

*J. B. P. Sawyer, P. Eng.*  
CONSULTING GEOLOGIST

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of \$ 26,559.05

(604) 684-5433

*[Signature]*  
Resident Geologist or  
Resident Mining Engineer

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

*[Signature]*  
~~Commissioner of Yukon Territory~~  
ADMINISTRATOR OF THE YUKON TERRITORY

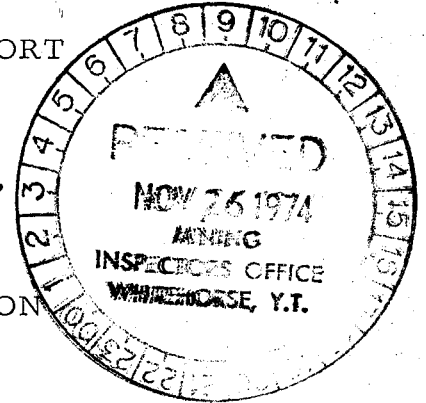
GEOLOGICAL AND GEOPHYSICAL REPORT

ON

TIM 1 to 8, JIM 1 to 22, and 31 to 40,  
I.R. 1 to 36 MINERAL CLAIMS  
MINTO AREA,

WHITEHORSE MINING DISTRICT, YUKON

Long. 137° 09'W, Lat. 62° 34'N  
N.T.S. REF. 115 I/11



for

BX DEVELOPMENT LIMITED

by

J. B. PAUL SAWYER, P. ENG.



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## LIST OF ILLUSTRATIONS

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### Maps in Separate Folder

Geological Map, coloured	Scale 1" = 400 ft.
Geological Map - used to show 1974 grouping,	Scale 1" = 400 ft.
Magnetometer Survey, plot of readings	1" = 400 ft.
Magnetometer Survey, contoured with E. M. Conductors superimposed	1" = 400 ft.
E. M. 16 Survey - readings, contours, & conductors,	1" = 400 ft.

## INTRODUCTION

The 76 TIM, I.R. and JIM claims which constitute the property covered by this report were acquired by BX Development Limited early in 1974. They lie to the south and southeast of the Dawson Range Joint Venture Ben and Pal claims in which BX Development also has an interest, and at the southwestern corner of a large block of claims (Fed Group) under active exploration by United Keno Hill Explorations/Falconbridge Nickel Mines. (see Figure 3)

The work completed on the property in 1974 was done under general field supervision of the writer, acting on behalf of BX Development Limited and consisted of line cutting to establish control for a grid of compassed and chained lines over which magnetometer and EM 16 surveys were run, and geological traverses were carried out. The geophysical work was done by field crews of Presunka Geophysical Prospecting Ltd. headed by Mr. S. Presunka, geophysicist. Geological mapping was done by Mr. J. Gondi, M.Sc., geologist, and the writer. Field work commenced on May 5th, 1974 and was completed by July 5th, 1974.

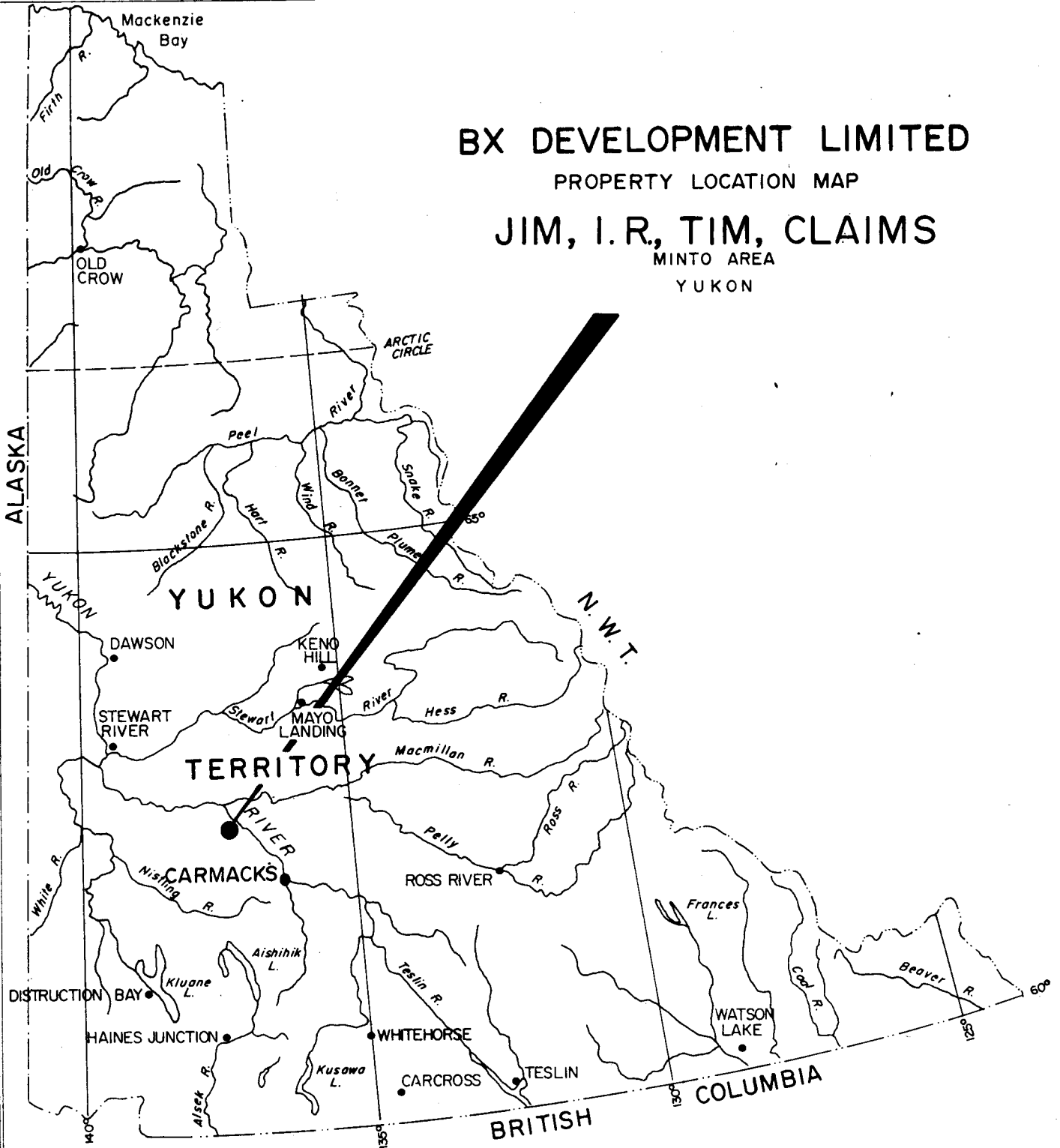
Applications to Group the 76 claims comprising the property, and for issuance of Certificates of Work in respect of the exploration work described in detail below, have been filed with the Mining Recorder, Whitehorse Mining District, at Whitehorse, Yukon Territory.

