BIOGEOCHEMICAL SURVEY ON THE WELSH GROUP OF CLAIMS POWELL TOWNSHIP LARDER LAKE MINING DIVISION PROVINCE OF ONTARIO.

Introduction:

The Welsh Group comprises 25 claims numbered as follows; 298267, 298268, 298269, 298270, 298289, 298290, 298291, 298292, 298293, 298294, 298295, 298296, 298297, 298298, 298299, 298300, 298326, 298327, 298328, 298329, 326582, 326583, 326584, 326585 and 326586.

Staking was carried out by Canadian Johns-Manville Co. Limited personnel from Matheson, Ontario in January and October of 1971. The claims are located in the northeast part of Powell Township, Larder Lake Mining Division, Province of Ontario.

Location and Accessibility:

The claims block is roughly square being five claims north-south and five claims east-west. The south boundary of the block is just north of Log Lake and crosses Highway #566 just over one-quarter mile past the Hydro bush road leading to the dam on the West Montreal River. To get to the area one drives to Matachewan. Taking Highway #566 through the town it is approximately five miles to the north end of Log Lake where the Hydro road begins. A small parking space has been made here by Hydro. The Hydro road runs right through the property giving good access to all areas of the block.

Several grids have been cut on the claims and these provide accurate location of the biogeochemical samples in those areas.

Geology and Topography:

Matachewan Precambrian rocks underlie the property and the main rock types are;

a) Diabase as N - S dykes

b) Pink syenite and related rocks

c) Andesite with much epidote alteration

d) Rhyolite and acid lavas

e) Siliceous sediments (?) according to Ontario Department of Mines

f) Quartz veins

Outcrop is generally scattered except in the NW 1/4 where there are large areas of andesite. The quartz veins reach an observed maximum of 40 feet in width just south of Welsh Lake (locally called Shields Lake ?)

Elevation differences are about 100 feet maximum but the claims block is highest in the northwest dropping in stages to the east side. Two small lakes exist in the north-central part of the claims and a beaver pond in the south-central part. A small amount of swamp is present.

Vegetation:

The bush is reasonably good being jackpine on the ridges, poplar and white birch for the remainder except in swamp areas where spruce predominates. Underbrush can be annoying on the side of hills where it is mainly thick hazel brush amongst the poplars. Alders are widespread where sufficient water is present. Some of the white birch have a deep root system and can be found over most of the claims. This tree type was selected for the biogeo-

chemical survey. However, ten alder samples were taken where white birch was absent. These alder samples have been excluded from the histograms.

Sampling:

A total of 270 birch sample results have been received and 10 alders. Extra results are expected and will be plotted on the maps. Twenty-five more results are required to provide coverage on the northwest claim and N 1/2 of the claim immediately south. About 100 follow-up samples were also taken. Four samples were taken on compass points 100 feet away from results considered anomalous. Several of these are not now considered anomalous but since the waiting time for results can be up to three months anything resembling a high must be sampled as soon as the figure is received, otherwise the program would take double the time to complete.

Second year growth was taken from the white birch using pruning shears although some third and fourth year growth was also taken. Samples comprise cuttings which were spaced as evenly as possible around the tree because, according to many biogeochemical reports by accredited writers, results can vary according to the side of the tree they are taken from. About 20 clippings were taken per sample and put in numbered bags. Sample locations are all flagged and different factors which may affect the sample were noted. These include weather, drainage slopes, approximate overburden, size of tree, type of bush, date and other pertinent features.

All samples were sent to Bondar-Clegg & Company of Ottawa, Ontario.

Analytical Technique:

The samples are dried at low heat, ground and completely ashed. The metallic elements in the ash are taken up in acid, evaporated to dryness and then digested in weak hydrochloritic acid. The metal content is then determinedby atomic absorbtion for copper, lead, zinc, molybdenum and silver.

Results:

Histograms have been made up for all elements determined. All have a generally smooth profile and only a few results are several times background. No secondary peaks can be seen and it is unlikely that any broad mineral deposits occur on the property. However, to get a picture of where the minerals can be found biogeochemical contour maps have been compiled. The most interesting is the Lead map which shows several trends that could have some significance. It is interesting to note that some galena was found in a quartz vein on the property and that the values determined for samples close to this location are in the region of 500 to 600 ppm's. According to the histogram for lead, the values should be above 1000 ppm's to be of any significance. The lead distribution picture is the most important one to examine because of the relatively stable nature and poor mobility of the element in soils. Hence any lead concentrations are close to their source. It is possible that very narrow mineralized veins occur on the property and that the sampling interval is not close enough to delineate them clearly.

Reading papers of W. J. Wolfe, it can be seen that for highly anomalous lead the value should be five times the normal value which would be 3000 ppm's on this property. Only one

value was close to this at 2800 ppm's and the highest values obtained were generally only two times the norm as seen from the histogram.

Anomalous copper, however, according to Wolfe must be only two or three times the norm which here means roughly 1000 ppm's plus. We have about eight such samples, the highest being about five times the norm or 1900 ppm's which is definitely anomalous. Studying the molybdenum data of Wolfe fifty times the norm value is required for a highly anomalous sample of this element. Our highest value is 440 ppm's or only twenty-two times the average, thus molybdenum prospects are bleak.

Zinc and silver show contrasts of two or three times the norm as does copper. The zinc average is about 12,000 ppm's and four samples lie in the two times contrast. For silver no values lie above the two times contrast.

Conclusions and Recommendations:

We can summarize the property as having scattered copper, lead and zinc mineralization. However, since the lead contour map outlines certain lineal features a small amount of follow-up work is necessary along these breaks and also in the southwest of the block where several of the higher lead, zinc, silver values occur in a small area. This work should include several R.E.M. traverses across the lineal trends to locate any conductors and also some closely spaced (e.g. 25 feet) biogeochem samples taken on a grid basis normal to these lineations.

P.A.R. Brown.

Submitted by: P. A. R. Brown
Geologist.

January 20, 1972.

APPENDICES

APPENDIX 1: A specimen field sheet is included to illustrate the recording process and data accumulated on samples.

APPENDIX 2: Legend Sheet
Sample location map with geological contacts (2 sheets)
Scale 1" = 200'

APPENDIX 3: Biogeochemical Analyses Sheets -
The results included in this report are photostatts of sheets received from Bondar-Clegg & Co. Limited of Ottawa. Where only a few results occurred on separate sheets these were joined together. The sheets are from report numbers;

IT - 23 - 1
IT - 28 - 1
IT - 29 - 1
IT - 41 - 1
IT - 46 - 1

The values shown have been used as the basis for the compilation of the histograms (excluding the 10 alder samples).

APPENDIX 4: Histograms -
Figures 1, 2, 3, 4 and 5 show the frequency distribution of the five elements, namely copper, molybdenum, lead, zinc and silver. Most results fall at the low end of the graph which is the normal distribution, commonly called the background value or first population. This generally forms the largest peak on a histogram. If a second peak occurs in the higher values it is called the second population or anomalous region. This only occurs when sufficient anomalous samples are taken. When it is absent one has to rely on a value which is several times background in order to determine if anomalous samples are present. This value varies with the element - e.g. five times background for lead and two to three times for copper.

APPENDIX 5: Biogeochemical Contour Maps -
Individual maps have been made up for the five elements and they show the distribution of the high or anomalous values. From these the lineal trends can clearly be seen and also the areas of higher than normal concentrations. All maps on a scale of 1" = 200'.
This visual aid enables ready assessment of the property and immediately shows where extra samples need to be taken and direction of grid lines, if required.

