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NORTHAIR MINES'  
BRANDYWINE GOLD-SILVER PROPERTY

BY

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&

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FOR PRESENTATION AT  
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ABSTRACT

The Brandywine property is located some 70 miles north of Vancouver, British Columbia in a metavolcanic roof pendant in the Coast Crystalline Belt. Gold and silver are the main metals of interest, while some value will be derived from copper, lead, and zinc.

Although a good deal of exploration work had been done in the area, the discovery was made by a prospector geochemically testing stream sediments for total heavy metal content.

A successful surface and underground exploration program was carried out by Northair Mines Ltd., a junior mining company, by raising funds through the public offering of company shares. When sufficient, favorable information became available, the Royal Bank of Canada provided an interim loan for further development, and on March 6, 1975 informed the company that under certain conditions, is prepared to finance the property to production.

LOCATION

Northair's Brandywine property is located in the Callaghan Creek area, approximately 70 miles north of Vancouver, B. C. Squamish, a deep seaport 30 miles to the south at the head of Howe Sound, is the nearest trade center. The Whistler Mountain resort community, well-known for its excellent skiing facilities, is located close by in the Alta Lake area. (Figure 1).

ACCESS

Paved Highway 99, which has its origin at Horseshoe Bay on the Trans Canada Highway, passes within 5 miles of the property. Rail service is available through British Columbia Railway with main terminals in North Vancouver. B. C. Hydro's mainline passes close to the property, and as the railway, parallels Highway 99 to the town of Pemberton.

Situated on the west slopes of Sproatt Mountain, the property is reached from Highway 99 by 9 miles of gravelled logging road, which, for the main part, follows the Callaghan Creek Valley. (Figure 2).

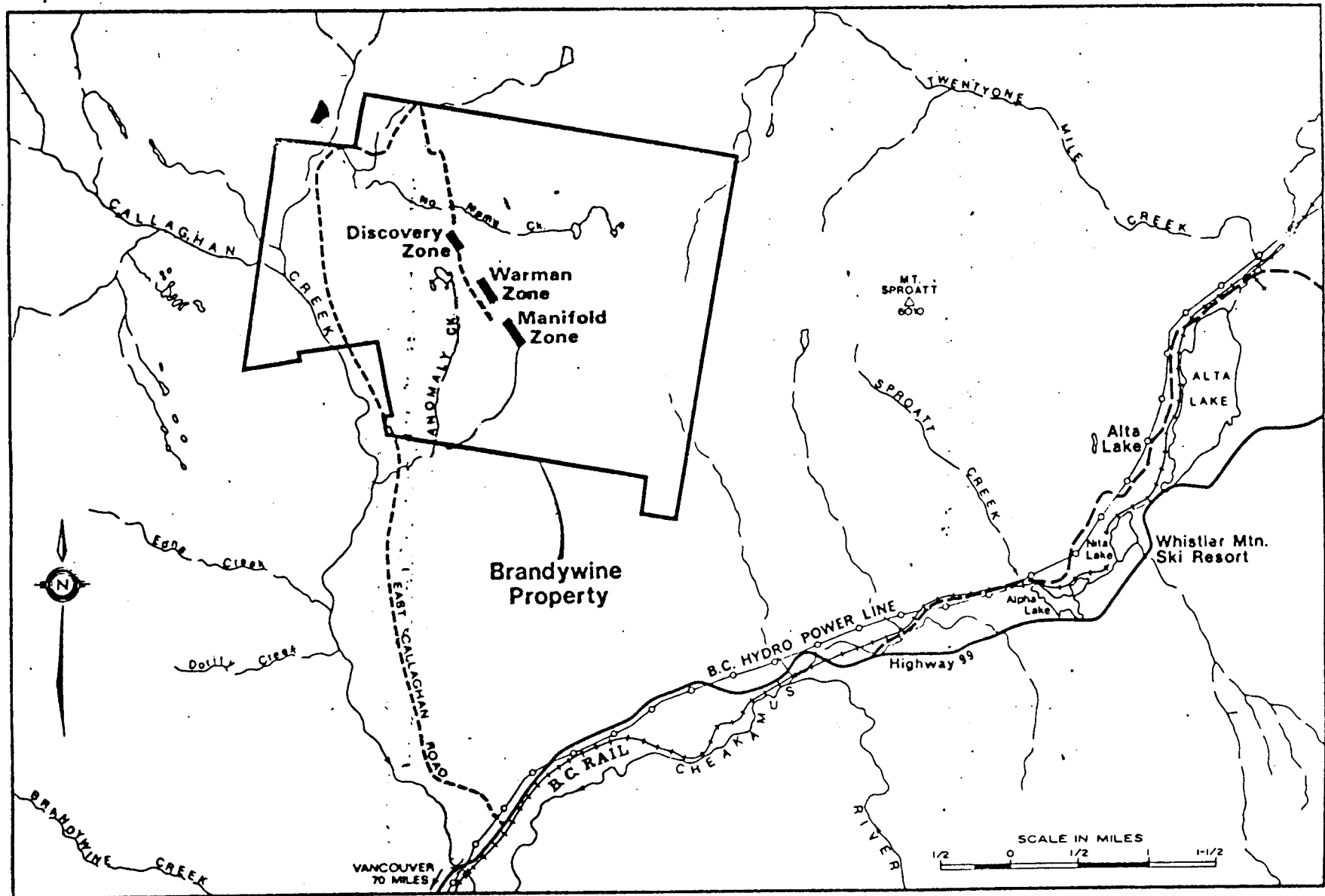


FIG. 2  
ROADS & SERVICES - CALLAGHAN CREEK AREA

CLIMATE, TOPOGRAPHY, AND FLORA

The Callaghan Creek area is within the Coast Range, a belt of heavy precipitation, principally in the form of snow, but quite variable with elevation and local topographic conditions. On the average, the property receives some 100 inches of annual precipitation, with approximately 65% of this falling as snow.

Temperature is seldom below 0° F. in winter, or above 80° F. in the summer, and snow can be expected on the ground between October 1st and July 1st.

