project : CUP LAKE	Property : DONEN 317	Collared : APRIL 5, 1979
Latitude : 6538.75	Azimuth :	Dip Tests :	Completed : APRIL 7, 1979
Departure : 305.10	Dip : -90°	m.	Core Size : N.Q. 3
Elevation : 1297.5 m	Depth : 41.4 m	End of hole	Logged by : W. BULMER

Depth m. ft	Columnar Section	From & To ASSO?	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
0 - 9				Tricone								
9.0 - 10.2		PoV Q14 ?		9 - 10.2 medium grained sand plus clay-brown colour								
10.2 - 13.6		6		10.2 - 13.6 fine pebble gravel-graded bedding evident-medium grey colour								
13.6 - 17.4		13		13.6 - 17.4 fine green/grey/brown coloured silt								
17.4 - 19.4		3		17.4 - 19.4 very coarse pebble gravel no matrix								
19.4 - 20.4		PrV		19.4 - 20.4 coarse grey/white sand								
20.4 - 27.1		4+14		20.4 - 27.1 coarse pebble gravel sand plus mud matrix								
27.1 - 37.3		Reg		27.1 - 37.3 green epidote-rich plus chlorite granite regolith								
37.3 - 41.4		unconformity	Vah	37.3 - 41.4 white biotite Valhalla Granite								

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
Recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS**  
dyine basalt massive, vesicular or as thin silt, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
generally gray in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES (increasing age)**
- CORVELL**  
Coy fine to medium grained dark reddish monzonite quartz syenite high background radiation
- VALHALLA**  
Vah medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
Nel moderate to strongly foliated gray biotite - hornblende quartz diorite or granodiorite
- EARLY VOLCANICS**  
eV fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (+ Regolith)**
- ie PoV-1 or Bg = Boulder gravel 64-256 mm  
 -2 or Cg = Cobble gravel 32-64  
 -3 or vCPg = very coarse Pebble gravel 16-32  
 -4 or cPg = coarse Pebble gravel 8-16  
 -5 or mPg = medium Pebble gravel 4-8  
 -6 or fPg = fine Pebble gravel 2-4  
 -7 or Gg = Granule gravel 1-2  
 -8 or vCSd = very coarse Sand 1/2-1  
 -9 or cSd = coarse Sand 1/8-1/2  
 -10 or mSd = medium Sand 1/8-1/4  
 -11 or fSd = fine Sand 1/8-1/8  
 -12 or vFSd = very fine Sand 1/256-1/64  
 -13 or St = Silt 1/256  
 -14 or cly = clay 1/256
- Other Symbols:**  
 Cbn = Carbonaceous    H = Hematite    S = Sulphide    Peg = Pegmatite  
 LV = Late Volcanics  
 LV-1 or oVB = massive dyine Basalt and related dyes and silt, may be vesicular  
 -2 or Pum = Pumice  
 -3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

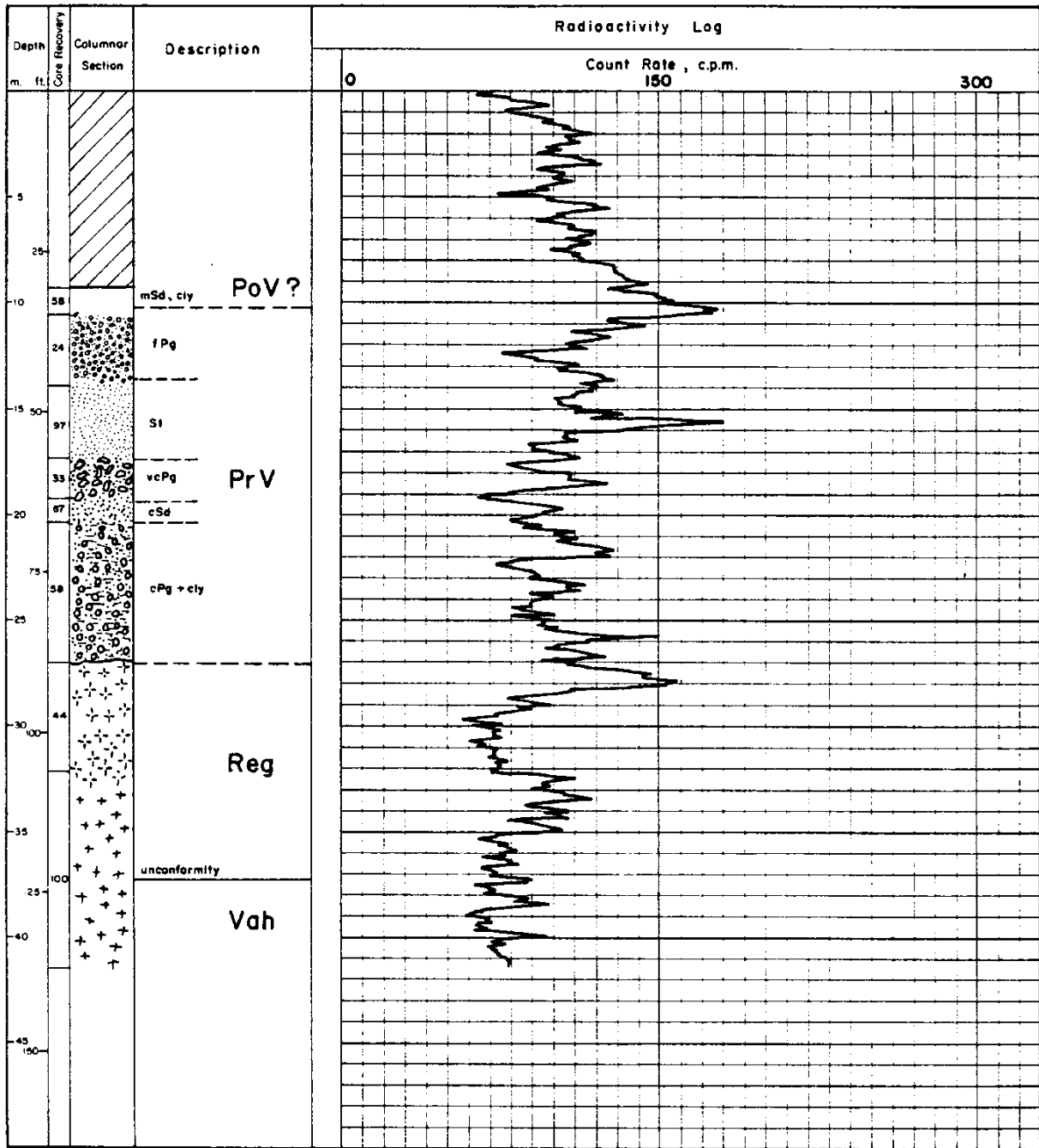
195

Method : D.D.  
 Hole № : CUP-177  
 Location : DONEN 317  
 Probe Depth : 41.4 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 73.5% - Total  
 66% - PrV? sed., 100% - Granite

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 10 Sec.

Date : APRIL 7, 1979  
 Logged & Probed by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

196

Hole No. : 79-CUP-178  
 Latitude : 6309.45  
 Departure : 302.34  
 Elevation : 1298.4 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 26.2 m

Property : DONEN 316  
 Dip Tests :  
 m.  
 End of hole

Collared : APRIL 9, 1979  
 Completed : APRIL 10, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m. ft.	Columnar Section	From & To	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	F ppm
0 - 9				Tricone								
9.1												
9 - 14.0			3 PrV ?	9 - 14.0 very coarse pebble gravel grey with yellow tinge to mud matrix (whats left of it) recovery very poor		178-12	10.36 10.46	10.46 10.56	0.1 ..	0.051 0.012		570
14.0 - 18.5			Reg ③	14.0 - 18.5 yellow brown (sulphide stain) granite regolith-biotite rich								
18.5 - 26.2			Vah ?	18.5 - 26.2 coarse grained brown stained (sulphides) Granite A phase of Valhalla?								

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 alvina basalt massive, vesicular or as thin silt, may be associated with auriferous and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES (increasing age)**

**CORVILL**  
 Coy fine to medium grained dark reddish megacrystic quartz syenite high background radiation

**VALHALLA**  
 Vah medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey biotite - hornblende quartz diorite or gneiss

**EARLY VOLCANICS**  
 Ev fine grained chloritic greenstone - generally badly fractured and contains abundant hematite streaks throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

PoV - 1 or Bg = Boulder gravel  
 - 2 or Cg = Cobble gravel  
 - 3 or vCg = very coarse Pebble gravel  
 - 4 or cPg = coarse Pebble gravel  
 - 5 or mPg = medium Pebble gravel  
 - 6 or fPg = fine Pebble gravel  
 - 7 or Gg = Granule gravel  
 - 8 or vSd = very coarse Sand  
 - 9 or cSd = coarse Sand  
 - 10 or mSd = medium Sand  
 - 11 or fSd = fine Sand  
 - 12 or vFSd = very fine Sand  
 - 13 or S1 = Silt  
 - 14 or cl = clay

**Post / Pre Volcanism Sediments (+ Regolith)**

Cbn = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite

**Late Volcanics**

LV - 1 or aB = massive alvina Basalt and related dykes and sills, may be vesicular  
 - 2 or Psh = Pumice  
 - 3 or TFS = Tuffaceous Sediments



# LOG AND PROBE SHEET

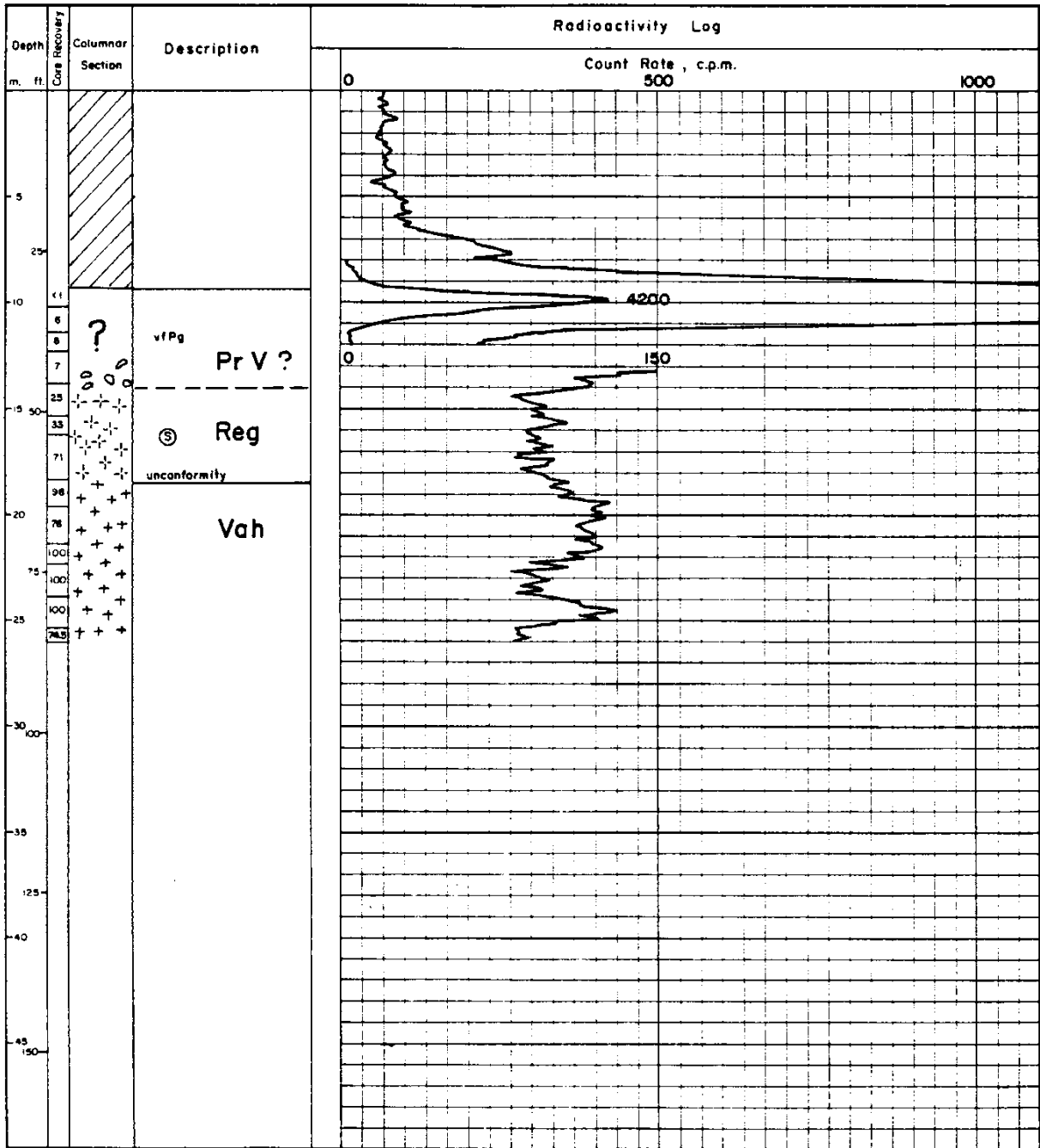
197

Method : D. D.  
 Hole No : CUP-178  
 Location : DONEN 316  
 Probe Depth : 26.0 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 60% - Total  
 7% - PrV? sediment,  
 48% - Reg., 92% - Granite

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 10 Sec.

Date : APRIL 10, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

198

Hole No. : <b>79-CUP-179</b>	Project : <b>CUP LAKE</b>	Property : <b>DONEN 316</b>	Collared : <b>APRIL 10, 1979</b>
Latitude : <b>6292.87</b>	Azimuth :	Dip Tests :	Completed : <b>APRIL 11, 1979</b>
Departure : <b>201.48</b>	Dip : <b>-90°</b>	m.	Core Size : <b>N.Q. 3</b>
Elevation : <b>1296.2 m</b>	Depth : <b>23.2 m</b>	End of hole	Logged by : <b>W. BULMER</b>

Depth m. ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
	(Hatched pattern)			0 - 4.7 Tricone								
5	(Pebbles in matrix)	4.7	5-3	4.7 - 9.4 medium to very coarse pebble gravel-poorly sorted-mostly granitic pebbles-no matrix-washed out								
25	(Sand and clay)	9.4	15-14 Cbn	9.4 - 9.7 medium grained sand plus grey-clay								
30	(Pebbles in matrix)	9.7	PV 5-2	9.7 - 12.1 poorly sorted pebble - cobble gravel-little matrix								
15	(Pebbles in matrix)	12.1	5-3 14 Cbn	12.1 - 15.5 medium to very coarse pebble gravel matrix intact-grey colour due to carbonaceous material								
15	(Granite)	15.5	unconfom	15.5 - 23.1 Valhalla Granite								
15	(Granite)	17.6	Vah	15.5 - 17.6 broken epidote rich granite								
20	(Granite)	17.6	Vah	17.6 - 23.1 white biotite Valhalla Granite-epidote-rich in places-slightly altered granite. Xenolith at 19.6 m								
25												
30												
35												
40												
45												

### EXPLANATION

- POST VOLCANISM SEDIMENTS  
- recent sand and gravels generally  
brown in colour matrix sandy,  
loosely bound
- LATE VOLCANICS  
- olivine basalt massive, vesicular  
or as thin sills, may be associated  
with pyroclastic and related tuffaceous  
sediments
- PRE VOLCANISM SEDIMENTS  
- generally gray in colour, matrix  
clay-like, good binder. Silty  
portion light brown in colour,  
contains carbonaceous material
- REGALITH LAYER  
- may or may not be well developed,  
and may or may not contain  
overlying sediments

- INTRUSIVES ( increasing age )  
**CORYELL**  
Coy fine to medium grained dark reddish  
magnetite quartz syenite high  
background radiation
- VALHALLA**  
Vah medium to coarse grained white  
prophyritic biotite granite large pink  
feldspar phenocrysts common
- NELSON**  
Nel moderate to strongly foliated gray  
biotite - hornblende quartz diorite  
or granodiorite
- EARLY VOLCANICS  
eV fine grained chloritic greenstone-  
generally badly fractured and  
contains abundant hematite stringers  
throughout

### LEGEND

- PV Post / Pre Volcanism Sediments (+ Regolith)
- 1-8 Pv-1 or Bg = Boulder gravel
- 2 or Cg = Cobble gravel
- 3 or vPg = very coarse pebble gravel
- 4 or cPg = coarse pebble gravel
- 5 or mPg = medium pebble gravel
- 6 or fPg = fine pebble gravel
- 7 or Gg = Granule gravel
- 8 or vSd = very coarse sand
- 9 or cSd = coarse sand
- 10 or mSd = medium sand
- 11 or fSd = fine sand
- 12 or vSl = very fine sand
- 13 or Sl = silt
- 14 or cl = clay
- 256 - mm
- 64 - 256
- 32 - 64
- 6 - 32
- 8 - 16
- 4 - 8
- 2 - 4
- 1 - 2
- 1/2 - 1
- 1/4 - 1/2
- 1/8 - 1/4
- 1/16 - 1/8
- 1/32 - 1/16
- 1/64 - 1/32
- 1/128 - 1/64
- 1/256 - 1/128
- Cbn = Carbonaceous
- H = Hematite
- S = Sulphide
- Pag = Pegmatite
- LV Late Volcanics
- LV-1 or eV = massive olivine basalt and related dykes  
and sills, may be vesicular
- 2 or Pum = Pumice
- 3 or TFS = Tuffaceous Sediments

# LOG AND PROBE SHEET

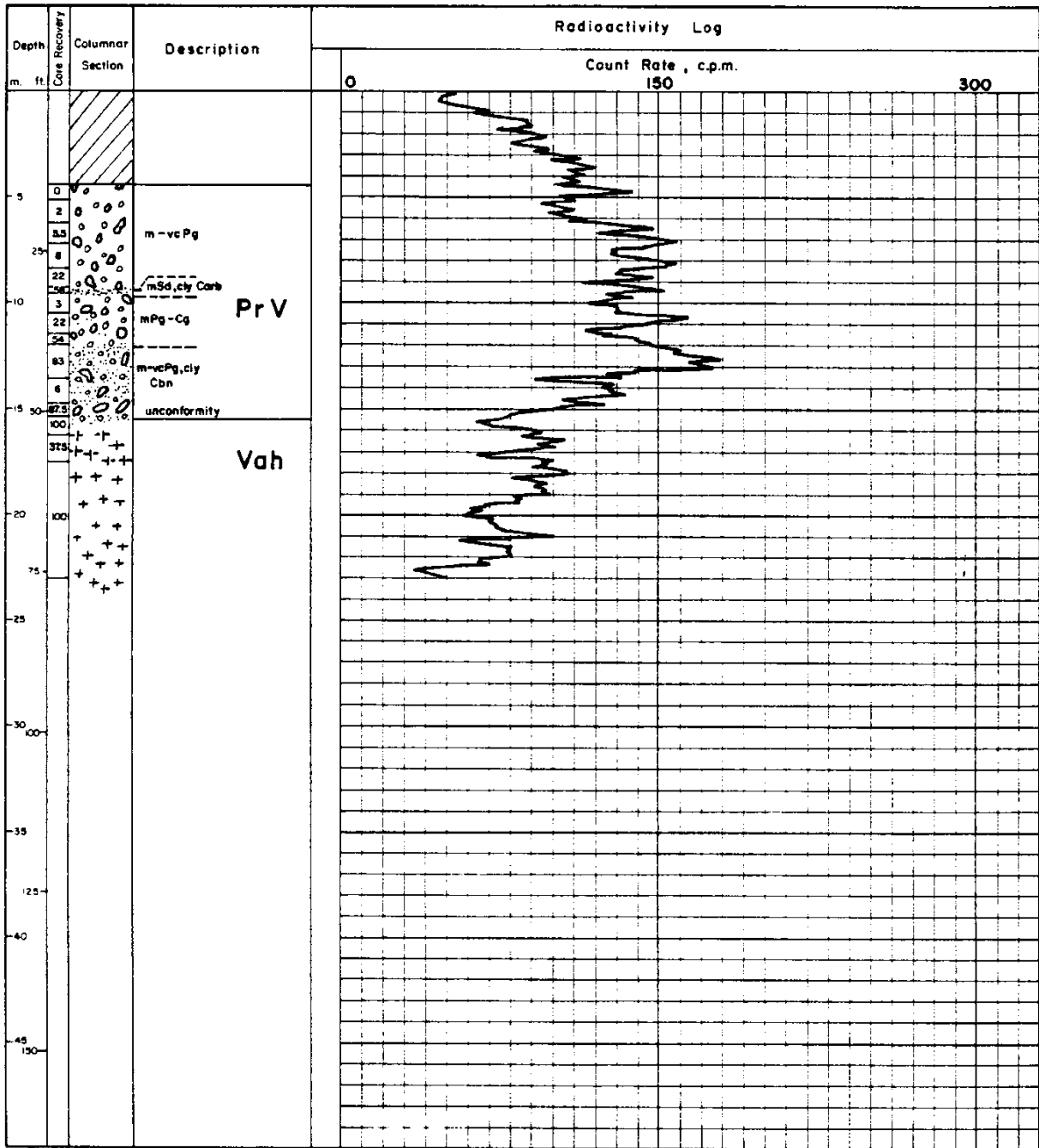
199

Method : D.D.  
 Hole No : CUP - 179  
 Location : DONEN 316  
 Probe Depth : 23.0 m

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 52% - Total  
 4% - PoV sed., 40% PrV sed.,  
 90% - Granite

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 90 cpm  
 Time Constant : 10 Sec.

Date : APRIL 11, 1979  
 Logged & Probed  
 by : T. OBARA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

200

Hole No. : 79 - CUP-180  
 Latitude : 6199.58  
 Departure : 950.48  
 Elevation : 1311.5 m

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 17.1 m

Property : DONEN 307  
 Dip Tests :  
 m.  
 End of hole

Collared : APRIL 23, 1979  
 Completed : APRIL 23, 1979  
 Core Size : N.Q. 3  
 Logged by : W. BULMER

Depth m ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
0				0 - 4.8 Tricone								
4.8			4/4 PV Cbn	4.8 - 8.8 coarse poorly sorted pebble gravel with carbonaceous grey mud matrix								
8.8			9 Reg	8.8 - 12.8 coarse granite sand epidote- rich-epidote-rich								
12.8			Vah	12.8 - 17 broken Valhalla granite orange colour to altered feldspars								
17.0												
17.1												

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally  
 brown in colour matrix sandy,  
 loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular  
 or as thin sills, may be associated  
 with pumice and related tuffaceous  
 sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour, matrix  
 clay-like, good binder. Silty  
 portion light brown in colour,  
 contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed,  
 and may or may not contain  
 overlying sediments

**INTRUSIVES ( increasing age )**

**CORYELL**  
 Coy fine to medium grained dark reddish  
 monzonite quartz syenite, high  
 background radiation

**VALHALLA**  
 Vah medium to coarse grained white  
 prophyritic biotite granite large post  
 feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated grey  
 biotite - hornblende quartz diorite  
 or gneiss

**EARLY VOLCANICS**  
 EV fine grained chloritic greenstone-  
 generally badly fractured and  
 contains abundant hematite stringers  
 throughout

### LEGEND

**Post / Pre Volcanism Sediments (- Regolith)**

PoV or PV  
 1e PoV-1 or Bg = Boulder gravel 256 mm  
 -2 or Cg = Cobble gravel 64-256  
 -3 or vCPg = very coarse Pebble gravel 32-64  
 -4 or cPg = coarse Pebble gravel 16-32  
 -5 or mPg = medium Pebble gravel 8-16  
 -6 or fPg = fine Pebble gravel 4-8  
 -7 or Gg = Granule gravel 2-4  
 -8 or vSd = very coarse Sand 1/2-2  
 -9 or cSd = coarse Sand 1/2-1  
 -10 or mSd = medium Sand 1/8-1/2  
 -11 or fSd = fine Sand 1/8-1/4  
 -12 or vSl = very fine Sand 1/4-1/8  
 -13 or Sl = Silt 1/256-1/8  
 -14 or cl = clay 1/256

**Cbn = Carbonaceous H = Hematite S = Sulphide Pcg = Pegmatite**

**Late Volcanics**  
 LV -1 or oIB = massive olivine Basalt and related dykes  
 and sills, may be vesicular  
 -2 or Pum = Pumice  
 -3 or TTS = Tuffaceous Sediments

# LOG AND PROBE SHEET

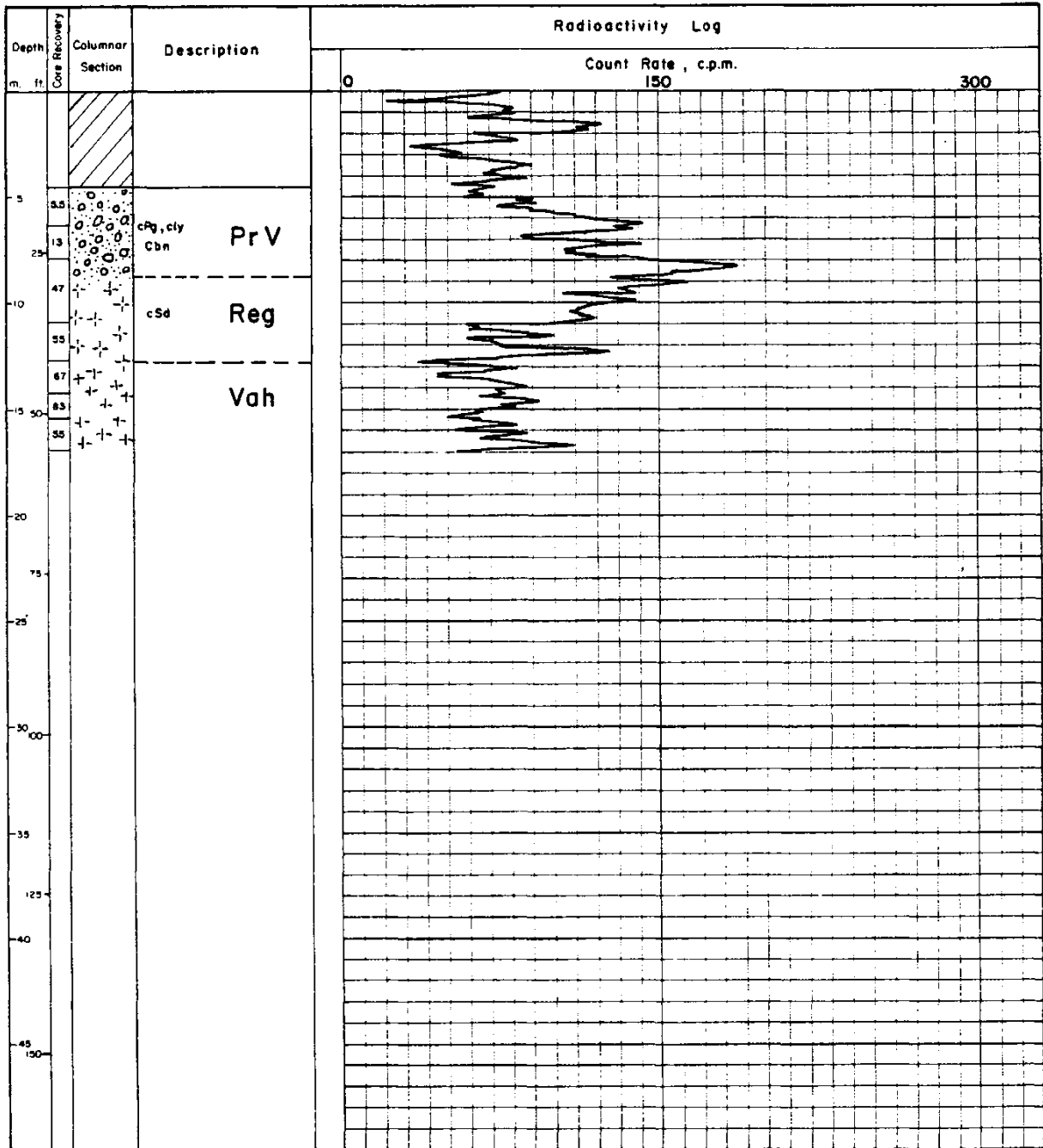
201

Method : D.D.  
 Hole N<sup>o</sup> : CUP-180  
 Location : DONEN 307  
 Probe Depth : 17.0 m.

Hole Angle : VERTICAL  
 Core Size : NQ  
 Core Recovery : 44.5%-Total  
 9%-PrV sed., 58%-Granite

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 40 cpm  
 Time Constant : 6 Sec.

Date : APRIL 23, 1979  
 Logged & Probed  
 by : T. OBARA K. YAMAGIZAWA  
 W. BULMER



# PNC EXPLORATION (CANADA) CO. LTD.

202

Hole No. : 79-CUP-181  
 Latitude : 6055.99  
 Departure : 744.11  
 Elevation : 1318.7 m.

