WELCOME NORTH MINES LTD. (N.P.L.)
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GODLIN LAKE

AND

ARCTIC RED AREAS

SUMMARY OF MINERAL PROPERTIES
AND
PROPOSED EXPLORATION

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J.D. Guild

March, 1979

INTRODUCTION

The properties included in this summary exploration proposal are located within the Mackenzie Mountains and fall within a Paleozoic belt of Lower Cambrian to Middle Devonian carbonates, their clastic equivalents and shales in the west-central section of the Northwest Territories and in the adjoining eastern Yukon (see Project Area Location Map).

Each of the described mineral deposits was found through surface prospecting carried on by personnel employed by Welcome North Mines Ltd., and each has been the subject of follow-up property exploration. The widely spaced prospecting traverses employed by Welcome North had a high success ratio so that the potential for discovery of additional occurrences through more sophisticated methods would appear good.

The area under discussion was the scene of intensive lead-zinc exploration duing the period 1973-77 but except for the persistent efforts of Rio Canex Exploration Ltd. at their Gayna River property, the Mackenzie Mountain area is now largely exploration dormant. It is believed by Welcome North that the region has unjustifiably fallen victim to the geologically transitory trends and vogues inherent to modern mineral exploration. The Godlin-Arctic Red area contains numerous base metal deposits which although individually of apparent limited size, in composite have the future potential to support production ventures.

Immediate access to the area is now largely by fixed or rotary wing aircraft but these remoteness aspects will become more attractive with related developments in the region and the accompanying improvement in infrastructure and access routes.

The exploration undertaking proposed herein will be of interest to those who take a longer range but practical view of mineral exploration. All the properties have a history of previous work and are offered through this exploration proposal to interested prospective partners on a negotiable basis either singly or as a package. The object of the proposal is to attract a serious exploration commitment toward a detailed investigation of the properties, enabling the partner, as operator, to earn a substantial controlling interest.

Each of the properties included in the Godlin Lake and the Arctic Red areas are summarized herein, under the following sections:

I. GODLIN LAKE AREA

- A. KEG Property
- B. BEAR/TWIT Property
- C. NITE Property
- D. ICE Property
- E. ARN Property
- F. HORSESHOE Property
- G. TET/RAP Property

II. ARCTIC RED AREA

- H. AB Property
- I. CAB Property
- J. DAB Property
- K. AJ Property
- L. RA Property
- M. REP Property
- N. REV Property

GODLIN LAKE AREA

- A KEG
- B BEAR-TWIT
- C NITE
- D ICE
- E ARN
- F HORSESHOE
- G TET-RAP

ARCTIC RED AREA

- H AB
- I CAB
- J DAB
- K AJ
- L RA
- M REP
- N REV

WELCOME NORTH MINES LTD (N.P.L.)

PROPERTY PROJECT LOCATION MAP

1979

0 25 50 75 100 miles

0 40 80 120 160 kilometres

KEG PROPERTY

N.T.S. 105P-14
Latitude 64°00'N Longitude 129°14'W
Number of Mineral Claims 47

The mineral occurrence of principal interest on the KEG property consists of zinc-rich float found over a strike length of approximately 1000 feet (300 meters). The massive sulphide mineralization consists of interbedded pyrite, sphalerite and minor galena within an argillitic host rock. Grab samples of the mineralization, taken in 1973, assayed in the range of 15-23% zinc.

The property, which is located 12 miles (19 kilometers) to the west of the Canol Road, was the subject of exploration programs by Dynasty Explorations Limited in 1973 and by Amax Exploration Inc. in 1974 (see accompanying property map).

EXPLORATION TO DATE

After conducting geological mapping, soil geochemical and geophysical surveys, Dynasty drilled five diamond drill holes (total 1600 feet, 490 meters) on the KEG property in 1973. Two of the holes collared 350 feet (100 meters) apart intersected zones of black graptolitic and pyritic, shaly dolomite interbedded and mineralized with marcasite, pyrite and sphalerite. The zones were interpreted by Dynasty to be lensoid slump or turbidite breccias and arenites. The best mineralized intersections from these holes assayed as follows:

Hole No. 1 - 44.5 feet (13 meters) of 2.10% combined lead-zinc (including 10 feet (3 meters) of 5.23% combined.

Hole No. 3 - 53 feet (16 meters) of 3.26% combined lead-zinc (including 27 feet (8 meters) of 4.32% combined and 10 feet of 3.78% combined).

Dynasty concluded that the mineralization was too low grade and discontinuous to warrant further work.

In 1974 Amax Exploration Inc. conducted geological mapping, prospecting and geochemical surveys on the property. They defined three types of mineralization:

1) Bedded pyritic, sphalerite-galena bearing turbidite breccias within the Sunblood Formation.
2) Shear and fracture controlled zinc-lead sulphides.
3) Stratabound disseminated sphalerite and galena within the Whittaker dolomites.

Amax concluded that the Dynasty drill results had discounted the economic potential of type (1) mineralization and that types (2) and (3) were too sporadic to be considered of economic significance.

RECOMMENDATIONS

The writers believe that the KEG property warrants additional exploration for the following reasons:

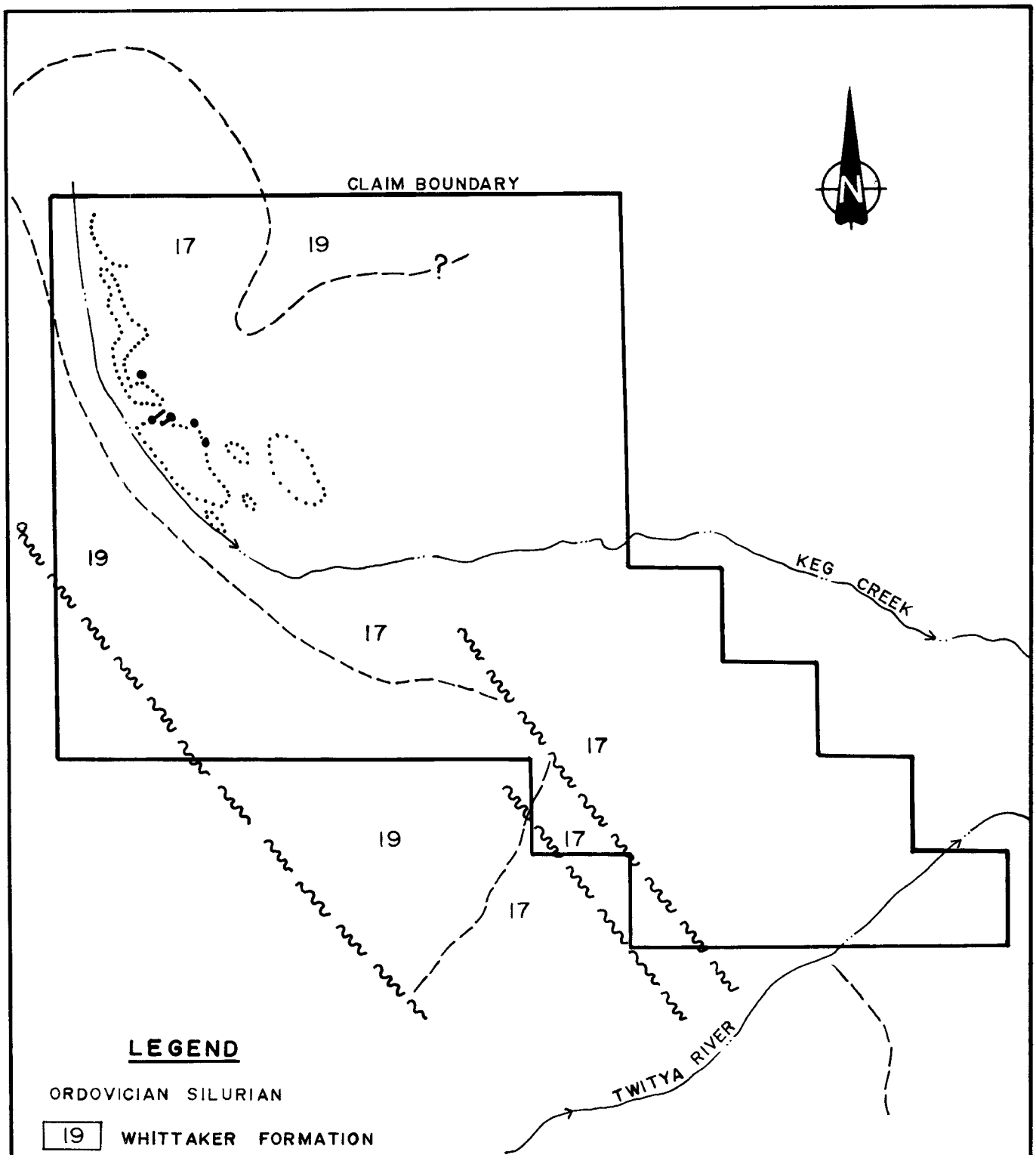
1) The mineral sections intersected by drilling, although low grade, offer sufficient encouragement to justify additional drilling to test for the possibility of improvement in tenor along lateral and dip projections.
2) Since mineralization of identical character or equivalent grade to surface float was not intersected by drilling the sources of this float have not been discovered.

3) The Sunblood Formation is recognized elsewhere in the Selwyn Basin and Mackenzie Mountains as being a volcanogenic massive sulphide host.

4. The alout of 1973 drilling did not adequately cover the possibility of steep-lying mineralized zones which surface evidence indicates may be present.

5) The drilling tested only a small part of the total mineralized potential indicated by surface float and geochemical evidence.

It is recommended that after a detailed review of KEG property data additional diamond drilling be carried out.



LEGEND

ORDOVICIAN SILURIAN

19 WHITTAKER FORMATION

17 SUNBLOOD FORMATION

DIAMOND DRILL HOLE

GEOCHEMICAL ANOMALY

+500 p.p.m. LEAD

+2000 p.p.m. ZINC

NOTE:

Geology and Geochemistry after Dynasty Explorations Ltd

WELCOME NORTH MINES LTD.

GODLIN AREA

KEG PROPERTY

GENERAL GEOLOGY

Scale: 1 = 1/2 mile 1: 31,680	Date: Mar. 1979 By: J.G.	N.T.S. 105P14 Fig.

BEAR/TWIT PROPERTY

N.T.S. 106A-3
Latitude 64°02'N Longitude 129°22'W
Number of Mineral Claims 105

The BEAR/TWIT lead-zinc-silver prospect is located on the north fork of the Twitya River some 25 miles (40 kilometers) northwest of the Canol Toad.

The mineral zone of principal interest on the property, the Main Zone, was the subject of investigation by Cominco Ltd. in 1973/74 and by Bethlehem Copper Corp. in 1975/76. A total of 5791 feet (1760 meters) of diamond dirlling, in 24 holes, has been drilled in the area of the Main Zone (see property map).

EXPLORATION TO DATE

There are three significant showings on the BEAR/TWIT property, the Main, the Upper and the Bench Zones. The nature and mode of sulphide mineralization is similar in each. Sphalerite, galena and minor tegrahedrite occur as filling to extensional fractures, breccia zones and vugs within tabular, stratabound zones. The mineralization occurs through a stratigrpahic thickness of 300 to 350 feet (90 to 105 meters) within Delorme and underlying transitional Delorme-Wittaker dolomites.

The Main Zone, which has been the subject of most concerted work to date, was sampled by Cominco in 1973 by surface channels and by fourteen short X-ray test holes.

A comparison of weighted grade averages from surface sampling and test hole intercepts is as follows:

	Length		Ag	Pb	Zn	Pb + Zn
	Feet	Meters	Oz./ton	%	%	%
Drill Intercept	24	7	0.50	1.46	3.27	4.73
Surface Samples	7	2	1.16	2.83	4.23	7.05

The best drill intersection was 46 feet (14 meters) of 8.75% combined lead/zinc with 1.08 ounces silver/ton, while shorter sections ranged in grade up to 52.1% combined lead/zinc over 5 feet (1.5 meters).

In 1974 Cominco drilled four AQ diamond drill holes with an accumulative footage of 1952 feet (585 meters). The best intersection from this drilling was 98 feet (30 meters) of 7.44% combined lead/zinc with 0.61 ounces silver/ton.

Amax Exploration Inc. in their assessment of the property in 1975 interpreted the drill results as indicating two tabular mineral zones, the shallow zone which is expressed in surface outcrop and a deeper zone lying beneath.

