REPORT ON PROGRAMS CONDUCTED ON THE BEATTY - HISLOP TOWNSHIPS CLAIMS OF CANADIAN JOHNS-MANVILLE CO. LIMITED LARDER LAKE MINING DIVISION UNDER EXPLORATION ASSISTANCE CONTRACT KL-21 EFFECTIVE APRIL 4th, 1972.

by

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and

F. J. Evelegh

Exploration Dept.
Canadian Johns-Manville Co. Limited

February 19, 1973
Matheson, Ontario.

APPENDICES

APPENDIX I - Property Plan of parts of Beatty and Hislop Townships on a scale of one inch equals 1000 feet, showing Company holdings outlined in red pencil.

APPENDIX II - Preliminary Geological Plan Showing Biogeochem Contours on a scale of one inch equals 50 feet as compiled by P. Brown.

APPENDIX III - Geological Report dated July 2nd, 1972 by J. H. Morris. Detailed Geological Plans - Sheets 1, 2, 3 and 4 - on a scale of one inch equals 50 feet, Index and Structural Elements Map and the Detail Geological Plan - Areas A, B, C both on a scale of one inch equals 400 feet and Legend Sheet accompany this report.

APPENDIX IV - Rock Descriptions by P. Brown and J. H. Morris. Bondar-Clegg & Company Limited Lab. Reports - 385-2 (2) and 483-2.

Note that rock sample locations and analyses have been shown on the detail plans of Appendix III.

APPENDIX V - Geo-Magnetic Contour Plan on a scale of one inch equals 400 feet.

APPENDIX VI - Electromagnetic Profile Plan on a scale of one inch equals 400 feet showing results of the initial R. E. M. survey.
Detailed Geological Plans - Sheets 2, 3 and 4 - on a scale of one inch equals 50 feet showing R. E. M. check and MS-1000 electromagnetic profiles.
Locations and analyses results for rock samples collected over zones of interest.
Rock descriptions by P. Brown and Bondar-Clegg and Company Limited Lab. Report No. 1093-2.

APPENDIX VII - Field Sheets and P. H. M. C. descriptions for auger basal till samples.
Bondar-Clegg & Company Limited Lab. Reports - 613-2, 700-2 and 964-2 (2).
Plan Showing Auger Basal Till Sample Locations and Geochem Analyses Results on a scale of one inch equals 400 feet.
Plans (3) Showing Auger Basal Till and P. H. M. C. Sample Locations on a scale of one inch equals 10 feet.

APPENDIX VIII - Biogeochem Field Sheets dated April 13 to 17, May 10 to 16 and July 24, 1972. Bondar-Clegg & Company Limited Lab. Reports - 300-2, 301-2, 437-2 and 700-2. Cumulative Frequency Distribution Diagrams for Cu - Mo - Zn in alder trees. Biogeochem Sample Location Maps on a scale of one inch equals 400 feet for both Beatty and Hislop Townships. Contoured Biogeochem Survey Plans on a scale of one inch equals 400 feet for Cu, Mo and Zn in Beatty and Hislop Townships.

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REPORT ON PROGRAMS CONDUCTED ON THE BEATTY - HISLOP TOWNSHIPS CLAIMS OF CANADIAN JOHNS-MANVILLE CO. LIMITED LARDER LAKE MINING DIVISION UNDER EXPLORATION ASSISTANCE CONTRACT KL-21 EFFECTIVE APRIL 4th, 1972.

Introduction:

The following and enclosed reports describe the Exploration Programs carried out on the Beatty-Hislop Townships claims which form part of Contract KL-21, dated May 8th, 1972.

Initially thirty-one claims were staked by Company personnel during the latter part of February with the recording date being March 3rd, 1972. Posts were pretagged and claims numbered 333431 to 333433 inclusive, 339635 to 339642 inclusive, 339801 to 339819 inclusive and 339938. As shown on the accompanying Property Plan these holdings are not contiguous but are in scattered groups in Lots 1 to 5, Concessions 1 and 2, Beatty Township, and Lots 1 to 3, Concession 6, Hislop Township.

The north one-half of Lot 3, Concession 1, Beatty Township being 160 acres, was purchased outright (surface and mining rights) from the Corporation of the Township of Black River-Matheson on April 11th, 1972. This block was added to Contract KL-21 at that time.

Exploration programs conducted during the period of the Agreement, which are described in this and the attached reports, include line cutting, chaining, rock trenching, preliminary and detailed geological mapping, rock and soil geochemical surveys, biogeochemical surveying, R. E. M. and MS-1000 electromagnetic surveying and a magnetometer survey. Note that all work, both field and office, was carried out by Company personnel based at Matheson, Ontario.

Line Cutting and Chaining:

A base line was started from a point on the boundary between Lots 3 and 4, Concession 1, Beatty Township, at a point 10+50 feet north of the No. 4 post of claim 339803 and extended to the east for a length of 2,600 feet on a bearing of N88°E. The base and right-angled offset lines were turned off using a transit. Picket lines, spaced at 200 foot intervals, were cut to both the north and south of the base line to cover the main outcrop area. Pickets were established at 100 foot intervals along all lines by chainage. Picket lines were tied in along their extremities by chaining to increase the accuracy of the plans.

During the course of this initial program 0.5 miles of base and 6.8 miles of picket lines were cut and chained.

Line cutting was extended to the east during the latter part of June preparatory to a detailed magnetometer survey to delineate the contacts of the diorite sill. A second base line, bearing due East, was started from a point on line 26+00 East at 11+50 feet south of base line No. 1 and cut to the east for a length of 2,600 feet. Right-angled offset lines were again established at 200 foot intervals along this base line.

During the course of this second program 0.5 miles of base and 1.7 miles of picket lines were cut and chained.

Details re man days worked and wages paid are shown in the following table. Costs with attached receipts are also listed.

Employee	Dates Worked 1972	Total 8-Hour Days	Daily Rate	Total Wages
J. Goodger	Apr 17-20 incl;24-27 incl; May 1 & 2; June 27 & 28	12	$30.13	$ 361.56
R. Haley	Apr 17-22 incl;24-26 incl; May 1; June 27 & 28	12	25.64	307.68
G. Edwards	Apr 17;20-22 incl;24-26 incl; May 1	8	24.30	194.40
W. Foster	Apr 18-22 incl; 24-29 incl; May 1	12	23.00	276.00
F. Cook	Apr 24,25,27-29 incl	5	21.20	106.00
R. Hallock	Apr 18-22 incl; 24-26 incl.	8	21.50	172.00
6	Totals	57		$1,417.64
Gas and Oil - Company vehicles				46.29
Hardware				4.15
		Total		$1,468.08

Preliminary Geological Mapping and Prospecting:

These programs were carried out by P. Brown, geologist with this Company, assisted by R. Haley and M. Bruce. Field work was concentrated along the porphyry and diorite contacts and over biogeochemical Cu - Mo anomalies.

Rock trenching, mapping and sampling which in part were conducted concurrently with the preliminary prospecting and mapping program, are discussed in other sections of the report.

The results of this initial survey are discussed on the following five pages under the heading "Preliminary Report on Beatty Township" compiled by P. Brown and dated June 5th, 1972. This report is accompanied by a "Geological Plan Showing Biogeochem Contours" on a scale of one inch equals 50 feet. The boundaries of this preliminary map sheet have been coloured green and are shown

on "Index and Structural Elements Map" on a scale of one inch equals 400 feet. (See report by J. H. Morris)

Details re man days worked for both field and office phases of the project and wages paid are shown in the following table; - Note that receipts for other costs incurred are attached.

Employee	Dates Worked 1972	Total 8-Hour Days	Daily Rate	Total Wages
P. Brown	May 10, 11, 15, 17 to 20 incl.	7	$30.13	$210.91
R. Haley	May 10, 17 to 20 incl.	5	25.64	128.20
M. Bruce	May 11 & 15	2	25.48	50.96
3	Totals	14		$390.07
Gas and Oil - Company vehicles				22.92
		Total		$412.99

PRELIMINARY REPORT ON BEATTY TOWNSHIP

Location and Accessibility:

Beatty Township is located in the Larder Lake Mining Division immediately northeast of Matheson. The property under investigation is in the N1/2 of Lot 3. Access is readily gained by driving east from Matheson for about 7 miles to the Holtyre turnoff; then walking north for three-quarters of a mile on a good trail, which was a former bush road, to the Stewart-Abate property. At this point the property lies 250 feet immediately to the east.

Topography and Vegetation:

The area comprises low lying, ice scoured outcrops surrounded by swamp. The soil beneath the swampy areas is clay and sand laid down during glacial lake times. Vegetation is mainly poplar, alder and spruce with minor balsam and birch.

General Geology:

Rocks in the area are Precambrian with pleistocene sand and clay cover. The Table of Formations is shown below: -

Pleistocene - sand and gravel

Lamprophyre

Feldspar porphyry

Diorite

Sediments - greywacke, quartzite (argillite ?)

Sediments:

Quartzite is the most common sedimentary rock followed by greywacke. Argillite may be present but as yet not mapped. The quartzite varies from a light green regular quartzite through greenish-grey into definite grey greywacke. Pyrite is a common constituent in these rocks making up 10% of the whole in places. Bedding is well marked and

strikes are relatively easy to determine. Where the quartzite is greyish, small quartz eyes are common, being about 1/16" in size.

Carbonatisation and sericitisation are present in some areas and are thought by J. Satterly and H. S. Armstrong of the Ontario Dept. of Mines, 1947, to have occurred just after the emplacement of the lamprophyre with the solutions being derived from the same magma that gave rise to the Algoman porphyries.

Diorite (?):

One diorite intrusive ? cuts across the N1/2 of Lot 3. Generally it is sill-like being roughly parallel to the strike of the sediments. At the Stewart-Abate property it obtains a width of 200 feet. Joints are abundant and cross fracturing is common, together with small quartz veins.

Felspar Porphyry:

A small plug intrudes the sediments in the NE 1/4 of the N 1/2 of Lot 3 with several smaller bodies around it. The main body varies in composition from west to east being more acidic in the east. Grain size is variable but generally the felspars may reach 1/2" and a distinct zoning can be seen. The NW quarter of the plug contains abundant inclusions of sedimentary rock and possibly partially digested volcanics. Jointing is fairly common but not as distinct as in the surrounding sediments. Practically all the porphyry has suffered carbonatisation and sericitisation. Accessory minerals include pyrite, chalcopyrite, molybdenite, and hematite making the weathered rock a bright rusty colour.

Lamprophyre:

This is the youngest rock type in the area and has two prominent directions - a) parallel to the strike of the sediments; and b) parallel to the main direction of the faulting. (i.e. N30°E) In places

carbonate is present as small veins. Generally these rocks have rounded inclusions of country rock and large biotite books, the whole being extremely hard. Fractures parallel to these dykes are present in the country rock.

Faulting:

The major faulting direction is N30°E and the movement is apparently rotational. Carbonate, quartz, or quartz and carbonate are present along these fault planes. Sulphides may or may not accompany the quartz and carbonate. In the northeast corner a 3 inch carbonate vein was found just south of the beaver pond along a fault. Chalcopyrite is abundant here.

Mineralisation:

Economically the main mineral of interest is molybdenite which is abundant. Other minerals present include chalcopyrite, galena, sphalerite, pyrite and hematite. Gold may be present but is not expected to be visible in hand specimen due to the extensive blasting carried out during the early 1900's.

Disseminated molybdenite has been found in the more acidic phase of the main plug on lines 18+00E and 20+00E at about 4+00N. Generally, the molybdenite is very fine grained but occasionally tight joints may be opened and crystals up to 1/8 inch can be seen on faces covering about 30% of the area.

In general areas of high molybdenite have suffered carbonate alteration.

Seams and disseminations ? of molybdenite are found throughout the sediments and diorite coinciding with the biogeochemical anomalies and this covers a significant area (4½ million square feet). The seams are tight joints and may have from 10% to 98% MoS_2 on the surfaces.

This is especially noticeable in the quartzite just west of line 14+00E at 7+00S.

Chalcopyrite has been found in the central area of the anomalous molybdenite zone and also close to the conductors detected by the E. M. survey. Amounts found are minor and generally associated with an equal or greater amount of pyrite.

Galena and sphalerite were found in an altered phase of the diorite associated with carbonate veins. A small blast has been made at 12+20E, 2+50S which exposes the minerals.

Some galena (very minor) was found associated with chalcopyrite and pyrite about 200 feet to the southeast (14+00E, 4+00S).

Conclusions:

1. Molybdenite mineralisation is associated with the intrusive felspar porphyry.
2. Major concentrations of molybdenite are found where fracturing and quartz veining is present.
3. Minor chalcopyrite is associated with some quartz veins usually with pyrite but not often seen with the molybdenite.
4. Pyrite is abundant throughout the sediments and porphyry.
5. The biogeochemical survey has effectively outlined the surface molybdenite showings.
6. The electromagnetic survey has located conductors, and sulphides have been found at these locations.
7. The magnetometer survey has traced the diorite under overburden and outlined the altered phases in the centre of the area.
8. The absence of molybdenite in the centre of the plug may indicate some form of zoning.

Recommendations:

1. Blasting of tightly jointed areas should be carried out - a) to break up the rock, and b) to get below the weathering effects.
2. An estimation of amount of jointing should be obtained.
3. Observations to see if the molybdenite is related to any specific set(s) of joints or fractures.
4. Observations to determine if zoning of pyrite, molybdenite and chalcopyrite exists and can be related to a porphyry-type deposit.
5. Assaying.

Summary:

The small isolated outcrops of felspar porphyry may be connected at depth into a larger pluton.

In this case the low biogeochemical values for the centre of the large plug may be due to erosion down to the low grade core of a porphyry-type zoned deposit.

Overall the area has considerable promise in making a low grade molybdenum deposit.

Submitted by: P. A. R. Brown
June 5th, 1972

cc:
H. K. Conn - Asbestos
file

Detailed Geological Mapping:

This program was conducted by J. H. Morris, geologist, assisted by T. DeMarchi. Both field and office work were completed by these two employees. Note that J. H. Morris was hired for the 1972 field season and is now attending the Graduate School, Dept. of Earth Sciences at Waterloo University.

A copy of the "Geological Report on the Beatty Township Claims" compiled by J. H. Morris, complete with detailed geological maps and dated July 2nd, 1972 is attached.

Details re man days worked for both field and office phases of the project and wages paid are shown in the following table. Note that receipts for other costs incurred are attached.

Employee	Dates Worked 1972	Total 8-Hour Days	Daily Rate	Total Wages
J. H. Morris	May 29th to June 30th excluding Sundays	29	$30.00	$ 870.00
T. DeMarchi	May 30th to June 28th excluding Sundays and also June 23rd	25	$32.05	801.25
2	Totals	54		$1,671.25
Gas and Oil - Company Vehicles				42.64
			Total	$1,713.89

Rock trenching was carried out as part of the geological program at locations selected by P. Brown and later by J. H. Morris. The purpose of this work was to expose fresh surfaces for geological mapping and rock sampling. Trench and pit sites have been shown on the Geological Plans - Sheets 1, 2, 3 and 4 - on a scale of one inch equals 50 feet. Mineralization in these pits is discussed by J. Morris in his report under the heading "Economic Geology" (See

Appendix III).

A gasolene-powered Copco plugger was used for this work which was conducted by the Company personnel listed in the following table; -

Employee	Dates Worked 1972	Total 8-Hour Days	Daily Rate	Total Wages
D. Campbell	May 23-27 incl; 29th; June 1, 2, 3 and 5-10 incl.	15	$32.05	$ 480.75
R. Haley	May 23-27 incl; June 5-8 incl; June 10th and 12-17 incl.	16	$25.64	410.24
2	Totals	31		$ 890.99
Gas and Oil - Company vehicles				40.60
Canadian Industries Limited				68.18
Gil's Electric				44.90
Bondar-Clegg & Company Limited				29.80
			Total	$1,074.47

In Appendix IV find detailed descriptions of rock samples numbered BE-1 to BE-14 inclusive, collected from outcrops and pits by P. Brown during the course of the preliminary mapping and prospecting program. Only samples 1, 2, 4, 6, 7 and 12 were analyzed geochemically. The results are shown on Bondar-Clegg & Company Limited Lab. Report No. 385-2 - sheets dated May 26th and June 1st, 1972. All samples were analyzed for Fe and Mo - two samples were tested for Cu. With the exception of sample BE-7, which contained 1820 ppm Mo, all results were non-anomalous.

Also included in Appendix IV find descriptions of samples BR-1, 2 and 3 collected by J. H. Morris. These three samples were analyzed geochemically for Cu, Mo, Ag and Au and the results are

shown on Lab. Report No. 483-2. Sample No. BR-2, which contained 700 ppm Cu, 1400 ppm Mo and 50 ppb Au, is of interest.

Note that rock sample locations and analyses have been shown on the detailed geological maps - Sheets 1, 2, 3 and 4 on a scale of one inch equals 50 feet which accompany the report compiled by J. H. Morris (see Appendix III).

Magnetometer Survey:

A magnetometer survey was completed on the grid of base line No. 1 during the latter part of April by G. Edwards, geophysical operator with this Company. The grid of base line No. 2 was surveyed by J. Goodger, geologist, on June 29th, 1972. Magnetic readings were recorded using a Jalander type instrument (Serial #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.

As standard Company procedure this instrument was checked on Munro Mine Base Station No. 2 (Munro-Beatty Sill) prior to the survey and an adjustment made so that a gamma value on the Jalander of 1220 corresponds to an absolute value of 57,599 ± 15 gammas. This has been previously established at the Government Magnetic Base Station at Matheson.

One base control station was used for the survey and is located on picket line 4+00 East at 0+30 feet north of base line No. 1. This station has a fixed value of 1620 gammas and readings were recorded at approximately four 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 899 was recorded on the block. Miles traversed - 8.5.

The results of the survey are shown on the accompanying "Geo-Magnetic Contour Plan" on a scale of one inch equals 400 feet. Magnetic values have been contoured at 500 gamma intervals from 1000 to 4000. Note that the picket line grids and magnetic values have been superimposed on an enlargement of Map No. 1947 - 2, Township of Beatty as published by the Ontario Dept. of Mines.

As anticipated, magnetic intensities over the sedimentary rocks and porphyry intrusive are weak and relatively uniform. Readings range in value from slightly less than 1000 to 1800 gammas in close proximity to the contacts of the diorite sill. In general, values fall in the range of 1100 to 1300 gammas.

Readings over the southeasterly trending, south-dipping diorite sill range in value from 1800 gammas along the contacts to 4800 gammas over bedrock exposures in the central part of the 200 foot thick intrusive. As shown on the accompanying plan, there is excellent correlation between J. Satterly's geological contacts and magnetic values in outcrop areas. Minor discrepancies occur in overburden-covered sections where magnetic data indicates the contact to be farther to the north (i.e. lines 22+00E to 30+00E, inclusive).

The northeasterly striking fault pattern, shown by Dr. Satterly, has been sharply defined by the magnetic survey. Additional cross structures, indicated by the recent work, have been shown in red pencil on the Geo-Magnetic Contour Plan.

Magnetic surveying was carried out on the property to delineate the contacts of the diorite sill and any offsetting cross structures. As described in the next section of this report, these contact zones will then be explored for sulphide mineralization using electro-magnetic surveying methods.

Details re man days worked and wages paid are shown in the following table;

Employee	Dates Worked 1972	Total 8-Hour Days	Daily Rate	Total Wages
G. Edwards	April 27, 28, 29; May 2 and 3	5	$24.30	$121.50
J. Goodger	June 29	1	$30.13	30.13
2	Totals	6		$151.63

Electromagnetic Survey:

Electromagnetic surveying was carried out on the Beatty Block in four separate stages as described in detail in the following paragraphs.

Initially the grid of Base Line No. 1 was surveyed using a McPhar R. E. M. vertical loop unit applying the "in-line" method. Distance between transmitter and receiver was maintained at 200 feet during the course of this work. Walki-talki units were used for communicating field data. Stations were spaced at 100 foot intervals.