APPENDIX 6: Assessment work breakdown sheets -

Specimen Field Sheet - #1

CANADIAN JOHNS-MANVILLE CO. LIMITED

GEOCHEMICAL SOIL SURVEY DATA

Collector: E. Vehkalahti Project: #160 Weather: Sunny and cool

Date: August 20, 1971 Area: Welsh Group Physiography: wooded uplands

Sample No.	Location	Drainage Slope	Remarks
G-8077	400' West of claim corner	→	Alder - 2" sample
-8078	800' West	→	Birch - 3" - Road at 8+25'W
-8079	1150' East of Lake	→	Alder - 2"
G-8080	Claim corner - Post #1-298299	←	Birch - 2"
-8081	400' East of Claim post	←	Birch - 2"
-8082	200'S of 8079	→	Birch - sample along shore of lake
-8083		→	Birch - 4" on lake (Jct of road & lake)
-8084	Bridge 40' N of cabin	→	Alder
G-8085	W shore of lake	↓	Birch - 2"
-8086	400'W " "	→	Birch - 2" - claim line (N-S)
-8087	800'W " "	→	" - 4"
-8088	1150'W " "	←	Cliff 15' high - lake Shore line - outcrop - 6" sample
-8089	400'N of 8088	←	Shore line - sample 6" - cliff 4' high
G-8090	400'E of lake	←	Birch - 4"
-8091	800'E " "	←	Birch - 4"
-8092	1200'E " "	→	Alder
-8093	Lake	↓	Birch - 4"
G-8094	400'W of lake		Birch - 4"
WG - 15	520' West of lake		Birch - 4"
- 16	Lake		Shore line - traverse on North boundary
- 17	400'E of lake		Birch - 4"
- 18	1020'E " "		Birch - 4"

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.
AC	Peridotite & Dunite (Serpentinized)
P	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.
CB	Carbonate rock.

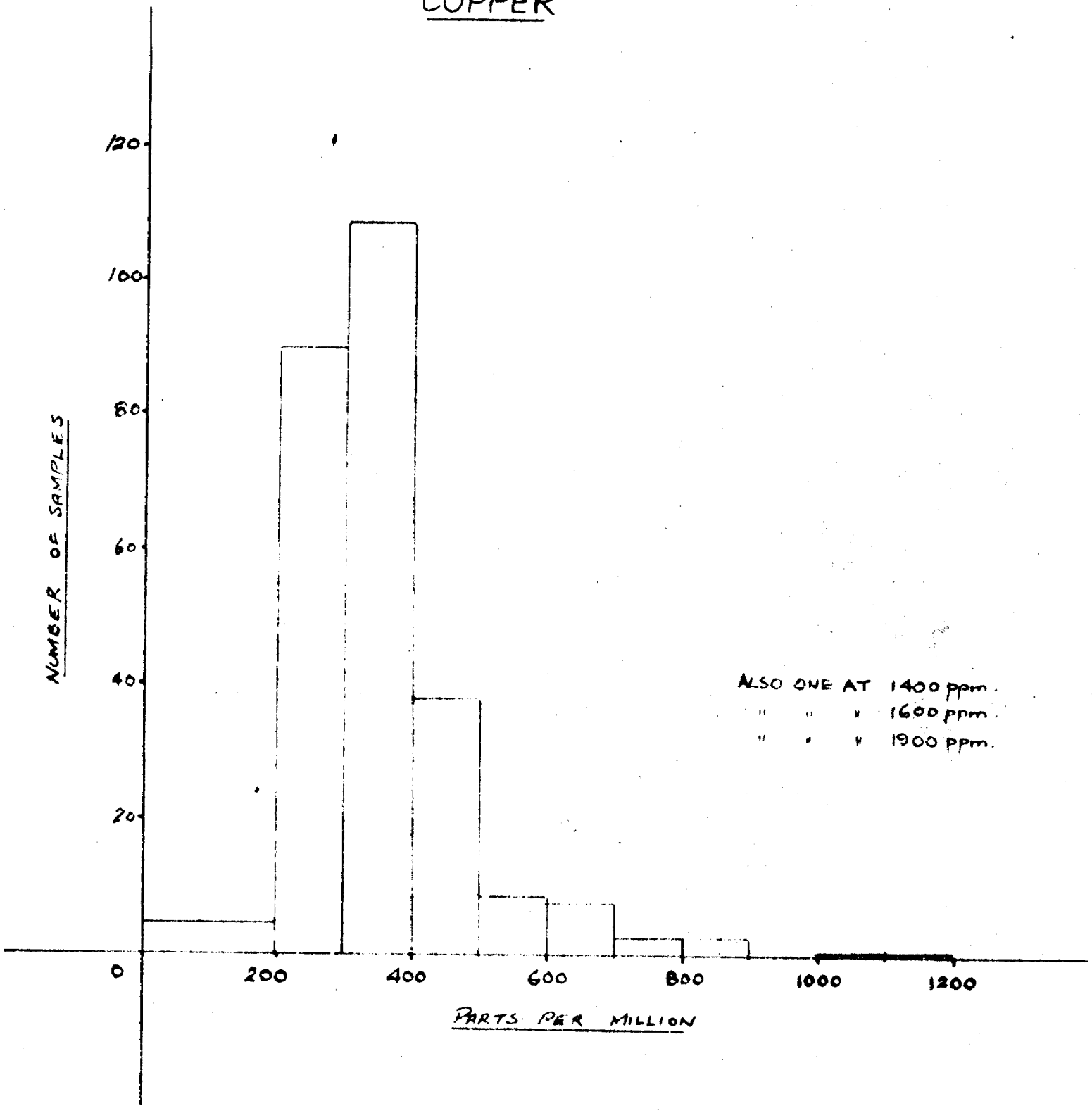
Abbreviations

Asbestos	Asb	Oxidized	[redacted]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
- 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