The shallow zone was estimated by Amax to have an indicated potential in the order of 200,000 to 500,000 tons grading 8.5 to 11.5% combined lead/zinc with 1 to 2 ounces silver/ton.

The deeper zone which was intersected in only two of the AQ drill holes by Cominco was estimated to have a potential tonnage of 3.6 to 18 million tons with an average grade of 7.38% combined lead/zinc and 0.83 ounces silver/ton. The calculations by Amax are based upon a 4% combined lead/zinc cut-off grade.

In 1976 Bethlehem Copper Corporation acquired an option on the property and drilled six BQ diamond drill holes totalling 2905 feet (870 meters) in the area of the Main Zone. Three of the holes were designed to check previous drill results and three were 'step-outs' to test down-dip projections of the zone.

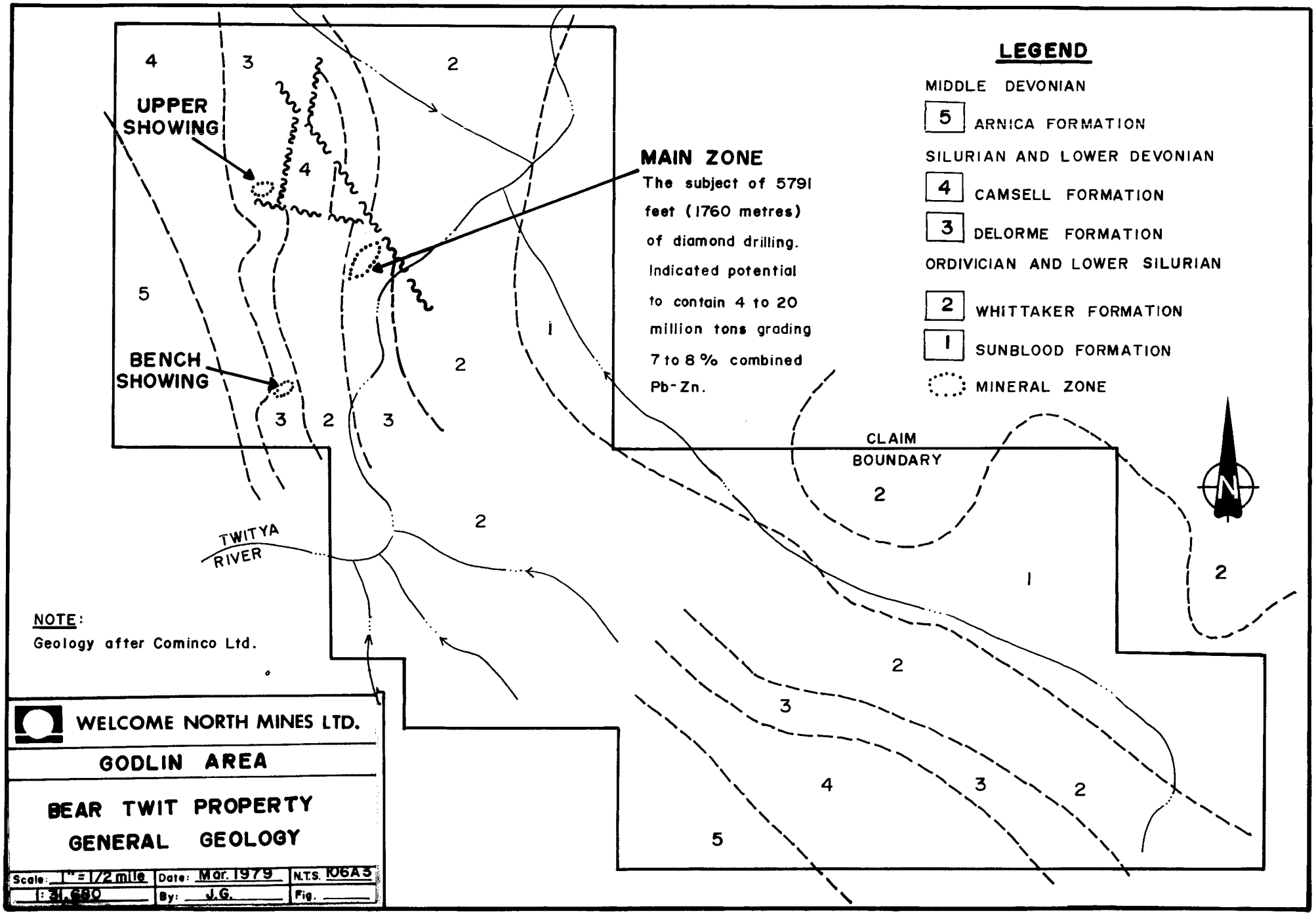
The results of these holes were considered by Bethlehem to be insufficiently encouraging to pursue further exploration of the property.

RECOMMENDATIONS

Diamond drilling by Cominco Ltd. on the BEAR/TWIT property was directed primarily to an investigation of the Main Zone as indicated by surface exposures. During the course of this drilling a deeper zone with significantly greater tonnage potential was intersected.

Bethlehem Copper Corporation in later work drilled three holes in an effort to test the deeper zone to additional depth. This drilling intersected disperse lower grade sulphides similar to those which were seen to fringe the central higher grade mineral core in earlier drill intersections. Drilling by Bethlehem is judged to have been excessively remote from the defined zone thereby missing possible plunge projections.

It is concluded that diamond drilling to date on the BEAR/TWIT property has not adequately tested depth projections of the Main Zone. The potential for a significant tonnage of lead-zinc ore still appears open to reasonable extension. It is recommended therefore that data on the property be carefully reviewed with the object of initiating further drilling to systematically test the Main Zone to increasing depth.


UPPER SHOWING
BENCH SHOWING
MAIN ZONE
The subject of 5791 feet (1760 metres) of diamond drilling. Indicated potential to contain 4 to 20 million tons grading 7 to 8 % combined Pb-Zn.
LEGEND
MIDDLE DEVONIAN
5 ARNICA FORMATION
SILURIAN AND LOWER DEVONIAN
4 CAMSELL FORMATION
3 DELORME FORMATION
ORDIVICIAN AND LOWER SILURIAN
2 WHITTAKER FORMATION
1 SUNBLOOD FORMATION
MINERAL ZONE
CLAIM BOUNDARY
TWITYA RIVER
N
NOTE:
Geology after Cominco Ltd.
WELCOME NORTH MINES LTD.
GODLIN AREA
BEAR TWIT PROPERTY
GENERAL GEOLOGY
Scale: 1" = 1/2 mile
1: 31,680
Date: Mar. 1979
By: J.G.
N.T.S. 106A3
Fig.

C.

NITE PROPERTY

N.T.S. 105P-16
Latitude 63°50'N Longitude 128°10'W
Number of Mineral Claims 22

The NITE claims were staked in 1972 and after preliminary investigation by Welcome North Mines Ltd. were optioned to Geomont Exploration Co. Ltd., (a subsidiary of Abitibi Peper Co.), in 1974 and to Shell Canada in 1975/76.

The claims are located between the Keele and the Ekwi Rivers, some 16 miles (26 kilometers) from the Canol Road.

Zones of syngenetic copper mineralization with approximate grades of 1% copper over widths up to 50 feet (15 meters) occur on the property (see accompanying property map).

EXPLORATION TO DATE

Geomont Exploration Co., after a program of geological mapping, trenching and sampling, drilled two diamond drill holes on the NITE property. The holes, totalling 1156 feet (340 meters), are reported to have intersected the target, cupriferous dolomite beds, although technical difficulties in the drilling caused each of the holes to be stopped short of its desired ultimate depth.

The main mineralized horizon at surface was interpreted by Geomont to be a dolomitic layer varying from 25 to 50 feet (7.5 to 15 meters) in thickness

and occurring 20 to 60 feet (6 to 18 meters) below the top of the Copper Cap Formation. The copper minerals bornite, chalcopyrite and tetrahedrite occur predominantly as fracture-filling veins of varying orientation, mainly parallel to bedding.

Geomont concluded that the copper mineralization on the NITE property resembles stratabound types which normally have large tonnage potentials. Drilling results were interpreted to indicate that the sulphides are highly leached to a depth of over 500 feet (150 meters) below surface. Because of the deep leaching, they considered the chances of discovering large tonnages of open pit ore to be small.

Shell Canada optioned the property in 1975/76 and in conjunction with their other extensive holdings in the Redstone River area studied the geology of the NITE occurrences in a regional context. The prime target on the property was considered by Shell to be potentially copper-bearing horizons within the Redstone River Formation which were postulated to lie beneath the NITE claims.

Coinciding depressed prices for copper and the lack of encouraging exploration results in their other prospects in the region coupled with the projected excessive depths to target zones on the NITE prompted Shell to abandon the region and to relinquish their option on the NITE property.

RECOMMENDATIONS

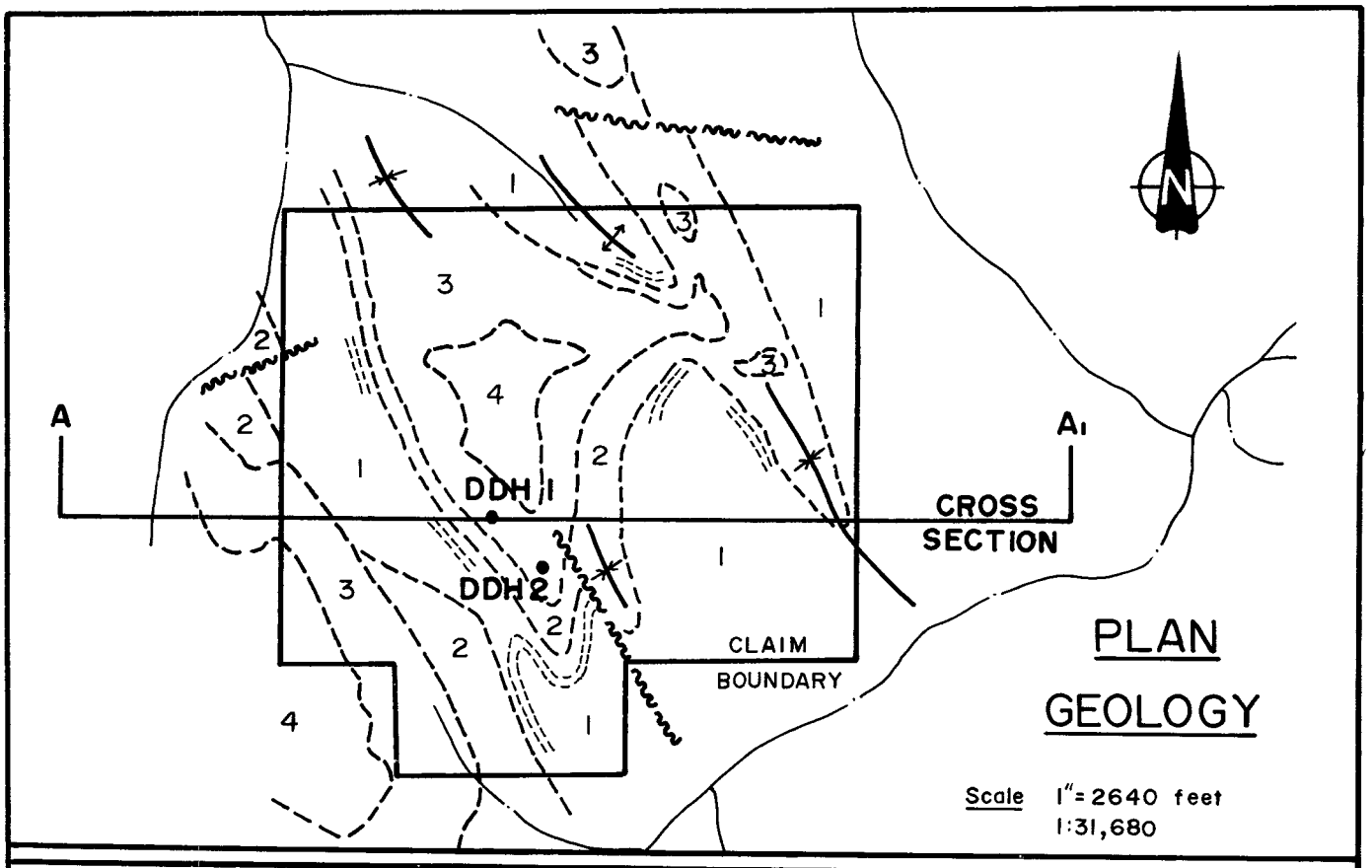
Welcome North believes that the copper potential of the NITE property has not been fully investigated. The numerous surface copper occurrences on

the claim group and in the region are insufficiently understood to provide the geological basis for confident correlation and projection of the various mineralized horizons.

