WATER QUALITY SUMMARY - HACKETT RIVER

All Units in mg/l unless otherwise stated

E=Extractable
L=less than

D=Dissolved

Sampling Station 5 MARA RIVER - 10 miles below Esker Lake

65°59'02"N
108°28'25"W

NAQUADAT NO: 00NW10QC0005

Date of Sampling	26/06/74	29/07/74	19/08/74
Temp. at Testing °C	20.9	24.2	17.7
Temp. at Sampling °C	10.0	14.0	7.0
pH at Sampling	6.5	---	---
pH at Testing	6.7	6.9	6.8
Turbidity (Turb. Units)	0.65	0.3	0.5
Colour (Rel. Units)	10.	L5.	L5.
Sp. Conductance (umho/cm)	10.9	11.0	10.
Alkalinity: Total, $CaCO_3$	3.0	3.1	4.4
Hardness: Total, $CaCO_3$	5.3	6.0	4.0
Calcium (Ca):D	1.4	1.6	0.8
Sodium (Na): D	0.4	0.4	0.3
Potassium (K):D	0.2	0.3	0.2
Chloride (Cl):D	0.3	0.2	0.4
Sulphate (SO_4):D	2.2	1.8	2.1
Nitrogen: Total, Kjeldahl	0.6	---	---
Nitrogen: $NO_2 - NO_3$	0.05	0.01	0.01
Phosphorous (P): Total	.003	L.003	L.003
Carbon (C): Total Organic	---	4.	4.
Carbon (C): Total Inorganic	---	1.	1.
Silica: Reactive SiO_2	0.2	---	---
Iron (Fe):E	L0.04	L0.04	L0.04
Manganese (Mn):E	L0.01	L0.01	L0.01
Cadmium (Cd):E	L.001	L.001	.002
Chromium (Cr):E	---	---	L.015
Cobalt (Co):E	L.002	L.002	.002
Copper (Cu):E	L.001	L.001	L.001
Zinc (Zn):E	L.001	.001	L.001
Lead (Pb):E	L.004	L.004	L.004
Molybdenum (Mo):E	L0.10	L0.10	L0.10
Nickel (Ni):E	L.002	L.002	.003
Arsenic (As):D	L.0005	L.0005	L.0005

WATER QUALITY SUMMARY - HACKETT RIVER

All Units in mg/l unless otherwise stated | E=Extractable L=less than | D=Dissolved

Sampling Station 6 | MARA RIVER - 300 yds below Esker Lake | 65°56'27"N 108°41'18"W

NAQUADAT NO: 00NW10QC0004

Date of Sampling	26/06/74	29/07/74	19/08/74
Temp. at Testing °C	21.1	24.3	17.2
Temp. at Sampling °C	11.0	14.0	6.0
pH at Sampling	6.55	---	---
pH at Testing	6.7	6.8	6.9
Turbidity (Turb. Units)	0.6	0.2	0.7
Colour (Rel. Units)	10.	L5.	L5.
Sp. Conductance (umho/cm)	10.6	9.0	9.9
Alkalinity: Total, $CaCO_3$	3.1	2.7	4.2
Hardness: Total, $CaCO_3$	5.7	5.0	3.0
Calcium (Ca):D	1.3	1.6	0.4
Sodium (Na): D	0.3	0.4	0.3
Potassium (K):D	0.2	0.3	0.2
Chloride (Cl):D	0.3	0.3	0.6
Sulphate (SO_4):D	2.1	1.9	1.9
Nitrogen: Total, Kjeldahl	0.3	---	---
Nitrogen: NO_2 - NO_3	0.17	L0.01	0.02
Phosphorous (P): Total	.003	L.003	L.003
Carbon (C): Total Organic	---	3.	4.
Carbon (C): Total Inorganic	---	1.	1.
Silica: Reactive SiO_2	0.2	---	---
Iron (Fe):E	L0.04	L0.04	L0.04
Manganese (Mn):E	L0.01	L0.01	L0.01
Cadmium (Cd):E	L.001	L.001	.002
Chromium (Cr):E	---	---	L.015
Cobalt (Co):E	.003	L.002	.002
Copper (Cu):E	.001	L.001	.001
Zinc (Zn):E	.001	L.001	.004
Lead (Pb):E	L.004	L.004	L.004
Molybdenum (Mo):E	L0.10	L0.10	L0.10
Nickel (Ni):E	.003	.002	.005
Arsenic (As):D	L.0005	L.0005	L.0005

WATER QUALITY SUMMARY - HACKETT RIVER

All Units in mg/l unless otherwise stated | E=Extractable L=less than | D=Dissolved

Sampling Station 7 | BOOT LAKE - Midway on east shore at narrowest part of lake | 65°54'03"N 108°27'47"W

NAQUADAT NO: OINWL0QC0002

Date of Sampling	26/06/74	29/07/74	19/08/74
Temp. at Testing °C	21.3	24.5	17.1
Temp. at Sampling °C	9.0	14.0	6.0
pH at Sampling	6.7	---	---
pH at Testing	6.5	6.7	7.8
Turbidity (Turb. Units)	0.8	0.5	0.6
Colour (Rel. Units)	10.	L5.	L5.
Sp. Conductance (umho/cm)	25.7	33.	51.
Alkalinity: Total, $CaCO_3$	3.1	3.5	4.9
Hardness: Total, $CaCO_3$	11.	14.	21.
Calcium (Ca):D	2.8	3.6	6.2
Sodium (Na): D	0.4	0.4	0.5
Potassium (K):D	0.3	0.5	0.5
Chloride (Cl):D	1.6	3.4	7.8
Sulphate (SO_4):D	5.3	6.0	7.0
Nitrogen: Total, Kjeldahl	0.6	---	---
Nitrogen: NO_2 - NO_3	0.11	L0.01	0.01
Phosphorous (P): Total	L.003	L.003	L.003
Carbon (C): Total Organic	---	4.	4.
Carbon (C): Total Inorganic	---	1.	1.
Silica: Reactive SiO_2	1.1	---	---
Iron (Fe):E	0.04	L0.04	0.09
Manganese (Mn):E	L0.01	L0.01	.014
Cadmium (Cd):E	L.001	.001	.002
Chromium (Cr):E	---	---	L.015
Cobalt (Co):E	L.002	L.002	.003
Copper (Cu):E	L.001	0.02	.002
Zinc (Zn):E	.015	.009	.024
Lead (Pb):E	L.004	L.004	L.004
Molybdenum (Mo):E	L0.10	L0.10	---
Nickel (Ni):E	.003	.004	.006
Arsenic (As):D	L.0005	L.0005	L.0005

WATER QUALITY SUMMARY - HACKETT RIVER

All Units in mg/l unless otherwise stated

E=Extractable
L=less than

D=Dissolved

Sampling Station 8 CAMP LAKE- at centre 65°57'58"N 108°23'20"W

NAQUADAT NO: 01NWI0QC0004

Date of Sampling	26/06/74	29/07/74	19/08/74
Temp. at Testing °C	20.9	24.6	17.9
Temp. at Sampling °C	8.0	12.0	7.0
pH at Sampling	6.7	-	-
pH at Testing	6.7	7.2	6.6
Turbidity (Turb. Units)	0.65	0.5	0.6
Colour (Rel. Units)	10.	L5.	L5.
Sp. Conductance (umho/cm)	29.3	30.	32.
Alkalinity: Total, $CaCO_3$	4.2	4.5	5.5
Hardness: Total, $CaCO_3$	12.	15.	12.
Calcium (Ca):D	2.7	3.2	3.0
Sodium (Na): D	0.3	0.4	0.3
Potassium (K):D	0.4	0.5	0.5
Chloride (Cl):D	0.7	0.6	0.9
Sulphate (SO_4):D	7.0	7.8	9.5
Nitrogen: Total, Kjeldahl	0.7	---	---
Nitrogen: NO_2 - NO_3	0.05	L0.01	0.01
Phosphorous (P): Total	.003	L.003	L.003
Carbon (C): Total Organic	---	4.	4.
Carbon (C): Total Inorganic	---	1.	1.
Silica: Reactive SiO_2	1.3	---	---
Iron (Fe):E	0.08	L0.04	L0.04
Manganese (Mn):E	.025	L0.01	.014
Cadmium (Cd):E	L.001	L.001	.003
Chromium (Cr):E	---	---	L.015
Cobalt (Co):E	.003	L.002	.005
Copper (Cu):E	.027	0.02	.011
Zinc (Zn):E	.090	.074	.078
Lead (Pb):E	.009	L.004	L.004
Molybdenum (Mo):E	L0.10	L0.10	L0.10
Nickel (Ni):E	L.002	L.002	.006
Arsenic (As):D	L.0005	L.0005	L.0005

WATER QUALITY SUMMARY - HACKETT RIVER

All Units in mg/l unless otherwise stated

E=Extractable
L=less than

D=Dissolved

Sampling Station 9. CLEAVER LAKE - from S.E. point 41/2 miles from Camp Lake

65°58'18"N
108°28'53"W

NAQUADAT NO: 01NW10QC0003

Date of Sampling	26/06/74	29/07/74	19/08/74
Temp. at Testing °C	21.4	24.2	17.1
Temp. at Sampling °C	9.0	13.0	5.0
pH at Sampling	6.8	---	---
pH at Testing	7.0	7.2	7.0
Turbidity (Turb. Units)	0.75	0.2	0.5
Colour (Rel. Units)	5.	L5.	L5.
Sp. Conductance (umho/cm)	72.2	73.	79.
Alkalinity: Total, $CaCO_3$	12.	13.	13.
Hardness: Total, $CaCO_3$	32.	33.	32.
Calcium (Ca):D	8.8	9.7	11.
Sodium (Na): D	0.5	0.5	0.6
Potassium (K):D	0.6	0.7	0.7
Chloride (Cl):D	0.9	0.9	1.1
Sulphate (SO_4):D	17.	19.	22.
Nitrogen: Total, Kjeldahl	0.5	---	---
Nitrogen: NO_2 - NO_3	0.03	0.01	0.19
Phosphorous (P): Total	L.003	L.003	L.003
Carbon (C): Total Organic	---	2.	3.
Carbon (C): Total Inorganic	---	3.	3.
Silica: Reactive SiO_2	2.2	---	---
Iron (Fe):E	L0.04	L0.04	L0.04
Manganese (Mn):E	L0.01	L0.01	L0.01
Cadmium (Cd):E	L.001	.002	.002
Chromium (Cr):E	---	---	L.015
Cobalt (Co):E	L.002	L.002	.002
Copper (Cu):E	.006	.006	.004
Zinc (Zn):E	0.28	0.14	0.18
Lead (Pb):E	L.004	L.004	L.004
Molybdenum (Mo):E	L0.10	L0.10	L0.10
Nickel (Ni):E	.004	.004	.005
Arsenic (As):D	L.0005	L.0005	L.0005

Addundum I

GEOLOGY AND OUTLINE OF ORE BODY

FROM: BATHURST NORSEMINES (N.P.L.)