Topography is generally rugged and locally characterized by northerly trending cliff faces and depressions. Mean gradient from valley bottom at the 2500 ft. elevation and the minesite at the 3250 ft. elevation is 25%.

The area is blanketed by an over-mature stand of timber which consists principally of hemlock and balsam, with some cedar and sparse Douglas Fir.

### EARLY HISTORY

The area in general has received a fair amount of attention from early prospectors and exploration companies. Several mineralized showings have been found and examined. Some of these are located within a few miles of the property, on the east side of Sproatt Mountain, west of Callaghan Creek, and close to Highway 99 in the Alta Lake area.

Although some of the early prospectors had been on the Brandywine ground, it would seem certain that modern man had never seen the high grade showings until discovered by the present vendors.

### EXPLORATION AND DEVELOPMENT (1969 TO PRESENT)

The story of the Brandywine property discovery really begins with Dr. "Mike" Warshawski's boyhood love of the Rocky Mountains, rocks, and minerals; his keenness for the outdoors; and his insatiable curiosity for what lies over the next hill. These ingredients, coupled with the strong desire to find an interesting and

EXPLORATION AND DEVELOPMENT (continued)

challenging hobby to complement his already successful Vancouver dental practice, took "Mike" to the prospecting course sponsored by the B. C. and Yukon Chamber of Mines in the winter of 1966-67. He again enrolled in the course in 1967-68, and in the following fall commenced taking a night school geology course given at the British Columbia Institute of Technology in Vancouver.

"Mike" was anxious to get going, and while still taking his courses decided on prospecting the Callaghan Creek area for the following reasons:

1. Close to home base of Vancouver.
2. Fairly accessible because of recent road construction in conjunction with development of potential ski areas and logging operations.
3. Known mineralization in the general area and in this group of rocks through southwestern British Columbia.
4. Open ground for claim staking.

In August, 1969 while prospecting the area he obtained a positive reaction from the silt in a stream crossing the East Callaghan Creek road. For obvious reasons this creek is now referred to as Anomaly Creek. (Figure 3).



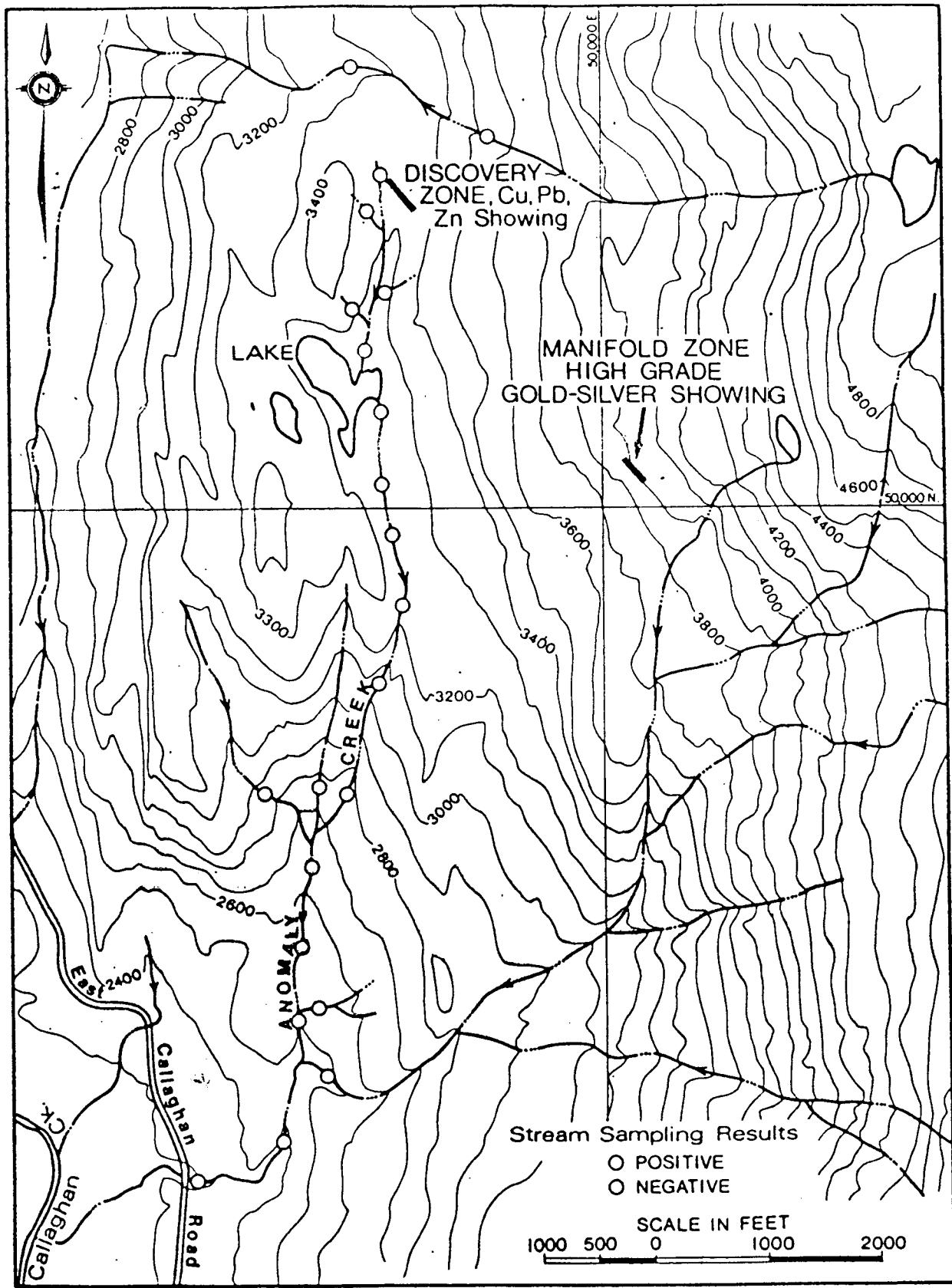


FIG. 3  
 EXPLORATION ACTIVITIES -  
 WARSHAWSKI & MANIFOLD

EXPLORATION AND DEVELOPMENT (continued)

The reaction was obtained with a Jens Morgensen geochemical field kit which tests the stream silt for total heavy metal content.

