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SUMMARY REPORT

NORTHAIR MINES LTD. (N.P.L.)
TT Claims Kamloops M.D.
92I/10E
C. Miller, P. Eng.
July 24, 1972

NORTHAIR MINES LTD.(N.P.L.)

TT CLAIM GROUP

Cherry Creek Area
Kamloops Mining Division
British Columbia

50° 120° N.W.

SUMMARY REPORT

by

C.R.D. Miller, P. Eng.

July 24, 1972

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INTRODUCTION

Northair Mines Ltd. (N.P.L.) in partnership with White River Mines Ltd. (N.P.L.) have conducted, during the year to date, a comprehensive investigation of their TT claim group in the Cherry Creek Area near Kamloops, B.C.

Mr. D.A. McLeod, President of Northair, and Mr. George Bleiler, mining executive, assumed responsibility for administration of the programs, completed under contracts by various service organizations with the desired capabilities. Technical direction and on site supervision was assigned to supervisory consultants, initially L.B. Gatenby, P. Eng. and more recently, the author of this report which summarizes all phases of the investigations to date.

SUMMARY AND CONCLUSIONS

1. Northair Mines Ltd. (N.P.L.) is the recorded owner of 57 located mineral claims and fractions known as the TT Claim Group in the Cherry Creek Area, Kamloops Mining Division, B.C.

2. By agreement dated January 31, 1972, White River Mines Ltd. owns a 50% participating interest in the property being investigated under Northair management.

3. The property is being explored primarily for copper deposits similar to the native copper occurrences under development by Afton Mines Ltd., a few miles to the southeast. Programs undertaken during the first half of 1972 included line cutting, magnetometer and I.P. Surveys, geological mapping and both percussion and diamond drilling.

4. No mineral concentrations of economic significance have been located to date. Three areas within the claim group do warrant further evaluation.

5. The major portion of the claims is believed underlain by a thick series of volcanic flows with interbedded and overlying sediments known as the Kamloops Group of Miocene Age. This group is in contact with and in part overlies intrusive rocks related to the Iron Mask Batholith; part of the Jurassic Coast Intrusions.

6. The areas considered to be the favourable hosts for mineral concentrations are fractured zones at or near the intrusive-volcanic contact. Known occurrences appear to be associated with intrusives near north westerly trending faults of regional extent.

7. The areas of the TT claims which warrant further study are:
   (a) The indicated volcanic-intrusive contact in the northern claims.
   (b) The geophysical disturbances noted along the western side of the property in an area believed to be near the base of the volcanic capping.
   (c) A north easterly sheared and altered zone near 104N-6E.

8. These investigations should be pursued to a logical conclusion in stages, each of which would be evaluated prior to initiation of the suceeding phase.

STAGE I - Exploration

(a) Detailed geological mapping of specific areas.
(b) Further reconnaissance and detailed I.P.
(c) Assimilation of new data.
(d) Exploratory diamond drilling.

Estimated Cost $ 28,500

STAGE II - Target Evaluation Drilling

Provision should be made to assess by further drilling all economic possibilities indicated by the preceding investigations.

Allow for 15,000 ft. of diamond drilling @$9.00/foot incl. $135,000

TOTAL STAGES I and II $163,500

STAGE III - Advanced Exploration and Feasibility

Assuming Stages I and II are successful, the investigation should be continued. No estimate as to the extent or estimated cost of this advanced study can be predicted at the present time. From experience, such investigations if continued through feasibility can range from under $500,000 to in excess of $5,000,000 dependent upon the size and complicity of the deposit.

9. In any event, the property should be retained for the foreseeable future and reassessed in the light of further developments in the area and improvements in exploration technology.

Respectfully submitted,

C.R. Miller, P. Eng.

C.R.D. MILLER
PROFESSIONAL ENGINEER
BRITISH COLUMBIA

July 14

CLAIM STATUS

As detailed in the Statement of Material Facts dated April 11, 1972, Northair was at that date the recorded owner of 53 located mineral claims (including two fractional claims) known as the Northair TT Group. This group is located in the Cherry Creek Area north of the Trans Canada Highway some 13 miles west of Kamloops, B. C.

By prior agreement (January 31, 1972), White River Mines Ltd. acquired a 50% interest in the property to be explored under Northair management. In this report joint ownership and participation are implied in all references to this Northair claim group.

The claims were purchased by Northair because of their geologically favourable location with respect to the Afton Mines native copper discoveries some 4 miles south easterly. Since a major staking rush was in progress at the time of their acquisition, Northair considered it advisable to re-confirm claim locations and property limits during the initial phase of the exploration program scheduled for the 1972 field season.

Amex Exploration Services Ltd. of Kamloops, B.C. were commissioned to complete a chain and compass survey of the claim lines, stake any existing fractions and prepare a plan of the company holdings with due respect to the legal rights of the owners of all adjacent properties. During the completion of this assignment and the subsequent cut line grid, also contracted to Amex, it appeared advisable to legally abandon and restake some of the claims and fractional claims in accordance with the Mining Act.

Several of the perimeter claims have been reduced to fractional size or eliminated by prior staking; a possibility indicated by the Engineers qualifying report dated January 6, 1972. All existing claims are however contiguous with the exception of TT-67. In the vicinity of TT-2 , the claims overlie a crown granted claim believed acquired to control rights to salt deposits in an alkaline lake near the northern limit of the Northair group.

As illustrated by the accompanying map, the Northair TT claims now consist of 57 located mineral claims legally described and to be group as:

GROUP A

NAME	TAG NO. or	RECORD NO.	DATE OF RECORD
TT 7-15 incl.		101671-101679	Dec. 6, 1971
TT 17, 19, 21		101681,101683 101685	Dec. 6, 1971
TT 58-60 incl.		101722-101724	Dec. 6, 1971
TT 66		101730	Dec. 6, 1971
TT 89-96		101753-101760	Dec. 6, 1971
Northair 4 Fr.		107625	March 20, 1971
Northair 5 Fr.		107626	March 20, 1971
Northair 8 Fr.	328491M		May 11, 1972
Northair 10 Fr.	336618M		May 11, 1972

GROUP B

TT 1-6 incl.		101665-101670	Dec. 6, 1971
TT 18		101682	Dec. 6, 1971
TT 20		101684	Dec. 6, 1971
TT 22-28 incl.		101686-101692	Dec. 6, 1971
TT 65		101729	Dec. 6, 1971
TT 97-102 incl.		101761-101766	Dec. 6, 1971
Northair 1 Fr.		101633	March 1, 1972
Northair 2 Fr.		107623	March 20, 1972
Northair 3 Fr.		107624	March 20, 1972
Northair 6 Fr.		107627	March 20, 1972
Northair 7 Fr.	328367M		May 11, 1972
Northair 11 Fr.	342374M		May 11, 1972

GROUP C

TT 67		101731	Dec. 6, 1971

Three claims, owned by an associate company, Bow River Resources Ltd, namely the TT 16, TT 56 and Northair 9 Fraction are contiguous to Northair Group A and by prior arrangement were considered part of the Northair claims with respect to the scheduled exploration programs completed to date.

TOPOGRAPHY AND ACCESS

The Northair claims occupy an approximately polygonal shaped area of some 3.7 square miles extending from a point near the Cornwall Lodge on the Trans Canada Highway north to within four thousand feet of Kamloops Lake.

The southwestern boundary of the property is coincident with the northeast flank of the Cherry Creek Valley denoted here by steep talus slopes and rugged near vertical cliffs, in places well over 200 feet in height. To the north and east in the central portion of the claims, the topography forms a plateau above the 2,500 feet elevation sloping gently to the north toward Kamloops Lake and east towards a north flowing creek near the eastern boundary of the property.

North of line 100 north, the topography changes more abruptly, the elevations decreasing rapidly towards Kamloops Lake (1,131') in a series of E-W undulating ridges and more rugged knobs of intrusive outcroppings.

With the exception of these precipitous areas,most of the property can be described as the open rangeland typical of this semi-desert clime with scattered clumps of scrub pine and small lakes or ponds, often rimmed by cottonwoods, etc. Small pines predominate in the scrub brush area prevalent in the areas of higher elevation, namely the southwest quarter of the property.

All of the claims are within lands held by the Cherry Creek (west) and Bowers ranches, the line fence disecting the group just west of the base line. Permission to complete these investigations was readily obtained from the respective owners, Messrs T.S. Clements, and D. Bowers, by posting bonds with the Department of Mines. It is probable that equally satisfactory arrangements could be negotiated for any continuing development.

Most of the property is readily accessible from either the old logging roads in the timbered areas, or the ranch access roads maintained by the present owners. It is possible to drive within a few hundred feet of virtually any pre-selected site within the property using a 4 wheel drive vehicle, most localities accessible to 2 wheel drive vehicles.

Small creeks, springs and natural or created ponds provide adequate supplies of water for ranch purposes, the amount available usually decreasing to the critical level during the July-September period. The soils in the northwest part of the property appear to be more alkaline and many of the ponds in this area and the large lake near the north boundary are quite alkaline. This lake is held by a Crown Grant presumably acquired as a source of salt (no development to date).

Water, for the drilling completed, was made available through the cooperation of the property owners. Provision of water would, however, be an important consideration in any major exploration or development program. Tankers could be used during the advanced exploration stages but the logical source for a permanent water supply would be a pipe line from Kamloops Lake.

Oil, natural gas, and electric power are readily available since the trunk lines for these services traverse the southwest part of the property. Limited supplies of timber (pine) are obtainable within property limits, but supplies for any major construction program could probably be secured more economically through established sawmills in the district.

Employee accommodations will be a minimal consideration for any future development since all amenities now exist in Kamloops some 14 miles by paved (Trans Canada) highway.

EXPLORATION PROGRAMS

Summary

The property is being explored systematically by a staged program, the first phase of which included:

(a) Survey of claim lines and establishment of a cut line grid of east west lines at 400 feet intervals.
(b) Completion of 4 percussion drill holes in south part of the property.
(c) Ground magnetometer survey.
(d) Geological mapping.
(e) I.P. Survey.
(f) Seven diamond drill holes.
(g) Soil sampling.

Stages (a) through (d) were directed by Mr. L. Gatenby, P. Eng., the major portion of the I.P. Survey and the subsequent diamond drill program supervised by the author.

The objective of the above investigation was to:

(1) Locate and explore the more obvious economic target areas.
(2) Indicate those specific areas which warrant more comprehensive investigation.

Although no economic possibilities have been pinpointed to date, the investigation is considered a success in that at least three areas within the property warrant further investigation.

EXPLORATION DETAIL

Claim Survey and Line Cutting

Amex Exploration Services Ltd. located all claim posts by closed chain and compass surveys and established the spatial relation of the TT claims with respect to all adjoining properties. During completion of this survey and construction of the grid, Amex staked all existing fractions for the Company.

The grid is a series of east west lines across the contiguous claims at intervals of 400 feet. Grid control is a base line extended north from station zero at final posts of claim TT-15 to station 124 north near the initial posts of claims TT 1 & 2. Line stations are at 200' intervals measured east and west from the base line with tie lines for control at 30 west, 30 and 60 east. Any location within the claims (except TT-67) can therefore be located by coordinates relative to this grid.

In total 50.26 miles of line were established consisting of :

2.35 miles of base line.
4.24 miles of tie lines.
43.67 miles of E-W cross lines.

Of this total:

0.96 miles were cut on claims TT 56 and Northair 9 Fr.
0.19 miles were cut on claim TT-16
26.66 miles were cut on proposed claim group A
22.45 miles were cut on proposed claim group B

Percussion Drilling

Four percussion drill holes totalling 850 feet were completed in the south part of the property between February 15 and March 10, 1972. These holes supervised by Mr. L.B. Gatenby, P. Eng. were the initial attempt to penetrate the Tertiary Volcanic cover rocks on the approximate projected strike of the mineralized areas noted along the volcanic-Iron Mask contact zone at the Afton, Leemac and Jacko Lake discoveries to the south east. Three of the holes lie within a triangular area some 1000' x 1500', the fourth located about 4000 feet to the north east.

The holes drilled to between 200 and 400 feet indicated 50 to 100' of clay and glacial till overlie basalts and andesites to the depths penetrated. The cuttings indicated the volcanics are probably part of the Kamloops Group. The formations are cut by calcite stringers with magnetite being a significant but variable accessory. Traces of native copper were noted, the two 10 foot sections selected from holes #1 and #3 assaying 0.01% and 0.03% copper.

These results indicate that at least the southern portion of the TT claims may be underlain by several hundred feet of Kamloops volcanics containing very minor amounts of native copper. Although results of this drilling were encouraging, it was evident that a more comprehensive method of exploration would be required including geophysical surveys and diamond drilling to greater depths than could be effectively explored by percussion holes.