The grid of base line No. 2 was surveyed in the same manner using the identical equipment. R. Haley, geophysical operator with this Company, conducted both surveys. R. Hallock assisted with the initial program which was completed in the early part of May. Note that W. Foster helped with this work. T. DeMarchi assisted on the second survey - completed in the latter part of June.

Results of these two surveys are shown on the accompanying "Electro-Magnetic Profile Plan" on a scale of one inch equals 400 feet. Profiles have been plotted on a scale of one inch equals 20°. Conducting zones have been marked in purple dashes.

Three weak conductors have been delineated by the R. E. M. "in-line" survey. Dip angles for the zone in the sediments to the

north of the base line on picket line 16+00E, crossover from +1° to -1°. Dip angles are of the same magnitude for the conductor along the north contact of the diorite sill on lines 16+00E and 18+00E. On line 12+00E along the east side of an outcrop of altered sediments, a crossover having dip angles of +2°, -1°, was recorded. Very minor pyrite, chalcopyrite and molybdenite mineralization was noted in narrow quartz stringers in this bedrock exposure.

As the conducting zones could be indicative of low percentage of disseminated sulphides detailed R. E. M. surveying was carried out over the previously delineated conducting zones. This work was carried out by P. Brown, geologist with this Company, assisted by J. Goodger and T. DeMarchi and was completed during the early part of October, 1972.

The results of the original in-line, re-read in-line and transmitter set-up surveys have been superimposed on the detailed Geological Plans of J. H. Morris - scale one inch equals 50 feet - Sheets 2, 3 and 4. Note that to emphasize minor changes the profiles have been plotted on a scale of one inch equals 5°. A brief report compiled by P. Brown, covering this check work, is shown on the following page.

REPORT ON R.E.M. CHECK SURVEYS
BEATTY BLOCK, BEATTY TOWNSHIP

Five conductors (weak) were indicated from the original survey carried out early in 1972.

The object of the latest survey was to detail the R. E. M. conducting zones with transmitter set-up method using both the 1000 cps and 5000 cps frequencies.

Detailing was carried out around the indicated crossover on line 18+00E at 9+00S. This work did indicate a weak conductor but it did not pick up anything on line 18+00E. Thus checks were run on all the indicated conductors using the 1000 cps, 200' coil spacing as had been carried out originally.

Results were disappointing since none of the indicated conductors checked out. Line profiles are generally similar but do not give "crossovers".

Samples were also collected from these original crossover points (or close to) except for the one on line 16+00E, 5+00S since no outcrops occur close by and depth to rock is probably 5 to 10 feet.

Insufficient sulphide (conductive material) to give a conductor using the R. E. M. unit was observed at all locations.

Submitted by: P. A. R. Brown
October 13th, 1972

cc: H. K. Conn
file

As part of this detailed R. E. M. program a series of selected rock samples were collected over the original conducting zones and shipped to Bondar-Clegg & Company Limited for geochemical analyses. The seven samples numbered BR-1 to BR-7 inclusive have been described by P. Brown and these descriptions are included in Appendix VI.

Analyses are shown on Geochem Lab. Report No. 1093-2 dated October 31, 1972. The results have been plotted on the 50 scale detailed Geology Sheets 2, 3 and 4 which show R. E. M. profiles - see Appendix III. Individual samples contain up to 1000 ppm Cu and 1100 ppm Mo - well below ore grade.

Due to the occurrence of minor disseminated chalcopyrite and molybdenite mineralization in outcrops adjacent to the original conducting zones, a final electromagnetic check survey was carried out to further test zones of interest. This program was conducted by P. Brown during early January, 1973 using a McPhar MS-1000 deep penetration, vertical loop electromagnetic unit.

The results of this survey have been plotted on Geological Sheets 2, 3 and 4 on 50 scale which show R. E. M. profiles and rock geochemical data. Note that profiles for the MS-1000 work are on a scale of one inch equals 5°. As indicated on the results no conducting zones were delineated by the deep penetration survey.

Details re costs, with attached receipts, and man days worked for all of the electromagnetic programs - both field and office - are as follows; -

Employee	Dates Worked 1972 & 1973	Total 8 Hour Days	Daily Rate	Total Wages
R. Haley	Apr 27,28,29; May 2; June 29,30	6	$25.64	$ 153.84
R. Hallock	Apr 27, 28, 29	3	21.50	64.50
W. Foster	May 2	1	23.00	23.00
T. DeMarchi	June 29,30, Oct 4	3	32.05	96.15
J. Goodger	May 3 and 9, Oct 5 Jan 4 & 6, 1973	5	30.13	150.65
M. Bruce	Jan 4 & 6, 1973	2	28.85	57.70
L. Bruce	Jan 3, 4, 6, 1973	3	20.00	60.00
P. Brown	Oct 4, 5, 6 Jan 3 to 6 incl, 1973	7	32.24	225.68
M. Evelegh	Oct 7	1	21.32	21.32
9	Totals	31		$ 852.84

Gas and Oil - Company vehicles	19.83
Bondar-Clegg & Company Limited - Rock Samples -	29.40
Total	$ 902.07

Geochemical Soil Surveys:

Samples of basal till were collected over biogeochemical anomalies and weak electromagnetic conducting zones on the Beatty Block using a hand auger. Company personnel conducted this work.

Locations of all samples and analyses results are shown on the accompanying Plan on a scale of one inch equals 400 feet. Maps showing exact sample locations are also included. These three sheets are on a scale of one inch equals 10 feet. Field sheets giving sample descriptions, etc. and Bondar-Clegg & Company Limited Lab. Reports are also part of Appendix VII.

Initially, samples were collected over anomalous Cu - Mo biogeochemical zones and all of the material was shipped to Bondar-Clegg & Company Limited for analyses. The twelve samples, numbered B-1000 to B-1011 inclusive were tested for Cu and Mo and the results are shown on Lab. Report No. 613-2. With the exception of one organic sample which contained 470 ppm Cu, results were of little interest.

The second phase of the program consisted of sampling the basal till over conducting zones on a 10 foot grid system. Again, all of the material was sent for analyses. These twenty-five samples, numbered C-1000 to C-1024 inclusive were tested for Cu - Mo - Pb and Zn and the results are shown on Lab. Report No. 700-2. Although several weakly anomalous analyses were obtained same are of little importance re economic sulphide mineralization. Note that a value of 54 ppm Zn was obtained from a sample site in Block "D" - the highest Zn value in the area sampled.

As a final check, soils over four of the conductors were

resampled, then concentrated by panning and the panned concentrates analyzed for Cu - Mo - Pb - Zn and Au. These fourteen samples were numbered C-1025 to C-1038 inclusive and the results are shown on Lab. Report No. 964-2. Values, in general, were weak, however, one sample in Block "F" (adjacent to narrow quartz stringers in the diorite) contained 2000 ppb Au. It is of interest to note that concentration improved the 54 ppm Zn in Block "D" to 290 ppm.

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

Employee	Dates Worked 1972	Total 8-Hour Days	Daily Rate	Total Wages
R. Haley	June 26, July 12 & 24	3	$25.64	$ 76.92
J. Goodger	June 26, July 12, Sept 6th and 7th	4	$30.13	120.52
J. H. Morris	July 24th	1	$30.00	30.00
T. DeMarchi	Sept 6th	1	$32.05	32.05
M. Evelegh (office work)	July 13, 18, 20	3	$21.32	63.96
5	Totals	12		$323.45
Gas and Oil - Company vehicles				5.80
Hardware				7.69
Bondar-Clegg & Company Limited				216.40
			Total	$553.34

Biogeochemical Survey:

Biogeochemical surveying, which consisted of sampling second year stems of alder trees - a few spruce were used where alders were not available - was carried out in three stages on the Beatty Block. Geologists and senior fieldmen conducted the field work.

Trees were sampled during the mid part of both April and May and on July 24th as shown on the Field Sheets. Bondar-Clegg & Company Limited Lab. Reports numbered 300-2, 301-2, 437-2 and 700-2 are also included in Appendix VIII. Samples were closely spaced along the south contact of the porphyry body and were analyzed geochemically for Cu and Mo. Samples were spaced at 400 foot intervals along claim lines on the remainder of the group and were tested for Cu, Mo, Pb and Zn. (See the accompanying Biogeochem Survey Plans in Appendix VIII).

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 consid-

ered 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, Mo, Pb and Zn 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.

Cumulative frequency distribution diagrams have been compiled for Cu, Mo and Zn in alder trees. These diagrams are included in Appendix VIII and are discussed in the following paragraphs; -

All samples were analyzed for Cu and Mo. Some of these were also tested for Zn and a few for Pb. Note that 575 determinations were made - 236 for Cu, 236 for Mo, 87 for Zn and 16 for Pb. In addition 91 checks were made on Mo results and 3 checks on high Zn values.

Most of the black spruce were not sent for analysis but are stored at the Matheson office for future reference. Results for the few samples shipped seemed to be low and analysis of the spruce was not considered warranted at the time.

Contour maps have been prepared for Mo, Cu and Zn. An insufficient number of results were available to compile a cumulative frequency distribution diagram for Pb.

Mo in Alder:

The cumulative frequency distribution is lognormal indicating one homogenous population and one origin. Values range up to 1900 ppm with background at 47 ppm. Anomaly contrast is high with the threshold at 550 ppm giving a value from almost 12 to 40. Standard deviation (b + s) is 165 ppm.

It is interesting to note that the contour map fits well with field observations. Finely disseminated or thinly coated slip faces of Mo can be found in the probably anomalous areas and really good samples with thick flakes are readily obtainable in the anomalous area to the east of the shaft.

Cu in Alder:

The cumulative frequency distribution shows close to lognormal distribution with background (b) at 425 ppm, (b + s) 575 ppm and threshold (t) at 775 ppm. Anomaly contrast is low with a maximum of 3. The contour map shows an interesting anomaly on claim 339640. This is coincident with the Zn anomaly and further follow-up should be carried out here.

Zn in Alder:

The normal distribution (straight line) is altered by the presence of a highly anomalous population deviating from the norm at 4400 ppm. This concerns 10% of the population. Background is 2700 ppm, (b + s) 3950 ppm and (t) 5700 ppm. Anomaly contrast is about 2 ranging up to 8 times background which is high for Zn making the anomaly on claim 339640 of great interest.

Pb in Alder:

There were 16 samples analyzed geochemically for Pb. Results vary from 255 ppm to 580 ppm. No correlation can be seen between these and the Zn results and no map has been made for this element.

Details re man days worked, labour and miscellaneous costs for the biogeochemical program are shown in the following table. Receipts are attached. Note that both field and office work have been included.

Employee	Dates Worked 1972	Total 8-Hour Days	Daily Rate	Total Wages
P. Brown	Apr 13, 14, 15, 17; May 25, 26, 27	7	$30.13	$ 210.91
R. Haley	Apr 13, 14, 15; May 11, 12, 16	6	$25.64	153.84
G. Edwards	Apr 14, 15; May 8 to 12 incl. and 16	8	$24.30	194.40
J. Goodger	May 10, 11, 25	3	$30.13	90.39
M. Bruce	June 1	1	$25.48	25.48
T. DeMarchi	Oct 13, 14	2	$32.05	64.10
F. J. Evelegh	June 12, 24; July 24	3	$59.61	178.83
M. Evelegh	Apr 18; May 31; June 7 & 12; July 4, 5	6	$21.32	127.92
8	Totals	36		$1,045.87

Gas and Oil - Company vehicles	8.00
Bondar-Clegg & Company Limited	848.20
Total	$1,902.07

Details re man days worked and labour costs for preparation of the final report and maps are shown in the following table; -

Note that this office work includes draughting, typing, interpretation of results, compilation of reports, etc.

Employee	Dates Worked 1973	Total 8-Hour Days	Daily Rate	Total Wages
J. Goodger	Feb 7, 16, 17	3	$30.13	$ 90.39
P. Brown	Feb 16, 17, 19	3	$32.24	96.72
M. Bruce	Feb 13, 14	2	$28.85	57.70
M. Evelegh	Feb 12,13,14,15,17,19	6	$21.32	127.92
T. DeMarchi	Feb 2,3,5,7,8,10,12 & 14 to 17 incl; & 19	12	$32.05	384.60
F. J. Evelegh	Feb 8,9 & 13 to 17 incl and 19	8	$59.61	476.88
6	Totals	30		$1,234.21

Total expenditures by Canadian Johns-Manville Co. Limited under the Beatty Block portion of Exploration Assistance Contract KI-21 = $9,412.75.

Refundable portion totals - $3,137.58.

Overall Conclusions and Recommendations:

The results of the detailed exploration programs conducted on the Beatty Block of claims have failed to reveal any economic chalcopyrite - molybdenite mineralization within or along the contacts of the porphyry body. However, as sparse mineralization has been mapped to the south of the porphyry, the possibility of the occurrence of an exocontact deposit at depth still exists. In this respect, an I. P. survey is recommended for the north one-half of Lot 3 in Concession 1. Work should be carried out after the breakup period in 1973 using the Company unit, if available. Otherwise the survey should be contracted to Scintrex.

Submitted by: P. A. R. Brown
Geologist

and: F. J. Evelegh
Regional Geologist

February 19th, 1973

GEOLOGICAL REPORT

BEATTY TOWNSHIP CLAIMS

by

J. H. Morris

Exploration Dept.
Canadian Johns-Manville Co. Limited.

July 2nd, 1972
Matheson, Ontario.

GEOLOGICAL REPORT -- BEATTY TOWNSHIP

Access and Topography:

Beatty Township is situated approximately four miles east of Matheson. Highway #101 from Matheson passes along its southern boundary with Hislop Township. Access to the main grid, situated in Concession 1, Lot 3, north half, is by way of a bush trail to the old Stewart-Abate property leaving Highway #101 approximately one mile and a quarter west of the Beatty-Munro Township line. The positions of areas A, B and C relative to the main grid, are shown upon the index map.

The topography is low and gently undulating, swampy areas surrounding the sparsely vegetated outcrop areas. The swampy areas are either open or covered with fairly well spaced tag alder. Poplar and birch predominate in those areas neither swampy nor rock outcrop. The cover in such areas is very open with negligible undercover beneath the main canopy. Spruce and balsam mainly occur along the margins of swampy areas. All vegetation cover has developed since 1916, as this Township was involved in the great fire of Matheson of that year. The topography becomes much more hilly to the north (northern part of area B).

Previous Work:

Beatty Township was mapped by Satterly and Armstrong of the Ontario Dept. of Mines in 1944-45, the results of which were published in the Fifty-Sixth Annual Report, Part 7, 1947. Prior to that mapping of this Township was carried out in 1914, and other adjacent townships in 1911 and 1914.

Until recently gold was apparently the only object of prospecting and mineral development in the Township. Within the area

covered by our claims two old gold properties exist. Area A covers what was the Martin property (and upon which the Ontario Dept. of Mines report has no information), and area C covers what was the Denovo property. The Stewart-Abate property lies immediately to the west of the main grid (the shaft is approximately four hundred feet west of the western end of the base); the northeasterly extension of the ore structure lies within our claims, just to the north of the western end of the baseline. Visible gold, with molybdenite, chalcopyrite and pyrrhotite, was found upon the latter property. No significant gold values were found upon the Denovo property.

Within the area of the main grid, considerable trenching and pitting has been carried out, especially on line 14+00E at 10+00S, where a quartz vein up to four feet wide occurs. Two drill holes were also found. In area A some trenching has been carried out together with the sinking of an inclined shaft, approximately twenty-five feet deep. Trenches and pits in area B were to test pyritic gossan zones restricted to diorite dykes. Considerable trenching and pitting, together with diamond drilling, was carried out within area C, the old Denovo property. Two shafts were also sunk, both vertical, one to twenty-eight feet, the other to thirty-four feet. A few of the trenches are presumed to have been in search for mineralisation other than gold, as no possible gold-bearing structures exist in their vicinity.

General Geology:

All basement rocks are Archaean, being metasediments (arenite, argillite), diorite, feldspar porphyry, lamprophyre and diabase/gabbro. In the area of the main grid, covered by detailed mapping,

the metasediments predominate. A diorite sill two to four hundred feet in width, parallels the bedding of the metasediments, the strike which is approximately S70°E, with a variable dip to the south. Feldspar porphyry occurs predominantly as plugs, the largest of which occurs in the north central part of the grid; small dykes also exist. Certain areas are altered. A lamprophyre dyke, variable from one to twenty feet wide, strikes approximately east/west along the baseline. The youngest (?) Archaean rock present is a diabase dyke seen in area A. Pleistocene deposits are well developed in two areas, in area B and in the southeastern portion of Sheet 4; they are interpreted as glaciolacustrine and glaciofluvial respectively. Ice scoured rock surfaces are visible in a few areas. Recent deposits are represented by the development of peat bog and swampy areas.

Detailed Geology:

A) Lithologies. Archaean (in stratigraphic order)

(i) Metasediments. (1c, d)

These are composed predominantly of impure quartzite (arenite), with a lesser amount of well laminated to massive argillite/siltstone. Minor amounts of laminated chert (up to three feet wide) and intraformational conglomerate exist. The arenite is a dark grey, medium grained, massive rock; it is variable from siliceous (pure quartzite) to non siliceous where the matrix predominates, usually being intermediate between the extremes. Quartz grains occur as very small glassy "eyes", content being variable and so controlling the purity of the quartzite. Both this and the argillite are yellow when altered, either close to the diorite or to the feldspar porphyry. The argillite is a fine grained, grey, non siliceous

rock, normally well laminated, but occasionally massive. In places it becomes very siliceous, or even a yellowish-grey laminated chert. Intraformational conglomerate bands are best developed in Area B, bands being up to five feet wide and consisting of rounded tabular argillaceous fragments in an arenite matrix. Sedimentary structures seen include ripple marks, channel scours, slump folds, graded bedding (drill core, area C), and cross bedding (very rare as single units). Where seen, such structures indicate that the sediments face to the north, but are overturned and dip to the south. The general strike is S70°E, dip 70°S. Occasionally the arenite and argillite is gradationally interbedded and might be more properly termed greywacke. The metasediments are the predominant lithology in the area covered by the index map.

(ii) Diorite: 4a

The diorite occurs as a sill-like mass, variable in width from two to four hundred feet. It is normally mesocratic, with mafic and acidic minerals approximately equal, but may become melanocratic with the mafic minerals greatly predominating. Its texture is variable from coarse in the centre to fine grained, andesitic at its margins with the sediments. Disseminated pyrite is common as is magnetite on microjoints and within the rock. It cuts bedding at a very small angle and in two places includes the metasedimentary country rock.

(iii) Feldspar porphyry: 5c

This occurs mainly as small plugs and more rarely as narrow dykes. In its fresh state, it is a pinkish-white, leucocratic rock, with feldspar phenocrysts up to one quarter of an inch long. Mafic content is approximately 5%; some rusty weathering material

(carbonate ?) is visible on weathered surfaces. Disseminated pyrite, haematite, and rarely molybdenite, is present. When altered, it becomes greenish-white with scattered green carbonate patches, weathering to a deep rusty brown. On line 18+00E, 7+00N, this alteration is prominent and very clearly related to a well developed foliation (sericitic/carbonate foliation planes).

(iv) Lamprophyre: 5f

Possibly two dykes are present, the main one continuous (though offset by faults) from line 0+00 to 18+00E approximately along the base line. A second one, twenty feet wide and striking SW occurs on line 20+00E, 14+00S. Both are melanocratic, black to pinkish black, micaceous rock; it is darkest where the biotite is most prominent. Rounded xenoliths of both the metasediments and feldspar porphyry are common.

(v) Gabbro/diabase: 6a

This was noted in area A only and is presumed (from the Ontario Dept. of Mines map) to be the youngest Archaean rock seen. In the outcrop mapped, it is fairly fine grained, mesocratic, but immediately to the west occurs as a very wide porphyritic dyke (gabbro).

(vi) Quartz diorite: 4a (seen in areas B and C; in the latter mapped as lamprophyre). Same age as diorite ?