Project : CUP LAKE  
 Azimuth :  
 Dip : -90°  
 Depth : 51.5 m

Property : DONEN 307  
 Dip Tests :  
 m.  
 End of hole

Collared : JUNE 24, 1979  
 Completed : JUNE 26, 1979  
 Core Size : N.Q. 3  
 Logged by : M. McDONALD  
 Checked by : W. BULMER

Depth m ft	Columnar Section	From To	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	V
0 - 6.7				Tricone								
6.7 - 12.49		6.7	9 PrV	coarse grey sand with mud matrix - occasional cobble present								
12.49 - 12.72		12.49 12.72	1 LV	probable basalt block		80-99	19.0-19.9	19.1-20.0	0.1	.002	.001	.020
12.72 - 19.69		12.72	13 PrV	light brown carbonaceous silt		90-99	20.0-20.9	20.1-20.9	0.1	.001	.002	.020
19.69 - 21.64		19.69	9	coarse grey sand-crude layering & carbonaceous mud matrix		100-103	21.0-21.3	21.1-21.4	0.1	.002	.002	.005
21.64 - 23.16		21.64	10	medium grained sand with few pebbles-including greenstone-green tinge to rock		104-109	21.4-21.9	21.4-21.9	0.1	.001	.001	.001
23.16 - 30.78		23.16	1 LV	olivine basalt		110-120	22.0-23.0	22.1-23.3	0.1	.043	.001	.010
30.78 - 32.3		30.78	9-4 PrV	coarse grey brown sand and gravel with some coarse pebbles		121-129	23.3-24.2	23.4-24.2	0.1	.004	.002	.001
32.3 - 41.45		32.3 33.83	Reg	rotten Valhalla granite		131-137	24.3-24.9	24.4-25.0	0.1	.001	.001	.025
41.45 - 51.51		41.45 46.93 48.46	Vah	broken - good Valhalla granite		138-153	27.0-32.4	27.1-32.4	0.1	.057	.001	.020

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin silt, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally grey in colour matrix clay, red, good binder. Silty partion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**  
**CORVELL**  
 fine to medium grained dark reddish monzonite quartz syenite high background radiation

**VALHALLA**  
 medium to coarse grained white granophyre biotite granite large perthite feldspar phenocrysts common

**NELSON**  
 moderate to strongly foliated grey biotite - hornblende quartz diorite or gneiss-diorite

**EARLY VOLCANICS**  
 fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

10 PrV - 1 or Bg = Boulder gravel 256 mm  
 - 2 or Cg = Cobble gravel 64-256  
 - 3 or vCg = very coarse Pebble gravel 32-64  
 - 4 or cPg = coarse Pebble gravel 16-32  
 - 5 or mPg = medium Pebble gravel 8-16  
 - 6 or fPg = fine Pebble gravel 4-8  
 - 7 or Gg = Granite gravel 2-4  
 - 8 or vCsd = very coarse Sand 1-2  
 - 9 or cSd = coarse Sand 1/2-1  
 - 10 or mSd = medium Sand 1/4-1/2  
 - 11 or fSd = fine Sand 1/8-1/4  
 - 12 or vSd = very fine Sand 1/16-1/8  
 - 13 or Ss = Silt 1/256-1/16  
 - 14 or cl = clay < 1/256

**Cl = Carbonaceous H = Hematite S = Sulphide Peg = Pegmatite**

**Late Volcanics**  
 LV - 1 or oIB = massive olivine basalt and related dykes and sills, may be vesicular  
 - 2 or Pum = Pumice  
 - 3 or TTS = Tuffaceous Sediments

# LOG AND PROBE SHEET

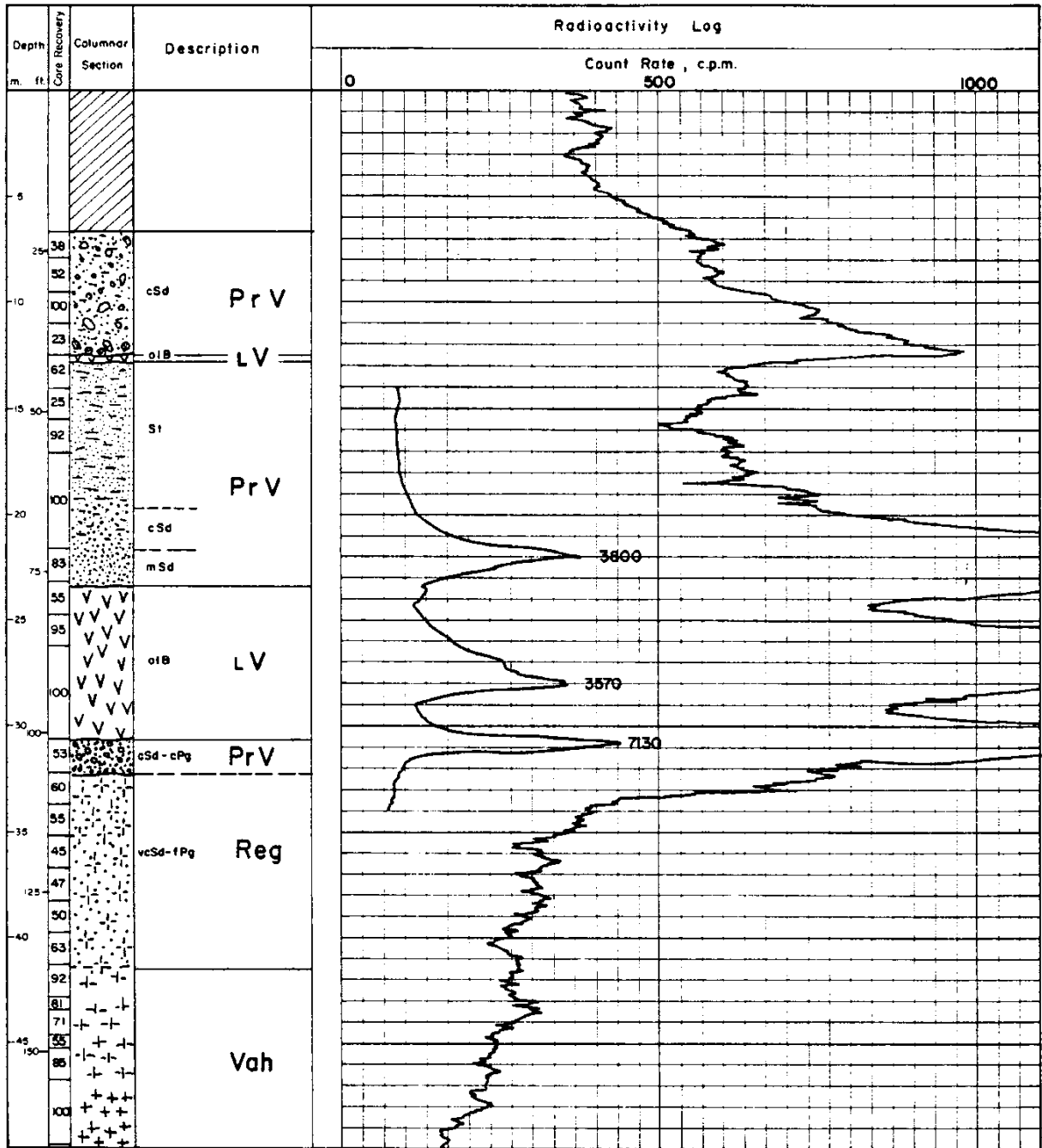
203

Method : **D. D.**  
 Hole N<sup>o</sup> : **CUP-181**  
 Location : **DONEN 307**  
 Probe Depth : **50.50 m**

Hole Angle : **VERTICAL**  
 Core Size : **NQ**  
 Core Recovery :

Detector : **Geiger GP27U**  
 Monitor : **TCS 603 R**  
 Background : **110 cpm**  
 Time Constant : **10 Sec.**

Date : **JUNE 26, 1979**  
 Logged & Probed  
 by : **K. YANAGIZAWA**  
**M. McDONALD**









# PNC EXPLORATION (CANADA) CO. LTD.

206

Hole No. : 79-CUP-182	Project : CUP LAKE	Property :	Collared :
Latitude : 6090.68	Azimuth :	Dip Tests :	Completed :
Departure : 1217.24	Dip :	m.	Core Size : NQ
Elevation : 1304.2 m	Depth : 14.6 m.	End of hole	Logged by : K. YANAGIZAWA

Depth m. ft	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay	
										U <sub>3</sub> O <sub>8</sub>	Th
0 - 10.4	Casing			0 - 10.4 Casing							
10.4 - 12.4	Pebbles	10.4	PoV	10.4 - 12.4 brown color mud matrix with granite and basalt pebble gravel many quartz, granite, and basalt granules							
12.4 - 12.5	Regolith	12.4	Val	12.4 - 12.5 greenish-gray color regolith							
12.5 - 14.6	Granite	12.5	Val	12.5 - 14.6 white Valhalla granite							

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
**PoV** recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS**  
**LV** olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
**PvV** generally grey in colour, matrix clay - silty, sandier - silty particles light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
**Reg** may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )**  
**CORYELL**  
**Coy** fine to medium grained dark reddish mafic quartz syenite. High background radiation
- VALHALLA**  
**Val** medium to coarse grained white porphyritic biotite granite large pink feldspar phenocrysts common
- NELSON**  
**Nel** moderate to strongly foliated grey biotite - hornblende quartz diorite or granodiorite
- EARLY VOLCANICS**  
**eV** fine grained chloritic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- Post / Pre Volcanism Sediments (+ Regolith)**
- |    |               |                             |              |
|----|---------------|-----------------------------|--------------|
| 1a | PoV - 1 or Bg | = Boulder gravel            | 256 mm       |
|    | - 2 or Cg     | = Cobble gravel             | 64 - 256     |
|    | - 3 or vCPg   | = very coarse Pebble gravel | 32 - 64      |
|    | - 4 or cPg    | = coarse Pebble gravel      | 16 - 32      |
|    | - 5 or mPg    | = medium Pebble gravel      | 8 - 16       |
|    | - 6 or fPg    | = fine Pebble gravel        | 4 - 8        |
|    | - 7 or Gg     | = Gravel gravel             | 2 - 4        |
|    | - 8 or vCSd   | = very coarse Sand          | 1 - 2        |
|    | - 9 or cSd    | = coarse Sand               | 1/2 - 1      |
|    | - 10 or mSd   | = medium Sand               | 1/4 - 1/2    |
|    | - 11 or fSd   | = fine Sand                 | 1/8 - 1/4    |
|    | - 12 or vFSd  | = very fine Sand            | 1/16 - 1/8   |
|    | - 13 or Ss    | = silt                      | 1/256 - 1/16 |
|    | - 14 or cl    | = clay                      | 1/256        |
- CBn = Carbonaceous    H = Hematite    S = Sulphide    Pgg = Pegmatite**
- Late Volcanics**
- |              |  |
|--------------|--|
| LV - 1 or eB | = massive olivine basalt and related dykes and sills, may be vesicular |
| - 2 or Pum   | = Pumice   |

# LOG AND PROBE SHEET

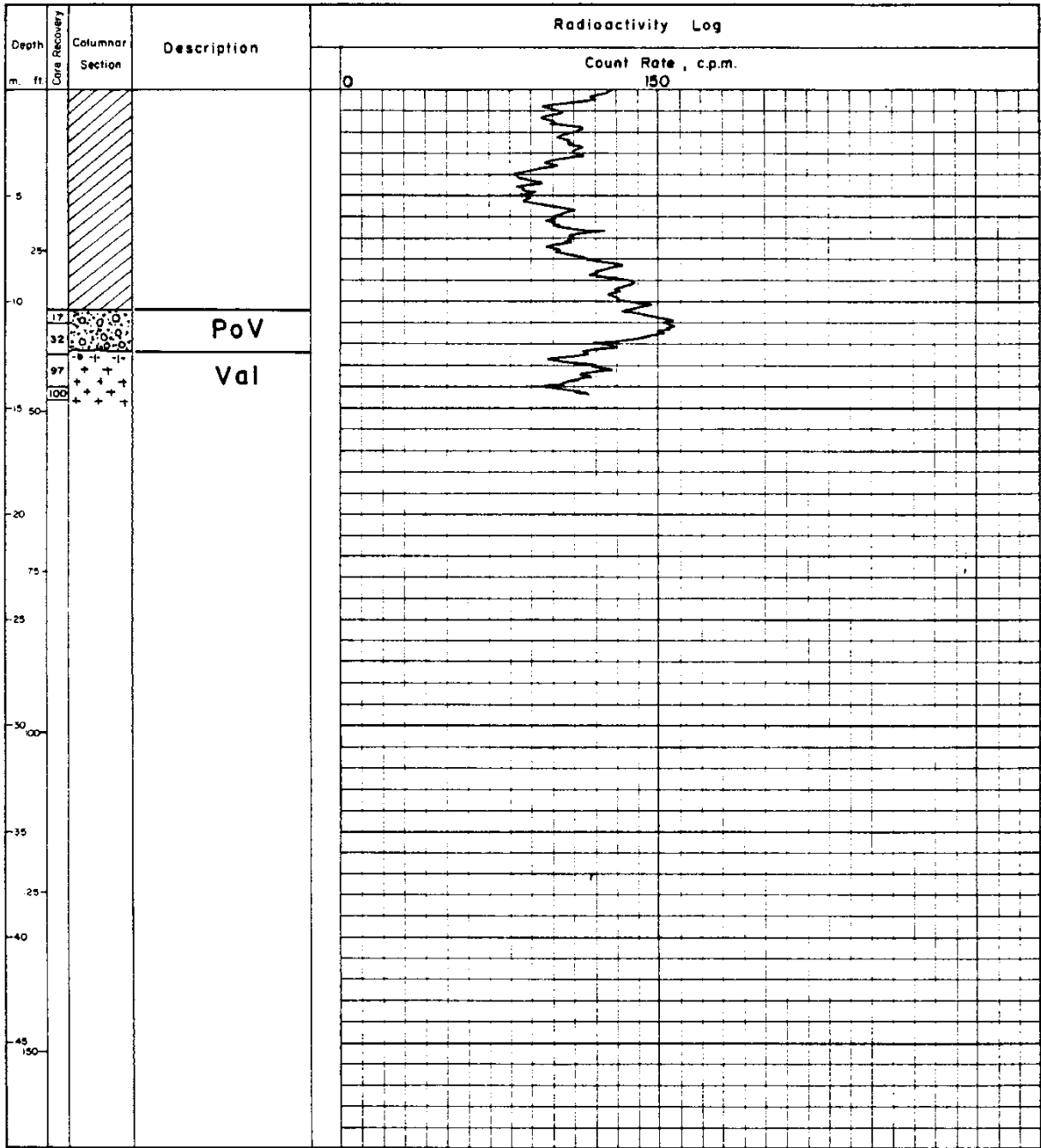
207

Method : D.D.  
 Hole No : CUP 182  
 Location :  
 Probe Depth : 14.5 m

Hole Angle : VERTICAL  
 Core Size : NQ 3  
 Core Recovery : TOTAL 54%

Detector : Geiger GP 27 U  
 Monitor : TCS 603 R  
 Background : 100 cpm  
 Time Constant : 10 Sec.

Date : JULY 26, 1979  
 Logged & Probed by : MEGURO  
 YANAGIZAWA



# PNC EXPLORATION (CANADA) CO. LTD.

208

Hole No. : 79-CUP-183  
 Latitude : 6906.87  
 Departure : 704.78  
 Elevation : 1290.7 m

Project : CUP LAKE  
 Azimuth :  
 Dip :  
 Depth : 21.3 m

Property :  
 Dip Tests :  
 m.  
 End of hole

Collared :  
 Completed :  
 Core Size : NQ  
 Logged by : K. YANAGIZAWA

Depth m ft.	Columnar Section	From & To Assay	Unit	Description	Rock Sample	Sample NR.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
	/ / / / /			0 - 3.0 Casing								
5	o o o o o	3.0		3.0 - 15.1 brown color mud matrix and quartz, granite and basalt granules granite and basalt pebble gravel gneiss cobble gravel								
10	o o o o o		PoV	15.1 - 15.2 gray color mud matrix with granite and porphyrite pebble gravel granite and quartz granules organic material								
15	o o o o o	15.1		15.2 - 15.21 gray color tuff								
15	o o o o o		PrV(?)	15.21 - 17.3 gray color mud matrix with granite and porphyrite pebble gravels granite and quartz granules, organic material								
20	+ + + + +	17.3		17.3 - 17.5 broken Valhalla granite								
20	+ + + + +		Vah	17.5 - 21.2 Valhalla granite, green white color								
25	+ + + + +	21.2		21.2 - 21.21 grayish-green color clay zone								
25	+ + + + +			21.21 - 21.3 Valhalla granite, green white color								
30												
35												
40												
45												
150												

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olivine basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally gray in colour, matrix clay-like, good binder. Silty portion light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**  
**CORYELL**  
 Cey fine to medium grained dark reddish monzonite quartz syenite. High background radiation

**VALHALLA**  
 Valh medium to coarse grained white porphyrite biotite granite large and feldspar phenocrysts common

**NELSON**  
 Nel medium to strongly foliated gray biotite - hornblende quartz diorite or gneiss

**EARLY VOLCANICS**  
 Ev fine grained chlorite greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

**Post / Pre Volcanism Sediments (+ Regolith)**

PoV or PrV

1s. PoV - 1 or Bg = Boulder gravel 84 - 256 mm  
 - 2 or Cg = Cobble gravel 32 - 64  
 - 3 or vCPg = very coarse Pebble gravel 16 - 32  
 - 4 or cPg = coarse Pebble gravel 8 - 16  
 - 5 or mPg = medium Pebble gravel 4 - 8  
 - 6 or fPg = fine Pebble gravel 2 - 4  
 - 7 or Gg = Granule gravel 1 - 2  
 - 8 or vCSd = very coarse Sand 1/2 - 1  
 - 9 or cSd = coarse Sand 1/8 - 1/2  
 - 10 or mSd = medium Sand 1/16 - 1/8  
 - 11 or fSd = fine Sand 1/64 - 1/16  
 - 12 or vFSd = very fine Sand 1/32 - 1/64  
 - 13 or St = Silt 1/256 - 1/64  
 - 14 or cl = clay 1/256

Cbn = Carbonaceous H = Hematite S = Sulphide Psg = Pyromorphite

**Late Volcanics**  
 LV - 1 or oB = massive olivine basalt and related dykes and sills, may be vesicular  
 - 2 or Pum = Pumice

# LOG AND PROBE SHEET

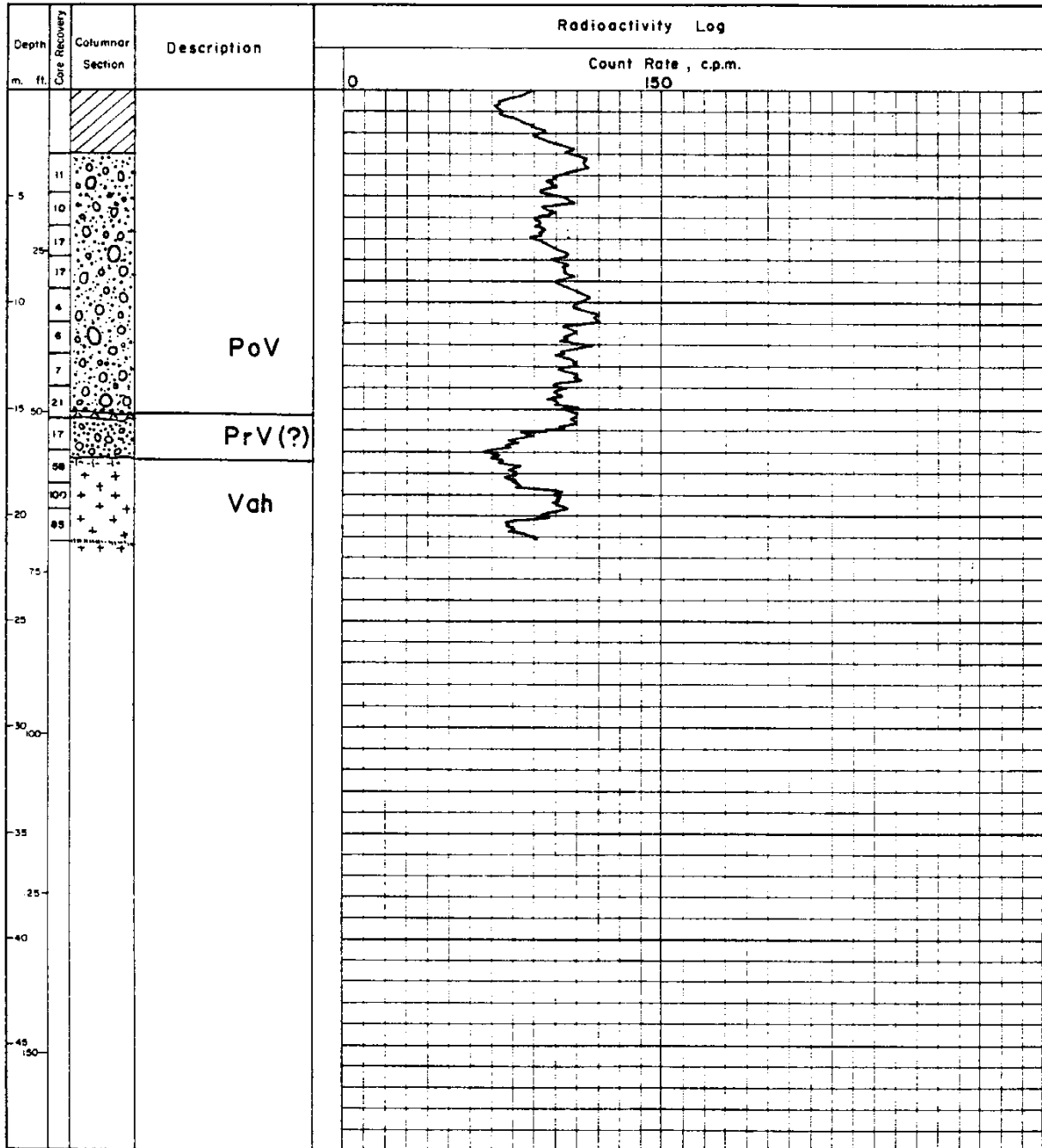
209

Method : D.D.  
 Hole N<sup>o</sup> : CUP 183  
 Location :  
 Probe Depth : 21.2 m.

Hole Angle : VERTICAL  
 Core Size : NQ 3  
 Core Recovery : TOTAL 28%

Detector : Geiger GP27 U  
 Monitor : TCS - 603 R  
 Background : 90 cpm  
 Time Constant : 10 Sec.

Date : JULY 27, 1979  
 Logged & Probed  
 by : MEGURO  
 YANAGIZAWA



# PNC EXPLORATION (CANADA) CO. LTD.

210

Hole No. : 79-CUP-184	Project : CUP LAKE	Property :	Collared :
Latitude : 5967.39	Azimuth :	Dip Tests :	Completed :
Departure : 237.17	Dip :	m.	Core Size : NQ
Elevation : 1296.9 m.	Depth : 27.7 m	End of hole	Logged by : K. YANAGIZAWA

Depth m. ft.	Columnar Section	From B To ASSAY	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
	(Hatched pattern)			0 - 3.05 Casing								
5	(Circles)	3.05	PoV	3.05 - 6.5 matrix is washed out basalt and granite cobble gravel basalt, granite, porphyrite pebble gravel								
25	(Small dots)	6.5										
10	(Small dots)		PrV	6.5 - 17.1 grey color mud matrix with large amount of quartz and granite granules, granite, porphyrite and green-stone pebble gravel, gneiss and granite cobble gravels								
15	(Small dots)											
17.1	(Small dots)	17.1	Reg	17.1 - 17.25 greenish-gray color tuffaceous sand								
20	(Small dots)	17.25			17.25 - 20.35 gray color mud matrix with large amount of quartz and granite granules, granite porphyrite and green-stone pebble gravels gneiss and granite cobble gravels							
20.35	(Small dots)	20.35										
21.65	(Small dots)	21.65	Vah	20.35 - 21.65 broken Valhalla granite color is yellow-white								
23.5	(Small dots)	23.5			21.65 - 23.5 yellow-green color regolith							
25	(Small dots)	26.0			23.5 - 26.0 white-gray color Valhalla granite 26.0 - 26.3 broken Valhalla granite, color is gray 26.3 - 27.7 white-gray color Valhalla granite							

### EXPLANATION

- POST VOLCANISM SEDIMENTS**  
recent sand and gravels generally brown in colour matrix sandy, loosely bound
- LATE VOLCANICS**  
olivine basalt massive, vesicular or so thin shells, may be associated with pebbles and related tuffaceous sediments
- PRE VOLCANISM SEDIMENTS**  
generally gray in colour, matrix clay - like, good binder. Silty parton light brown in colour, contains carbonaceous material
- REGALITH LAYER**  
may or may not be well developed, and may or may not contain overlying sediments

- INTRUSIVES ( increasing age )**
- CORYELL**  
fine to medium grained dark reddish nepheline quartz syenite. High background radiation
- VALHALLA**  
medium to coarse grained white porphyrite biotite granite large post-ferrous phenocrysts common
- NELSON**  
medium to strongly foliated gray biotite - hornblende quartz diorite or granodiorite
- EARLY VOLCANICS**  
fine grained charitic greenstone - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

- PoV / PrV**  
1a PoV - 1 or Bg = Boulder gravel 256 mm  
- 2 or Cg = Cobble gravel 64 - 256  
- 3 or vPg = very coarse Pebble gravel 32 - 64  
- 4 or cPg = coarse Pebble gravel 16 - 32  
- 5 or mPg = medium Pebble gravel 8 - 16  
- 6 or fPg = fine Pebble gravel 4 - 8  
- 7 or Gg = Granule gravel 2 - 4  
- 8 or vcSd = very coarse Sand 1 - 2  
- 9 or cSd = coarse Sand 1/2 - 1  
- 10 or mSd = medium Sand 1/4 - 1/2  
- 11 or fSd = fine Sand 1/8 - 1/4  
- 12 or vSd = very fine Sand 1/16 - 1/8  
- 13 or S1 = Silt 1/256 - 1/64  
- 14 or cl = clay 1/256
- CaB = Carbonaceous H = Hematite S = Sulphide Pg = Pegmatite**
- LV Late Volcanics**  
LV - 1 or oB = massive olivine Basalt and related dykes and sills, may be vesicular  
- 2 or Pum = Pumice  
- 3 or T/S = Tuffaceous Sediments

# LOG AND PROBE SHEET

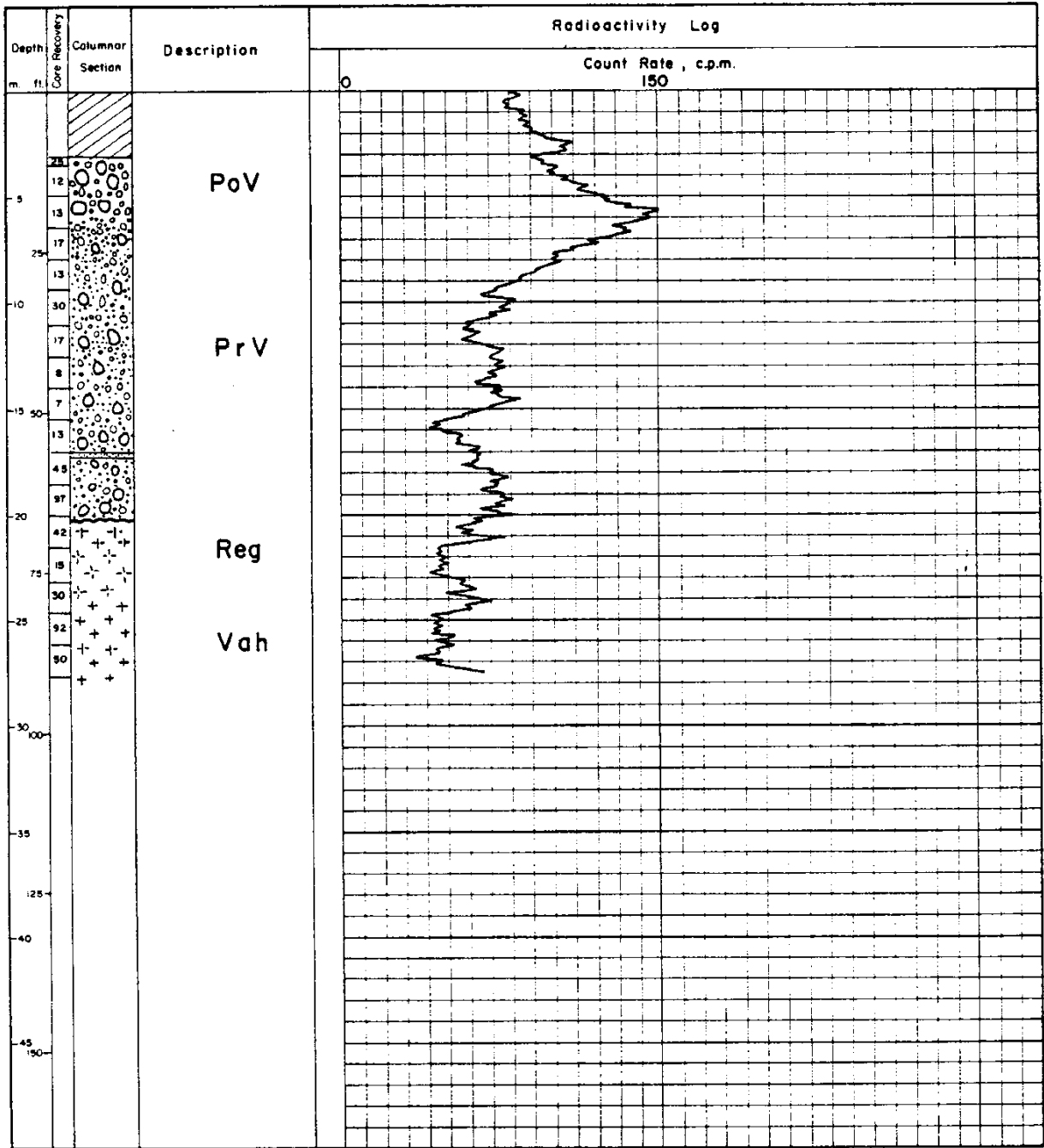
211

Method : D.D.  
 Hole No : CUP - 184  
 Location :  
 Probe Depth : 27.6 m.