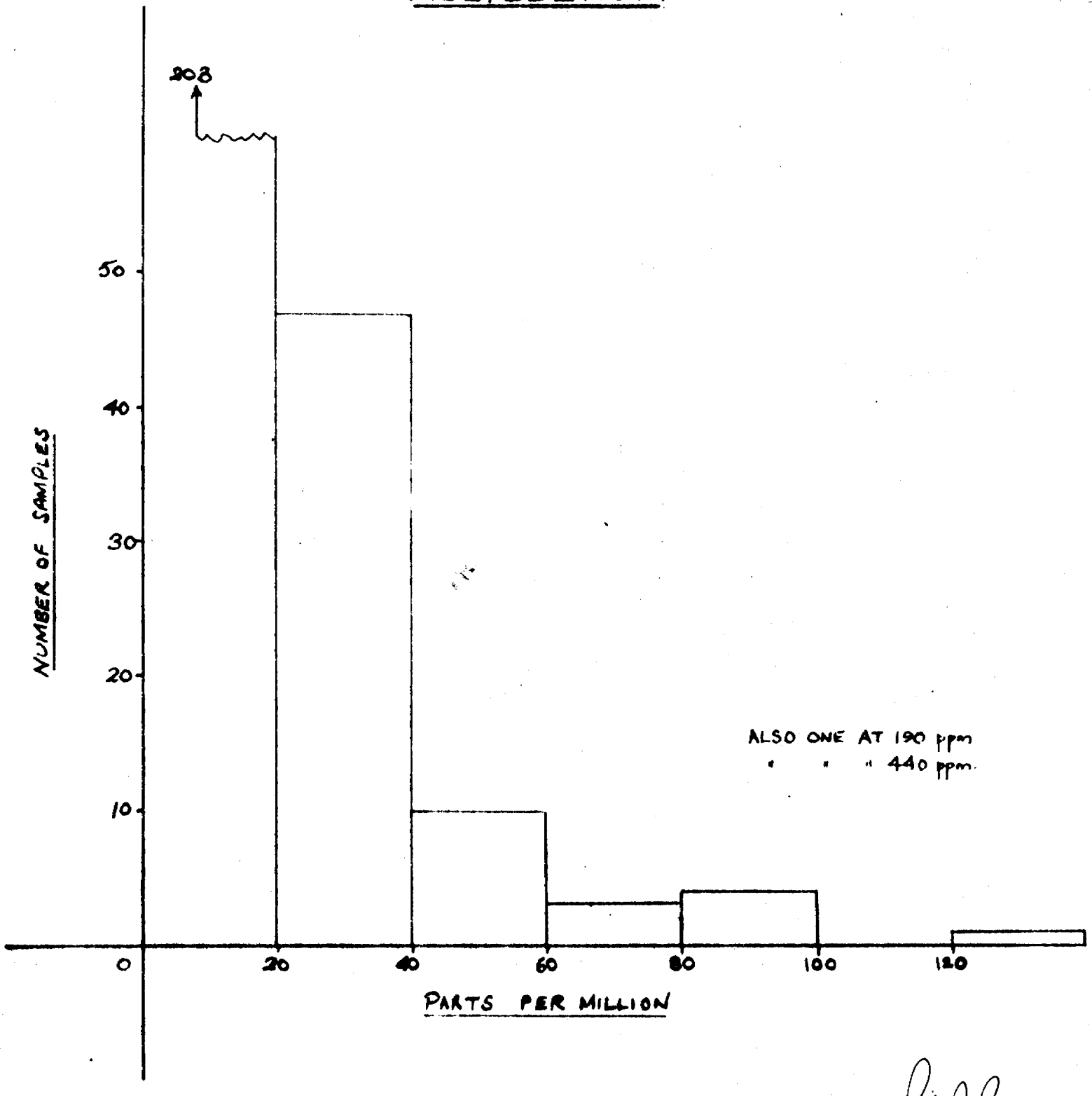
COPPER



JAN 20 1972 P.A.R. Brown.

WELSH GROUP POWELL TWP

MOLYBDENUM



P.A.R. Brown.

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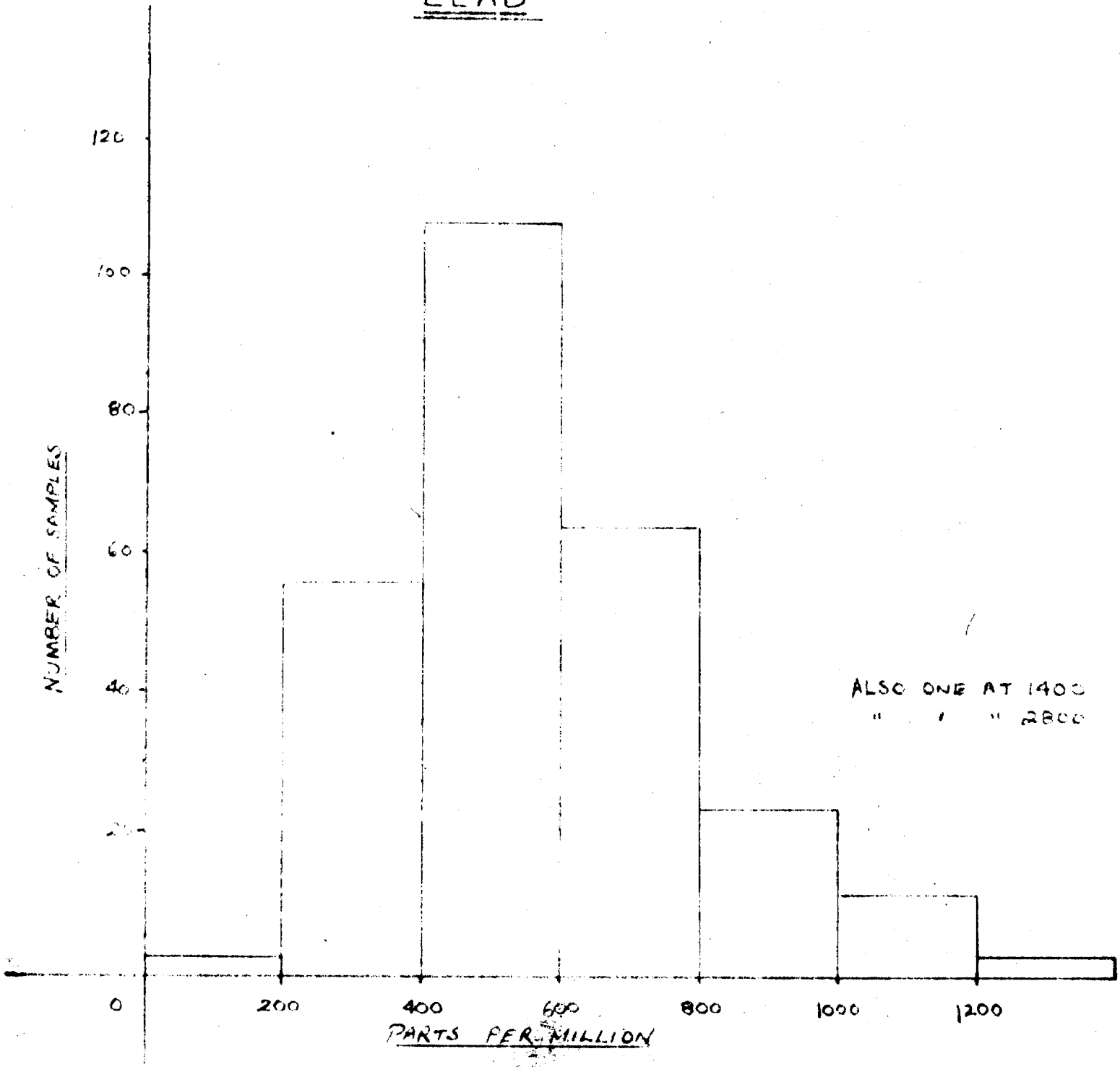
WELSH GROUP POWELL TWP.

