REPORT ON EXPLORATION PROGRAMS CONDUCTED ON THE BROOKBANK GROUP OF CLAIMS OF CANADIAN JOHNS-MANVILLE CO. LIMITED LOCATED IN POWELL AND BANNOCKBURN TOWNSHIPS LARDER LAKE MINING DIVISION UNDER GOVERNMENT ASSISTANCE CONTRACT CG-29.

by

F. J. Evelegh

Exploration Dept.
Canadian Johns-Manville Co. Limited

January 29th, 1973
Matheson, Ontario.

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Introduction:

The following report describes the Exploration Programs carried out on the Brookbank claims during the early part of 1972. This group is included in Contract CG-29 which covers all work completed during the period April 6th, 1972 to March 31st, 1973.

Field work conducted under this contract includes line cutting and chaining, magnetic, electromagnetic and biogeochemical surveys. All programs were handled by Company personnel based at Matheson, Ontario.

Supervision of the overall project and interpretation of the survey results were the responsibilities of the writer, Regional Geologist with Canadian Johns-Manville Co. Limited.

Property:

Twenty-six claims comprise the Brookbank holdings and these have been divided into three separate groups based upon recording dates.

Group No. 1 - 10 claims numbered 326587-88, and 339627 to 34 inclusive - staked in early February and recorded on March 3rd, 1972.

Group No. 2 - 12 claims numbered 340200 to 11 inclusive - staked during the latter part of March, 1972 and recorded on the 29th.

Group No. 3 - 4 claims numbered 340674 to 77 inclusive - staked in early April 1972 and recorded on the 18th.

Total acreage - approximately 1,040 acres.

Location and Accessibility:

The Canadian Johns-Manville property is located in the northwest part of Powell and northeast part of Bannockburn Townships, Larder Lake Mining Division, Province of Ontario. Claims are contiguous with eight being situated in Bannockburn and eighteen in Powell Townships.

Access to within one mile of the north boundary of the group is provided by Highway No. 566 which has been constructed to the west from Matachewan as a mining access road. The claims are located approximately seven miles from Matachewan.

Skidoos were utilized during the course of the geophysical and geochemical programs to transport men and equipment from the highway to the survey area.

Topography:

The property is characterized by relatively high, rolling terrain with numerous large exposures of syenite and granite in the north and amphibolitized volcanics and serpentinized peridotite in the south parts. Second growth birch and poplar with scattered pine timber these areas of higher relief.

Beaverponds, narrow creeks and small lakes occur in the south part of the group. Alders and spruce grow in these low areas. Drainage is to the south and east to the Montreal River.

Previous Work:

The claims surveyed were previously held by W. Brookbank, N. Evoy and A. Hansen and at that time considerable trenching was completed. Work was concentrated in a gossan zone which occurs along the granite - amphibolitized volcanics contact. Mineralization consists of magnetite, pyrite and very minor chalcopyrite.

Property: (cont'd)

This property has been described in Ontario Dept. of Mines Geological Report No. 51 entitled "Geology of the Matachewan Area" compiled by H. L. Lovell and published in 1967, and is shown on Map No. 2110 which accompanies the report. Four diamond drill hole projections have been shown on this map, however, no data re rock types intersected, mineralization, assays, etc. is available.

Dr. W. S. Savage, former Resident Geologist with the Ontario Dept. of Mines at Kirkland Lake, examined the property and issued a brief report in February 1952. This report is on file in Kirkland Lake.

An electrical resistivity survey was conducted on the claims in 1957 for Geo-Scientific Prospectors Limited and the report and maps were filed with the Ontario Dept. of Mines for assessment purposes. Apparently no follow-up work was carried out at that time.

The claims were acquired by Canadian Johns-Manville by staking as part of a program to explore the granitic and syenitic bodies in the Matachewan Area for Cu - Mo mineralization.

General Geology:

The geology of the Brookbank claims is shown on Map No. 2110 on a scale of one inch equals one-half mile. This plan shows the geology of Powell and Cairo Townships and accompanies GR-51 - "Geology of the Matachewan Area".