Hole Angle : VERTICAL  
 Core Size : NQ 3  
 Core Recovery : TOTAL 31%

Detector : Geiger GP 27 U  
 Monitor : TCS 603 R  
 Background : 110 cpm  
 Time Constant : 10 Sec.

Date : JULY 29, 1979  
 Logged & Probed by : MEGURO  
 YANAGIZAWA



# PNC EXPLORATION (CANADA) CO. LTD.

212

Hole No. : 79-CUP-185  
 Latitude : 5794.07  
 Departure : 278.80  
 Elevation : 1299.1 m.

Project : CUP LAKE  
 Azimuth :  
 Dip :  
 Depth : 24.6 m

Property :  
 Dip Tests :  
 m.  
 End of hole

Collared :  
 Completed :  
 Core Size : NQ  
 Logged by : K. YANAGIZAWA

Depth m. ft.	Columnar Section	From & To ASSO.	Unit	Description	Rock Sample	Sample No.	From	To	Width	Assay		
										U <sub>3</sub> O <sub>8</sub>	Th	
0 - 6.1				0 - 6.1 Casing								
6.1 - 19.7		6.1	PoV(?)	6.1 - 19.7 brown color mud matrix with large amount of quartz, granite and basalt granules granite, basalt, gneiss and porphyrite pebble gravel, granite, gneiss, and cobble gravel								
19.7 - 20.5		19.7	Vah	19.7 - 20.5 broken Valhalla granite color is greenish-white								
20.5 - 24.6		20.5		20.5 - 24.6 white color Valhalla granite								

### EXPLANATION

**POST VOLCANISM SEDIMENTS**  
 recent sand and gravels generally brown in colour matrix sandy, loosely bound

**LATE VOLCANICS**  
 olive basalt massive, vesicular or as thin sills, may be associated with pumice and related tuffaceous sediments

**PRE VOLCANISM SEDIMENTS**  
 generally gray in colour, matrix clay-like, good binder. Silty parting light brown in colour, contains carbonaceous material

**REGALITH LAYER**  
 may or may not be well developed, and may or may not contain overlying sediments

**INTRUSIVES ( increasing age )**

**CORVELL**  
 Coy fine to medium grained dark reddish massive quartz dyarite high background radiation

**VALHALLA**  
 Vah medium to coarse grained white porphyrite biotite granite large pink feldspar phenocrysts common

**NELSON**  
 Nel moderate to strongly foliated gray biotite - hornblende quartz diorite or gneiss

**EARLY VOLCANICS**  
 fine grained chloritic granitoid - generally badly fractured and contains abundant hematite stringers throughout

### LEGEND

PoV / Pre Volcanism Sediments (+ Regolith)

10 PoV - 1 or Bg	= Boulder gravel	256 mm
- 2 or Gg	= Cobble gravel	64 - 256
- 3 or vCg	= very coarse Pebble gravel	32 - 64
- 4 or cPg	= coarse Pebble gravel	16 - 32
- 5 or mPg	= medium Pebble gravel	8 - 16
- 6 or fPg	= fine Pebble gravel	4 - 8
- 7 or Gg	= Gravel gravel	2 - 4
- 8 or vSd	= very coarse Sand	1 - 2
- 9 or cSd	= coarse Sand	1/2 - 1
- 10 or mSd	= medium Sand	1/4 - 1/2
- 11 or fSd	= fine Sand	1/8 - 1/4
- 12 or vSf	= very fine Sand	1/16 - 1/8
- 13 or Sf	= Silt	1/256 - 1/16
- 14 or cl	= clay	1/256

Cbn = Carbonaceous    H = Hematite    S = Sulphide    Pag = Pagnite

LV Late Volcanics

LV - 1 or oLB = massive olive basalt and related dykes and sills, may be vesicular

- 2 or Pum = Pumice

- 3 or TFS = Tuffaceous Sediments



# LOG AND PROBE SHEET

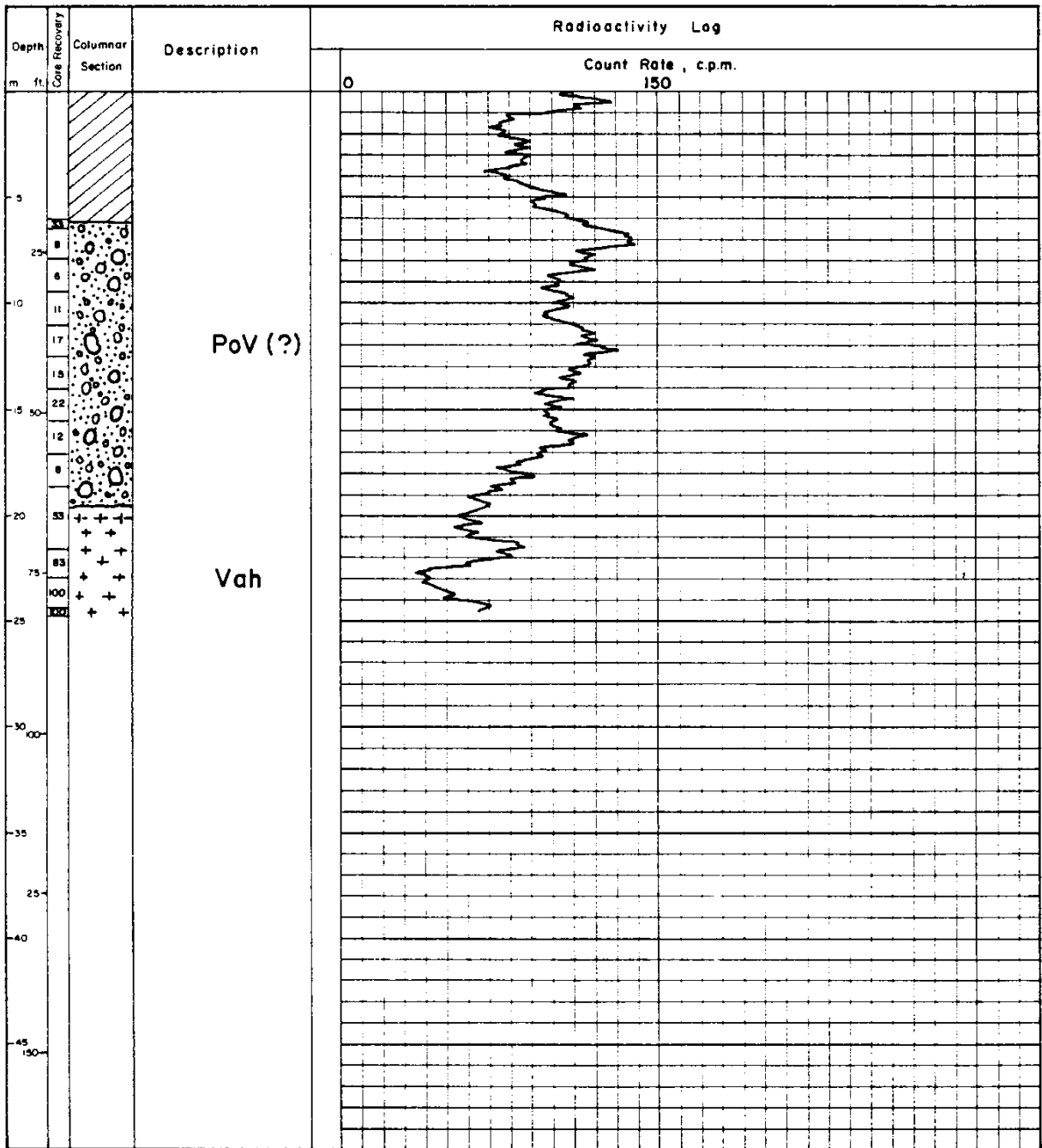
213

Method : D.D.  
 Hole No. : CUP 185  
 Location :  
 Probe Depth : 24.6 m

Hole Angle : VERTICAL  
 Core Size : NQ 3  
 Core Recovery : TOTAL 45%

Detector : Geiger GP27U  
 Monitor : TCS 603 R  
 Background : 90 cpm  
 Time Constant : 10 Sec.

Date : JULY 30, 1979  
 Logged & Probed by : MEGURO  
 YANAGIZAWA



# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

<b>Method</b> Diamond drill	<b>Hole Angle</b> 90°	<b>Scintillation</b> Detector G375A	<b>Date</b> November 13, 1979
<b>Hole No.</b> Cup Lake 220	<b>Core Size</b> NQ 3	<b>Monitor</b> Mt. Sopris 1000C	<b>Logged &amp; Probe</b>
<b>Location</b> Cup Lake	<b>Core Recovery:</b> Basalt % Sediments % Basement 83.7%	<b>Background</b> 12 c.p.s.	<b>By</b> L. Nicoll
<b>Probe Depth</b> 19.7		<b>Time Constant</b> 1 Sec.	

Depth	Core Recovery	Columnar Section	Description	Scintillation Log			Assays				
				0	C.P.S. 100	200	From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th
			0-7.3 Tricone								
5			7.3-7.9 Overburden - boulders								
25			7.9-11.6 "Sand granite"; light greyish white								
10			11.6-16.9 Weathered granite								
15			16.9-20.4 Nelson gneiss								
50											
20											
75											
25											
30											
00											
35											
125											
40											
45											
150											





# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

Method <u>Diamond drill</u>	Hole Angle <u>90°</u>	Scintillation Detector <u>G375A</u>	Date <u>September 16, 1979</u>
Hole No. <u>Cup Lake 227</u>	Core Size <u>NQ 3</u>	Monitor <u>Mt. Sopris 1000C</u>	Logged & Probe
Location <u>Cup Lake</u>	Core Recovery: Basalt - %	Background <u>15 c.p.s.</u>	By <u>K. Yanagizawa</u>
Probe Depth <u>30.6</u>	Sediments <u>41.2%</u>	Time Constant <u>1 Sec.</u>	
	Basement <u>63.4%</u>		

Depth m. ft.	Columnar Section	Description	Scintillation Log			Assays							
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th			
			0	100	200								
0-5		0-20.1 Casing											
5-10													
10-15		10.9-23.0 Matrix is washed out, granite, basalt, porphyritic granite, vesicular basalt pebble gravels and basalt cobble gravels											
15-20		23.0-23.5 Gneiss and basalt pebble gravels, basalt, quartz, gneiss, granite granules, matrix is brown color mud (Tertiary sedements not clearly identified)											
20-25		23.0-23.5 Brown color matrix with granitic gneiss pebble gravels (Nelson granite), basalt pebble gravels, granite quartz granules											
25-30		23.5-26.0 Broken hornblende (biotite) gneiss (Nelson granite) greenish-grey white color.											
30-35		26.0-28.6 Brownish-yellow color weathered granite											
35-40		28.6-29.2 Greenish-grey color, weathered hornblende (biotite) gneiss (Nelson granite)											
40-45		29.2-29.9 Pinkish grey color fine grain granite (Valhalla granite)											
45-50		29.9-30.7 Greenish-grey color, weathered hornblende (biotite) gneiss (Nelson granite)											
50-55	30.7-30.9 Pinkish grey color, fine grain granite (Valhalla granite)												
55-60	30.9-31.0 Greenish-grey color, broken hornblende (biotite) gneiss (Nelson granite)												



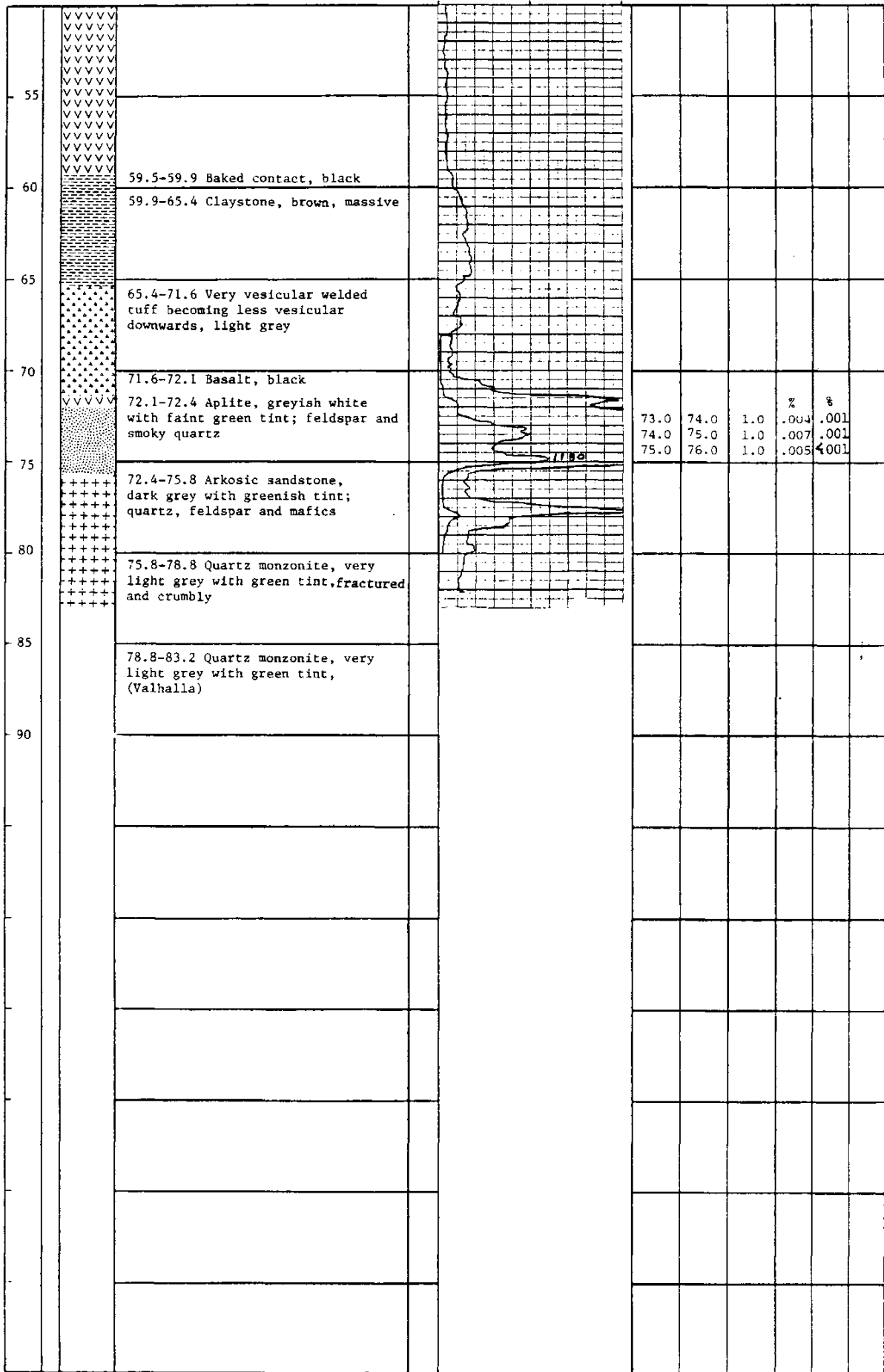


## PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

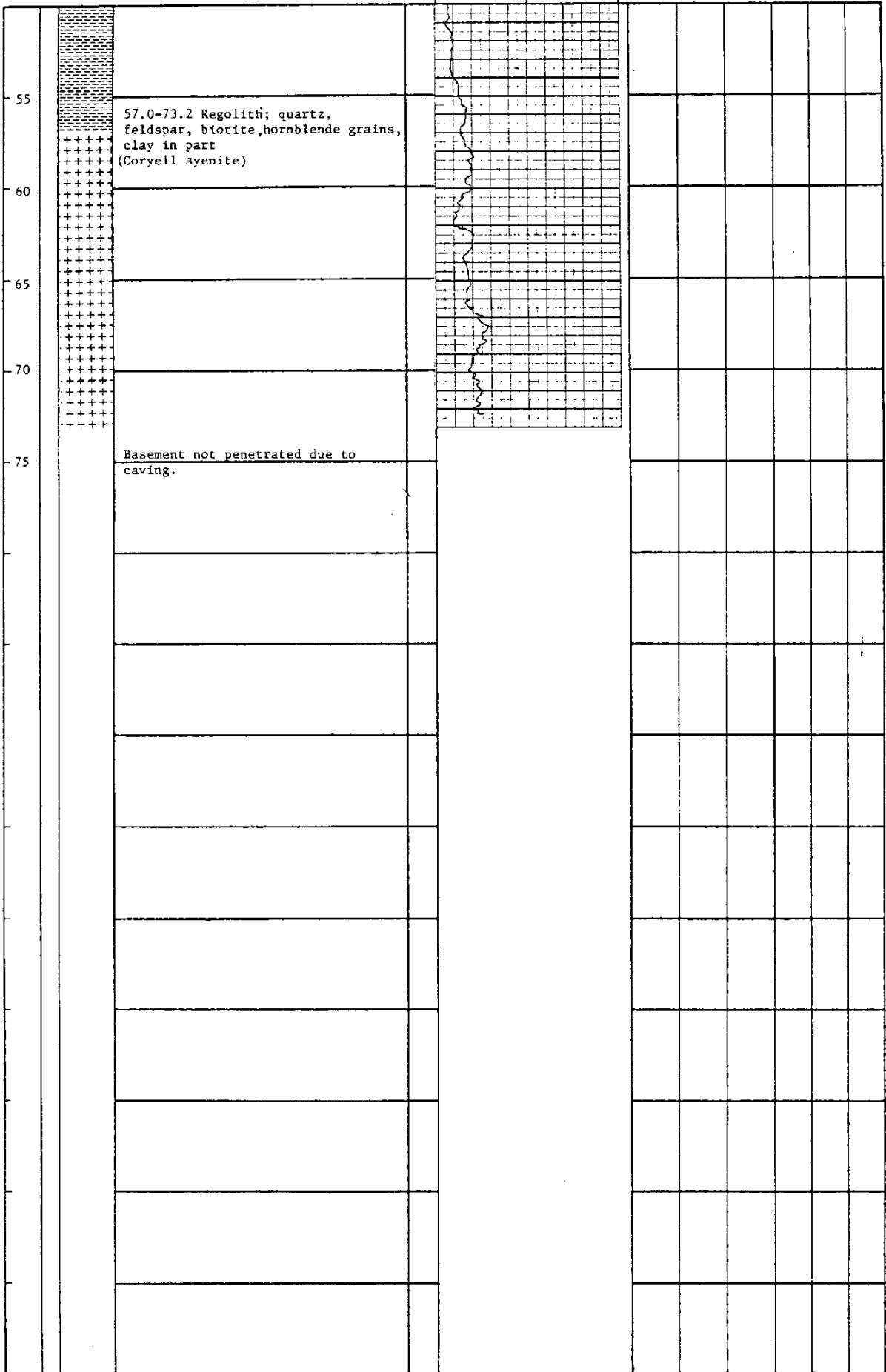
<u>Method</u> Diamond drill	<u>Hole Angle</u> 90°	<u>Detector</u> G375A	<u>Date</u> September 13, 1979
<u>Hole No.</u> Cup Lake 229	<u>Core Size</u> NQ 3	<u>Monitor</u> Mt. Sopris 1000C	<u>Logged &amp; Probe</u>
<u>Location</u> Cup Lake	<u>Core Recovery:</u> Basalt 100.0% Sediments 84.1% Basement 72.0%	<u>Background</u> 13 c.p.s.	<u>By</u> L. Nicoll
<u>Probe Depth</u> 82.2		<u>Time Constant</u> 1 Sec.	

Depth m. ft.	Core Recovery	Columnar Section	Description	Scintillation Log			Assays					
				C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th	
				0	100	200						
5	VVVVVV		0-1.8 Tricone									
25	VVVVVV											
10	VVVVVV		1.8-59.5 Basalt, dark grey-black, minor olivine phenocrysts near top becoming more abundant downwards									
15.50	VVVVVV											
20	VVVVVV											
75	VVVVVV											
25	VVVVVV		25.5-28.3 Fractured zone									
30	VVVVVV											
35	VVVVVV											
125	VVVVVV											
40	VVVVVV											
45	VVVVVV											
150	VVVVVV											
	VVVVVV											

















# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

<b>Method</b> <u>Diamond drill</u>	<b>Hole Angle</b> <u>90°</u>	<b>Detector</b> <u>G375A</u>	<b>Date</b> <u>September 21, 1979</u>
<b>Hole No.</b> <u>Cup Lake 233</u>	<b>Core Size</b> <u>NQ 3</u>	<b>Monitor</b> <u>Mt. Sopris 1000C</u>	<b>Logged &amp; Probe</b>
<b>Location</b> <u>Cup Lake</u>	<b>Core Recovery:</b> Basalt 89.6 % Sediments 63.1 % Basement 62.7 %	<b>Background</b> <u>10 c.p.s.</u>	<b>By</b> <u>L. Nicoll</u>
<b>Probe Depth</b> <u>62.2</u>		<b>Time Constant</b> <u>1 Sec.</u>	

Depth m. ft.	Core Recovery	Columnar Section	Description	Scintillation Log			Assays					
				C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th	
				0	100	200						
	VVVVVV		0-0.6 Tricone									
5	VVVVVV											
25	VVVVVV											
10	VVVVVV		0.6-50.6 Basalt, black with olivine phenocrysts									
15	VVVVVV											
50	VVVVVV		16.5-17.1 Broken zone									
20	VVVVVV											
75	VVVVVV											
25	VVVVVV											
30	VVVVVV											
100	VVVVVV											
35	VVVVVV											
125	VVVVVV											
40	VVVVVV											
45	VVVVVV											
150	VVVVVV											





# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

<u>Method</u> Diamond drill	<u>Hole Angle</u> 90°	<u>Detector</u> G375A	<u>Date</u> September 22, 1979
<u>Hole No.</u> Cup Lake 234	<u>Core Size</u> NQ 3	<u>Monitor</u> Mt.Sopris 1000C	<u>Logged &amp; Probe</u>
<u>Location</u> Cup Lake	<u>Core Recovery:</u> Basalt 100.0% Sediments 68.8% Basement 85.0%	<u>Background</u> 5 c.p.s.	<u>By</u> L. Nicoll
<u>Probe Depth</u> 59.7		<u>Time Constant</u> 1 Sec.	

Depth m ft	Columnar Section	Description	Scintillation Log			Assays						
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th		
			0	100	200							
0-5	VVVVVV	0-52.8 Basalt, black with olivine phenocrysts										
5-10	VVVVVV											
10-15	VVVVVV											
15-20	VVVVVV											
20-25	VVVVVV											
25-30	VVVVVV											
30-35	VVVVVV											
35-40	VVVVVV											
40-45	VVVVVV											
45-50	VVVVVV											



# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

Method Diamond drill  
Hole No. Cup Lake 235  
Location Cup Lake  
Probe Depth 50.0

Hole Angle 90°  
Core Size NQ 3  
Core Recovery: Basalt 91.0%  
Sediments 91.1%  
Basement 88.3%

Scintillation  
G375A

Detector G375A  
Monitor Mt. Sopris 1000C  
Background 15 c.p.s.  
Time Constant 1 Sec.

Date September 18, 1979  
Logged & Probe  
By L. Nicoll

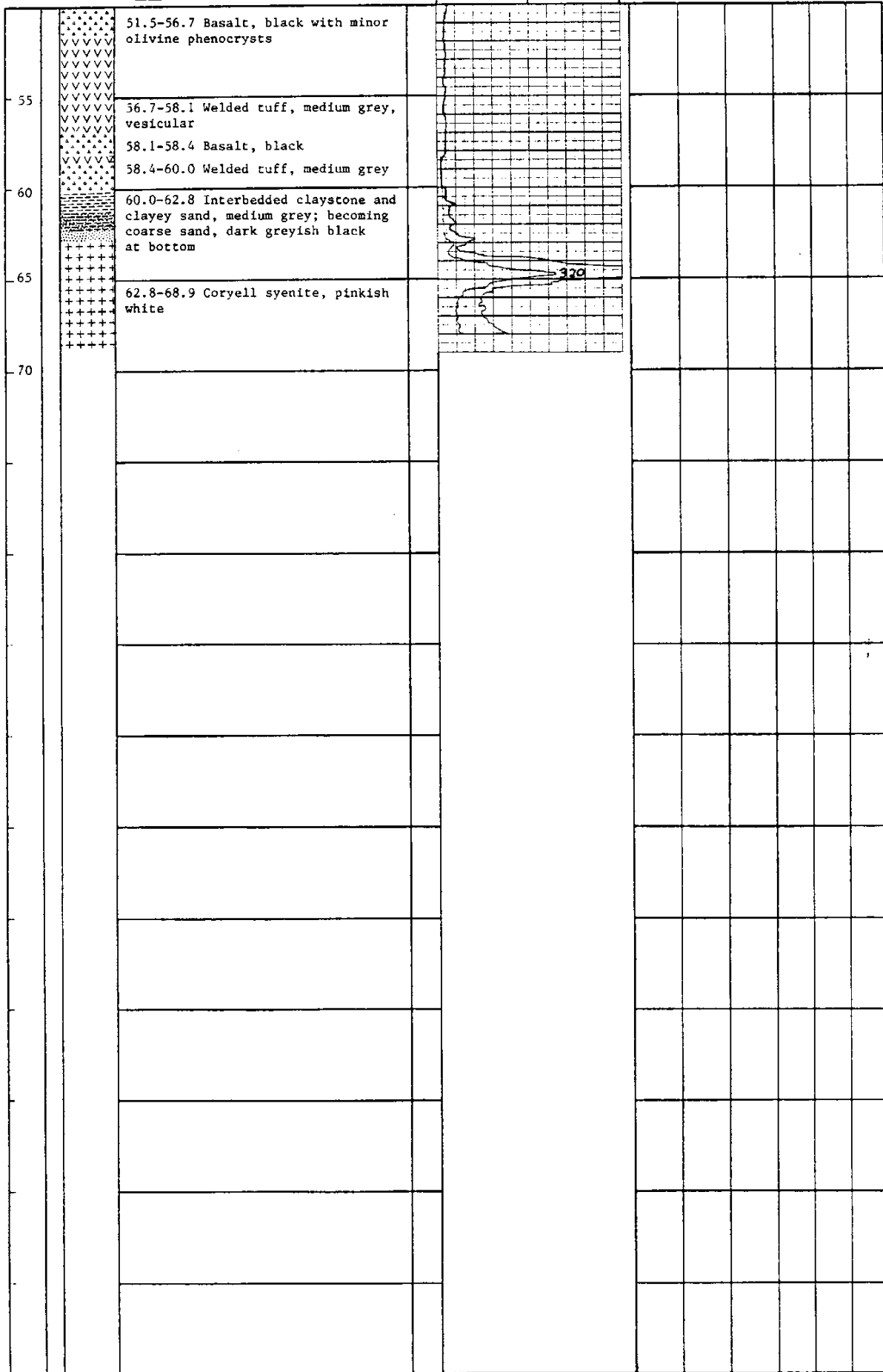
Depth m. ft.	Core Recovery	Columnar Section	Description	Scintillation Log			Assays								
				C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th				
				0	100	200									
5															
25			0-13.7 Tricone												
10															
15	VVVVVV		13.7-26.5 Basalt, black with olivine phenocrysts, fractured and crumbly												
20	VVVVVV														
25	VVVVVV		26.5-26.8 Baked claystone, black 26.8-32.9 Claystone, medium brown												
30	VVVVVV		32.9-40.2 Vesicular basalt, medium grey becoming non-vesicular and black towards bottom; broken and clayey in part												
35	VVVVVV														
40	VVVVVV		40.2-41.6 Sandstone, fine grain, medium grey, clay in part 41.6-42.3 Coarse sand, dark greyish black												
45	VVVVVV		42.3-42.8 Arkose, medium grain, grey, grading downwards into pebble conglomerate 42.8-47.5 Coryell syenite, soft and crumbly; feldspar, pyroxene and												
150	VVVVVV														
							40.2	40.3	0.1	43	3				
							40.6	40.7	0.1	129	5				
							40.8	40.9	0.1	203	3				
							41.0	41.1	0.1	136	5				
							41.2	41.3	0.1	557	5				
							41.4	41.5	0.1	134	4				
							41.6	41.7	0.1	767	5				
							41.8	41.9	0.1	325	11				
							44.1	44.2	0.1	.016	.002				
							44.2	44.3	0.1	.039	.002				
							44.3	44.4	0.1	.092	.003				
							44.4	44.5	0.1	.076	.003				



# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

<u>Method</u> Diamond drill	<u>Hole Angle</u> 90°	Scintillation <u>Detector</u> G375A	<u>Date</u> September 23, 1979
<u>Hole No.</u> Cup Lake 236	<u>Core Size</u> NQ 3	<u>Monitor</u> Mt. Sopris 1000C	<u>Logged &amp; Probe</u>
<u>Location</u> Cup Lake	<u>Core Recovery:</u> Basalt 100.0% Sediments 58.3% Basement 56.6%	<u>Background</u> 11 c.p.s.	<u>By</u> L. Nicoll
<u>Probe Depth</u> 68.0		<u>Time Constant</u> 1 Sec.	