"Mike" traced the anomaly upstream for some distance and then called upon his former instructor A. H. "Moose" Manifold, department head of mining at B. C. Institute of Technology, for assistance. Through the fall of 1969 and the summer of 1970 the anomalous results were traced upstream to a small lake and beyond to a small inlet stream. As prospecting advanced beyond the lake, silt samples were tested from the small streams flowing into the main stream with anomalous results obtained only on the easterly side.

Approximately 2000 feet beyond the lake, the stream reaches a height of land where it has its origin in underground water seeping through gravels from another stream. This stream is about 100 feet north of the start of Anomaly Creek and flows at right angles to it. Negative geochemical results were obtained from this stream.

EXPLORATION AND DEVELOPMENT (continued)

Having located the anomaly quite closely, Warshawski and Manifold confined their search to the hillside east of here. Some float, mineralized with chalcopyrite and galena, was found and before snow closed the 1970 season, a large piece of well-mineralized material was found almost in place. Thirteen mineral claims were staked to cover this ground.

Early the following summer the vein was located and by hand-trenching traced along strike for 30 feet. Additional hand-trenching and mapping revealed other veins and areas of lead-zinc copper mineralization in close proximity to the mineralized outcrop. Soil sampling was also carried out in the immediate area to geochemically test for parallel structures and obtain a trend for the mineralization.

Having tied down the location and approximate trend of the mineralization, additional claims were staked to cover projected structure. While running one of the claim lines, another mineralized outcrop was located some 3700 ft. southeast of the original discovery. This showing is located on what is now known as the Manifold Zone. An unsuspecting looking sample was collected and

EXPLORATION AND DEVELOPMENT (continued)

pocketed by Manifold who, some time later, had it assayed. To everyone's amazement, the sample had a high gold and silver content. Finally, the two partners had hit on something that heightened the interest considerably and they were now in a position to barter with exploration companies.

McIntyre Mines Ltd. optioned the property that fall (1971), but snow conditions prevented further examination. During the summer of 1972, trenching on the high-grade showing and mapping indicated all the known showings were likely on the same structure. A geochemical soil sample program was conducted over a two square mile area on a line spacing of 400 feet and sample interval of 50 feet. Samples were submitted for geochemical analysis for copper, lead, zinc, and silver. Anomalous results were obtained and detailed sampling of the areas of interest followed.

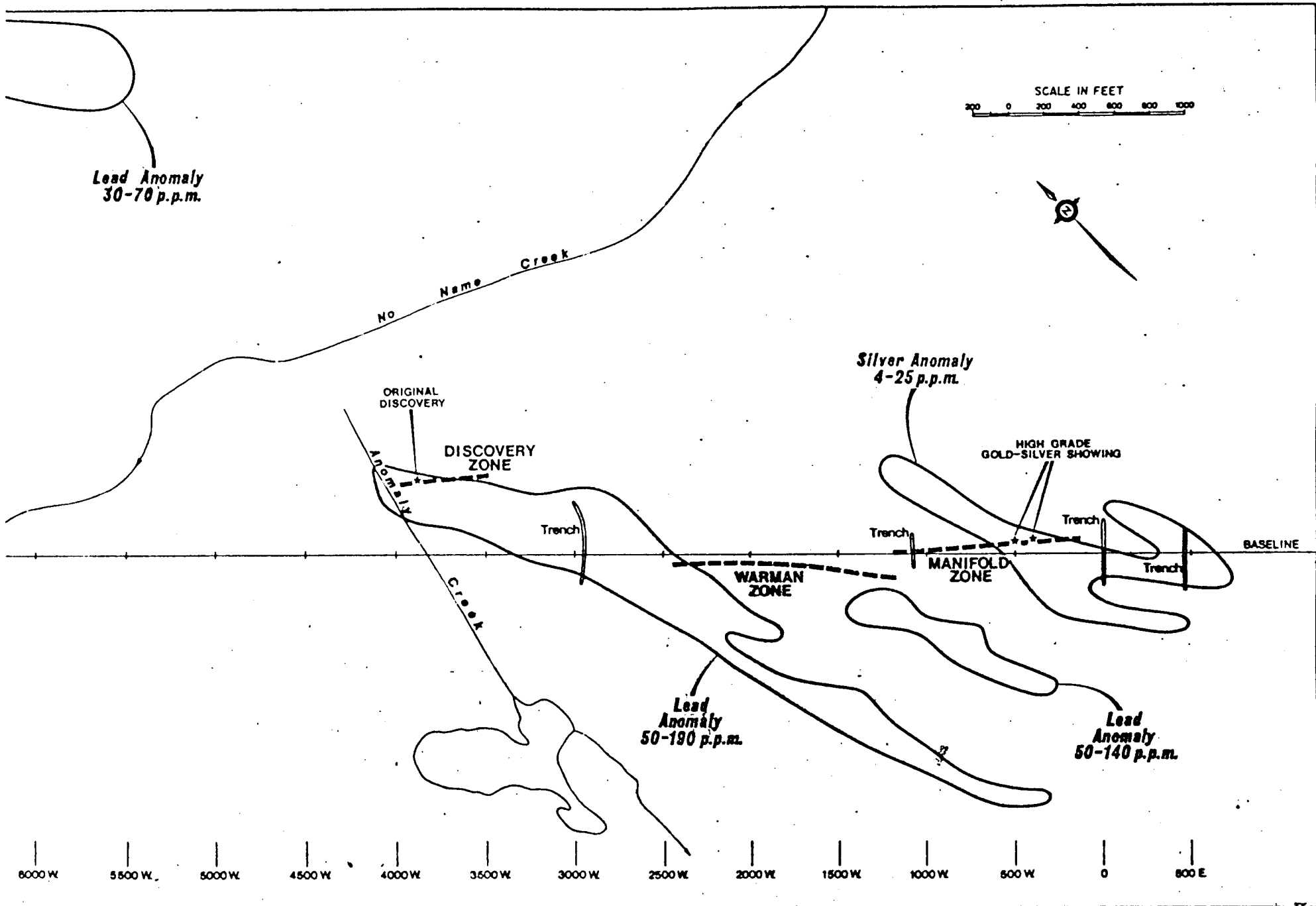


FIG. 4  
GEOCHEMICAL ANOMALIES & TRENCHING -  
McINTYRE MINES LTD. (1972)