In both areas these are narrow sills up to five feet wide. The matrix is greyish-white, fairly siliceous with scattered black mafic clots. Four such bodies were found, three in area B and one in area C. In all cases pyritic gossan is associated with seams and nodules in the sills; this is especially well developed in area B. In area C a quartz/carbonate stockwork has been developed predominantly perpendicular to the sill boundaries and discontinuous

into the sediments. It is upon this sill that one of the Denovo shafts was sunk.

(vii) Pleistocene:

In area B, a series of shoreline berms, similar in form to a storm beach, are present along part of the southern margin of the hilly area in the northern part of this area. The Ontario Dept. of Mines report suggests that such a relationship was developed in glacial lake Barlow-Ojibway, the hilly areas at that time being islands with pebble beaches forming around them. This interpretation appears to be correct.

In the area covered by Sheet 4, a boulder bed of well rounded boulders up to four feet long is present. Both vegetation and soil cover is poorly developed, the boulders being exposed in many areas. This deposit is interpreted as glaciofluvial in origin.

B) Structural geology:

(i) Foliations:

Two cleavages are present, termed S_1 and S_2 respectively. Only in one place, line 18+00E, 8+00N, are the two seen together. Here S_1 is developed as a quartz filled fracture cleavage, lithons up to one inch wide; its general trend is SE, with a dip of approximately 60°S. S_2 is a much more prominent cleavage, lithons being less than 4 mm. wide; its general trend is NE, also with a dip to the south (shallower than S_1). As these foliations are present in feldspar porphyry, this indicates that it has undergone two recordable deformations. In the immediate vicinity S_2 is the predominant foliation, being defined by sericitic, altered surfaces (an overall greenish-white appearance). Apart from two other places where S_1 was observed very poorly developed in argillite (area C and line 4+00E, 2+00N),

the only cleavage observed is S_2; it is found in all lithologies except the diabase/gabbro. It is only spasmodically developed. Where a "shear zone" (with or without quartz veining) such as that at the Stewart-Abate is developed, then S_2 and the "shear zone" are parallel in strike, though may be divergent in dip.

(ii) Jointing:

Numerous readings were obtained with the purpose of seeing if any relationship existed between jointing and folding. This has not been done, but at least shows that joint sets (a complimentary joint set with an acute and obtuse angle) of specific orientation are developed in the metasediments and feldspar porphyry. Overall, all lithologies are well jointed, though the lamprophyre least of all. In the more siliceous rocks, such as chert, the effect of the numerous joint sets is to create a very hackly surface and breaking up into pieces less than one inch in size. As the rock becomes less siliceous, so the jointing becomes more spaced (pieces up to one foot long obtainable). The average size of a joint faced piece is generally one to four inches. It is stressed that joint set (of which there are many of different orientations) here means a complimentary set and not a series of high angle, sub parallel fractures, as found in the porphyry deposits of the southwest United States; hence no attempt was made to count fractures or obtain details of spacing, this appearing to be a function of lithology.

However, in two areas, line 16+00E, 1+50S and line 16+00E, 7+50N, prominent quartz veined fractures occur. In both cases feldspar porphyry is involved; in the former occurrence closely spaced (less than six inches) quartz veinlets in two directions

cut across the contact. This was the only place where such a relationship was observed. At 7+50N, the quartz veining is related to well spaced joints (average one to two feet apart), though the direction paralleling S_2 is more prominent.

(iii) Folding:

Two periods of deformation are recognised, D_1 and D_2. Intersection of S_0 (bedding) and S_1 yields L_1 (lineation) which is synonymous with the fold axis of F_1; only two such lineations were obtained (area C and line 4+00E, 2+00N). Though opposite plunges were obtained (which is presumably a result of D_2 and faulting), both intersections indicate an anticline to the south. This would be in accordance with both the facing directions of the sediments and also with a synclinal structure mapped by the Ontario Dept. of Mines, the axis of which passes through Painkiller Lake in the northern part of the Township. It is suggested that F_1 consists of overturned folds plunging to the SE.

The second period of folding is indicated by the presence of S_2. Only one intersection obtained (that of S_1 and S_2 giving L_2 - i.e. the F_2 fold axis on line 18+00E, 8+00N) is strictly valid. All other intersections obtained (i.e. S_0 and S_2) can only approximate to L_2 as S_0 was no longer a planar element (having been folded by F_1) prior to F_2. However, as S_0 has a well developed regional trend, the error involved is minimal (and also as the F_1 anticline is to the south, then S_1, if a fan or axial planar cleavage, would have a shallower dip to the south than S_0). From these intersections, F_2 fold axes were obtained (see structural element map). In the grid area, the general trend is SW with a plunge of approximately 60° in that direction. In all cases, bar two, an antiform is indicat-

ed to the north (referred to as an antiform as this involves folding inverted bedding into an anticline shape, but with beds facing towards the core of the fold). The intersection on line 18+00E indicates an antiform to the SE (as does an S_0/S_2 intersection on the same line at 1+00N - the orientation of the fold axis E-W is probably due to the approximation involved in using a S_0/S_2 intersection). In conjunction with those localities where S_0 and S_2 strikes are at an angle between 65° and 90° (indicating proximity to the crest of a fold), positions of F_2 folds have been interpreted. Evidence is best for the synform and less so for the antiform and the fold at the west end of the baseline. The stresses involved during F_2 would have acted in a direction perpendicular to the fold axes; this direction is approximately parallel to the strike of S_0, hence making it mechanically difficult to fold S_0 (as stresses would be acting along the weakest (?) direction of the sediments). However, strain would still accumulate in the rocks, and it is suggested that this was released by fracturing (together with displacement) approximately along the F_2 B ades - i.e. the NE trending faults within the grid area have been interpreted in this way.

In area C, a re-orientation of minor fold axes (F_2) and L_2 is apparent close to the fault separating the sediments and volcanics. In area B both a parasitic fold and L_2 indicate an F_2 antiform to the north.

(iv) Faulting:

The most important fault in the area appears to be the strike slip fault separating the volcanics from the sediments. The wrench movement along this fault has been inferred from the re-orientation of certain D2 elements. However, this fault is offset by those

inferred to be parallel to F_2 folds. It is suggested that both fault directions are D_2 in origin; the strike slip fault appearing early and releasing accumulated strain by slippage between two dissimilar blocks (i.e. sediments and volcanics). If for some reason this strain release mechanism stopped, then strain would begin to accumulate and be released by the fracturing postulated above (iii). It is assumed that re-orientation of L_2 and minor fold axes close to the strike fault is the result of these elements forming at the same time as the fault was active. The apparent displacement of the diabase/gabbro dyke, 6a, along the strike fault, is apparently due to deflection rather than displacement (Ontario Dept. of Mines report, based upon geophysical work).

(v) Summary of structural elements:

S_0 : - bedding. Strike approximately S70°E, dip 50 - 80°S.

D_1 : - F_1 folds; overturned, plunging to SW(?) at approximately 45°.

S_1 ; very poorly developed, strike approximately parallel to S_0, but dip up to 14° shallower in the same direction.

D_2 : - F_2 folds; closely spaced, represented by fractures paralleling the fold axes. Plunge approximately 60°SW.

S_2 ; spasmodically developed, but present in all rock types (bar 6a). Very intense in places. Strike approximately N45 - 70°E, dip either NW or SE.

Faults ; strike slip and cross faults.

"Shear zones" ; either with or without quartz carbonate veining. Most pits and trenches are upon such zones.

Though not proven, it is suggested that most of the jointing of the area also belongs to D_2. The following evidence suggests that

D_2 was either a weak deformation event or was developed at a high level in the crust; -

1) S_2 only spasmodically developed, in most areas being absent.
2) all rocks are jointed, intensity dependent (?) upon lithology, but indicating brittle deformation.
3) negligible re-orientation of S_0.
6) Economic Geology:

In previous years exploration in the area has been for gold. The current program was undertaken to test the possibility of there being a porphyry-molybdenite deposit associated with the altered feldspar porphyry plug. As stated in the first Weekly Report, mapping was carried out with a working hypothesis in mind. It appears that the most interesting feature of the feldspar porphyry, namely its alteration zones, has been caused by a structural (D_2) rather than a hydrothermal event. As it also contains an S_1 cleavage and is intruded by a lamprophyre dyke, a considerable time separation appears evident between the feldspar porphyry emplacement and the mineralisation episode, D_2. Thus, comparison with a porphyry deposit, such as the Brenda Mine, does not appear valid. At the Brenda Mine a sequence of events commencing with the intrusion of a quartz diorite and terminating with faulting, quartz veining and mineralisation, is presumed to have been rapid, with negligible age separation between the succeeding stages. Absent to are the high angle parallel joint sets (mineralised or not) characteristic of the porphyry deposits of Arizona; as stressed earlier, the joint sets here are complimentary. However, disseminated pyrite and haematite is present in the feldspar

porphyry. In addition one flake of molybdenite was found; such sparsity would not appear to indicate economic mineralisation synchronous with emplacement of the feldspar porphyry. It therefore appears that no economic mineralisation (porphyry type) occurred either as part of the feldspar porphyry during emplacement or in joint sets or fractures soon afterwards.

Based upon the evidence of biogeochemical and geophysical surveys, test pits were blasted in a zone two hundred feet north and south of the baseline from line 0+00 to 4+00E. A total of eighteen pits were blasted, and of these, one had appreciable mineralisation and two others a lesser amount. The remainder were either totally barren or with negligible mineralisation (less than six surfaces mineralised). Pit P12 was well mineralised. This was located on the diorite/sediment contact, immediately adjacent to a foliated zone. It contained an abundant quartz/carbonate stockwork, mostly as thin veins and seams. Some sericitic alteration of the sediments was noted. Pyrite is very abundant both in the stockwork, on microjoints and as seams. Of the total broken rock, eight percent carried molybdenite mineralisation, predominantly as scattered flakes and patches along the margins of the quartz carbonate veins. In one case, a vein contained ninety percent molybdenite, but the normal range is five to twenty percent. Molybdenite also occurs on microjoints with up to fifteen percent coverage. Chalcopyrite mineralisation is very minor. Pit P14, in a similar position, but removed from a foliated zone, carried molybdenite mineralisation on microjoints with coverage of ten to fifty percent on approximately two percent of the total broken rock. Pit P15 was totally barren, but molybdenite mineralisation was previously reported on microjoints from

the old trench just to the north of it. The three pits straddling the base line at line 0+00 were nearly barren (grab sample assay still awaited). Of the other pits, only P10 contained any appreciable mineralisation. Here, five percent of the broken rock contained molybdenite, chalcopyrite and pyrite on microjoints. In two cases, molybdenite coverage was one hundred percent, but normally five to thirty. Small quartz/calcite veins up to half an inch wide are fairly numerous.

The only other pits blasted, on lines 14+00E and 16+00E at 7+00S and 9+00S respectively, have already been reported upon in a previous Weekly Report. Assays are still awaited upon samples from pit P16 (line 14+00E). Apart from visible gold found in a pit on line 2+00S, 1+00N (see previous Weekly Report), only very minor mineralisation was found. The pits mentioned above are the best examples seen. Mineralisation in areas A, B and C has already been commented upon. The map of these areas shows what minerals were found, approximate percentages being: -

Area A: - Pyrrhotite: ten to fifteen percent coverage on less than twenty surfaces

Chalcopyrite: trace

Area B: - Pyrrhotite: up to fifteen percent coverage on a few microjoints

Chalcopyrite: trace

Area C: - Best mineralised area in pit one hundred feet west of Post #2 - claim 339806.

Sphalerite: sixty percent coverage on one surface. Five to fifteen on others.

Molybdenite: ninety percent coverage on less than ten surfaces.

Pyrite and Chalcopyrite: trace

All other mineralisation noted on map is very minor.

Conclusions:

Based upon the following evidence, it is concluded that a porphyry deposit does not exist within this area.

1) Mineralisation, as found from pits P12 to P15 and others in the vicinity, is related to quartz carbonate veined foliated zones (F_2).
2) The feldspar porphyry plug was emplaced prior to F_1 and hence separated from the F_2 event by F_1 and intrusion of the lamprophyre dyke.

It is suggested that mineralisation is related to a structural event F_2. The source of fluids involved is not known, but might possibly be related to the gabbro/diabase dykes.

During a conversation with a person who worked at the Stewart-Abate property, and from the Ontario Dept. of Mines report, it appears that the ore zone within the quartz vein has a rake of approximately fifty degrees southwest (the ore zone being sixty-five feet below the shaft collar, but at the surface just to the northeast). This corresponds very well with the orientation and plunge of F_2. As these fracture (fault) zones are known to be mineralised (Au,Mo,Cu), the most promising area appears to be that to the southwest of the Stewart-Abate shaft. This could initially be tested by biogeochemical sampling.

John Henry Morris

Submitted by: John Henry Morris
July 2nd, 1972.

June 13, 1972

H. K. Conn - Asbestos

BEATTY CLAIMS

Enclosed please find description of location of samples from initial trenching on the Beatty Block which have been sent to Bondar-Clegg for analyses; -

BR - 1 - Diorite - fresh, massive, well jointed. Very sparse mineralization (quartz, chalcopyrite, molybdenite), on joint surfaces. Molybdenite coverage less than 5%, chalcopyrite more abundant. Both mainly associated with quartz.
0+00 Base Line, 15' East.

BR - 2 - Greywacke - grey, fine to medium grained, massive. Molybdenite coverage on joint surfaces variable from 5 - 100%. Traces of chalcopyrite. Usually associated with quartz.
Line 14+00 East, 7+00S.

BR - 3 - Greywacke - as BR - 2. Sample from same trench, but of irregular stockworth of quartz veins, of variable thicknesses, carrying varying amounts of fine granular or flaky molybdenite. Chalcopyrite as small scattered patches.
Line 14+00 East, 7+00S.

Samples described by J. H. Morris.

F. J. Evelegh

cc:
file

BEATTY TOWNSHIP - Suite of Rocks

Sample BE - #1 - (U-198) Location 19+40E, 4+00N
Medium grained, carbonated and oxidized felspar porphyry. Felspars zoned markedly, also kaolinized, and reach 1/8" in size. Rusty oxidation due to weathering of pyrite and specular hematite. MoS_2 present disseminated and also in thin "layers" or seams.
N. B. Specular hematite very fine grained and seen in polished section under microscope. In this sample not much present.

Sample BE - #2 - (#3) Location 18+10E, 4+35N
Medium grained, oxidized felspar porphyry. Kaolinisation of felspars where weathered. Disseminated MoS_2 and pyrite (+ specular hematite). Small quartz veins cut specimen - these contain MoS_2 also. Slips in sample also mineralized with pyrite.

Sample BE - #3 - (17/5) Location 1+30E, 3+40N
Grey quartzite, (greywacke) with disseminated pyrite and also pyrite in seams plus small quartz veins. Quartz veins contain pyrite and MoS_2.

Sample BE - #4 - (17/5/5) Location 14+50E, 2+30N
Felspar porphyry with crystals up to 1/4". Disseminated chalcopyrite present plus some pyrite. Also fine specks of MoS_2 and specular hematite (actually mineral may not be specular hematite since dull grey not as blue as MoS_2 but has red streak).

Sample BE - #5 - (Y-9363) Location 9+30E, 11+00N
Felspar porphyry with pyrite on seams. Spec probably mixture with quartzite.

Sample BE - #6 - (U-499) Location 11+20E, 3+80S
Grey (green) quartzite with some pyrite seams. Fine grained MoS_2 associated with clear to white quartz all through sample. May be injections along bedding planes. Also MoS_2 on hair line fractures.

Sample BE - #7 - (Y-9366) Location - small pit 1+00W, 1+20N
Pale green quartzite with quartz veins. MoS_2 restricted to veins especially concentrated at contacts. Few hair line fractures have MoS_2, pyrite.

Sample BE - #8 - (Y-9364) Location 2+00W, 8+50N
Grey quartzite plus disseminated pyrite and some chalcopyrite. Chalcopyrite may be on hair line fractures. Small quartz vein has pyrite, chalcopyrite within.

Sample BE - #9 - Location - Dump material near shaft of Stewart Abate.
Seams MoS_2. Note small rusty weathered carbonate vein. Some chalcopyrite present and also disseminated MoS_2. Rock type appears to be quartz vein material.

Sample BE - #10 - (Y-9361) Location 14+50E, 3+40N
Mixture of felspar porphyry and quartzite - almost barren but does contain very fine specks of pyrite and possibly chalcopyrite.

Sample BE - #11 - (#6) Location 15+50E, 11+00S
From trench blasted on quartz vein material. Scattered chalcopyrite in vuggy material - oxidation due to alteration after blasting. Carbonate present and also secondary copper minerals. Note grey mineral associated with chalcopyrite.

Sample BE - #12 - (#4) Location 14+80E, 2+00S.
Felspar porphyry with pyrite and chalcopyrite on slips. Some fine MoS_2 in rock.

Sample BE - #13 - (U-487) Location - small pit - 12+30E, 2+60S
Brecciated vein material with galena and sphalerite, minor chalcopyrite and pyrite. Vein material is quartz and carbonate.

Sample BE - #14 - (Y-9362) Location 10+00E, 4+60N
Grey quartzite with carbonate on slips. Note many fine, weathered fractures and alteration around them.

Submitted by: P. A. R. Brown
May 19th, 1972

cc:
H. K. Conn - Asbestos
file

BEATTY ROCK SAMPLES (BR Series)

(R. E. M. CONDUCTING ZONES)

Sample No.	Location	Description
BR - 1	Line 12+00E; 5+00S	Light grey fine grained quartzite with disseminated pyrite. Narrow seams of pyrite, chalcopyrite with minor MoS_2.
BR - 2	Line 14+00E; 7+00S	a) Light grey quartzite with many small seams of MoS_2, also a few seams of pyrite. Minor fractures with quartz/carbonate material and possibly two gold specks. Moly seams from 1/4" to 3/4" apart. Some chalcopyrite is also present.
BR - 3	same location	b) 1" quartz-carbonate chalcopyrite vein in grey quartzite. MoS_2 on seams and disseminated in quartz veins. Check for Au.
BR - 4	Line 16+00E; 0+50N	Light greenish-grey felspathic quartzite intermixed with felspar porphyry. Disseminated pyrite present.
BR - 5	Line 16+50E; 9+00S	Altered diorite with disseminated pyrite. Chalcopyrite and pyrite with narrow quartz veins. Much disseminated MoS_2 associated with quartz/carbonate vein. Bright apple green patches occur within the diorite, close to the quartz carbonate veins. The mineral appears to be a carbonate.
BR - 6	Line 18+00E; 6+50S	Quartz vein material at contact of diorite and quartzite. Contains MoS_2 and chalcopyrite with pyrite. Small rusty carbonate stringers in quartz material.
BR - 7	Line 18+00E; 9+10S	Light grey quartzite with quartz/carbonate vein material (as stringers) with disseminated pyrite present and MoS_2 on one seam.

Submitted by: P. A. R. Brown
October 13, 1972

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

Geochemical Lab Report

Extraction Cu,Mo,Ag-HNO_3,HCl Au-Fire Assay

Method A.A.

Fraction Used - 100 Rocks

Report No. 483-2

From O.J.N. Co.Ltd-Mr. F.J. Evelegh
Project # 9

Date June 20 1972

SAMPLE NO.		Cu ppm	Mo ppm	Ag ppm	Au ppb			REMARKS
BR - 1		127	190	0.8	15			
BR - 2		87	190	0.6	L 5			L Means Less Than
BR - 3		700	1400	1.6	90			

D-15

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

Geochemical Lab Report

Extraction: Fe - HNO_3-HCl
Method: A.A.
Fraction Used: -100 rocks.