LEAD



JAN 20 1972

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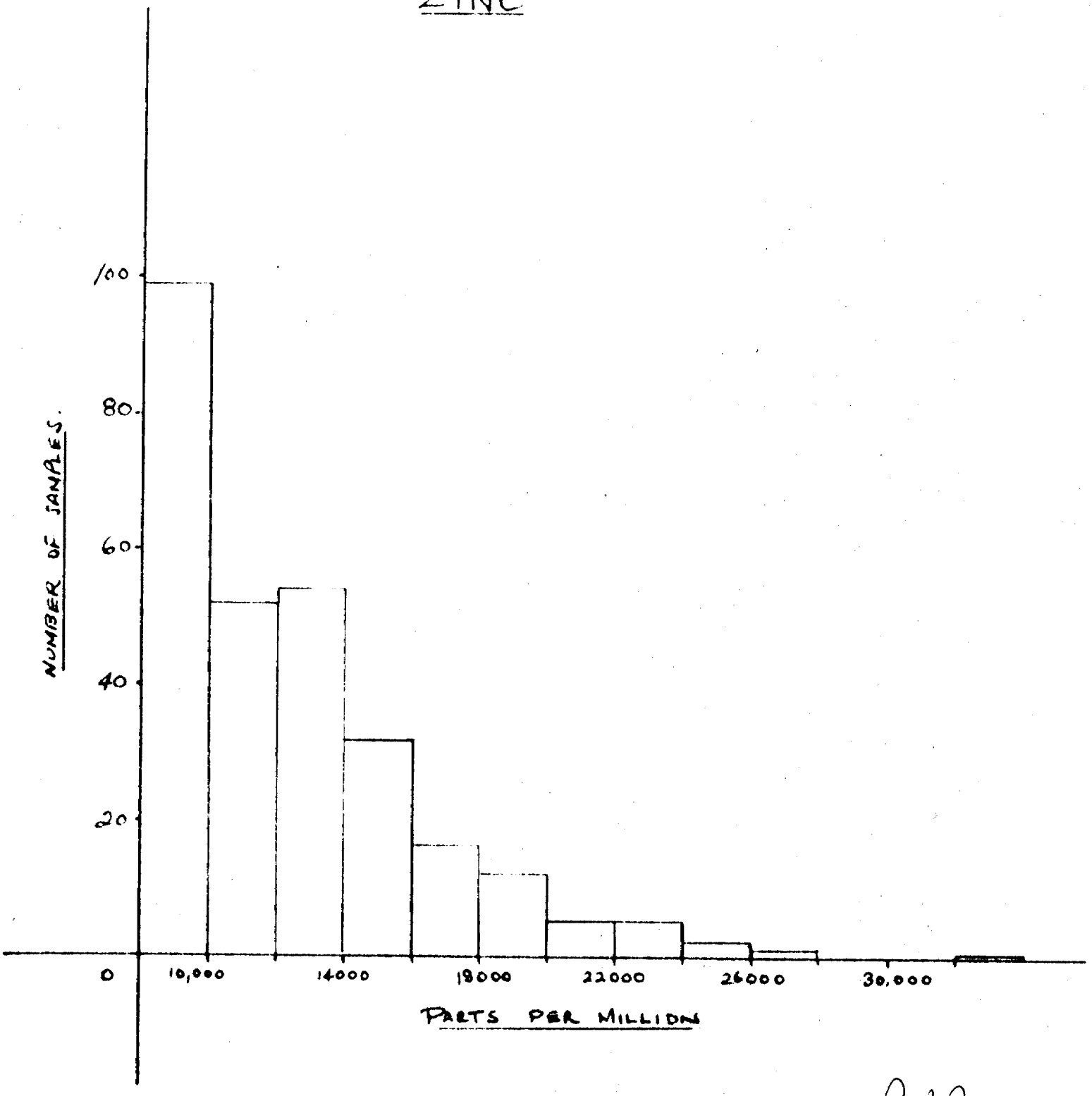
ZINC



P.A.R. Brown.

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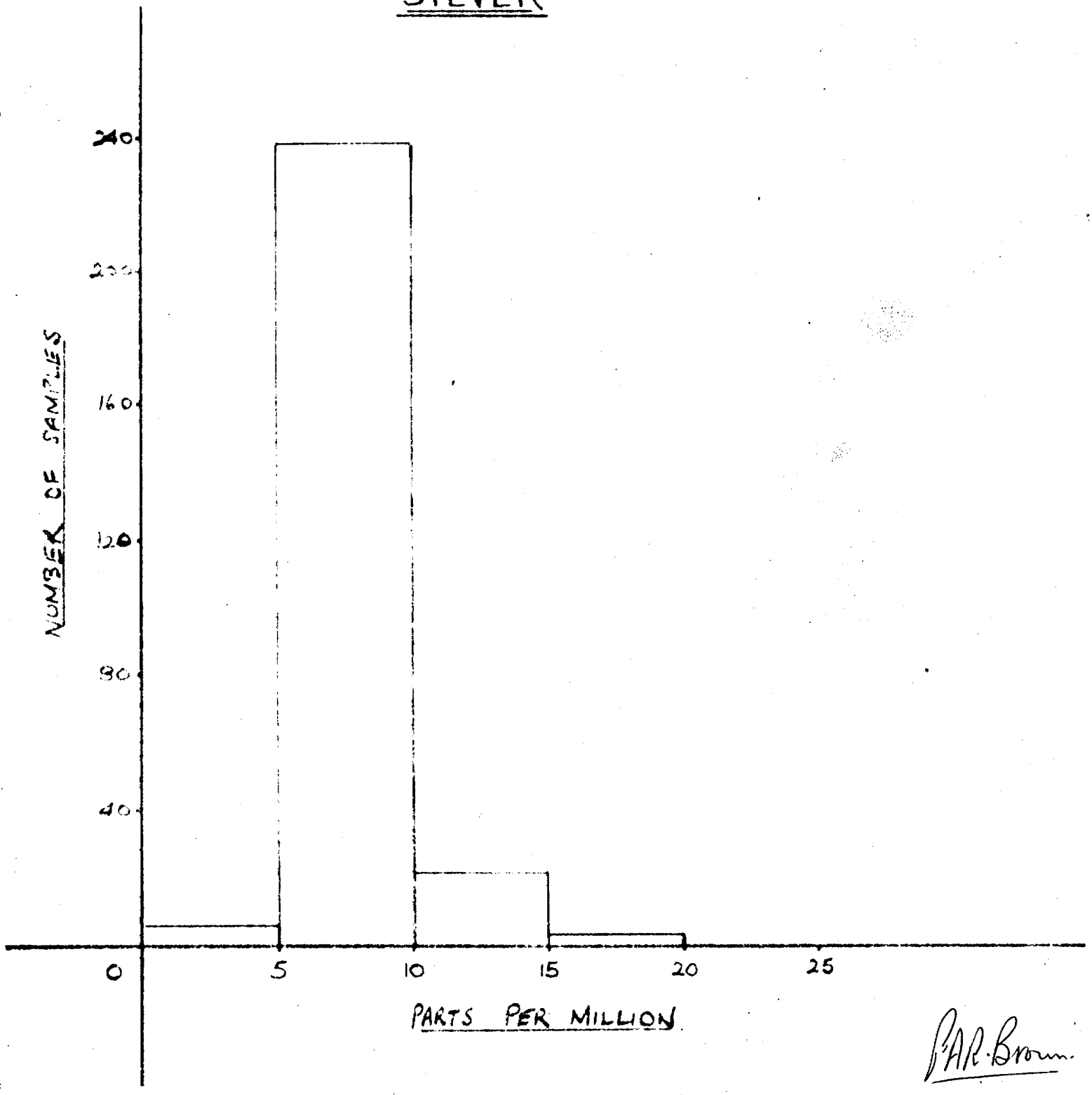
WELSH GROUP POWELL TWP.

SILVER



S.A.R. Brown

JAN 20 1972

WELSH GROUP POWELL TWP.

768A BELFAST ROAD (M.R. 1), OTTAWA 8, ONTARIO
PHONE: 237-3110 TELEX: 013-3568

GEOCHEMICAL LAB REPORT

No: 19-87-1

Extraction: Au - Fire Assay. Cu, Pb, Zn, Ni, Ag - HNO_3, HCl.

From: Canadian Johns-Manville Co. Ltd., Mr. F. J. Evelegh.

Method: AA

Date: August 30, 1971

Fraction Used: ABK

Analyst: AA - G.B.