Each of the holes drilled in 1975 was terminated through technical difficulties in the drilling and the depths obtained appear to be barely adequate to test straight-line projections of known surface mineral zones. It appears possible that the leached zones intersected in the 1975 drill holes may not, in fact, correlate with surface mineral horizons.

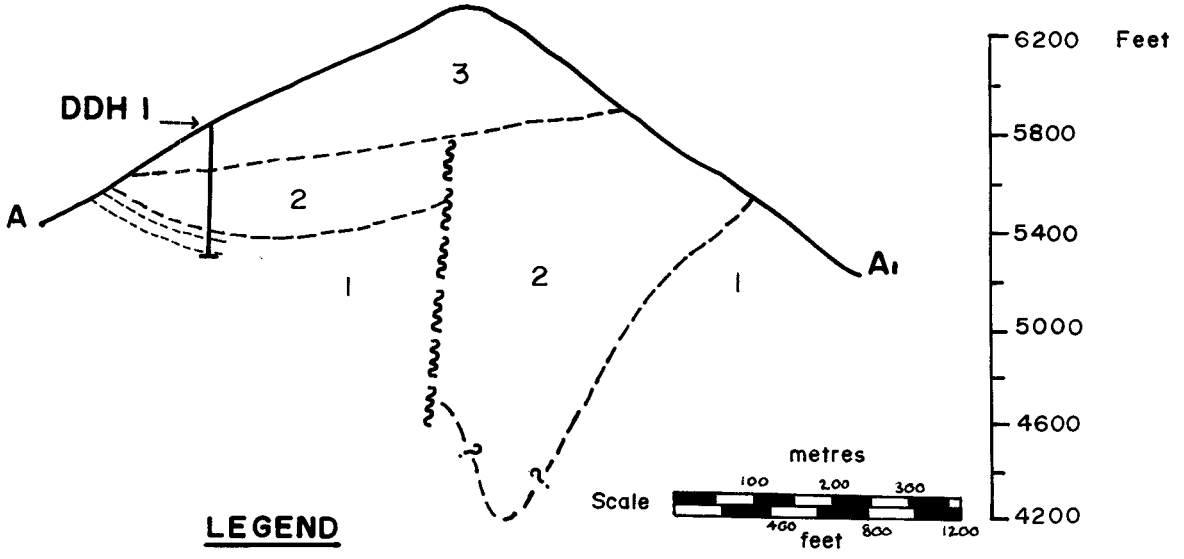
Based upon the surface showings it is contended that the NITE property has the reasonable potential to contain sizeable economic concentrations of copper and it is therefore considered that further work is justified.

It is recommended that after a review of all available data on the property more detailed and comprehensive geological studies be undertaken with the view to choosing additional drill targets in more immediate proximity to the known mineralization.



PLAN GEOLOGY

Scale 1"= 2640 feet
1:31,680



LEGEND

- 4 MIDDLE RAPITAN GROUP
- 3 LOWER RAPITAN GROUP
- 2 UNNAMED FORMATION
- 1 COPPER CAP FORMATION
- MINERALIZED HORIZON
- D.D.H.

CROSS SECTION A-A1

NOTE:
Geology after Geomont Exploration Co. Ltd.

WELCOME NORTH MINES LTD.

GODLIN AREA

NITE PROPERTY

GENERAL GEOLOGY

Scale: See Above	Date: Mar. 1979	N.T.S. 105P16
	By: J.G.	Fig.

ICE PROPERTY

N.T.S. 105P-11
Latitude 63°38'N Longitude 129°00'W
Number of Mineral Claims 36

The ICE claims, located less than a mile (1 kilometer) north of the Canol Road, near Godlin Lakes, were staked over surface occurrences of galena and smithsonite found over widths of up to 75 feet (22 meters). Mineralization is intermittently exposed for a strike length of 12000 feet (3600 meters) and average grades of up to 20% combined lead-zinc have been obtained across the zone. The ICE zone forms a continuation of mineralized reefal dolomites that extents southward from the ARN property (see accompanying property map).

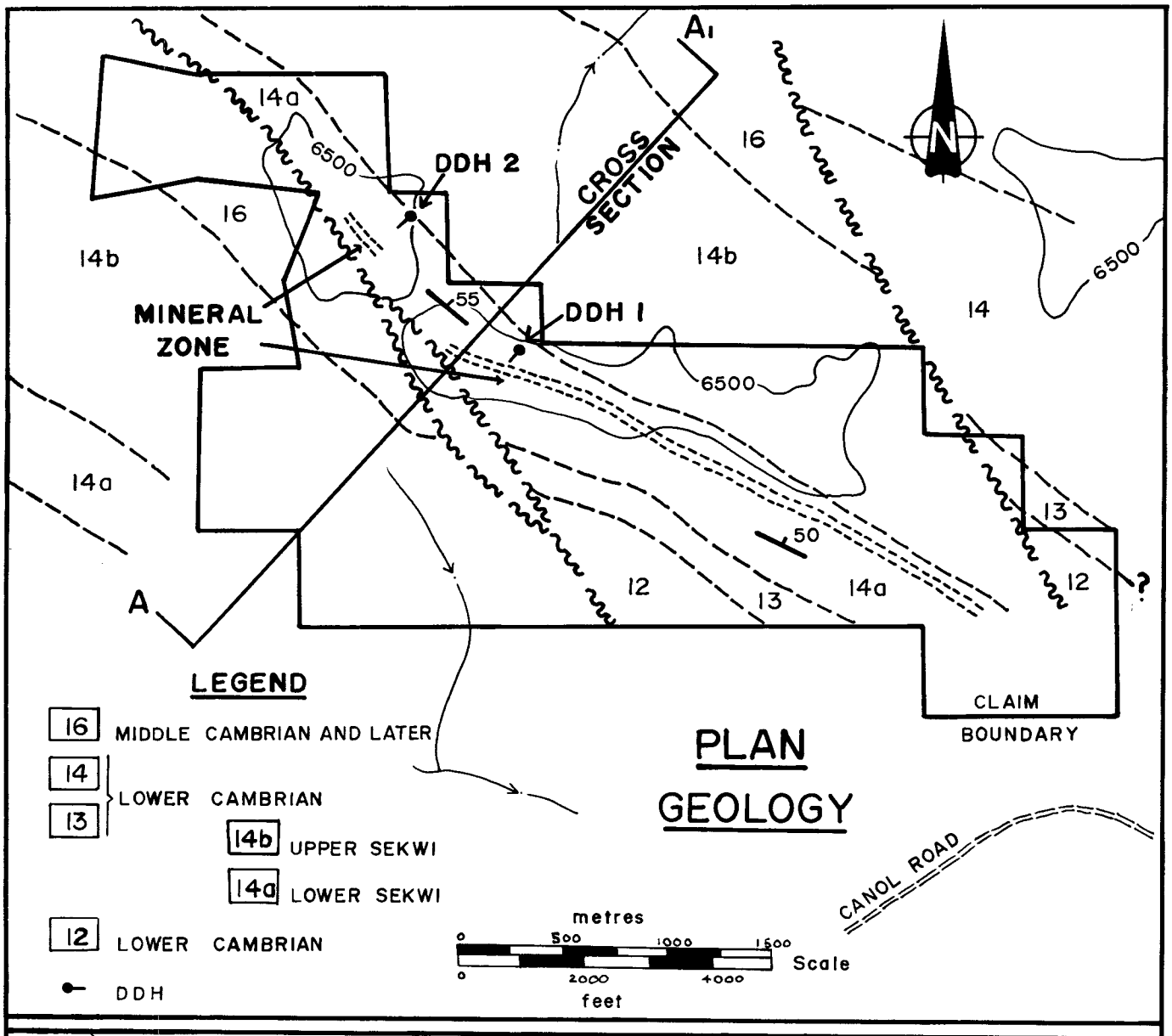
EXPLORATION TO DATE

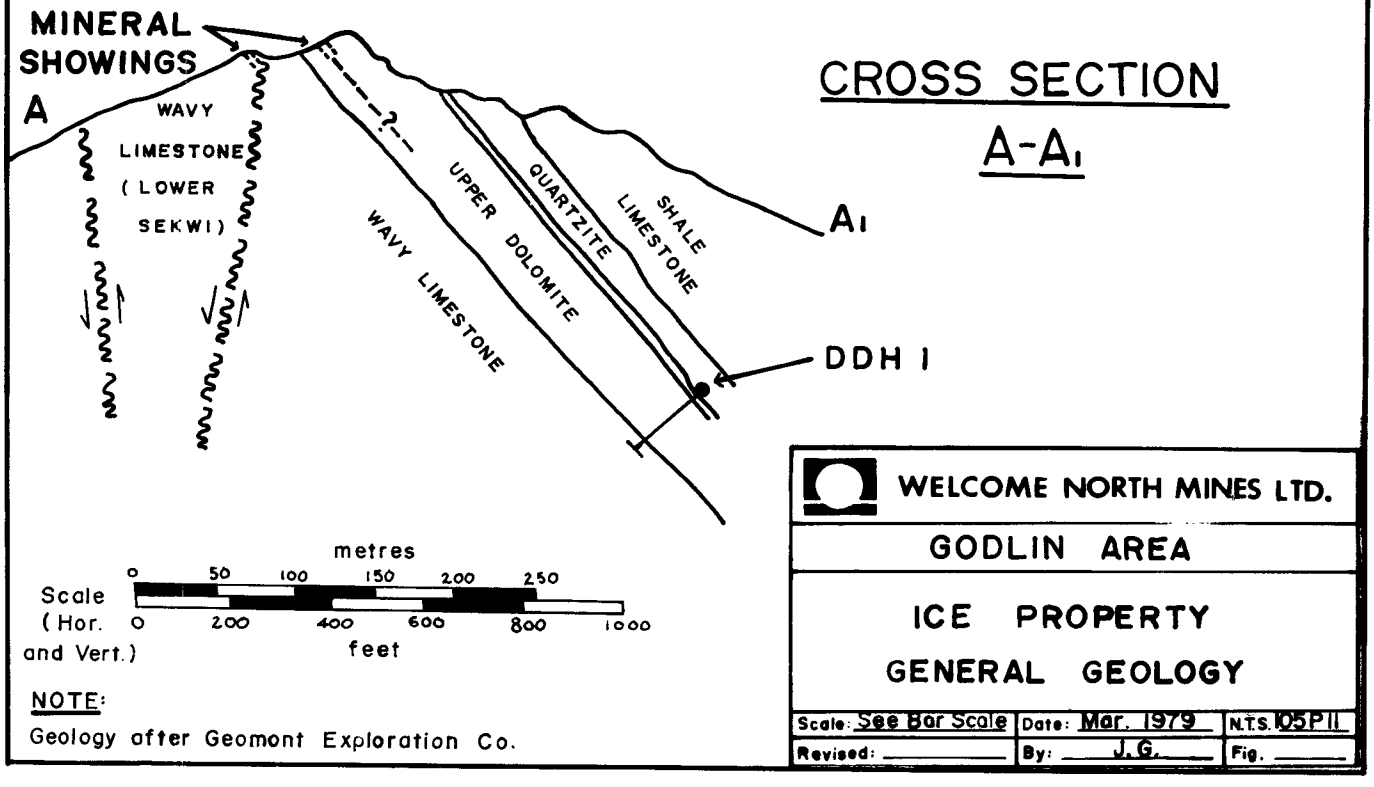
Mineralization on the ICE property occurs as disseminations and as vug and fracture fillings in an orange weathering, vuggy dolomite, part of the Lower Sekwi Formation.

Prospecting and sampling in 1973 resulted in the discovery of seven separate showings none of which are fully or well exposed. The zone is exposed in true outcrop at only one location along the trend. A representative sample, normal to the zone, taken from a cliff face at this point, averaged 20% lead-zinc over a width of 30 feet (9 meters).

Abitibi Pulp and Paper Company, which had an option on the ICE property in 1974, carried out geological mapping, surface sampling and diamond drilling.

Check samples, in general, confirmed 1973 results with the best section averaging 17% lead-zinc across 50 feet (15 meters).





NOTE:
Geology after Geomont Exploration Co.

WELCOME NORTH MINES LTD.