Silicic intrusive rocks of the Algoman occur in the north part of the group and consist of granite, granodiorite and syenite. These are in contact with amphibolitized Keewatin volcanics in

the showing area in the south part of the property. On the basis of aerial - magnetic data and geological mapping to the east of the Brookbank claims, a small body of serpentinized peridotite occurs to the south of the amphibolite.

Gowganda sediments occur at the northeast corner of a small lake in the extreme south part of the claims. Northerly trending diabase dikes have been mapped in the north part of the group.

Line Cutting and Chaining:

A base line, striking N45°W, was started from the boundary between claims 339629 and 339631 at a point 750 feet south of the No. 1 post of the former as established by chainage. This line was cut to the southeast for a length of 800 feet and to the northwest for 3200 feet. The most southeasterly line was designated as 0+00.

Right-angled offset lines were located every 200 feet along this base line in the south part and every 400 feet to the north of line 12+00 West. Pickets were established at 100 foot intervals along these offset lines by chainage with all lines extended 600 feet on either side of the base line.

A Brunton compass, affixed on a tripod, was used to turn off the base and picket lines. Totals of 3.2 miles of picket and 0.8 miles of base lines were cut and chained during the course of this work.

Details re man days worked and costs are shown in the following table. Receipts are attached.

Employee	Dates Worked 1972	Total 8 Hr. Days	Daily Rate	Total Wages
W. Foster	April 6 - 9 incl.	4	$21.31	$ 85.24
	April 10- 12 "	3	$23.00	69.00
R. Hallock	April 6 - 12 incl	7	$21.50	150.50
G. Gourley	April 6, 7, 8	3	$18.00	54.00
3	Totals	17		$358.74

Gas and Oil - Company vehicles (includes skidoos)	36.55
Groceries	89.77
Hardware	24.23
Truck repairs	4.97
Total	$514.26

Magnetometer Survey:

A magnetometer survey was conducted over the picket line grid on the Brookbank Group by R. Hallock, geophysical operator with this Company. W. Foster assisted with the work. Magnetic readings were recorded using a Jalander type instrument (Serial No. NR 57133) having sensitivities of 11.0, 32.3, 111.0, 335.6 and 1146.0 for scales 1, 2, 3, 4 and 5 respectively.

In accordance with standard Company procedure this instrument was checked on Munro Mine Base Station No. 2 (Munro-Beatty Sill) prior to the survey and a correction was applied to Jalander readings so that a gamma value of 1220 corresponds closely to an absolute value of 57,599 ± 15 gammas. This value was established from the Government Magnetic Base Station located at Matheson.

One base control station was used for the survey and is located on the base line at picket line 8+00 West. This station has a fixed value of 2010 gammas and readings were recorded at approximately three hour intervals as a check on the working

condition of the instrument and to record the daily diurnal variation.

Stations were spaced at 50 foot intervals along the offset lines and a total of 350 recorded on the group. Miles traversed - 3.2.

The results of the survey are shown on the accompanying Geo-Magnetic Contour Plan on a scale of one inch equals 200 feet. Contour interval is 500 gammas from 2000 to 5000 with additional contours at 6000, 8000 and 10,000 gammas.

Magnetic values over the body of amphibolite range up to a peak of 23,000 gammas with a large percentage of the readings being in excess of 8000 gammas. This strong anomaly occurs over a length of 1,000 feet and width of 600 feet in the extreme south part of the surveyed area. Extending northwards from the amphibolite contact magnetic readings range in value from 2000 to slightly in excess of 5000 gammas, well above normal for syenite or granite. This is believed due to mafic syenite occurring along the contact zone.

H. L. Lovell in G. R. - 51 reports that some of the mafic syenite contains sufficient magnetite to attract a pocket magnet. He further reports a magnetic anomaly over a syenite stock in Cairo Township along a volcanic contact.

The irregular zone of mafic syenite on the Brookbank claims has been given an approximate width of 900 feet with the assumed contact closely parallel to that of the amphibolite to the southeast.

Over the main part of the syenite stock in the north part of the claims magnetic readings range in value from 1700 to 3000 gammas. Values show a gradual decrease to the northwest.

Details re man days worked are shown in the following table. Office work includes man days spent in preparation of the magnetic map for this report.