EXPLORATION AND DEVELOPMENT (continued)

The program indicated the following possibilities:

1. Continuity of structure between the Manifold and Discovery Zones.
2. Extension of the Manifold Zone to the south-east.
3. Copper, lead, and zinc geochemical results comparable to and lying north of the Discovery Zone.
4. A continuous zone of anomalous silver values 800 feet northwest and 800 feet southeast of the high grade showings. (Figure 4).

Efforts were concentrated on bulldozer trenching of the silver anomaly. Trenches at Section 1100 West located the structure, but it was narrow and poorly mineralized. At Sections 100 West and 300 East trenching failed to locate the source of the geochemical anomaly.

Trenches were made at 2900 West to check high lead and zinc values. The structure was located but found to be narrow with very low values in gold and silver.

At this time, McIntyre decided to drop their option on the property and it was consequently offered to other majors who were not interested.

Shortly after this, the option was offered to Don McLeod,

EXPLORATION AND DEVELOPMENT (continued)

President of Northair. McLeod, with money in the Northair treasury and a strong desire to investigate the high grade gold-silver showings, optioned the property for the Company and immediately began a diamond drilling program. Of the 28 holes drilled between September and November, 1972, on what is now known as the Manifold Zone, 18 were in ore. (Figure 5).

It was felt that drilling results were encouraging enough to warrant an underground exploration program. In early May of 1973 an adit was collared at the 3700 foot elevation, some 200 feet lower than the original high-grade showings and approximately 400 feet west of the structure.

The adit intersected the structure in early June and better widths and grades were encountered than indicated by a nearby diamond drill hole intersection. Drifting on the structure continued until the end of August with the following assay grades and widths obtained from two main ore shoots:

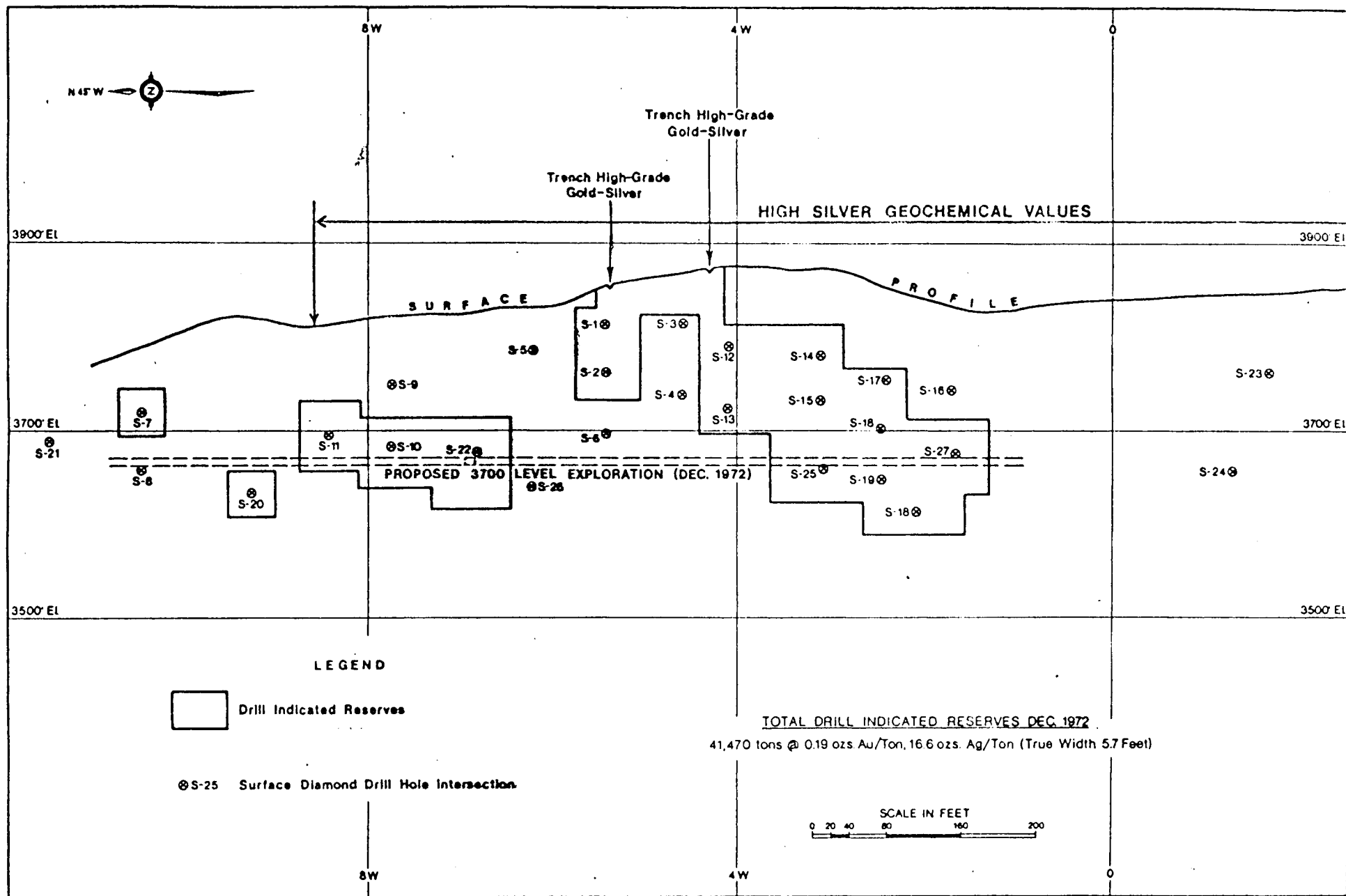


FIG. 5  
 VERTICAL LONGSECTION - MANIFOLD ZONE  
 DRILL INDICATED RESERVES - DATE 1972



EXPLORATION AND DEVELOPMENT (continued)

West: 240 feet of .44 oz. Au/ton, 12.4 oz. Ag/ton over true width of 5.83 feet.