GODLIN AREA

ICE PROPERTY

GENERAL GEOLOGY

Scale: See Bar Scale	Date: Mar. 1979	N.T.S. 105P11
Revised:	By: J.G.	Fig.

Drilling of the property by Abitibi (two holes with an accumulative footage of 514 feet) (154 meters) was conducted to intersect projections of the ICE mineralization at points greater than 1000 feet (300 meters) down dip from surface showings. The drilling did not intersect lead-zinc mineralization.

RECOMMENDATIONS

It is concluded that diamond drilling conducted by Abitibi was too remote from known mineralization on the ICE property to adequately test possible depth projections of the zone. Surface work has indicated zones of economically interesting mineralization the strike and dip extents of which are not presently known. Further investigation of the mineral occurrences and the region in general is warranted. This proposed work is particularly pertinent when the area is viewed from the perspective of small tonnage ore zones feeding a central concentrator.

ARN PROPERTY

N.T.S. 105P-11
Latitude 63°43'N Longitude 129°17'W
Number of Mineral Claims 18

The ARN claims cover the northwesterly extension of metal-rich Sekwi dolomites which form host rock to the ICE deposits to the south. The lead-zinc mineral trend has been traced across the ARN property a distance of 6 miles (9 kilometers) and local concentrations of metal have been indicated along the trend. The south boundary of the ARN claims is 7 miles (11 kilometers) north of the Canol Road.

The reader is referred to accompanying drawings and to Section D of this report which describes the ICE property.

EXPLORATION TO DATE

Exposure of the vuggy mineralized dolomite horizon across the ARN property is poor. It has been traced largely through talus trains and ill defined, frost heaved float concentrations. Attempts at bedrock exposure by hand trenching have not been successful.

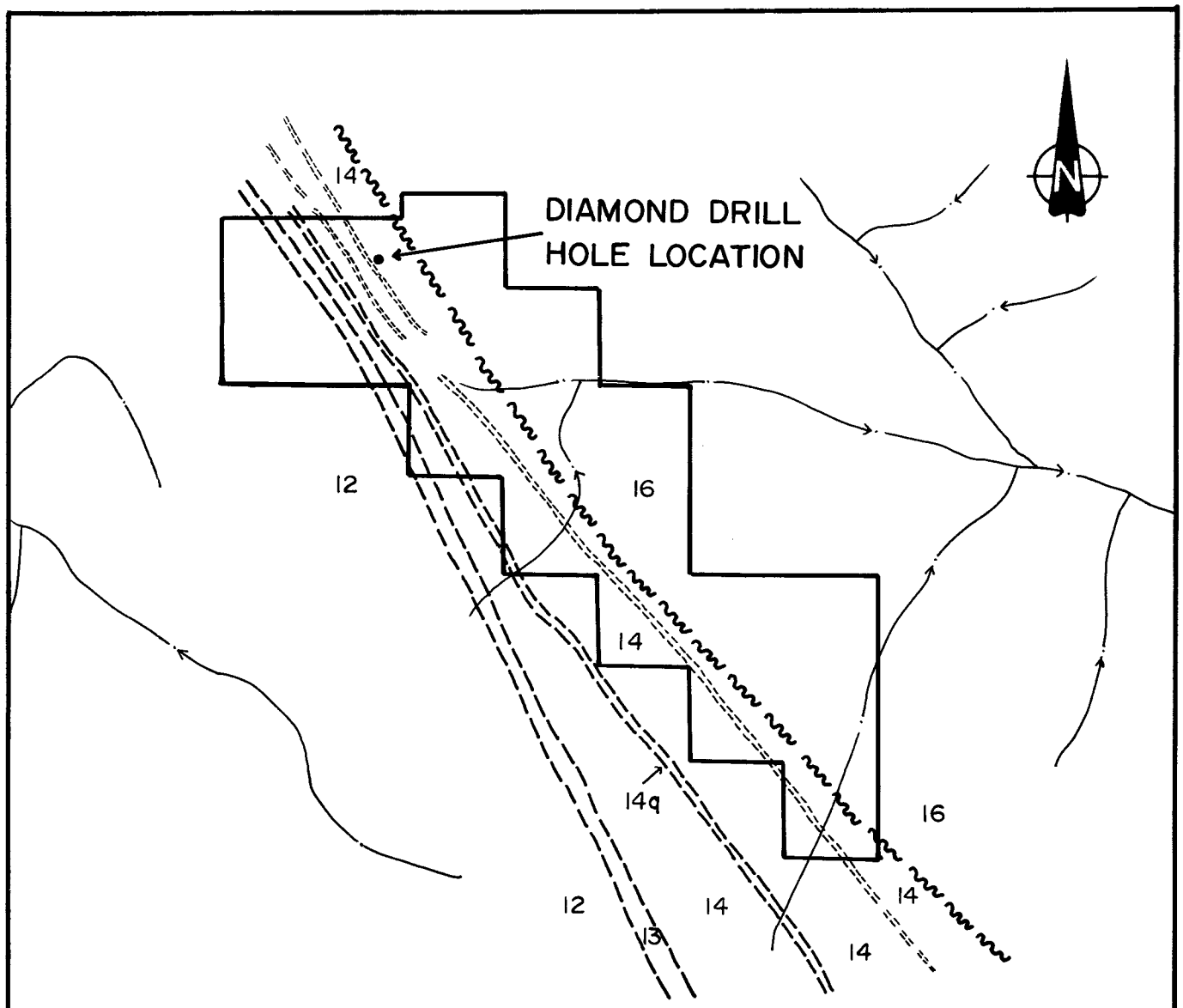
Within the Sekwi Formation, one or more mineralized beds may be present and attain widths up to 100 feet (30 meters). The beds are typically orange weathering and have a pitted vuggy texture. Blebs of galena sphalerite or smithsonite fill vugs and locally form irregular laceworks in the rock.

Grades vary markedly along strike with specimens assaying up to 11% combined lead-zinc but systematic sampling across the rubble trains and rills generally assay less than 1% combined lead-zinc.

Bethlehem Copper Corporation held an option on the ARN property during 1973-1974 and in addition to geological mapping, trenching and geochemical sampling they drilled one diamond drill hole 225 feet (70 meters) in length under the ARN #6 float occurrence. No lead or zinc mineralization was encountered in the drilling.

RECOMMENDATIONS

It is recommended that the ARN claims be held in good standing pending related development of the ICE property.



LEGEND

CAMBRIAN AND LATER

16 ROAD RIVER FORMATION

LOWER CAMBRIAN

14 SEKWI FORMATION

14q ORTHOQUARTITE

13 SHALE, LIMESTONE

12 ORTHOQUARTITE

MINERALIZED HORIZON

D.D.H.

GODLIN RIVER

NOTE:

Geology after Bethlehem Copper Corp. Ltd.

WELCOME NORTH MINES LTD.

GODLIN AREA

ARN PROPERTY
GENERAL GEOLOGY

Scale: 1" = 1/2mile	Date: Mar. 1979	N.T.S. 105P11
1:31680	By: J.G.	Fig.

HORSESHOE PROPERTY

N.T.S. 105P-6
Latitude 63°28'N Longitude 129°14'W
Number of Mineral Claims 13

A large area of lead-zinc mineralized float with corresponding anomalous geochemical values in soils occurs on the HORSESHOE property within two miles (3 kilometers) of the Canol Road. Selected pieces of float assay to 63.25% lead and 6.69% zinc. The mineralization occurs in vugs and/or in-filling in Sekwi dolomite which is in fault contact with graptolitic, locally pyritiferous black shales (see accompanying illustration).

EXPLORATION TO DATE

A geochemical soil survey conducted over and beyond the area of mineralized float on the HORSESHOE property in 1973 indicated an anomalous zone 3000 feet long by 1200 feet wide (900 by 360 meters). Threshold values in lead are in the order of 75 ppm with anomalous values ranging to 5775 ppm. Hand trenching in anomalous areas failed to reach bedrock.

St. Joseph Explorations Ltd., who held an option on the HORSESHOE claims in 1976 conducted geological mapping, additional grid-controlled geochemical soil sampling, hand trenching and prospecting.

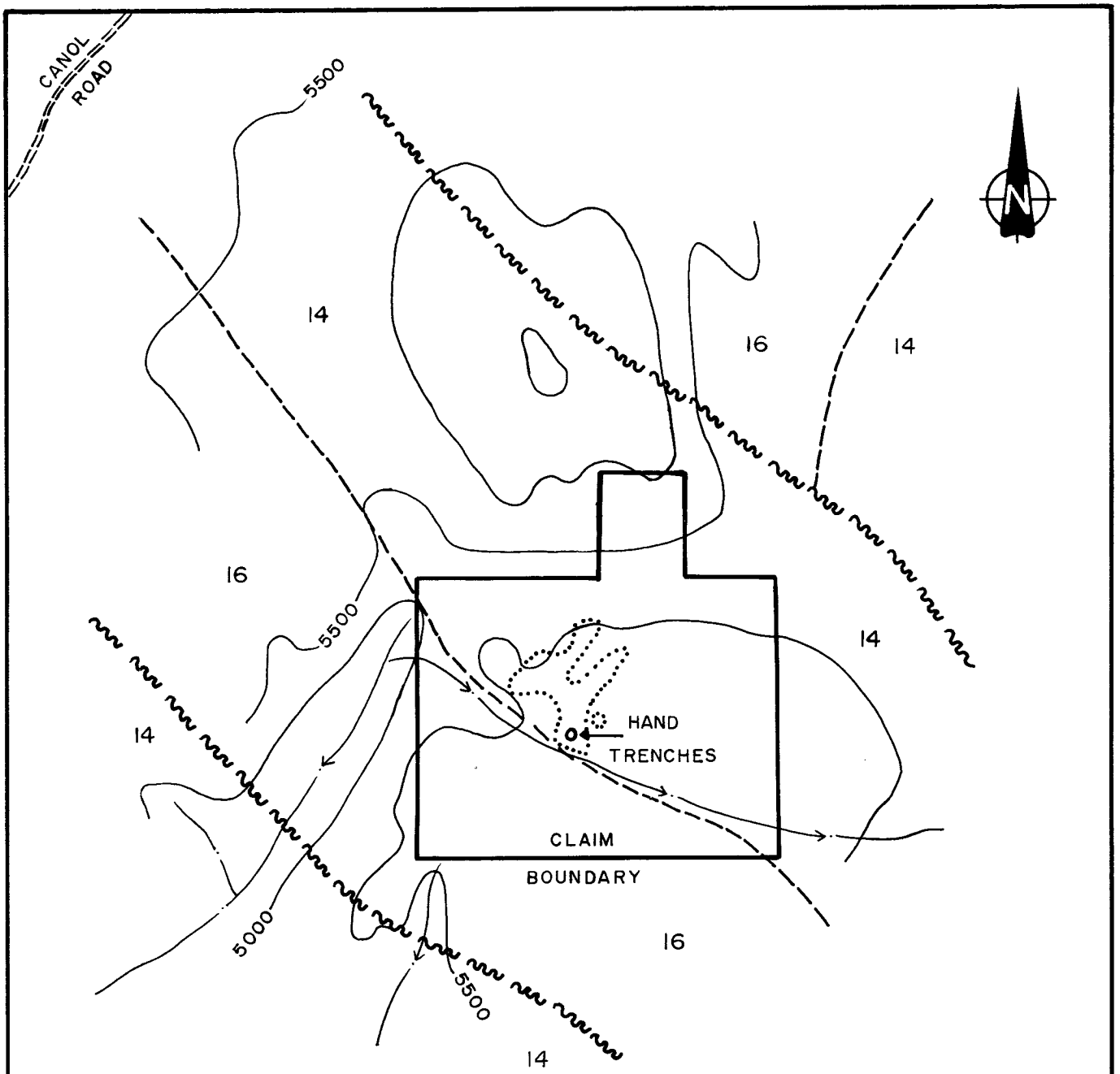
The 1976 soil survey indicated lead-zinc anomalies included within an irregular shaped, northeasterly trending area 2000 by 1000 feet in extent (600 by 300 meters) and closely coinciding with visible mineralization in float boulders. Histograms prepared by St. Josephs indicate a threshold value of 100 ppm for lead and 250 ppm for zinc.

Several small hand trenches were reported to have reached broken bedrock material in which the highly weathered mineralization displayed an erratic pattern following a network of fractures of diverse attitude. In places where the galena and smithsonite veining was found to be more intense the rock took on a brecciated appearance.

Two samples of selected high grade float rock from two locations are reported by St. Josephs to average 2.13% lead and 20.15% zinc.