ANNUAL REPORTS

1973 and 1974

Far North Property Promising

ENCOURAGING RESULTS FROM 1973 PROGRAM

By R.J. MacNEILL, P.Eng.

INTRODUCTION

Derry Michener & Booth, retained by Bathurst Norsemines Ltd. (N.P.L.) as mining geological consultants, has reviewed the results of exploration carried out by Bathurst on their Hackett River properties up to 1969, and the exploration carried out by Cominco Ltd. under an option agreement in 1970, 1971, 1972 and to date in 1973. Representing Derry Michener & Booth the writer has reviewed reports and data covering work prior to 1971 and has reviewed and reported upon the exploration programmes of 1971, 1972 and 1973. Following a visit to the property in July, 1973, a summary report of observations on the current programme was submitted to the Bathurst management. The present report is a general summary of data and results to 1972 and is a review of the 1973 programme. A summary of results of 1973 drilling on the East Cleaver Lake Zone is included.

AUTHOR'S CREDITS

R.J. "Jake" MacNeill is a Mining Geological Consultant in Vancouver where he represents the worldwide consulting firm of Derry Michener and Booth. A graduate of Queen's University and California Institute of Technology. Mr. MacNeill has extensive experience in most phases of mining and mining explorations in many parts of the world. Prior to entering the consultation field in 1971 he held senior positions with several major Canadian, American, and Australian companies. He has been consultant for Bathurst Norsemines Ltd. for the last 2 years.

SUMMARY

In 1973 detailed geological and geophysical work and seven diamond drill holes were completed on the East Cleaver Lake Zone. The first three holes were unsuccessful but the succeeding four cut wide intersections of high grade lead-zinc-silver with some copper and gold mineralization. It is estimated that at least four million tons of high grade and about an equivalent tonnage of low grade material to a depth of 800 feet have already been drill indicated on this zone.

If the "A" Zone, to the east, persists to a plunge depth of 700 feet, an additional four million tons could be present to that depth.

It is apparent that the Hackett River Properties have already attained considerable stature and that there exists considerable potential for additional tonnage and further discoveries.

PROPERTY

The Bathurst Norsemines Hackett River Properties comprised 901 mining claims at December 31, 1972. All the claims are reported by Bathurst and Cominco to be in good standing.

LOCATION AND ACCESS

The property is located in the Hackett River area, District of MacKenzie, approximately 300 miles northeast of the City of Yellowknife, N.W.T. Bathurst Inlet, on the Arctic Coast, lies about 45 miles to the north (refer to sketch).

Access to the property is by air. Winter access is more convenient using the larger lakes for DC3-size freighters; however, there are a number of large eskers on and adjacent to the property on which year-round gravel airstrips could be constructed. An airstrip has been partially completed near Cigar Lake in the south-central part of the property. Winter ground haulage may be feasible and another possibility is a combination of summer barging to the Bathurst Inlet area with winter cattrains to the property. The accessibility of the Bathurst Inlet area for ocean-going vessels, however, may require considerable study.

HISTORY

The earliest known prospecting in the area was that of Rio Tinto in 1956 who discovered copper mineralization associated with sulphide gossans. The Geological Survey of Canada mapped the area in 1962 (Paper 63-40) and described these gossans.

The original claim group covering what is now called the "A" Zone was staked in 1966 and in 1967 by Bathurst Inlet Mining Corporation Ltd. Additional claim groups were staked in the area in 1968 and 1969 by Norsemines Ltd. and Atlin-Yukon Mining Ltd. These companies were amalgamated in 1970 to form Bathurst Norsemines Ltd., the present claim owners.

Preliminary geological mapping, prospecting and ground electromagnetic surveys were undertaken in 1968 and 1969. In 1969 a programme of 13 shallow drill holes totalling 2902 feet was completed by Bathurst Inlet Mining Co. on the "A" Zone.

In January, 1970 the property was optioned to Cominco Ltd., who have conducted all exploration since that time. Over $1,000,000 has been expended to date. Under the terms of the agreement, Cominco can progressively earn up to an approximately 65% interest in the property by maintaining the property in good standing, by continuing exploration and by concluding financial arrangements to bring the property into commercial production. Early in 1970 an airborne electromagnetic and magnetic survey of 926 line-miles was carried out over the property. The Cominco exploration in 1970 and 1971 was concentrated upon proving the depth and strike extensions of the high-grade silver-zinc mineralization in Zone "A", reconnaissance geological mapping, trenching, examination of a number of mineral occurrences and testing numerous geophysical conductors throughout the volcanic-sedimentary belt considered to be the favourable geological horizon. A geo-

detic survey in 1971 established control points throughout the property. In 1972 Cominco's exploration programme comprised detailed mapping of a portion of the SA and ED claim groups, which adjoin the southeast corner of the Bathurst Norsemines claim group and which fall within the terms of the option agreement; geological checking of mapping done in previous years; gravity surveys on Finger Lake West Zone, Finger Lake East Zone and Jo Zones; some electromagnetic and induced polarization surveys on the SA and ED groups; and two drill holes on a coincident EM-Gravity anomaly east of Cleaver Lake.

In 1973 the main thrust of the exploration programme has been detailed geological study and diamond drilling of the East Cleaver Lake Zone. It is understood that since July, additional gravity and magnetic detailing has continued around the East Cleaver Lake Zone and along the trend of the favourable contact trend from Cleaver Lake to Finger Lake.

GEOLOGY

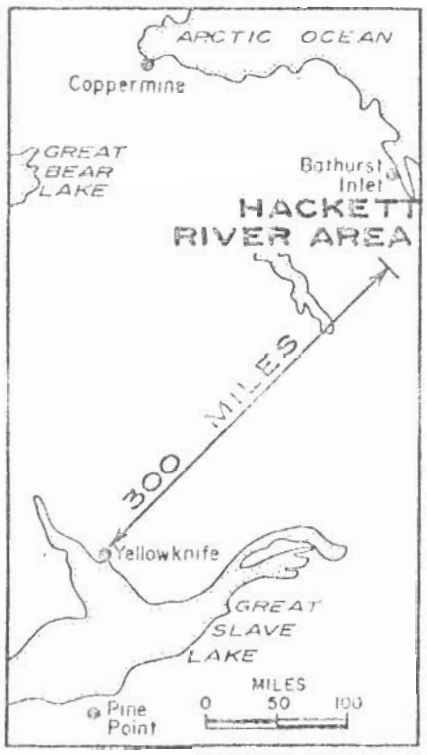
Regional

The Hackett River area is underlain by a broad, northwesterly-trending belt of metasediments and metavolcanics of assumed Yellowknife Group (Archean) age which are flanked by granite rocks of similar age. The belt is known to have a length of at least 25 miles and widths up to 12 miles. Within the claim group the belt appears to be closed off at the northwest end by granite but is open to the east where it swings to a northeasterly direction. The metasediments comprise quartzite, greywacke, quartz-biotite schist (with minor quartzite), limestone, calcareous quartzites and paragneiss derived from the above metasediments. The sequence is intercalated with basic to intermediate volcanic rocks and concordant acid volcanics including thick sequences of ash, tuff, rhyolites and chert. Younger north-west-trending diabase dykes cut the belt. The metasediment-metavolcanic belt is believed to have undergone several periods of folding. A prominent northwest-trending fault bounds the belt and follows the southern property boundary for part of its length.

Numerous long sulphide gossans have been discovered throughout the belt. Many of these are caused by weak sulphide mineralization, chiefly pyrite and pyrrhotite, with only minor chalcopyrite. However, massive sulphide lenses composed of pyrite, sphalerite, chalcopyrite and galena with notable values in silver and gold have also been discovered at several places.

Local

Geological mapping of the property on a reconnaissance scale, with selected portions mapped at larger scale, in the last few years has defined an extensive belt of metamorphosed volcanic and sedimentary rocks trending NW-SE through the claim group. The formations are highly contorted and faulted but seem to have a general southerly dip. What appear to be the earlier volcanics are primarily intermediate to basic in composition. Concordant with, and probably overlying the basic volcanics, is a thick series of acid volcanics varying from rhyolites to chert. A predominant portion of the acid volcanic series is composed of rhyolitic ash and lapilli tuff with some agglomerate. Calcareous and intermediate volcanic rocks occur intercalated within the acid volcanic series. The volcanics appear to be overlain by limestones and limy volcanics and in turn by a thick series of metasediments – graphitic schists, greywackes, argillites, siltstones, derived schists and metaquartzites. Intrusive rocks – primarily acid and intermediate granitics with associated dykes, underlie the northerly part of the claim group. The intrusives are represented throughout the volcanic series as stocks and dykes and presumably postdate the volcanic-sedimentary series. A few diabase dykes have been noted. Most of the series has been sheared, locally deformed by more than one period of folding and metamorphosed to the upper amphibolite facies.



Stratiform sulphides occur at many localities within the metavolcanic-metasedimentary series. Several lenses of massive sulphides composed of pyrite, sphalerite, chalcopyrite and galena with notable values in gold and silver have been discovered. These comprise the important mineral deposits discovered so far which are described in more detail below. Relationships of the rocks host to the ore zones are being studied. A volcanogenic origin for the ore sulphides has been proposed based upon their proximity and spatial relationship to the acid volcanics. The writer feels that a syngenetic sea bottom origin followed by extensive remobilization should be considered as a possible origin. It is improbable that the precise geological relationships and the structural setting of the major ore sulphide lenses will be apparent until the current studies are completed and a considerable amount of additional data becomes available from detailed exploration. This particularly applies to the Cleaver Lake East body where drilling has been concentrated in 1973.