Report No.: 385-2
From: Mr. F.J. Evelegh, Canadian Johns-Manville Co. Ltd.,
PROJECT: 10B
Date: June 1, 1972

SAMPLE NO.		Fe%						REMARKS
MC - 1		10.0						
MC - 2		10.0						
MC - 3		5.25						
MC - 4		5.65						
BE - 1		1.67						
BE - 2		1.53						
BE - 4		1.48						
BE - 6		3.70						
BE - 7		2.38						
BE - 12		1.50						

D-15

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

Geochemical Lab Report

Extraction [illegible]

Method Aqua Regia

Fraction Used -100 Mesh

Report No. [illegible]

From [illegible]

Project: [illegible]

Date May 25, 19[illegible]

SAMPLE NO.		Cu ppm	Mn ppm	Pb ppm				REMARKS
[illegible] - 1				[illegible]				
[illegible] - 2				[illegible]				
[illegible] - 3		[illegible]		[illegible]				
[illegible] - 4		[illegible]	[illegible]	[illegible]				
[illegible] - 1				[illegible]				
[illegible] - 2				[illegible]				
[illegible] - 4		87		3				
[illegible] - 6				[illegible]				
[illegible] - 7				[illegible]				
[illegible] - 12		37		25				
								Project: [illegible]

Philo rock samples from Beatty Twp.

11.12

0-18

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

Geochemical Lab Report

Extraction Cu,Ni,Mo,Au - HNO_3-HCl

Method A.A.

Fraction Used -80 soils, -100 rocks.

Report No. 1093-2

From Canadian Johns-Manville Co.Ltd.-Mr.Evelegh.
Project: #19 and #9 & # 18

Date October 31, 19 72

SAMPLE NO.	Cu ppm	Mo ppm	Ni ppm	Au ppb
PMS - 1	14		175	
2	4		70	
3	8		70	
4	20		1300	
5	16		1050	
6	8		22	
7	12		40	
8	16		53	
9	4		25	
10	22		1150	
11	6		30	
12	26		940	
13	26		240	
14	25		250	
15	10		530	
16	36		520	
17	32		70	
18	14		58	
19	10		155	
20	12		60	
21	32		90	
22	16		95	
23	12		26	
24	28		8	
PMR - 1	7		2100	
2	8		2100	
3	12		1200	
4	10		2000	
5	7300		1000	
6	29		400	
7	37		1600	
PMR - 8	178		1100	
9	93		245	
10	139		255	
11	147		420	
12	55		195	
13	8		105	
MR - 1	178		2850	
2	730		8800	
BR - 1	85	8		10
2	93	250		15
3	1000	330		20
4	37	5		5
5	297	1100		65
6	93	140		10
7	36	98		60
F - 6655			8	
56			8	
57			9	
58			1	
59			9	
60			10	
61			8	
62			8	
63			3	
64			2	
65			N.D.	
66			5	
67			9	
68			9	
69			4	
70			2	

Roger J. Goodreau

DESCRIPTION OF P. H. M. C. SAMPLES
BEATTY BLOCK, BEATTY TOWNSHIP

Checking R. E. M. conducting zones.

Number	Description
C-1025	Mainly white to greyish fine sand. Good concentration of heavy minerals under hand lens with magnetite plus speck of galena seen. Minor amount of organic material (less than 1/2%).
C-1026	Light brown to grey clayey sand. Some grit pieces up to 1/2". Heavy mineral content obscured due to clay material.
C-1027	Blue-grey clay with some black muck. Sample contains minor organic material.
C-1028	Blue-grey clay with about 5% black muck. Some sand grains in the black muck.
C-1029	Mainly black muck but some gravel-sized pieces up to 1" and a sandy texture. Contains about 10% organic material.
C-1030	Dark brown to black clayey sand with some gravel pieces up to 3/4". Sand fraction contains abundant black mineral grains.
C-1031	Mainly clayey gravel. The clay is dark brown to black with angular gravelly pieces up to 3/4" in size. Some organic material present.
C-1032	Dark greyish-brown slightly clayey sandy topsoil. Contains angular fragments up to 1/2".
C-1033	Orange brown medium grained sand with about 10% black muck. Some heavy minerals seen with hand lens (magnetite).
C-1034	Dark orangy brown sand. Slightly more coarse grained than C-1033 but still contains about 10% organic black muck.
C-1035	Dark brown slightly greyish topsoil plus angular limestone fragments. About 5% organic content.
C-1036	Medium brown slightly reddish silty topsoil with rust-red angular fragments up to 1/2" size. About 5% organic material.
C-1037	Light to medium brown silty clay with angular fragments of weathered feldspar porphyry.
C-1038	Slightly silty clay topsoil with weathered angular fragments of feldspar porphyry.

P. A. R. Brown
September 11, 1972.

CANADIAN JOHNS-MANVILLE CO. LIMITED

GEOCHEMICAL SOIL SURVEY DATA

Collector: J. Goodger / A. DeMarchi Project: #9 Weather: Clear

Date: September 6, 1972 Area: Beatty Block / Beatty Twp Physiography: Flat

Sample No.	Location	Drainage Slope	Remarks Basal Till Samples	Depth
Block "D"				
C-1025	Line 18+00E 5+80S; 10'E		Light grey silty sand	5'
C-1026	20'E		Light brown coarse silt	4-5'
C-1027	10'W		Light grey fine clay	5'
C-1028	20'W		As above with fine grey sand	5'
Block "B"				
C-1029	Line 16+00E 30'N; 15'E		Dark brown coarse sand	3-5'
C-1030	25'E		Light grey clay & sand	3-5'
	10'W		Tried 10 holes - all black	
	20'W		muck to bedrock	
Block "A"				
C-1031	Line 12+00E 5+40S; 10'W		Light brown to grey sand with small rocks	8"
C-1032	20'W		Light brown coarse silt	8"
C-1033	10'E		Reddish-brown gritty sand	3'
C-1034	25'E		As above	3'
Block "F"				
C-1035	Line 3+00E 1+70S; 10'E		Light cream sand & clay	8'
C-1036	10'W		Light brown fine sand & clay	6"
C-1037	20'W		As above	7"
C-1038	1+85S		Light reddish brown sand	10"

CANADIAN JOHNS-MANVILLE CO. LIMITED

GEOCHEMICAL SOIL SURVEY DATA

Collector: R. A. Haley & J. Goodger Project: #9 Weather:

Date: June 26, 1972 Area: Beatty Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks
B-1000	Line 24+00 0+00	flat	Light - fine grained
1001	Line 16+00 2+00S	S	Light coarse sand
1002	Line 14+00 2N & 75W	N	Light clay
1003	Line 14+00 4+50S	S	Clay and coarse red sand
1004	Line 8+00 5+60S	S	Clay, sand & some gravel
B-1005	Line 4+00 4+00S	NE	Clay, sand & fine gravel
1006	Line 2+00E 1+60S & 100E	SE	Red sand - and black humus
1007	Line 0+00 1S & 40E	W	Clay, light sand, fine grained
1008	Line 0+00 1+60N; 1E	N	Clay, red sand, fine grained
1009	Line 0+00 1+60N; 1+20W	N	Light sand with fine gravel
B-1010	Line 0+00 7S & 60W	NE	Red coarse sand
B-1011	Line 0+00 10+40S; 1+60W	N	Light fine sand

CANADIAN JOHNS-MANVILLE CO. LIMITED

GEOCHEMICAL SOIL SURVEY DATA

Collector: J. Goodger & R. Haley
Project: #9 Beatty-Hislop Gr.
Weather: Clear, Hot
Date: July 12, 1972
Area: Beatty Twp
Physiography: Muskeg

Sample No.	Location	Drainage Slope	Remarks	Size
			Auger basal till samples	
C-1000	Line 12+00E 5+30S	S	Light reddish-brown coarse soil	6"
1001	5+40S	S	Dark brown fine soil	6"
1002	5+50S	S	Light clay	4"
1003	5+60S	S	Light reddish brown gritty soil	7"
1004	5+70S	S	Light brown silty sand	4'
C-1005	Line 16+00E 0+30N	NE	Dark brown fine silt	3'
1006	0+40N	NE	Light grey coarse sand with clay	6"
1007	0+50N	NE	as above	4"
1008	0+60N	NE	Light brown coarse sand with small rocks	4"
1009	0+70N	NE	as above	4"
C-1010	Line 16+00E 5+00S	S	Light brown coarse sand	4"
1011	4+90S	S	As above	4"
1012	4+80S	S	Coarse red sand	6"
1013	5+10S	S	Grey brown coarse sand	6"
1014	5+20S	S	Grey-brown coarse sand	6"
C-1015	Line 18+00E 9+00S	E	Reddish-brown coarse sand	2'
1016	9+10S	E	Grey-brown coarse sand	1-5'
1017	9+20S	E	As above	1'
1018	Line 18+00E 6+05S	Swamp	3' peat; 1½' grey clayey sand	
1019	5+90S	"	4' peat; 1' grey clayey sand	
C-1020	5+80S	"	2' peat; 9" grey clay	

CANADIAN JOHNS-MANVILLE CO. LIMITED

GEOCHEMICAL SOIL SURVEY DATA

Collector: J. H. Morris & R. Haley
Project: #9
Weather:
Date: July 13, 1972
Area: Beatty-Hislop Gr. Beatty Twp.
Physiography:

Sample No.	Location	Drainage Slope	Remarks Auger basal till samples
	Line 18+00E		
C-1021	6+15S	Swamp	1' peat; 1' brown clayey sand
1022	6+25S	"	1½' peat; 9" brown clayey sand
1023	8+80S	"	6" peat; 1½' dark brown clayey sand
C-1024	8+90S	"	6" peat; 1' dark reddish brown to yellow brown clayey sand.

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

Geochemical Lab Report

Extraction Cu, Mo, HNO_3-HCl

Method A.A.

Fraction Used - 80 soils

Report No. 613-2

Mr. F. J. Evelegh

From Canadian Johns Manville Co. Ltd.

Project # 9

Date July 17 19 72

SAMPLE NO.		Cu ppm	Mo ppm					REMARKS
B - 1000		27	2					
01		5	6					
02		11	2					
03		8	2					
04		11	2					
05		10	6					
06 *		470	29					Indicates Organic *Samples
07		30	11					
08		4	4					
09		13	4					
10		12	1					
11		8	1					

0-15

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

Geochemical Lab Report

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

Method A.A.

Fraction Used - 80 mesh

Report No. 700-2

From Canadian Johns Manville Co. Ltd.
Mr. F. J. Eveleigh Project # 9

Date August 14 19 72

SAMPLE NO.	Cu ppm	Pb ppm	Zn ppm	Mo ppm				REMARKS
C - 1000	16	12	20	4				
01	25	13	27	9				
02	5	8	9	9				
03	3	7	6	2				
04	4	4	6	1				
05 *	39	10	14	4				
06	8	7	11	2				
07	2	5	7	1				
08	4	5	9	1				
09	5	11	10	2				
10	7	7	9	4				
11	3	7	7	2				
12	8	8	12	5				
13	4	7	9	1				
14	4	5	6	1				
15	14	8	9	2				
16	3	6	3	1				
17	2	7	4	1				
18	4	3	8	1				
19	4	3	9	1				
20	27	14	54	2				
21	5	4	8	N.D.				N.D. Not Detected
22	4	4	8	N.D.				
23	12	6	20	1				
24	7	5	13	1				

D-15

BONDAR-CLEGG & COMPANY LTD.
76_ BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110 TELEX: 053-3548

Geochemical Lab Report

P.H.M.C.
Beatty Block.

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

Report No.: 964-2

Method: A.A.

From: F. J. Evelegh, Canadian Johns-Manville
Project No. 9

Fraction Used: -100 rocks

Date: September 26 1972

SAMPLE NO.	Cu ppm	Pb ppm	Zn ppm	Mo ppm				REMARKS
C-1025	37	47	290	1				
26	21	29	82	N.D.				N.D. - NOT DETECTED
27	31	26	46	1				
28	7	13	15	1				
29	8	14	14	1				
30	12	9	15	1				Plotted. Oct. 5/72 Dm.
31	8	10	7	4				
32	3	9	7	1				
33	7	12	8	1				
34	10	8	12	2				
35	4	6	4	2				
36	21	8	6	22				
37	17	9	6	22				
38	27	9	12	36				

Roger J. Goodman

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

Geochemical Lab Report

Extraction Au - Fire Assay

Method A.A.

Fraction Used -100 rocks.

Report No. 964-2

From Canadian Johns-Manville Co. Ltd-F.J.Evelegh.
Project: #9

Date October 4, 19 72

SAMPLE NO.	Au PPB					SAMPLE NO.				
C - 1025	I.S.		I.S. Insufficient Sample.							
26	I.S.									
27	I.S.									
28	10									
29	10									
30	10									
31	45									
32	940									
33	30									
34	20									
35	65									
36	55									
37	2980									
38	340									

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

Geochemical Lab Report

Extraction: Cu,Pb,Zn,Mo - HNO_3-HCl
Report No.: 700-2
Method: A.A.
From: Canadian Johns Manville Co. Ltd., Mr. F. J. Evelegh Project # 9
Fraction Used: trees
Date: August 14 1972 19

SAMPLE NO.	Ash wt. grams	Cu ppm/Ash	Pb ppm/Ash	Zn ppm/Ash	Mo ppm/Ash			REMARKS
B - 770	.121	215	395	490	15			Trees
771	.197	365	380	2990	19			Beatty-Hislop Gr
772	.116	310	415	4750	39			Beatty Twp.
773	.105	505	300	2250	86			
774	.206	830	305	3550	64			
775	.117	735	255	3600	135			
776	.164	315	360	3050	38			Plotted Aug 23/72 DM
777	.180	290	425	3350	54			
778	.130	385	475	1800	12			
779	.139	495	400	555	45			
780	.115	485	330	3800	19			
781	.121	380	440	5600	12			
782	.097	345	680	2700	9			
783	.125	360	380	2900	14			
784	.191	345	280	2550	77			
785	.200	285	295	3700	41			

R. A. Pattrick

D-10

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

Geochemical Lab Report

Extraction: Cu, Mo - HNO_3-HCl
Report No.: 300-2
Method: A.A.
From: Mr. F.J. Evelegh, ~~Canadian Johns-Manville Co. Ltd.,~~ PROJECT: #10-B
Fraction Used: TREES
Date: May 12, 19~~72~~

SAMPLE NO.	ASH Wt. GRAMS	Cu/ASH ppm	Mo/ASH ppm	REMARKS
U - 085	.140	321	7	
86	.115	326	17	Beatty Twp. 64 assayed all analyzed for Cu-Mo only.
87	.113	367	159	
88	.116	431	120	
89	.167	374	164	
90	.187	219	104	
91	.137	591	124	
92	.153	522	620	
93	.123	440	1900	
94	.153	474	457	
95	.117	496	209	
96	.107	252	65	
97	.090	555	194	
98	.107	486	56	
99	.092	565	33	
100	.114	491	79	
101	.080	525	37	
102	.101	495	94	
103	.077	617	292	
104	.101	544	495	
105	.105	500	762	
106	.084	357	89	
107	.145	482	224	
108	.112	558	26	
109	.125	496	16	
110	.097	592	185	
U - 401	.111	216	13	
02	.094	319	16	
03	.087	454	29	
04	.145	331	14	
405	.188	130	8	

D.H. Pollock

Report No. 300-2 BONDAR-CLEGG & COMPANY LTD. Page No. 2

GEOCHEMICAL LAB REPORT

SAMPLE NO.	ASH Wt. GRAMS	Cu/ASH ppm	Mo/ASH ppm	REMARKS
U - 406	.112	445	31	
07	.110	545	27	
08	.145	260	110	
09	.187	305	220	
410	.164	265	80	
11	.194	250	135	
12	.144	400	90	
13	.123	488	16	
14	.138	350	46	
15	.124	290	137	
16	.146	495	75	
17	.106	292	100	
18	.209	306	127	
19	.095	263	21	
20	.185	284	59	
21	.153	346	135	
22	.166	358	72	
23	.134	310	26	
24	.131	550	53	
25	.107	369	93	
26	.160	337	66	
27	.135	304	147	
28	.120	521	25	
29	.168	268	83	
30	.195	215	61	
31	.174	287	23	
32	.141	443	134	
33	.146	370	65	
34	.122	360	98	
35	.087	615	100	
36	.087	598	56	
37	.226	159	9	
U - 438	.101	279	12	
				All high molybdenum values confirmed.

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

Geochemical Lab Report

Extraction: Cu, Mo - HNO_3-HCl
Method: A.A.
Fraction Used: TREES

Report No. 301-2
From: Mr. F.J. Evelegh, Canadian Johns-Manville Co. Ltd., PROJECT: 10-B
Date: May 12, 1972

SAMPLE NO.	ASH Wt GRAMS		Cu/ASH ppm	Mo/ASH ppm	Mo/ASH ppm/CHECKS			REMARKS
U - 451	.127		507	394	370			Beatty Twp
52	.078		782	173	150			
53	.083		536	126	135			
54	.102		539	171	170			
55	.128		348	109	108			
56	.138		482	297	290			
57	.110		273	54	45			
58	.123		292	109	96			
59	.115		443	152	150			
60	.134		272	104	85			
61	.094		271	53	53			
62	.105		452	81	78			
63	.088		233	57	47			
64	.111		270	31	29			
65	.093		295	59	60			
66	.128		238	35	29			
67	.105		338	28	39			
68	.102		323	107	80			
69	.114		364	61	56			
70	.124		395	64	54			
71	.098		454	102	90			
72	.079		530	400	360			
73	.090		500	61	61			
74	.098		470	235	190			
75	.083		495	102	96			
76	.068		520	22	I.S.			I.S. Insufficient Sample.
77	.064		460	260	180			
78	.082		520	105	80			
79	.119		335	29	34			
80	.123		405	85	87			
81	.071		450	56	49			

D.W. Strutt

Report No. 301-2

BONDAR-CLEGG & COMPANY LTD.

GEOCHEMICAL LAB REPORT

SAMPLE NO.	ASH Wt. GRAMS		Cu/ASH ppm	Mo/ASH ppm	Mo/ASH ppm/CHECKS			REMARKS
U - 501	.132		395	23	13			
02	.127		450	16	18			
03	.125		360	12	10			
04	.138		350	14	12			
05	.112		475	22	12			
06	.121		510	25	83			
07	.140		385	89	88			
08	.086		395	17	19			
09	.137		510	135	122			
10	.109		440	78	75			
11	.103		340	53	68			
12	.095		450	89	67			
13	.112		505	670	570			
14	.113		345	97	75			
15	.100		399	450	520			
16	.145		275	224	210			
17	.157		340	70	50			
18	.143		245	320	250			
19	.173		265	260	320			
20	.149		425	500	600			
21	.145		270	230	170			
22	.179		295	47	45			
23	.095		480	16	16			
24	.128		400	16	9			
25	.166		320	18	15			
26	.108		575	150	125			
27	.126		395	1270	1280			
28	.130		510	85	64			
29	.135		475	175	175			
30	.160		300	290	275			
31	.089		540	135	125			
32	.122		260	33	33			
33	.129		360	8	12			
34	.108		460	280	215			
35	.109		520	320	310			
36	.107		515	61	54			

Report No. 301-2 BONDAR-CLEGG & COMPANY LTD. Page No. 3

GEOCHEMICAL LAB REPORT

SAMPLE NO.	ASH Wt. GRAMS		Cu/ASH ppm	Mo/ASH ppm	Mo/ASH ppm/CHECKS			REMARKS
U - 537	.112		375	27	29			
38	.097		515	62	63			
39	.149		240	13	9			
40	.122		260	12	7			
41	.148		230	14	7			
42	.106		470	14	12			
43	.112		355	13	10			
44	.136		295	11	11			
45	.145		300	14	18			
46	.132		365	15	14			
47	.145		220	14	26			
48	.094		720	11	13			
49	.116		260	9	15			
50	.154		235	10	10			
51	.155		170	10	20			
52	.068		590	15	12			
53	.153		300	10	14			
U - 554	.100		470	10	18			

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

Geochemical Lab Report

Extraction Cu, Zn, Mo - HNO_3-HCl
Method A.A.
Fraction Used ASH

Report No. 437-2
From Mr. F.J. Evelegh, Canadian Johns-Manville Co. Ltd., PROJECT: #9
Date June 19, 1972

SAMPLE NO.	ASH Wt. GRAMS		Cu/ASH ppm	Zn/ASH ppm	Mo/ASH ppm			REMARKS
U - 111	.118		590 ✓	1900 ✓	~~226~~ 205 ✓			Check Mo-205
12	.096		625 ✓	2400 ✓	56 ✓			
13	.111		630 ✓	2300 ✓	~~150~~ 120 ✓			Check Mo-120
14	.138		420 ✓	2400 ✓	~~196~~ 180 ✓			Check Mo-180
15	.112		540 ✓	3100 ✓	77 ✓			
16	.078		760 ✓	2600 ✓	26 ✓			
17	.074		1050 ✓	3000 ✓	43 ✓			
18	.084		360 ✓	5100 ✓	43 ✓			
19	.119		840 ✓	~~8400~~ 8500 ✓	22 ✓			Check Zn-8500
20	.065		890 ✓	~~23100~~ 21,300 ✓	37 ✓			Check Zn-21,300
21	.111		540 ✓	2700 ✓	38 ✓			
22	.091		715 ✓	2700 ✓	26 ✓			
130	.136		550 ✓	2900 ✓	300 ✓			
31	.172		465 ✓	2200 ✓	~~305~~ 315 ✓			Check Mo-315
33	.100		800 ✓	2000 ✓	~~148~~ 135 ✓			Check Mo-135
149	.128		765 ✓	3900 ✓	61 ✓			
150	.129		700 ✓	2000 ✓	17 ✓			
51	.160		375 ✓	4200 ✓	25 ✓			
52	.101		595 ✓	1000 ✓	24 ✓			
53	.124		565 ✓	2100 ✓	29 ✓			
55	.159		380 ✓	600 ✓	47 ✓			
56	.127		470 ✓	600 ✓	27 ✓			
57	.133		415 ✓	1900 ✓	18 ✓			
58	.134		820 ✓	3500 ✓	75 ✓			
59	.129		545 ✓	2700 ✓	19 ✓			
60	.153		525 ✓	2000 ✓	24 ✓			
61	.138		435 ✓	2700 ✓	16 ✓			
62	.156		575 ✓	5500 ✓	26 ✓			
63	.161		310 ✓	6000 ✓	14 ✓			
64	.093		215 ✓	8600 ✓	22 ✓			
65	.113		520 ✓	900 ✓	18 ✓			

Plotted on Sec June 23/72

0-18

BONDAR-CLEGG & COMPANY LTD.