Depth m ft.	Columnar Section	Description	Scintillation Log			Assays						
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th		
			0	100	200							
		0-3.7 Tricone	[Scintillation Log Grid]									
-5 -25	[V-pattern]	3.7-41.5 Basalt, black with olivine phenocrysts	[Scintillation Log Grid]									
-10 -15 -20	[V-pattern]		[Scintillation Log Grid]									
-25 -30	[V-pattern]	23.6-26.8 Broken zone	[Scintillation Log Grid]									
-35 -40	[V-pattern]		[Scintillation Log Grid]									
-45 -50	[V-pattern]	41.5-49.6 Claystone, medium brown, scattered plant fragments	[Scintillation Log Grid]									
	[Hatched]	49.6-51.5 Welded tuff, medium grey, vesicular	[Scintillation Log Grid]									



# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

Method Diamond drill

Hole Angle 90°

Scintillation  
Detector G375A

Date September 28, 1979

Hole No. Cup Lake 237

Core Size NQ 3

Monitor Mt. Sopris 1000C

Logged & Probe

Location Cup Lake

Core Recovery: Basalt 90.0 %  
Sediments 37.8 %  
Basement 52.5 %

Background 10 c.p.s.

By L. Nicoll

Probe Depth 80.5

Time Constant 1 Sec.

Depth m. ft.	Columnar Section	Description	Scintillation Log			Assays				
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th
			0	100	200					
0-5	VVVVVV	0-2.4 Tricone								
5-25	VVVVVV									
25-10	VVVVVV									
10-15	VVVVVV									
15-50	VVVVVV	2.4-39.6 Basalt, black with minor olivine phenocrysts								
50-20	VVVVVV									
20-75	VVVVVV									
75-25	VVVVVV									
25-30	VVVVVV									
30-100	VVVVVV									
100-35	VVVVVV									
35-125	VVVVVV									
125-40	VVVVVV	39.6-39.9 Baked claystone, black								
40-45	VVVVVV	39.9-48.9 Claystone, brown with plant fragments								
45-150	VVVVVV	48.9-50.6 Vesicular basalt, black with olivine phenocrysts, zeolites in cavities								



		0	100	200						
55	50.6-51.2 Claystone, medium grey, rock fragments, crumbly	[Stratigraphic Column]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]
	51.2-51.6 Sandstone, medium grey, fine grain, broken									
60	51.6-72.0 Basalt, black with minor olivine phenocrysts	[Stratigraphic Column]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]
	55.2-66.5 Broken basalt									
70	72.0-72.8 Sandstone, coarse grain with pebbles, clay matrix, medium grey, poorly consolidated	[Stratigraphic Column]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]
75	72.8-81.1 Coryell syenite, white, abundant feldspar, moderate biotite and hornblende, epidote alteration.	[Stratigraphic Column]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]
80		[Stratigraphic Column]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]
85		[Stratigraphic Column]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]	[CPS Graph]

# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

<u>Method</u> Diamond drill	<u>Hole Angle</u> 90°	<u>Detector</u> G375A	<u>Date</u> September 30, 1979
<u>Hole No.</u> Cup Lake 238	<u>Core Size</u> NQ 3	<u>Monitor</u> Mt. Sopris 1000C	<u>Logged &amp; Probe</u>
<u>Location</u> Cup Lake	<u>Core Recovery</u> Basalt 95.0 % Sediments 77.8 % Basement 98.9 %	<u>Background</u> 11 C.P.S.	<u>By</u> L. Nicoll
<u>Probe Depth</u> 91.3		<u>Time Constant</u> 1 Sec.	

Depth m. ft.	Columnar Section	Description	Scintillation Log			Assays					
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th	
			0	100	200						
		0-2.4 Tricone									
5	✓✓✓✓✓										
25	✓✓✓✓✓										
10	✓✓✓✓✓	2.4-45.8 Basalt, black with olivine phenocrysts, becoming fine grain towards bottom									
15	✓✓✓✓✓										
50	✓✓✓✓✓										
20	✓✓✓✓✓										
75	✓✓✓✓✓										
25	✓✓✓✓✓										
30	✓✓✓✓✓	30.0-30.3 Broken zone, rust colored alteration along fracture planes									
00	✓✓✓✓✓										
35	✓✓✓✓✓										
125	✓✓✓✓✓										
40	✓✓✓✓✓										
45	✓✓✓✓✓	45.8-46.0 Baked contact, black									
150	✓✓✓✓✓	46.0-52.1 Claystone, medium brown, plant fragments									





















# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

Method <u>Diamond drill</u>	Hole Angle <u>90°</u>	Detector <u>Scintillation G375A</u>	Date <u>October 23, 1979</u>
Hole No. <u>Cup Lake 244</u>	Core Size <u>NQ 3</u>	Monitor <u>Mt. Sopris 1000C</u>	Logged & Probe
Location <u>Cup Lake</u>	Core Recovery: Basalt <u>95.0 %</u> Sediments <u>27.0 %</u> Basement <u>98.0 %</u>	Background <u>10 c.p.s.</u>	By <u>K. Yanagizawa</u>
Probe Depth <u>24.2</u>		Time Constant <u>1 Sec.</u>	

Depth m. ft.	Columnar Section	Description	Scintillation Log			Assays								
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th				
			0	100	200									
		0-3.4 Casing												
-5	VVVVVV VVVVVV VVVVVV VVVVVV VVVVVV	3.4-15.5 Basalt, black color with olivine phenocrysts												
	VVVVVV VVVVVV VVVVVV VVVVVV VVVVVV	7.0-11.0 Broken zone												
25	VVVVVV VVVVVV VVVVVV VVVVVV VVVVVV	12.0-13.2 Broken zone												
	VVVVVV VVVVVV VVVVVV VVVVVV VVVVVV	14.4-15.5 Broken zone												
	VVVVVV VVVVVV VVVVVV VVVVVV VVVVVV	15.5-15.6 Welded tuff, dark grey color												
	VVVVVV VVVVVV VVVVVV VVVVVV VVVVVV	15.6-15.65 Black color mud												
-15	VVVVVV VVVVVV VVVVVV VVVVVV VVVVVV	15.65-18.0 Orangish brown color, silt becomes light brown color, coarse sandstone toward the bottom												
	VVVVVV VVVVVV VVVVVV VVVVVV VVVVVV													
20	VVVVVV VVVVVV VVVVVV VVVVVV VVVVVV													
75	++++++ ++++++ ++++++ ++++++ ++++++	18.0-20.1 Grey color coarse sandstone, matrix is grey color mud												
	++++++ ++++++ ++++++ ++++++ ++++++													
25		20.1-20.3 Greenish-grey color conglomerate, matrix is greenish grey color mud, with quartz diorite pebble gravels												
30		20.3-20.35 Cooked mud, black color												
		20.35-24.7 Valhalla granite, greenish grey color with pink feldspar												
35		22.1-22.3 Very weathered zone, sheared												
40														
45														
150														



# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

Method Diamond drill

Hole Angle 90°

Scintillation

Detector G375A

Date October 9, 1979

Hole No. Cup Lake 247

Core Size NQ 3

Monitor Mt. Sopris 1000C

Logged & Probe

Location Cup Lake

Core Recovery: Basalt 98.6 %  
Sediments 87.5 %  
Basement 100.0 %

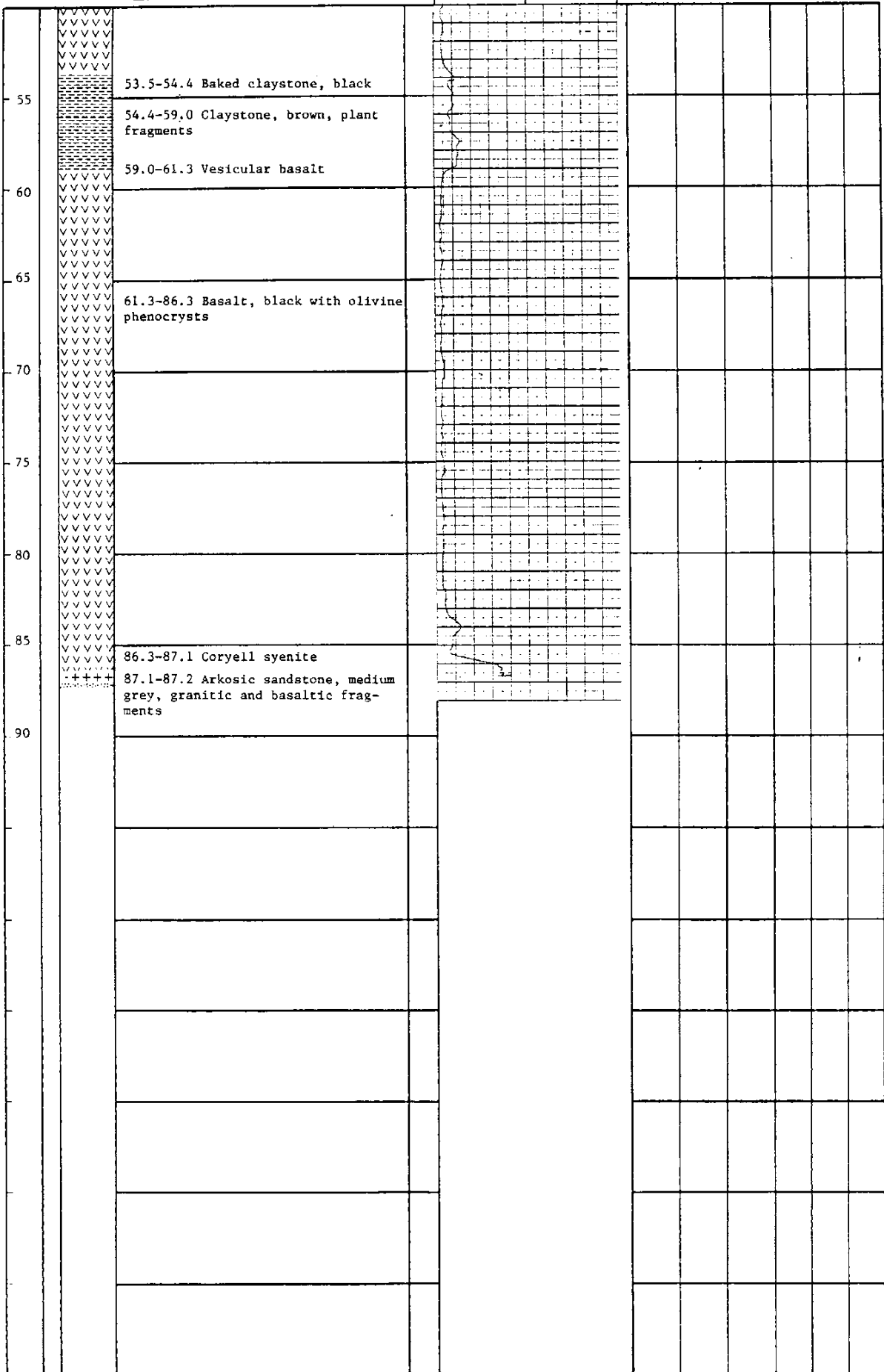
Background 11 c.p.s.

By L. Nicoll

Probe Depth 86.7

Time Constant 1 Sec.

Depth m ft.	Columnar Section	Description	Scintillation Log			Assays				
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th
			0	100	200					
0-5		0-5.5 Tricone								
5-25	vvvvvv	5.5-53.5 Basalt, black with olivine phenocrysts								
5-10	vvvvvv	5.5-7.9 Broken zone								
15-50	vvvvvv	17.1-26.2 Broken zone								
20-75	vvvvvv									
25-30	vvvvvv									
30-35	vvvvvv									
35-125	vvvvvv	36.0-53.5 Broken zone								
40-45	vvvvvv									
45-150	vvvvvv									



## PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

Method Diamond drill

Hole No. Cup Lake 248

Location Cup Lake

Probe Depth 72.3

Hole Angle 90°

Core Size NQ 3

Core Recovery: Basalt 95.8%  
Sediments 38.5%  
Basement 48.4%

Scintillation

Detector G375A

Monitor Mt. Sopris 1000C

Background 9 c.p.s.

Time Constant 1 Sec.

Date October 6, 1979

Logged & Probe

By L. Nicoll

Depth m. ft.	Core Recovery	Columnar Section	Description	Scintillation Log			Assays					
				C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th	
				0	100	200						
			0-53.3 Basalt, black with olivine phenocrysts									
			0-9.5 Broken zone									
-5												
25												
10												
15												
20												
25												
30												
35												
40												
45												



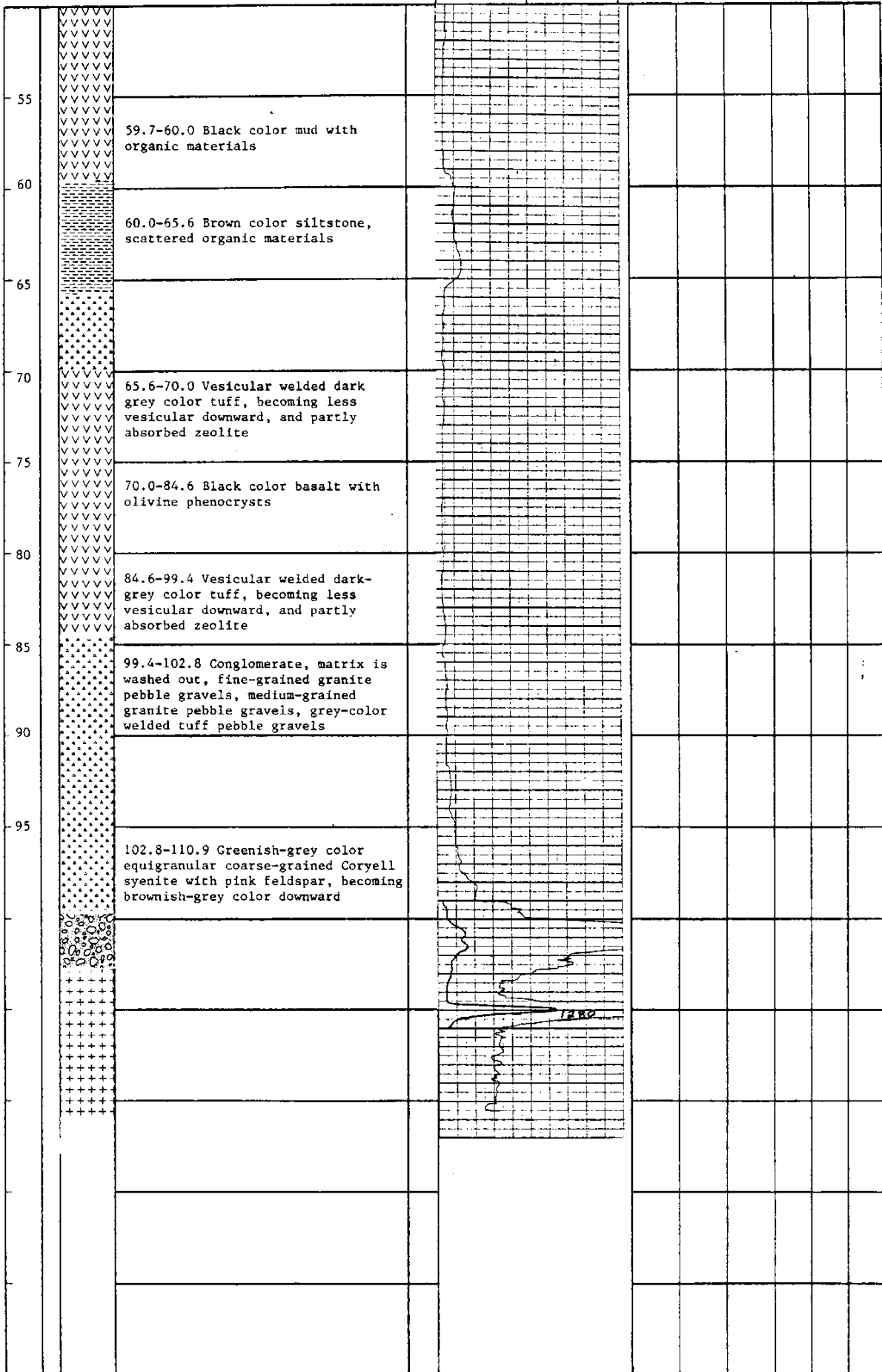












# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

Method Diamond drill

Hole Angle 90°

Scintillation  
Detector G375A

Date October 10, 1979

Hole No. Cup Lake 252

Core Size NQ 3

Monitor Mt.Sopris 1000C

Logged & Probe

Location Cup Lake

Core Recovery: Basalt 98.3 %  
Sediments 69.6 %  
Basement 94.8 %

Background 10 c.p.s.

By L. Nicoll

Probe Depth 71.4

Time Constant 1 Sec.

Depth m ft	Columnar Section	Description	Scintillation Log			Assays						
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th		
			0	100	200							
		0-1.8 Tricone										
	VVVVVV	1.8-47.6 Basalt, black with olivine phenocrysts										
5	VVVVVV											
25	VVVVVV											
10	VVVVVV											
15	VVVVVV											
50	VVVVVV											
20	VVVVVV											
75	VVVVVV											
25	VVVVVV											
30	VVVVVV											
100	VVVVVV											
35	VVVVVV											
125	VVVVVV	37.9-40.0 Broken zone										
40	VVVVVV											
45	VVVVVV											
150	VVVVVV	47.6-48.1 Baked claystone, black										
	VVVVVV	48.1-53.2 Claystone, medium brown, plant fragments										





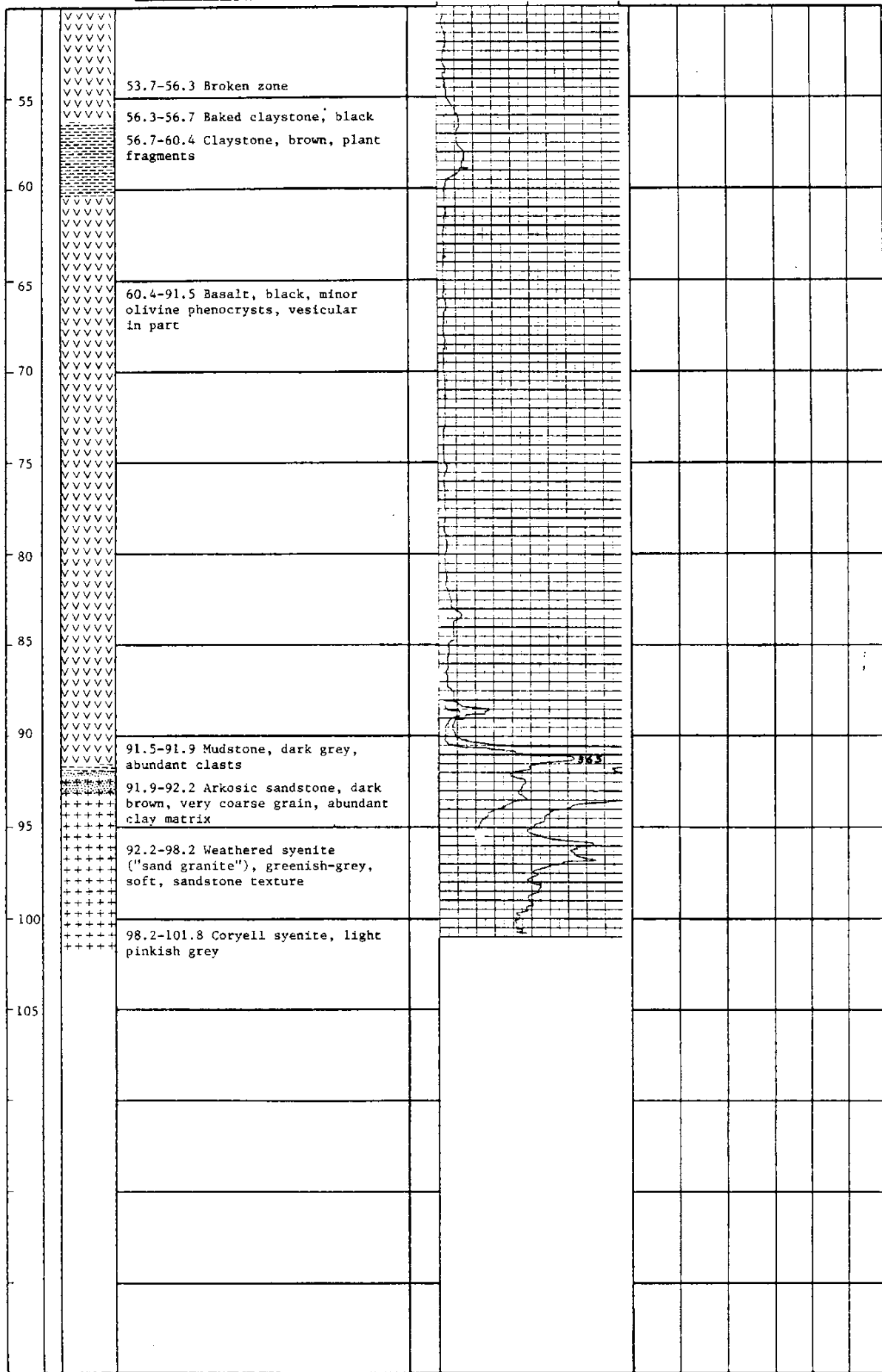
# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

<u>Method</u> Diamond drill	<u>Hole Angle</u> 90°	<u>Detector</u> G375A	<u>Date</u> October 12, 1979
<u>Hole No.</u> Cup Lake 253	<u>Core Size</u> NQ 3	<u>Monitor</u> Mt.Sopris 1000C	<u>Logged &amp; Probe</u>
<u>Location</u> Cup Lake	<u>Core Recovery</u> Basalt 97.0 % Sediments 82.0 % Basement 86.0 %	<u>Background</u> 8 c.p.s.	<u>By</u> K. Yanagizawa
<u>Probe Depth</u> 63.8		<u>Time Constant</u> 1 Sec.	

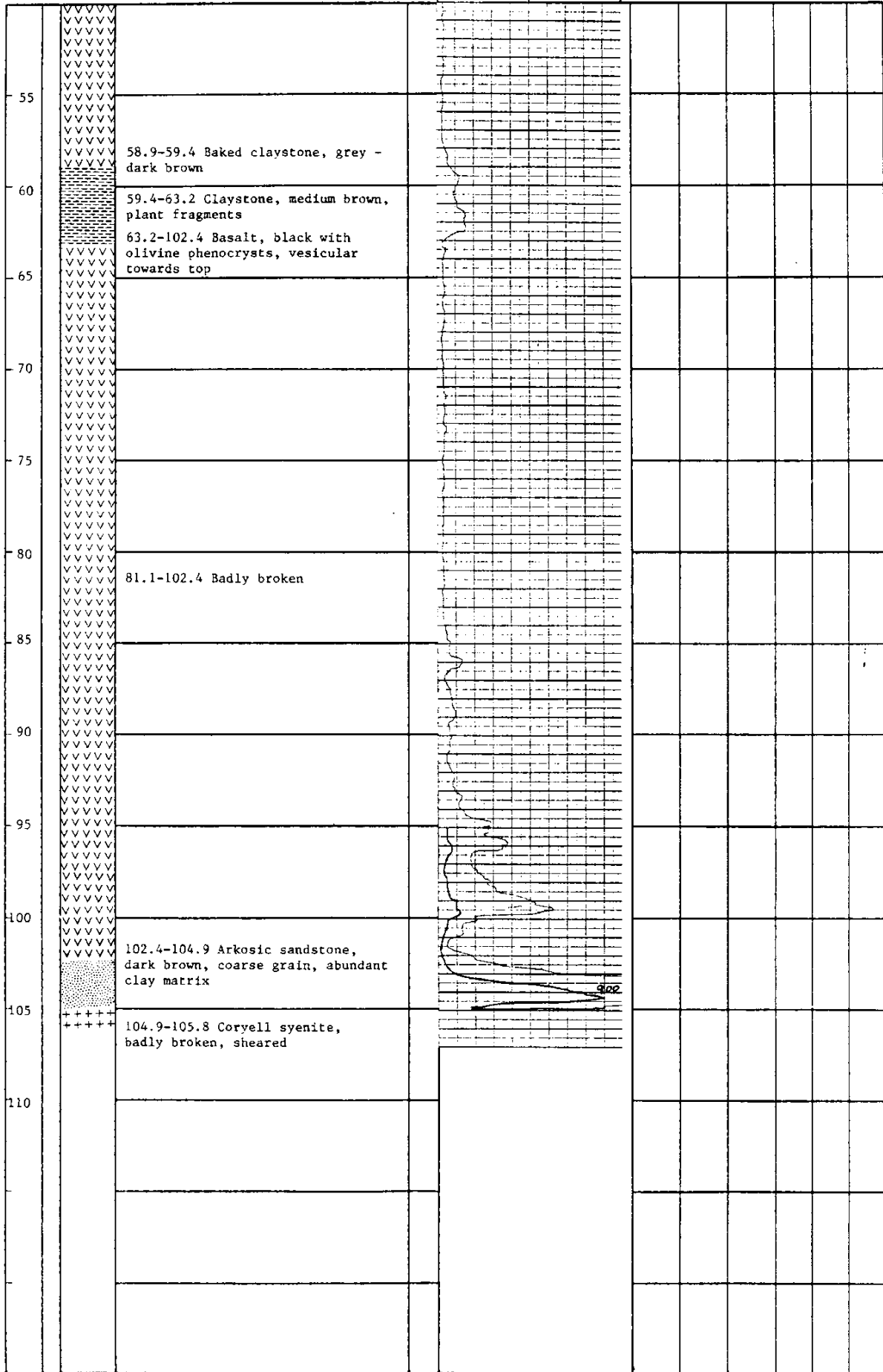
Depth m. ft.	Columnar Section	Description	Scintillation Log			Assays				
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th
			0	100	200					
	VVVVV	0-53.75 Basalt, black with olivine phenocrysts, becomes finer grain towards lower contact								
-5	VVVVV	11.7-16.5 Broken zone								
-25	VVVVV									
-10	VVVVV									
-15	VVVVV									
-20	VVVVV									
-25	VVVVV									
-30	VVVVV									
-35	VVVVV									
-40	VVVVV									
-45	VVVVV									











# PNC EXPLORATION ( CANADA ) CO. LTD. LOG AND PROBE SHEET

<u>Method</u> Diamond drill	<u>Hole Angle</u> 90°	<u>Detector</u> G375A	<u>Date</u> October 18, 1979
<u>Hole No.</u> Cup Lake 257	<u>Core Size</u> NQ 3	<u>Monitor</u> Mt.Sopris 1000C	<u>Logged &amp; Probe</u>
<u>Location</u> Cup Lake	<u>Core Recovery</u> : Basalt 95.6% Sediments 44.4% Basement 100.0%	<u>Background</u> 6 C.P.S.	<u>By</u> L. Nicoll
<u>Probe Depth</u> 72.2		<u>Time Constant</u> 1 Sec.	

Depth m. ft.	Core Recovery	Columnar Section	Description	Scintillation Log			Assays					
				C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th	
				0	100	200						
	VVVVVV		0-54.4 Basalt, black with Olivine phenocrysts									
5	VVVVVV											
25	VVVVVV											
10	VVVVVV											
15	VVVVVV											
20	VVVVVV											
25	VVVVVV											
30	VVVVVV											
35	VVVVVV											
40	VVVVVV											
45	VVVVVV		36.0-39.6 Broken zone									
125	VVVVVV											
40	VVVVVV											
45	VVVVVV		48.5-50.6 Broken zone									
150	VVVVVV											





# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

Method Diamond drill  
Hole No. Cup Lake 258  
Location Cup Lake  
Probe Depth 67.4

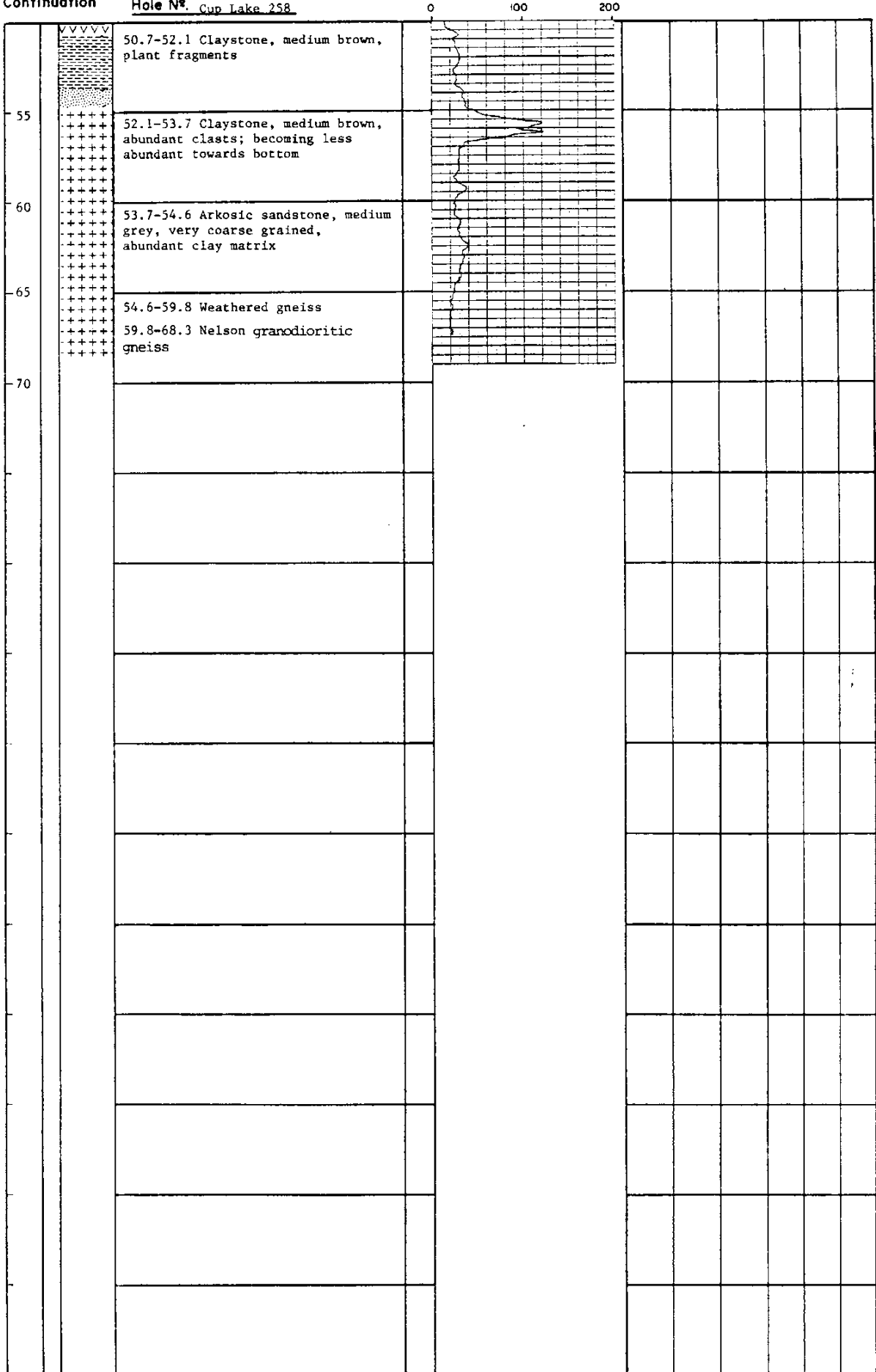
Hole Angle 90°  
Core Size NQ 3  
Core Recovery: Basalt 92.0 %  
Sediments 75.0 %  
Basement 90.1 %

Scintillation

Detector G375A  
Monitor Mt. Sopris 1000C  
Background 15 c.p.s.  
Time Constant 1 Sec.