Magnetometer Survey

During March 1972, Amex Exploration Services Ltd. completed a magnetometer survey of the grid. The readings were taken at 200 intervals along the lines with a Sharp MF-1 Magnetometer. The readings were adjusted for diurnal variation and relative intensities in gammas were plotted at a scale of 1" = 400'. The lines surveyed totalled 46 miles.

Mr. L.B. Gatenby, P. Eng. who supervised this work has prepared the accompanying magnetic contour plan, the contour intervals selected being 500 gammas.

Magnetic disturbance are most prevalent in a chain of highs and lows trending north westerly across the western portion of the claims. A somewhat similar but weaker chain of magnetic disturbances traverse the northern portion, the area south of line 100N east of the base line illustrating considerable magnetic fluctuations but no sizable anomalies of consequence at the selected contour interval.

The subsequent (partially coincident) geological mapping and diamond drilling indicate all but the northern portion of the claims is underlain by Kamloops volcanics overlain in part by Tranquille sediments, outcrops are most numerous along the western and northern edges of the claims, in other areas generally restricted to small and relatively unobtrusive exposures masked by mesquite and tall grass.

Where observed magnetite is a significant but variable accessory mineral both in the Kamloops volcanics and the Cherry Creek intrusive. It is therefore concluded that the observed variations in magnetic intensity are more probably due to variation in the magnetite content of the underlying rocks and the depth of overburden than to changes in geological formation or structure.

In a broad sense however, the magnetometer survey does confirm the present geological interpretation, namely: Kamloops volcanics exposed along the western side of the property, Cherry Creek intrusive across the northern sector and volcanics masked by overlying sediments and overburden south of 100N and east of the base line. Geological contacts or structures are not defined by this survey and none of the magnetic anomalies outlined are, from present knowledge, considered to reflect economic possibilities.

I.P. Surveys

During the period late April through May 1972, Kenting Earth Sciences completed an I.P. survey of those portions of the grid amenable to geophysical investigation (that is excluding "pipe line valley" and precipitous terrains).

The area was investigated by taking readings along the east west lines using a pole dipole electrode array in conjunction with a 7.5 KW Huntec Mark III receiver. Receiving electrode spacings were at both 400' and 800' intervals. The technique is explained in detail within the accompanying Kenting report.

This reconnaissance survey, totalling 34 line miles, indicated a large number of relatively weak I.P. anomalies. The majority of these are of three types:

(a) North-South anomalies probably caused by changes in rock type and are now interpreted to be the least significant from an economic viewpoint.

(b) North-easterly trending anomalies, possibly indication of north easterly trending faults and shears. The majority of these are not considered of economic significance. One line of detailed I.P. was undertaken across the strongest one of this type (Line 104N, 6E).

(c) Anomalies unrelated to either of the above and usually associated with an increase in the apparent resistivity. This type is located near the eastern and western extremities of the grid, those to the west now believed to be of greater significance.

In the north section there are a number of small anomalies detected only on the wider electrode separation. The best of these on line 116N was detailed.

In total five anomalous zones were investigated by 2 line miles of detailed I.P. on 32N, 52N, 80N, 104N and 116N, the geophysical consultant recommending testing by diamond drill all except that on 32N.

Hole 3 drilled west at 60° from 52N, 1E indicated a thick layer of shales with graphitic horizons overlies the Kamloops volcanics and is the probable source of the anomaly.

Hole 4 drilled west at 60° from 80N, 26+30E, encountered on above average magnetite content in basalts with interbedded graphitic shales at the interpreted anomalous horizon.

The north easterly trending anomaly crossing line 104N was tested by hole N-5, drilled southerly (ie on strike). The hole encountered well sheared and altered (chlorite and serpentine) volcanics. No mineralization was noted but the degree of shearing and alteration observed suggests that this north east trending anomaly warrants further consideration, particularily since the abrupt change in topography at 104N.(Plateau ends @102N - terrain slopes north at 55°) prevented completion of the recommended vertial hole at 104N 4E.

The detailed survey on line 116N indicated three anomalous zones of interest, two with eastery dip one apparently dipping west. Two converging holes N-6 and N-7 were drilled to test the recommended possibilities. Both encountered the type of mineralization anticipated in this environment, but by no means of economic tenor.

After consideration of all the information now at hand, it appears possible that these anomalies on line 116N may be reflection of a deep seated conductor paralleling the line and the presumed intrusive-volcanic contact. This hypothesis warrants further investigation.

Geology

Regional

GSC memoir 249 - Geology and Mineral Deposits of the Nicola map area has formed the basis for all geological studies completed to date.

The region is underlain by Triassic Nicola volcanics which have been intruded by an elliptical shaped north westerly trending intrusive complex known as the Iron Mask Batholith. This complex (part of the Jurassic Coast Intrusions) varies in composition from syenite to ultra-basics and may represent a succession of intrusions, the most recent of which are the Sugar Loaf microdiorites and the Cherry Creek Intrusive. The latter name applies to the rugged exposures of trachyte and latite porphyry near the mouth of Cherry Creek on the south side of Kamloops Lake. The Sugar Loaf microdiorites outcrop on the Afton property a few miles to the south east continuing south east along the south flank of the Batholith.

The area between these intrusives is underlain by a series of volcanic flows and sediments of Miocene Age known as the Kamloops Group. This series is described as primarily a considerable thickness of volcanics, ranging from rhyolites to basalt (predominantly basaltic). The rocks are usually massive and fine grained but are sometimes so coarse grained as to resemble fine grained plutonic rocks. They are often fragmental with numerous tuffaceous horizons and sedimentary interbeds similar to those of the overlying Tranquille Beds.

Copper mineralization is associated with the Sugar Loaf and Cherry Creek intrusives, principally as native copper or chalcopyrite bornite etc. along with magnetite hematite and pyrite. In the early 1900's there was minor production of copper and magnetite in both areas, the region regaining economic stature as a possible porphyry copper environment in the mid 1950's.

To date, mineralization in significant amounts appears to be confined to fractured and altered zones within the intrusive at or near the contact with Kamloops volcanics. The most significant discoveries reported to date are the native copper deposits now being explored by Afton Mines Ltd. There is little geological information published re these economically significant occurrences. It is generally believed however the copper occurs as minute platelets along fractures within an irregulary shaped fracture zone extending to at least 1100 feet below surface. In some areas, there is associated chalcopyrite, pyrite, chalcocite, etc. The distributions of the native copper is quite erratic, from published data seemingly ranging from very meager disseminations to average assay values of 7-8% copper across core lengths of several tens of feet. This fracture zone appears to be associated with a major north westerly trending fault.

The Northair property is situated immediately south east of the Cherry Creek Intrusive and encompasses a major portion of the hypothetical strike extension between the known mineralized portions of the two intrusives. The claim group could therefore contain areas where either:

(a) The assumed favourable host (intrusive) might be masked by relatively thin cappings of the overlying volcanics and sediments.

or (b) Economically significant concentrations of copper minerals could exist within the volcanics.

Geological Mapping

Mr. A. Dawson mapped the claims under the supervision of Mr. L.B. Gatenby early in 1972. His observations confirmed the geological interpretations postulated from the regional studies by the G.S.C. and generally agree with subsequent observations by the author and by the cores of the seven diamond drill holes completed to date.

Dawson attempted to subdivide the Kamloops Volcanics into its various members. Subsequent field observations, supported by discussions with geologists at neighbouring properties suggest that there is a wide variation in both texture and composition of these rocks within relatively narrow stratigraphic limits and area. It now appears probable that positive identification of a stratigraphic unit can only be determined by very exhaustive research including the study of a large number of thin and polished sections.

Mr. Dawson's interpretations are however of considerable value in that he has provided an acceptable hypothesis which would form the basis for such an investigation.

Extensive outcrops occur in the western portion of the property. These range from fine grained andesites and basalts to agglomerates and often exhibit trachytic or porphyritic textures. Magnetite, hematite and specularite are common accessory constituants. Strikes and dips are generally not apparent but where noted, suggest the strike changes from northwest at coordinates ON-4W to north and northeast near 80N 30W to northeast to east in the northwest corner of the property. Dips vary from NE at 40^{o} through east @45^{o} to southeast at 10^{o} respectively. These are generalized observations, Dawson having noted considerable variation in both strike and dips in certain areas.

The above generalization suggests the Kamloops Volcanic - capping may be thin along the western edge of the property thickening rapidly towards the east. This theory is supported by the discovery of a small outcrop near 76N - 34W subsequent to Dawson's investigations. The outcrop is an andesite porphyry with blotchy phenocrysts of whitish feldspar ¼ inch or more in diameter contained within a fine grained greenish matrix. The formation strikes at 350o and dips east at 45°. Dr. M.Carr has identified a hand specimen as typical of the base of the Kamloops volcanics.

Along the north edge of the property, Dawson has mapped the Cherry Creek intrusive as extending only a few hundred feet south into the TT claims and dipping beneath the volcanics about 400 feet east of the base line. Contacts are not exposed.

Extensive outcroppings, between latitudes 112 and 120N departures 3E to 15E have been classed as trachyte identified here as a fine grained igneous rock equivalent in composition to a syenite, with numerous small feldspar laths generally aligned to exhibit a trachytic texture. These exposures are considered part of the volcanic series but in some localities sufficiently resemble plutonic rocks to suggest that their true identity can only be determined by very detailed mapping and exhaustive microscopic investigations.

For example, a small outcrop at 116+50N 20E has been identified in hand specimen as Cherry Creek Intrusive. A thin section from the same specimen has been identified by A. Macdonald at U.B.C. as "medium grained basalt (Diabase) of unknown age", the origin being "volcanic or minor intrusive rock".

It is interesting to note that no sulphides were identified initially in this specimen but can be readily identified in polished section. Macdonald estimated the specimen contained from 2 - 3% pyrrhotite.

The area south of 104N east of 6W (from base line) was mapped by Dawson as predominantly overburden with a few exposures of andesites basalts and agglomerates in part overlain by shales and siltstones. The greatest concentration of outcrops(volcanics) is within a roughly rectangular area between lines 68 and 80N and departures 6 to 30 east of the base line.

During the subsequent field work closer scrutiny of the surface indicates extensive areas of top soil frequently contain high percentages of decomposed shales. This observation, supported by the location of additional bedrock exposures (sediments) suggest the major portion of this plateau like area is blanketed by shales and siltstones (Tranquille) overlying the volcanics.

Subsurface Geology

Cuttings and cores from the four percussion and seven diamond drill holes has confirmed the hypothesis indicated above. Formations in the south part of the property are predominantly volcanic flows and associated fragmental rocks. In hole N-1 drilled to 1068 feet, the rock apparently becomes more massive with depth, the core below 800' logged as 80-90% trachyte, similar to the surface exposures near the Cherry Creek intrusive in the northern part of the group.

In the central area, overlying (hole N-3) and intercalated sediments are noted in association with typical Kamloops volcanics within the depth tested (450 feet).

Two diamond drill holes (N-6 and N-7) were drilled east and west respectively on line 116 north to test geophysical targets between stations 4 and 10 east of the base line. Both intersected trachyte rocks similar to the surface exposures in this area and similarily suggestive of an intrusive origin or spatially near intrusive location (depth penetrated 650'). One section of core from hole N-7 (349'-424.5) was classified as diorite-Cherry Creek Instrusive? Mr. A. Macdonald identified a thin section of a typical specimen as "porphyritic basalt" probably of volcanic origin but could be the margin of a small intrusive."

Structural Geology

Dawson mapped a northwesterly trending fault exposed on surface for a distance of a few hundred feet and crossing line 120N at station 31+50 west. There is no apparent displacement and the direction of relative movement if any is unknown. The location of this fault is such that it might be the extension of the major N-W fault associated with the Afton deposits. There is however no topographic features to indicate more conclusively that this is a continuation of the Afton fault.

Hole N-5, drilled on azimuth 195° at minus 60° was an attempt to evaluate the I.P. anomaly striking north easterly along an axis through coordinates 96N at base line and 104N 5E. The drill cores indicate a well developed shear zone with extensive alteration of the volcanics (chlorite, serpentine, etc.). Three prominent directions of shearing were noted and the I.P. anomaly may be indication of a N.E. shear zone at roughly right angles and subordinant to the above postulated major NW-SE fault.

The transmission lines and trunk oil and gas lines traverse a draw also striking northwesterly across the SW portion of the claims. This valley, here in referred to as "pipeline valley" may be the surface expression of a major fault structure parallel to that noted above.

No other significant structures have been noted but to some degree, the I.P. and the magnetometer surveys suggest the property may be criss-crossed by a number of northwesterly and northeasterly trending faults or shear zones paralleling the major trends which have been identified on a regional basis.