Employee	Dates Worked	Total 8 Hr. Days	Daily Rate	Total Wages
R. Hallock	Apr 15,16,17/72	3	$21.50	$ 64.50
W. Foster	Apr 15,16,17/72	3	23.00	69.00
M. Bruce	May 10, 1972	1	24.00	24.00
T. DeMarchi	Jan 26/73	1	32.05	32.05
F. J. Evelegh	Apr 15/72	1	55.45	55.45
"	Jan 25/73	1	59.61	59.61
5	Totals	10		$304.61

Electromagnetic Survey:

Electromagnetic surveying was carried out on the Brookbank claims during April 1972 by R. Hallock, assisted by W. Foster. Readings were recorded using a McPhar R. E. M. vertical loop unit applying the "in-line" method. During the course of this survey 1.4 miles of picket line were traversed and 78 readings recorded. Work was concentrated over the favourable contact zone in the south part of the grid.

Distance between transmitter and receiver was maintained at 200 feet throughout the survey. Stations were spaced at 100 foot intervals. Walki-talki units were used for communicating field data.

The results of the R. E. M. survey are shown on the accompanying Electromagnetic Profile Plan on a scale of one inch equals 200 feet. Profiles have been plotted on a scale of one inch equals 20°. Conducting zones have been marked with dashed purple lines on the plan. Questionable zones have been marked with a purple asterik.

Electromagnetic Survey:(cont'd)

Dip angles over the trenched area along the syenite amphibolite contact were erratic but indicated only one weak crossover. This is on the south side of the base line on picket line 2+00 West and has angles of +3°, -1°. Strike of the conductor has been shown as northwesterly.

A northerly trending conductor has been delineated on the north sides of lines 8+00W and 10+00W with dip angles reaching +2°, -4°. This zone may be caused by disseminated sulphide mineralization along a diabase dike contact. An extremely weak conductor occurs on the south side of line 10+00W.

Details re man days worked are shown in the following table. Office work includes man days required for preparation of the electromagnetic map for this report.

Employee	Dates Worked	Total 8 Hr. Days	Daily Rate	Total Wages
R. Hallock	Apr 12,13,14/72	3	$21.50	$ 64.50
W. Foster	Apr 12,13,14/72	3	23.00	69.00
M. Bruce	Apr 18/72	1	24.00	24.00
T. DeMarchi	Jan 27/73	1	32.05	32.05
F. J. Evelegh	Jan 26/73	1	59.61	59.61
5	Totals	9		$249.16

Biogeochemical Survey:

The biogeochemical survey was conducted by G. Edwards, fieldman, and by P. Brown and J. Goodger both geologists with this Company. Field work was carried out in April, 1972.

Second year stems from 81 birch and 3 alder trees were collected for copper analyses. Samples have been numbered consecu-

tively from U-001 to U-084 as shown on field and analysis sheets and the plan. Samples were collected at 100 foot intervals along picket lines 0+00 to 12+00 West consecutively. Traverses covered 1.4 miles.

The twigs are taken using pruning shears from branches distributed as evenly as possible about the tree and placed in a numbered sample bag. A piece of flagging tape with the sample number is tied to the tree for future reference and data is recorded pertaining to the sample. Field sheet records include date, weather, name of sampler, project number, location, sample number, topography, drainage slope, tree type and size of tree.

To prepare the biogeochem samples the plant material is put through a Wiley Mill and reduced to -1 mm. A 20 cc. crucible is filled with material and total weight recorded to three decimals. Drying in a vented oven for two hours at 105°C followed by a second weighing is the next step. Another drying for one hour is carried out and if the resulting weight compares with the second weighing then the sample has reached constant weight and is considered dry. This dry weight is also recorded.

Charring is the most important stage and is critical. Resins are burnt off but free carbon must not be produced. This is done in a muffle furnace with the door open for two hours at about 200°C. These conditions are variable depending on the material. The furnace door is now closed and the temperature increased to not more than 450°C. When a clean white or slightly grey ash with no black material remains then the sample is taken out, placed in a desiccator and when cool brushed onto a balance pan. Its weight is recorded to three decimals. The ash is now digested for one-half

hour by 1.5 cc. of concentrated nitric acid in a test tube of 90°C, controlled by a water bath. Then 1/2 cc. of concentrated hydrochloric acid is added and digestion continued for one and one-half hours. The tube is then removed and the sample diluted to 10 cc's with de-ionized water. The contents are shaken to mix and allowed to settle. Metal concentrations are read by Atomic Absorbtion and calculated to ppm based on the original ash weight.