Date November 13, 1979  
Logged & Probe  
By L. Nicoll

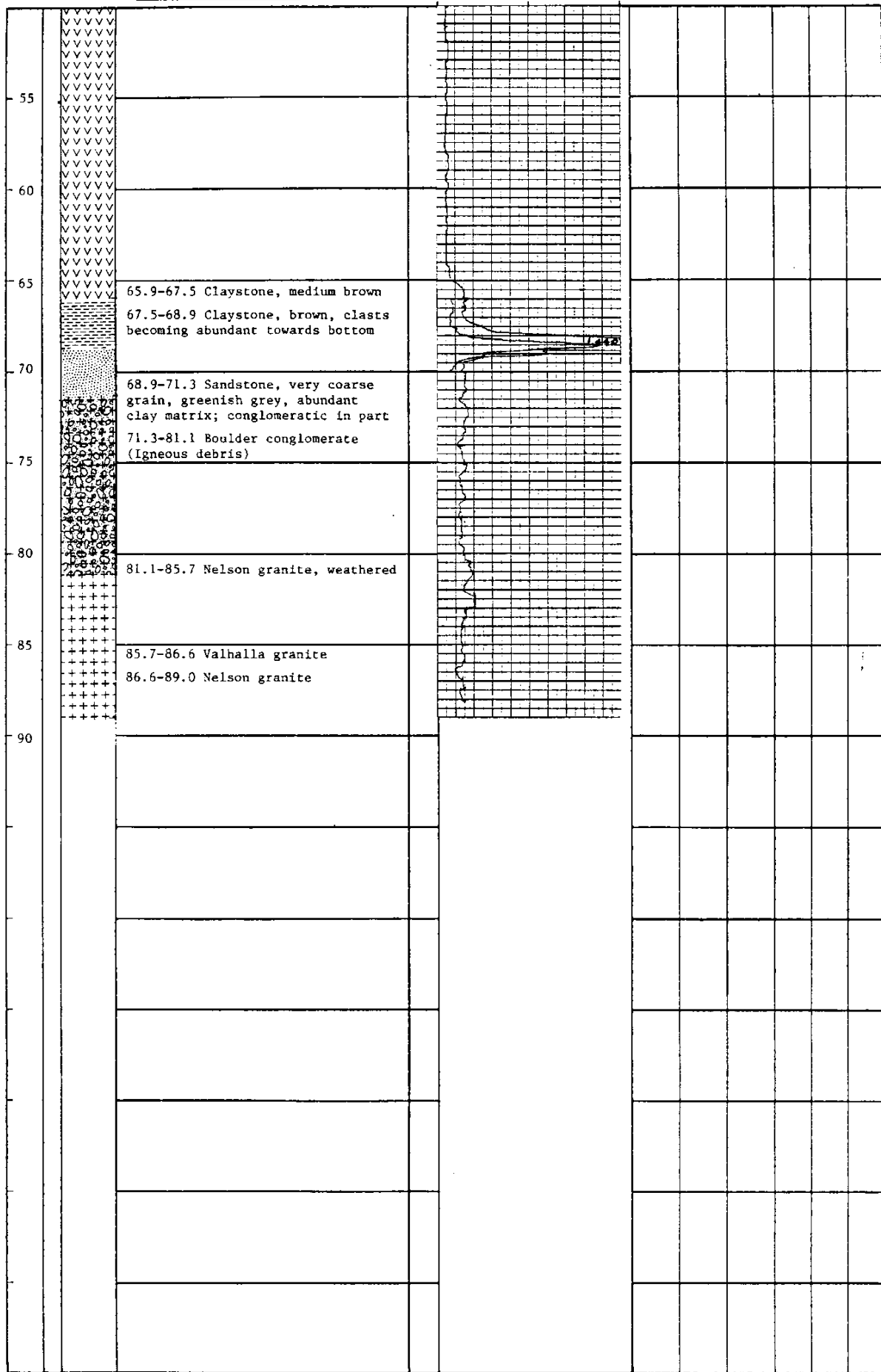
Depth m. ft.	Columnar Section	Description	Scintillation Log			Assays						
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th		
			0	100	200							
		0-3.0 Tricone										
5	VVVVVV	3.0-50.7 Basalt, black, medium grained, olivine phenocrysts; becomes finer grained towards bottom										
25	VVVVVV	0-18.1 Broken zone										
10	VVVVVV											
15	VVVVVV											
20	VVVVVV											
25	VVVVVV											
30	VVVVVV											
35	VVVVVV											
40	VVVVVV											
45	VVVVVV											
50	VVVVVV											
	VVVVVV											
	VVVVVV											
	VVVVVV											
	VVVVVV											
	VVVVVV											
	VVVVVV											
	VVVVVV											
	VVVVVV											
	VVVVVV											













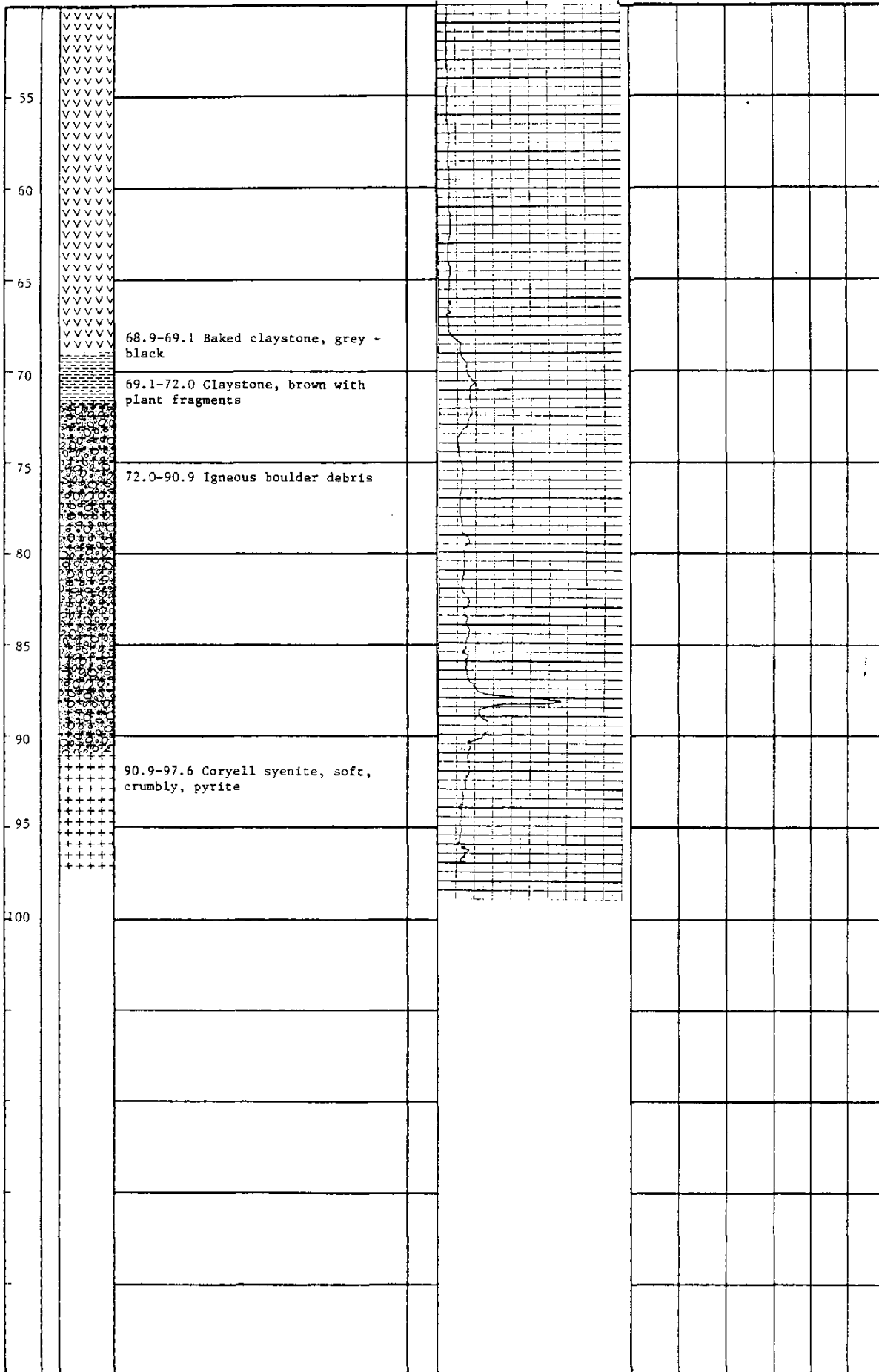








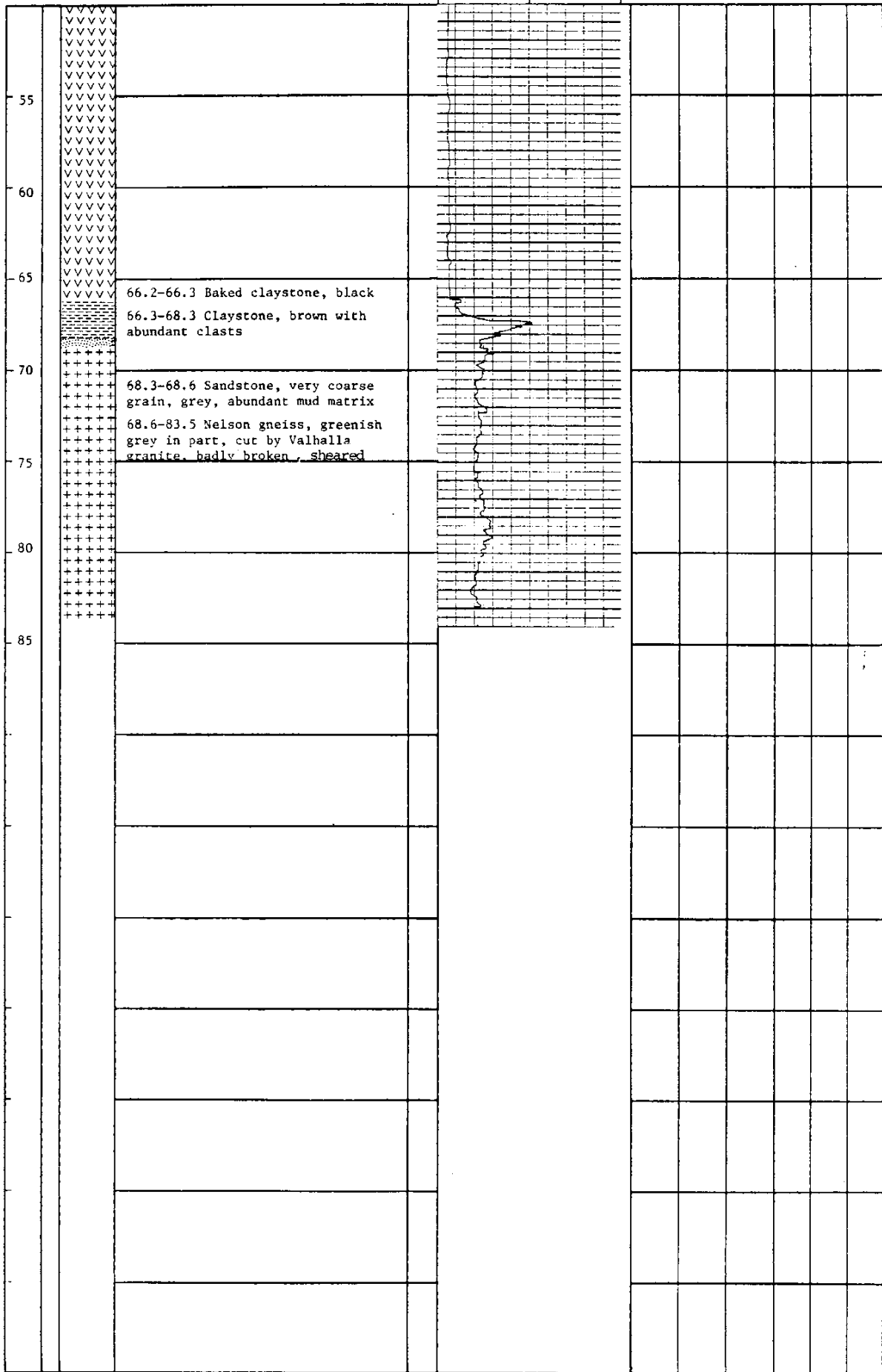




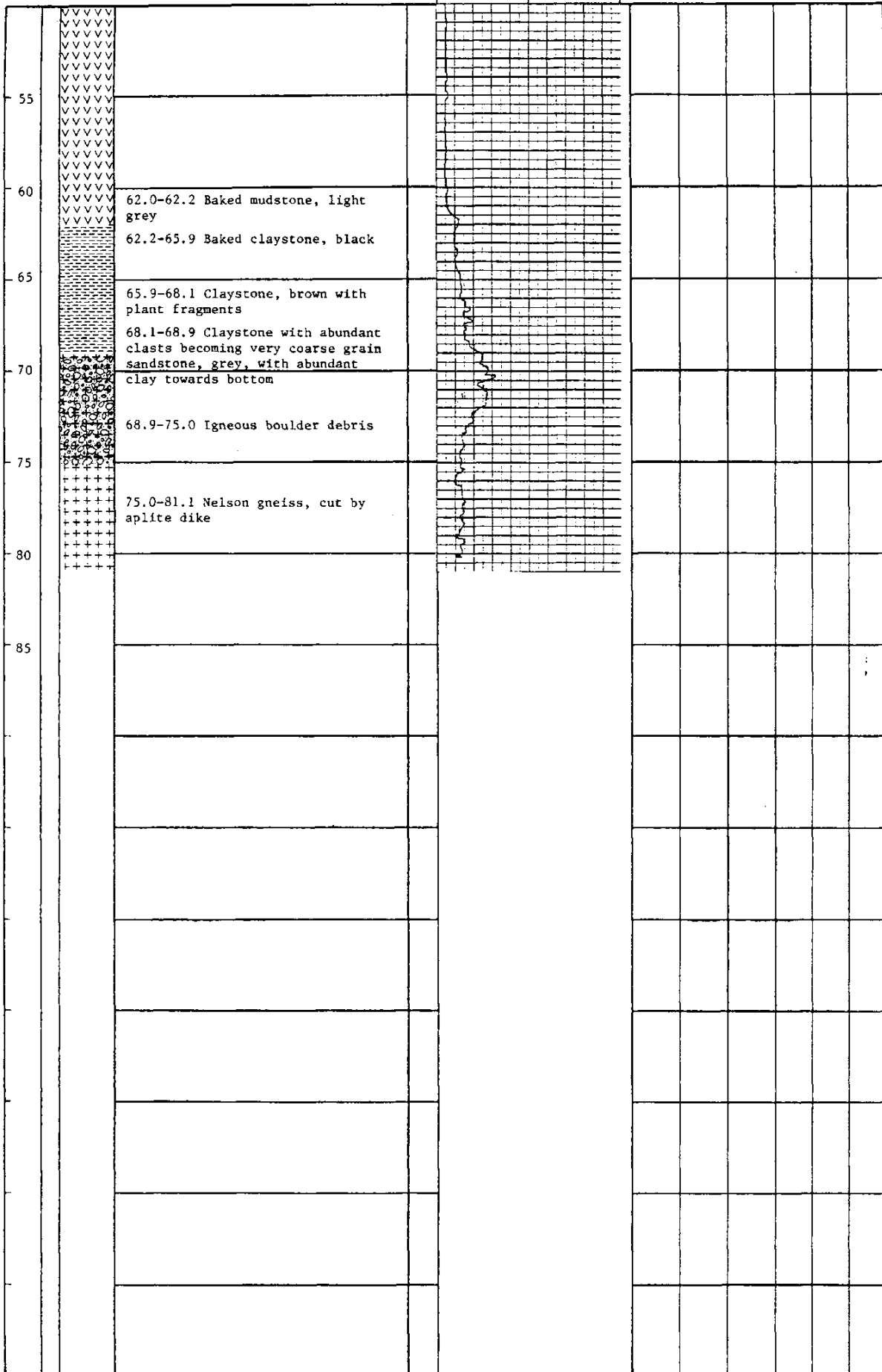
# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

<u>Method</u> Diamond drill	<u>Hole Angle</u> 90°	<u>Detector</u> G375A	<u>Date</u> November 4, 1979
<u>Hole No.</u> Cup Lake 264	<u>Core Size</u> NQ 3	<u>Monitor</u> Mt. Sopris 1000C	<u>Logged &amp; Probe</u>
<u>Location</u> Cup Lake	<u>Core Recovery</u> : Basalt 93.4 % Sediments 66.3 % Basement 81.8 %	<u>Background</u> 10 c.p.s.	<u>By</u> L. Nicoll
<u>Probe Depth</u> 82.9		<u>Time Constant</u> 1 Sec.	

Depth m ft.	Columnar Section	Description	Scintillation Log			Assays						
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th		
			0	100	200							
5	v v v v v	0-66.2 Basalt, black with olivine phenocrysts	[Scintillation Log Grid]									
25	v v v v v		[Scintillation Log Grid]									
10	v v v v v		[Scintillation Log Grid]									
15	v v v v v		[Scintillation Log Grid]									
20	v v v v v		[Scintillation Log Grid]									
25	v v v v v		[Scintillation Log Grid]									
30	v v v v v		[Scintillation Log Grid]									
35	v v v v v		[Scintillation Log Grid]									
40	v v v v v		[Scintillation Log Grid]									
45	v v v v v	47.3-48.8 Broken zone	[Scintillation Log Grid]									









APPENDIX II

FUKI DRILL HOLE LOGS

# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

Method Diamond drill  
Hole No. Fuki 201  
Location Fuki  
Probe Depth 33.6

Hole Angle 90°  
Core Size NQ 3  
Core Recovery: Basalt - %  
Sediments 100.00%  
Basement 98.04%

Scintillation  
Detector G375A  
Monitor Mt.Sopris 1000C  
Background 20 c.p.s.  
Time Constant 1 Sec.

Date September 6, 1979  
Logged & Probe  
By L. Nicoll

Depth m ft	Columnar Section	Description	Scintillation Log			Assays					
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th	
			0	100	200						
0-5											
5-25											
25-10		0-20.7 Tricone									
10-15											
15-20		20.7-21.4 Clay, greenish black									
20-25		21.4-25.5 Coarse sand - coarse pebble conglomerate, greyish green clay matrix, claystone partings									
25-30		25.5-34.5 Coryell trachyte, medium grey, phenocrysts of feldspar, biotite, and hornblende in an aphanitic groundmass; veinlets and amygdules of chlorite, quartz and epidote									
30-35											
35-40											
40-45											
45-150											

# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

Method Diamond drill

Hole Angle 90°

Scintillation  
Detector G375A

Date September 4, 1979

Hole No. Fuki 202

Core Size NQ 3

Monitor Mt. Sopris 1000C

Logged & Probe

Location Fuki

Core Recovery: Basalt 96.93%  
Sediments 19.84%  
Basement 100.00%

Background 15 c.p.s.

By L. Nicoll

Probe Depth 32.5

Time Constant 1 Sec.

Depth m. ft.	Columnar Section	Description	Scintillation Log			Assays					
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th	
		0-11.6 Tricone									
5											
25											
10		11.6-21.5 Basalt, black with minor olivine, crumbly in part									
50	VVVVVV										
20	VVVVVV	21.5-23.0 Interbedded welded tuff and basalt, crumbly in part									
75	VVVVVV										
25	VVVVVV	23.0-29.3 Fine - coarse pebble conglomerate									
30	OOOOOO					26.8	26.9	0.1	.110	.001	
30	OOOOOO	29.3-32.9 Granite, medium pinkish white, weathers light orange, broken, contains quartz and feldspar				26.9	27.0	0.1	.090	.002	
	+++++					27.0	27.1	0.1	.039	.002	
	+++++					27.1	27.2	0.1	.043	.002	
	+++++					27.2	27.3	0.1	.004	.002	
	+++++					27.3	27.4	0.1	.004	.003	
	+++++					27.4	27.5	0.1	.066	.005	
	+++++					27.5	27.6	0.1	.203	.002	
	+++++					27.6	27.7	0.1	.098	.002	
	+++++					27.7	27.8	0.1	.077	.003	
35											
125											
40											
45											
150											
















































































# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

Method Diamond drillHole Angle 90°Scintillation  
Detector G375ADate September 3, 1979Hole No. Fuki 203Core Size NQ 3Monitor Mt. Sopris 1000C

Logged &amp; Probe

Location FukiCore Recovery: Basalt 87.34%  
Sediments 49.09%  
Basement 91.64%Background 14 c.p.s.By L. NicollProbe Depth 62.0Time Constant 1 Sec.

Depth m. ft.	Columnar Section	Description	Scintillation Log			Assays				
			0	100	200	From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th
0-11.6		Tricone								
11.6-15.1	Basalt	Basalt, dark grey-black with minor olivine								
15.1-20.3	Welded tuff	Welded tuff, grey-black, greenish alteration								
20.3-21.7	Basalt	Basalt, dark grey-black with minor olivine								
21.7-29.1	Welded tuff	Welded tuff								
29.1-32.3	Basalt	Basalt, minor olivine								
32.3-34.2	Welded tuff	Welded tuff								
34.2-41.3	Basalt	Basalt								
41.3-41.5	Baked contact	Baked contact, fine to coarse pebble conglomerate with clay matrix, dark earthy grey								
41.5-41.8	Fine - coarse grain pebble conglomerate	Fine - coarse grain pebble conglomerate, grey								
41.8-44.1	Andesite	Andesite, grey, biotite phenocrysts								
44.1-44.3	Basalt	Basalt, black, cryptocrystalline								
44.3-45.8	Siltstone	Siltstone with abundant rock fragments								

55		45.8-52.3 Interbedded green and dark grey siltstone; fine grain sandstone partings, cross-bedding. Siltstone becomes darker towards bottom. Conglomerate partings; dip 0°																												
		52.3-56.6 Fine - medium pebble conglomerate with fine sand matrix																												
		56.6-56.7 Siltstone, grey																												
60		56.7-61.0 Granite, slightly weathered.																												
		61.0-62.8 Granite, dark pinkish grey																												
65																														











APPENDIX III

COLLIER LAKE DRILL HOLE LOGS

# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

<u>Method</u> Diamond drill	<u>Hole Angle</u> 90°	<u>Detector</u> G375A	<u>Date</u> August 24, 1979
<u>Hole NR.</u> Collier 201	<u>Core Size</u> NQ 3	<u>Monitor</u> Mt.Sopris 1000C	<u>Logged &amp; Probe</u>
<u>Location</u> Collier LK	<u>Core Recovery</u> Basalt 85.7 % Sediments 26.4 % Basement 93.7 %	<u>Background</u> 12 c.p.s.	<u>By</u> L. Nicoll
<u>Probe Depth</u> 43.3		<u>Time Constant</u> 1 Sec.	

Depth m. ft.	Columnar Section	Description meters	Scintillation Log C.P.S.			Assays				
			0	100	200	From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th
	VVVVVV	0-1.8 Tricone								
5	VVVVVV	1.8-33.0 Basalt, dark grey-black with minor olivine, slightly fractured								
25	VVVVVV	8.4-9.2 Fracture zone								
10	VVVVVV									
15	VVVVVV									
50	VVVVVV	19.2-29.5 Very vesicular basalt, orangish white vesicule filling								
20	VVVVVV									
75	VVVVVV									
25	VVVVVV									
30	VVVVVV	33.0-33.2 Fine pebble gravel with abundant greyish brown clay matrix, carbonaceous fragments								
100	VVVVVV	33.2-38.3 Clay, light greyish brown, orangish brown alteration, carbonaceous fragments								
35	VVVVVV	38.3-38.4 Fine pebble gravel, abundant clay matrix								
125	VVVVVV									
40	+++++	38.4-39.9 Clay, brownish grey, carbonaceous fragments, scattered rock fragments								
45	+++++	39.9-44.5 Coryell monzonite, medium grey, abundant quartz, feldspar, minor biotite altering to chlorite, epidote.								
150	+++++									

# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

<u>Method</u> Diamond drill	<u>Hole Angle</u> 90°	<u>Detector</u> Scintillation G375A	<u>Date</u> August 27, 1979
<u>Hole No.</u> Collier 202	<u>Core Size</u> NQ 3	<u>Monitor</u> Mt. Sopris 1000C	<u>Logged &amp; Probe</u>
<u>Location</u> Collier LK	<u>Core Recovery</u> : Basalt 94.8% Sediments 41.9% Basement 39.2%	<u>Background</u> 12 c.p.s.	<u>By</u> L. Nicoll
<u>Probe Depth</u> 69.5		<u>Time Constant</u> 1 Sec.	

Depth m. ft.	Core Recovery	Columnar Section	Description meters	Scintillation Log C.P.S.			Assays				
				0	100	200	From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th
			0-1.8 Tricone								
5			1.8-52.0 Basalt, black with minor olivine, reddish brown alteration along joints								
25			12.6-12.9 Vesicular basalt								
10			15.0-15.3 Basaltic dikes								
15			17.4-24.7 Very vesicular basalt, abundant alteration								
50			27.7-30.7 Very vesicular basalt, abundant alteration								
20			36.6-37.3 Vesicular basalt								
75			41.7-52.0 Very vesicular basalt, abundant reddish brown alteration, non-vesicular in part								
25											
30											
30											
35											
125											
40											
45											
50											



# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

<u>Method</u> Diamond drill	<u>Hole Angle</u> 90°	<u>Detector</u> G375A	<u>Date</u> August 29, 1979
<u>Hole No.</u> Collier 203	<u>Core Size</u> NQ 3	<u>Monitor</u> Mt. Sopris 1000C	<u>Logged &amp; Probe</u>
<u>Location</u> Collier LK	<u>Core Recovery</u> Basalt 86.93% Sediments - % Basement 86.37%	<u>Background</u> 10 c.p.s.	<u>By</u> L. Nicoll
<u>Probe Depth</u> 61.4		<u>Time Constant</u> 1 Sec.	

Depth m ft	Core Recovery	Columnar Section	Description meters	Scintillation Log C.P.S.			Assays					
				0	100	200	From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th	
			0-1.8 Tricone									
5	VVVVVV		1.8-50.6 Basalt, dark grey-black with minor olivine									
25	VVVVVV											
10	VVVVVV											
15	VVVVVV		16.6-17.9 Very vesicular basalt									
20	VVVVVV		19.0-19.6 Very vesicular basalt									
20	VVVVVV		20.0-20.4 Vesicular basalt									
75	VVVVVV		20.4-30.9 Very vesicular basalt, black with light grey and reddish alteration									
25	VVVVVV											
30	VVVVVV		30.9-33.5 Vesicular basalt									
100	VVVVVV											
35	VVVVVV											
125	VVVVVV											
40	VVVVVV		41.3-45.9 Very vesicular basalt, abundant reddish alteration									
45	VVVVVV											
150	VVVVVV		45.9-50.6 Altered basalt, lower portion of flow									



# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

<u>Method</u> Diamond drill	<u>Hole Angle</u> 90°	<u>Detector</u> G375A	<u>Date</u> August 31, 1979
<u>Hole No.</u> Collier 204	<u>Core Size</u> NQ 3	<u>Monitor</u> Mt.Sopris 1000C	<u>Logged &amp; Probe</u>
<u>Location</u> Collier LK	<u>Core Recovery</u> : Basalt 97.4% Sediments 32.8% Basement 55.8%	<u>Background</u> 12 c.p.s.	<u>By</u> L. Nicoll
<u>Probe Depth</u> 79.9		<u>Time Constant</u> 1 Sec.	