East: 197 feet of .30 oz. Au/ton, 30.13 oz. Ag/ton over true width of 7.0 feet.

Combined: 437 feet of .37 oz. Au/ton, 21.2 oz. Ag/ton over true width of 6.0 feet.

Diamond drilling commenced in June of 1973 to investigate for possible extensions northwest and southeast of the Manifold Zone. Emphasis was soon placed on probing the Manifold Zone below the 3700 level development for ore potential at depth.

Meanwhile, bulldozer trenching just southeast of the Discovery Zone showings produced some bonanza type gold values from grab samples of mineralized structure. Diamond drilling commenced immediately on this zone and drill inferred reserves stand at 110,000 tons at .10 oz. Au/ton, 1.28 oz. Ag/ton, 0.60% Cu, 5.96% Pb, and 7.2% Zn.

The discovery of high grade gold values at the Discovery Zone once again rekindled interest in the area between it and the Manifold Zone. Additional geochemical soil sampling was carried out, expressly for gold analysis, with results indicating some continuity. In addition,

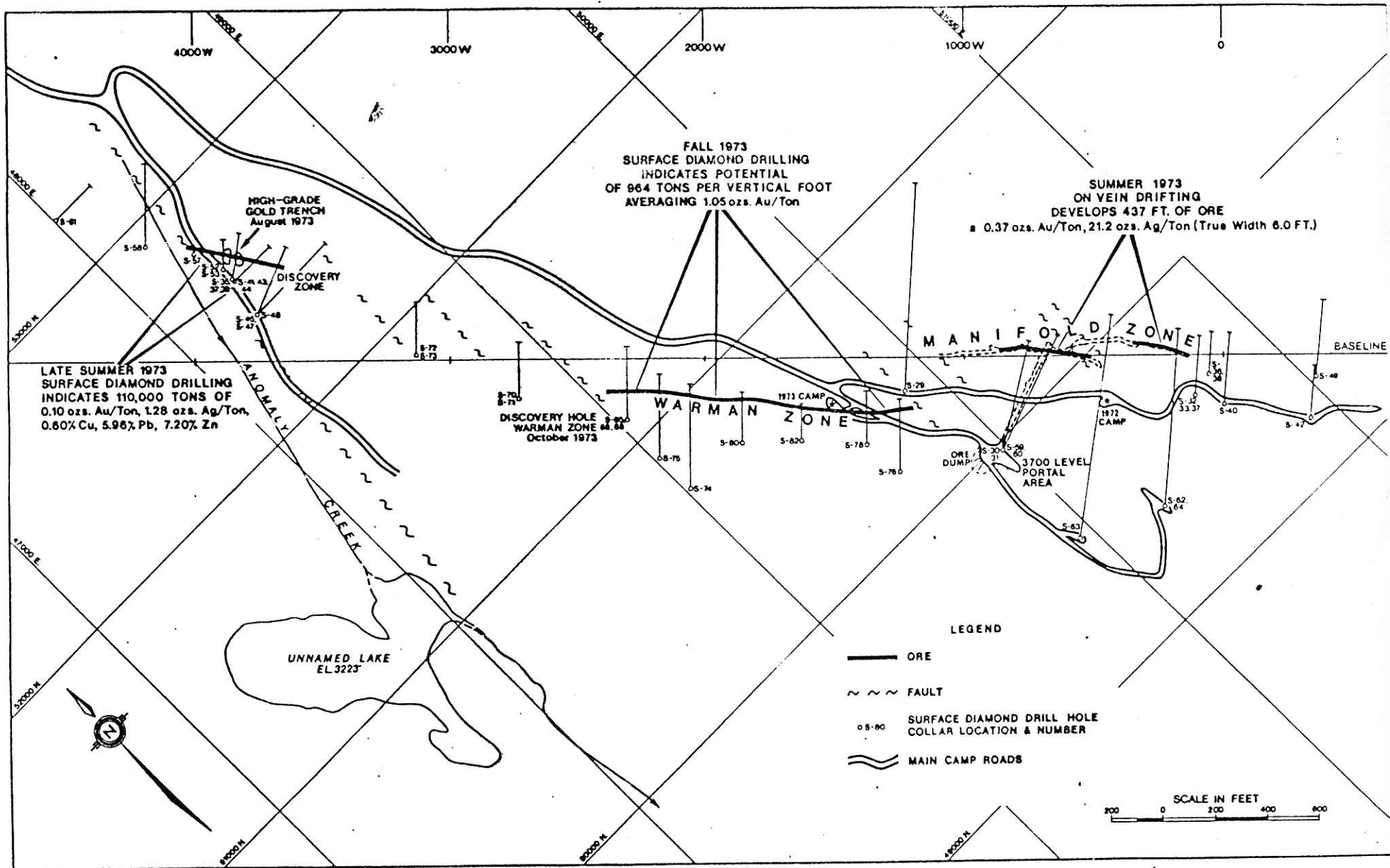


FIG. 6  
EXPLORATION ACTIVITIES - NORTHAIR (1973)

EXPLORATION AND DEVELOPMENT (continued)

various geophysical methods were tested and surveys were carried out to aid in pinpointing the structure for diamond drilling. The first hole, drilled approximately midway between the Discovery and Manifold Zones, encountered good gold, copper, lead, and zinc values. A systematic program of diamond drilling southeast to the Manifold followed and indeed proved very successful. (Figure 6).