RECOMMENDATIONS

It is concluded that the extensive area of mineralized float on the HORSESHOE property with a corresponding anomalous lead-zinc geochemical expression has not been adequately tested by programs to date. Deeper, more extensive mechanical trenching is recommended to discover a source of this mineralization in place.



LEGEND

CAMBRIAN AND LATER

16 ROAD RIVER FORMATION

LOWER CAMBRIAN

14 SEKWI FORMATION

AREA OF MINERALIZED FLOAT WITH GEOCHEMICAL EXPRESSION
+100 p.p.m. LEAD
+250 p.p.m. ZINC

NOTE:
Property Data after St. Joseph Exploration Ltd.

WELCOME NORTH MINES LTD.

GODLIN AREA

HORSESHOE PROPERTY

GENERAL GEOLOGY

Scale: 1" = 1/2 mile 1:31,680	Date: Mar. 1979 By: J.G.	N.T.S. 105P6 Fig.

TET-RAP PROPERTY

N.T.S. 106A-1
Latitude 64°01'N Longitude 128°19'W
Number of Mineral Claims 54

The TET-RAP copper-silver prospect is located near the confluence of the Godlin and the Ekwi Rivers some six miles (10 kilometers) to the southeast of the Canol Road.

The property was optioned by Welcome North Mines Ltd. to Bethlehem Copper Corporation Ltd. in 1973/74 and to Canadian Nickel Company Ltd. in 1976. Exploration of the property conducted by each of the companies included a total of 1347 feet (404 meters) of diamond drilling (see accompanying property map).

EXPLORATION TO DATE

Exploration interest was initially attracted to the TET-RAP property by concentrations of tetrahedrite mineralized talus runs and float boulders discovered along Cataract Creek for about 1000 feet (300 meters). The mineralization which is stratigraphically restricted to the Little Dal Formation, acts as matrix to coarsely crystalline breccia fragments of dolomite up to 12 inches (0.3 meters) in size. Initial attempts to systematically sample this mineralization indicated average grades of 3.5 to 5% copper with 4 to 5 ounces of silver per ton and suggested the possible occurrences of an economic deposit. Subsequent efforts to define the occurence in place have been hampered by the lack of exposure on the property where the minerally critical areas are predominantly covered by either talus or overburden.

Bethlehem Copper included programs of geological mapping, geochemical sampling, test pitting and diamond drilling in their exploration of the property. Hand trenching through the difficult talus cover locally succeeded in exposing sections of tetrahedrite mineralization in place but failed to expose zones mineralized as well as those indicated by the large higher grade fragments of float (6-foot (3-meter) blocks). Included among the more interesting assay sections obtained by chip sampling the trench floors were:

Showing #1

		% Cu	% Zn	Oz./Ag
Trench 1	20 feet (6m)	1.20	0.21	1.64
Trench 2	10 feet (3m)	2.84	0.36	3.27

Showing #6

Trench 1	5 feet (1.5m)	2.25	0.38	1.88
Trench 2	5 feet (1.5m)	1.71	0.23	1.21

Two diamond drill holes, total footage 601 feet (180 meters), by Bethlehem in 1973 tested below the trenches at Number 1 showing. Drill results were disappointing with only one of the holes intersecting short sections of tetrahedrite mineralization which contained minor values in copper and silver.

Exploration attention by Bethlehem in 1974 was concentrated in testing copper-zinc geochemical anomalies elsewhere on the property away from the main float indicated zone, in areas where overburden cover is less prohibitive to hand trenching. A combined program of hand pitting and test hole drilling (6 holes totalling 106 feet; 32 meters) failed to indicate a source for the anomalous geochem.

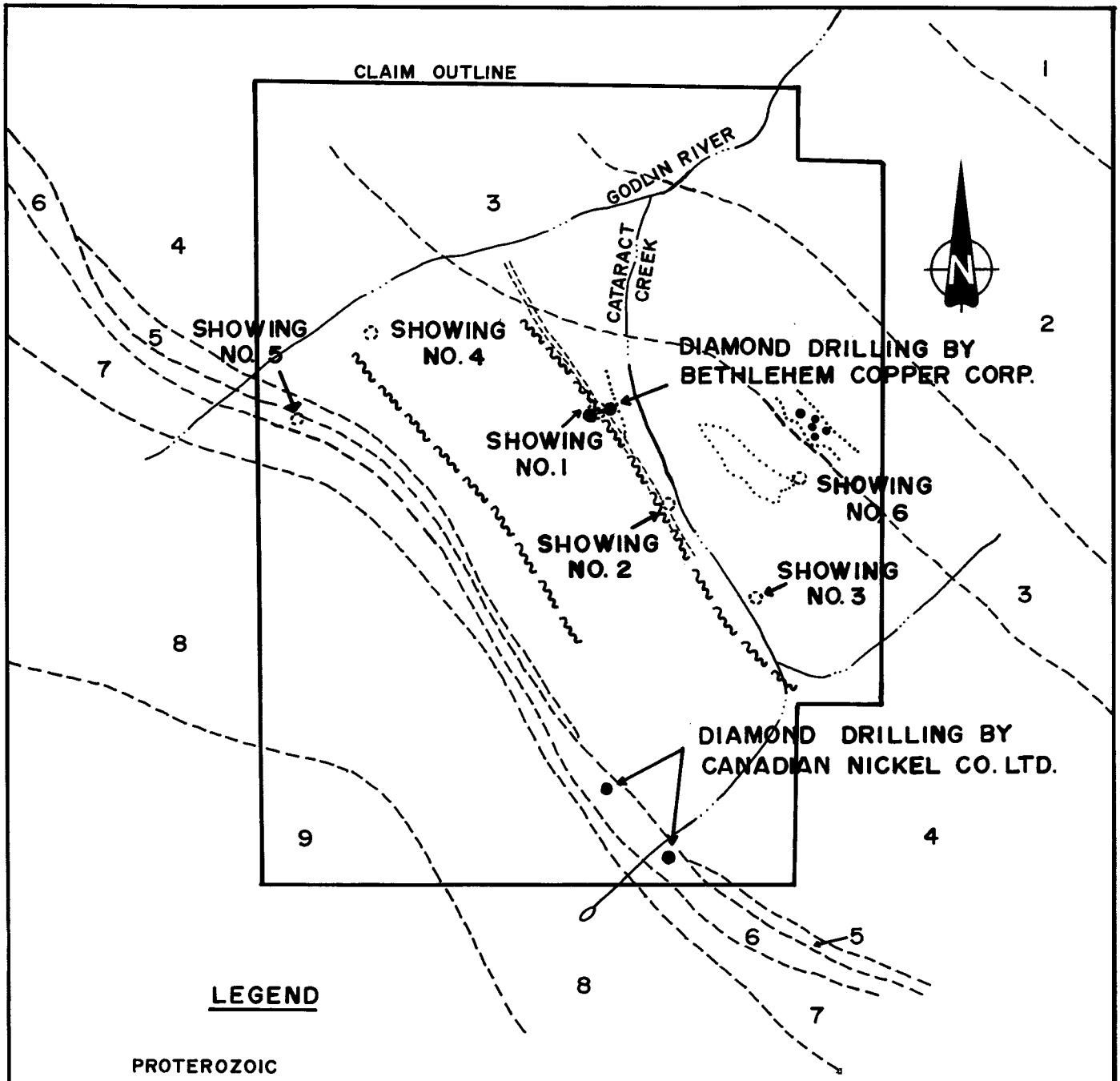
In 1976 Canadian Nickel acquired an option on the property and after a

preliminary program of prospecting which succeeded in extending the tetrahedrite float zone for a total strike extent of 6000 feet (1800 meters) placed their main exploration emphasis on an examination of the Copper Cap-Redstone River contact in a search for syngenetic copper. This search resulted in the discovery of stratiform chalcopyrite-pyrite within the Copper Cap Formation at two locations including a 3-foot (1-meter) zone assaying 1.17% copper and a 30-foot (9-meter) section of low grade mineralization, 1400 feet (420 meters) on strike to the south. These discoveries led to the use of geophysical suveys to test buried sections of the contact zone and to the eventual drilling of an induced polarizaiton anomaly. Two holes for a total of 640 feet (192 meters) were drilled but only pyrite with no accompanying chalcopyrite was encountered in the holes.

CONCLUSIONS AND RECOMMENDATIONS

The discovery float zone of argentiferous tetrahedrite appears to stand as the objective of principal economic interest on the TET-RAP Property. The syngenetic copper, the zinc-lead showings, and the established copper-zinc geochemical anomalies are secondary targets.

Since much of the claim group is overburden covered, it is recommended that detailed geochemical surveys, assaying for silver, copper, lead, and zinc, be employed to narrow targets for mechanical trenching and to ultimately define sources of the high grade breccia float. Silver, which was not included in surveys to date, appears to comprise an important element in the economics of the property. The exploration objective on the TET-RAP Property may evolve as a deposit or deposits of moderate tonnage but high-grade silver-copper mineralization.



LEGEND

PROTEROZOIC

- 9 SHEEPBED FM.
- 8 MIDDLE RAPITAN FM.
- 7 LOWER RAPITAN FM.
- 6 COPPERCAP FM.
- 5 REDSTONE RIVER FM.
- 4 LITTLE DAL FM.
- 3 UPPER KATHERINE FM.
- 2 LOWER KATHERINE FM.
- 1 TSEZOTENE FM.

MINERALIZED ZONE

D.D.H.

GEOCHEMICAL HIGH'S

NOTE:

Geology after Canadian Nickel Company Ltd.

WELCOME NORTH MINES LTD.

ARCTIC RED AREA

TET-RAP PROPERTY

GENERAL GEOLOGY

Scale: 1"=1/2mile	Date: Apr. 79	N.T.S. 106A1
1:31,680	By: J.G.	Fig.

H.

AB PROPERTY

N.T.S. 106C-16
Latitude 64°59'N Longitude 132°17'W
Number of Mineral Claims 204

The AB property, located approximately five miles (8 kilometers) to the north-east of Border Lake, has been the subject of more detailed exploration than other properties included within the Arctic Red group of prospects. It was discovered in 1974 and had work each season through to 1977 (see AB property map).

EXPLORATION TO DATE

There are two important showings within the AB claim group, the AB Main Zone and the AB C-Zone. The zones, which lie some 12000 feet (3660 meters) apart, consist of zinc-lead mineralization occurring within the Lower Cambrian Sekwi Formation. The two are believed to be within equivalent lithologic units.

Surface chip sampling of the AB Main Zone returned 10.12% combined lead-zinc across 90 feet (27 meters). Three diamond drill holes totalling 866 feet (260 meters) were drilled on this zone in 1974.

Hole No. 1 is believed to have been drilled beneath the projection of the zone.

Hole No. 2 intersected 72 feet (22 meters) of 2.14% zinc including an intersection of 10 feet (3 meters) of 12.5% zinc.

Hole No. 3 intersected 32.5 feet (10 meters) of 0.88% zinc.

The AB C-Zone has an equally impressive surface expression. Six holes for a total of 1,562 feet (470 meters) were drilled in 1977. Results of the drilling were again disappointing relative to the expectations indicated by the surface showing, however the following mineralized sections were cut:

D.D.H.	Width (feet)	(meters)	Combined % Pb/Zn
77-2	6	2	0.41
77-3	8	2.5	1.53
	2	0.6	3.22
	2	0.6	1.62
	10	3	4.53
	2	0.6	1.40
77-4	10	3	1.33
	16	5	2.15
	10	3	3.34
77-5	5	1.5	1.78
77.6	15	4.6	1.14

The distribution of sphalerite and galena in these occurrences is irregular and apparently is controlled by the permeability as well as by the chemistry of the host rocks. In general, the quantity and grade of mineralization within the AB C-Zone increases toward the southwest. Conversely, the amount of pyrite increases toward the northeast suggesting that the gossan outcropping in the creek is part of a pyrite halo. The style of mineralization is very similar in the two zones, indicating that there could be additional sulphide zones in this permeable facies of the Sekwi Formation on the AB Mineral Claims.

RECOMMENDATIONS

Further drilling on the AB Property is warranted in order to:

a) define the southwestern limit of the C-Zone since the grade and quantity of mineralization are increasing in that direction;

b) delineate the configuration of the Main Zone sulphide horizon, inconclusively tested by 1974 drilling;

c) test favourable stratigraphy between the two showings.

1.