Depth m ft	Columnar Section	Description meters	Scintillation Log C.P.S.			Assays				
			0	100	200	From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th
		0-2.1 Tricone								
	VVVVV	2.1-62.0 Basalt, dark grey-black, minor olivine								
-5	VVVVV									
-25	VVVVV									
-10	VVVVV									
-15	VVVVV									
-50	VVVVV	16.2-16.5 Basaltic dikes								
-20	VVVVV	19.8-23.0 Vesicular basalt								
-75	VVVVV									
-25	VVVVV	23.0-28.4 Very vesicular basalt, crumbly, abundant reddish alteration								
-30	VVVVV									
-30	VVVVV	28.4-30.9 Vesicular basalt								
-35	VVVVV									
-125	VVVVV									
-40	VVVVV	38.9-41.0 Vesicular basalt								
-45	VVVVV									
-45	VVVVV	43.7-46.2 Very vesicular basalt, crumbly, altered								
-150	VVVVV									
-150	VVVVV	46.2-47.3 Vesicular basalt								
-150	VVVVV									
-150	VVVVV	48.8-50.2 Very vesicular basalt, crumbly, altered								





# PNC EXPLORATION (CANADA) CO. LTD. LOG AND PROBE SHEET

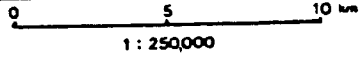
Method <u>Diamond drill</u>	Hole Angle <u>90°</u>	Detector <u>Scintillation G375A</u>	Date <u>September 1, 1979</u>
Hole No. <u>Collier 205</u>	Core Size <u>NQ 3</u>	Monitor <u>Mt. Sopris 1000C</u>	Logged & Probe
Location <u>Collier LK</u>	Core Recovery: Basalt <u>83.1%</u> Sediments <u>7.3%</u> Basement <u>99.2%</u>	Background <u>10 c.p.s.</u>	By <u>L. Nicoll</u>
Probe Depth <u>47.0</u>		Time Constant <u>1 Sec.</u>	

Depth m. ft.	Columnar Section	Description	Scintillation Log			Assays						
			C.P.S.			From	To	Length	U <sub>3</sub> O <sub>8</sub>	Th		
		0-1.8 Tricone	0	100	200							
5	VVVVVV	1.8-31.0 Basalt, dark grey-black with minor olivine										
25	VVVVVV											
10	VVVVVV											
15	VVVVVV	17.7-19.7 Vesicular basalt										
20	VVVVVV	20.2-21.1 Vesicular basalt										
25	VVVVVV	21.6-31.0 Very vesicular basalt, crumbly, altered										
30	VVVVVV											
35	VVVVVV	31.0-38.4 Clay and fine grain sand, medium orange brown; granite pebbles										
40	VVVVVV	38.4-41.5 Granite pebbles										
45	VVVVVV	41.5-43.0 Granite, light pink, with biotite, hornblende, quartz, feldspar										
45	VVVVVV	43.0-43.9 Coarse pebble breccia with clay and fine sand matrix										
45	VVVVVV	43.9-47.6 Coryell trachyte, phenocrysts of biotite, hornblende and pyroxene in an aphanitic groundmass										

## APPENDIX IV

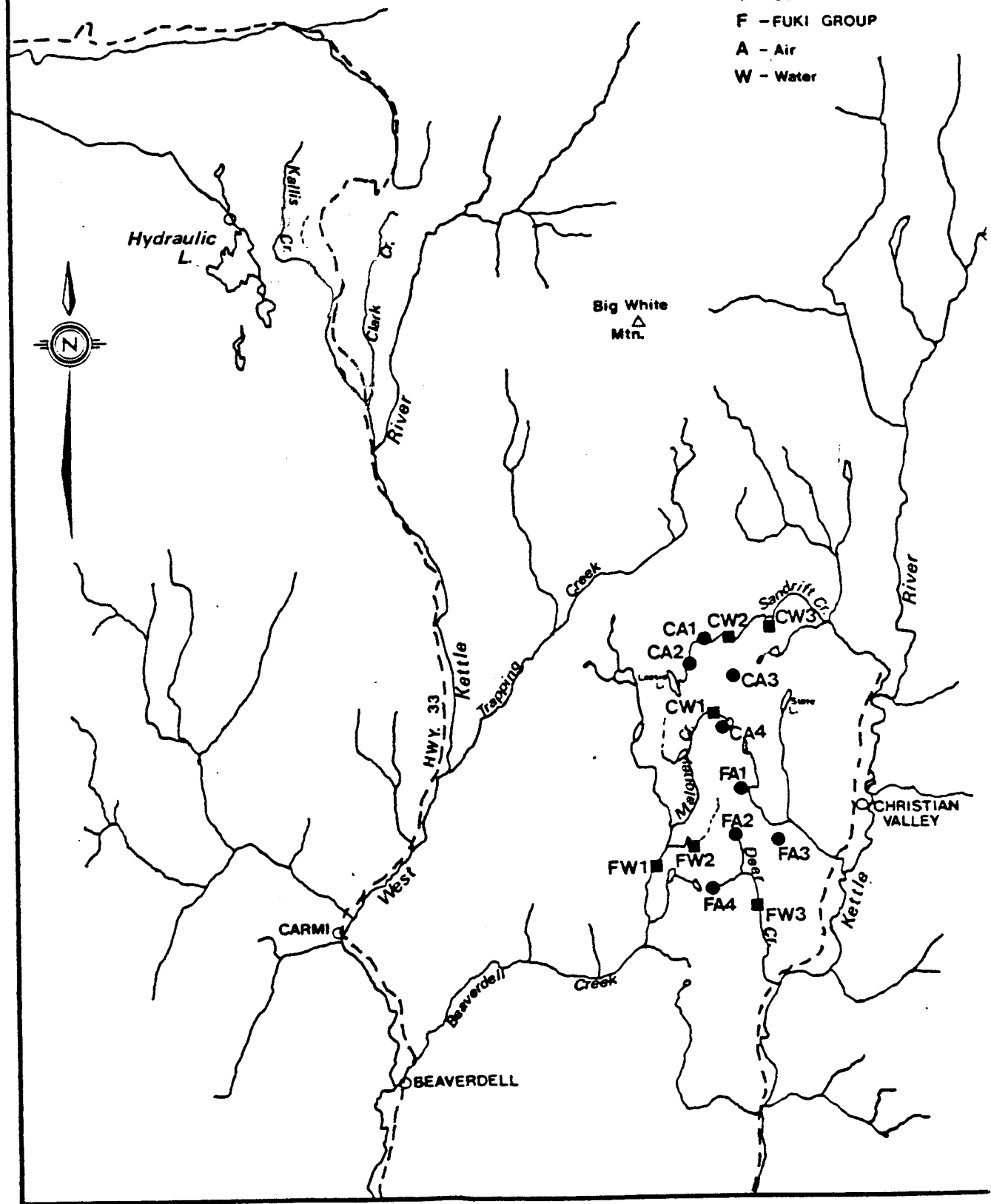
GROUNDWATER GEOCHEMICAL LOCATIONS AND ANALYSES

# LOCATION MAP



## LEGEND

- C - CUP LAKE GROUP
- F - FUKI GROUP
- A - Air
- W - Water



## Water Quality Sampling Site Descriptions

### 1) Cup Lake Group Water Quality Stations

- CW1, located on Maloney Creek, downstream from Cup Lake and upstream from the old abandoned back road. Water obtained at an open area and site was carefully flagged.
- CW2, located on Sandrift Creek, upstream from small lake. In the upper reaches of this creek there are periods of very low stream flow; occasionally none at all. The creek was dry on July 26, 1979, therefore a water sample was not obtained.
- CW3, Sandrift Lake No. 1. The sampling site was located at the spot where the lake was deepest (12 metres). The water for the sample was taken from the 2.0 m depth below surface.

### 2) Fuki Group Water Quality Stations

- FW1, located on Beaverdell Creek, downstream from the confluence of the stream leading from Martin Lake. The sampling site was at a gravelly section of stream bottom and stream flows were moderate.
- FW2, located at the outlet of Martin Lake. This sample was obtained right at the outlet instead of downstream because of the very low stream flows.
- FW3, located downstream of the Deer Creek and second, unnamed, creek confluences. The bank is very steep at this location and it will be difficult to return to the exact spot. The site was flagged.

## Air Quality Sampling Site Descriptions

### 1) Cup Lake Group Air Quality Stations

- CA1, located 2.8 km north on the road leading through Sandrift Meadows and to Sandrift Creek (Sandrift Creek Road) from the junction of this road with Lassie Lake Road. Dustfall cannisters are 100 m east of Sandrift Creek Road.
- CA2, located 1.3 km north on Sandrift Creek Road from the junction of this road with Lassie Lake Road. Dustfall cannisters are just 10m west of Sandrift Creek Road.
- CA3, located 1.6 km north on Sandrift Creek Road from junction of Lassie Lake Road and Sandrift Creek Road, then east 0.9 km along dirt road running west to east. Dustfall cannisters are 10 m north of the dirt road.
- CA4, located 100 m off Lassie Lake Road on dirt road heading west. This road joins Lassie Lake 100 m south of the Cup Lake campground. Dustfall cannisters are 4 m north of the dirt road.

### 2) Fuki Group Air Quality Stations

- FA1, located 1.9 km north on Lassie Lake Road from junction of Lassie Lake Road with Deaverdell Road. Dustfall cannisters are 30 m east of this point in clearing in roads.
- FA2, located 1.4 km west along Beaverdell Road from junction of Beaverdell Road with Lassie Lake Road, and 200 m south along side road leading to Fuki showing. Dustfall cannisters are just east of this point.
- FA3, located 1.4 km east along Beaverdell Road leading to Christian Valley from junction of Beaverdell Road with Lassie Lake Road. Dustfall cannisters are south of road and above road embankment.
- FA4, located 3.4 km south along dirt road by the Fuki showing from the junction of this road with the Beaverdell Road. Dustfall cannisters are across Deer Creek and 200 m north up a couloir.

PRELIMINARY WATER QUALITY ANALYTICAL RESULTS

P.N.C.

## Water Quality Analysis

Station No.: CW 1

Sampling Date

Description:

26/07/79

pH	6.81
Susp. Solids (mg/l)	7
Diss. Solids (mg/l)	78
Total Solids (mg/l)	86
Acidity (mg/l CaCO <sub>3</sub> )	2.8
Alkalinity (mg/l CaCO <sub>3</sub> )	38
Diss. SO <sub>4</sub> (mg/l)	< 2
Diss Cl (mg/l)	0.6
Total PO <sub>4</sub> (mg/l P)	< 0.01
Diss. NO <sub>3</sub> +NO <sub>2</sub> (mg/l N)	0.15
NH <sub>3</sub> -N (mg/l N)	0.04
TKN (mg/l N)	0.11
Total Ca (ppm)	9.5
Total Mg (ppm)	3.0
Total Na (ppm)	3.0
Total K (ppm)	0.60
Total Fe (ppm)	0.44
Total Mn (ppm)	0.04
Total U (ppb)	



Station No: CW 2

Not sampled due to stream being dry.

P.N.C.

## Water Quality Analysis

Station No.: CW 3

Sampling Date

Description:

26/07/79

pH	5.82
Susp. Solids (mg/l)	6
Diss. Solids (mg/l)	59
Total Solids (mg/l)	61
Acidity (mg/l CaCO <sub>3</sub> )	8.4
Alkalinity (mg/l CaCO <sub>3</sub> )	12
Diss. SO <sub>4</sub> (mg/l)	< 2
Diss Cl (mg/l)	0.9
Total PO <sub>4</sub> (mg/l P)	< 0.01
Diss. NO <sub>3</sub> +NO <sub>2</sub> (mg/l N)	0.13
NH <sub>3</sub> -N (mg/l N)	0.13
TKN (mg/l N)	0.38
Total Ca (ppm)	5.0
Total Mg (ppm)	1.1
Total Na (ppm)	2.5
Total K (ppm)	0.76
Total Fe (ppm)	0.38
Total Mn (ppm)	< 0.02
Total U (ppb)	

P.N.C.

## Water Quality Analysis

Station No.: FW 1

Sampling Date

Description:

26/07/79

pH	7.29
Susp. Solids (mg/l)	2
Diss. Solids (mg/l)	89
Total Solids (mg/l)	88
Acidity (mg/l CaCO <sub>3</sub> )	1.9
Alkalinity (mg/l CaCO <sub>3</sub> )	50
Diss. SO <sub>4</sub> (mg/l)	2
Diss Cl (mg/l)	0.5
Total PO <sub>4</sub> (mg/l P)	< 0.01
Diss. NO <sub>3</sub> +NO <sub>2</sub> (mg/l N)	0.24
NH <sub>3</sub> -N (mg/l N)	0.04
TKN (mg/l N)	0.04
Total Ca (ppm)	16.0
Total Mg (ppm)	2.8
Total Na (ppm)	3.2
Total K (ppm)	1.2
Total Fe (ppm)	0.30.
Total Mn (ppm)	< 0.02
Total U (ppb)	

P.N.C.

## Water Quality Analysis

Station No.:	FW 2	<u>Sampling Date</u>
Description:		26/07/79
pH		6.73
Susp. Solids (mg/l)		2
Diss. Solids (mg/l)		62
Total Solids (mg/l)		61
Acidity (mg/l CaCO <sub>3</sub> )		2.2
Alkalinity (mg/l CaCO <sub>3</sub> )		19
Diss. SO <sub>4</sub> (mg/l)		2
Diss Cl (mg/l)		0.4
Total PO <sub>4</sub> (mg/l P)		<0.01
Diss. NO <sub>3</sub> +NO <sub>2</sub> (mg/l N)		0.16
NH <sub>3</sub> -N (mg/l N)		0.09
TKN (mg/l N)		0.69
Total Ca (ppm)		5.5
Total Mg (ppm)		1.5
Total Na (ppm)		2.5
Total K (ppm)		0.84
Total Fe (ppm)		0.30
Total Mn (ppm)		<0.02
Total U (ppb)		

P.N.C.

## Water Quality Analysis

Station No.: FW 3

Sampling Date

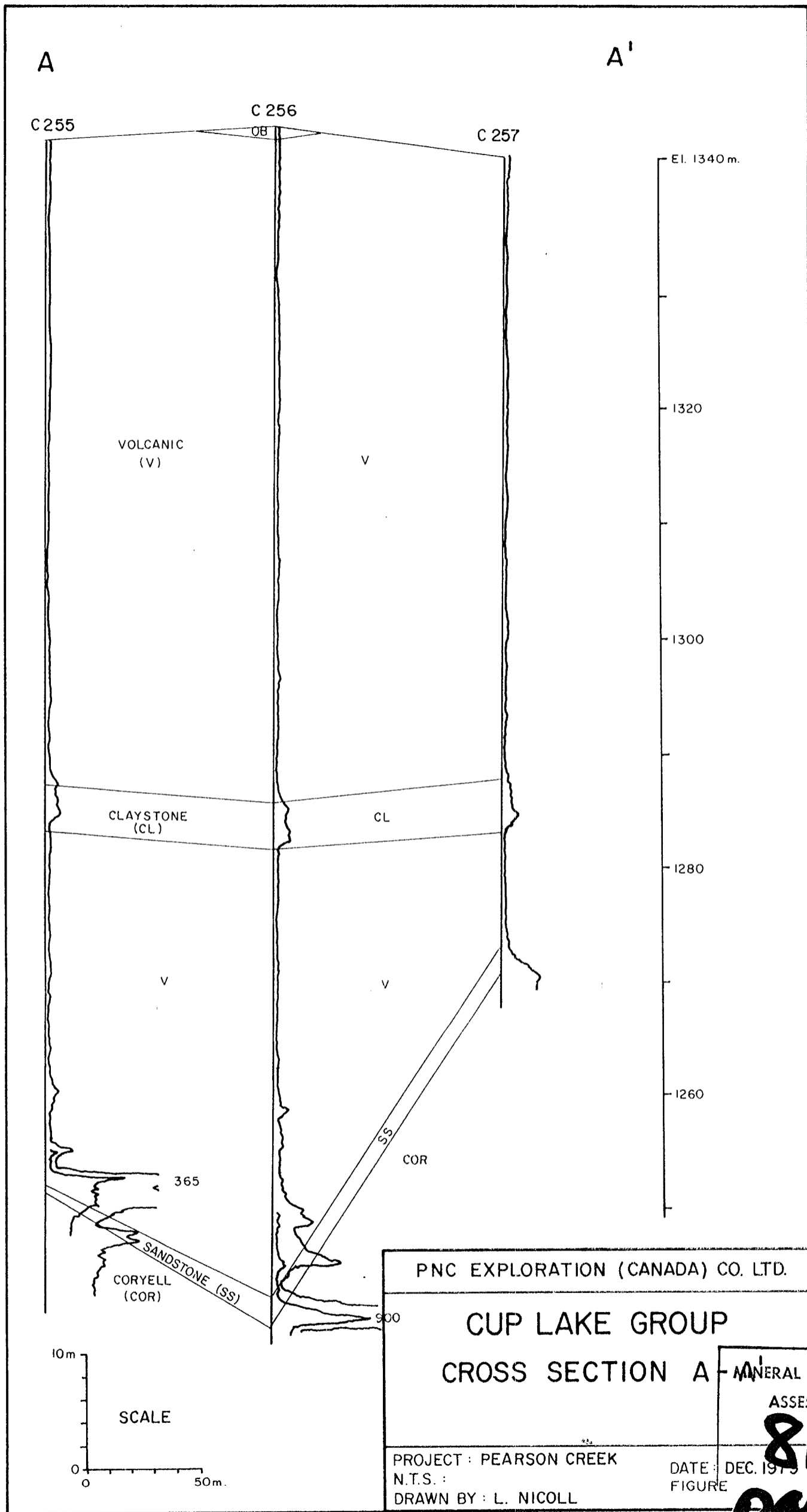
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26/07/79

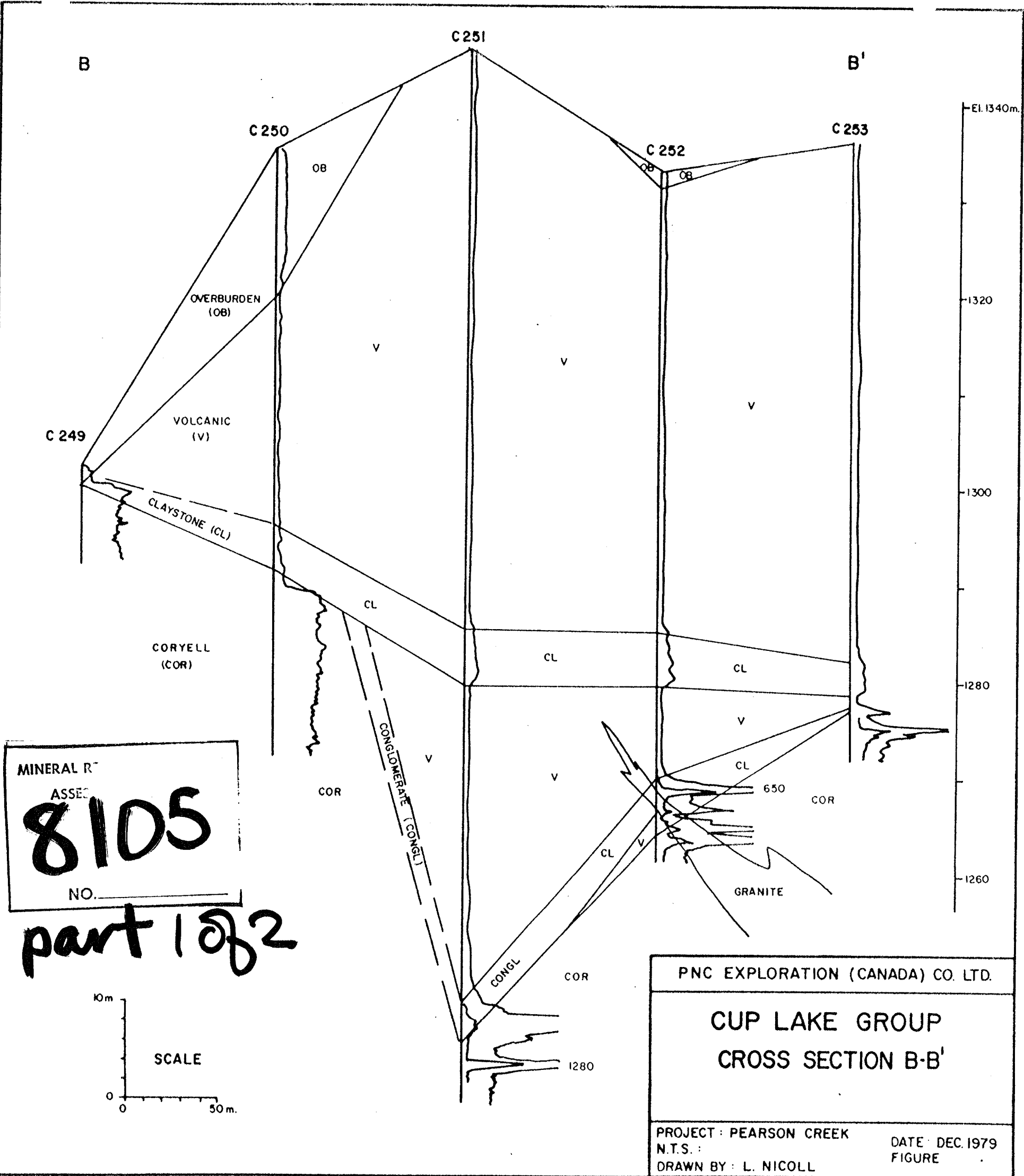
pH	7.46
Susp. Solids (mg/l)	1
Diss. Solids (mg/l)	128
Total Solids (mg/l)	126
Acidity (mg/l CaCO <sub>3</sub> )	1.7
Alkalinity (mg/l CaCO <sub>3</sub> )	92
Diss. SO <sub>4</sub> (mg/l)	< 2
Diss Cl (mg/l)	0.3
Total PO <sub>4</sub> (mg/l P)	< 0.01
Diss. NO <sub>3</sub> +NO <sub>2</sub> (mg/l N)	0.15
NH <sub>3</sub> -N (mg/l N)	< 0.01
TKN (mg/l N)	0.01
Total Ca (ppm)	24.5
Total Mg (ppm)	6.1
Total Na (ppm)	5.2
Total K (ppm)	1.3
Total Fe (ppm)	0.10
Total Mn (ppm)	< 0.02
Total U (ppb)	

SUPPLEMENTAL ANALYTICAL RESULTS FOR URANIUM AND RADIONUCLIDES JULY, 1979

<u>Parameter</u>	<u>STATION NO</u>				
	<u>CW 1</u>	<u>CW 3</u>	<u>FW 1</u>	<u>FW 2</u>	<u>FW 3</u>
Diss. U. (ppb)	0.20	0.35	0.50	0.15	1.00
Gross Alpha (pCi/l)	1 <sup>±</sup> 1	2 <sup>±</sup> 1	< 1	2 <sup>±</sup> 1	< 1
Gross Beta (pCi/l)	6 <sup>±</sup> 3	5 <sup>±</sup> 3	5 <sup>±</sup> 3	17 <sup>±</sup> 3	9 <sup>±</sup> 3
Total Ra 226 (pCi/l)	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Diss. Ra 226 (pCi/l)	< 0.2	< 0.2	< 0.2	0.2 <sup>±</sup> 0.2	< 0.2

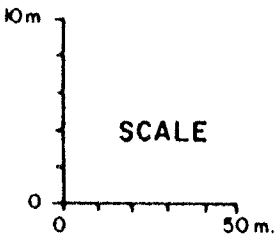


**8105**  
**part 1002**



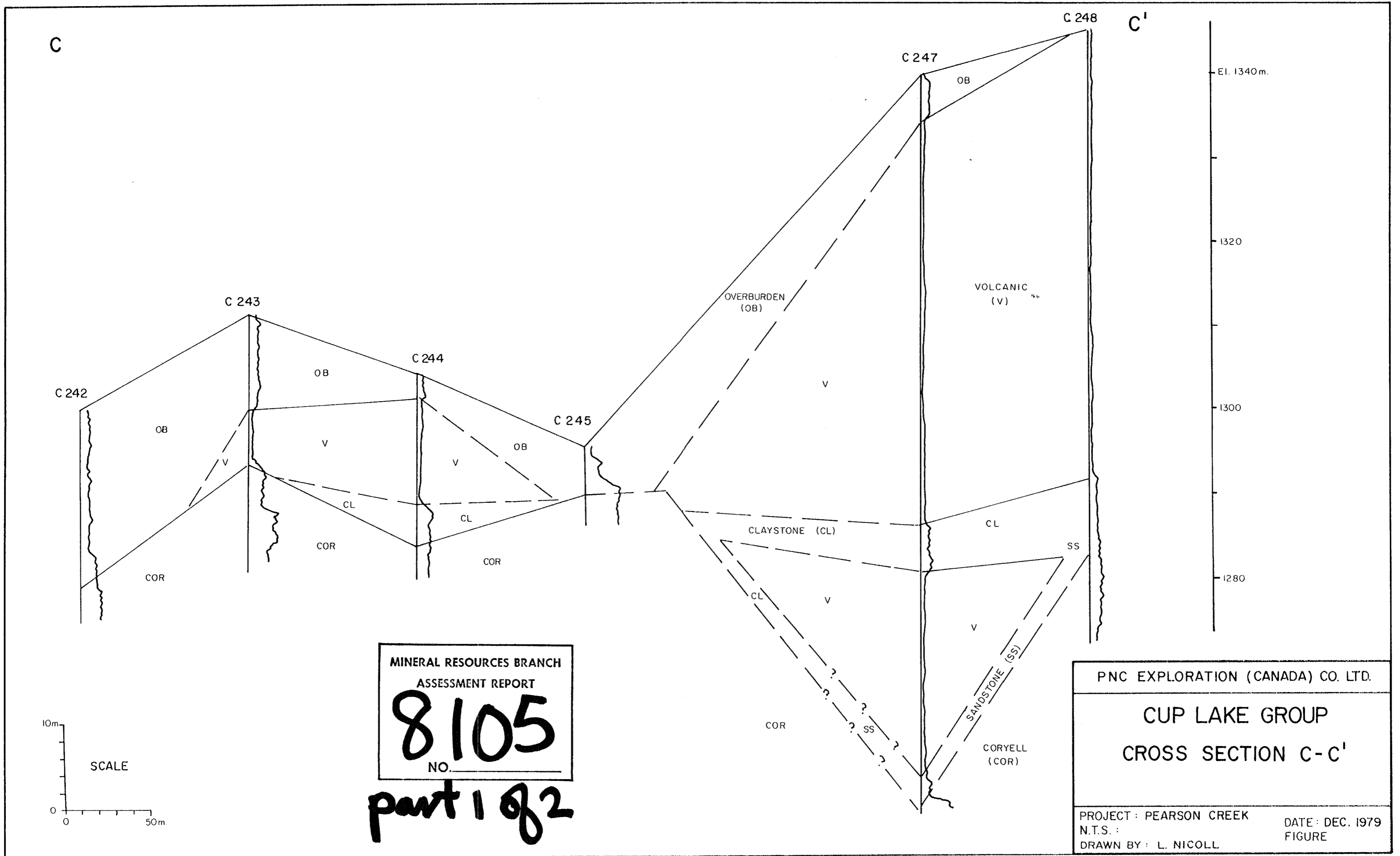
MINERAL R<sup>T</sup>  
 ASSEC  
**8105**  
 NO. \_\_\_\_\_

*part 1 of 2*



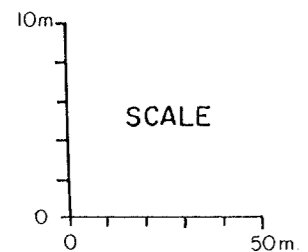
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**CUP LAKE GROUP  
 CROSS SECTION B-B'**  
 PROJECT : PEARSON CREEK  
 N.T.S. :  
 DRAWN BY : L. NICOLL  
 DATE : DEC. 1979  
 FIGURE



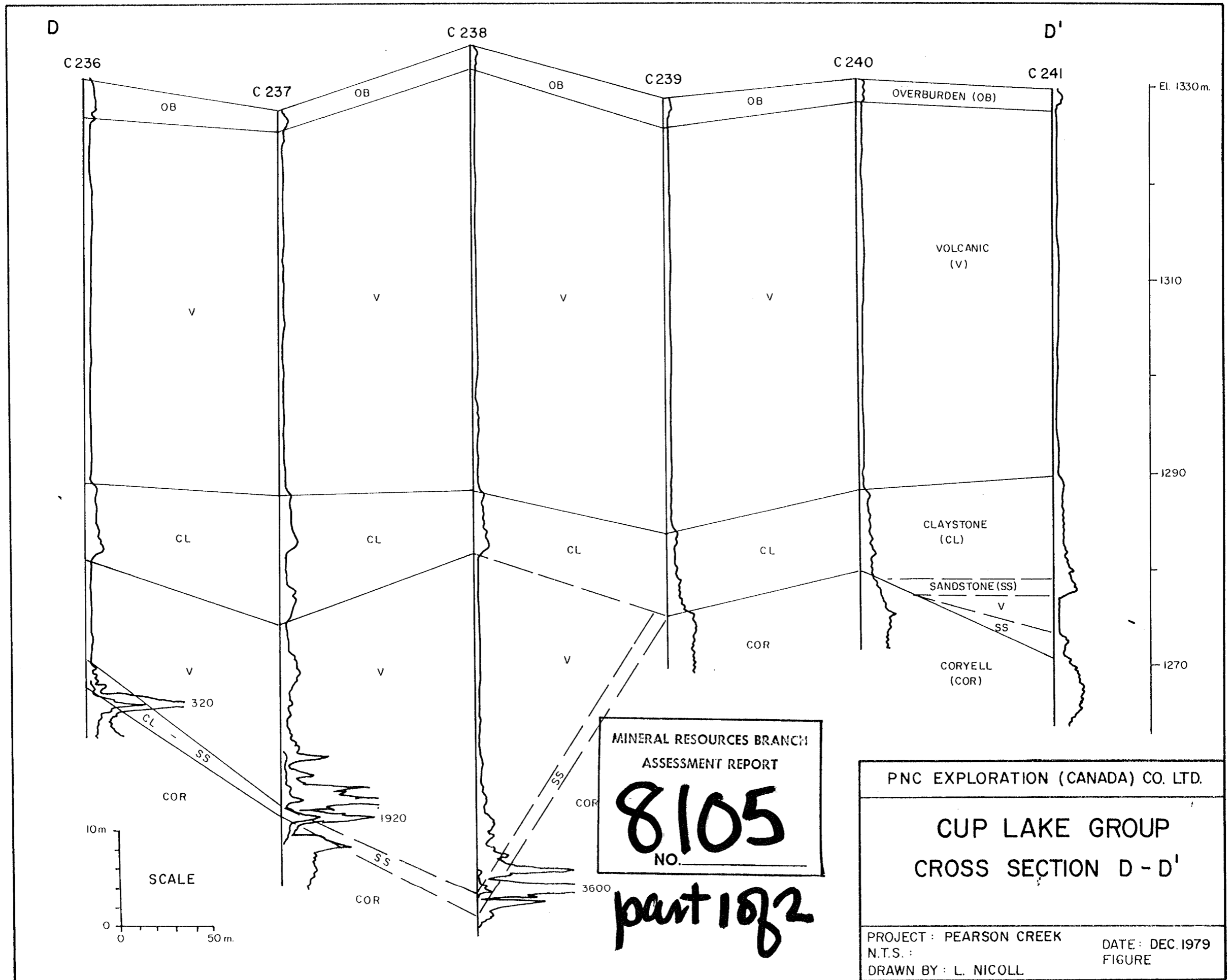


MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**8105**  
 NO. \_\_\_\_\_

*part 1 of 2*



PNC EXPLORATION (CANADA) CO. LTD.  
**CUP LAKE GROUP**  
**CROSS SECTION C-C'**  
 PROJECT: PEARSON CREEK  
 N.T.S.: DATE: DEC. 1979  
 DRAWN BY: L. NICOLL FIGURE



D

C 238

D'

C 236

C 237

C 239

C 240

C 241

OB

OB

OB

OVERBURDEN (OB)

El. 1330m.