Overall accuracy for Cu, Zn and Mo is a maximum of 20% relative standard deviation which is acceptable.

Extraction of essential information is carried out statistically and is best done by graphical representation of the frequency distribution of the data; then the average value (background) degree of variation and the existence of one or more populations is precisely determined.

The distribution pattern which best fits geochemical and biogeochemical data is the lognormal one. Graphically this gives a bell-shaped curve which when smoothed gives the frequency curve. Then plotting the cumulated frequencies as ordinates the cumulative frequency curve is derived. This is the integral of the frequency curve. By replacing the arithmetic ordinate scale with a probability scale the cumulative frequency curve is represented by one or more straight lines.

Fifteen to twenty-five classes are recommended and as a rule the width of a class, expressed logarithmically, must be kept equal to or smaller than the standard deviation.

All samples were analyzed geochemically for Copper by Bondar-Clegg and Company Limited of Ottawa. The cumulative frequency distribution diagram for Cu in birch trees is attached.

A total of 81 samples has been used to construct the cumulative frequency distribution diagram which shows lognormal distribution with background (b) at 300 ppm, (b + s) at 360 ppm, and threshold (t) at 430 ppm. Values above 430 ppm are anomalous, 361 - 430 are probably anomalous and 301 - 360 are possibly anomalous.

Contours are shown on the accompanying 200 scale Biogeochemical Survey Plan for Cu.

Details re man days worked and costs are shown in the following table. Receipts are attached.

Employee	Dates Worked	Total 8 Hr Days	Daily Wage	Total Wages
G. Edwards	Apr 10 - 13 incl/72	4	$24.30	$ 97.20
J. Goodger	Apr 10/72	1	30.13	30.13
P. Brown	Apr 11/72	1	30.13	30.13
M. Bruce	Apr 14/72	1	24.00	24.00
T. DeMarchi	Jan 29/73	1	32.05	32.05
M. Evelegh	Jan 29/73	1	21.32	21.32
F. J. Evelegh	Jan 27/73	1	59.61	59.61
7	Totals	10		$294.44
Gas and Oil - Company vehicles (includes skidoos)				11.06
Groceries				23.01
Bondar-Clegg & Company Limited				201.60
			Total	$530.11

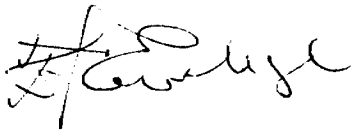
Total expenditures by Canadian Johns-Manville Co. Limited under the Brookbank portion of Exploration Assistance Agreement CG-29 = $1,598.14. Refundable portion totals - $532.71.

Conclusions:

The results of the magnetic, electromagnetic and biogeochemical surveys are not indicative of economic Cu - Mo mineralization on the Brookbank Group of claims.