Geochemical Lab Report

Report No. 437-2 Page No. 2

SAMPLE NO.	ASH Wt. GRAMS		Cu/ASH ppm	Zn/ASH ppm	Mo/ASH ppm			REMARKS
U - 166	.109		550	3700	18			
67	.131		535	3600	46			
68	.103		390	2400	195 ~~246~~			Check Mo-195
69	.102		390	2900	265 ~~301~~			Check Mo-265
70	.134		450	3200	90			
71	.114		510	3200	30			
72	.130		690	3600	12			
73	.117		600	3200	22			
74	.102		390	2500	31			
75	.129		700	4200	26			
76	.125		560	1800	19			
78	.118		510	2300	48			
79	.076		525	2600	22			
80	.201		300	2000	11			
81	.119		495	1900	12			
82	.128		310	2900	16			
83	.145		540	2400	26			
84	.117		340	2400	27			
85	.100		500	3500	20			
86	.083		480	5400	22			
87	.135		290	2800	12			
88	.097		310	930	8			
89	.121		370	2900	12			Plotted Dat. June 24th
90	.150		500	2500	17			
91	.103		390	1700	18			
92	.078		770	3700	31			
93	.068		590	2900	35			
94	.121		495	1700	22			
199	.087		1035	2900	21			
202	.152		395	2000	16			
203	.102		380	~~18500~~ 16500	10			Check Zn-16500
04	.146		410	1500	41			
05	.147		610	2000	42			
06	.124		485	2400	11			
07	.122		575	2700	34			
08	.108		555	3500	37			

BONDAR-CLEGG & COMPANY LTD.

Geochemical Lab Report

Report No. 437-2

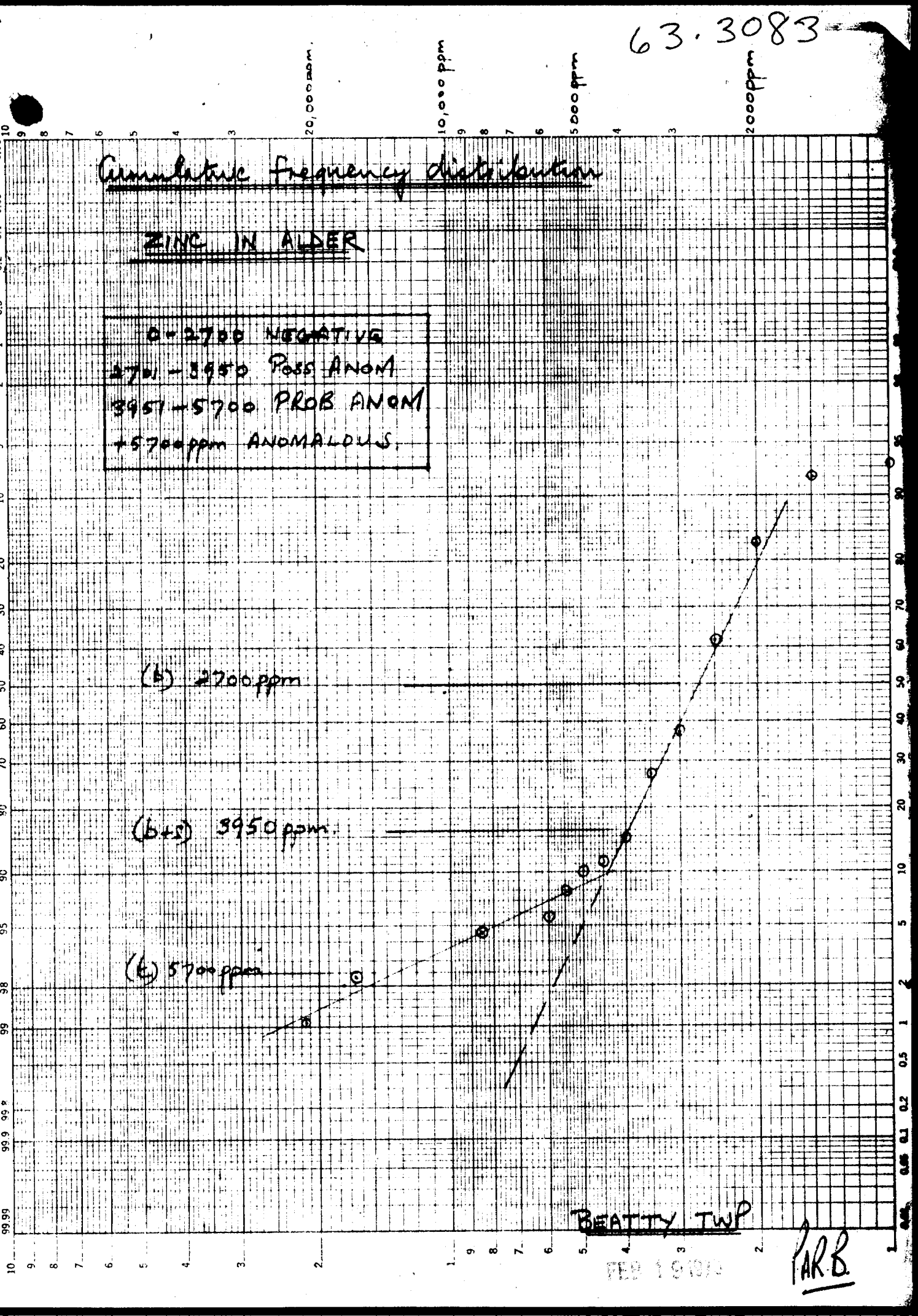
SAMPLE NO.	ASH WT. GRAMS		Cu/ASH ppm	Zn/ASH ppm	Mo/ASH ppm			REMARKS
U - 209	.157		510	2700	36			
10	.137		575	3300	44			
11	.111		540	2700	13			
12	.146		410	2200	59			
13	.109		550	2100	18			
U - 250	.106		555	4200	32			

63.3083

Cumulative frequency distribution

ZINC IN ALDER

0 - 2700 NEGATIVE
2701 - 3950 POSS ANOM
3951 - 5700 PROB ANOM
+5700 ppm ANOMALOUS.

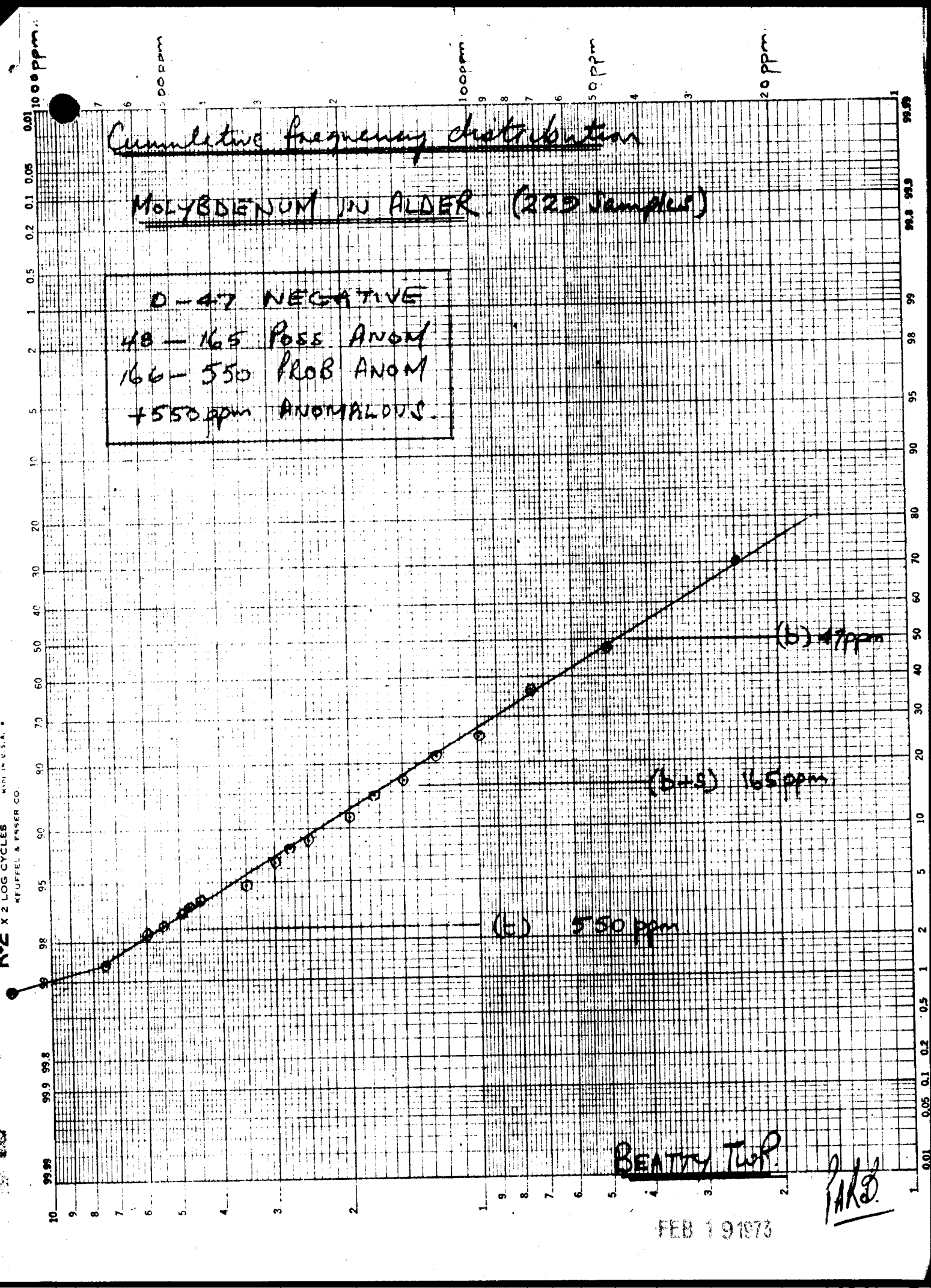


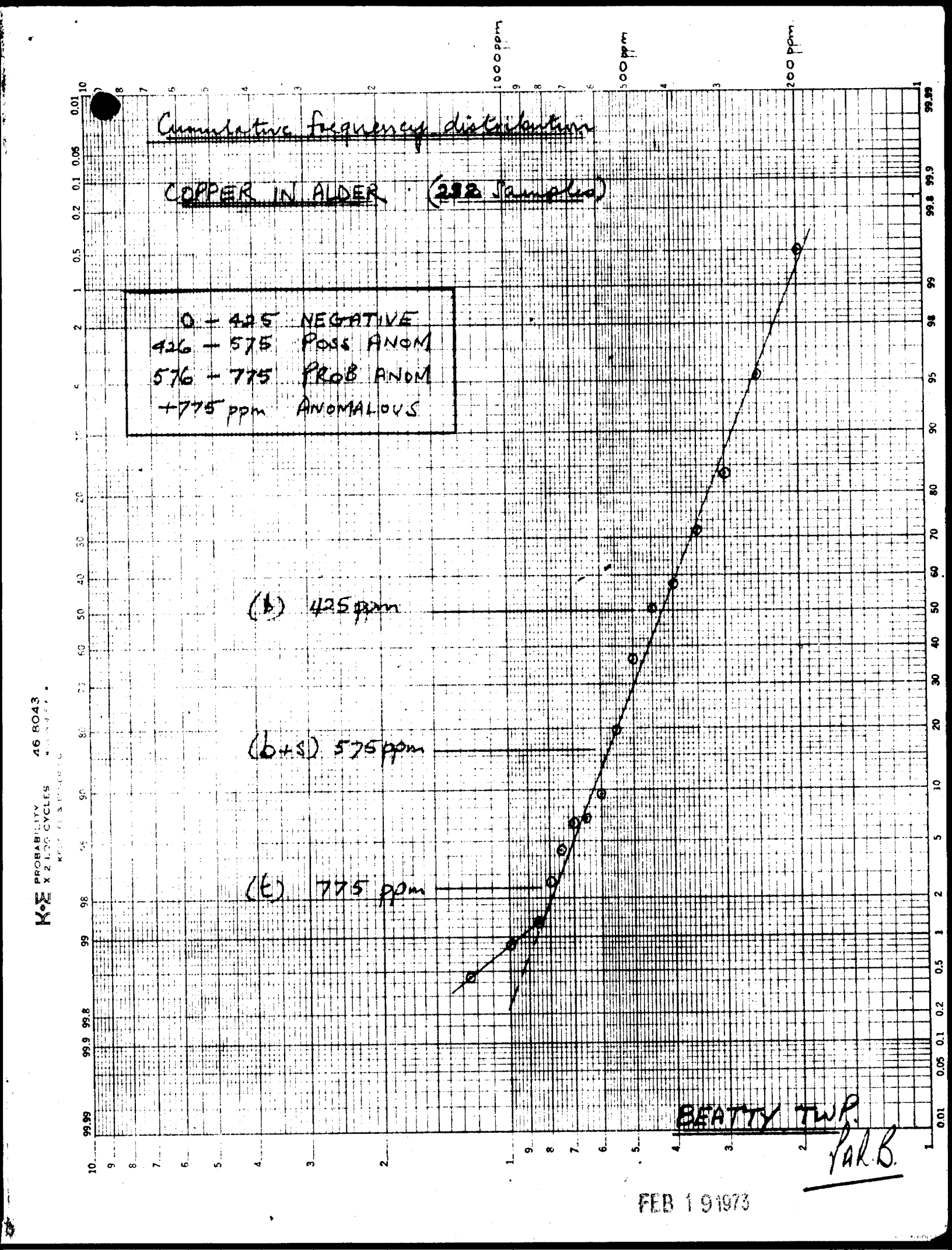
PAR B.

Cumulative frequency distribution

MOLYBDENUM IN ALDER (223 samples)

0 – 47	NEGATIVE
48 – 165	POSS ANOM
166 – 550	PROB ANOM
+550 ppm	ANOMALOUS.




Cumulative frequency distribution
COPPER IN ALDER (282 Samples)
0 - 425 NEGATIVE
426 - 575 Poss ANOM
576 - 775 PROB ANOM
+775 ppm ANOMALOUS
(b) 425 ppm
(b+s) 575 ppm
(t) 775 ppm
1000 ppm
500 ppm
200 ppm
PROBABILITY
X 2 LOG CYCLES
46 8043
BEATTY TWP.
FEB 19 1973

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIOGEOCHEMICAL ~~SOIL~~ SURVEY DATA

Collector: P. A. R. Brown Project: #10-B Weather: Sunny

Date: April 13, 1972 Area: Beatty Twp Physiography: Mainly flat low-lying outcrop & swamp

Sample No.	Location	Drainage Slope	Remarks All samples are alder
U-451	9+60S 12+65E Post #1; c1339803 2+50W; 1+00N	↓	North edge of swamp, south side of outcrop, 1/2' alder - 3' high
452	8+40S 12+80E 1+20N of 451	↑	North edge of outcrop 1" alder - 5' high
453	7+30S 13+00E 1+00N of 452	—	3/4" alder - 5' high
454	6+10S 13+30E 1+00N of 453	↘	South edge of outcrop 1/2" alder - 3' high
U-455	5+15S 13+40E 1+00N of 454	→	East edge of outcrop; 3/4" alder - 6' high
456	4+15S 13+40E 1+00N of 455	—	Outcrop to east and north 3/4" alder, 8' high
457	3+10S 13+50E 1+00N of 456	↙	On outcrop alder 1"; 4' high
458	2+20S 13+52E 1+00N of 457	←	" " 1" 5' "
459	1+20S 13+55E 1+00N of 458	↖	Between two outcrops - 1/2 alder 2' high
U-460	0+30S 13+60E 1+00N of 459	↙	On outcrop 3/4" alder; 5' high
461	0+85N 13+70E 1+00N of 460	↑	" 1/2" " 4' "
462	1+90N 13+75E 1+00N of 461	↙	On large outcrop area 3/4" alder - 5' high
463	3+00N 13+90E 90N of 462	↗	At claim post on outcrop area 1/2" alder - 3' high
464	500'E of 463 3+00N 19+75E on claim line	↘	East side of outcrop 3/4" - 4' high 1/2" - 3' high
U-465	1+00N 19+50E 1+00S of 464	→	" 350'W of sample line -
466	On B.L. 19+50E 1+00S of 465	—	Just off east side of outcrop 3/4" alder - 5' high
467	1+00S 19+45E 1+00S of 466	—	1+00E of outcrop - 1" alder - 14' high
468	2+00S 19+45E 1+00S of 467	—	1" alder - 12' high
469	3+00S 19+45E 1+00S of 468	—	1/2" alder - 4' high
U-470	4+05S 19+35E 1+00S of 469	↓	Outcrop to south 3/4" alder 6' high
471	5+10S 19+35E 1+00S of 470	—	Flat outcrop - 1/2" alder 4' high
472	6+10S 19+70E 1+00S of 471	—	Eastend of swamp 1/2" alder 3' high
U-473	7+15S 19+35E 1+00S of 472	—	" 1/4" alder 2½' high

2.

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIOGEOCHEMICAL ~~XXXX~~ SURVEY DATA

Collector: P. Brown Project: #10-B Weather:

Date: April 14, 1972 Area: Beatty Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks All samples are alder
U-474	7+95 S 19+40 E 1+00S of 473	—	Outcrop in swamp 200' west 3/4" alder - east end of swamp
U-475	9+00 S 19+30 E 1+00S of 474	↑	1" alder 10' high
476	9+95 S 19+25E 1+00S of 475	—	Outcrop to southwest, 1+00N; 3/4" alder 4' high
477	~~9+95S~~ 11+00 S 19+30 E 1+30S of 476	→	15'N of claim line; 1" alder on outcrop
478	12+00S 19+25E 1+00S of 477	↘	Edge of outcrop area - 1/2" alder
479	1+00S of 478	—	1/2" alder - 2½' high
U-480	1+00S of 479	—	Outcrop to west 30'; 3/4" alder 4' high
U-481	1+00S of 480	—	

3.