Mineralization

No mineralization of economic importance has been located to date. Panning of pulverized volcanics particularly the trachyte, reveals interesting but sub-economic amounts of native copper generally associated with magnetite and specularite.

Cuttings from the four percussion holes contained visible traces of native copper and DDH-N-1 (deepening of percussion hole 3) encountered minor copper values to a depth of 1030 feet. The copper usually occurred as small disseminated grains in quartz carbonate fracture fillings occasionally as larger blobs or small wires in the fractures. The associated volcanic hosts usually included above average amounts of magnetite, hematite and specularite, reddish discolourations often an indication of the presence of native copper. Drill holes N-2, 6, and 7 intersected similar mineralization.

All cores in the vicinity of such occurrences were split in 10 foot sections and assayed for copper.Values usually ranged from 0.02% to 0.04% copper. The highest assay returned was 0.12% Cu. from section 420' to 430' in hole N-1. It may be significant to note that all the native copper observed had a bright metallic lustre quite brittle in comparison to the often dull and very malleable variety usually reported from elsewhere in North America.

Spectrographic analysis of two ten foot samples from N-6 suggest that the assaying completed tested all economic possibilities presented.

Visually the cores from N-6 and 7 appeared to contain the highest concentrations of copper,a conclusion not substantiated by the assay results. As before, the metal occurs as disseminated grains in quartz carbonate fracture fillings usually associated with rocks classified as trachyte or diorite. The mineralized fractures in both N-6 and N-7 are at a very acute angle to the core axis thus suggesting neither hole was correctly oriented to satisfactorily test the exploration possibilities suggested by the I.P. survey.

Diamond Drilling

Seven diamond drill holes totalling 4135 feet were completed between late March and early June 1972. The work was completed by Allen Drilling Ltd. (holes 1 & 2) and Connors Drilling Ltd. (holes 3-7 inclusive). Both contractors supplied BQ wire line equipment. The major equipment difference was that Allen supplied a conventional skid mounted drill where as the Connors drill was mounted on a 6 x 6 truck, considered more desirable in this area because the latter could be moved and reset in considerably less time with virtually no damage to the ground surface other than that required for the normal sevicing of the drill. Water was trucked from ponds by permission of the property owners. Recovery was generally excellent but these formations are generally soft and inclined to "mud" readily hence additives were frequently used to guarantee good core recoveries.

Holes 1 (deepening of percussion hole 3) and 2 were drilled in "pipe line valley" mainly to obtain geological information in this geologically favourable area inaccessible to geophysics because of the pipe and power lines. Holes 3 through 7 were drilled to test I.P. targets. Holes 3, 4 and 5 indicated anomalies were due to uneconomic occurrences of graphitic argillites, tuffaceous horizons or extensive shear zones; only N-5 apparently not satisfactorily investigating the anomalous I.P. responses.

Similarily further investigations are warranted near line 116 north near holes N-6 and N-7.

Soil Sampling

Contiguous Claims

No extensive soil sampling program was undertaken on the contiguous claim group, primarily because it was considered that the more comprehensive I.P. survey undertaken would indicate areas of economic interest more accurately and conclusively.

Soil samples were taken along the lines south of 24N below the cliffs in the "pipe line valley". Samples were collected by Amex Exploration Services Ltd. at 100 foot intervals along existing grid lines. In total 96 samples along 1.75 miles of line were collected from holes excavated by mattock to an average depth of 6". "B" horizon is generally not existent in the Cherry Creek area consequently all samples were in the buff sandy clay "A" horizon common to this region.

Every second sample (ie at 200' intervals) was forwarded to Cres Laboratories for determination of copper in parts per million by Atomic absorption techniques. Values ranged from a low of 33 ppm Cu. to a high of 120 ppm Cu. No significant anomalous areas were defined.

Of the area surveyed, 0.42 miles were within the claims held by Bow River Resources, the remainder being on Northair claims TT-13, 14 and 15.

TT-67

This claim, isolated and reduced to fractional size by prior staking rights, was explored by a detailed soils survey in June 1972.

It is readily accessible, the main Bowers ranch access road bisecting the claim. The terrain slopes easterly at about a 10% grade, the western (above road) portion covered by scrub pine. There are no known rock exposures and the average depth of overburden coverage is believed to exceed 25 feet.

Picket lines at 100 foot intervals were established parallel to the long axis of the claim (ie 356½°) and stations chained at 100 foot intervals along the 1500 foot lines.

Soil samples were selected from holes averaging 6" deep excavated by mattock at each station. All samples collected were from the buff sandy clay "A" horizon, the "B" horzon being non existent within limitations of this survey. Copper values ranged from 30 to 90 parts per million, the majority of samples being in the 40-60 ppm range.

This survey did not locate any copper geochemical values considered indicative of economic possibilities and further exploration of this claim is not warranted at the present time.

Field work was completed by Amex Exploration Services Ltd., the assays determined by Atomic Absorption Techniques at Crest Laboratories in Vancouver.

FUTURE POSSIBILITIES

The results to date are sufficiently encouraging as to warrant the continuation of this investigation. Further expenditures should however be directed towards:

(a) Immediate Possibilities
(b) Long range Possibilities

(a) Immediate Possibilities

The major portion of the property is now considered to have been explored within the practical limitations of existing exploration techniques. The three possibilities which warrant further study are:

(1) The intrusive-volcanic contact area in the vicinity of line 116N. I.P. coverage along N-S lines at 400 feet intervals would be more ideally oriented for the detection and evaluation of an E-W conductor. In conjunction with these investigations, this area should be remapped in greater detail, preferably by or under direction from a recognized authority on the geology of this region. Anomalous I.P. responses should be detailed and assessed as warranted by diamond drilling. From present knowledge at least one diamond drill hole appears warranted.

The area under consideration is that portion of the claims north of line 100N. Because of the proximity of this area to the claim boundary, a working agreement with the owners of the adjacent properties should be considered.

(2) Western Boundary Area
Kenting has advised that geophysical disturbances on lines 40N through 80N form a pattern unlike that for the rest of the property. The responses do not appear to be of the order of magnitude indicative of mineral concentrations but do warrant re-evaluation because of their proximity to the assumed favourable volcanic-intrusive contact. More detailed geological mapping followed by reassessment of geophysical results is warranted.

(3) Northeast Shear (I.P. anomaly at 104N 6E)
The investigation has proved the existence of a sheared and altered zone in this area and further investigation is warranted. Three lines of detail I.P. should be completed across the indicated anomaly in a direction normal to the indicated conductive axis. (ie N.W. lines).

Any targets of economic significance located by these investigations should be tested by diamond drilling.

Estimated Cost

This should be a phased program, continuation of which will be dependent upon the results from the previous stage.

Stage 1 Exploration

Line cutting - 10 miles @$100/mile		$ 1,000	
Geological Mapping		7,500	
Consultants - allow	$ 3,000		
Geologist & assistant (allow 2 weeks)	3,500		
Field subsistance	600		
Laboratory research	100		
Transportation & Misc.	300		
Exploratory Diamond Drilling		16,700	
Allow 2,000 feet @$7.00	14,000		
Geologist	1,500		
Field subsistance	300		
Misc. Drilling supplies	200		
Transportation, etc.	200		
Assaying	500		
Administration & Overhead		800	
Contigencies @10% of above		2,500	
Total estimage Stage 1			$28,500

Stage 2 Exploration

Target Evaluation Drilling
Make allowance for 15,000 feet of drilling to assess targets located by the above at an overall cost estimated at $9.00/ft. $135,000

Stage 3 Advanced Exploration and Feasibility

This would consist of detailed studies to fully assess the economic possibilities presented by the earlier programs. In addition to further drilling, it would include metallurgical studies and economic evaluations. It might include a program of underground development, bulk sampling and on site mill test etc. Prior to establishment of the approximate size and complicity of such a deposit, the cost of this research can not be determined. From experience and published information, the cost of such a program could range from less than $500,000 to in excess of $5,000,000.

(b) Long Range Possibilities

Completion of Stage (a) recommendations will probably complete the exploration warranted on this claim group within the economically practical limits imposed by the limitations of the techniques currently available to management. The investigation will not however have eliminated all economic possibilities. Further improvements in exploration techniques could include methods to effectively explore, at an acceptable cost, the apparently deep (500' to 1000' below surface) intrusive contact assumed to underlie this property. They could conceivably detect economic targets at lesser depths which have not been detected by existing techniques.

The claims should be retained for the foreseeable future and reassessed in the sight of new information from the area and improvements in exploration technology.

CERTIFICATE

I, Carl R.D. Miller of Vancouver British Columbia do hereby certify that:

1. I am a geologist residing at 2732 Oliver Crescent Vancouver 8 British Columbia.

2. I am a registered Professional Engineer in the Province of British Columbia.

3. I have practised my profession for over 20 years.

4. That I was retained April 18, 1972 by Northair Mines Ltd. (N.P.L.) as supervisory consultant in charge of the completion of the exploration programs described within this report.

5. I was resident engineer at the property during the period April 20 to July 1, 1972.

6. I have no direct, indirect or contingent interest in Northair Mines Ltd. (N.P.L.), White River Mines Ltd. (N.P.L.) or in any of the properties controlled by these companies.

C.R.D. Miller

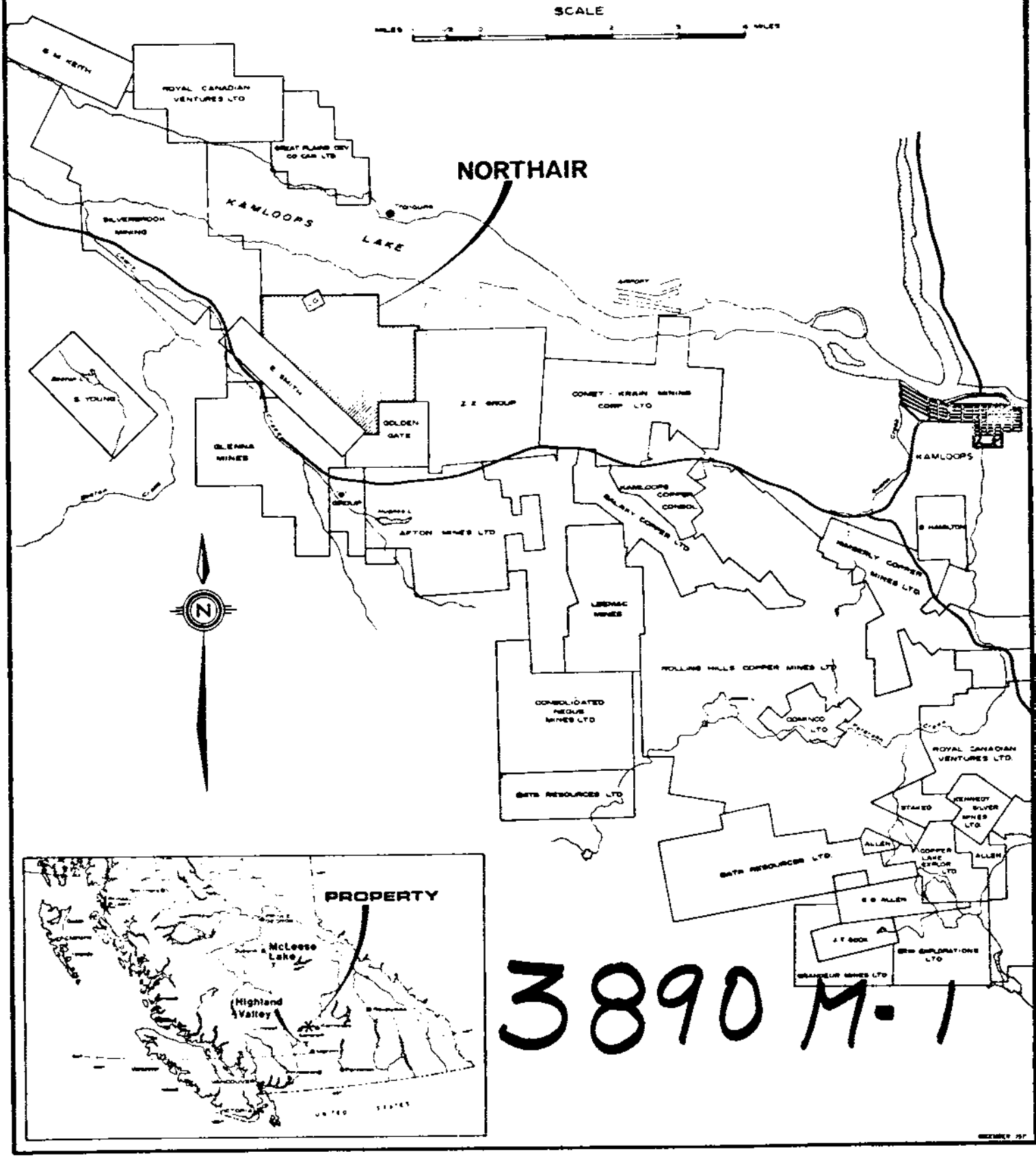
PROFESSIONAL ENGINEER
C. R. D. MILLER
BRITISH COLUMBIA

July 24, 1972

NORTHAIR MINES LTD.