SAMPLE NO.		Cu ppm		Pb ppm	Zn ppm	Mo ppm	Ag ppm	REMARKS
BW - 1	/ WGLL	785		555	11900	71	8.0	Project No. 160
BW - 2	/ W	325		275	11200	16	5.5	Prop.
BW - 3	/ W	600		290	11100	52	7.0	SEPT 8, 1971
BW - 4	/ W	530		540	6300	58	7.5	
BW - 5	/ W	375		500	8700	33	6.0	
BW - 6	/ W	440		410	12600	89	5.0	
BW - 7	/ W	415		465	13200	22	6.5	
BW - 8	/ W	275		395	13300	30	5.0	
BW - 9	/ W	1600		465	7000	440	8.5	
BW - 10	/ W	440		350	8100	56	6.0	
BW - 11	/ W	330		485	8500	23	5.5	
BW - 12	/ W	660		735	12500	190	7.0	
BW - 13	/ W	320		595	9300	18	7.0	
BW - 14	/ W	340		295	7700	12	7.5	
8 - 7099	/ W	550		575	16600	92	6.5	
7100	/ W	460		420	12000	15	7.0	
7101	/ W	475		410	15100	16	10.5	
7102	/ W	355		390	8900	14	7.0	
7103	/ W	285		560	7500	85	7.0	
7104	/ W	1900		325	8700	15	8.5	
7105	/ W	670		750	15400	14	8.5	
7106	/ W	790		490	9400	90	7.5	
7107	/ W	420		890	11000	96	7.0	
7108	/ W	475		410	15500	55	7.5	
7109	/ W	670		820	17700	26	5.5	
7110	/ W	375		810	16000	18	8.0	

Report No. IP-23-1 BONDAR-CLEGG & COMPANY LTD. Page No. 2

GEOCHEMICAL LAB REPORT

SAMPLE NO.		Cu ppm		Pb ppm	Zn ppm	Ni ppm	Ag ppm	REMARKS
7124	/ W	470		400	17000	28	10.5	
7125	/ W	1400		460	12600	48	9.0	
7126	/ W	640		560	15900	34	10.	
7127	/ W	690		625	19000	30	11.	
7128	/ W	300		380	12000	24	5.5	
7129	/ W	470		360	6900	30	6.5	
7130	/ W	1000		780	13700	35	7.5	
7131	/ W	330		300	6300	10	6.5	
7132	/ W	300		220	8600	14	6.9	
7133	/ W	340		280	7300	26	8.5	
7134	/ W	400		450	7100	33	6.0	
7135	/ W	210		400	6900	16	5.5	
7136	/ W	370		290	12600	19	5.5	
7138	/ W	290		260	6000	21	6.0	
7139	/ W	340		295	15500	31	7.0	
7140	/ W	300		640	14700	19	5.5	
7141	/ W	290		280	9000	17	6.5	
7142	/ W	365		700	15800	12	6.0	
7143	/ W	290		330	7700	14	6.0	
7144	/ W	420		290	6500	38	6.5	
7145	/ W	390		415	9000	22	6.0	
7146	/ W	340		410	9000	24	6.5	
7147	/ W	400		260	1100	11	5.5	
7148	/ W	380		290	17400	35	5.0	
7149	/ W	300		370	7000	11	5.5	

Report No. 78-23-1

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL LAB REPORT

SAMPLE NO.		Cu ppm		Pb ppm	Zn ppm	Mo ppm	Ag ppm	REMARKS
7198	W	700		220	9600	20	7.0	
7199	W	470		750	18900	15	6.5	
7200	W	380		330	6300	27	5.5	
				Note:	Plant Material Concentrations refer to ash.			
				Note:	Samples are unsuitable for gold			
					analysis due to insufficient sample			
					after ashing.			
					Minimum sample requirement for gold			
					analysis is 10 grs.			

Report [redacted] IT-29-1

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL LAB REPORT

SAMPLE NO.		Cu Amh/ppm	Pb Amh/ppm	Zn Amh/ppm	Mo Amh/ppm	Ag Amh/ppm		REMARKS
G - 8072		280	340	8300	120	6.5		Welch Jr.
73		440	540	10900	19	8.5		Powell Top
74		290	580	5700	17	8.5		S
75		340	510	12800	18	11.		MS
76		390	660	11000	17	9.0		MM 27, 71
77		270	420	1800	52	7.0		ALDER
78		350	660	11200	39	6.5		
79		310	400	2300	80	7.0		ALDER
80		510	480	9800	50	6.0		
81		260	220	5800	33	6.5		
G - 8082		480	910	10000	27	9.0		
83		600	310	7500	36	6.5		
84		380	320	15000	42	7.5		ALDER
85		380	700	13500	33	6.5		
86		320	440	6900	21	5.0		
87		420	530	19000	20	8.0		
88		220	210	2100	16	5.5		
89		290	200	2100	14	5.5		
90		330	650	13900	13	8.0		
91		440	400	11100	11	9.0		
92		430	260	2400	113	7.5		ALDER
93		230	500	6900	18	6.5		
94		500	650	13000	18	9.0		
WG #15		340	990	9700	33	7.0		
WG #16		210	600	1800	23	7.0		
WG #17		220	600	2100	18	7.5		
WG #18		420	390	9800	17	10.		

768A BELFAST ROAD (M.R. 1), OTTAWA 8, ONTARIO
PHONE: 237-3110 TELEX: 013-3548

GEOCHEMICAL LAB REPORT

No: 13-46-1

Extraction Cu,Pb,Zn,Ni,Ag - HNO_3-HCl

From Canadian Johns-Manville Co. Ltd.,

Method AA

Date Dec. 30, 1971

Fraction Used Talus

Analyst AA - S.P.

SAMPLE NO.	Sple Wt	Aliq Wt.	Cu ppm/Aliq	Pb ppm/Aliq	Zn ppm/Aliq	Ni ppm/Aliq	Ag ppm/Aliq	REMARKS
D - 7160	4.260	.071	275'	425'	12400'	17'	8.5'	Project # 160 1.66
81	4.505	085	375'	990'	21300'	12'	7.5'	1.89
82	4.189	.069	310'	710'	18100'	14'	8.5'	1.67
83	4.311	.062	390'	750'	14000'	11'	9.0'	
84	4.374	.086	300'	420'	10500'	12'	7.0'	
85	3.893	.066	250'	640'	8900'	13'	8.0'	1.69
86	4.127	.058	300'	535'	6800'	9'	8.5'	
87	4.135	054	350'	250'	7200'	21'	8.5'	
88	4.350	.078	270'	525'	8600'	26'	7.0'	1.71
89	4.448	.056	300'	465'	11800'	14'	9.0'	
90	4.196	.046	270'	260'	6200'	4'	7.5'	
D - 7211	5.19	.08	205'	780'	15300'	8'	7.0'	ST. Heat T.B.
D - 7196	4.935	.072	350'	570'	11200'	11'	8.5'	1.46
97	4.931	.094	285'	900'	17200'	6'	7.0'	Light Heat T.B.
98	4.899	.054	350'	690'	13400'	5'	9.5'	
99	4.705	058	350'	550'	7600'	14'	8.5'	4/1/72
D - 7200	4.487	.055	365'	500'	14000'	33'	9.0'	
01	4.713	.076	265'	600'	6600'	26'	7.0'	
02	4.958	.091	295'	660'	9200'	5'	7.0'	
03	4.883	.069	320'	890'	18700'	7'	7.0'	
04	4.357	045	410'	1100'	28000'	11'	9.0'	
05	4.347	.060	335'	720'	24700'	7'	9.0'	
06	4.252	.062	280'	645'	11100'	5'	8.5'	
07	4.500	.072	275'	780'	10700'	7'	8.5'	
08	4.845	.057	350'	500'	13300'	5'	9.5'	
09	5.202	.071	330'	700'	12500'	6'	7.0'	
10	4.695	085	230'	520'	14700'	12'	6.5'	

BRANCH OFFICES
1500 PEMBERTON AVE., NORTH VANCOUVER, B.C.
BOX 487, CAMPBELLTON, N.B.

BONDAR-CLEGG & COMPANY LTD.
768A BELFAST ROAD (M.R. 1), OTTAWA 8, ONTARIO
PHONE: 237-3110 TELEX: 013-3548

GEOCHEMICAL LAB REPORT

No: IT-28-1

Extraction Cu, Pb, Zn, Mo, Ag, - HNO_3-HCl

Method AA

Fraction Used ASH

From Mr. F. J. Evelegh, Canadian Johns-Manville Co. Ltd.