An underground exploration and development program was initiated in late January 1974 at the 3450 elevation and some 1000 feet of drifting on the Warman Zone proved 710 feet of ore over a true width of 7.5 feet with average grade of .70 oz. Au/ton; 1.0 oz. Ag/ton; 0.23% Cu, 1.54% Pb, and 2.39% Zn.

Raising programs on the Warman and Manifold Zones proved the vertical continuity of ore in both.

Surface diamond drilling and underground development to the end of August 1974 had produced enough information to proceed with a feasibility study.

In early summer of 1974 an existing milling plant was purchased, dismantled, and transported to Vancouver for storage. From September to the end of November, emphasis

## EXPLORATION AND DEVELOPMENT (continued)

was placed on upgrading existing roads and building new ones, clearing areas for permanent campsite, mill site, and the clearing and collaring of a main level haulage adit at the 3250 level. These programs were completed just before heavy snow conditions forced temporary work stoppage and sites are in good condition for start-up in early spring. (Figure 7).

## GEOLOGY

The Brandywine property lies within the Coast Crystalline Belt, a plutonic and metamorphic terrane, extending from the State of Washington to the Alaska-Yukon boundary. This belt parallels the B. C. coast and extends inland for an average distance of some 100 miles.

A number of roof pendants consisting of sedimentary and volcanic rocks occur within this belt. The Brandywine property is considered to be situated in one of these pendants as is the former producer at Britannia some 35 miles to the south.

Metamorphosed volcanics, consisting mainly of intermediate tuffs and breccias, with little evidence of definite flows, form the main part of the Northair pendant. Most recent

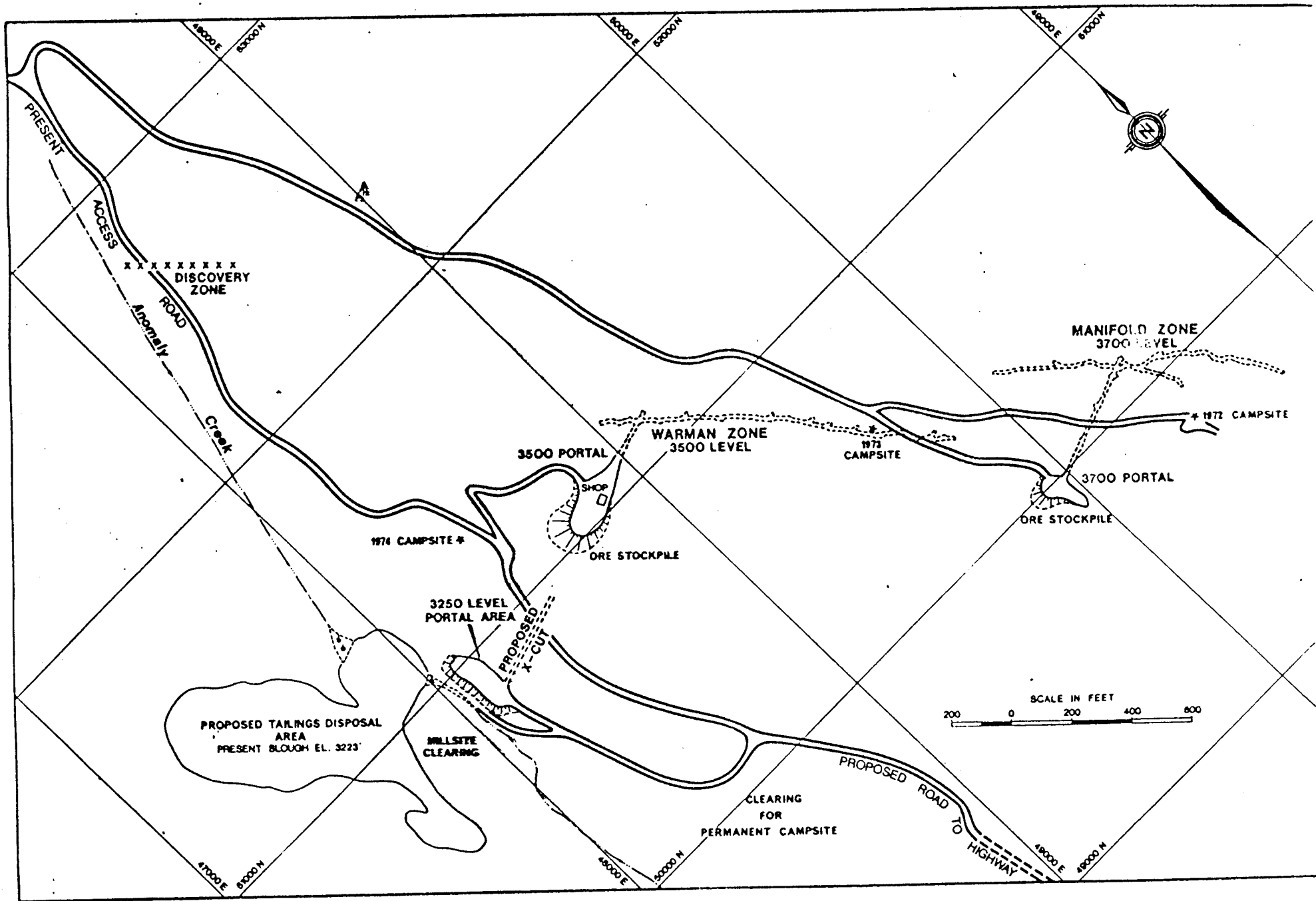


FIG. 7

DEVELOPMENTS - SURFACE AND UNDERGROUND (1974)