GEOPHYSICS

In addition to airborne magnetic-electromagnetic surveys, Cominco has for several years conducted detailed ground follow-up on most of the anomalies found by airborne magnetic and electromagnetic surveys. Geochemical tests have also been conducted over many geophysical anomalies and prospects. The results are very voluminous and it is considered beyond the scope of this report to deal with the results in detail. Geophysical surveys using closer spacing in selected areas and with more sensitive instrumentation are currently being carried out. Gravity and EM combinations seem to offer the most productive results.

MINERAL DEPOSITS

Although base metal sulphides have been discovered in at least six separate zones, this report summarizes only the three more significant ones – the "A" or Main Zone, the Finger Lake Zone and the East Cleaver Lake Zone.

"A" Zone

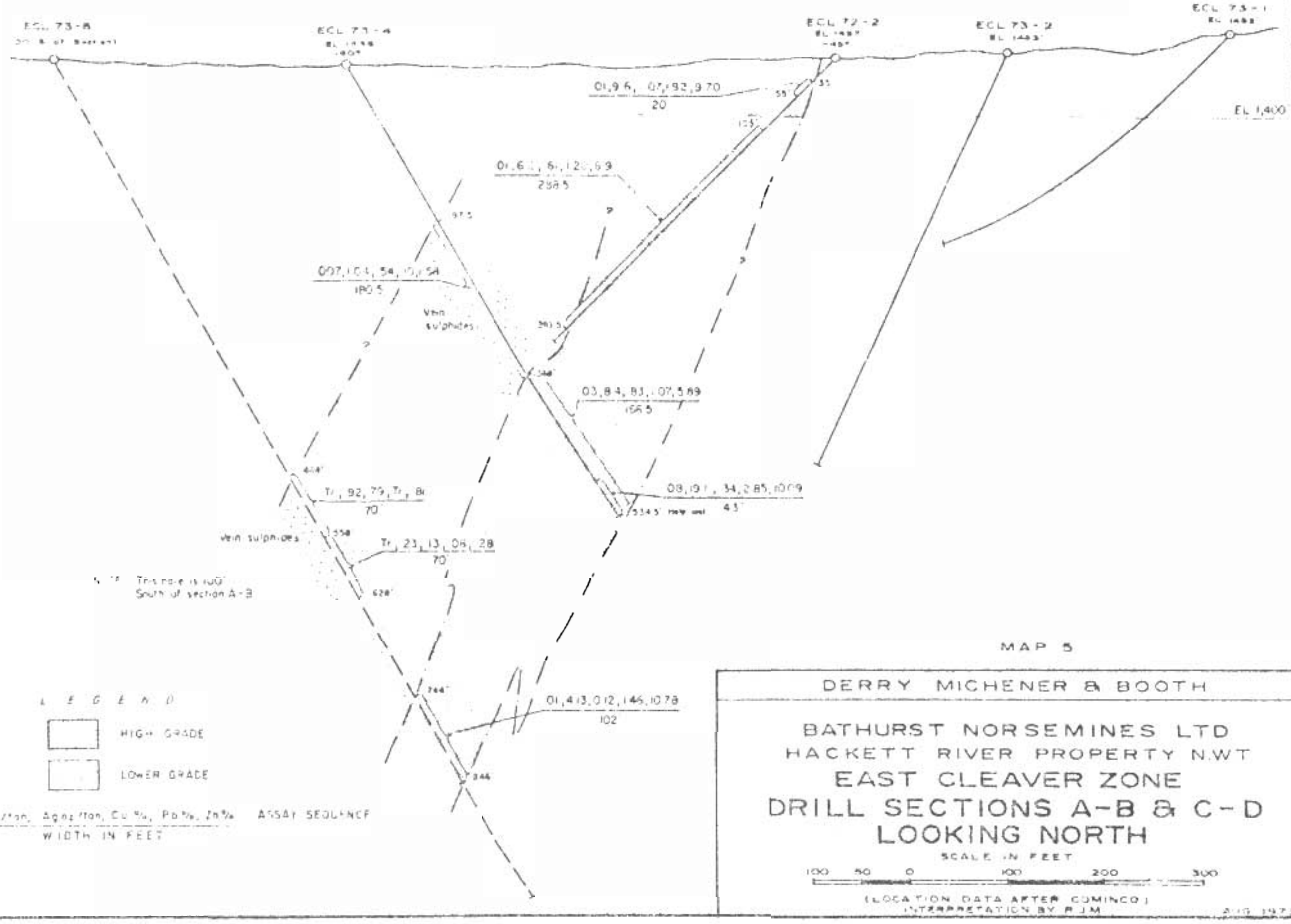
Following the initial drilling by Bathurst Inlet Mining Co. Cominco drilled eleven holes (A, B, C, D, E, F, G, H, I, K and P), totalling 6810 feet.

Massive sulphides were intersected in all holes drilled along a strike length of 3300 feet from hole P in the west to K in the east.

Drilling on the Main "A" Zone has outlined a band of massive pyrite and pyrrhotite about 60 to 70 feet thick

SECTION A-B

276° Azimuth (approx)



MAP 5

DERRY MICHENER & BOOTH

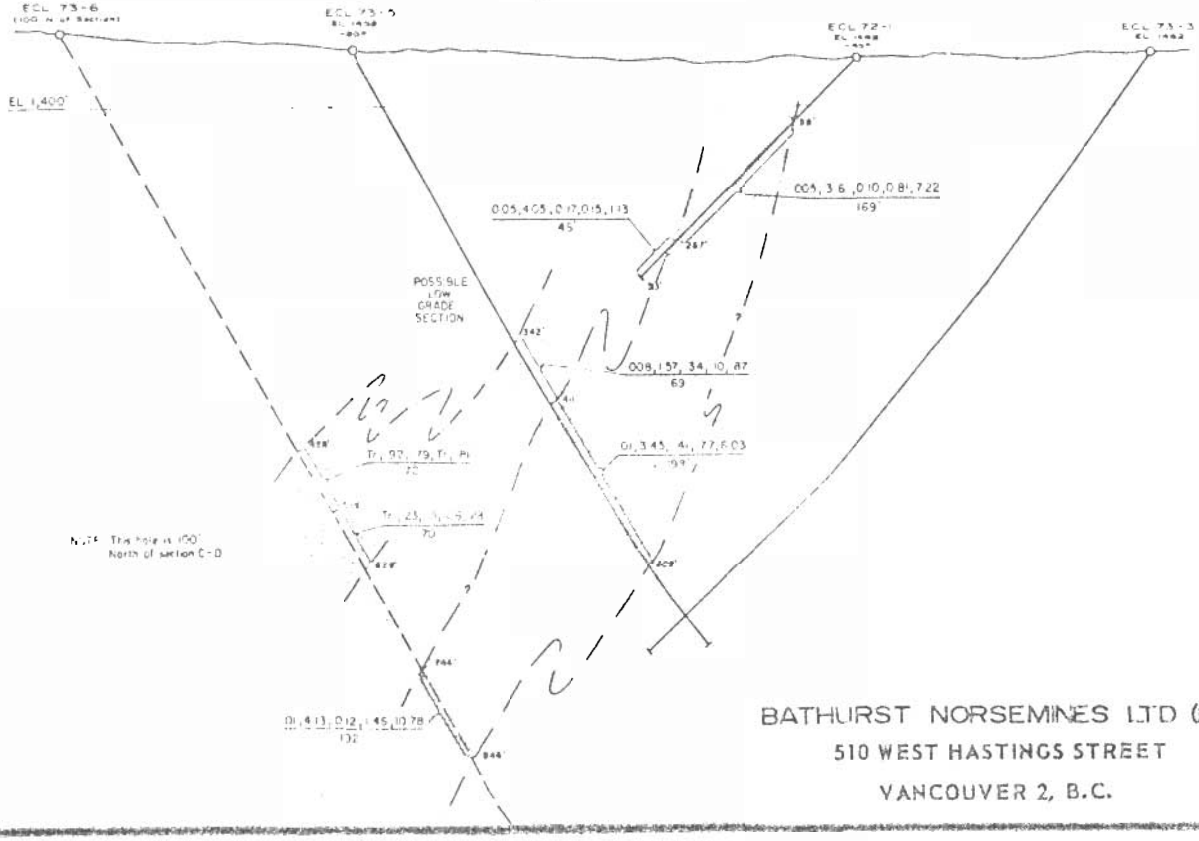
BATHURST NORSEMINES LTD
HACKETT RIVER PROPERTY N.W.T
EAST CLEAVER ZONE
DRILL SECTIONS A-B & C-D
LOOKING NORTH

SCALE IN FEET
100 50 0 100 200 300

(LOCATION DATA AFTER COMINCO)
INTERPRETATION BY R.J.M.

SECTION C-D

276° Azimuth (approx)



BATHURST NORSEMINES LTD (NPL)
510 WEST HASTINGS STREET
VANCOUVER 2, B.C.

dipping 45° south and west. This band contains significant silver-lead-zinc-copper and gold. Two lenses, known as the east and west bodies, contain somewhat better grades averaging about 7 oz/ton silver, 8.5% zinc, 1.4% lead, 0.25% copper and 0.05 oz/ton gold. The drill holes are too widely spaced to allow calculations of ore reserves and it is apparent that these higher grade lenses are open at depth. In addition a possibly important copper lens was intersected by hole H beneath the west body. The one hole intersecting this lens cut 95 feet of 2.73% Cu, 7.00 oz/ton Ag with minor Pb, Zn and Au values.

(1) East Body – (from hole K to hole (13)

The widely separated drill intersections cut the upper portion of this body from surface down to the 200 foot level (holes K, E, 6, 12, 3 & 13) and between the 400 and 600 foot levels (holes F, C & A).

The averages from these drill intercepts are as follows:

	True Width	Au. oz/ton	Ag. oz/ton	Cu%	Pb%	Zn%
Upper Portion	26 ft.	0.04	6.81	0.58	1.69	8.86
Lower Portion	17 ft.	Tr	7.69	0.56	1.18	6.77
Average for Total Zone	23 ft.	0.02	7.16	0.57	1.49	8.03

The overall grades represent the sum of the weighted averages for all intersections: the average width is the arithmetic average of all true widths. These figures should be considered as "general order of magnitude" data.

From the above it is apparent that, apart from gold, there is little variation in metal values down to 600 feet below surface.