Date September 21 1971

Analyst AA - R.D

SAMPLE NO.		ash/Cu ash	ash/Pb ash	Zn ash	Mo ash	Ag ash		REMARKS
G - 8001	✓	340	310	12,000	3	5.5		Powell Twp.
2	✓	480	440	10,000	4	7.5		Wilde Group.
3	✓	515	430	15,600	6	7.0		L
4	✓	315	580	13,200	8	6.0		MB.
5	✓	355	530	11,400	6	6.0		SEPT. 24, 1971
6	✓	460	960	17,300	14	6.5		
7	✓	285	580	10,900	14	6.5		
8	✓	290	380	11,100	3	5.5		
9	✓	280	730	12,800	7	6.0		
10	✓	265	470	11,100	13	6.5		
11	✓	185	540	6,500	11	5.0		
12	✓	240	470	7,300	5	5.5		
13	✓	300	760	13,500	8	6.0		
14	✓	225	440	9,200	4	5.5		
15	✓	410	830	7,200	14	7.0		
16	✓	275	595	10,800	7	6.0		
18	✓	270	820	11,100	10	5.5		
19	✓	300	485	15,000	3	5.0		
20	✓	275	495	13,700	3	6.5		
21	✓	365	545	13,600	5	5.0		
22	✓	350	515	9,600	10	6.5		
23	✓	230	500	7,500	4	5.5		
24	✓	250	390	14,000	19	6.0		
25	✓	480	380	7,700	4	6.0		
26	✓	290	500	10,700	9	5.0		
27	✓	270	315	9,600	5	5.5		
28	✓	350	615	12,000	4	5.5		
29	✓	385	660	11,200	4	6.5		
30	✓	350	655	12,000	10	4.0		
31	✓	345	795	15,900	13	4.5		
32	✓	335	420	8,900	60	6.0		

Report No. IT-28-1 BONDAR-CLEGG & COMPANY LTD. Page No. 2

GEOCHEMICAL LAB REPORT

SAMPLE NO.		Cu ash	Pb ash	Zn ash	Mo ash	Ag ash		REMARKS
G - 8033	/	420	790	17,000	16	6.0		
34	/	300	565	13,900	10	4.5		
35	/	295	575	13,100	7	8.5		
36	/	290	555	17,000	8	5.5		
37	/	320	780	18,000	8	8.5		
38	/	335	1040	10,000	7	5.0		
39	/	340	680	21,000	20	6.5		
40	/	475	695	12,800	3	5.5		
41	/	300	730	9,000	15	5.5		
42	/	245	615	10,500	7	6.5		
43	/	310	570	11,900	4	6.0		
44	/	475	510	9,400	7	5.0		
45	/	390	380	13,500	6	7.5		
46	/	360	410	16,200	10	6.0		
47	/	355	665	15,000	4	4.5		
48	/	275	640	13,800	3	5.0		
49	/	290	695	15,600	5	4.5		
50	/	290	690	9,300	7	6.0		
51	/	325	600	19,500	11	6.5		
52	/	270	845	14,200	16	12.0		
		CONCENTRATION REFERS TO ASH						
		PROJECT #160						

Report No. 79-29-1

BONDAR-CLEGG & COMPANY LTD.

Page No. 3

GEOCHEMICAL LAB REPORT

SAMPLE		Cu ppm	Pb ppm	Zn ppm	Mo ppm	Ag ppm	ppm	REMARKS
8 - 8053		350	510	13200	11	8.5		
8 - 8054		230	230	6100	29	5.5		
8 - 8055		350	970	13300	29	6.5		
56		430	340	1700	82	8.0		ALDER
57		370	500	12300	54	7.0		
58		950	560	3000	54	10.		ALDER
59		330	390	3800	70	6.5		
60		230	230	1700	80	6.0		ALDER
61		280	440	7100	42	7.0		
62		260	270	800	47	6.5		ALDER
63		1100	2800	2500	54	9.5		
8 - 8064		460	1000	15800	33	6.5		
8 - 8065		320	330	3200	24	7.5		ALDER
66		120	220	6300	15	5.0		
67		230	420	9400	20	5.5		
68		220	220	1300	13	6.0		ALDER
69		370	670	12600	38	9.5		
70		380	320	12700	27	9.0		
71		200	140	1800	22	5.0		
D - 7072		660	1000	13,700	10	6.0		
73		340	510	9500	19	10.		Mod. Anom. Zn.
74		405	1100	12200	30	12.		
77		570	760	10,300	21	17.		P/MB.
80		430	700	19,700	15	13.		
7139		250	635	9100	9	11.		
40		370	940	10,600	13	9.0		
7282		410	750	11,300	5	8.5		
83		500	1200	13,900	9	13.		
84		375	1100	15,000	10	10.		
85		400	700	22,900	15	8.0		
86		220	315	1500	10	7.0		
87		370	550	8600	16	7.5		
88		225	480	9400	4	9.5		
89		380	830	11,000	12	7.0		

BRANCH OFFICES
1500 PEMBERTON AVE., NORTH VANCOUVER, B.C.
BOX 487, CAMPBELLTON, N.B.

BONDAR-CLEGG & COMPANY LTD.

768A BELFAST ROAD (M.R. 1), OTTAWA 8, ONTARIO
PHONE: 237-3110
TELEX: 013-3548

GEOCHEMICAL LAB REPORT

No: IT-41-1

Extraction: Cu, Pb, Zn, Mo, Ag - HNO_3-HCl

From: Canadian Johns-Manville Co. Ltd.,

Method: AA

Date: Dec. 17, 1971

Fraction Used: TREES.

Analyst: AA - R.P.

SAMPLE NO.	WT. ASH	Cu ppm/ASH		Pb ppm/ash	Zn ppm/ASH	Mo ppm/ASH	Ag ppm/ASH	REMARKS
F - 3483	.076	330		380	14900	9	9.0	Project # 160
F - 6982	.085	225		400	5800	35	9.5	
83	.072	440		1000	23600	28	13.	white birch
84	.071	460		1300	26300	28	13.	from
85	.074	400		1000	22900	14	11.	Welsh Lk.
86	.075	350		990	14100	20	11.	
87	.078	330		370	18800	22	11.	
[illegible]	.059	390		760	25900	12	10.	
89	.066	330		750	13200	15	12.	sent Nov 16/71
90	.094	340		650	8800	11	8.5	
91	.108	300		660	15600	17	8.5	
92	.086	300		450	15200	12	8.5	
93	.050	420		1400	32600	10	16.	
94	.082	390		1000	22800	36	12.	
95	.126	300		710	11900	10	8.5	
96	.073	315		300	16700	14	16.	
D - [illegible]	.103	890		485	16300	10	7.5	
[illegible]	.061	385		700	21500	12	8.0	
87	.077	310		1000	16400	39	8.5	
88	.087	380		640	16900	46	7.0	white birch
89	.074	340		1000	14300	10	8.0	Welsh Lk
90	.061	360		1000	22100	16	10.	
91	.078	310		550	11400	13	7.5	
92	.063	365		890	25200	16	9.5	
93	.118	250		490	8500	8	7.0	
94	.088	320		640	11400	11	8.0	
95	.105	305		790	9000	10	6.5	
96	.097	310		710	14800	8	6.5	
97	.084	270		760	7900	6	7.5	
D - 7141	.073	310		970	9200	11	8.0	
42	.072	290		510	9200	11	8.0	