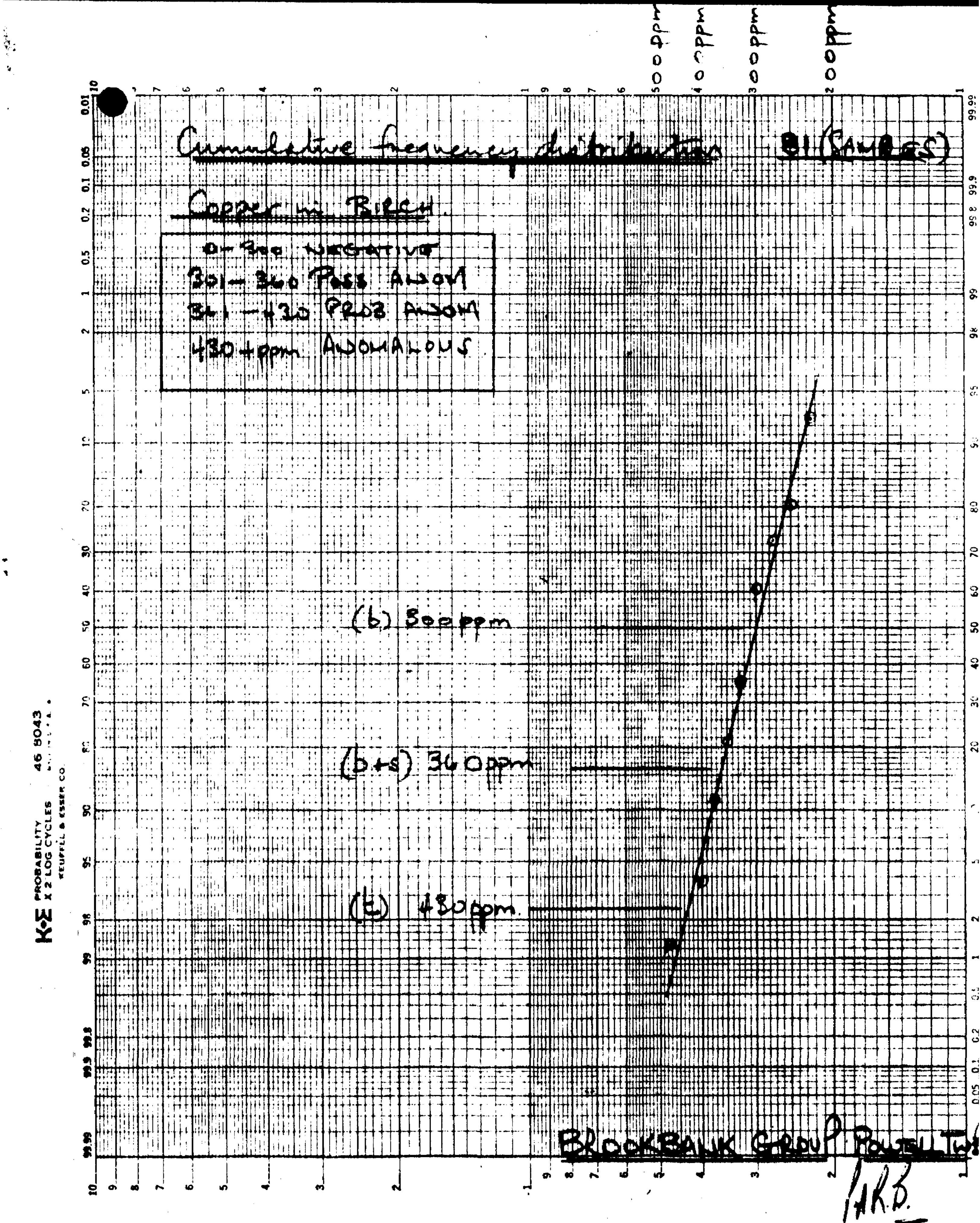
Recommendations:

Allow the claims to lapse on the expiry dates in 1973.



Submitted by: F. J. Evelegh
Regional Geologist

January 29th, 1973.


500ppm
400ppm
300ppm
200ppm
Cumulative frequency distribution
81 (SAMPLES)
Copper in Birch
0-300 NEGATIVE
301-360 POSS ANOM
361-430 PROB ANOM
430+ppm ANOMALOUS
(b) 300ppm
(b+s) 360ppm
(t) 430ppm
BROOKBANK GROUP POWELL TWP
K+E PROBABILITY X 2 LOG CYCLES 46 8043
KEUFFEL & ESSER CO.
IARD.