(2) West Body – (holes P & H over a strike length of about 300 feet)

This body has been intersected between 200 feet and 300 feet below surface by drilling which gave the following weighted averages:

Length Between Holes	True Width	Au. oz/ton	Ag. oz/ton	Cu%	Pb%	Zn%
250 ft.	46.5 ft.	0.15	7.16	0.06	1.61	9.58

It should be noted that the overall grades for both the East and West bodies are roughly comparable except for copper and gold.

Between the eastern and western bodies the massive sulphide zone is generally of low grade although a slightly higher grade section is present in the footwall in holes 7, 12, and 8 with the following average values:

True Width	Au. oz/ton	Ag. oz/ton	Cu%	Pb%	Zn%
19 ft.	0.01	1.30	0.25	0.11	6.21

A copper zone occurs in the footwall of the western part of the "A" Zone. The grade is generally low throughout with erratic higher values ranging from 1% cu - 3.5% Cu and 1 oz. to 6 oz/ton Ag over narrow widths. The weighted average of all such better intersections is 1.34% Cu and 2.2 oz/ton Ag over a true width of 14 feet.

The deepest drill intersection, at 700 feet below surface in hole I, is noteworthy in that it cut a 110 foot thickness of the disseminated footwall copper zone averaging 1.16% copper. This zone includes a 20 foot hanging wall section grading 2.1% copper.

Where this zone was intersected in hole H a 95 foot core length grades 2.73 copper, 7.00 oz silver with minor lead zinc and gold. This intersection lies about 110 feet below the footwall of the massive sulphide zone.

It is suggested that the copper zone, together with the overlying massives sulphides may plunge at about 50° to the west, as does the east body.

"A" Zone Reserves – For the "A" Zone, the widely spaced drilling has indicated the presence of lenses and shoots, of silver-zinc-lead mineralization, with some copper values, within a main stratabound sulphide zone.

The partially drilled east body, or lens, has a marked plunge to the north and is open down plunge. Assuming 9 cu. ft. per short ton for the massive sulphides within this shoot, a strike length of 900 feet and an average true width of 23 feet, the drill incidated potential on this east body is in the order of 2,300 tons per foot of extension down plunge. The average weighted grade of all the drill intersections is 7.1 oz. per ton silver, 8.16% zinc, 1.18% lead, 0.57% Cu and 0.02 oz. Au. per ton.

The West Body is indicated by two holes, P and H, which intersect the mineralization at approximately 200 feet apart along strike. Contingent upon further drilling, it is conjectured that the West Body may have a strike length of approximately 600 feet and that the underlying copper shoot may have a strike length of about 300-400 feet. If the West Body proves to have plunge continuity the down plunge potential could be in the order of 3600 tons/v.ft. at 0.15 oz. Au., 7.16 oz. Ag., .06% Cu., 1.61% Pb., and 9.58% Zn. The copper zone with a 300 foot length may have a down plunge potential of 1300 tons per foot grading approximately 2% copper.

Thus the totals for the "A" Zone approximate 6600 tons per foot of extension down plunge.

Finger Lake Zone – (Located halfway between the "A" and Cleaver Lake Zones.)

A hole drilled beneath an outcrop of high-grade massive zinc sulphide, found by prospecting and later confirmed as a weak geophysical conductor, cut 28 feet of 8.54 oz. Ag., 0.03% Cu., 1.23% Pb., and 2.97% Zn.

Although this is the only significant intersection of "ore grade" obtained to date at this location, its presence may have significance beyond its indicated size due to its proximity to the important East Cleaver Lake Zone which is one mile to the west. Between these zones geophysical anomalies of possible importance remain untested. One of these is a broad gravity anomaly with a coincident electromagnetic response. This anomaly will undoubtedly warrant drilling.

East Cleaver Lake Zone

Following a discovery hole into this zone in 1970, a second intersection was obtained in 1971. Electromagnetic and gravity surveys in 1972 preceeded the drilling late in 1972 of two very important holes; ECL 72-1 and ECL-72-2. Drilling recommenced in 1973 but the first three holes of the series were unsuccessful due to mechanical problems. These holes did establish, however, that the dip or plunge of the orebody is to the west. The next three holes were successful in obtaining long intersections of good grade material. The final hole in the 1973 series intersected two zones with high values in gold and silver. This hole, ECL 73-7 was not drilled on regular section, and the significance of the intersections, (very high in silver but low in lead and zinc) relative to the main East Cleaver Zone remains unknown. Possibly these intersections represent a different ore horizon.

A summary of drilling results to date on the East Cleaver Lake Zone is as follows:

Drilling Results

		Au (oz)	Ag (oz)	Cu%	Pb%	Zn%
1970 - CL-4	86'	0.007	9.0	0.03	1.40	6.60
1971 - ECL 71-1	10'	TR	3.0	0.01	0.98	2.30
1972 - ECL 72-1	169'	0.005	3.60	0.10	0.81	7.22
	46'	0.05	4.05	0.17	0.15	1.13
- ECL 72-2	20'	0.01	9.60	0.07	1.92	9.70
	288.5'	0.01	6.20	0.61	1.20	6.95
1973 - ECL 73-4	180.5'	0.007	1.04	0.54	0.10	1.58
	166.5'	0.03	8.40	0.83	1.07	5.89
- ECL 73-5	198'	0.008	1.57	0.34	0.10	0.87
- ECL 73-5	69'	0.008	1.57	0.34	0.10	0.87
	198'	0.01	3.45	0.41	0.77	6.03
- ECL 73-6	70'	TR	0.92	0.79	TR	0.81
	102'	0.01	4.13	0.12	1.46	10.78
- ECL 73-7	22.5'	0.12	28.6	0.16	0.65	0.30
	30'	0.17	13.9	0.12	0.95	TR

The two East-West sections on the East Cleaver Lake zone, approximately 200' apart, have been probed to a vertical depth of about 500'. On an intermediate section about halfway between sections A-B and C-D, hole ECL 73-6 intersected over 100' of good grade material at approximately 800' down the dip (or plunge) of the ore zone.

On the basis of the drilling thus far completed, an order of magnitude of the minimum dimensions of the higher grade portion of the ore zone can be derived from the following:

(a) Ore grade materials have been intersected over a length of about 500'.

(b) Depths of at least 500' on Sections A-B and C-D and at least 800' on an intermediate section have been indicated by drilling.

(c) True width of the higher grade zone seems to vary from 140' - 180' on Sections A-B and C-D, and is about 90' at a depth of 800' down dip.

Thus although the extent of the East Cleaver Lake mineral zone has not yet been delineated either along strike or down dip, on the basis of the drilling completed to date it would appear that the high grade zone has at least four million tons drill-indicated. A weighted average of drill intersections in the higher grade portion of the East Cleaver Lake Zone is .013 oz. gold, 5.39 oz. silver, 0.45% copper, 1.06% lead and 7.07% zinc.

Of possibly great significance to the economic potential of this deposit is the presence of a wide but lower grade zone which overlies the high grade section, but which is suspected to be on the stratigraphic footwall side of the orebody. This lower grade material covers a broad area. Weighted averages of the wide intersections of lower grade in holes 73-4, 73-5, and 73-6 are 0.007 oz. gold, 0.97 oz. silver, 0.48% copper, 0.84% lead and 1.08% zinc. Any studies directed toward mining the East Cleaver Lake Zone would have to take into consideration this broad zone of lower grade material from the standpoint of its value to an open pit or block caving operation. Overburden depth seems to average about 20' - 25' so should offer no serious obstacle to an open pit operation.

CONCLUSIONS

The "A" Zone, with a drill indicated potential of about 6600 tons per foot of extension down plunge has not been fully delineated, especially to depth, but it is suggested that further work on this deposit should be deferred while search for extensions of the East Cleaver, and other occurrences of similar stature are pursued.

The structural setting of the Cleaver Lake sulphide Zone is considered extremely important. The indicated N-S strike of the zone is discordant with the regional E-W trend and it can be speculated that ore emplacement has been profoundly influenced by major folding, faulting, or both. Major faulting in a N-S direction may be present anywhere in a belt about a mile wide through the Boot-Thigh Lake trend.

Detailed magnetic surveys may prove valuable in supplementing geologic evidence. Although the ores are not particularly magnetic, it is noted that the "A" Zone gave positive magnetic response over most of its length. Magnetic surveys with high sensitivity may indicate structural trends of the host rock formations.