CAB PROPERTY

N.T.S. 106C-15/16 and 106F-1/2
Latitude 64°59'N Longitude 132°37'W
Number of Mineral Claims 92

The CAB property, located five miles (8 kilometers) to the west of the AB, was discovered in 1974, received some work that year, but has lain basically dormant since that time (see accompanying Property Map).

Mineralization on the CAB claims, within the Sekwi Formation, is controlled and associated with secondary cross-cutting zones of dolomitization. These are poorly understood and appear to be of a limited extent and grade. It is thought at this time that the stratigraphic section present at the CAB 2 zone has a number of similarities to those exposed on the AB Main and C zones.

EXPLORATION TO DATE

The CAB No. 1 Zone was drilled in 1974 (328 feet - 98 meters) but no significant mineralization was encountered in the hole.

CAB No. 2 Upper Zone was also drilled (two holes totalling 806 feet - 242 meters). The best intersection was 45 feet (14 meters) of 1.02% zinc.

The results of the above drilling cannot be satisfactorily correlated with the related surface showings.

The CAB No. 2 Lower Zone which returned surface assays up to 6.72% zinc over a true thickness of 30 feet (9 meters) has not been drilled due to the difficult surface access.

The CAB showings indicate a potential for localized discrete zones of base metal concentration within the Sekwi Formation.

RECOMMENDATIONS

The CAB claims should be held and further explored in conjunction with the AB prospect located five miles (8 kilometers) to the east.

J.

DAB PROPERTY

N.T.S. 106C/16, 106F/1
Latitude 65°00'N Longitude 132°13'W
Number of Mineral Claims 20

The DAB prospect is located two miles (3 kilometers) to the northeast of the AB showings. Sphalerite mineralization is exposed on the southwest wall of a small canyon which has been cut through the dolostones of the Franklin Mountain Formation. Mineralization is concentrated in two flat-lying zones each 10 to 20 feet (3-6 meters) thick which parallel bedding.

EXPLORATION TO DATE

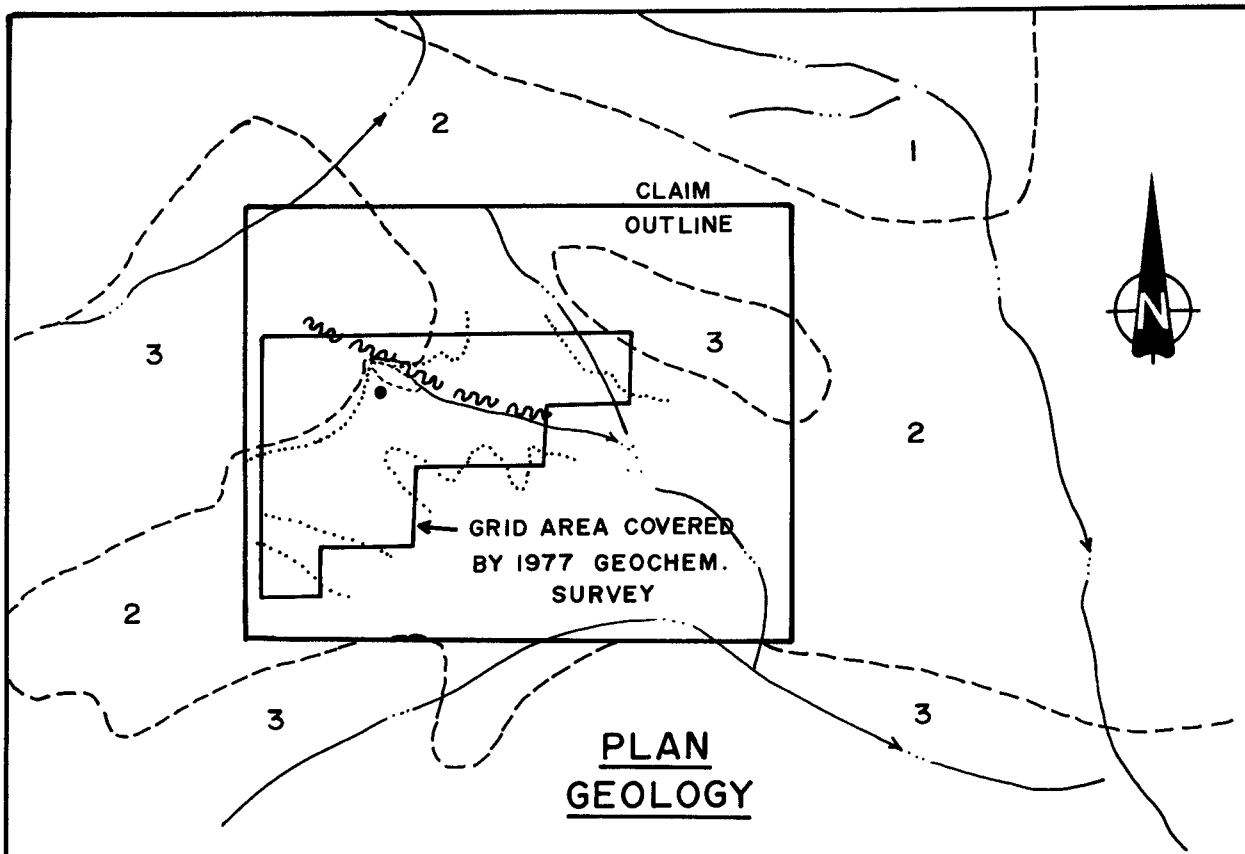
The principal sulphide present is a dull waxy-green coloured sphalerite. It occurs as veinlets, vug filling, and large, coarse-grained blebs at the juncture of fractures. The upper band can be traced for approximately 600 feet (180 meters) along the creek wall to where the elevation of the plateau falls below that of the mineralized zone.

A 3000 by 4000-foot (900 by 1200 meter) geochemistry grid was soil sampled over the mineralized area. Anomalous zinc values up to 9000 ppm are centered over the known mineralized outcrop and 2400 feet (700 meters) along strike to the east. Since the host dolostones are flat-lying, the anomalous zone in the northeastern part of the grid could also reflect an extension of the mineralization. Anomalous zinc values as high as 5600 ppm are found in the southwestern section of the grid. Since mineralization is irregularly controlled by structure and porosity it is suggested that another zone of sphalerite subcrops in this area.

In 1977 a 189-foot (57-meter) vertical diamond drill hole was drilled from the plateau above the showing. Sphalerite and minor pyrite were found in the upper 110 feet (33 meters) of core which is more porous than the underlying rock. The style of mineralization and grade are similar to that found in outcrop except that sulphides do not form two distinct zones. The highest grade assay, 2.30% zinc, is from the five-foot (1.5-meter) section 40-45'. Other assayed intervals were all less than 1% zinc.

RECOMMENDATIONS

Diamond drilling to date has not adequately tested the mineral potential of the DAB prospect. The upper 45 feet (14 meters) of core in the hole drilled is a lithoclast breccia with fragments of dolostone and chert which is possibly a solution collapse breccia formed during karsting. Mineral deposits occurring within this environment are likely to be scattered and of moderage size, however the potential for economic concentration is present. Further diamond drilling to test existing geochemical targets on the property is warranted.



PLAN
GEOLOGY

LEGEND

ORDOVICIAN - SILURIAN

3 ROAD RIVER FM.

CAMBRIAN - ORDOVICIAN

2 FRANKLIN FM.

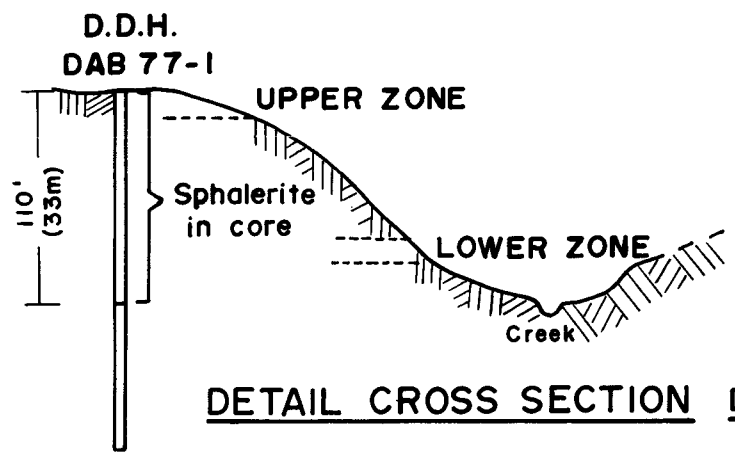
LOWER CAMBRIAN

1 SEKWI FM.

MINERALIZED ZONE

D.D.H.

GEOCHEMICALLY ANOMALOUS ZINC +500 p.p.m.



DETAIL CROSS SECTION DAB D.D.H.

WELCOME NORTH MINES LTD.

ARCTIC RED AREA

DAB PROPERTY
GENERAL GEOLOGY

Scale: 1" = 1/2 mile	Date: Apr. 1979	N.T.S. 106C16
1:31,680	By: J.G.	Fig.

K.

AJ PROPERTY

N.T.S. 106B-15/16

Latitude 64°48'N Longitude 130°35'W

Number of Minera Claims 30

The AJ lead-zinc property was discovered in 1973, was the subject of a brief geological appraisal and geochemical survey in 1974, and has since been held in good standing without additional work.

The property is located 10 miles (16 kilometers) to the south of the Gayna River property where Rio Canex Exploration Ltd. has conducted continuing exploration and development since 1974.

The recognized similarities between the leached silica capping of the AJ Showing and that of the Trent ore zone on the McIntyre Mines Ltd. Nadaleen River claims some 100 miles (160 kilometers) to the west have caused renewed interest in the AJ Property.

EXPLORATION TO DATE

The AJ mineral zone occurs at the contact between a band of black graphitic shale and a thick sequence of coarsely banded dolomites, both apparently parts of the Middle Devonian stratigraphy. It can be traced on strike for greater than two miles (3 kilometers) and has widths estimated to range from 15 to 80 feet (4 to 24 meters) (see Property Map). R.F. McLoughlin in his 1974 report on the property postulated two types of mineralization. Type I consists of a steeply dipping well mineralized breccia feeder zone while type II consists of a stratabound, partially silicified zone mineralized with disseminated grains

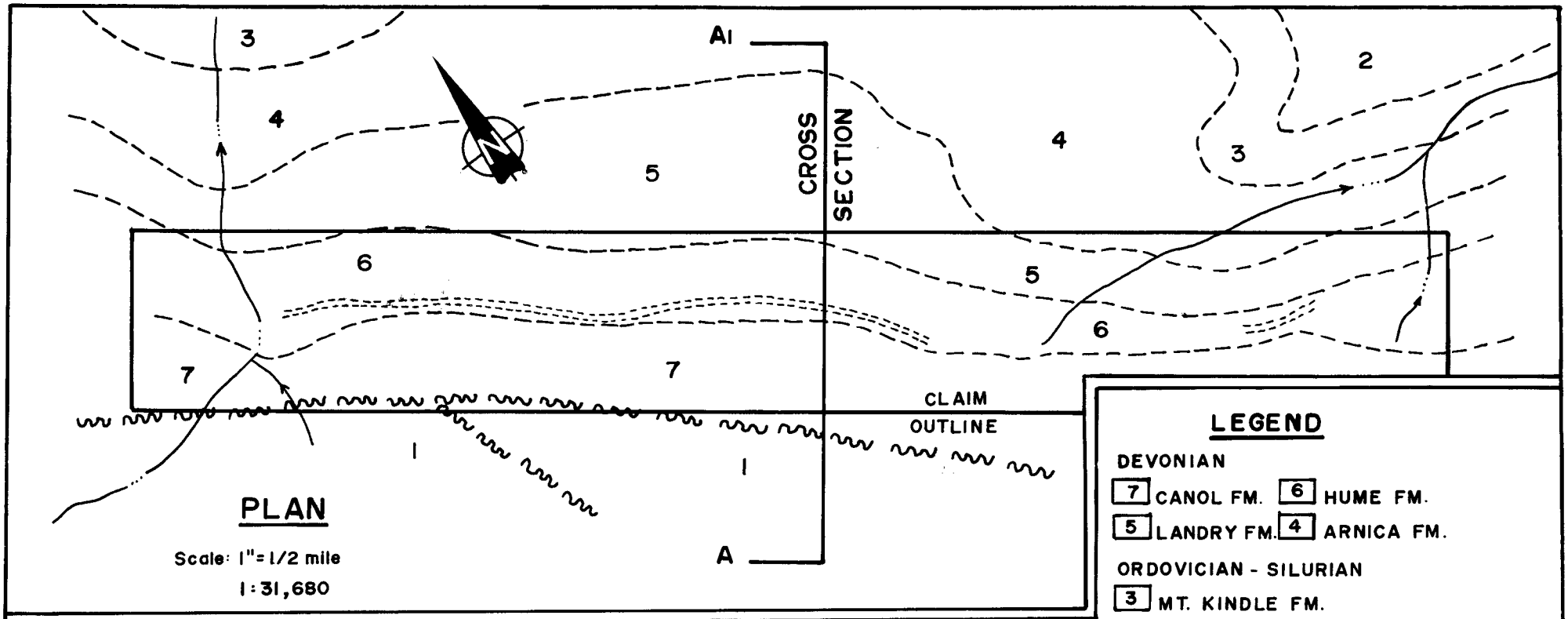
of sphalerite and galena. The latter is conformable to the enclosing sediments and dips gently to the southwest into the broad plateau valley floor (see accompanying cross-section). The zone is evident in outcrop or as mineralized rubble throughout much of its strike length with type I or II mineralization variously exposed. The mineralization consists mainly of silicified and quartz-veined dolomite in which fresh sulphides are rarely evident. The weathered surfaces are extremely pitted and cindery in appearance with sphalerite and galena preserved only in the fresh inner cores of the rock, some of the outer pits containing smithsonite. It is believed that fresh samples of this material would assay in the plus 10% combined lead-zinc range. The best exposure found on the property is in a small creek which cuts through a section of the structure and exposes parts of type II stockwork, well mineralized with unaltered reddish sphalerites.