V

V

V

V

1310

1290

CL

CL

CL

CL

CLAYSTONE (CL)

SANDSTONE (SS)

V

SS

1270

V

V

V

COR

CORYELL (COR)

320

CL

COR

1920

SS

COR

COR

3600

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT

8105  
NO.

part 1072

PNC EXPLORATION (CANADA) CO. LTD.

CUP LAKE GROUP  
CROSS SECTION D - D'

PROJECT: PEARSON CREEK  
N.T.S.:  
DRAWN BY: L. NICOLL

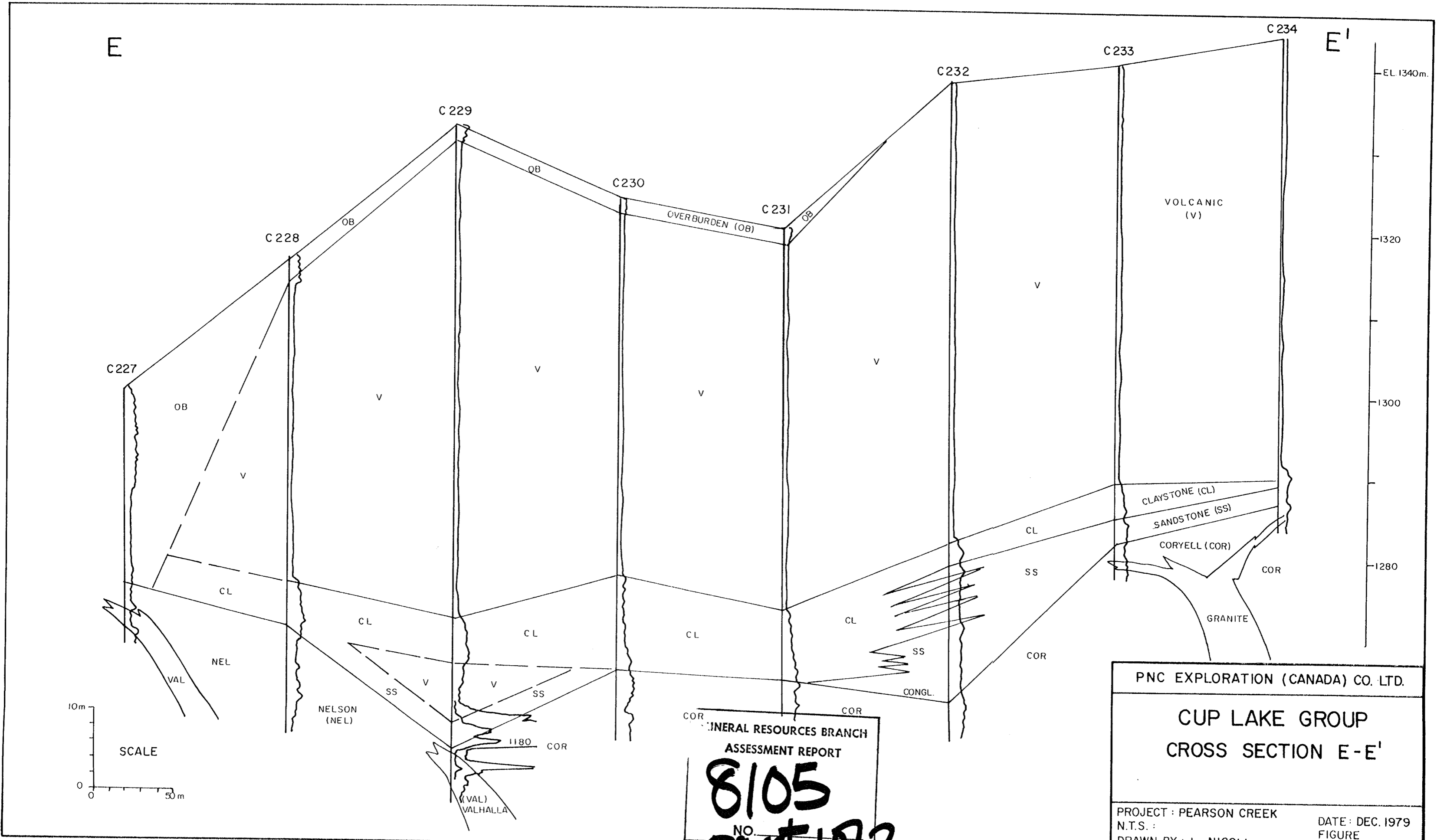
DATE: DEC. 1979  
FIGURE

10m

SCALE

0

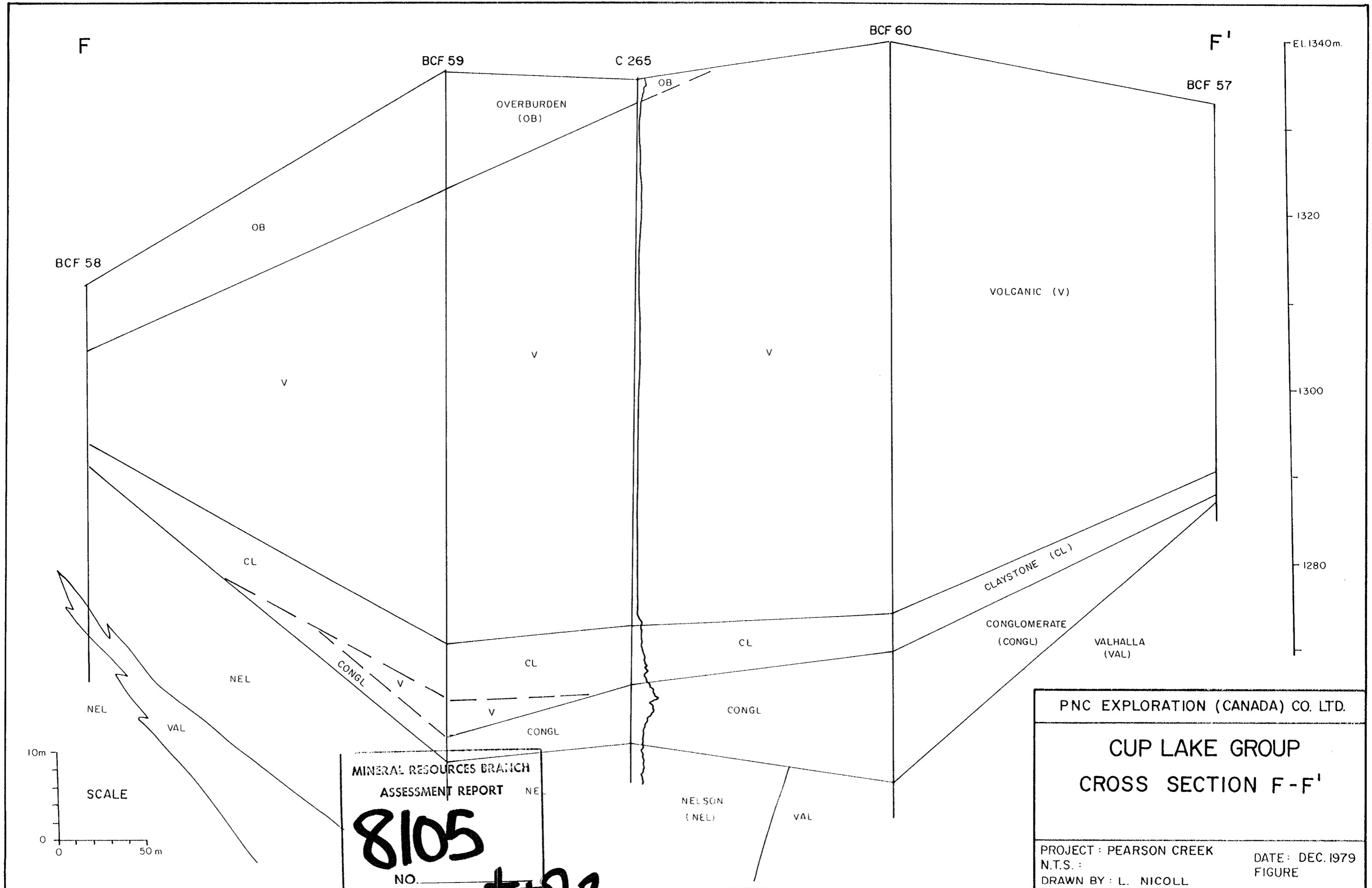
50m.



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT

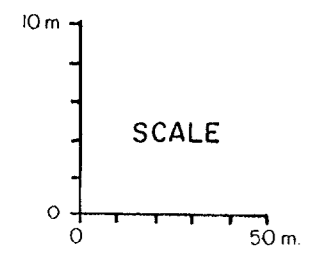
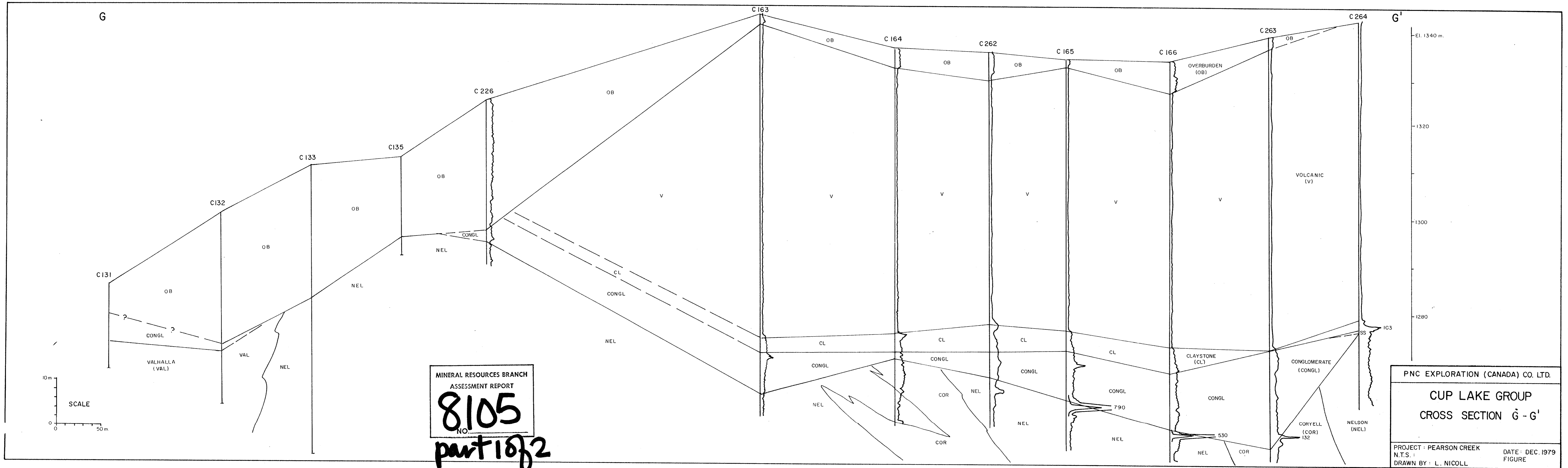
8105  
NO. part 1062

PNC EXPLORATION (CANADA) CO. LTD.  
CUP LAKE GROUP  
CROSS SECTION E-E'  
PROJECT : PEARSON CREEK  
N.T.S. :  
DRAWN BY : L. NICOLL  
DATE : DEC. 1979  
FIGURE



**part 1862**

PNC EXPLORATION (CANADA) CO. LTD.  
**CUP LAKE GROUP  
 CROSS SECTION F-F'**  
 PROJECT: PEARSON CREEK  
 N.T.S.:  
 DRAWN BY: L. NICOLL  
 DATE: DEC. 1979  
 FIGURE



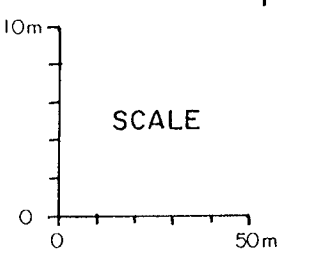
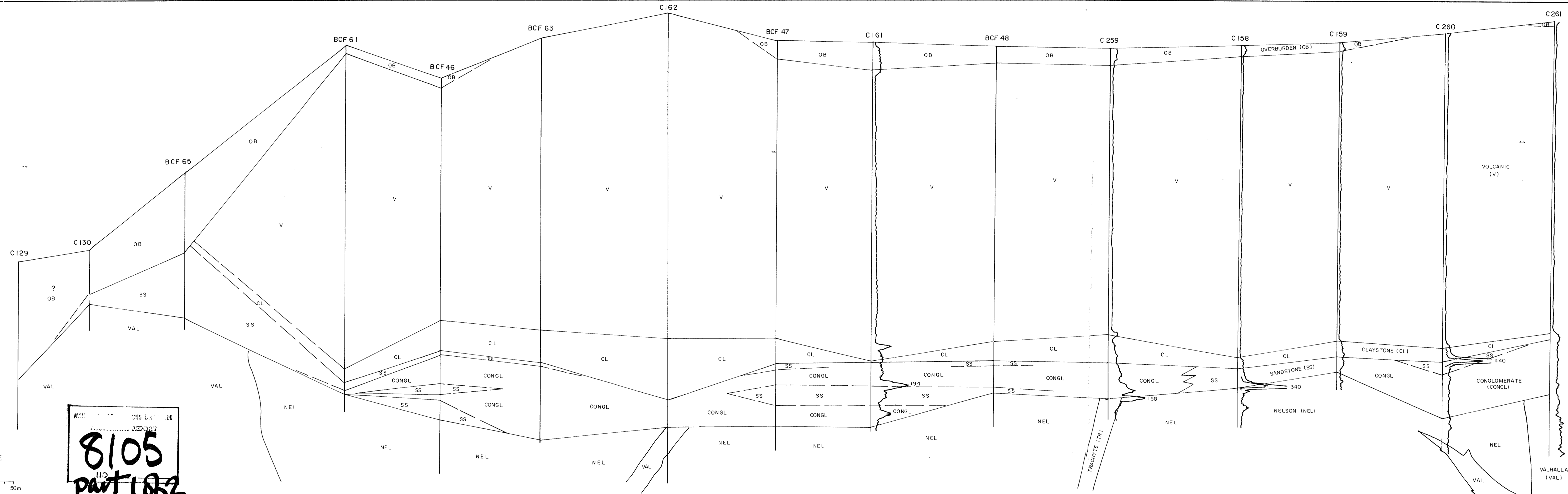
MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**8105**  
 NO.

*part 1 of 2*

PNC EXPLORATION (CANADA) CO. LTD.  
**CUP LAKE GROUP**  
**CROSS SECTION G-G'**  
 PROJECT : PEARSON CREEK  
 N.T.S. :  
 DRAWN BY : L. NICOLL  
 DATE : DEC. 1979  
 FIGURE

H

H'



REPORT NO. 8105  
part 182

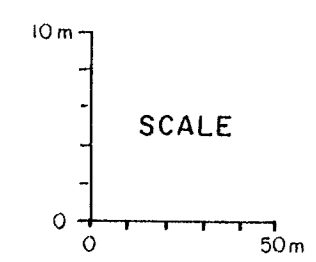
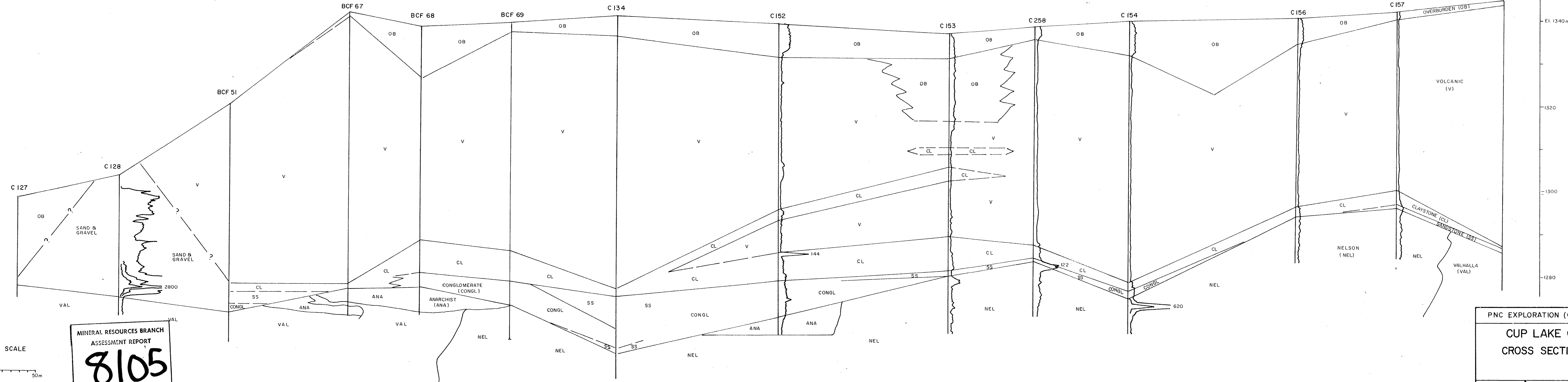
PNC EXPLORATION (CANADA) CO. LTD.

CUP LAKE GROUP  
CROSS SECTION H - H'

PROJECT: PEARSON CREEK  
N.T.S.:  
DRAWN BY: L. NICOLL

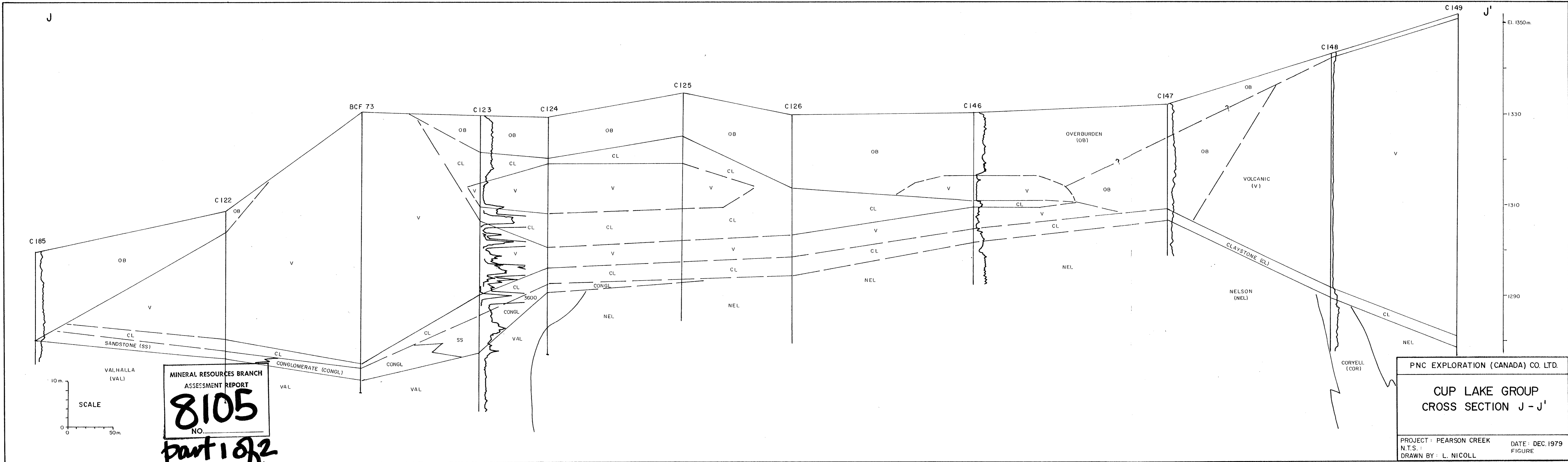
DATE: DEC. 1979  
FIGURE

I I'



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
NO. **8105**  
**part 1 of 2**

PNC EXPLORATION (CANADA) CO. LTD.  
**CUP LAKE GROUP**  
**CROSS SECTION I - I'**  
PROJECT: PEARSON CREEK  
N.T.S.:  
DRAWN BY: L. NICOLL  
DATE: DEC. 1979  
FIGURE



MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**8105**  
 NO.

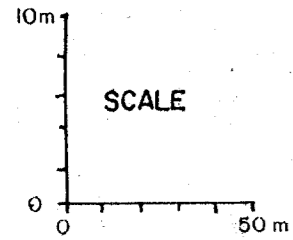
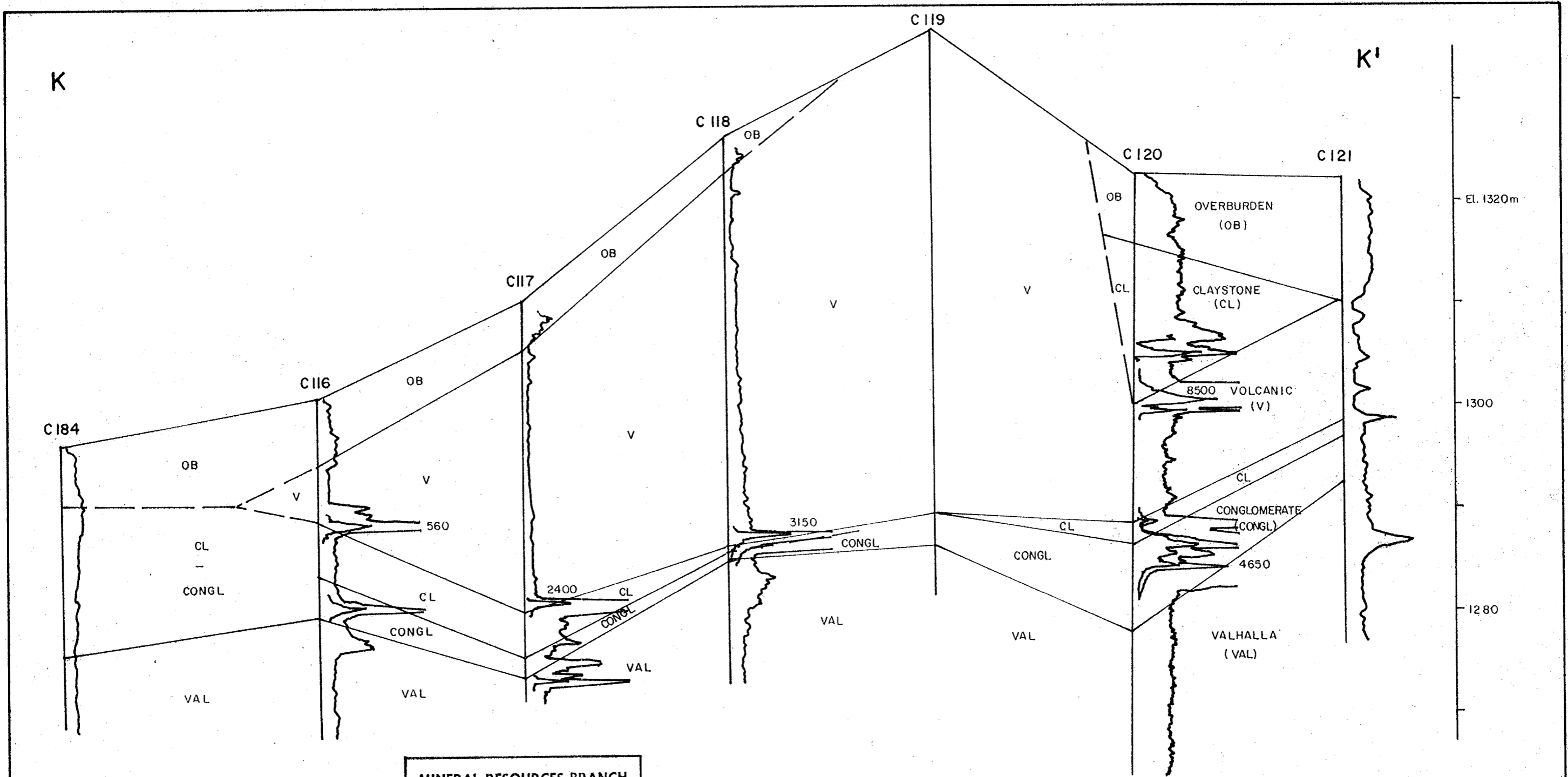
*part 1 of 2*

PNC EXPLORATION (CANADA) CO. LTD.

**CUP LAKE GROUP  
 CROSS SECTION J - J'**

PROJECT : PEARSON CREEK  
 N.T.S. :  
 DRAWN BY : L. NICOLL  
 DATE : DEC. 1979  
 FIGURE

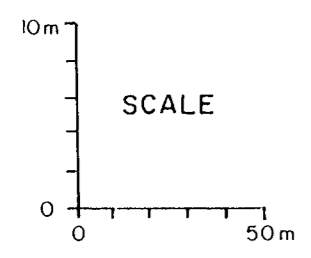
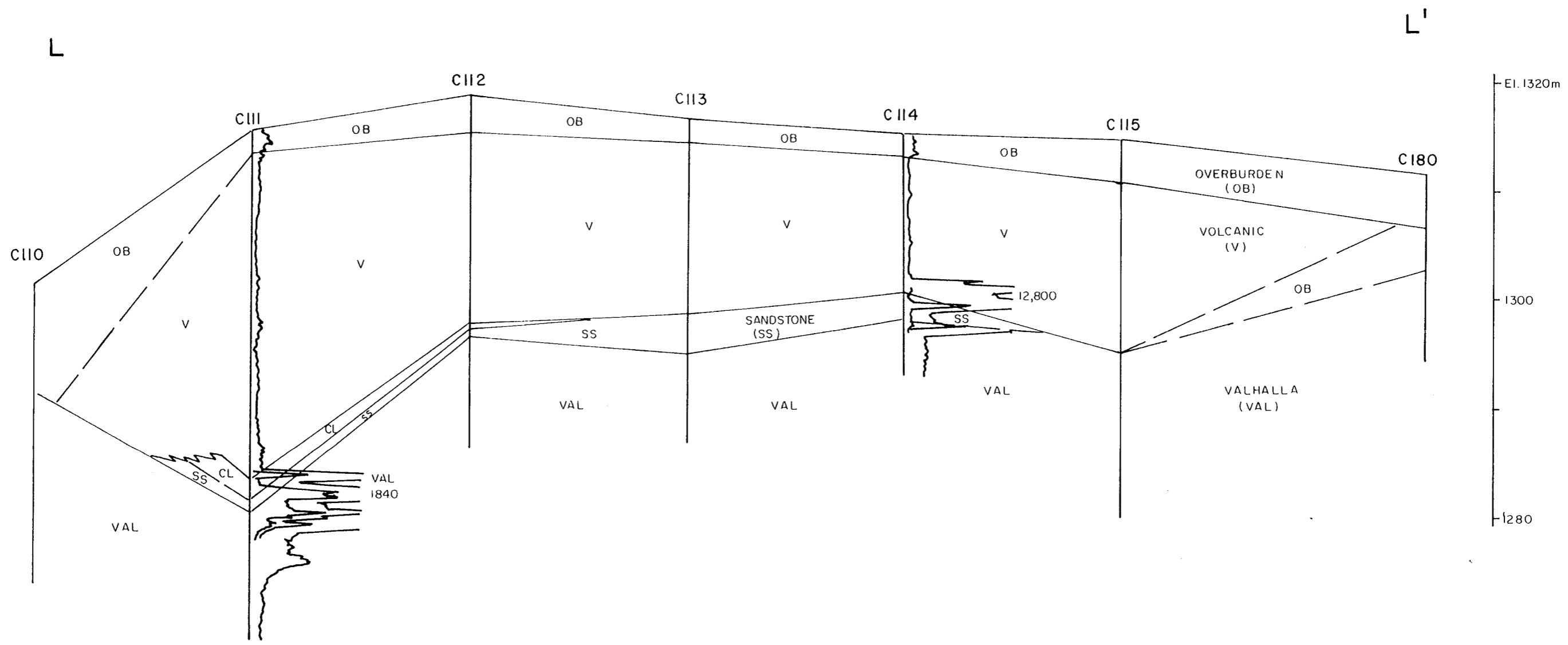




MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**8105**  
 NO.