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIOGEOCHEMICAL ~~SOIL~~ SURVEY DATA

Collector: P. Brown Project: #10-B Weather:

Date: April 15, 1972 Area: Beatty Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks All samples are alder
U-501	1+00N of Hwy 101	—	Alder 1" - on trail West side - 8' high
502	3+00N	—	" 2" " " 4'
503	5+00N	—	" 1/2" " " 3'
504	7+00N	—	" 3/4" " " 5'
U-505	9+00N	—	" 3/4" on East side of trail - 5'
506	11+00N	—	" 1/2" west side 3'
507	13+00N	—	" 1" " - 8' high
508	15+00N	—	" 1¼" " road swings west 15+50 9' high
509	17+00N	—	" 1½" "
U-510	19+00N	←	" 3/4" "
511	21+00N	←	" 1" " of road
512	23+00N	←	" 1/2" - small clump E side road
513	25+00N	←	1¼" alder - road swings east - 9' west side
514	27+00N	←	At 22+50 road swings west - 1" alder -
U-515	29+00N	—	1½" alder east side - 8' high
516	31+00N	↑	1½" alder - east side road - 11'
517	33+00N	←	1½" alder - west side road
518	35+00N	↙	1" alder west side by dump
519	37+00N	↖	100'NE of Stewart Abate shaft -3/4" alder on o.c.
U-520	39+00N	↖	Just north of outcrop - 3/4" - 4' high east of trail
521	41+00N	↖	W side trail 2" alder - 9' high
522	43+00N	←	" 2¼" alder - 14' high
523	45+00N	—	On outcrop - 1½" alder east side of trail just E. of shack
U-524	47+00N	↑	2" alder E side trail - 15' high

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIO GEOCHEMICAL ~~SOIL~~ SURVEY DATA

Collector: P. Brown Project: #10-B Weather:

Date: April 17, 1972 Area: Beatty Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks Alder and spruce samples
U-525	49+00N of Hwy 101	↑	130' to creek (south bank) 3/4" alder high
526	0+30'N 0+90'E X-8232	↑	Same location as X-8232 - 1" alder 10'
527	X-8231	↓	" " X-8231 - 1½" alder
528	X-8230	↓	Close to outcrop 3/4" alder 3' high
529		—	400'W of SW¼, N½, 1 of 3, Con 1 1/2" alder 3' high
U-530	1+00S of 529	—	1/2" alder - 3' high
531	1+00S of 530	↓	same as above
532	0+25S 10+50E 1+00S of 531	↑	1" alder - 10' high - on outcrop
533	0+90S 10+30E 2+00S of 532	↓	On outcrop - 1½" alder - 9' high
534	5+15S 10+20E 3+00S of 533	↑	On small outcrop - nearly all spruce, some poplar - alder 3/4" - 3' high
U-535	5+85S 10+20E 1+00S of 534	—	3/4" alder 4' high
536	6+75S 10+80E 1+00S of 535	—	" 6' high
537	1+00S of 536	—	N side of swamp - 1/2" alder
538	1+10S of 537	—	alder twigs - 1/4" sample
539	as above	—	Spruce sample - 2" - 8' high
U-540	1+00S of 538	—	Spruce Sample - 1" - 5' high
541	2+00S of 540	—	Spruce sample 1" - 4' high - Centre of swamp
542	2+10S of 541	—	1½" spruce sample - 9' high
543	1+00S of 542	—	1" spruce sample - 6' high
544	2+00S of 543	—	1" spruce sample "
U-545	2+00S of 544	—	2" spruce sample - 9' high
546	2+50S of 545	↑	Edge of swamp - alder 1"
547	as above	↑	Edge of swamp - 5" Spruce Sample 25' high
U-548	2+00S of 547	→	On outcrop 10'N of claim - 1" alder

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIOGEOCHEMICAL ~~SOIL~~ SURVEY DATA

Collector: P. Brown Project: #10-B Weather:

Date: April 17, 1972 Area: Beatty Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks Spruce and alder samples
U-549	2+00S of 548	→	2" spruce sample 12' high
U-550	2+00S of 549	↓	4" " " 18' high
551	2+50S of 550	↓	3" spruce
552	2+00S of 551	—	1" alder - 6' high
553	2+00S of 552	—	1" alder - 8' high
U-554	2+00S of 553	—	1/2" alder - 3' high - 300'N of Hwy 101.

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIOGEOCHEMICAL XXXX SURVEY DATA

Collector: G. Edwards Project: #10-B Weather: Sunny

Date: April 14, 1972 Area: Beatty Twp Physiography: Mainly flat

Sample No.	Location	Drainage Slope	Remarks All samples are alder
U-085	Claim Post 4 Cl 339803	—	Open swamp
086	100'N	—	"
087	200'N	—	"
088	300'N	—	"
089	400'N	—	"
U-090	500'N	↓	Side of low ridge - open mixed cover
091	600'N	↓	as above
092	700'N	↓	On top of outcrop - open scattered spruce cover
093	800'N	↑	Base of outcrop - low swampy ground spruce cover
094	80'N 900'N 1+80E	↑	Low swampy ground between scattered outcrops - mixed cover
U-095	175'N 1000'N 1+80E	↑	Top of outcrop - mixed open cover
096	370'N 1100'N 173E	↑	same as above
097	370'N 1200'N 1+70E	↑	Base of outcrop - open scattered cover
098	300'E of 366'N U-097 4+30E	↓	same as above
099	235'N 100'S 4+30E	↓	"
U-100	135'N 200'S 4+40E	↓	Top of outcrop - open mixed cover
Apr 15, 1972 101	20'N 300'S 4+60E	↓	same as above
102	400'S	↓	"
103	500'S	—	Base of outcrop - low flat swamp
104	600'S	—	same as above
U-105	700'S	—	"
106	800'S	—	"
107	900'S	—	Open flat spruce swamp
U-108	1000'S	—	same as above

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIOGEOCHEMICAL SURVEY DATA

Collector: G. Edwards Project: #10-B Weather:

Date: April 15, 1972 Area: Beatty Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks All samples are alder
U-109	1100'S on claim line Post #1; cl 339803	—	Open scattered spruce swamp
U-110	200'N	—	same as above

3.

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIO GEOCHEMICAL ~~SOIL~~ SURVEY DATA

Collector: R. Haley Project: #10-B Weather: Cool

Date: April 13,14,15/72 Area: Beatty Twp Physiography: Fairly flat

Sample No.	Location	Drainage Slope	Remarks All samples are alder with the exception of two spruce samples
U-401	Post #1 - cl. 339805 - 800'N	Flat	Tag Alder
402	900'N	"	"
403	1000'N	"	"
404	1100'N	"	"
U-405	Post #1 - cl 339802 - 1200'N	"	Spruce
406	100'N	"	Tag alder
407	200'N	"	"
408	300'N	"	"
409	400'N	"	"
U-410	500'N	"	"
411	600'N	"	"
412	700'N	"	"
413	800'N	"	"
414	900'N	"	"
U-415	1000'N	"	"
416	1100'N	"	"
417	1200'N	"	"
418	1300'N	"	"
419	Claim Post 1450'N	"	" Con 1 Centre of east side of N 1/2, Lot 3,
U-420	1+90N 23+70 E 400'W of U-419	"	Tag alder

4.

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIOGEOCHEMICAL [redacted] SURVEY DATA

Collector: R. Haley Project: #10-B Weather:

Date: April 13,14,15/72 Area: Beatty Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks
U-421	90'N 23+75E 100'S of U-420	Flat	Tag Alder
422	26'S 23+70E 200'S	"	"
423	1+20S 23+70E 300'S	"	"
424	2+40S 23+75E 400'S	"	"
U-425	3+30S 23+70E 500'S	"	"
426	4+45S 23+70E 600'S	"	"
427	5+55S 23+75E 700'S	→	"
428	6+80S 23+75E 800'S	↗	"
429	7+85S 23+80E 900'S	Flat	"
U-430	8+70S 23+50E 1000'S	"	"
431	10+00S 23+40E 1100'S	"	"
432	11+15S 23+40E 1200'S	"	"
433	12+00S 23+25E 1300'S	"	"
434	12+85S 23+15E 1400'S	"	" E - W claim line
U-435	1500'S	"	"
436	1600'S	"	"
437	1700'S	"	Spruce
U-438	1800'S	"	Tag alder

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIOGEOCHEMICAL ~~XXXXXX~~ SURVEY DATA

Collector: R. A. Haley & G. Edwards Project: #9 Weather:

Date: May 10,11,12 & 16/72 Area: Beatty Block Beatty Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks All samples are alders
U-111	Line 26+00E; 6+50E,260'S of	0+00 Flat	Poplar and tag alder bush
112	200'S	"	
113	400'S	"	
114	600'S	"	Tag alder swamp
U-115	800'S	"	900'S to E - W claim line
116	1000'S	"	Spruce, poplar, tag alder bush
117	1220'S	"	
118	1430'S	"	
119	1660'S	"	Open swamp
U-120	1870'S	"	" "
121	2170'S	"	E - W claim line
122	Post #1; claim 339641;660'E of	U-121 "	Open swamp
U-130	1800'N	"	" "
131	2000'N	"	
133	2400'N	"	Outcrop
U-149	Post #2;claim 339938;Lot 4, Con II	"	Alder swamp
U-150	380'N	"	Alder and poplar bush; overburden shallow
151	750'N	↗	Outcrop
152	1080'N	↖	As U-150
153	1320'N	↖	" "
U-155	Post #1; claim 339938; 450'W of	↑	Overburden 10' - alder & poplar bush
156	900'W	↑	" 10' " "
157	Post #4; claim 339938;1320'W of	↑	Overburden faily deep
158	425'S	↗	Outcrop

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIOGEOCHEMICAL ~~SOIL~~ SURVEY DATA

Collector: R. A. Haley & G. Edwards Project: #9 Beatty Block Weather:

Date: May 10,11,12 & 16/72 Area: Beatty Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks All samples are alder
U-159	875'S	Flat	Outcrop
U-160	1320'S	Flat	" Post #3; claim 339938
161	400'E of U-160	↘	Edge of outcrop
162	800'E of U-160	Flat	Alder and spruce swamp
163	Post #1; claim 339816; Lot 4,	Con II	Outcrop
164	475'S	↙	Overburden shallow; boulders
U-165	910'S	Flat	Poplar & alder bush; overburden shallow
166	Post #1; claim 339819; Lot 4,	Con I ←	" " " deep
167	400'S	Flat	" " " "
168	800'S	"	Alder swamp - overburden deep
169	Post #2; claim 339819; 1270'S	"	" " " "
U-170	400'W of U-169	"	" "
171	800'W	"	Alder and willow
172	Post 2;cl 339818 1300'W	"	
173	400'N	"	Alder swamp
174	800'N	"	Alder and poplar
U-175	Post 1;cl 339818 1275'N	↖	
176	1725'N	↑	Along edge of creek
178	2175'N	←	
179	Post #1; claim 339817;2600'N	Flat	
U-180	400'W	"	Poplar and alder
181	800'W	"	" "
182	Post #4; claim 339817; 1300'W	"	
183	400'S	↖	Edge of creek

CANADIAN JOHNS-MANVILLE CO. LIMITED

BIOGEOCHEMICAL ~~SOIL~~ SURVEY DATA

Collector: R. A. Haley & G. Edwards Project: #9 Weather:

Date: May 10,11,12 & 16/72 Area: Beatty Block Beatty Twp Physiography:

Sample No.	Location	Drainage Slope	Remarks All samples are alder
U-184	800'S	Flat	Poplar and alders
U-185	Post #3; claim 339817; 1320'S	"	
186	1500'S	↑	Taken at pit
187	1750'S	↑	Outcrop
188	2150'S	→	"
189	2620'S	↗	Outcrop - Post #3; claim 339818
U-190	400'E of U-189	Flat	Overburden shallow
191	800'E	"	" "
192	400'S of U-169	"	Spruce, poplar and alders
193	800'S	"	" " "
194	1300'S	"	" " "
199	Post #4; claim 339635	"	Poplar and alder bush
U-202	Post #4; claim 339638; 1100'S	"	Poplar, alder and willow
203	400'S	"	Alder swamp
204	800'S	"	Alder, willow, poplar bush
U-205	Post #3; claim 339638; 1150'S	"	Same
206	Post #2; claim 339638	"	Alder swamp
207	400'N	"	" "
208	800'N	"	" "
209	Post #1; claim 339638; 1250'N	"	" "
U-210	400'N	"	" "
211	800'N	"	" "
212	Post #1; claim 339635; 1320'N	"	" "
213	Post #1; claim 333432	"	Spruce, polar & alder bush
U-500	12+20E; 2+60S on Grid Line	"	By Pb - Zn pit

BIOGEOCHEMICAL SURVEY SHEET

Group: Beatty-Hislop Group Collector: F. J. Evelegh Project No. 9

Township: Beatty Date: July 24, 1972

Sample #	Location	Tree Type	Diam.	Sample Height	Nature of Terrain	Drain. Direc
U-770	#1; cl 339806	A	1½"	7'	Open poplar-southeast facing SW hill to muskeg - all same	
771	400'S of #1; cl 339806	A	1/2"	6'		SW
772	800'S of "	A	1/3"	5'	75'S of #2-cl 339806	S
773	1200'S of	A	1/2"	4'	on last outcrop before swamp	S
774	400'W of 773	A	1/2"	3'		
U-775	400'N of 774	A	1½"	7'	on outcrop 1a	S
776	450'N of 775	A	3/4"	4'	200'N of claim line, by outcrop 1a	swamp
777	375'N of 776	A	1/2"	3'	on north claim line	S
778	400'W of 777	A	1"	6'	as above	S
779	400'S of 778	A	1½"	10'	Cabin at 200'S, 50'E	S
U-780	400'S of 779	A	1"	7'	claim line 100'N of 780	Swamp
781	400'S of 780	A	1/2"	3'		"
782	540'W of 781	A	1/2"	6'	On N-S claim line	"
783	500'N of 782	A	1"	8'	open poplar & spruce	NE
784	300'N of 783	A	1"	8'	40'E of claim line	Swamp
U-785	500'N of 784	A	1/2"	6'	At post 4, cl 339806	"

LEGEND FOR DETAILED GEOLOGICAL MAPPING

Geological Legend

6	**6 Quartz Diabase, Diabase - Matachewan** **6a Quartz Diabase, Diabase - Keweenawan**
5	Granite 5a; Syenite 5b; Syenite porphyry 5-b1; 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.
CB	Carbonate rock.

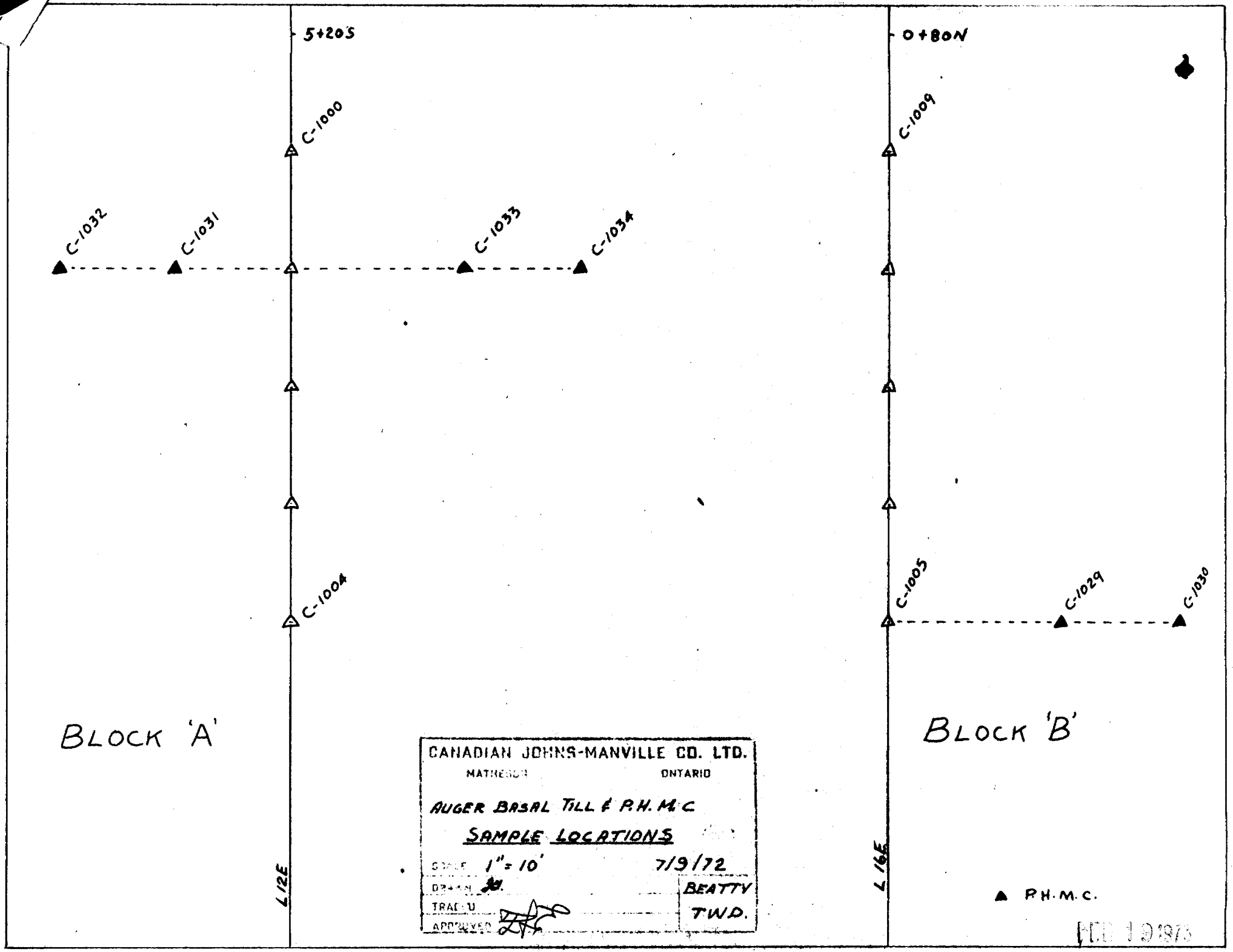
Abbreviations

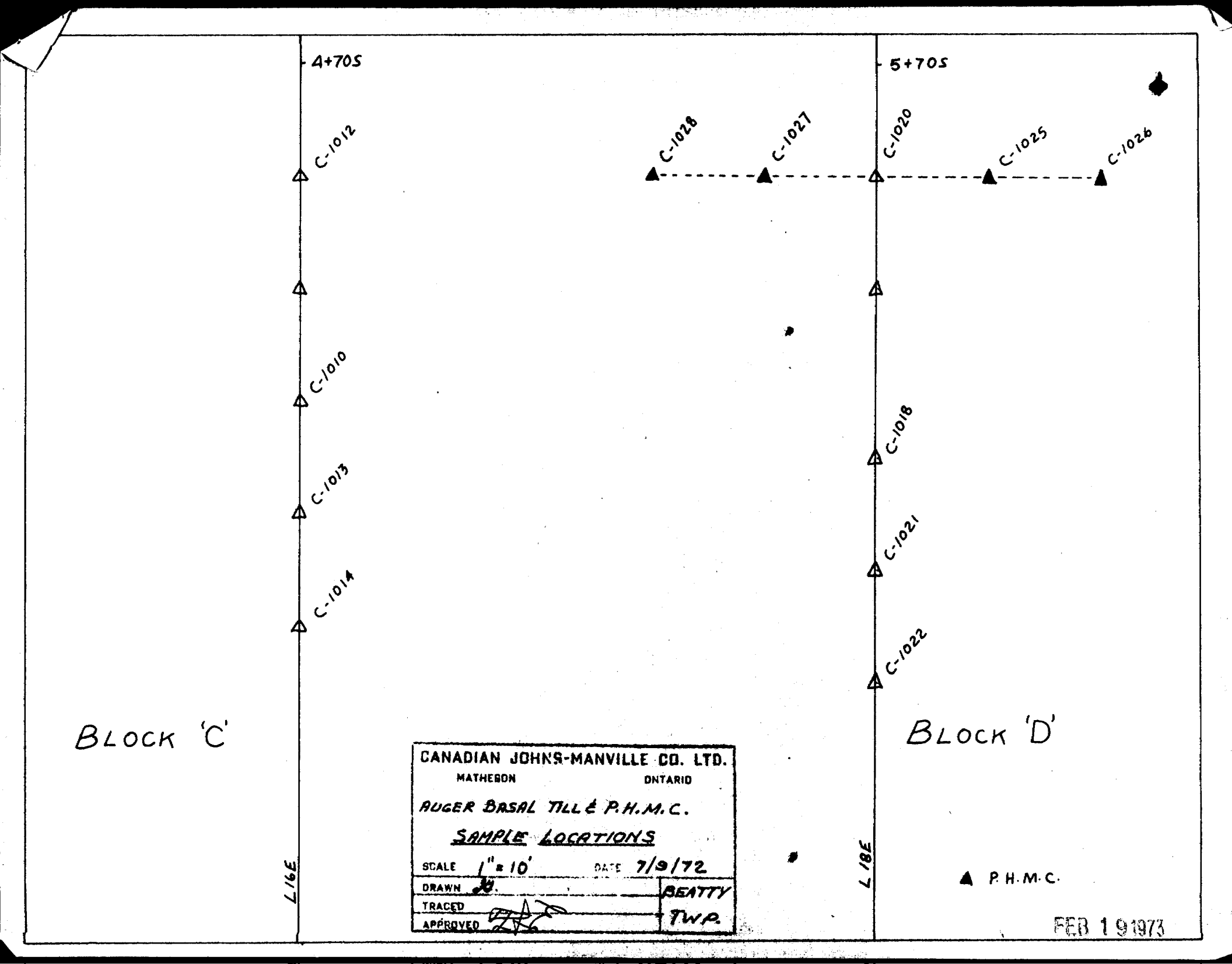
Asbestos	Asb	Oxidized	Ox'd
Brecciated	Brec'd	Pyrite	Py
Carbonated	Carb'd	Pyrrhotite	Po
Chalcopyrite	Cpy	Peridotite	Perid
Disseminated	Diss	Pyroxenite	Pyrox
Dark	Dk	Quartz	Qtz
Feldspar	Fp	Serpentinite	Serp
Foliated	Fol'd	Sheared	Sh'd
Grained - fine	F gr'd	Serpentinized	Serp'd
- medium	M gr'd	Strongly	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
- 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 - sheering - jointing