The results of the 1974 geochemical soil survey substantiated the continuous linear surface expression and indicated a uniformity of grades along strike.

RECOMMENDATIONS

The mineral zone on the AJ property, although fairly apparent in strike dimension, is not sufficiently exposed in cross-section to clearly ascertain the mode of occurrence, true width or depth potential of the deposit. As the sulphides appear to have been leached from near surface exposures of the mineral zone as the result of its topographic setting on a high flat plateau, no over-all grade estimates can presently be made. The AJ zone has however the potential to contain large tonnages of possibly economic mineralization. It appears justified therefore to sample beneath the leached capping to test grades of underlying sulphide mineralization.

To this end, a program of diamond drilling is recommended possibly in conjunction with rock trenching.



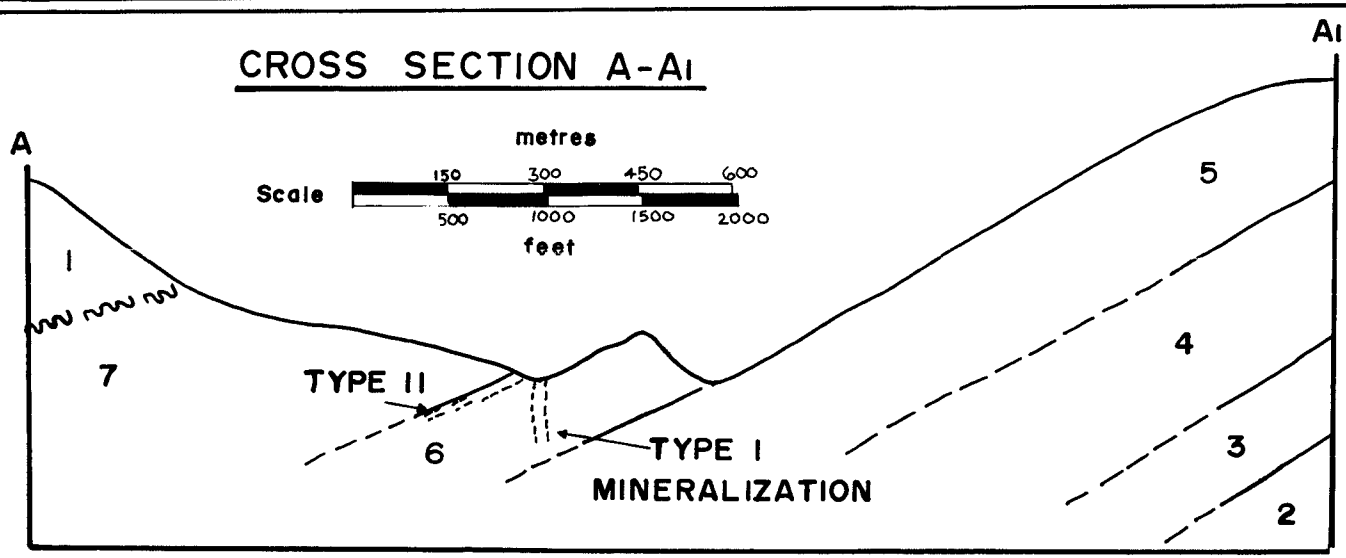
PLAN

Scale: 1" = 1/2 mile
1 : 31,680

LEGEND

DEVONIAN
7 CANOL FM. 6 HUME FM.
5 LANDRY FM. 4 ARNICA FM.
ORDOVICIAN - SILURIAN
3 MT. KINDLE FM.
CAMBRIAN TO ORDOVICIAN
2
PROTEROZOIC
1 KEELE FM.
MINERAL ZONE

CROSS SECTION A-A1



WELCOME NORTH MINES LTD.

ARCTIC RED AREA

AJ PROPERTY
GENERAL GEOLOGY

Scale: As Shown	Date: Mar. 1979	N.T.S. 106B15
	By: J.G.	Fig.

L.

RA PROPERTY

N.T.S. 106B-15
Latitude 65°01'N Longitude 131°32'W
Number of Mineral Claims 7

The RA lead-zinc mineral deposit, discovered in 1974, is located approximately 13 miles (21 kilometers) to the west of the AJ property. It is exposed on a high (6,000 feet) narrow ridge which cuts the mineral zone at right angles (see RA Property Map).

Rocks underlying the property are made up of a compressed sedimentary sequence ranging in age from Hadrynian to Middle Devonian, bounded on each side by low angle thrust faults. The known mineralization is believed to occur within the Middle Devonian section.

Assay results from chip samples across the zone appear potentially of economic interest even though possible strike projections are not apparent. Talus cover masks all but the mineralized ridge crest in the area of the showing.

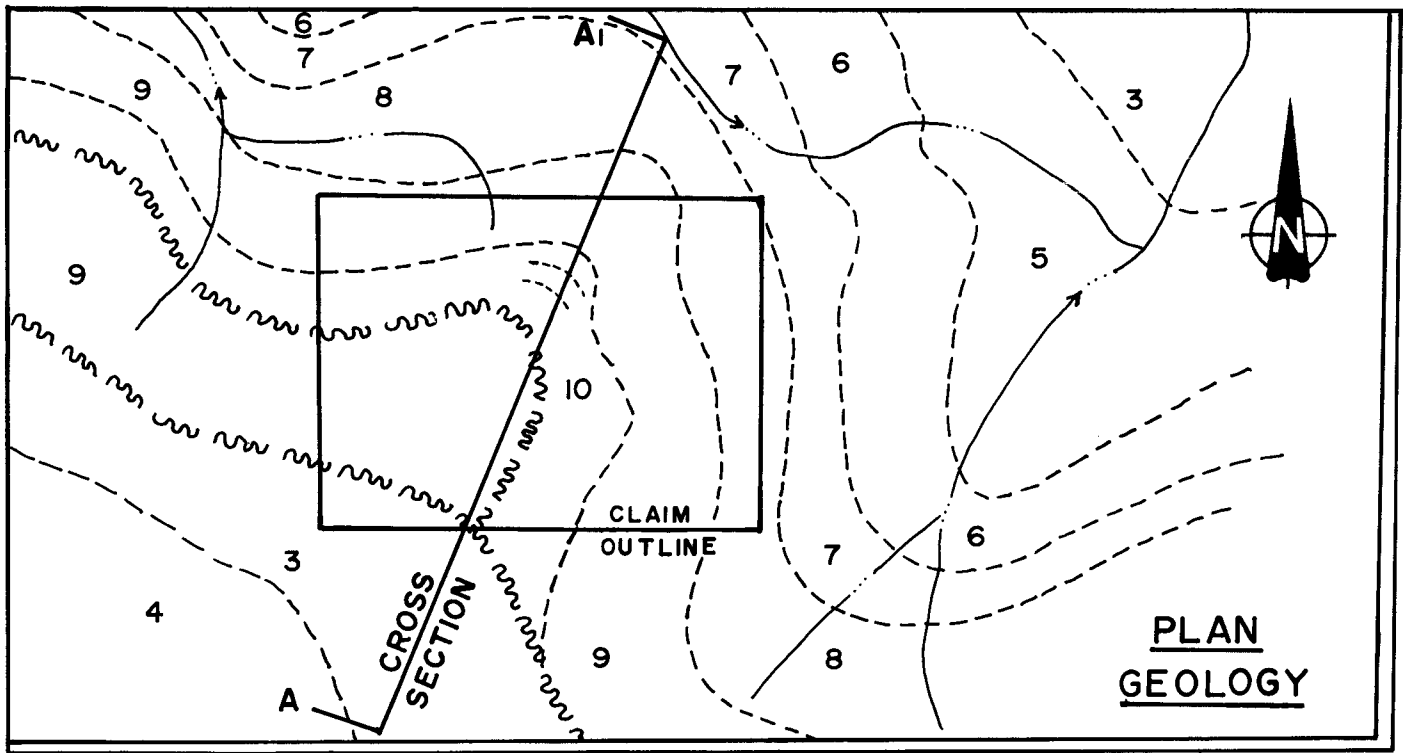
EXPLORATION TO DATE

There has been no exploration carried out on the RA property other than the initial prospecting traverses of the area and the above-mentioned preliminary chip sampling, the results of which are illustrated on the accompanying cross-section. Sample results indicate an average grade of 5.98% lead and 4.87% zinc across a calculated true width of 127 feet (39 meters). It should be noted that the above average is based, in part, upon samples taken from frost heaved rubble and talus and that the average is considerably weighted by the

sample from a 14-foot (4 meter) band (true thickness 7 feet, 2 meters) of massive galena.

RECOMMENDATIONS

It is concluded that available information on the RA property indicates the possible existence of a mineral zone of sufficient width and tenor to be considered of potential economic interest. A program of additional prospecting, geological mapping, trenching and contingent diamond drilling should therefore be contemplated. This program should be considered in conjunction with a corresponding program on the AJ property. It is recommended that the RA claims be held in good standing to await possible development of the AJ.



LEGEND

DEVONIAN
10 HUME FM.
9 LANDRY FM.
8 ARNICA FM.

SILURIAN-DEVONIAN
7 DELORME FM.

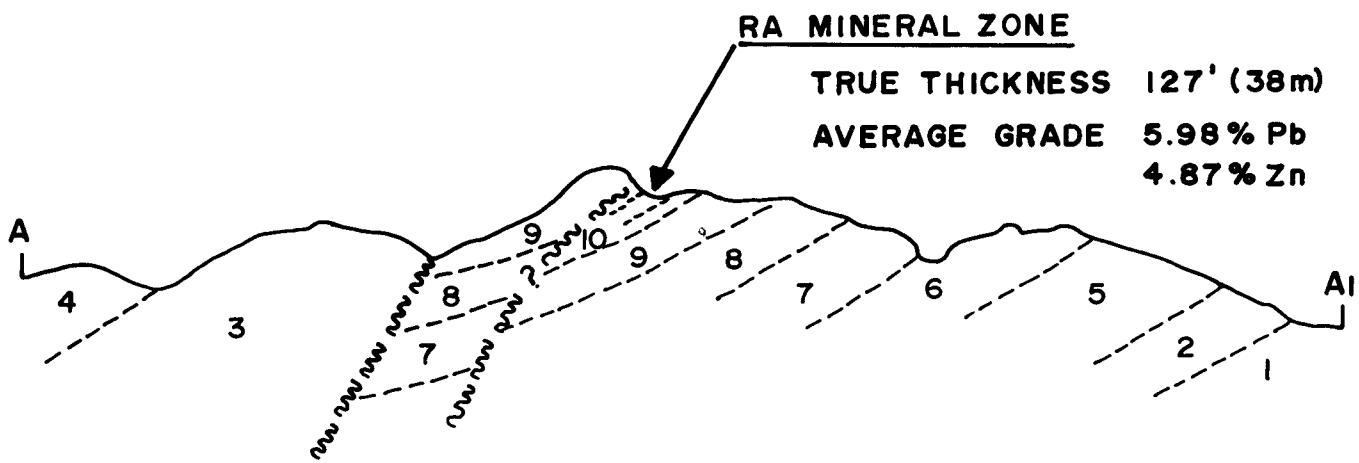
ORDOVICIAN-SILURIAN
6 MT. KINDLE FM.