*part 18/2*

PNC EXPLORATION (CANADA) CO. LTD.  
 CUP LAKE GROUP  
 CROSS SECTION K - K'  
 PROJECT: PEARSON CREEK  
 N.T.S.:  
 DRAWN BY: L. NICOLL  
 DATE: DEC. 1979  
 FIGURE

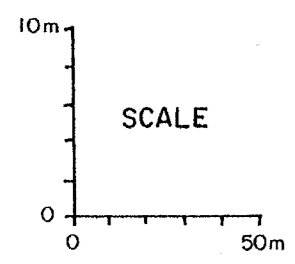
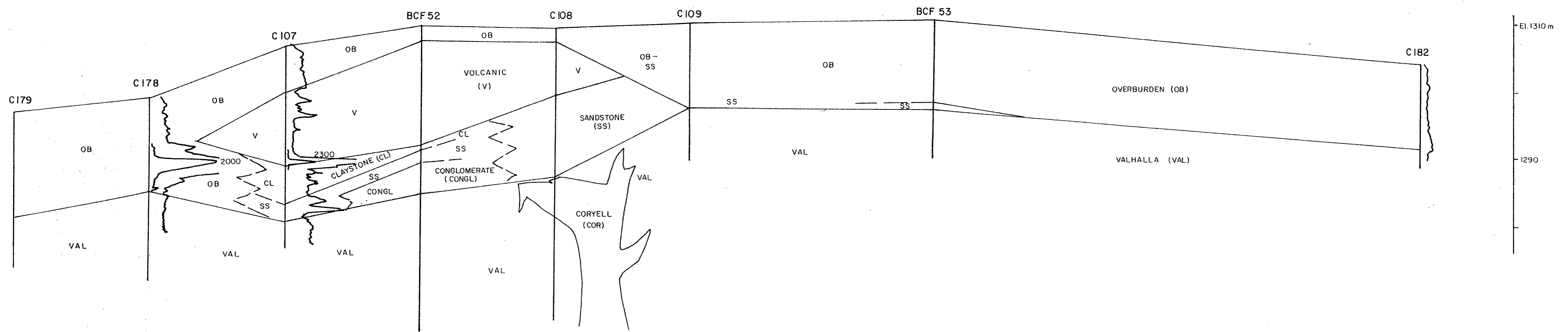


MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**8105**  
 NO. \_\_\_\_\_  
*part 1 of 2*

PNC EXPLORATION (CANADA) CO. LTD.  
 CUP LAKE GROUP  
 CROSS SECTION L - L'  
 PROJECT : PEARSON CREEK  
 N.T.S. : DATE : DEC. 1979  
 DRAWN BY : L. NICOLL FIGURE

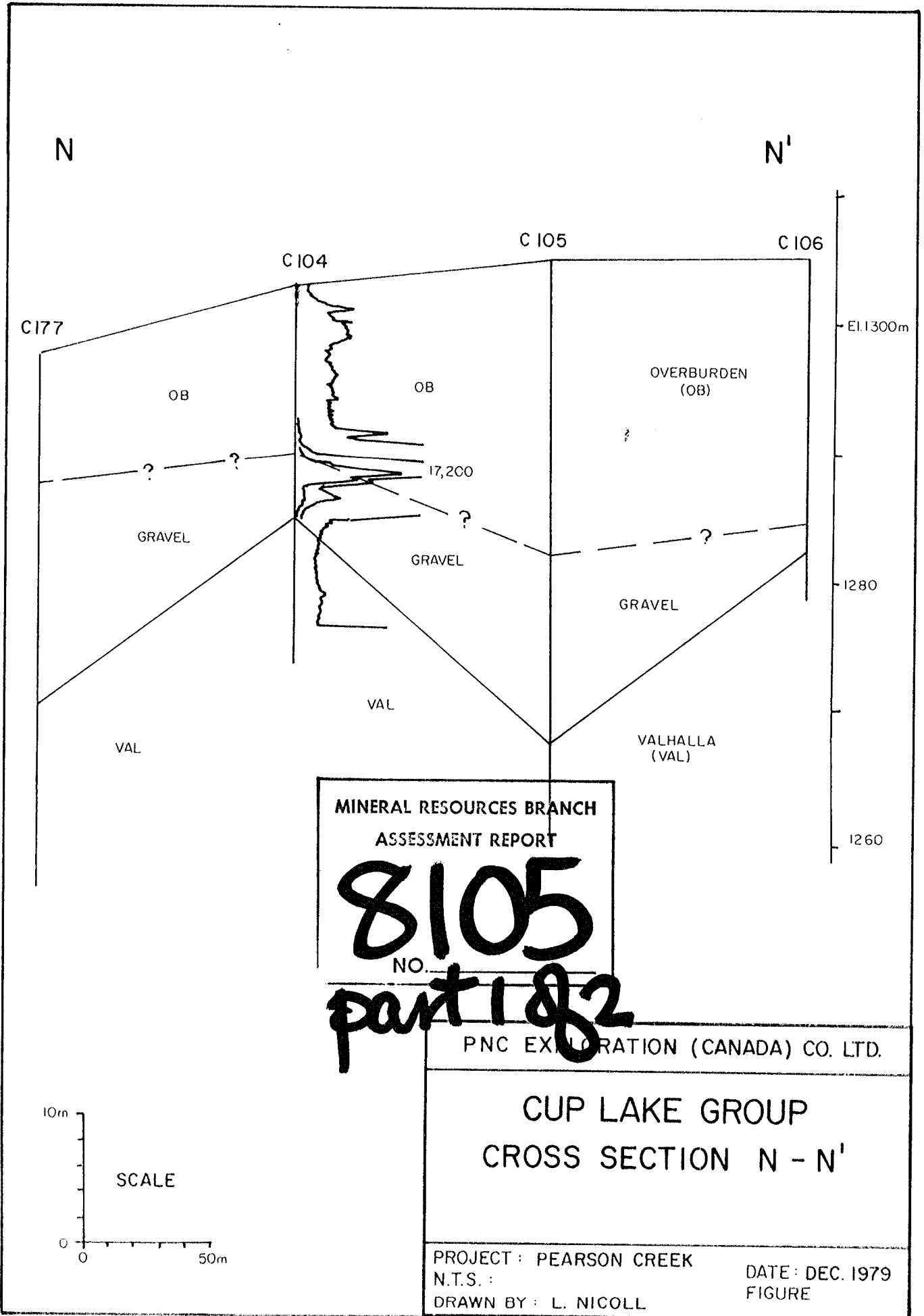
M

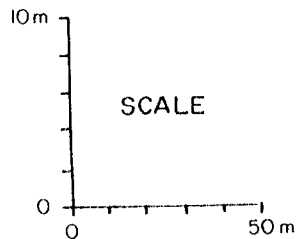
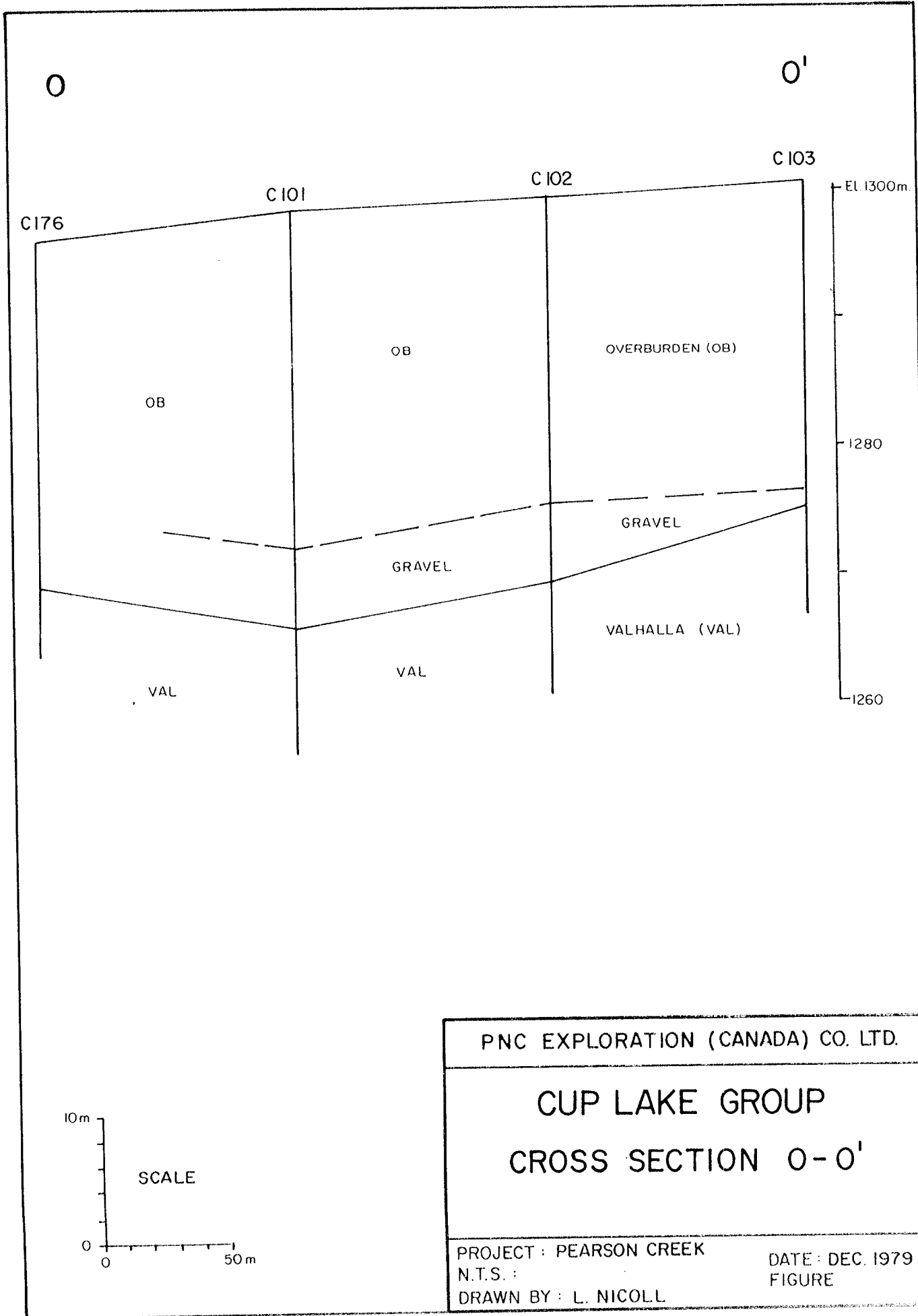
M'



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**8105**  
NO.  
*part 1 of 2*

PNC EXPLORATION (CANADA) CO. LTD.	
CUP LAKE GROUP CROSS SECTION M - M'	
PROJECT: PEARSON CREEK	DATE: DEC. 1979
N.T.S.:	FIGURE
DRAWN BY: L. NICOLL	



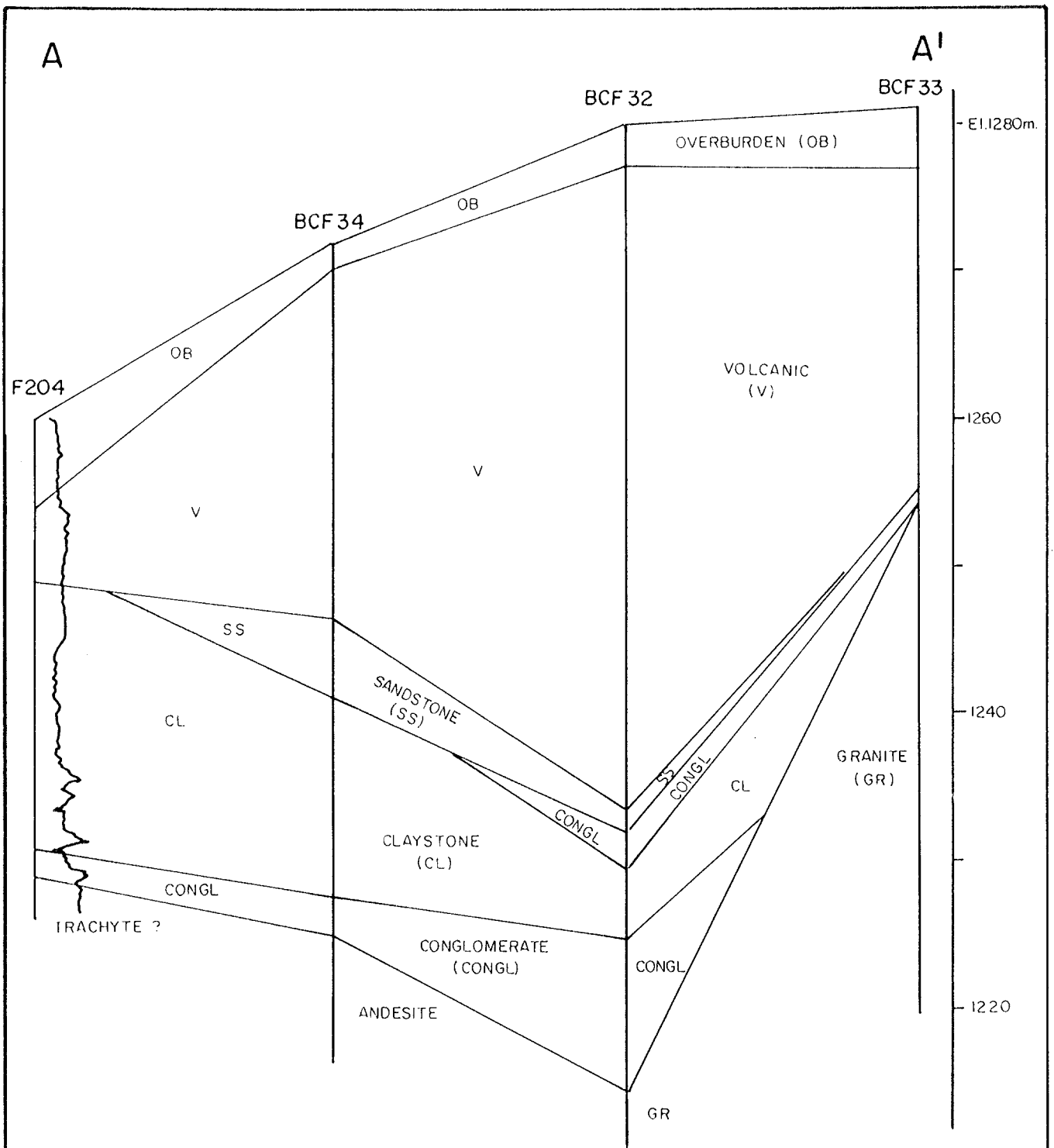


PNC EXPLORATION (CANADA) CO. LTD.

CUP LAKE GROUP  
CROSS SECTION O-O'

PROJECT : PEARSON CREEK  
N.T.S. :  
DRAWN BY : L. NICOLL

DATE : DEC. 1979  
FIGURE



PNC EXPLORATION (CANADA) CO. LTD.

FUKI GROUP  
CROSS SECTION A - A'

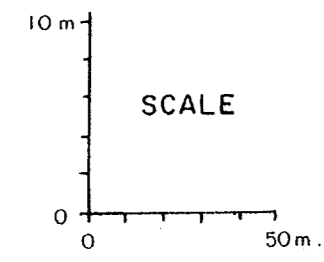
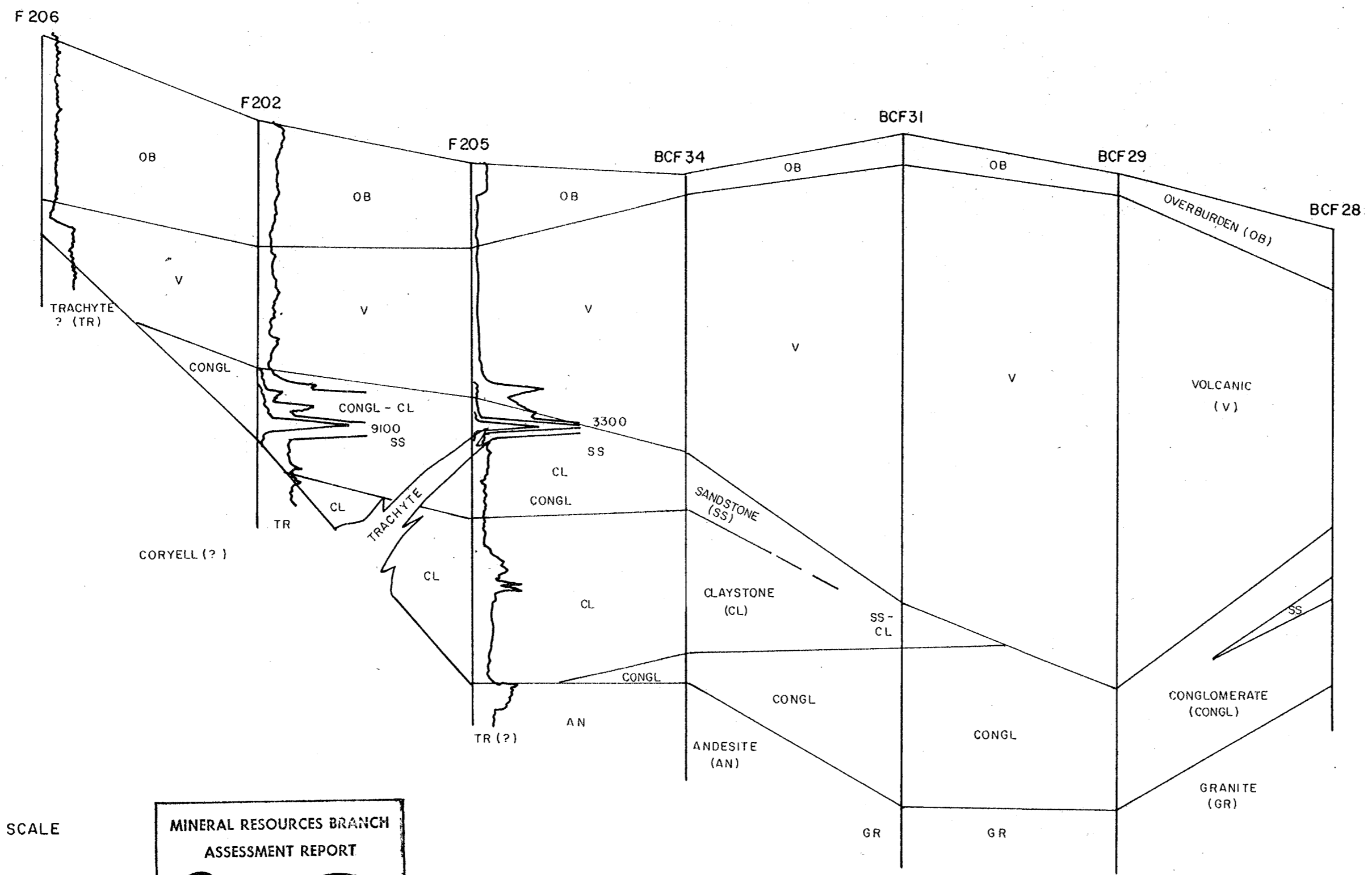
PROJECT : PEARSON CREEK  
N.T.S. :  
DRAWN BY : L. NICOLL

DATE : DEC. 1979  
FIGURE



C

C'

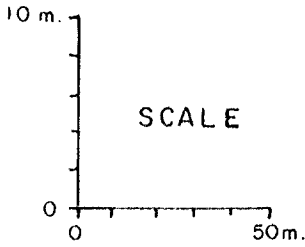
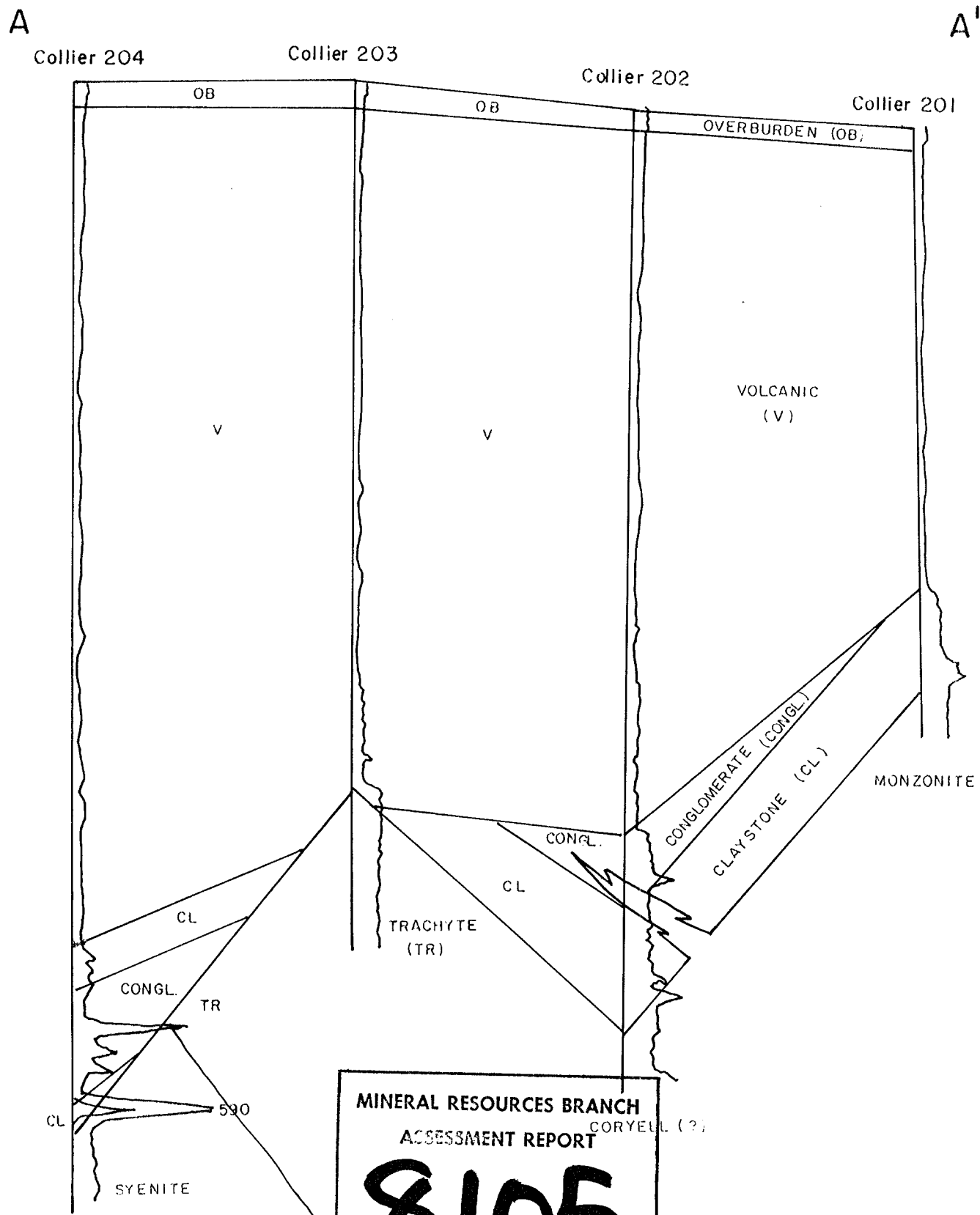


MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**8105**  
 NO.

*part 1082*

PNC EXPLORATION (CANADA) CO. LTD.  
**FUKI GROUP**  
**CROSS SECTION C-C'**  
 PROJECT : PEARSON CREEK  
 N.T.S. :  
 DRAWN BY : L. NICOLL  
 DATE : DEC. 1979  
 FIGURE

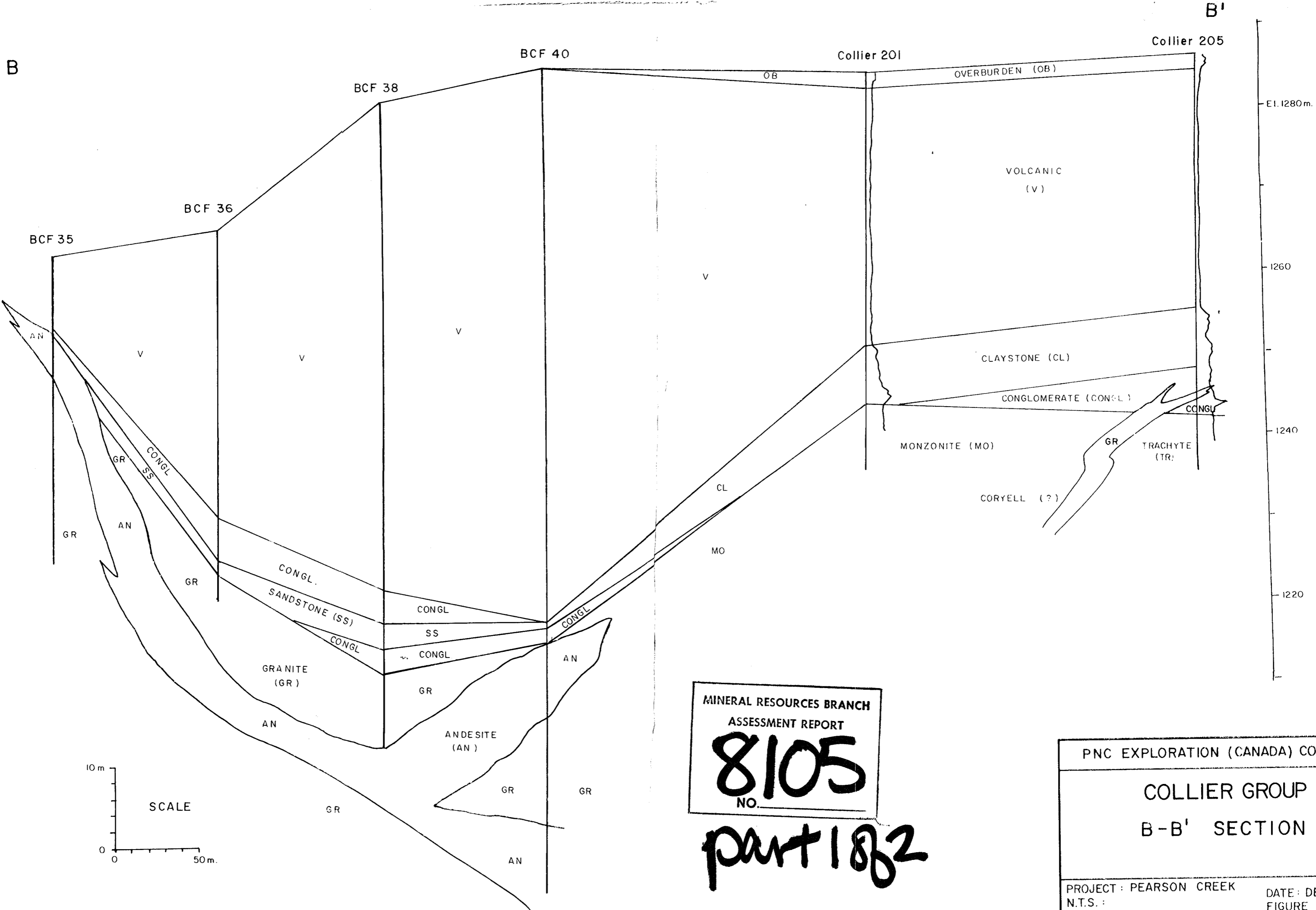




MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
 8105  
 CORYELL (?)

part 1 of 2

PNC EXPLORATION (CANADA) CO. LTD.  
 COLLIER GROUP  
 A - A' SECTION  
 PROJECT: PEARSON CREEK  
 N.T.S.:  
 DRAWN BY: L. NICOLL  
 DATE: DEC. 1979  
 FIGURE



PNC EXPLORATION (CANADA) CO. LTD.	
COLLIER GROUP B-B' SECTION	
PROJECT: PEARSON CREEK N.T.S. : DRAWN BY: L. NICOLL	DATE: DEC. 1979 FIGURE