PROPERTY MAP

KAMLOOPS AREA, B.C.



3890 M-1

CLAIM NO. TT-15 **DIAMOND DRILL RECORD** PROPERTY NORTHAIR HOLE NO. N-1

Note hole is deepening of a percussion hole P-3

LATITUDE 6 + 30N ELEVATION 2200' BEARING North DEPTH 1067 STARTED March 29/72 COMPLETED April 20/72

DEPARTURE 0+00 SECTION DIP 87° DRILLED BY Allen LOGGED BY A. Dawson

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
280-437	Soft dark green basalt agglomerate; fragments mainly volcanic flow -- lt grey to dark red varying size up to 1". Odd fragment looks to be a syenite. Matrix is soft green basalt 1-2% magnetite in matrix and in some fragments alteration: hematite - in fracture and in matrix. Weak spodmatic fracturing 35° to 40° Some fractures with secondary hematite. Odd small speck of secondary native copper on fractures. Most fine fractures filled with calcite. Mineralization occurs @282½', 292', 302', 307', 313', 324', 448. Core recovery: 95%. Fragments make up 60% of rock. Bottom of bed is muddy soft w. hematite stain (10')					
434	Increase in the fragments to 75% with similar dark green matrix. Also there is an increase in the syenite fragments. Rock is harder with similar green basalt matrix. Calcite stringers. Chloritic matrix, hematite, magnetite, in matrix.					
	Py. @468' - disseminated Py in the matrix					
	479' - fracture @45°					
	483' - native copper & 481					
	504' - trace pyrite					
	510-519 - Soft muddy core because of fracturing @60°.					

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CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. N-1

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
525-539	Matrix is more lt.grey, harder dioritic material, some disseminated Py., disseminated hematite and some magnetite. Native copper in fractures @530', 527', 526', 531', 538', 539.					
539-604	Same as above, matrix is dark green chloritic basaltic material, disseminated hematite and magnetite calcite stringers throughout. Some native copper along fractures. 545-555½ - soft muddy core due to extreme fracturing @48° Native copper @547½', 553', 567', 593½.					
604-687.5	Rock type the same: dark green chloritic basalt matrix with inclusions of pink syenite. At 611', there is a pink trachyte inclusions. Inclusions make up 65% to 70% of the rock, 1-2% magnetite and has secondary hematite in fractures. Many stringers of calcite occur . Fractures occur @70°. Trace of native copper @ 621 along fractures. At 624', secondary native copper on fractures appears to increase somewhat. Native copper in a fracture in a trachyte fragment. Native copper @637½', 641', 648½', 650', 653					
687.5-828	Soft dark green basalt agglomerate. Fragments are mainly trachyte with odd syenite fragment. Description is the same from 280' to 687.5. Weakly magnetic - 1% magnetite, chlorite, hematite,					

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CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. N-1

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
	calcite alteration. Fracturing the same. Secondary native copper very, very sparce. Soft muddy core @708½ to 710½'. Also secondary epidote along fractures. Trace of Py. @781.2', Native copper @803', 817'. Soft ground from 835.9' to 837' @849' fracture @57° Soft ground from 855'to 864'					
828-956	Rock type same as above. Trachyte fragments and minor syenite fragments make up approximately 75-80% of the basaltic dark green chloritc agglomerate. Contains 2% magnetite, much hematite, calcite. Mineralization is very sporatic along fractures with trace amts native copper @915', 923'. Fracturing occurs @approximately 60° throughout. Saw a tiny speck of chalcopyrite @ 886½'. Soft ground @ 912½' due to fracturing Native copper @ 923½', 929' Epidote @924', 926½, 934½' Rock is harder from 930' to the bottom of the section.					
956-968	Matrix is light green and harder dioritic material with black phenocrysts. Secondary mineralization consist of calcite, hematite, and some epidote plus native copper sporatically throughout. The rock type is still in the agglomerate however.					

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CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. N-1

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
968-1067	Trachyte fragments make up 90% of the agglomerate and the rock is very hard. The rock is reddish green in colour with calcite veins throughout. Fractures for the main part are around 45°, however near the bottom of the hole are @ 15°. Some hematite is present but magnetite is lacking. Some epidote is present sporatically as well as native copper @ 968', 970', 1007'. Porphyritic andesitic? fragments in minor amounts are present near the top of the section and @ 993'. A very very trace amount of disseminated pyrite occurs @ 970½'. Some of the secondary native copper is present, within the calcite filled fractures. All the copper present is along the fractures rather than disseminated. Rock becoming more competent from 1036 to end section. Only a few small quartz-calcite seams 1036 -67 none in which native copper was noted.					
1067	End of hole.					

DIAMOND DRILL RECORD

CLAIM NO. TT-15 PROPERTY NORTHAIR - KAMLOOPS HOLE NO. N-2

LATITUDE 14+00N ELEVATION 2220 BEARING N45°E DEPTH 522' STARTED April 22/72 COMPLETED May 4/72

DEPARTURE 0+00E SECTION 14 North DIP 70° DRILLED BY Allen D.D. Co. LOGGED BY Carl Miller

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS %CU			
0-85	Casing subsequently reamed to 91 feet.								
85-298	Mudstone - Soft dark blue grey badly broken & muddy sediment, appears to be reasonably competent rock except for frequent mudslips. Core recovery ranges from 60-90% for short runs averaging about 4 feet. Rock becoming more competent towards end of section.								
298-321	Agglomerate-dark grey to red basaltic ground mass with soft basaltic angular fragments from a few millimetres in diameter to 2" - few muddy seams - no visible copper or sulphides.	3595	330	340	10'	.01			
		94	340	350	10	.03			
		93	350	360	10	.01			
321-370	Agglomerate-dark grey to red soft basaltic ground mass-soft basaltic angular fragments as before, very few fractures, prominent ones @330' and 335' @25° to core. visible native copper @358.	92	360	370	10	.02			
370-386	Agglomerate-amygdaloidal basalt as above but fragments becoming harder and more dioritic in texture.								
386-522	Agglomerate-fine grained chloritic andesites ground mass with angular to sub angular fine grained predomenantly. reddish to brownish syenite fragments. Fragments vary in size from less than ¼ inch								

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CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. N-2

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS			
	to near 1½" - fragments from 1 - 1¼" appear to predominate. Section is mineralized throughout with iron oxides, predominantly rusty-hematite to specularites and magnetite - up to 1-2% specularite in local areas. A few occurrences of native copper were noted, the most significant being a patch of minute copper particles at 501' covering an area ¼" in diameter.								

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DIAMOND DRILL RECORD

CLAIM NO. TT 9 PROPERTY NORTHAIR (KAMLOOPS) HOLE NO. N-3

LATITUDE 52+00N ELEVATION 2680 BEARING Grid West DEPTH 522 STARTED May 12/72 COMPLETED May 16/72

DEPARTURE 1+00E SECTION 52N DIP -60° DRILLED BY T. Connors LOGGED BY C. Miller

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
0-37'	Casing in overburden					
37-77	Siltstone, buff grey fine grained rock, in part fragmental. Sections brecciated, pebbles of darker brown throughout generally less than ¼" long. Cas vary sometimes acute to core but predominantly 60-70° to core.					
77-86	Basalt - dark green chloritic, speckled by white carbonate filled amygdules, in part fragmental.					
86-88	Siltstone as above.					
88-91	Basalt as above.					
91-107.5	Siltstone as above					
107.5-224	Shale very fine grained blue grey rock. Cas quite uniform @70°-75° to core, very slight disseminations of pyrite.					
224-294	Shale as above. Cas 70-75°, a few prominent widely spaced (average 1/10' length) calcite filled fractures at angle of 20° to core. Several narrow bands of carbonaceous & graphitic bands varying in length to 2-3" or less at widely spaced intervals.					
294-327	Shale as above but lighter grey in colour - core more fractured particularly 311'-317'.					

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CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. N-3

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
327-340.5	Shale as above, dark blue - core still badly broken - very poor recovery 337'-340.5'.					
340.5-349	Shale as above, Cas 70° several black graphitic bands up to ½". Core badly broken.					
349-380	Shale. Light blue grey with few whitish bands. Cas 70°.					
380-384	Shale , very fine grained dark carbonaceous or graphitic.					
384-388.5	Shale blue grey as above.					
388.5-389	Black Shale - carbonanceous & graphitic.					
389-400	Shale - blue-grey as above - predom. fine grained but a few coarser sections. Cas predom. 70° but highly contorted at a few local points.					
400-401.5	Fault? Alternating grey & black bands of shale crossbedded, contorted and possibly faulted.					
401.5-404.5	Siltstone - medium grained texture - grey with slight pyrite.					
404.3-406	Breccia - blue grey rock composed of angular fragments of shale usually less than ¼" in diameter, fracture at 405.5' near parallel. core with calcite and slight pyrite.					
406-449	Shale fine grained blue grey, with a few whitish bands, 2" breccia @406.5. Cas 70°.					
	At 412' there is 2" of black vitreous coal with very thin					

DIAMOND DRILL RECORD

CLAIM NO. ..... PROPERTY ..... HOLE NO. N-3

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
	calcite seams along partings carrying disseminations of pyrite.					
449-501	Basalt - dark green fine grained massive (but soft) rock speckled by widely spaced calcite filled amygdules. There are a few widely separated calcite filled fractures at very infrequent intervals up to ¼" in thickness usually bearing 0.5 - 1% pyrite (of the seam). These fractures cut core at angles of about 20°.					
501-511	Andesite - Basalt? E.g. green rock with few small patches of brown biotite - has a very fine granular texture.					
511-521	Andesite - Fine grained as above but slightly coarser in grain size.					
	Overall core recovery 95% or better, in a few badly broken sections recovery dropped to 60-70% . Section 311-314 had recovery approximating 25%.					

CLAIM NO. TT-23

DIAMOND DRILL RECORD

PROPERTY NORTHAIR (Kamloops) HOLE NO. N-4

LATITUDE 79-87N ELEVATION 2580 BEARING Grid West DEPTH 457 STARTED May 16/72 COMPLETED May 18/72

DEPARTURE 26+29E SECTION 80N DIP -60° DRILLED BY Connors Drilling Ltd LOGGED BY C. Miller

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
0-16	Casing - overburden					
16-82	Agglomerate - fine grained basalt, frag. in basaltic groundmass					
	as before.					
	@48' - 6" brecciated zone with quartz carbonate.					
82-149	Shale? Very fine grained dark grey green banded rock - Cas 75°					
	to core - few quartz carbonate stringers @20-30° to the core.					
	Short sections appear volcanic in origin @92' and at 98'.					
149-212	Basalt - very soft chloritic rock, in part brecciated with					
	considerable magnetite, some serpentine - chlorite well					
	developed along slickensides.					
212-222	Shale? fine grained soft grey banded rock with prominent dark-					
	black layers - Cas @80°.					
222-266.5	Basalt - very fine grained dark grey rock, very few carbonate					
	filled amygdules.					
266.5-298	Shale - siltstone? Banded grey rock - Cas 65-70°					
298-317	Siltstone or ash rock possibly graphitic shales black fine					
	grained rock - generally quite massive in a few localities, banding					
	is 65-70° to core.					

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CLAIM NO. .....

DIAMOND DRILL RECORD

PROPERTY ..... HOLE NO. N-4

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS			
317-397	Volcanic ash rock? Fine grained dark grey green rock, very soft brecciated and agglomeritic sections, 337-338, 342-3, 355-59. Coarser grained 359-372.								
397-406.5	Volcanic ash rock? Very fine grained grey rock with bands of coarser material generally 2" in width or less. There are a few graphitic bands and visible blotches of black graphitic material usually less than ½" in diameter but occasionally up to 2" in the long axis. Core angles where observed are about 60°.								
406.5-427	Andesite - very fine grained soft rock, blue grey in colour. with three calcite lined fractures at angles to core of 20-30°.								
427-457	Tuff and Agglomerate? - Ash rock, fine grained massive rock with black irregular shaped fragments (or phenocrysts) These are generally subangular and 1/8" or less, - 8" breccia at 452'.								
	End of hole.								