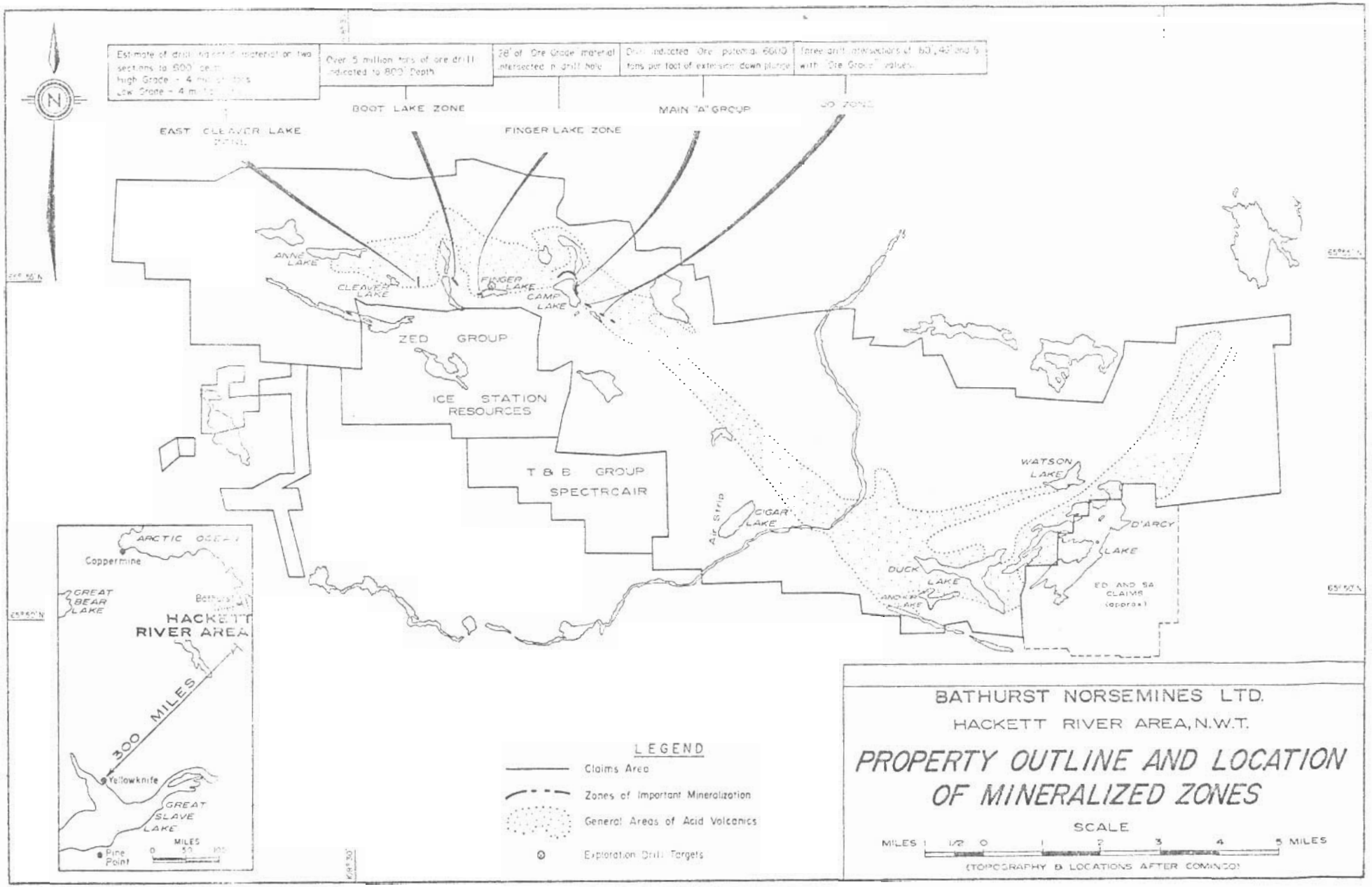
A gravity anomaly with coincident conductivity centered just east of Boot Lake seems a most intriguing exploration target worthy of detailed ground work and probably drilling. This anomaly seems definite, having been indicated on three lines. Its location on the favourable formational trend raises the possibility that it may represent a sulphide zone at depth. The Finger Lake sulphide zone, where modest values in silver, lead and zinc were obtained over a 28' core length in hole N 71-1, is only about 1600' east of this anomaly along strike.

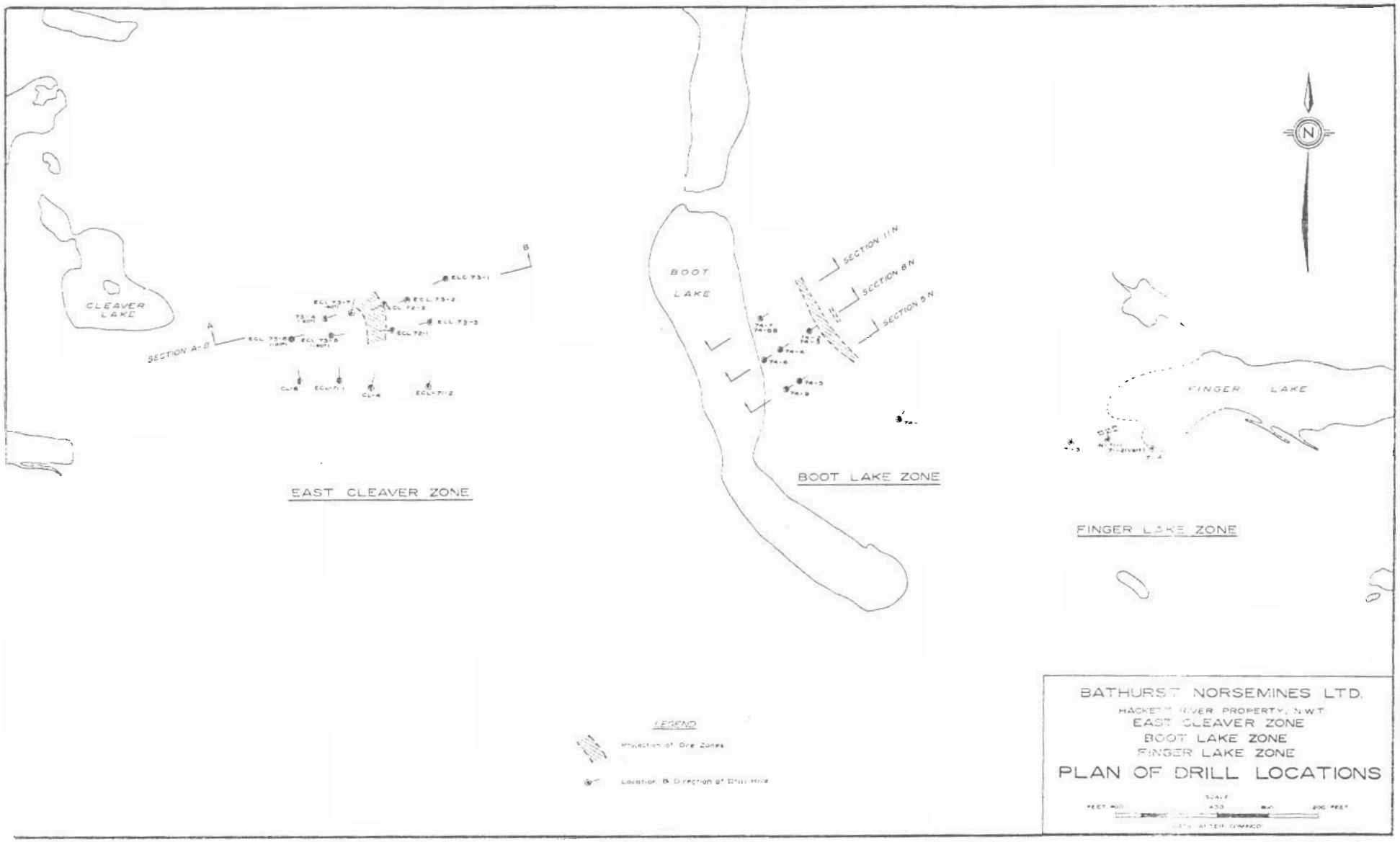
Two small gravity anomalies between Finger Lake and the "A" Zone at Camp Lake have not yet been drilled.

Employment of electromagnetic equipment with greater depth penetration than that used in the past seems warranted in selected areas.

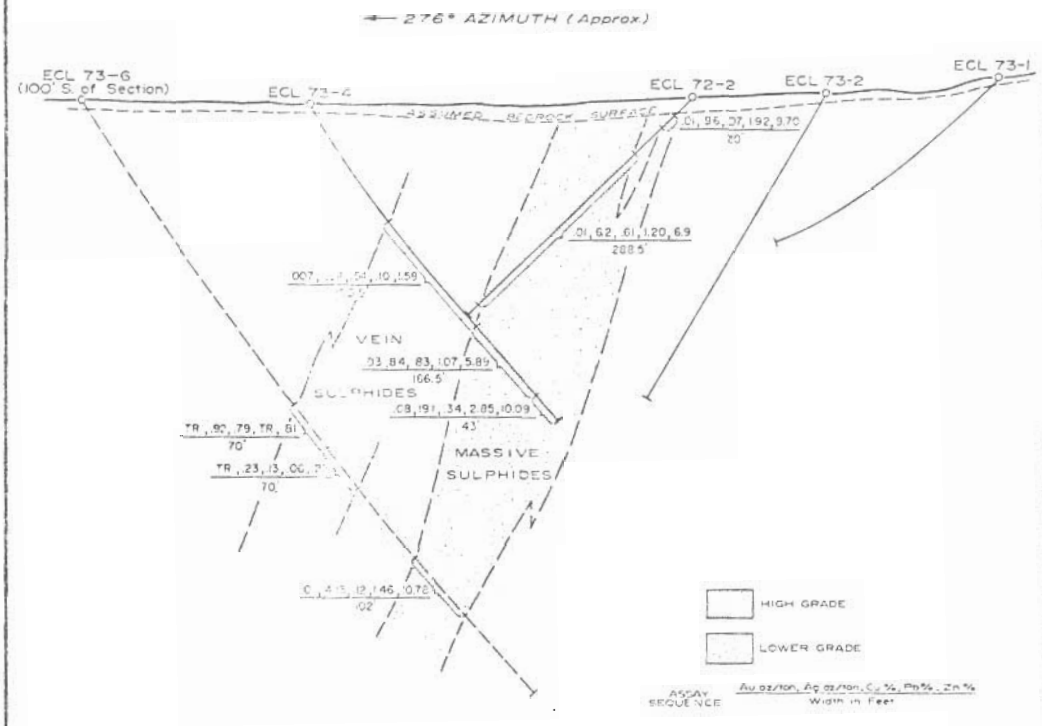
Geochemical work in 1971 showed no significant anomalies over the sulphide zone at Finger Lake nor over the East Cleaver Lake deposit. Geochemical anomalies in silver, copper, lead and zinc were found over an extensive area south of Ann Lake. Many sulphide bearing boulders and erratics have been found in this area, and although it is possible that glacial carry westward from Cleaver Lake could account for these boulders and anomalies, it is possible that they may have originated from other sources.

The exploration programme being financed and conducted by Cominco has proceeded in a normal sequence resulting in discovery of a second important base metal sulphide deposit – the East Cleaver Lake Zone. The large Bathurst Norsemines property has only been partially explored and it is expected that progressive exploration over succeeding years will result in the discovery of other important deposits. Many geophysical responses have been found over a very extensive zone of favourable host rocks and it is probable that some of these may, after detailed work, prove to represent mineral deposits which will be mineable when the economics of operating at this location permit. The presence of the East Cleaver Lake Zone with good grades over good widths and with a clear indication of substantial depth extension appears to bring the time closer when such operations may become possible.