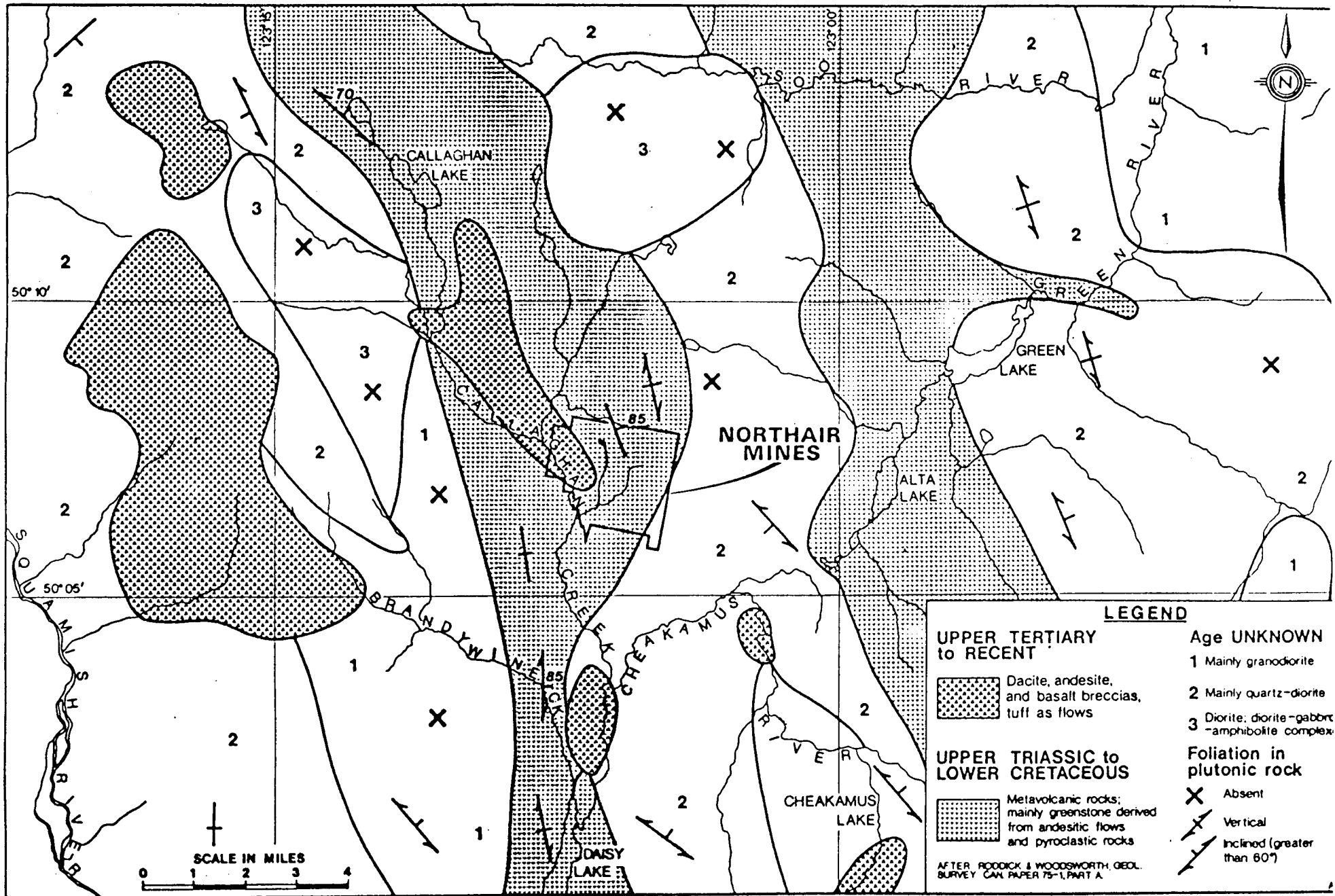


FIG. 8

GEOLOGY (continued)

information points to a Lower Cretaceous age for these volcanics.

Younger volcanic rocks of basaltic composition outcrop in the area with nearly horizontal attitudes. These may be as young as 10,000 years, and investigations show that a number of points of recent volcanic activity exist.

(Figure 8).

Metallic mineralization at the property occurs in the form of pyrite, sphalerite, galena, chalcopyrite, native gold, and argentite in steeply dipping, northwest trending, quartz-carbonate zones hosted by the Lower Cretaceous volcanics.

The volcanics in the immediate vicinity have a northerly trend with steep dips. Schistosity paralleling the volcanic attitudes is prevalent, and most faulting seems to have taken place along these planes. Basaltic dykes, believed related to the recent basalt flows, crosscut the Warman Zone along the schistosity planes. (Figure 9).