FEB 1957


5+20S
C-1000
C-1032
C-1031
C-1033
C-1034
C-1004
L12E
BLOCK 'A'
0+80N
C-1009
C-1005
C-1029
C-1030
L16E
BLOCK 'B'
▲ R.H.M.C.
CANADIAN JOHNS-MANVILLE CO. LTD.
MATHESON ONTARIO
AUGER BASAL TILL & R.H.M.C
SAMPLE LOCATIONS
SCALE 1" = 10'
7/9/72
DRAWN
TRACED
APPROVED
BEATTY TWP.

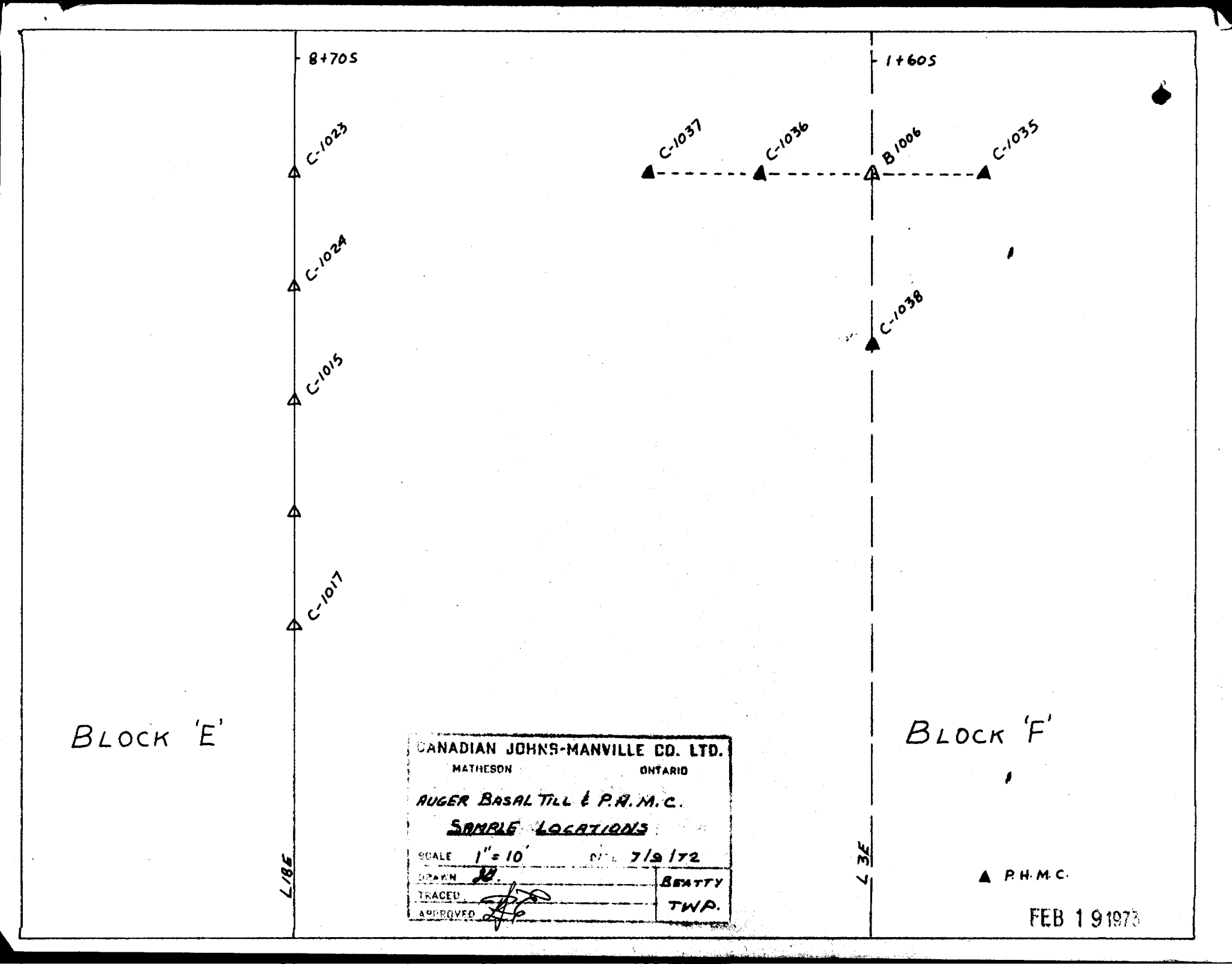


CANADIAN JOHNS-MANVILLE CO. LTD.
MATHESON ONTARIO

AUGER BASAL TILL & P.H.M.C.
SAMPLE LOCATIONS

SCALE 1" = 10' DATE 7/9/72

DRAWN M.	BEATTY
TRACED	TWP.
APPROVED	


8+70S
1+60S
C-1023
C-1024
C-1015
C-1017
C-1037
C-1036
B 1006
C-1035
C-1038
L18E
L 3E
BLOCK 'E'
BLOCK 'F'
CANADIAN JOHNS-MANVILLE CO. LTD.
MATHESON ONTARIO
AUGER BASAL TILL & P.H.M.C.
SAMPLE LOCATIONS
SCALE 1" = 10'
DATE 7/9/72
DRAWN
TRACED
APPROVED
BEATTY TWP.
▲ P.H.M.C.
FEB 19 1973

ADJOINS SHEET No.

NICKLE LAKE

GAME LAKE

SALVE LAKE

SALVE CREEK

LEACH LAKE

FROOME LAKE

LAWLAR LAKE

PIKE RIVER

RIVER

BEATTY TWP.

HISLOP TWP.

MUNRO TWP.

GUIBORD TWP.

BARTON CR.

BEATTY FISSURE ZONE

Barton Creek Shaft

PAT GOLD

MARTIN

STEWART ABATE

54692 P12045

54693 P12046

54694 P12047

54634 P12039

54633 P12038

54638 P12043

13739 P1224

54635 P12040

54636 P12041

54637 P12042

13738 P1223

25634 P10838

25635 P10839

25633 P10841

25622 P10842

56685 P12044

25628 P10840

25628 P10837

39403 P9942

39400 P9943

339938

339811

339817

339816

339818

339819

339806

339808

339807

339809

339810

339803

339802

339640

339639

339804

339805

339641

339642

339635

339636

339812

339813

333431

333432

339638

339637

339815

339814

339801

333433

1 2 3 4 5 6 7 8 9

I II III IV V

ADJOINS SHEET No.

CANADIAN JOHNS MANVILLE CO. LTD. — MATHESON, ONT.

ADJOINS SHEET No.

ONT. 1"= 1000' PROPERTY PLAN BEATTY - HISLOP TWP.

FEB 19 1975

42A09SW0120 63.3883 BEATTY

200

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

ADJOINS SHEET No. HISLOP TWP.

ONT. 1" = 400' - GEO-MAGNETIC CONTOUR PLAN BEATTY TWP.

MC PHAR R.E.M.-200' SPACING- SCALE 1" = 20° INLINE METHOD R. HALEY

FEB 19 1973 --- CONDUCTOR

ONT. 1" = 400' - ELECTRO MAGNETIC PROFILE PLAN BEATTY TWP.

220

MUNRO TWP.

SAMPLES TAKEN
A - APRIL
M - MAY
JY - JULY

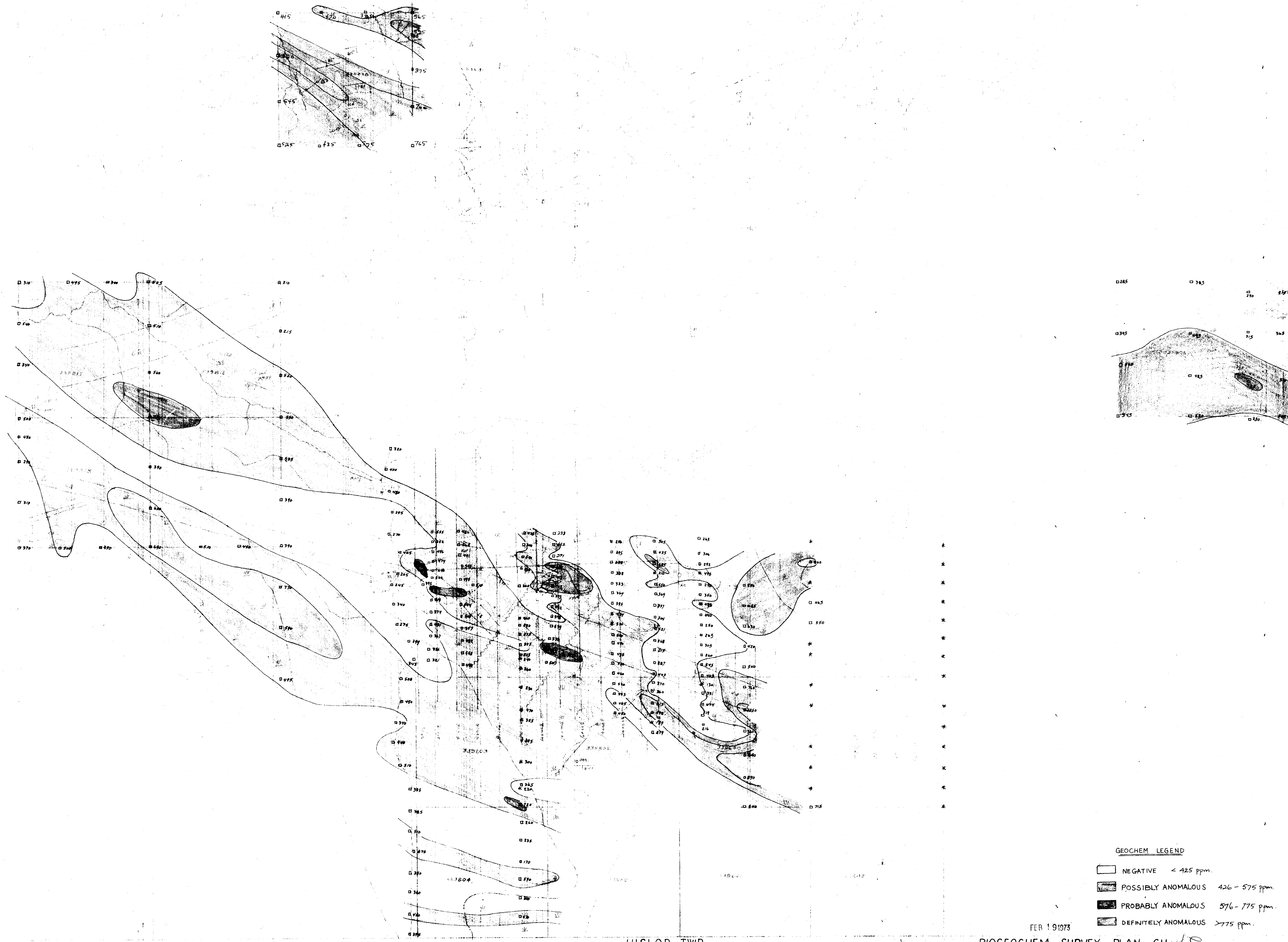
TREE TYPE
□ - ALDER
✱ - SPRUCE

BONDAR CLEGG REPORT NO.
300-2
301-2
437-2
700-2

BIOGEOCHEM SAMPLE LOCATION MAP

HISLOP TWP. | ONT. 1"=400' | FEB 19 1973 | BEATTY TWP.


MATHESON, ONT.
M U199
M U200
M U201
M U202
M U203
M U204
M U205
M U212
M U211
M U210
M U209
M U208
M U207
M U206
M U219
BONDAR CLEGG REPORT NO.
437-2
SAMPLE TAKEN
M - MAY
TREE TYPE
▫ - ALDER
* - SPRUCE
BIOGEOCHEM SAMPLE LOCATION MAP.
FEB 19 1973
HISLOP TWP.
240



42A09SW0120 63.3083 BEATTY

250

ADJOINS SHEET NO

HWY. NO 101

HISLOP TWP.

ANOM.

PROB. ANOM.

339425 POSS. 339435 ANOM.

Cu

339637

339815

339814

339807

333433

333432

333431

GUIGUES TWP.

ADJOINS SHEET NO

ADJOINS SHEET NO

GEOCHEM LEGEND

NEGATIVE < 2700 PPM.

POSSIBLY ANOMALOUS 2701 - 3950 ppm.

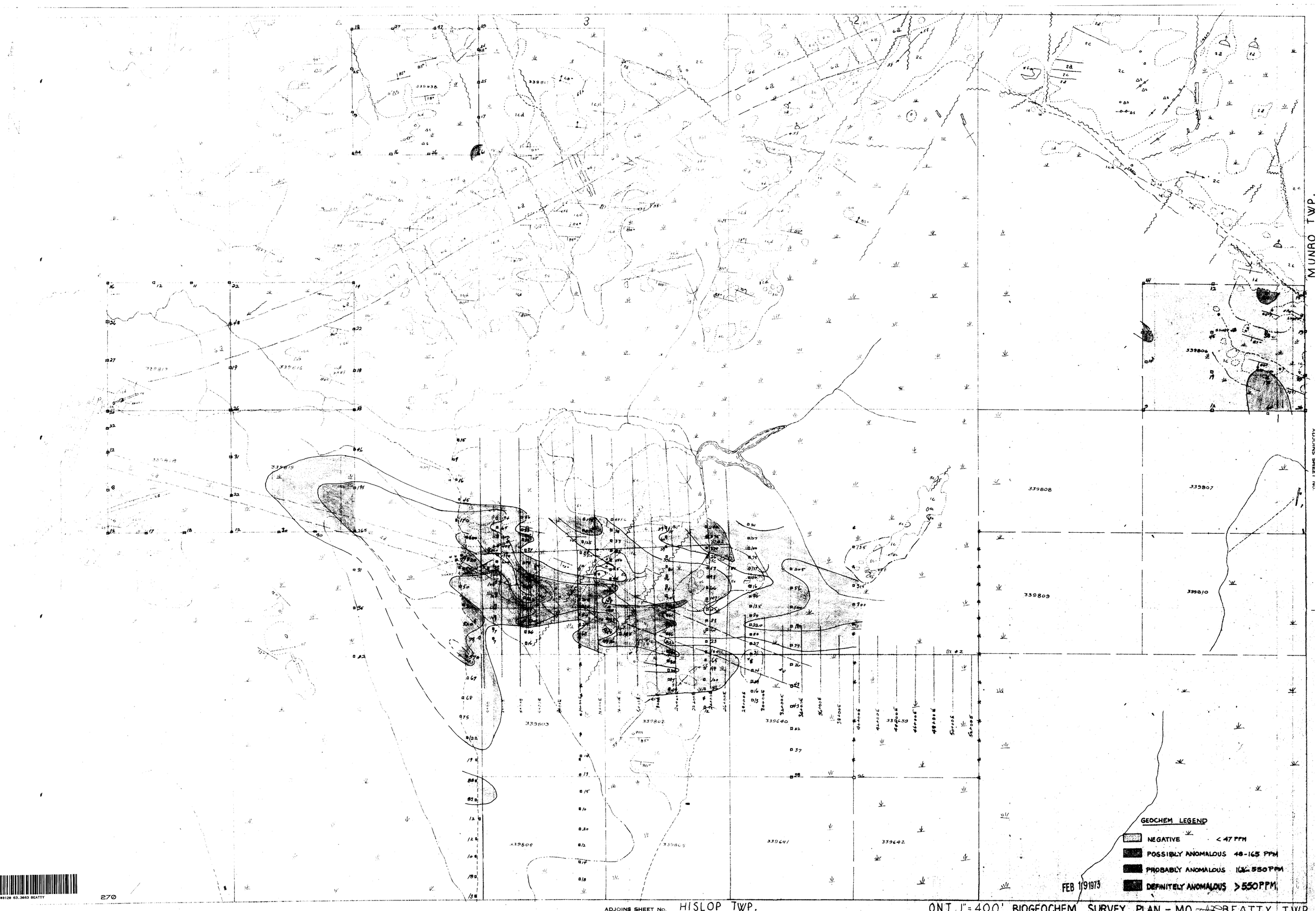
PROBABLY ANOMALOUS 3951 - 5700 ppm.

DEFINITELY ANOMALOUS >5700 ppm.

FEB 1 9 1973

ONT. 1"=400' BIOGEOCHEM SURVEY PLAN - C U.

HISLOP TWP.



ADJOINS SHEET NO. HISLOP TWP.