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIO GEOCHEMICAL SURVEY DATA

Collector: G. Edwards Project: #160-1 Brookbank Gr. Weather: Sunny

Date: April 10th to 13th/72 Area: Powell Twp. Physiography: Wooded uplands

Sample No.	Location	Drainage Slope	Remarks
			All samples are birch with the exception of 3.
U-001	Line 0+00 5+50S	↘	Small ravine - gentle rolling high ground outcrops & boulders - mixed cover
002	5+00S	↘	same as above
003	4+00S	↑	On top of outcrop - high ground open mixed cover
004	3+00S	↑	Base of outcrop - low land - mixed cover
U-005	2+00S	→	Low flat ground - mixed cover
006	1+00S	→	Low flat ground - at side of small hill or outcrop - mixed cover
007	0+00 B/L	→	same as above
008	1+00N	↘	" " "
009	2+00N	↑	Low ravine between outcrop and small ridge - mixed cover
U-010	3+00N	↑	same as above
011	4+00N	↑	" " "
012	5+00N	↓	Base of small ridge - mixed cover
013	6+00N	↑	Base of outcrop - low ground mixed cover
014	Line 2+00W 6+00N	↑	same as above
U-015	5+00N	↑	Between two outcrops - low ravine mixed cover
016	4+00N	—	Low flat alder swamp
017	3+00N	—	same as above
018	2+00N	↗	Side of outcrop - high ground mixed cover
019	1+00N	→	Sample Y-9370 was taken on this line at 1+35N, remarks same as above
U-020	0+00 B/L	↗	On top of small outcrop - high ground scattered outcrops - mixed cover
021	1+00S	↘	High flat ground - scattered outcrops mixed cover
022	2+00S	—	Sample W-1980 taken on this line at 1+40S - remarks same as above
U-023	3+00S	→	High ridge - possible outcrops mixed cover

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIO GEOCHEMICAL ~~SOIL~~ SURVEY DATA

Collector: Project: #160-1 Brookbank Gr. Weather:

Date: Area: Powell Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks
U-024	Line 2+00W 4+00S	→	On top of outcrop - old trench - high ground - mixed cover
U-025	5+00S	→	Low ravine between outcrops mixed cover
026	Line 4+00W 5+00S	↗	On top of ridge - high hilly ground mixed cover
027	4+00S	↗	same as above
028	3+00S	↗	Base of outcrop - high hilly ground - scattered outcrops - mixed cover
029	2+00S	↑	Top of outcrop - same as above
U-030	1+00S	←	Low ravine between two outcrops mixed cover
031	0+00 B/L	↗	On top of high outcrop ridge - mixed cover
032	1+00N	↑	Base of outcrop - high ground open mixed cover
033	2+00N	↑	same as above
034	3+00N	—	Low flat swamp - alder and spruce cover Alder Sample
U-035	4+00N	↓	Base of low ridge - low flat ground mixed cover
036	5+00N	→	Top of low ridge mixed cover
037	6+00N	→	Base of low ridge - low sloping ground mixed cover
038	Line 6+00W 6+00N	→	same as above
039	5+00N	→	Top of low ridge - jackpine cover
U-040	4+00N	→	Base of low ridge - jackpine cover
041	3+00N	—	Low flat swamp - spruce cover
042	2+00N	—	same as above
043	1+00N	↑	Side of ridge on top of outcrop open mixed cover
044	0+00 B/L	←	On top of high ridge - outcrops mixed cover
U-045	1+00S	↓	Side of ridge - high ground - mixed cover
046	2+00S	↓	On top of outcrop - high hilly ground open birch cover
U-047	3+00S	↗	High hilly ground - scattered outcrops birch cover

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIO GEOCHEMICAL SOIL SURVEY DATA

Collector: Project: #160-1 Brookbank Gr. Weather:

Date: Area: Powell Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks
U-048	Line 6+00W 4+00S	↑	High hilly ground - scattered outcrops white birch cover
049	5+00S	↑	same as above
U-050	6+00S	↑	High flat ground - mixed cover
-051	Line 8+00W 6+00S	↑	High hilly ground - scattered outcrops open mixed cover
052	5+00S	↑	same as above
053	4+00S	↑	On top of small outcrop - high ground open mixed cover
054	3+00S	↖	On side of outcrop - high ground mixed cover
U-055	2+00S	↑	Small ravine between two outcrops mixed cover
056	1+00S	↑	Top of high ridge or outcrop open mixed cover
057	0+00 B/L	—	Low flat ground at base of outcrop mixed cover
058	1+00N	—	Low flat swamp - spruce cover
059	4+00N	↓	Side of jackpine ridge - no white birch or alder at 2+00N or 3+00N; jackpine cove
U-060	5+00N	↓	top of ridge - jackpine cover
061	6+00N	↑	Side of ridge - scattered outcrops mixed cover
062	Line 10+00W 6+00N	—	Low flat swampy ground - mixed cover
063	5+00N	↑	Top of low ridge - spruce & jackpine
064	4+00N	↓	same as above - small scattered outcrops
U-065	3+00N	—	Low flat swamp - birch & spruce cover
066	1+00N	—	No birch or alder at 2+00N; low flat swamp
067	0+00 B/L	—	same as above
068	1+00S	—	Base of outcrop - low flat swamp - no birch available - mixed cover-Alder
069	2+00S	↑	Low ravine between 2 outcrops - mixed cover
U-070	3+00S	→	On side of outcrop - high ground open mixed cover
		↑	