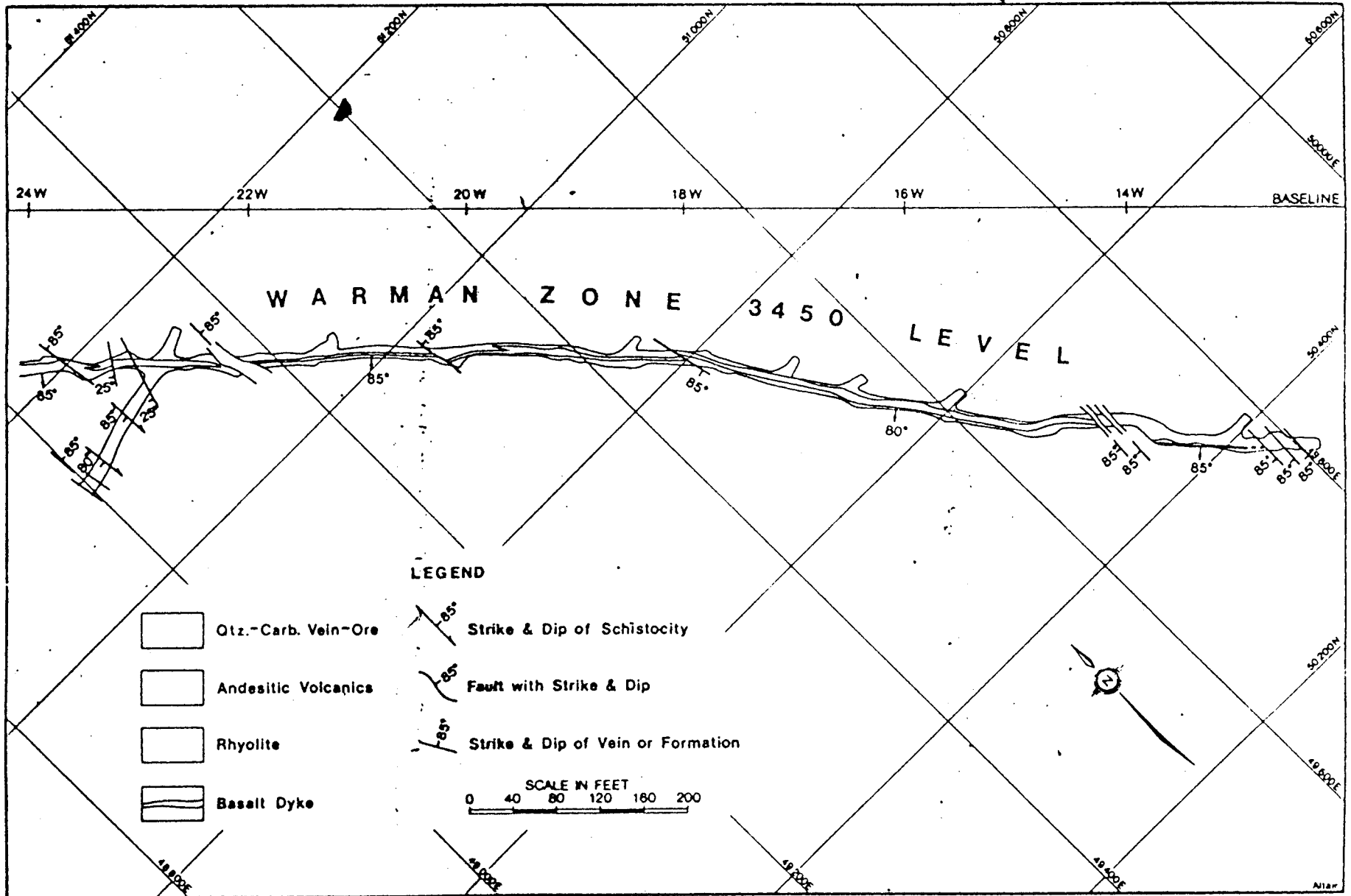


FIG. 9  
GENERALIZED GEOLOGICAL MAP - 3450 LEVEL



## PROPERTY ACQUISITION AND FINANCING

In December, 1971 McIntyre Mines Ltd. paid \$1,000.00 to Manifold and Warshawski for the right to examine and explore the 18 mineral claims. The agreement also called for an option payment of \$20,000.00 (subsequently changed to \$10,000.00) before September 1, 1972.

Northair paid \$10,000.00 on September 1, 1972 for the right to examine and explore 104 mineral claims. The additional terms of this agreement were modified in August, 1973 to read:

1. \$100,000.00 total payable in five equal instalments beginning September 1, 1973 and payable first of September each following year.
2. Provide vendors a total of 350,000 common Company shares between September 1, 1973 and September 1, 1976.

Northair Mines Ltd. (N.P.L.) was incorporated in 1966 under British Columbia charter. Authorized capital shares stood at 6,000,000 (April 1974) with 4,484,000 issued as of February 1, 1975.

From inception in 1966 to December, 1971, Northair was active in various exploration ventures throughout B. C., Yukon, and Northwest Territories. During very active exploration and heavy market play in the Kamloops area

PROPERTY ACQUISITION AND FINANCING (continued)

of B. C., Northair acquired an interest in a group of claims approximately 2000 feet northwest of the Afton Mines property. While diamond drilling on this property, minor native copper was encountered.

This sparked much market interest in Northair, and in April, 1972 the Vancouver Stock Exchange requested that the Company sell 300,000 shares to meet share demand and keep the price within reasonable range. The sale of these treasury shares netted the Company \$289,000.00 and eventually provided the necessary capital to acquire the Brandywine property, proceed with diamond drilling and a portion of the early phase of underground exploration.

In June, 1973, after good widths and grades were encountered in initial drifting from the 3700 level adit cross-cut, Continental Securities Corp. and Burleigh and Partners Ltd. agreed to purchase 200,000 Northair treasury shares to net the Company \$180,000.00. This provided the necessary money to proceed with further surface diamond drilling and underground exploration of the east ore shoot at the Manifold Zone.

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PROPERTY ACQUISITION AND FINANCING (continued)

Emphasis was then placed on developing this ore shoot with hope of providing favorable information in order to proceed with further financing arrangements. After obtaining encouraging results, Canarim Investment Corp. Ltd., Continental Securities Corp., Burleigh & Partners Ltd., and Carlisle Douglas & Co. Ltd. agreed to purchase 400,000 treasury shares to net the Company \$415,000.00. In addition, the agreement attached one warrant per share exercisable before February 13, 1974. The favorable results obtained from drilling the Warman Zone in late 1974 assured that the warrants would be exercised and this provided an additional \$480,000.00 for the Company.

In August, 1973, Teck Corp. agreed to purchase 100,000 Northair treasury shares to provide \$125,000.00 for Teck's right to a first refusal on any future financing.

In May, 1974, the Royal Bank of Canada provided a line of credit for \$500,000.00 (later increased to \$700,000.00) with intent to provide additional funds through to production pending continuing favorable results from the program.

PROPERTY ACQUISITION AND FINANCING (continued)

Northair obtained an additional \$138,000.00 from a private placement of treasury shares to a group of investors in October, 1974.

On March 6, 1975 the Royal Bank of Canada notified the Company that it is prepared to advance sufficient funds for the purpose of bringing the property into production. This financing is subject to certain terms and conditions which the Company feels can be met.

CONCLUSION

The successful exploration, development, and financing of the Brandywine property emphasizes the following important points:

1. The individual prospector, equipped with simple tools and a basic knowledge, plays an important and very necessary role in today's mining industry.
2. Junior mining companies, with ambitious and optimistic directors, can explore and bring properties into production by raising capital through the public offering of Company shares.

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