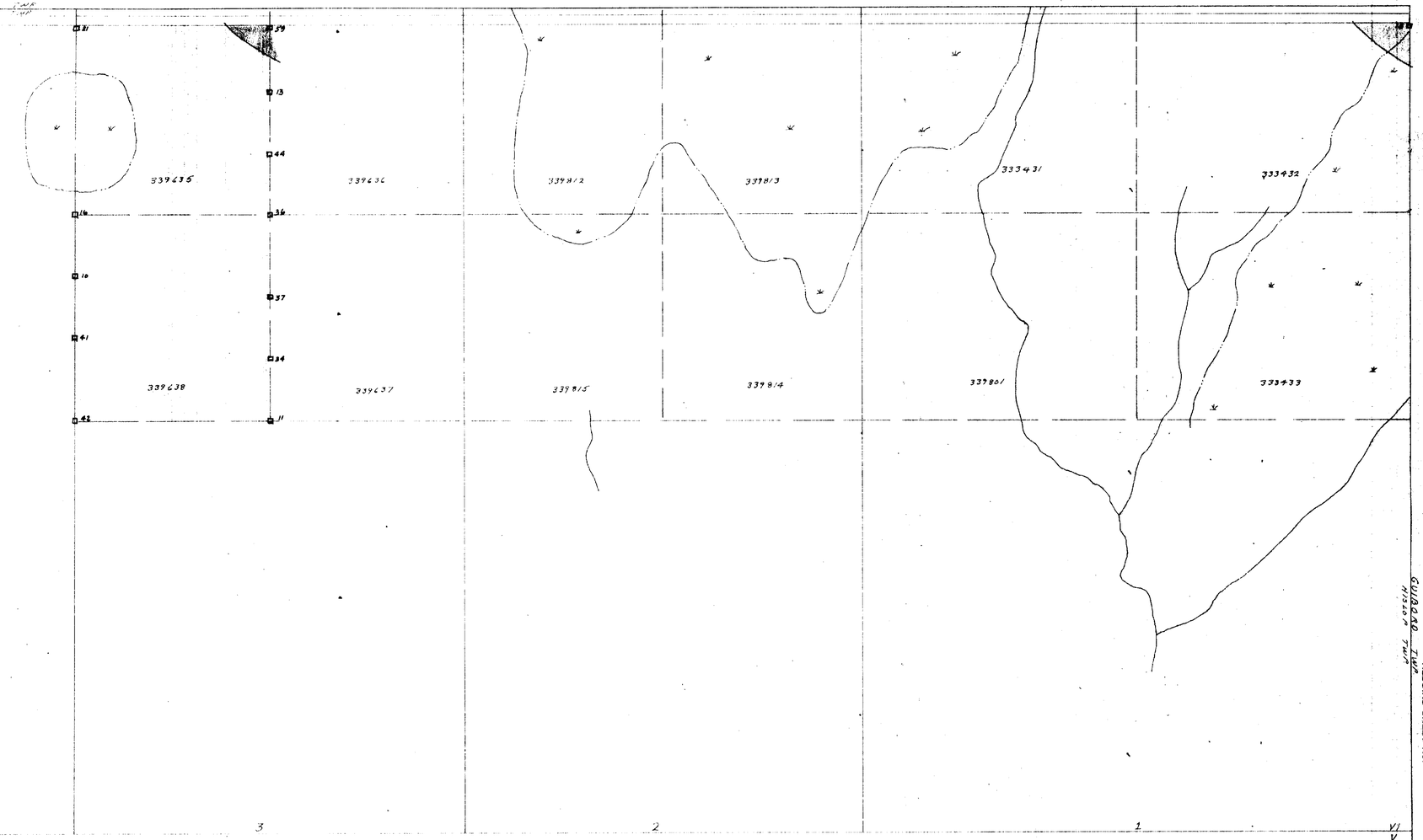
ONT. 1"=400' BIOGEOCHEM SURVEY PLAN - MO ~~276~~ BEATTY TWP.

CANADIAN JOHNS MANVILLE CO. LTD - MATHESON, ONT.

ADJOINS SHEET NO.

HWY. NO. 101

BEATTY TWP. / HISLOP TWP.



GUIBAO TWP. / HISLOP TWP.

ADJOINS SHEET NO.

ADJOINS SHEET NO.

5 4 3 2 1 VI V

GEOCHEM LEGEND

NEGATIVE <2700 ppm.

POSSIBLY ANOMALOUS 2701-3950 ppm.

PROBABLY ANOMALOUS 3951-5700 ppm.

DEFINITELY ANOMALOUS >5700 ppm

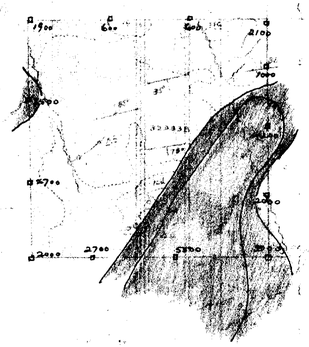
FEB 19 1973

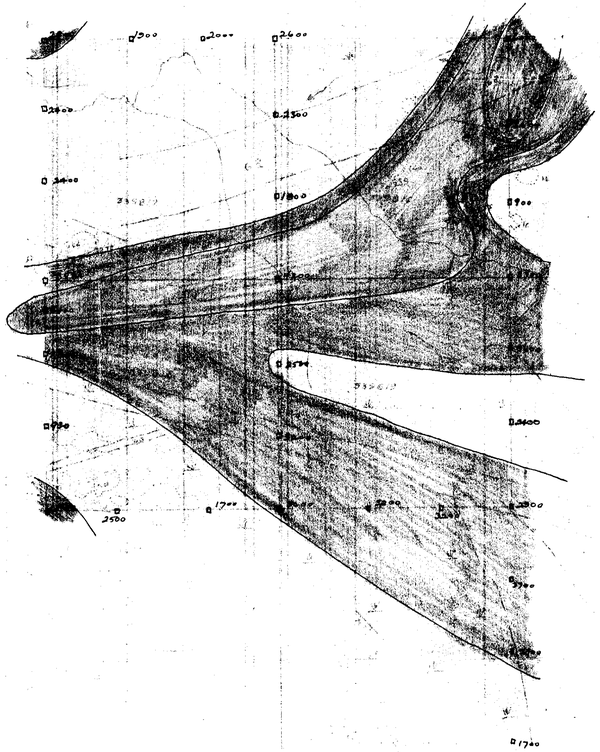
42A05NW0120 63.3083 BEATTY

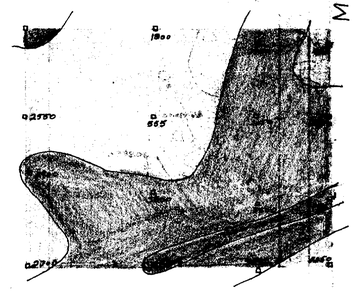
280

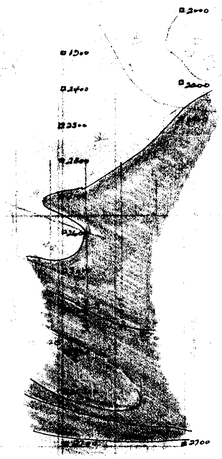
ADJOINS SHEET NO.

ONT. 1"-400' BIOGEOCHEM SURVEY PLAN - MO HISLOP TWP.









MUNRO TWP.

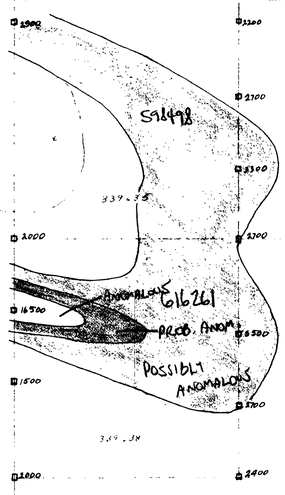
GEOCHEM LEGEND

NEGATIVE	< 2700 ppm.
POSSIBLY ANOMALOUS	2701 – 3950 ppm.
PROBABLY ANOMALOUS	3951 – 5700 ppm.
DEFINITELY ANOMALOUS	> 5700 ppm.

FEB 19 1973

HISLOP TWP.

ONT. 400 BIOGEOCHEM SURVEY PLAN - ZN



ADJOINS SHEET No. 6W/1240 HISLOP TWP.

ADJOINS SHEET No.

GEOCHEM LEGEND

- NEGATIVE < 2700 ppm.
- POSSIBLY ANOMALOUS 2701 – 3950 ppm.
- PROBABLY ANOMALOUS 3951 – 5700 ppm.
- DEFINITELY ANOMALOUS > 5700 ppm.

FEB 19 1976

ONT. 1"=400' BIOGEOCHEM SURVEY PLAN - ZN HISLOP TWP.

ADJOINS SHEET No. 1

L-14+00E
L-16+00E
L-18+00E
L-20+00E
L-22+00E
L-24+00E
L-26+00E

BEAVER POND

LOT 3
LOT 2

CON. I

BASE LINE

N

ADJOINS SHEET No. 3

ADJOINS SHEET No. 2

REM & MS-1000 PROFILES
ROCK GEOCHEM SURVEY PLAN CU.- MO.- AU. PPb FEB 19 1979
ONT. 1"=50' GEOL. & TOPO. PLAN SHEET NO. 2 BEATTY TWP.

310

N
ADJOINS SHEET No 4
ADJOINS SHEET No.
ADJOINS SHEET No.
CON. I
LOT 3
LOT 2
300' S. of B.L.
Tx1
BR-6
BR-2
BR-3
BR-5
BR-7
TS-1
TS-2
TS-3
8+00 S
9+00 S
10+00 S
L-14+00E
339802
339640
o--o = MS1000 SURVEY
TS Δ = TRANSMITTER SET UP.
---- = 1000 cps
-.-.- = 5000 cps
--x-- = R.E.M 1000 cps. (RE-READ)
-.-x-.- = R.E.M 1000 cps ORIGINAL READINGS.
PROFILES 1" = 5°
● BR - ROCK SAMPLES
REM & MS-1000 PROFILES
ROCK GEOCHEM SURVEY PLAN CU-MO-AU.ppb
ONT. 1"=50' GEOL. & TOPO. PLAN
SHEET NO. 3
BEATTY TWP.

320

ADJOINS SHEET No. 2

ADJOINS SHEET No. 3

CON. I

LOT 4

LOT 3

GLACIO-FLUVIAL BOULDER BED

300' S of B.L.

Tx2

P15

P14

P12

P13

BR-1

339803

L-0+00

L-2+00E

L-4+00E

L-6+00E

L-8+00E

L-10+00E

L-12+00E

ADJOINS SHEET No.

REM & MS-1000 PROFILES

ROCK GEOCHEM SURVEY PLAN CU-MO-AU PPB

ONT. 1"-50' GEOL. & TOPO. PLAN SHEET NO. 4 ~~276~~ BEATTY TWP.

FEB 19 1973

330

L-0+00E
L-2+00E
L-4+00E
L-6+00E
L-8+00E
L-10+00E
L-12+00E

N

LOT 3
LOT 4

CON. I

ADJOINS SHEET No. 3

ADJOINS SHEET No. 2

ADJOINS SHEET No. 4

BASELINE

X ROCK SAMPLE NOS. BR-1 BE-1

CU.	MO.	AG.	AU.
ppm	ppm	ppm	ppb
127	190	0.8	15

BE-7
MO-1820 ppm.

340

GEOLOGY BY J.H. MORRIS FEB 19 1973

ONT. 1"-50' GEOL. & TOPO. PLAN SHEET NO. 1 BEATTY TWP.

L-14+00E

L-16+00E

L-18+00E

L-20+00E

L-22+00E

L-24+00E

L-26+00E

BEAVER POND

LOT 3

LOT 2

CON. I

BASELINE

5c

1c

1d

5f

QUARTZ VEINLETS

QUARTZ VEINS

x BE-2
MO-60 PPM

x BE-1
MO-65 PPM.

x BE-4
CU-87 PPM.
MO-3 PPM.

ADJOINS SHEET No. 1

ADJOINS SHEET No. 3

ADJOINS SHEET No.

FEB 19 1973 GEOLOGY BY J.H. MORRIS

ONT. 1"=50' GEOL. & TOPO. PLAN SHEET NO. 2 BEATTY TWP.

ADJOINS SHEET No. 4

ADJOINS SHEET No.

CON. I

300' S of B.L.

LOT 3

LOT 2

339640

339802

L-14+00E

L-20+00E

L-26+00E

L-32+00E

L-38+00E

L-44+00E

	CU ppm	MO ppm	AG ppm	AU ppb
P16				
BR-2	87	190	0.6	<5
BR-3	700	1400	1.6	50

CU MO
ppm ppm
BE 12 - 17 15

QUARTZ VEINED FRACTURES

FEB 19 1973 GEOLOGY BY J.H. MORRIS

ONT. 1·50' GEOL. & TOPO. PLAN SHEET NO. 3 BEATTY TWP.

ADJOINS SHEET No.

ADJOINS SHEET No. 2

ADJOINS SHEET No. 3

CON. I

LOT 4

LOT 3

300' S. of B.L.

300' S. of B.L.

P15

P14

P12

P13

4a

1c

1d

5c

5f

GLACIO-FLUVIAL BOULDER BED

339803

L-4000

L-2100E

L-3100E

L-4100E

L-5100E

L-6100E

L-7100E

N

ADJOINS SHEET No.

FEB 19 1973 GEOLOGY BY J.H. MORRIS

ONT. 1"-50' GEOL. & TOPO. PLAN SHEET NO. 4 BEATTY TWP.


N
ADJOINS SHEET No.
ADJOINS SHEET No.
ADJOINS SHEET No.
339817
339816
339818
339819
339811
339803
339804
339805
339640
339641
339639
339642
339808
339809
339806
339807
339810
AREA 'A'
AREA 'B'
AREA 'C'
PRELIM. MAP
So/S1 LINEATION = F1 FOLD AXIS
SHADED ARROW HEAD = DIRECTION OF F1 ANTICLINE
S1/S2 LINEATION = F2 FOLD AXIS
SHADED ARROW HEAD = DIRECTION OF F2 ANTIFORM
So/S2 LINEATION ≏ F2 FOLD AXIS
SHADED ARROW HEAD = DIRECTION OF F2 ANTIFORM
PARASITIC FOLD F2
SHADED ARROW HEAD = DIRECTION OF F2 ANTIFORM
MINOR FOLD AXIS F2
So/S2 STRIKE SEPARATION OF > 65°
F2 ANTIFORM
F2 SYNFORM
FAULT MOVEMENT
INDEX & STRUCTURAL ELEMENTS MAP GEOLOGY BY J.H. MORRIS
ONT. 1" = 400'
FEB 19 1973 BEATTY TWP.

380

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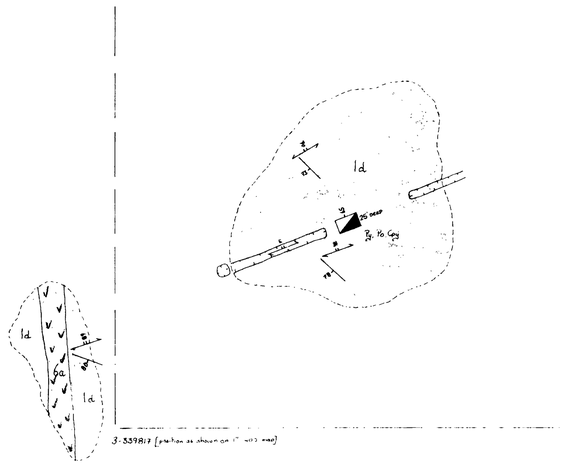
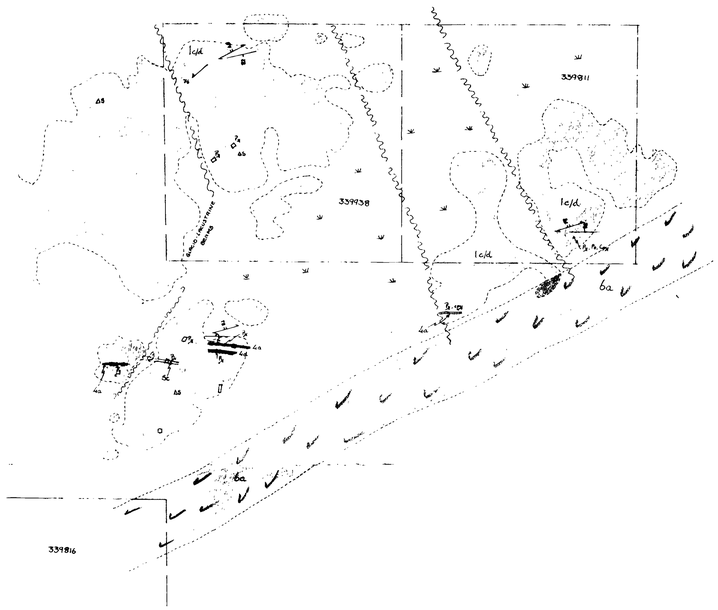
ADJOINS SHEET NO.



AREA 'A'

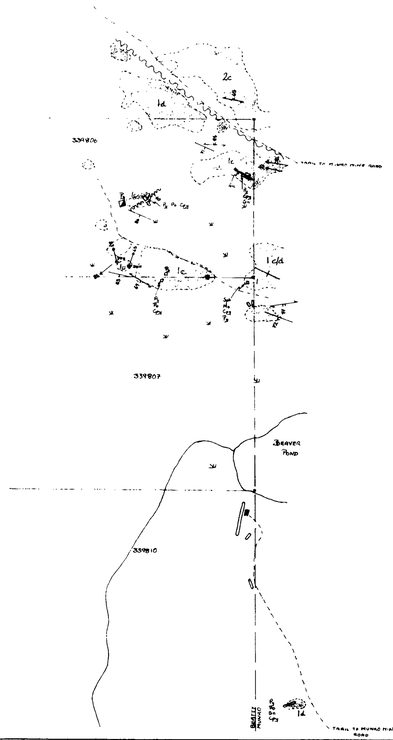
SCALE 1" 50'



AREA 'B'

SCALE 1" 400'

ADJOINS SHEET NO.



AREA 'C'

SCALE 1" 400'

N

GEOLOGY BY J.H. MORRIS

ADJOINS SHEET No.

ONT. DETAIL GEOL. PLAN - AREAS A, B & C. FEB 1910?? BEATTY TWP.

ADJOINS SHEET NO.

FEB 19 1977 BEATTY TWP.

AUCER BASAL TILL SAMPLES

Block - ANALYSES RESULTS

		CU	MO	PB	ZN
[A]					
5+30S	C-1000 -	16	4	12	20
	C-1001 -	25	9	13	27
	C-1002 -	5	9	8	9
	C-1003 -	3	2	7	6
5+70S	C-1004 -	4	1	4	6
[B]					
0+30N	C-1005 -	39	4	10	14
	1006 -	8	2	7	11
	1007 -	2	1	5	7
	1008 -	4	1	5	9
0+70N	1009 -	5	2	11	10
[C]					
4+80S	C-1012 -	8	5	8	12
	C-1011 -	3	2	7	7
	C-1010 -	7	9	7	9
	C-1013 -	4	1	7	9
5+20S	C-1014 -	4	1	5	6
[D]					
5+80S	C-1020 -	27	2	14	54
	C-1019 -	4	1	3	9
6+05S	C-1018 -	4	1	3	8
6+15S	C-1021 -	5	ND	4	8
6+25S	C-1022 -	4	ND	4	8

		CU	MO	PB	ZN	AU(PPB)
[E]						
8+80S	C-1023 -	12	1	6	20	
	C-1024 -	7	1	5	13	
	C-1015 -	14	2	8	9	
	C-1016 -	3	1	6	3	
4+20S	C-1017 -	2	1	7	4	

P.H.M.C. SAMPLES

		CU	MO	PB	ZN	AU(PPB)
[A] @ 5+40S						
+10W	C-1031 -	8	4	10	7	45
+20W	C-1032 -	3	1	9	7	960
+10E	C-1033 -	7	1	12	8	30
+25E	C-1034 -	10	2	8	12	20
[B] @ 0+30N						
+15E	C-1029 -	8	1	14	14	10
+25E	C-1030 -	12	1	9	15	10
[D] @ 5+80S						
+10E	C-1025 -	37	1	47	290	I.S.
+20E	C-1026 -	21	ND	29	82	I.S.
+10W	C-1027 -	31	1	26	46	I.S.
+20W	C-1028 -	7	1	13	15	10
[F] @ 1+70S						
+10E	C-1035 -	4	2	6	4	65
+10W	C-1036 -	21	22	8	6	55
+20W	C-1037 -	17	22	9	6	2000
1+85S	C-1038 -	27	36	9	12	340

BASAL TILL SAMPLE LOCATIONS

FEB 19 1973

ONT 1" = 400' & CEOCHEM ANALYSES RESULTS BEATTY TWP.