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIOGEOCHEMICAL ~~XEXX~~ SURVEY DATA

Collector: Project: #160-1 Weather:

Date: Area: Brookbank Gr. Powell Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks
			~~Sample Y-9797 taken at 4+00S; line 10+00W~~
U-071	Line 10+00W 5+00S	/	High hilly ground - scattered outcrops open white birch cover
072	6+00S	/	same as above
073	Line 12+00W 6+00S	/	low flat ground between two ridges mixed cover
074	5+00S	/	same as above
U-075	4+00S	/	"
076	3+00S	/	"
077	1+00S	/	Sample Y-9796 taken at 2+00S; Line 12+00W Side of outcrop - open mixed cover
078	0+00 B/L	—	Low flat swamp - no birch - spruce cover - alder sample
079	1+00N	—	Low flat swamp - spruce cover
U-080	2+00N	↘	Base of hill at swamp - low flat ground mixed cover
081	3+00N	↘	Top of hill - jackpine cover
082	4+00N	→	Top of small outcrop and ridge - mixed cover
083	5+00N	/	Low flat ground - mixed cover
U-084	6+00N	/	same as above

BONDAR-CLEGG & COMPANY LTD.
BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110 TELEX: 053-3548

Geochemical Lab Report

Extraction Cu - HNO_3-HCl
Method AA
Fraction Used TREES

Report No. 295-2
From CANADIAN JOHNS-MANVILLE CO.-MR.F. EVELEGH
PROJECT: #160-1
Date MAY 4, 19 72

SAMPLE NO.	Ash/Wt. grams		Cu ppm/Ash					REMARKS
U - 001	.099		242					BROOKBANK GR.
002	.109		247					Powell Twp
003	.092		348					#166
004	.097		360					
005	.069		360					
006	.115		260					
007	.099		360					
008	.106		310					
009	.091		295					
010	.083		315					
011	.084		285					
012	.107		280					
013	.069		305					
014	.082		280					
015	.066		365					
016	.065		305					
017	.092		370					
018	.083		335					
019	.120		235					
020	.082		245					
021	.080		390					
022	.094		280					
023	.114		280					
024	.082		390					
025	.090		275					
026	.090		335					
027	.093		320					
028	.097		310					
029	.110		290					
030	.089		325					
031	.090		345					

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GEOCHEMICAL LAB REPORT

SAMPLE NO.	Ash/Wt grams		Cu ppm/Ash					REMARKS
U - 032	.113		220					
033	.073		320					
034	.129		300					ALDER.
035	.084		495					
036	.112		310					
037	.138		220					
038	.124		240					
039	.087		345					
040	.135		305					
041	.096		355					
042	.132		340					
043	.117		290					
044	.119		275					
045	.073		315					
046	.124		355					
047	.110		345					
048	.098		305					
049	.106		275					
050	.085		425					
051	.126		245					
052	.101		290					
053	.113		245					
054	.103		380					
055	.109		245					
056	.108		315					
057	.101		320					
058	.079		350					
059	.098		300					
060	.093		270					
061	.157		215					
062	.092		345					
063	.133		225					
064	.134		260					
065	.078		360					
066	.078		390					
067	.070		350					

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GEOCHEMICAL LAB REPORT

SAMPLE NO.	Ash/Wt. grams		Cu ppm/Ash					REMARKS
U - 068	.168		280					ALDER
069	.109		215					
070	.140		320					
071	.112		225					
072	.097		295					
073	.095		410					
074	.102		345					
075	.092		325					
076	.088		310					
077	.129		250					
078	.094		380					ALDER
079	.069		385					
080	.123		245					
081	.073		310					
082	.113		305					
083	.121		315					
084	.083		395					