Estimate of drill indicated material on two sections to 600' depth
high Grade - 4 million tons
Low Grade - 4 million tons
Over 5 million tons of ore drill indicated to 800' Depth
28' of Ore Grade material intersected in drill hole
Drill indicated Ore potential 6600 tons per foot of extension down plunge
Three drill intersections of 60', 45' and 5' with "Ore Grade" values
BOOT LAKE ZONE
FINGER LAKE ZONE
MAIN "A" GROUP
EAST CLEAVER LAKE
ANNE LAKE
CLEAVER LAKE
FINGER LAKE
CAMP LAKE
ZED GROUP
ICE STATION RESOURCES
T & B GROUP
SPECTRCAIR
AIR STRIP
CIGAR LAKE
WATSON LAKE
D'ARCY LAKE
DUCK LAKE
ED AND SA CLAIMS (approx)
ARCTIC OCEAN
Coppermine
GREAT BEAR LAKE
Bathurst Inlet
HACKETT RIVER AREA
300 MILES
Yellowknife
GREAT SLAVE LAKE
Pine Point
MILES
0 50 100
LEGEND
Claims Area
Zones of Important Mineralization
General Areas of Acid Volcanics
Exploration Drill Targets
BATHURST NORSEMINES LTD.
HACKETT RIVER AREA, N.W.T.
PROPERTY OUTLINE AND LOCATION OF MINERALIZED ZONES
SCALE
MILES 1 1/2 0 1 2 3 4 5 MILES
(TOPOGRAPHY & LOCATIONS AFTER COMINCO)


CLEAVER LAKE
SECTION A-B
A
B
EAST CLEAVER ZONE
BOOT LAKE
SECTION 11N
SECTION 8N
SECTION 5N
BOOT LAKE ZONE
FINGER LAKE
FINGER LAKE ZONE
N
LEGEND
Projection of Ore Zones
BATHURST NORSEMINES LTD.
HACKETT RIVER PROPERTY, N.W.T.
EAST CLEAVER ZONE
BOOT LAKE ZONE
FINGER LAKE ZONE
PLAN OF DRILL LOCATIONS
SCALE
FEET 400 0 400 800 FEET

SECTION A-B



BATHURST NORSEMINES LTD.

HACKETT RIVER PROPERTY, N.W.T.

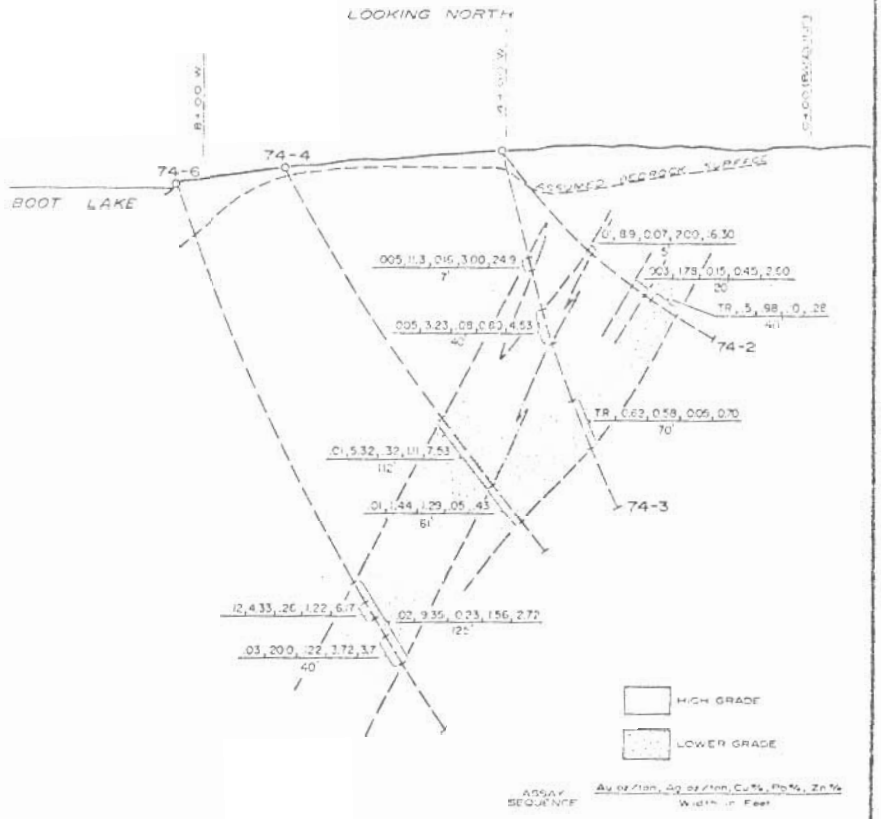
EAST CLEAVER LAKE

SCALE IN FEET

100 50 0 100 200 300

(LOCATION DATA AFTER COMINCO)

SECTION 8 NORTH



BATHURST NORSEMINES LTD.

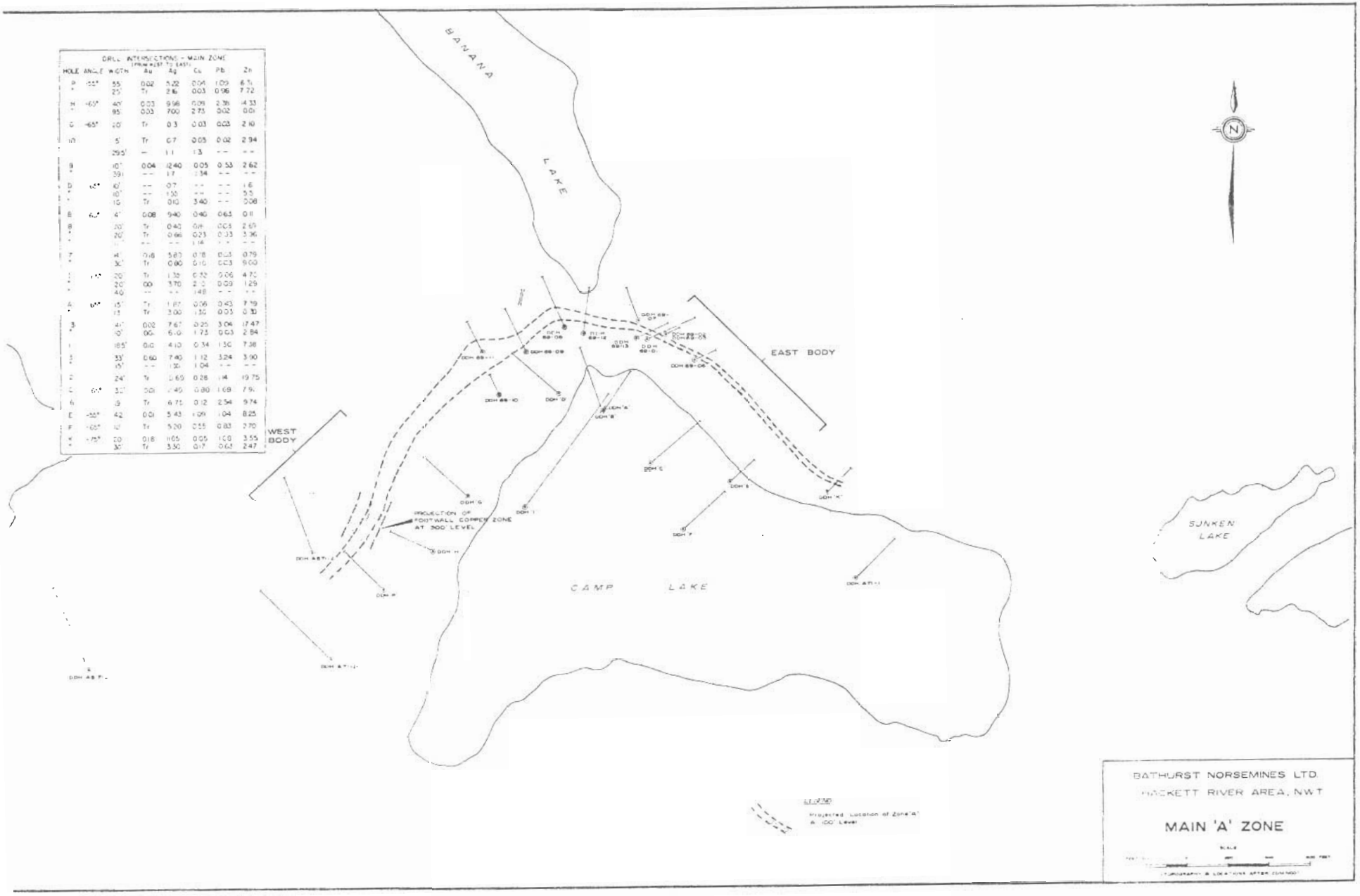
HACKETT RIVER PROPERTY, N.W.T.