R. M. Claydon

Project No. IT-41-1

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL LAB REPORT

SAMPLE NO.	WT ASH	Cu ppm/ASH		Pb ppm/ASH	Zn ppm/ASH	Mo ppm/ASH	Ag ppm/ASH	REMARKS
D - 7143	.074	340		990	11900	7	8.0	
44	.093	290		720	12700	11	7.5	
45	.116	240		780	13600	8	7.0	
46	.076	355		700	19300	13	8.0	
47	.070	300		485	13900	14	7.0	
48	.064	375		600	21500	14	8.0	
49	.079	265		495	12000	23	7.5	
50	.087	230		710	21500	11	7.0	
51	.054	260		350	9100	4	9.5	
52	.061	410		510	14500	3	8.0	
53	.062	310		520	18100	16	7.5	
54	.066	300		890	12400	15	8.0	
55	.083	250		850	12600	12	8.5	
56	.074	240		410	8000	16	9.0	
57	.098	235		375	11400	10	7.5	
58	.106	235		700	13900	9	7.5	
59	.068	310		750	20600	4	7.5	
60	.083	375		510	10800	N.D.	7.0	
[illegible]	.095	200		460	10500	8	7.0	
63	.064	375		640	16400	16	8.0	
64	.065	245		720	13800	10	8.5	
[illegible]	.065	380		750	13806	10	8.5	
[illegible]	.083	340		490	12000	12	8.5	
67	.094	200		560	8500	11	8.0	
68	.066	400		490	12700	4	9.0	
69	.057	385		880	17200	5	9.0	
70	.089	250		400	11800	11	8.0	
72	.078	280		560	9000	9	7.0	
74	.066	480		580	12400	15	7.5	
77	.107	205		420	9300	9	6.5	
79	.059	390		600	14200	8	9.0	
G - 8095	.100	330		440	15000	7	6.5	
96	.100	280		385	15500	7	6.0	
97	.115	285		195	15200	9	5.5	
98	.120	275		230	9600	10	8.5	
99	.080	350		150	14400	9	7.5	

Washed Sample
White Pyrite

Plotted P&RB
22/12/71

Report No. IT-41-1

BONDAR-CLEGG & COMPANY LTD.

Page No. 3

GEOCHEMICAL LAB REPORT

SAMPLE NO.	WT. ASH	Cu ppm/ASH		Pb ppm/ASH	Zn ppm/ASH	Mo ppm/ASH	Ag ppm/ASH	REMARKS
G - 8172	.118	245		470	7500	8	6.0	
73	.067	375		690	19300	12	8.0	
74	.124	175		450	6900	8	6.5	
75	.110	255		460	10800	9	7.5	
76	.077	340		410	8200	4	8	
77	.060	530		330	11200	N.D.	7.5	
78	.085	340		560	7800	8	8.0	
79	.078	870		510	10900	6	6.0	
80	.094	290		470	12200	11	8.0	
81	.105	230		530	5400	6	6.5	
82	.09[illegible]	260		610	9700	10	6.5	
83	.094	265		800	15600	5	6.5	
84	.083	290		480	11200	5	7.0	
85	.096	270		580	11000	7	6.0	
	.0[illegible]0	310		1250	10000	10	7.5	
87	.080	300		850	13000	4	5.5	
88	.115	210		355	10000	6	6.0	
89	.073	310		430	10800	4	5.0	
90	.063	285		890	14600	8	8.0	
91	.080	525		855	19100	4	7.0	
92	.099	285		460	11900	8	6.0	
93	.082	270		575	17200	5	7.0	
94	.116	300		450	12100	4	5.5	
95	.091	260		360	10800	7	6.0	
96	.093	265		500	12900	6	6.5	
97	.091	230		450	11800	9	6.5	← 12.98
99	.129	210		315	3100	5	6.0	
G - 8200	.077	415		840	9100	4	7.0	
01	.085	290		760	12500	7	7.0	
02	.094	390		765	14700	7	7.0	
G - 8253	.078	850		475	8300	10	6.0	
54	.082	240		350	10400	10	6.0	
55	.081	255		380	11500	10	6.0	
56	.091	230		570	7000	4	5.5	
57	.131	150		435	7000	8	5.5	
G - 8345	.145	220		600	13000	7	6.5	

All adobe 5ft white brick in lower

Report No. IT-41-1

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL LAB REPORT

SAMPLE NO.	WT. ASH	Cu ppm/ASH		Pb ppm/ASH	Zn ppm/ASH	Mo ppm/ASH	Ag ppm/ASH	REMARKS
G - 8351	.065	275		310	19100	13	8.0	
G - 8502	.090	320		520	14800	10	6.5	

N.D. Not Detected.

Note: TREE SAMPLES.

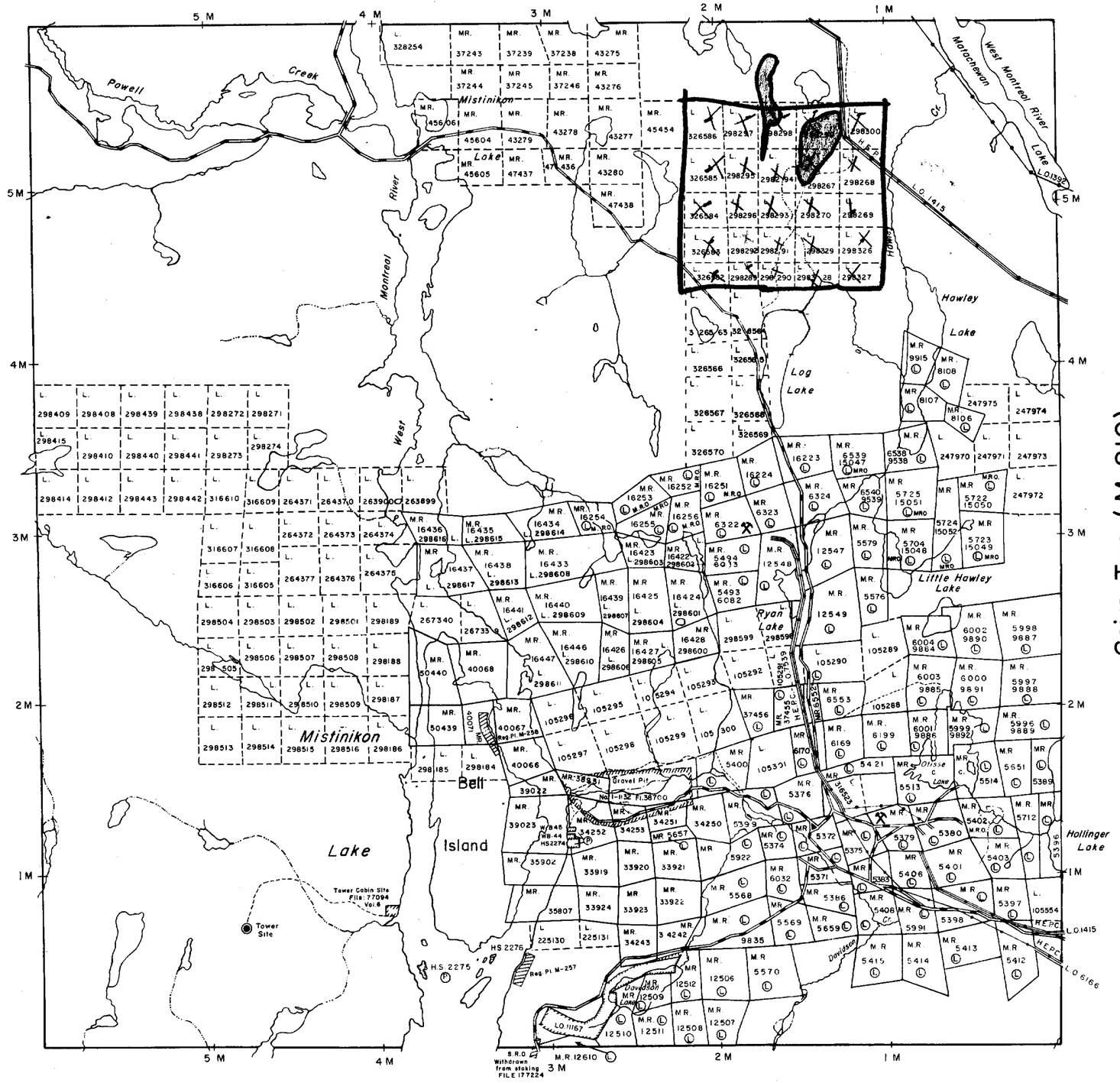
Weight in grams.