LEGEND FOR DETAILED GEOLOGICAL MAPPING

Geological Legend

6	Quartz diabase, diabase
5	Granite 5a; Syenite 5b; Syenite porphyry 5-bl; Feldspar porphyry 5c; Quartz feldspar 5d; Felsite 5e; Lamprophyre 5f; Granodiorite, granitic gneiss 5g; Quartz diorite 5h.
4	Diorite 4a; Gabbro diabase 4b.
4C	Peridotite & Dunite (Serpentinized)
4P	Pyroxenite
3	Rhyolite fragmental lava
2	Andesite basalt pillow lava 2a; Diabasic lava 2b; Spherulitic lava 2c; Fragmental lava 2d; Tuff & Chert 2e; Talc-chlorite schist 2f; Amphibolite 2g.
1	Greywacke 1a; Arkose 1b; Quartzite 1c; Argillite or shale 1d; Conglomerate 1e; Iron formation 1f; Chlorite schist 1g.
1S	Carbonate rock.

Abbreviations

Asbestos	Asb	Oxidized	Ox'd
Brecciated	Brec'd	Pyrite	Py
Carbonated	Carb'd	Pyrrhotite	Po
Chalcopyrite	Cpy	Peridotite	Perid
Disseminated	Diss	Pyroxenite	Pyrox
Dark	Dk	Quartz	Qtz
Feldspar	Fp	Serpentinite	Serp
Foliated	Fol'd	Sheared	Sh'd
Grained - fine	F gr'd	Serpentinized	Serp'd
- medium	M gr'd	Strongly	Str
- coarse	C gr'd	Schistose	Sch'se
Graphite	Graph	Stringers	Strs
Gneiss	Gn	Schist	Sch
Gneissic	Gn'c	Sericitized	Ser'd
Hornblende	H'bl	Typical	Typ
Light	Lt	Thread vein	T.V.
Magnetite	Magn	Texture	Text
Moderately	Mod	Trace	Tr
Medium	Med	Volcanics	Volc
Massive	Mass	Weakly	Wk

TOPOGRAPHIC SYMBOLS

- Direction in which lava flows face, indicated by shape of pillows
- Outcrop (0075)
- Swamp or muskeg
- Scarp
- Creek
- Drill hole
- Bush road
- High ground
- Cabin
- Shaft
- Pit or trench
- Esker
- Geological Contact - assumed - definite
- Swamp border
- Shear zone
- Fault - assumed - definite
- Attitudes - bedding - shearing - jointing

340202

340201

340206

340211

340200

340203

340200

BL No 1

340210

340209

340202

340204

326588

339627

339631

339633

339629

339634

340205

326587

339628

339630

339632

GEOCHEM LEGEND

NEGATIVE < 301 PPM

POSSIBLY ANOMALOUS - 301-360 PPM

PROBABLY ANOMALOUS - 361-430 PPM

DEFINITELY ANOMALOUS >430 PPM

BIOGEOCHEM SURVEY PLAN - CU

(2x3) 65g ft.

63.3028

29/11/73

41P15NW626S 63.3028 POWELL

200

BIOGEOCHEM SAMPLE LOCATION MAP

ONT. 1" = 200' BROOKBANK GR. POWELL TWP.

63.3028

210

CANADIAN JOHNS MANVILLE CO. LTD. — MATHESON, ONT.   ADJOINS SHEET No.

41P15NW8265 63.3028 POWELL

220

ADJOINS SHEET No.

63.3028

SER. NO. OPERATOR
(NR 5733) R HALLOCK
JALANDER SURVEY

GEOMAGNETIC CONTOUR PLAN (213) 639-2

27/11/73

41P15NW826S 63.3028 POWELL

230

340202

340201

340206

5a

5b-1

340211

340200

340203

340200

340210

340209

5a

340202

GRANITE – SYENITE

59

59

340204

326588

339627

LAKE

339631

MAFIC SYENITE

339633

2a

339629

AMPHIBOLITE

5a

5a

Ni

326587

340205

339628

339630

339632

339634

2a

R.E.M. UNIT- IN-LINE METHOD
COIL SPACING - 200'
OPERATOR R.- HALLOCK

ELECTROMAGNETIC PROFILE PLAN SCALE 1" = 20°

ONE 1"200' BROOKBANK GR. (2x3) 69 M.

POWELL TWP.

63.3028

29/11/73

41P15NW8265 63.3028 POWELL

240