DIAMOND DRILL RECORD

CLAIM NO. TT-3 PROPERTY NORTHAIR (KAMLOOPS) HOLE NO. N-5

LATITUDE 104+80N ELEVATION 1940 BEARING 195° DEPTH 345.5' STARTED May 18/72 COMPLETED May 20/72

DEPARTURE 4+30E SECTION 105 N DIP .60° DRILLED BY Connors Drilling LOGGED BY C. Miller

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
0-32	Overburden					
32-43.5	Tuff & Agglomerate? Fine grained altered rock banding white to grey to black at core angles 55°-60° possibly shale.					
43.5-47	Shale - very fine grained soft muddy rock - buff grey.					
47-107	Basalt - dark fine grained chloritic rock in part fragmental - numerous slickensides some lined by calcite but generally exhibiting development of sericite and serpentine - Slickensides at varying angles and sufficiently closely spaced that core will readily split in one plane by tapping at virtually any point. Prominent directions are: (a) near parallel core. (b) 20-30° to core (c) 50° to core. Core is blocky, runs generally 2-4' with recovery averaging about 85-90%. Magnetite content high throughout section, 1-2% on average - 4-5% in some areas.					
107-220	Basalt - f.g. chloritic as before, but less fractured appearance slickensides with sericite and serpentine present but at less frequent intervals. Magnetite content as before, runs					

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CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. N-5

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
	normal length (7-10') except in badly broken sections at;					
	122.5-123.5, 135-136, 146-7, 173-3.5, 174.5-6.					
220-223.5	Basalt as before but very well fractured, similar to section					
	47-107.					
223.5-233	Basalt - fine sugary texture with similar magnetite content to					
	above. Slickensides at intervals of a few inches to a foot					
	similar to those noted above. Frequently carry minor					
	disseminations of pyrite usually as flat "scales" a few					
	millimeters in diameter.					
233-326	Basalt similar to section above but number of					
	slickensides appears to be decreasing with increasing depth					
	of hole. Magnetite content remains about same as earlier					
	descriptions.					
326-327	Graphitic Schist? or Shale?					
	Very fine grained dark to black rock varying from closely					
	banded to quite amorphous					
	Constituency. Where observed core angles are 60°.					
	Section contains a few clayey rounded fragments.					
327-345.5	Tuff?					
	Fine grained grey banded rock - Cas 60°					

CLAIM NO. ... **DIAMOND DRILL RECORD** PROPERTY ... HOLE NO. Page 3 N-5

LATITUDE ... ELEVATION ... BEARING ... DEPTH ... STARTED ... COMPLETED ...

DEPARTURE ... SECTION ... DIP ... DRILLED BY ... LOGGED BY ...

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS			
	grain size varies with bands generally very thin to ½".								
	Colour varies from various shades of grey to a few prominent								
	narrow blackish bands which appear graphitic. Few platy								
	disseminations of pyrite in minor quantities on some bedding								
	planes.								
	End of hole.								
	Core recovery overall would exceed 95% on average but drops								
	to about 50% in badly fractured or muddy sections.								

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DIAMOND DRILL RECORD

CLAIM NO. TT-1 PROPERTY NORTHAIR (KAMLOOPS) HOLE NO. N-6

LATITUDE 116+00N ELEVATION 1840 BEARING Grid E DEPTH 698' STARTED May 23/72 COMPLETED May 28/72

DEPARTURE 3+75E SECTION 116+00Nv DIP 55° DRILLED BY Connors Drilling LOGGED BY C. Miller

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
0-16	Casing overburden					
16-66	Trachyte - grey to red medium grained rock - as before. Has appearance of an intrusive rather than a flow. Core is very broken. Recovery ranging from about an average of 60-70% rocovery to less than 30% locally.					
66-113.5	Trachyte Agglomerate - Kamloops volcanics - fragmental soft chloritic - basaltic matrix with almost muddy texture.with numerous (75-95% of core) dark grey fragments of trachyte - generally containing considerable hematite in blebs or reddish stain.					
113.5-169	Agglomerate - basaltic matrix - trachyte fragments, resembles a fine grained diorite in appearance particularly on the rounded core surface.					
169-184	Agglomerate - soft basaltic - some syenite fragments.					
184-227	Trachyte - Syenite? Coarse grained phase of Kamloops? Soft fine to medium grained grey rock with crystalline appearance as before. There are no prominent fractures but core appears to break readily @50-55° to core axis. From 205' to end of section, there are a few narrow carbonate filled fractions.					

WESTERN MINER PRESS LTD.
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CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. N-6

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
227-241	Breccia zone - fragments of trachyte - small(less than 1") cemented by very soft muddy material.					
241-279	Trachyte - syenite as before - few blotchy chlorite seams , thin calcite seams generally @45° (both ways) to core.					
279-297	Trachyte - syenite,- dark green grey crystalline rock, quite magnetic,has considerable blotchy alteration.					
297-307	Trachyte - grey fragment - sugary textured rock. Few random narrow quartz carbonate stringers, many of which bear small flakyy dissemination of native copper.					
307-334	Trachyte as before - few carbonate - slips very little visible native copper.					
334-698	Agglomerate - 80-90% + Trachyte fragments - slight scattered native copper usually associated with hematite staining generally along the edges of narrow quartz carbonate stringers. Rock becomes more massive in appearance with increasing depth and in many areas, appears intrusive rather than volcanic. It may represent a contact or near contact phase of Kamloops - Iron Mask formations. Slight disseminations of native copper (as before) present to end of hole.					

WESTERN MINER PRESS LTD.
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DIAMOND DRILL RECORD

CLAIM NO. TT-1 PROPERTY NORTHAIR (KAMLOOPS) HOLE NO. N-7

LATITUDE 116+00N ELEVATION 1880 BEARING W DEPTH 525 STARTED May 28/72 COMPLETED June 2/72

DEPARTURE 10+33E SECTION 116N DIP 55° DRILLED BY Connors Drilling LOGGED BY C. Miller

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
0-17	Casing - overburden					
17-34	Agglomerate & Tuff - Fine grained grey shaly appearing matrix with coarser subrounded fragments in part trachytic.					
34-101	Trachyte as before - fine grained fragmental volcanic agglomerate grey crystalline texture with fine blotches and patches of hematite, some specularite and magnetite. Scattered very fine disseminations of sulphides mainly pyrite.					
101-117	Trachyte - similar to above but lighter grey with less hematite and only slight magnetite sparse fine disseminations of sulphides.					
117-133	Agglomerate - fine grained grey fragmental as before, varying in composition from trachyte to andesite. Scattered narrow quartz carbonate stringers at various angles to the core. Most of the none prominent fractures are slickensided with development of chlorite, sericite, etc. Predominant direction of these shears is 45° to core (two directions) and near parallel to core. Fair magnetite content.					
113-138	Agglomerate as above but highly chloritized along fractures displaying a greenish waxy appearance when split along fracture. Section may represent a strong shear parallel to core.					

WESTERN MINER PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. N-7

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS			
138-157	Agglomerate as above - grey sugary textured fragmental rock green chlorite and serpentine, etc. on slickensides usually parallel to core. Slight dissemination of pyrite, magnetite, few carbonate slips.								
157-251	Agglomerate - Massive appearance sugary textured dioritic rock put suggestions of fragmental origin. Fragments appear to be approximately 50% syenite-dioritic and 50% trachyte. Blotchy patches and small fracture fillings of white carbonates some of the trachyte fragments are hematite stained which is also associated with some of the calcite fracture fillings. No visible native copper was noted. Core is broken in short (few inches) sections and breaks readily on one of the three prominent directions ie 45° (two ways) or parallel to core. There is a fourth less prominent direction; 20-30° to core. Section 174-176 appears quite brecciated with heavy hematite staining.								
251-277	Agglomerate - fine grained matrix fragments vary from trachyte through andesite to basalt. Well developed sericitization carbonatization etc. along fractures. Carbonate slips form irregular lacing, quite well developed in local areas.								

CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. N-7

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
	The slips reveal small displacements (minor movement) and traverse some fragments but terminate abruptly at the border of others.					
277-349	Agglomerate as above but fewer calcite filled fractures and lower degree of carbonatization.					
349-369	Diorite - Cherry Creek intrusive? Fine grained sugary textured grey rock. Section from 360-369 bears sparse erratic disseminations of native copper generally associated with fractures (with calcite) usually from near parallel to 20° to the core. Contact? @269' 1/8" chlorite and carbonate etc. @20° to core.		Note:		thin and polished sections of the core @362' were prepared and analysed by A. Macdonald at U.B.C. Rock is identified as porphyritic basalt probably of volcanic origin but possibly the margin of a small intrusive. This specimen is believed representative of the core logged as diorite?	
369-424.5	Diorite? Somewhat similar textured rock to above but lighter grey - even textured massive good coring rock - few carbonate stringers.					
424.5-525	Agglomerate? Fine grained grey even textured rock with the suggestion of being fragmental at least in part. There appears to be "streaks" of reddish-yellowish alteration halos around many hair line fractures generally near parallel but sometimes up to right angles to the core. Quartz carbonate fractures are not common at start of section but increase in					

WESTERN MINER PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. N-7

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS			
	numbers towards end of section from 448' on. Alteration "halos"								
	and many of carbonate slips bear considerable hematite and								
	several fractures near parallel core bear sparse disseminations								
	of native copper particulary from 497' to end of hole.								
525	End of hole. Casing pulled.								

WESTERN MINER PRESS LTD.
STANDARD FORM NO. 502

Transmission Lines

Natural Gas Pipeline

Mudstone very soft rock incompetent when wet

2000' Elev.

Bottom of Percussion Drill Hole

Agglomerate
Dark green basaltic matrix.
Vol. fragments, 1-2% magnetite & hematite

Agglomerate
Basaltic fragments - 75% of core.
Syenite content increasing

Agglomerate, dioritic appearance.

Agglomerate
Dark green chloritic matrix.

Agglomerate, as above
increasing % of syenite fragments.

Agglomerate, green basalt matrix
few syenite fragments

Agglomerate
green basaltic matrix.
75% trachyte fragments
& some syenite

Agglomerate light green
Diorite matrix dark phenocrysts

Agglomerate, 90% Trachyte fragments.

Minor scattered occurrences of native Cu. usually associated with calcite veins or syenite fragments

N-1

12+00 N.

Agglomerate, dark grey to red angular basaltic fragments

Agglomerate very soft chloritic, considerable hematite and magnetite.

Agglomerate, basaltic matrix, dioritic fragments.

Agglomerate
Fine grained chloritic andesite matrix with syenite fragments.

Scattered minor occurrences native copper

N-2
(Drilled 45° East of Section)

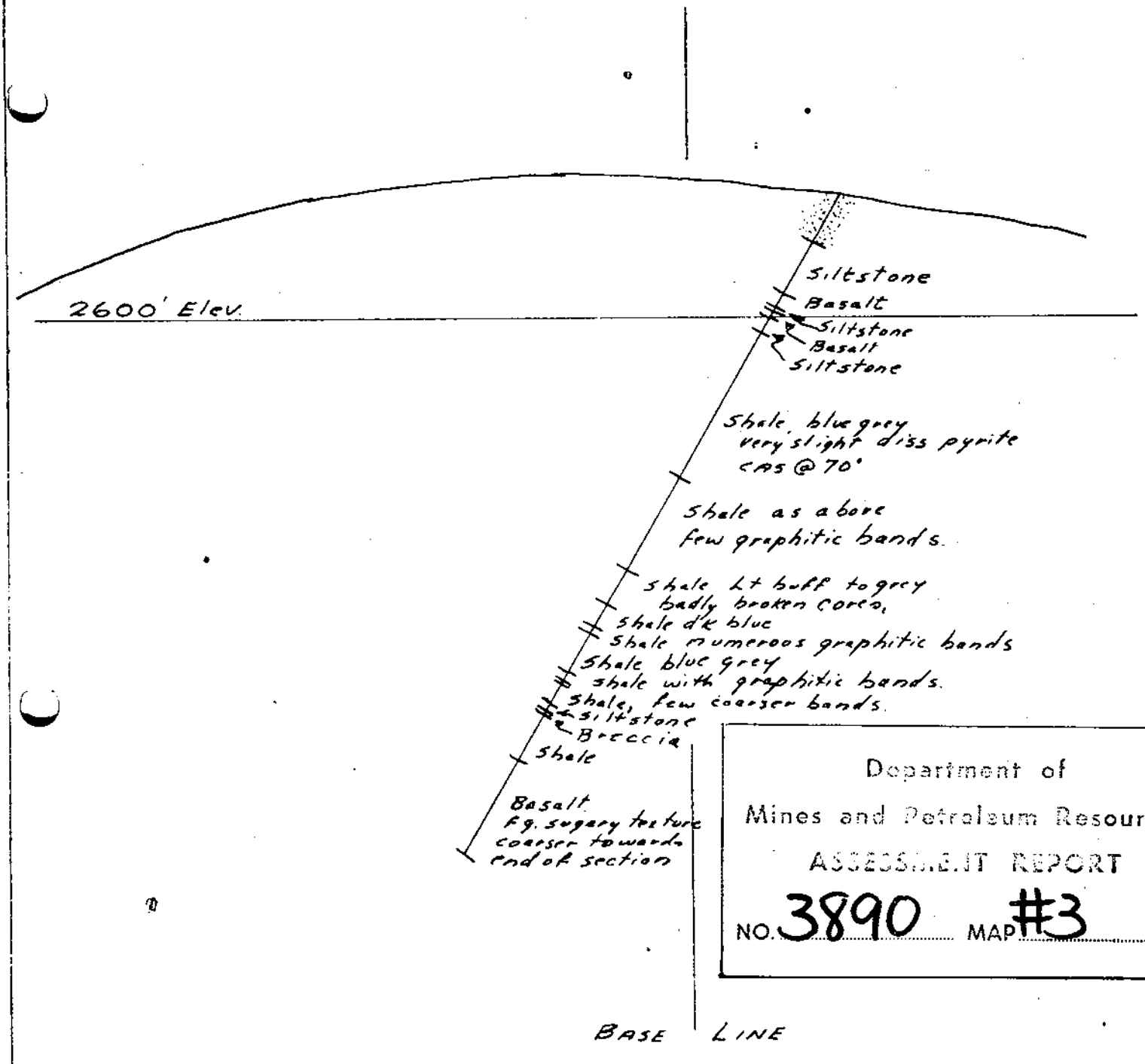
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3890 MAP #2

NORTHAIR MINES LTD. (N.P.L.)