Baden Twp. (M.205)

Bannockburn Twp.(M.207)

Cairo Twp. (M. 210)

Yarrow Twp. (M.260)



200

42A03SE0328 2.739 POWELL

J.P.v.K.

THE TOWNSHIP
OF

POWELL

DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C.

NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers.

L.O. 7601 Covers Flooding Rights In This Twp To Below Contour 870'.00 To H.E.P.C. File: 12290 Vol. 2.

L.O. 11167 Shown thus: ---- File : 90970

DATE OF ISSUE

JAN 27 1972

ONT. DEPT. OF MINES AND NORTHERN AFFAIRS

PLAN NO. M.241

ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS

2.739

ADJOINS SHEET No.

ADJOINS SHEET No.

LAKE

WELSH LAKE

WELSH LAKE

Birch Fist

Jack Pine Fist

Jack Pine Fist

326586 326585 326584 326583 326582

298297 298298 298299 298300 298295 298294 298293 298296 298292 298291 298289 298290 298268 298267 298269 298270 298326 298329 298328 298327

TREE TYPES

- BIRCH
- ALDER

BONDAR CLEGG REPORT NOS.

1T-23-1
1T-28-1
1T-29-1
1T-46-1
1T-41-1

TRUCK ROAD TO HYDRO DAM

HIGHWAY 566

LOG LAKE

PLAN SHOWING GEOL. CONTACTS & BIOGEOCHEM SAMPLE LOCATIONS
ONT. 1"=200' WEST SHEET WELSH GR. POWELL TWP.

JAN 20 1972

210

42A03SE0328 2.739 POWELL

LAKE

WELSH LAKE

Beaver Pond

LOG LAKE

TRUCK ROAD TO HYDRO DAM

HIGHWAY 566

N

326586 326585 326584 326583 326582

298297 298298 298299 298295 298294 298267 298296 298293 298292 298291 298290 298289 298328 298327 298270

DDH -45°

TREE TYPES
- BIRCH
- ALDER

BONDAR CLEGG REPORT NOS.
1T-23-1
1T-28-1
1T-29-1
1T-41-1
1T-46-1

JAN 20 1978

BIOGEOCHEM SURVEY PLAN - CU
ONT. 1:200 - WEST SHEET - WELSH CR. POWELL TWP

ADJOINS SHEET NO.

42A03SE0326 2.739 POWELL

220

N

LAKE

326586

298297

LAKE

298298

298299

326585

298294

298267

298295

326584

298293

298296

298270

Beaver Pond

326583

298292

298291

298329

326582

298328

298327

298289

298290

TRUCK ROAD TO HYDRO DAM

LOG LAKE

HWY # 35E

ALDER

BONDAR CLEGG
REPORT NOS.
1T-23-1
1T-28-1
1T-29-1
1T-41-1
1T-46-1

P.A.R. Bonnar
JAN 20 1978

-WEST SHEET-

TWP

230

LAKE

LAKE

WELSH LAKE

Beaver Pond

LOG LAKE

TRUCK ROAD TO HYDRO DAM

326586 326585 326584 326583 326582

298297 298298 298299 298294 298295 298267 298293 298296 298270 298292 298329 298291 298328 298327 298290 298289

660-11,200-6.5
400-2300-7.0
920-1800-7.0
660-11,000-9.0
310-10000-9.0
580-5700-8.5
540-10,900-8.5
340-8300-6.5
140-1800-5.0
220-1300-6.0
670-12,600-9.5
320-13,700-9.0
1000-15,800-6.5
330-3200-7.5
220-6300-5.0
420-9400-8.5
280-2500-9.5
270-800-6.5
640-14800-5.5
440-7100-7.0
230-1700-6.0
340-1700-8.0
280-9000-6.5
390-3600-6.5
700-15,800-6.0
580-12,300-7.0
560-3000-10
330-14,400-8.0
540-13,800-5.0
665-15000-4.5
410-10,200-6.5
510-9400-5.0
570-11400-6.0
880-13,500-7.5
315-9,600-5.5
500-10,700-5.0
380-7,700-6.0
390-14,000-6.0
500,7500-5.5
575-9600-6.5
380-11,100-5.5
730-12,800-6.0
478-11,100-6.5
540-6,500-5.0
580-10,900-6.5
960-13,300-6.5
520-11,400-6.0

TREE TYPES
○ BIRCH
□ ALDER

BONDAR CLEGG REPORT NOS.
1T-23-1
1T-28-1
1T-29-1
1T-41-1
1T-46-1

P.H. Brown
JAN 20 1972

42A03SE0328 2.739 POWELL

240

BOREHOLE SURVEY PLAN - PB, ZN, AG.
ONT. D.P.R. - WEST SHEET - WELSH GR. POWELL TWP.

LAKE

LAKE

WELSH LAKE

298297 298298 298299 298295 298294 298267 298293 298296 298270 298292 298291 298329 298328 298290 298327 298289

326586 326585 326584 326583 326582

Beaver Pond

LOG LAKE

TRUCK ROAD TO HYDRO DAM

O BIRCH
□ ALDER

BONDAR CLEGG
REPORT NOS.
1T-23-1
1T-28-1
1T-29-1
1T-41-1
1T-46-1

- PB, ZN, AG.

JAN 20 1972

-WEST SHEET- WELSH GR, POWELL TWP

42A03SE0328 2.739 POWELL

250

LAKE

LAKE

Beaver Pond

LOG LAKE

326586 298297 298298 298299 326585 298294 298267 298295 326584 298296 298293 298270 326583 298292 298291 298329 298328 326582 298289 298290 298327

TRUCK ROAD TO HYDRO BRM

HWY 97C

N

900 - 2300

660 - 11,200 - 6.5

920 - 1800 - 7.0

510 - 12,800

660 - 11,000 - 9.0

510 - 10000 - 9.0

580 - 5700 - 8.5

570 - 10,900 - 8.5

340 - 8300 - 6.5

140 - 1800 - 5.0

220 - 1300 - 6.0

270 - 12,600 - 9.5

320 - 12,700 - 9.0

400 - 15,800 - 6.5

330 - 3200 - 7.5

220 - 6300 - 5.0

420 - 9400 - 5.5

900 - 2500 - 9.5

270 - 800 - 6.5

690 - 14800 - 5.5

440 - 7100 - 7.0

230 - 1700 - 6.0

340 - 1700 - 8.0

280 - 9000 - 6.5

390 - 3600 - 6.5

500 - 12,300 - 7.0

760 - 15,800 - 6.0

560 - 3000 - 10

330 - 7,700 - 8.0

540 - 13,800 - 5.0

465 - 15,000 - 4.5

410 - 10,200 - 6.5

510 - 9400 - 5.0

570 - 11,400 - 6.0

390 - 13,500 - 7.5

315 - 9,600 - 5.5

500 - 10,700 - 5.0

380 - 7,700 - 6.0

390 - 14,000 - 6.0

500 - 7500 - 5.5

515 - 9600 - 6.5

380 - 11,100 - 5.5

480 - 12,800 - 6.0

470 - 11,100 - 6.5

540 - 6,500 - 5.0

580 - 10,900 - 6.5

568 - 17,300 - 6.5

580 - 11,400 - 6.0

□ ALDER

BONDAR CLEGG REPORT NOS.

1T-23-1
1T-28-1
1T-29-1
1T-41-1
1T-46-1

PB ZN, AG.

JAN 20 1972

-WEST SHEET- [illegible] GR. POWELL TVP

42A03SE0328 2.739 POWELL

260