CAMBRIAN-ORDOVICIAN
5 FRANKLIN MTN. FM.

CAMBRIAN-SILURIAN
4 MT. KINDLE EQUIV.

CAMBRIAN
3 SEKWI FM.
2 BACKBONE RANGE FM.

PROTEROZOIC
1 SHEEPBED FM.
MINERALIZED ZONE



REGIONAL CROSS SECTION A-A1

WELCOME NORTH MINES LTD.

ARCTIC RED AREA

RA PROPERTY
GENERAL GEOLOGY

Scale: 1" = 1/2 mile	Date: Apr. 1979	N.T.S. 106B15
1:31,680	By: J.G.	Fig.

M.

REP PROPERTY

N.T.S. 106C-8
Latitude 64°29'N Longitude 132°05'W
Number of Mineral Claims 48

The REP property is located on a branch of Duo Creek south of Duo Lake. The zinc-lead showings, which were discovered by prospecting in 1976, occur near the contact of Upper Cambrian to Lower Ordovician (€Of) Franklin Mountain Formation and younger Road River Formation (OSDr) carbonates. Mineralization principally sphalerite, takes the form of crackle healing and breccia matrix in a broken black chert, cross-fracture breccias and bedding plane laminations in black platy limestone. Based upon the type and number of occurrences, this contact is considered an exploration target area worthy of additional investigation (see attached property map).

EXPLORATION TO DATE

The principal showing on the REP property, the "A" Zone, is exposed for a thickness of 5 to 40 feet (1.5 to 12 meters) for 150 feet (45 meters) on strike and is open to probable extension. Chip samples indicate grades in the order of 2-3% zinc while grab samples range up to 36% zinc.

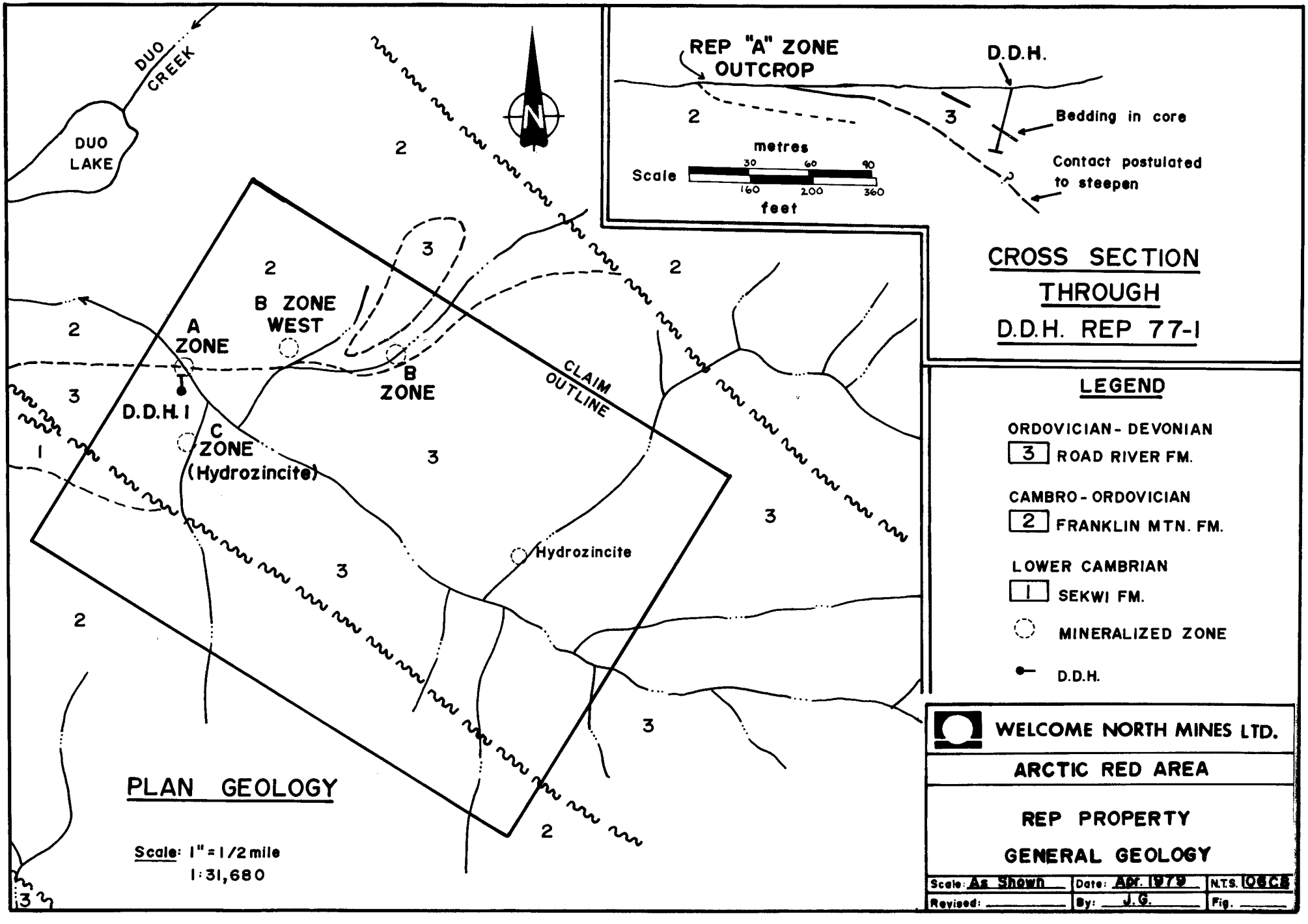
Geochemical soil grid surveys conducted in 1976 and extended in 1977 indicate anomalous zinc highs associated with and extending beyond known mineralization along the contact between Franklin Mountain and Road River formations.

A diamond drill hole 100 feet (30 meters) in length, laid out to test the "A" Zone at depth, was stopped short of intersecting the favourable contact area when it

was found that rock sequences had steepened beyond projected dips. For logistical reasons the hole was never lengthened.

RECOMMENDATIONS

The known stratigraphically bound mineralization on the REP property is considered significant to further mineral potential along the above described contact. Additional drilling of this contact area therefore appears warranted.


DUO CREEK
DUO LAKE
N
2
3
A ZONE
B ZONE WEST
B ZONE
C ZONE (Hydrozincite)
D.D.H. 1
CLAIM OUTLINE
Hydrozincite
1
PLAN GEOLOGY
Scale: 1" = 1/2 mile
1:31,680
REP "A" ZONE OUTCROP
D.D.H.
Bedding in core
Contact postulated to steepen
metres
Scale
30 60 90
160 200 360
feet
CROSS SECTION THROUGH D.D.H. REP 77-1
LEGEND
ORDOVICIAN - DEVONIAN
3 ROAD RIVER FM.
CAMBRO - ORDOVICIAN
2 FRANKLIN MTN. FM.
LOWER CAMBRIAN
1 SEKWI FM.
MINERALIZED ZONE
D.D.H.
WELCOME NORTH MINES LTD.
ARCTIC RED AREA
REP PROPERTY
GENERAL GEOLOGY
Scale: As Shown
Date: Apr. 1979
N.T.S. 096C8
Revised:
By: J.G.
Fig.

N.

REV PROPERTY

N.T.S. 106A-3

Latitude 64°08'N Longitude 129°20'W

Number of Mineral Claims 105

The REV zinc-lead mineral occurrences were discovered in 1975 and were the subject of concerted work programs during the 1975-76 field seasons.

The REV property is located 25 miles (40 kilometers) to the north of the Canol Road and more significantly from a geological and economic feasibility point of view, only 2-6 miles (3-10 kilometers) north of the BEAR property where geological lead-zinc reserves have been established.

Sphalerite, the predominant sulphide present, has been found at 10 separate locations on the property, occurring in a variety of manners from veins, disseminations, semi-massive sulphides, vug filling, crackle zones and breccias to stratabound laminations possibly of intratidal origin. Galena and tetrahedrite occur as accessory minerals at these showings. Mineralization appears to be controlled by faulting and related fracturing as well as the porosity and physiochemistry of individual beds within the host Mount Kindle Formation dolomites (see attached property map).

Exploration to date has indicated mineral concentrations of economic grade over mineable but erratic widths on the REV property. The potential to develop small to moderate sized blocks of ore appears reasonable, especially when viewed in conjunction with established mineral reserved on the adjoining BEAR property.

EXPLORATION TO DATE

Work on the REV group in 1975 consisted of geological mapping and bulk sampling of selected showings followed by 580 feet (174 meters) of short test-hole drilling. The drilling included seven holes on the Big Cirque Showing and four holes on the Main Showing.

Bulk sampling results were generally lower than visual estimates had indicated with assays varying from .04% to 11.60% zinc over panel sample areas approximately 20 by 30 feet (6 by 9 meters).

The best diamond drill hole intersection was obtained on the Main Showing in hole number 1. This intersection, which was assayed for neither lead nor silver, averaged 15.25% zinc over a core length of 40 feet (12 meters).

1976 exploration involved partial check-sampling of surface exposures, property and showing-scale geological mapping and geochemical surveys.

Channel sampling, in general, yielded higher average results than 1975 bulk sample methods over corresponding areas.

Geochemical soil sample surveys conducted in 1976 over areas of mineralized float produced anomalies in both lead and zinc which suggest additional zones of mineralization of the types described above.

RECOMMENDATIONS

The REV property has a large number of known mineral occurrences some of which are indicated to have zinc concentrations of economic tenor. Geochemical surveys suggest that additional similar types of occurrence may be present.

Since the potential for limited but possibly viable mineral concentrations has been demonstrated by work to date on the property further more detailed assessment is warranted. This proposed assessment would most efficiently be carried out through additional diamond drilling.

DAB CLAIM BLOCK

AB MAIN ZONE

AB "C" ZONE

AB CLAIM BOUNDARY

LEGEND

SILURIAN - DEVONIAN

5

ORDOVICIAN - SILURIAN

4 ROAD RIVER FM.

CAMBRIAN - ORDOVICIAN

3 FRANKLIN MTN. FM.

LOWER CAMBRIAN

2 SEKWI FM.

1 BACKBONE FM.

MINERAL ZONE

D.D.H.

WELCOME NORTH MINES LTD.

ARCTIC RED AREA

AB PROPERTY

GENERAL GEOLOGY

Scale 1" = 1/2 mile	Date: Mar. 1979	N.T.S 106C16
1:31,680	By: J.G.	Fig.

YUKON
N.W.T.

CAB NO. 2 ZONE

DDH

CAB NO. 1 ZONE

DDH

CAB CLAIM
OUTLINE

BORDER LAKE

LEGEND

ORDOVICIAN - SILURIAN

5 ROAD RIVER FORMATION

CAMBRIAN-ORDOVICIAN

4 FRANKLIN MTN. FORMATION

LOWER CAMBRIAN

3 SEKWI FORMATION

2 BACKBONE FORMATION

PRECAMBRIAN

1 RAPITAN FORMATION

MINERALIZED HORIZON

D.D.H.

WELCOME NORTH MINES LTD.

ARCTIC RED AREA

CAB PROPERTY

GENERAL GEOLOGY

Scale 1" = 1/2 mile	Date Mar. 1979	NTS 106C/5,16
1:31,680	By: J.G.	Fig

WEST GEOCHEMICAL SOIL GRID

EAST GEOCHEMICAL SOIL GRID

ESAU'S SHOWING

MAIN SHOWING

BIG CIRQUE SHOWING

WATERFALL SHOWING

REV CLAIM OUTLINE

LEGEND

DEVONIAN

4 CAMSELL FORMATION

SILURIAN - DEVONIAN

3 DELORME FORMATION

ORDOVICIAN - SILURIAN

2 MT. KINDLE FORMATION

ORDOVICIAN

1

MINERALIZED ZONE

D.D.H.

GEOCHEMICALLY ANOMALOUS ZINC +290 p.p.m.

WELCOME NORTH MINES LTD.

ARCTIC RED AREA

REV PROPERTY

GENERAL GEOLOGY

Scale 1" = 1/2 mile	Date Apr. 1979	NTS 106A3
1: 31,680	By: J.G.	Fig