SECTION #1 & 2 DRILL HOLES

Looking West along Base Line

Scale 1" = 100' May 1972 CM



NORTHAIR MINES LTD. (N.P.L.)

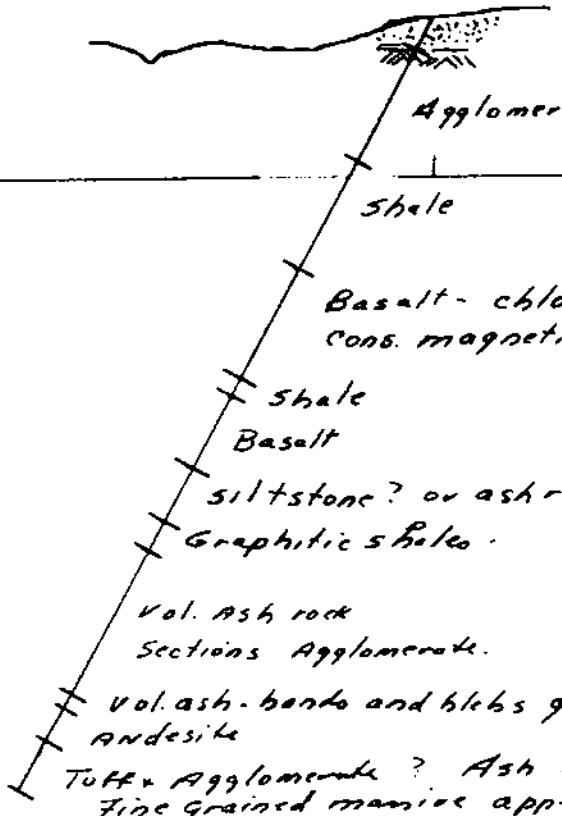
TT CLAIMS - KAMLOOPS. B.C.

SECTION 52 N

DIAMOND DRILL HOLE N-3.

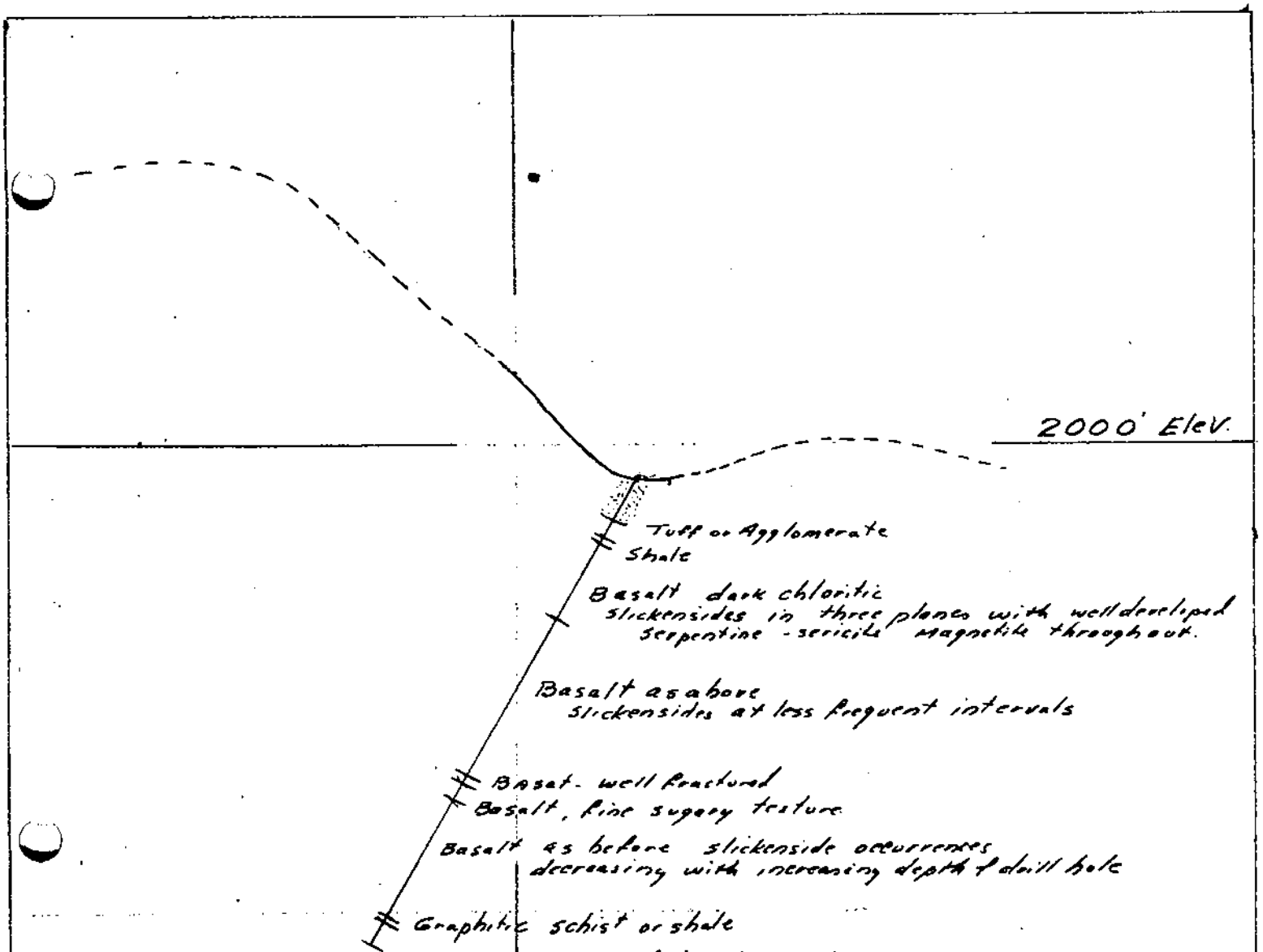
Looking North at Base Line.

1" = 100' May 72 CM.



26+00 E

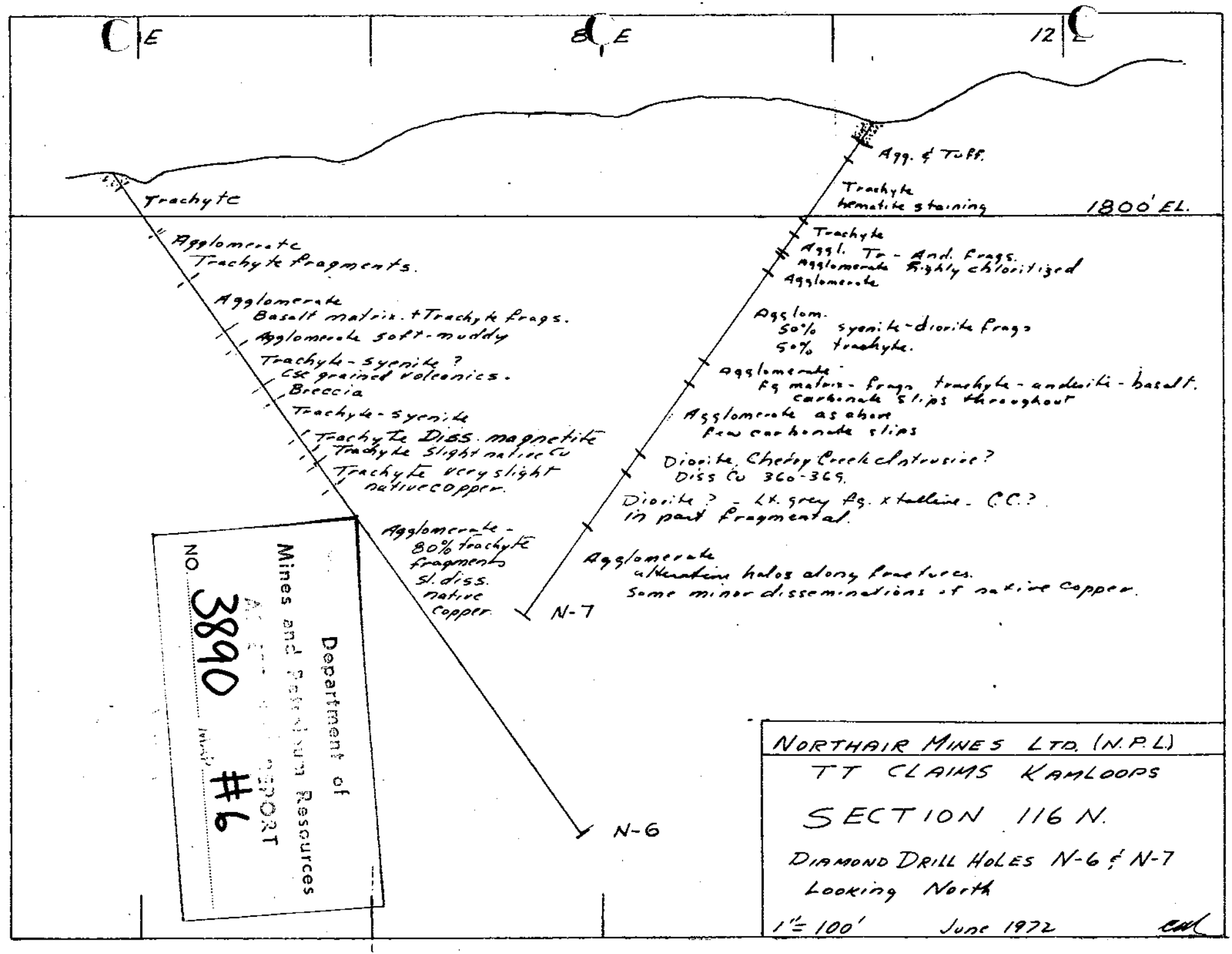
NORTHAIR MINES LTD. (N.P.L.)
TT CLAIMS - KAMLOOPS B.C.
SECTION 80N.
DDH N-4
LOOKING North at 26+00E
1" = 100' May 1972