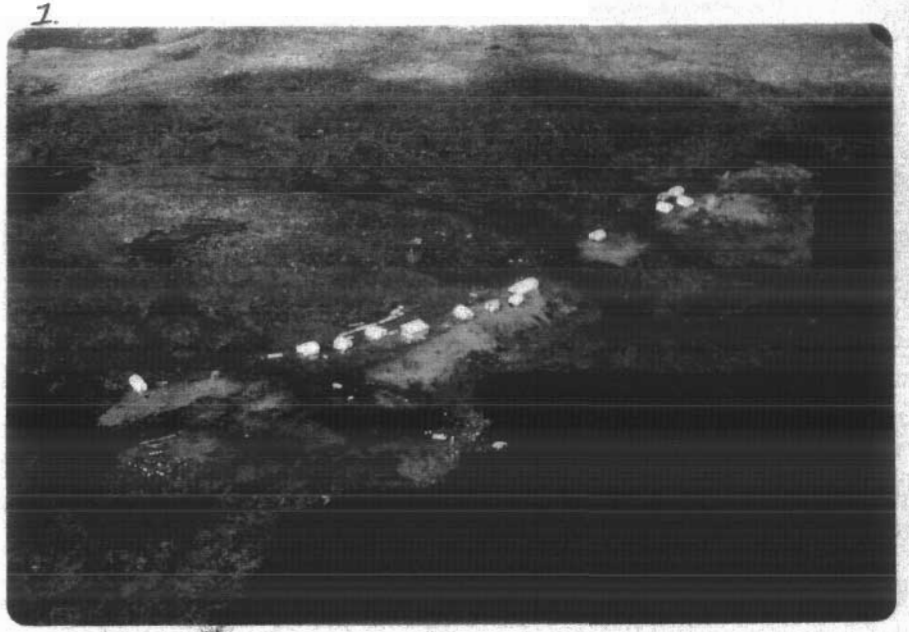
BOOT LAKE

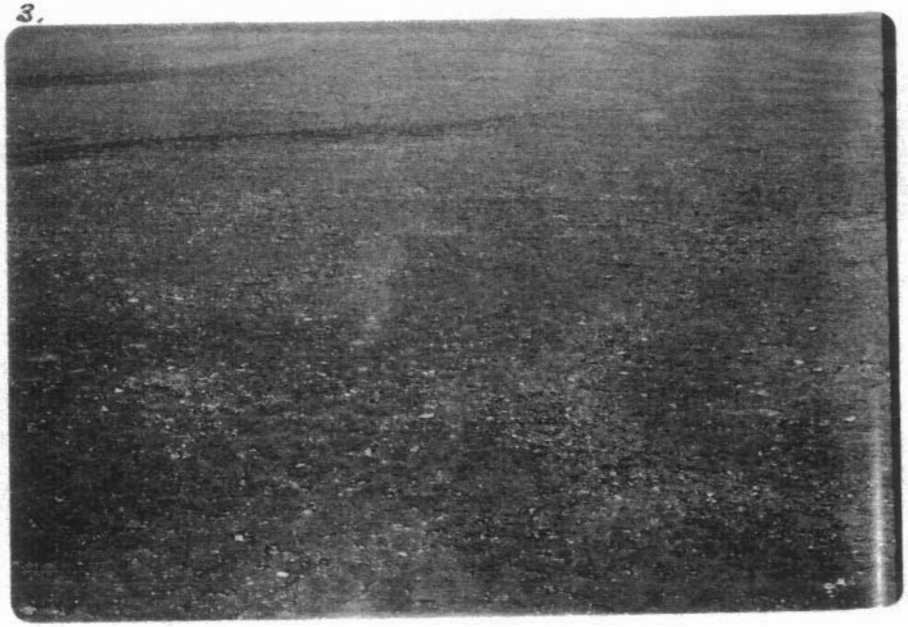
SCALE IN FEET

100 50 0 100 200 300

(LOCATION DATA AFTER COMINCO)


DRILL INTERSECTIONS - MAIN ZONE
(FROM WEST TO EAST)
HOLE ANGLE WIDTH Au Ag Cu Pb Zn
P -55° 55' 0.02 5.22 0.04 1.09 6.74
" 25' Tr 2.16 0.03 0.96 7.72
N -65° 40' 0.03 9.96 0.09 2.38 4.33
" 95' 0.03 7.00 2.73 0.02 0.01
G -65° 20' Tr 0.3 0.03 0.03 2.10
M 5' Tr 0.7 0.05 0.02 2.94
295' -- 1.1 1.3 -- --
B 10' 0.04 12.40 0.05 0.53 2.62
" 39' -- 1.7 2.34 -- --
D -65° 10' -- 0.7 -- -- 1.6
" 10' -- 1.30 -- -- 5.5
" 15' Tr 0.10 3.40 -- -- 0.08
B -65° 4' 0.08 9.40 0.40 0.65 0.11
B 20' Tr 0.40 0.6 0.05 2.69
" 20' Tr 0.66 0.23 0.03 3.36
" -- -- -- 1.14 -- --
7 14' 0.18 5.83 0.18 0.03 0.79
" 30' Tr 0.80 0.10 0.03 9.00
J -65° 20' Tr 1.35 0.52 0.06 4.70
" 20' 0.01 3.70 2.0 0.09 1.29
" 40' -- -- 1.48 -- --
A -65° 15' Tr 1.87 0.06 0.43 7.19
" 15' Tr 3.00 1.30 0.03 0.30
3 41' 0.02 7.67 0.25 3.06 17.47
" 10' 0.01 6.0 1.73 0.03 2.84
1 185' 0.10 4.10 0.34 1.30 7.38
3 33' 0.60 7.40 1.12 3.24 3.90
" 15' -- -- 1.30 1.04 -- --
2 24' Tr 0.65 0.28 .14 19.75
C -65° 35' 0.01 2.45 0.80 1.69 7.9
6 9' Tr 6.75 0.12 2.54 9.74
E -55° 42' 0.01 5.43 1.09 1.04 8.25
F -60° 10' Tr 5.20 0.55 0.83 2.70
K -75° 20' 0.18 11.65 0.05 1.00 3.55
" 30' Tr 3.30 0.17 0.63 2.47
BANANA
LAKE
EAST BODY
WEST BODY
PROJECTION OF FOOTWALL COPPER ZONE AT 300' LEVEL
CAMP LAKE
SUNKEN LAKE
N
LEGEND
Projected Location of Zone 'A' at 100' Level
BATHURST NORSEMINES LTD.
HACKETT RIVER AREA, N.W.T.
MAIN 'A' ZONE



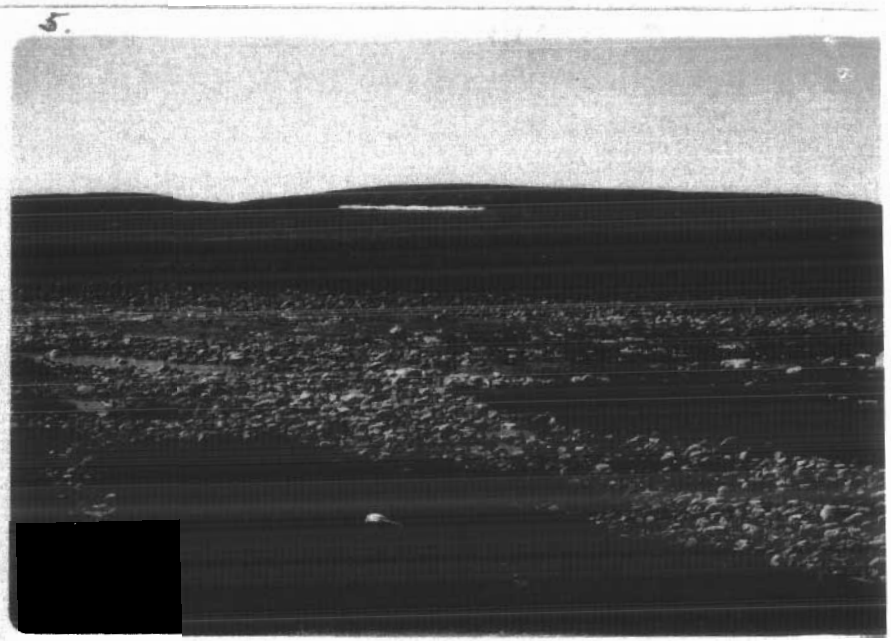


1. View west. June 26/74.
   Cominco camp on esker near Camp Lake.

2. View west, June 26/74
   Tent camp. Samples taken from point at front right.

3. June 26/74

   Rocky terrain north of camp.

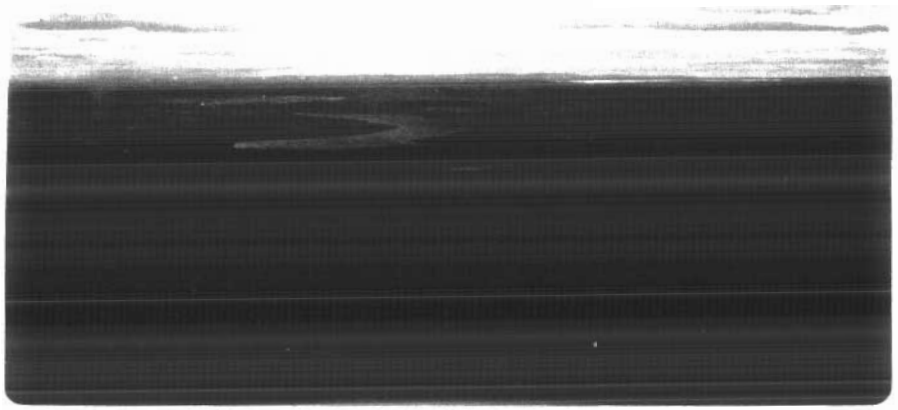


4. View south. June 26/74
Eskers west of Camp Lake

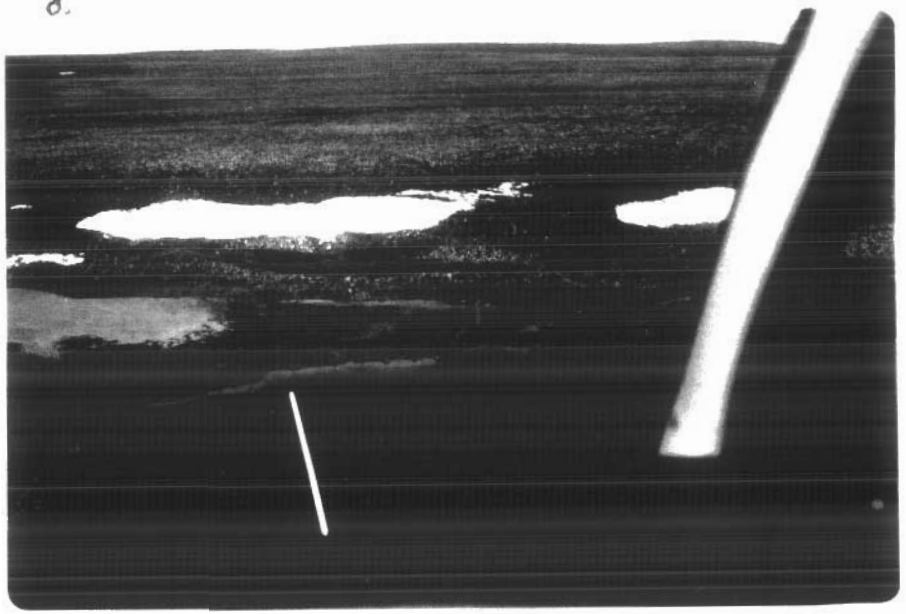
5. View northwest. June 26/74
Hackett River at Station 2

6. View northeast, June 26/74
Hackett River at Station 4.
Sampling Site indicated.

7



8.