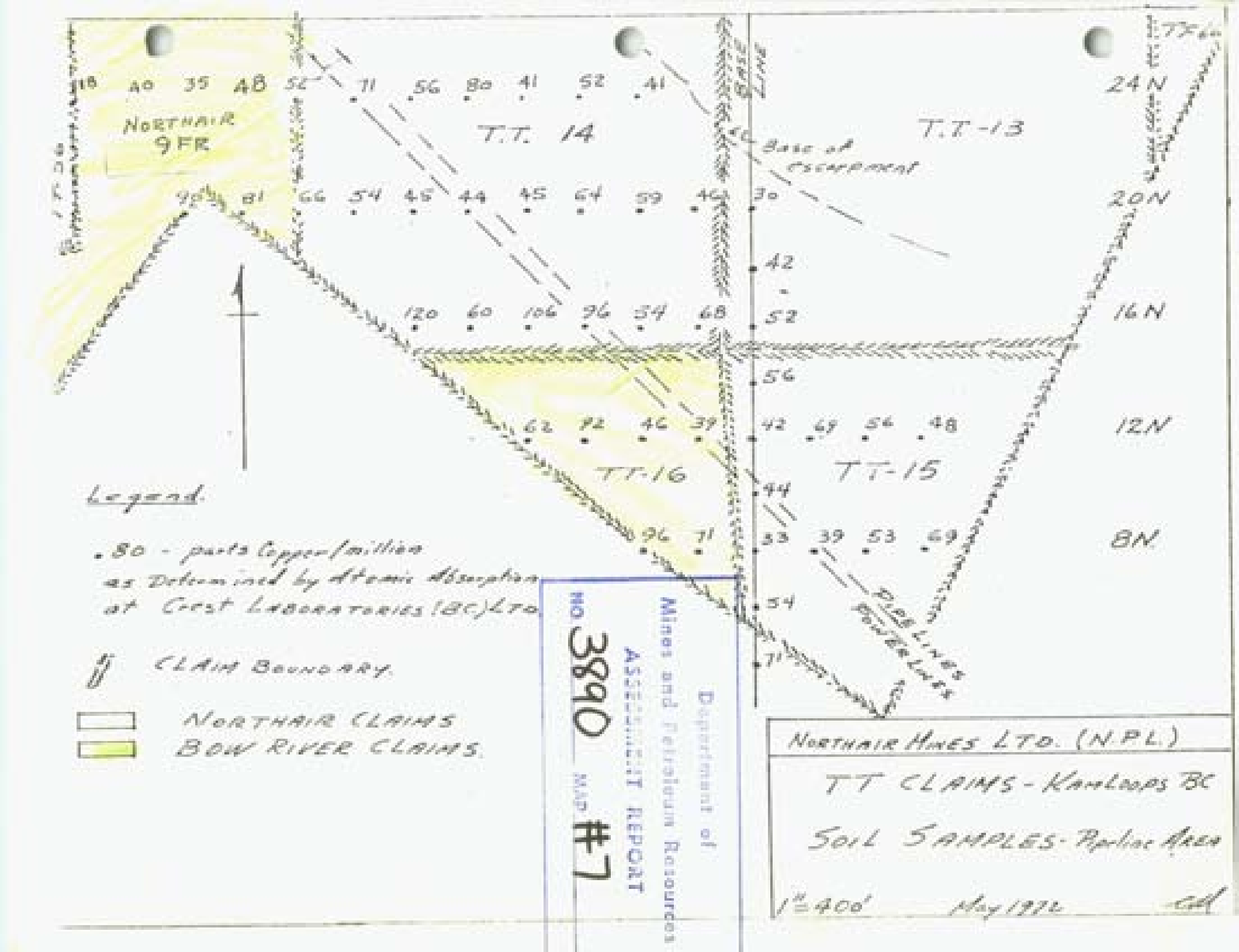


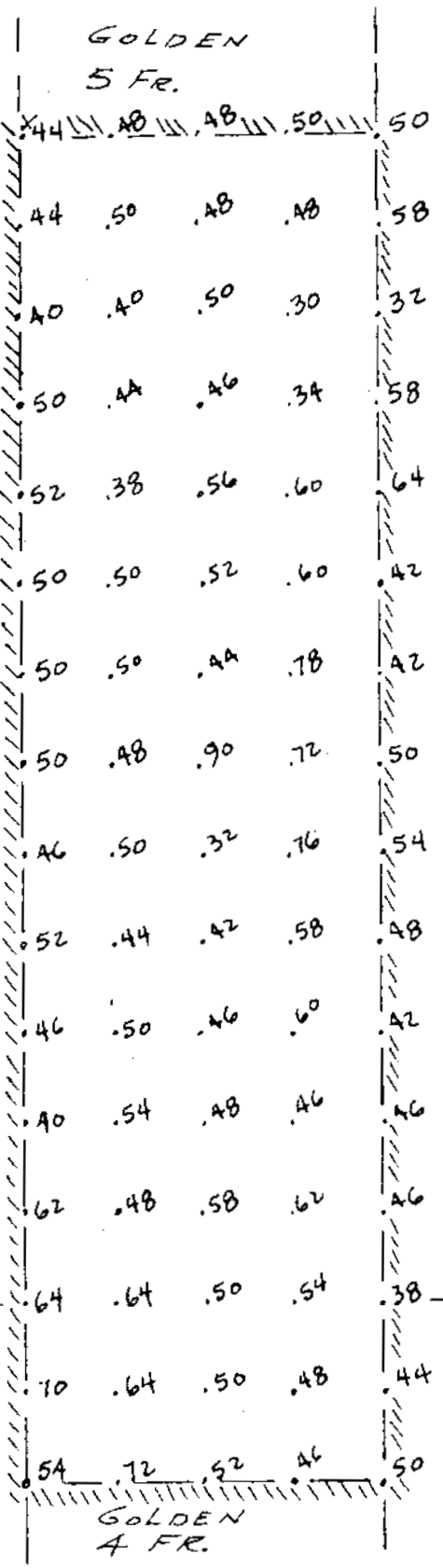
104 N.

NORTHAIR MINES LTD. (N.P.L.)
TT CLAIMS - KAMLOOPS, B.C.

DIAMOND DRILL HOLE N-5
Looking West at Section 104 N, 4+30E
Hole drilled on azimuth 195°
1"= 100' May 1972


E
8 E
12 E
Agg. & Tuff.
Trachyte
Trachyte hematite staining
1800' EL.
Trachyte
Agglomerate
Trachyte fragments.
Agglomerate
Basalt matrix. + Trachyte frags.
Agglomerate soft-muddy
Trachyte - syenite ?
C.g. grained volcanics.
Breccia
Trachyte - syenite
Trachyte DIBS. magnetite
Trachyte slight native Cu
Trachyte very slight native copper.
Agglomerate -
80% trachyte fragments
Sl. diss. native copper
N-7
N-6
Trachyte
Aggl. Tr - And. Frags.
Agglomerate highly chloritized
Agglomerate
Agglom.
50% syenite-diorite frags
50% trachyte.
Agglomerate
Fg matrix - frags trachyte - andesite - basalt.
carbonate slips throughout
Agglomerate as above
few carbonate slips
Diorite, Chetoy Creek Intrusive?
Diss Cu 360-369.
Diorite? - Lt. grey fg. xtalline - CC.?
in part fragmental.
Agglomerate
alteration halos along fractures.
Some minor disseminations of native copper.
Department of
Mines and Petroleum Resources
REPORT
NO. 3890
#6
NORTHAIR MINES LTD. (N.P.L.)
TT CLAIMS KAMLOOPS
SECTION 116 N.
DIAMOND DRILL HOLES N-6 & N-7
Looking North
1" = 100'
June 1972


NORTHAIR 9FR
T.T. 14
T.T-13
Base of Escarpment
TT-16
TT-15
24N
20N
16N
12N
8N
Legend.
• 80 - parts Copper/million as Determined by Atomic Absorption at Crest Laboratories (BC) Ltd.
CLAIM BOUNDARY.
NORTHAIR CLAIMS
BOW RIVER CLAIMS.
POWER LINES
NORTHAIR MINES LTD. (N.P.L.)
TT CLAIMS - Kamloops BC
SOIL SAMPLES - Radar Area
1" = 400'
May 1972
Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3890
MAP #7



N

JAM-8

JAM-7

JAM 6

JAM-5

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3890 MAP #8

.60 - parts per million Cu by AA

NORTHAIR MINES LTD (N.P.L.)
KAMLOOPS CLAIMS
SOIL SAMPLING
T.T.-67

Scale 1" = 200' June/72 C.M.

AMEX EXPLORATION SERVICES LTD.

A.A. (AB) ABLETT — Confidential Work

BUS. 374-1123
RES. 376-7490

204, 635 VICTORIA STREET

BOX 286
KAMLOOPS, B.C.

September 14, 1972

Northair Mines Ltd. (NPL),
333-885 Dunsmuir Street,
Vancouver, B.C.

Dear Sirs:

The following is a breakdown of our personnel engaged, and direct costs incurred, during completion of 50.4 miles of Magnetometer Survey on your "TT" Group of mineral claims in the Cherry Creek Area, Kamloops Mining Division. This program was completed during the period February 21 to April 15, 1972:

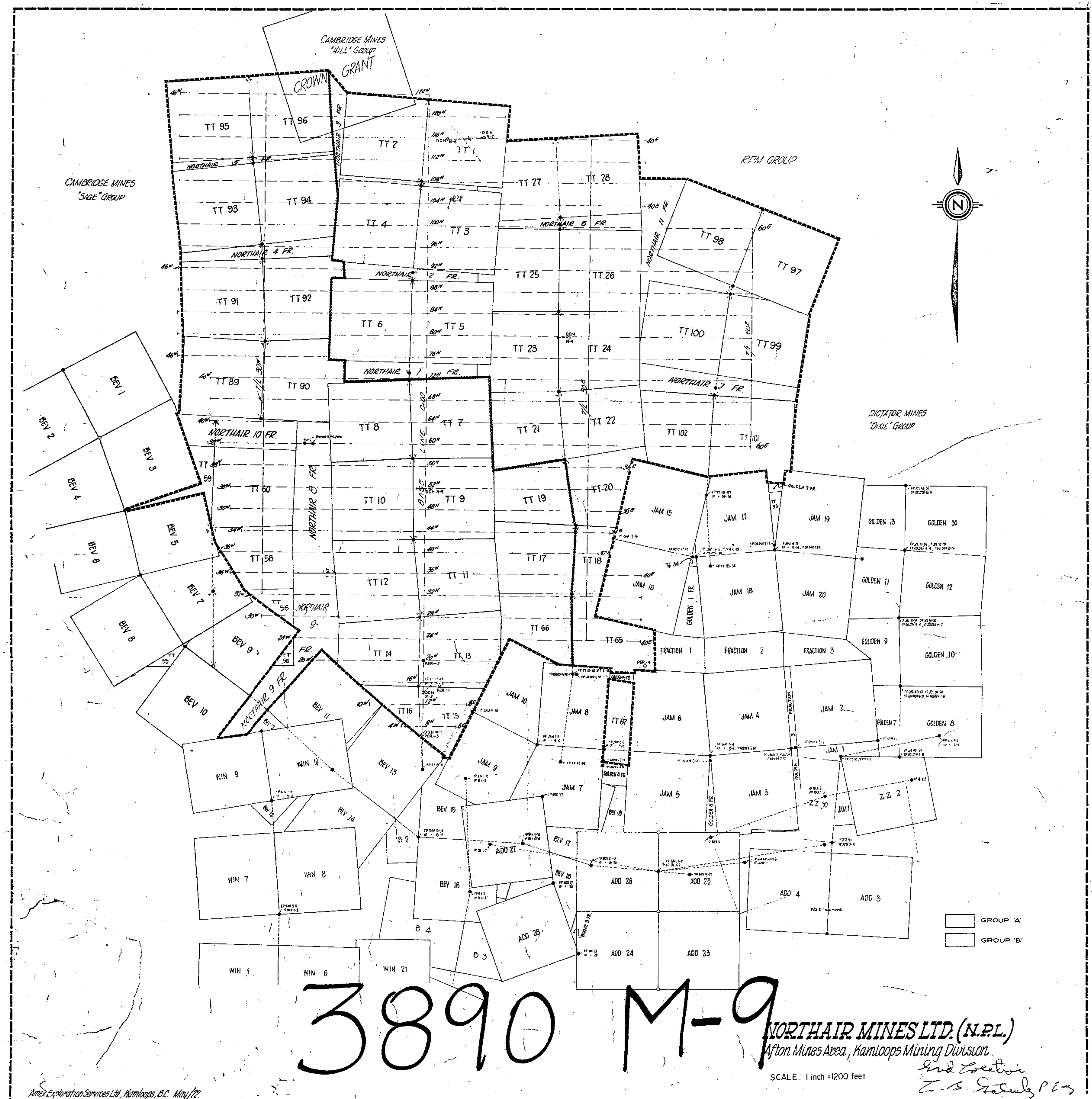
PERSONNEL ENGAGED	TIME EXPENDED	WAGES	
B. Bried	16 days	$ 641.60	
B.L. Smith	16 days	641.40	
J.W. Butcher	16 days	641.60	
R. Apps	16 days	641.60	
A.A.Ablett	8 days	389.60	
		$ 2956.00	$ 2956.00

DIRECT COSTS

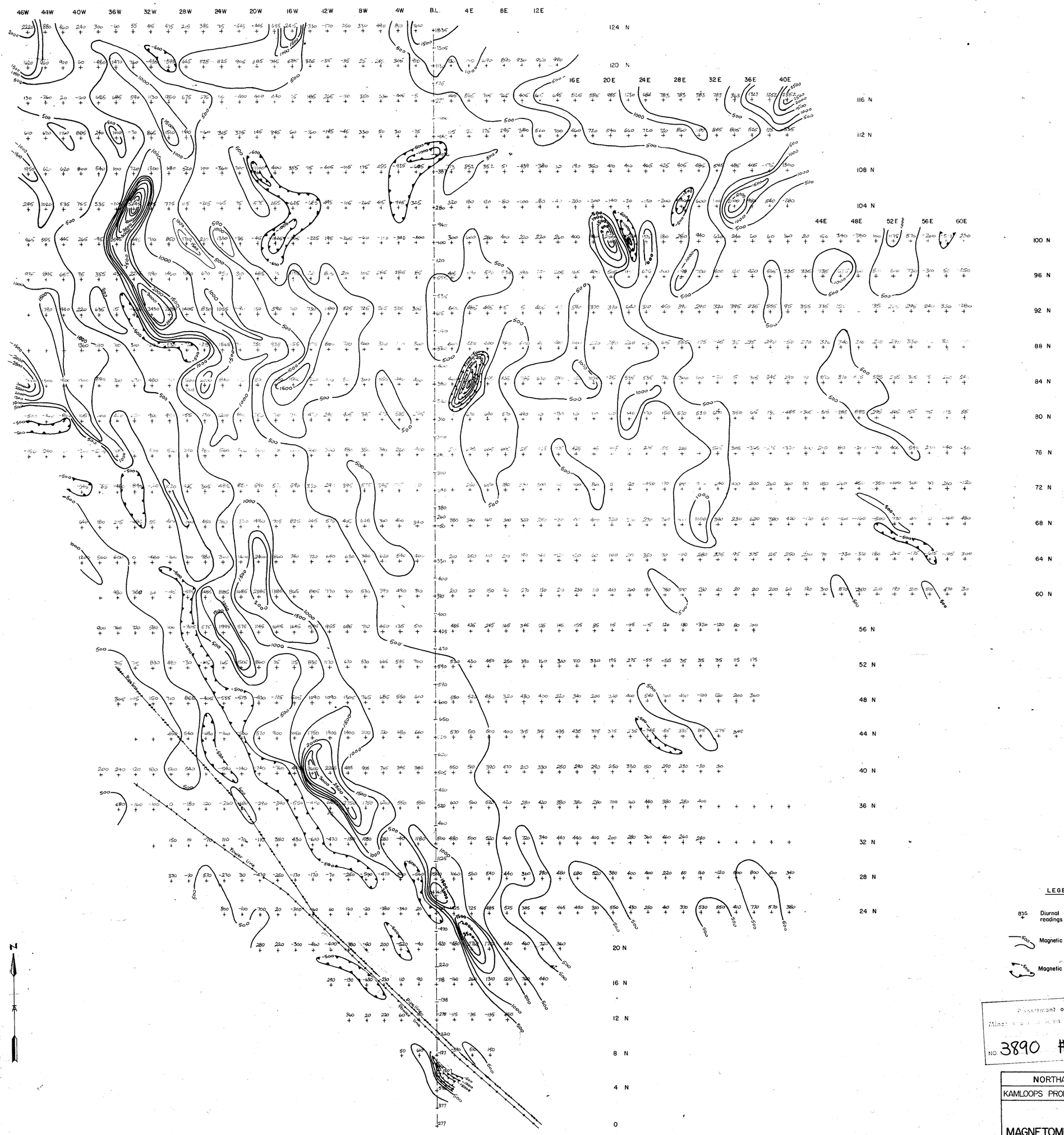
4-wheel drive	16 days @ $ 20.00 per day	320.00
	Total cost	$ 3276.00

Yours very truly,

A.A. Ablett,
Amex Exploration Services Ltd.



CAMBRIDGE MINES "HILL" GROUP
CROWN GRANT
CAMBRIDGE MINES "SAGE" GROUP
RPM GROUP
DICTATOR MINES "DIXIE" GROUP
N
TT 95
TT 96
TT 2
TT 1
TT 27
TT 28
TT 93
TT 94
TT 4
TT 3
TT 98
TT 97
TT 91
TT 92
TT 6
TT 5
TT 25
TT 26
TT 23
TT 24
TT 100
TT 99
TT 89
TT 90
TT 8
TT 7
TT 21
TT 22
TT 102
TT 101
TT 60
TT 10
TT 9
TT 19
TT 20
TT 58
TT 12
TT 11
TT 17
TT 18
TT 56
TT 66
TT 65
TT 14
TT 13
TT 55
TT 16
TT 15
TT 67
NORTHAIR 3 FR.
NORTHAIR 5 FR.
NORTHAIR 4 FR.
NORTHAIR 6 FR.
NORTHAIR 2 FR.
NORTHAIR 1 FR.
NORTHAIR 7 FR.
NORTHAIR 10 FR.
NORTHAIR 8 FR.
NORTHAIR 9 FR.
NORTHAIR 11 FR.
BASE LINE
BEV 1
BEV 2
BEV 3
BEV 4
BEV 5
BEV 6
BEV 7
BEV 8
BEV 9
BEV 10
BEV 11
BEV 13
BEV 14
BEV 15
BEV 16
BEV 17
BEV 18
BEV 19
JAM 15
JAM 17
JAM 19
JAM 16
JAM 18
JAM 20
JAM 10
JAM 8
JAM 6
JAM 4
JAM 2
JAM 9
JAM 7
JAM 5
JAM 3
JAM 1
GOLDEN 13
GOLDEN 14
GOLDEN 11
GOLDEN 12
GOLDEN 9
GOLDEN 10
GOLDEN 7
GOLDEN 8
GOLDEN 1 FR.
GOLDEN 2 FR.
GOLDEN 4 FR.
GOLDEN 6 FR.
FRACTION 1
FRACTION 2
FRACTION 3
WIN 9
WIN 10
WIN 7
WIN 8
WIN 5
WIN 6
WIN 21
ADD 27
ADD 26
ADD 25
ADD 28
ADD 24
ADD 23
ADD 4
ADD 3
Z.Z. 2
Z.Z. 30
B 2
B 3
B 4
GROUP 'A'
GROUP 'B'
NORTHAIR MINES LTD. (N.P.L.)
Afton Mines Area, Kamloops Mining Division.
SCALE: 1 inch = 1200 feet
Amex Exploration Services Ltd., Kamloops, B.C. May/72.
3890 M-9



LEGEND

835 Diurnal corrected magnetometer readings in gammas.

Magnetic contour lines

Magnetic lows

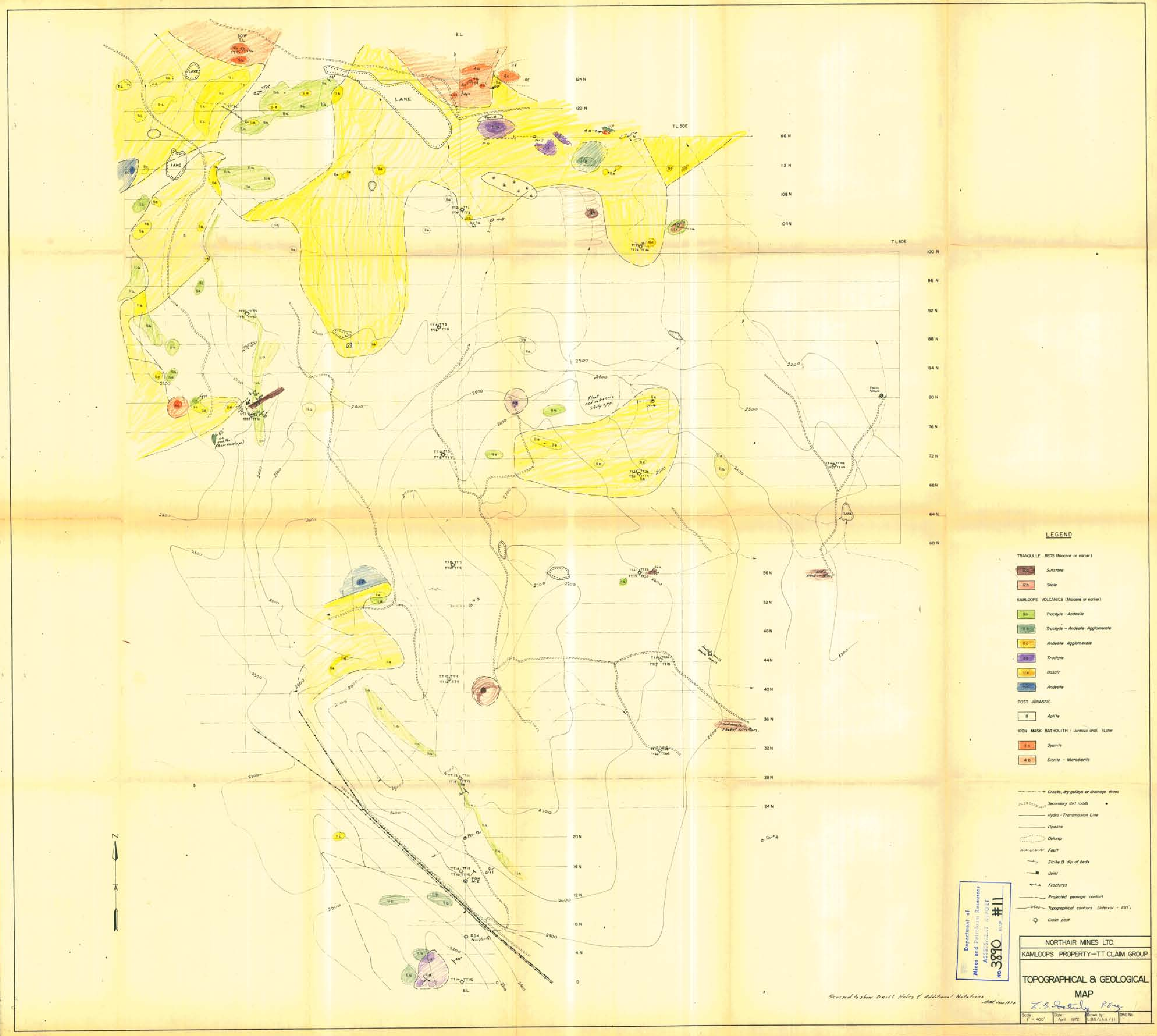
Instrument: Sharpe M.F. – I. Field work by:
Amex Exploration Services Kamloops B.C.
L.B. Goluby P. Eng.

NORTHAIR MINES LTD.

KAMLOOPS PROPERTY - TT CLAIM GROUP.

MAGNETOMETER SURVEY

Scale:	Date:	Drawn by:	DWG. No.
1" = 400'	April 1972	L.B.G. / J.L.	



LEGEND
TRANQUILLE BEDS (Miocene or earlier)
12c Siltstone
12b Shale
KAMLOOPS VOLCANICS (Miocene or earlier)
11a Trachyte - Andesite
11b Trachyte - Andesite Agglomerate
11c Andesite Agglomerate
Trachyte
11e Basalt
Andesite
POST JURASSIC
8 Aplite
IRON MASK BATHOLITH : Jurassic and(?) Later
4a Syenite
4b Diorite - Microdiorite
Creeks, dry gullies or drainage draws
Secondary dirt roads
Hydro - Transmission Line
Pipeline
Outcrop
Fault
Strike & dip of beds
Joint
Fractures
Projected geologic contact
Topographical contours (interval - 100')
Claim post
Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3890 MAP #11
NORTHAIR MINES LTD.
KAMLOOPS PROPERTY—TT CLAIM GROUP
TOPOGRAPHICAL & GEOLOGICAL MAP
Scale 1" = 400'
Date April 1972
Drawn by L.B.G./ch.d./J.I.
DWG No.
LAKE
B.L.
TL 30E
TL 60E
124 N
120 N
116 N
112 N
108 N
104 N
100 N
96 N
92 N
88 N
84 N
80 N
76 N
72 N
68 N
64 N
60 N
56 N
52 N
48 N
44 N
40 N
36 N
32 N
28 N
24 N
20 N
16 N
12 N
8 N
4 N
0
2200
2300
2400
2500
2600
2700

DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA.

TO WIT:

In the Matter of a geological and a magnetometer survey for Northair Mines Ltd. of Vancouver B.C. Covering the T.T. claim Group Kamloops Mining Division

I, L. B. Gateley Consulting Engineer

of 3196 Westmount Place West Vancouver B.C.

in the Province of British Columbia, do solemnly declare that the costs of the geological survey and engineering on the magnetometer survey are as follows:

A. H. Dawson B.A. March 30th to April 16/72
13 days geological field work @ $40.00/day — $520.00

L. B. Gateley Cons. Engineer 3 days @ $150.00/— 450.00

Vehicle Rental - Tilden — $\frac{13}{25}$ of $288.00 — 150.00

Living expenses in Kamloops Dawson & Gateley 310.00

J. Libal - drafting geology and magnetometer maps. 32 hrs @ 2.50/hr 80.00

Total $1510.00

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City of Vancouver, in the Province of British Columbia, this 25th day of September 1972, A.D.

L. B. Gateley

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

★o