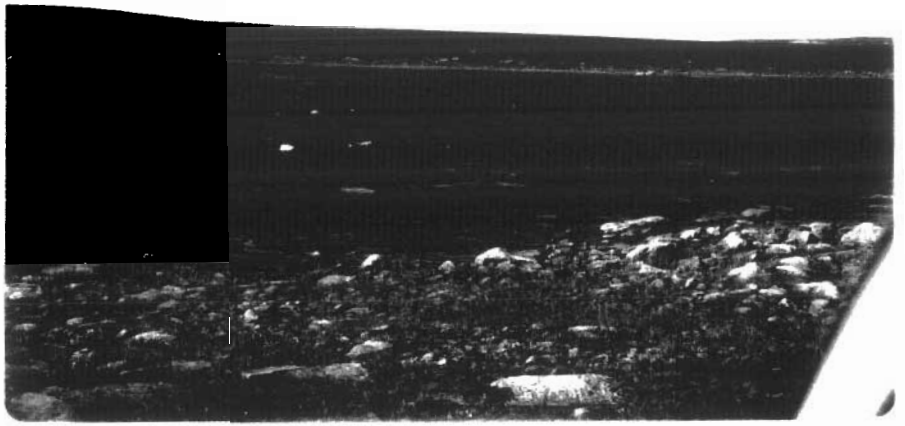
7. View east, June 26/74.
Anchor Lake at middle right.
Sampling Station 1 indicated.

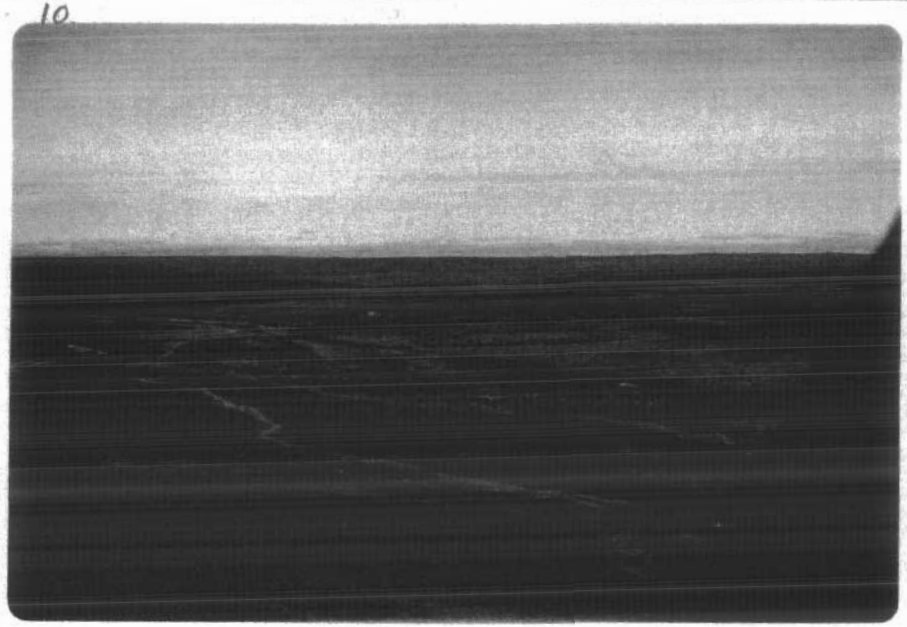
8. View north, June 26/74
Camp Creek flowing from behind esker at left into the Hackett River in foreground. Sampling Station 3 indicated.

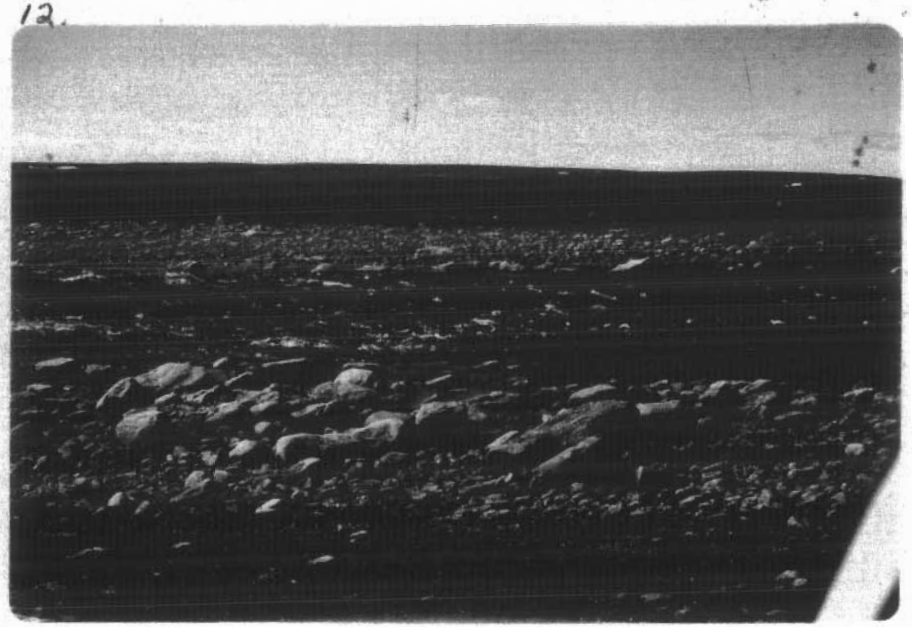
9. View northwest, June 26/74

Mara River at outflow of Esker Lake.
(Sampling Station 6)

9





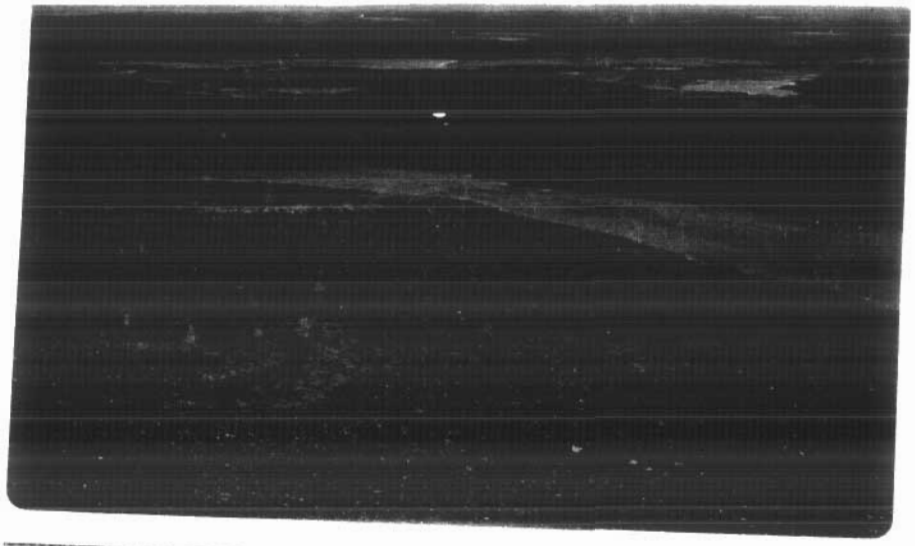


10. View northeast, June 26/74
Mara River above Station 5.

11. View northwest, June 26/74
Mara River at Sampling Station 5
Sampling site indicated.

12. View west, June 26/74
Mara River at Sampling Station 5.

13



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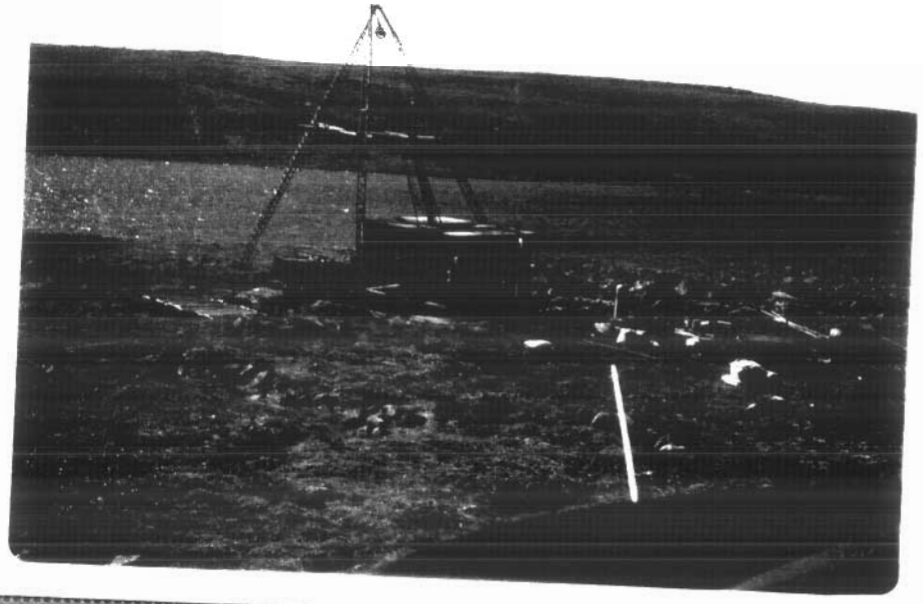

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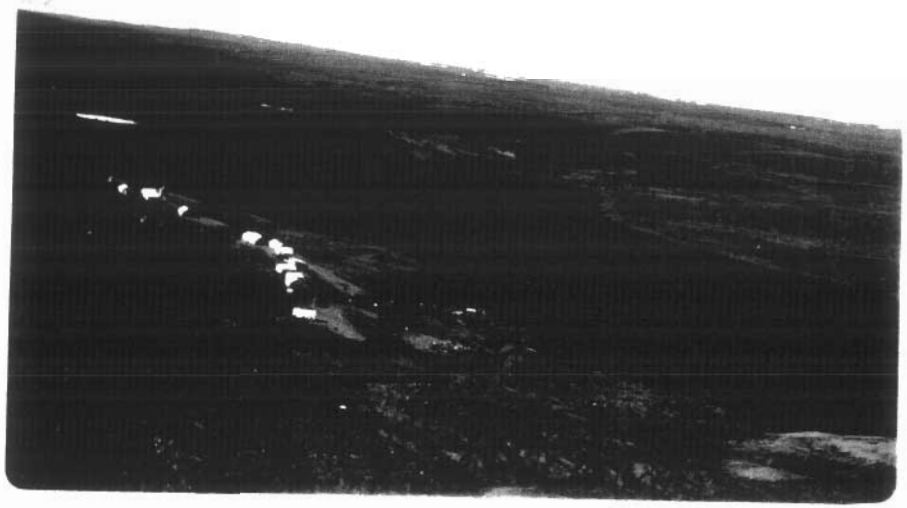

13. View southeast, June 26/74
Boot Lake. Sampling Station 7
indicated.

14. View west, June 26/74
Diamond drill on Boot Lake. Pump
on lake shore at right delivered
water to drill.

15. View north, June 26/74
Camp Lake. Sampling Station 8
indicated.