# BX DEVELOPMENT LIMITED

PROPERTY LOCATION MAP

## JIM, I.R., TIM, CLAIMS

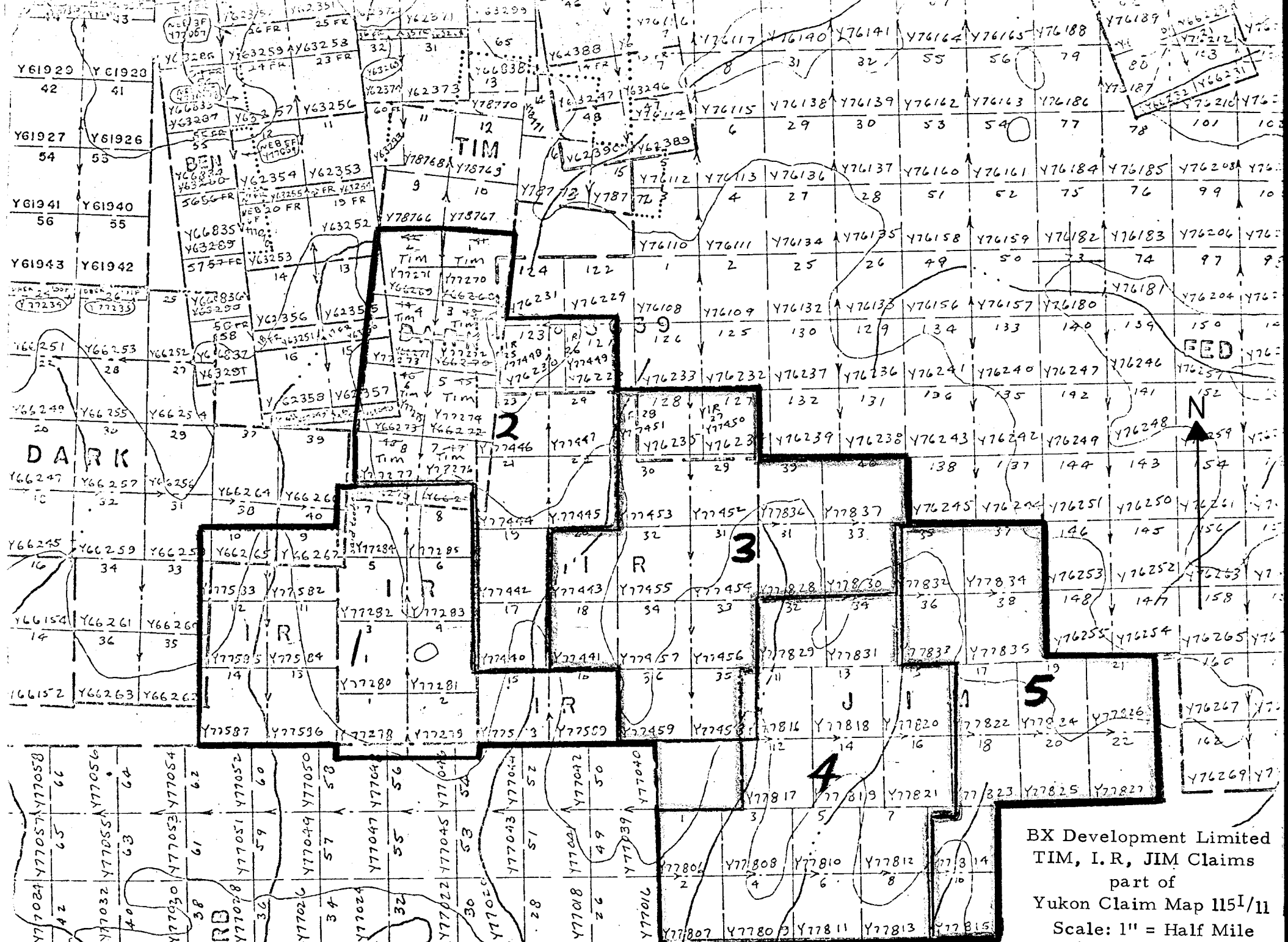
MINTO AREA  
YUKON



### LOCATION MAP

SCALE 0 20 40 60 80 100 MILES

FIGURE 1



BX Development Limited  
 TIM, I.R, JIM Claims  
 part of  
 Yukon Claim Map 115I/11  
 Scale: 1" = Half Mile

(large coloured numbers refer to 1974 claim groupings)

Figure 2.

PROPERTY

The 76 claims which make up the BX Development Limited property are described as follows:-

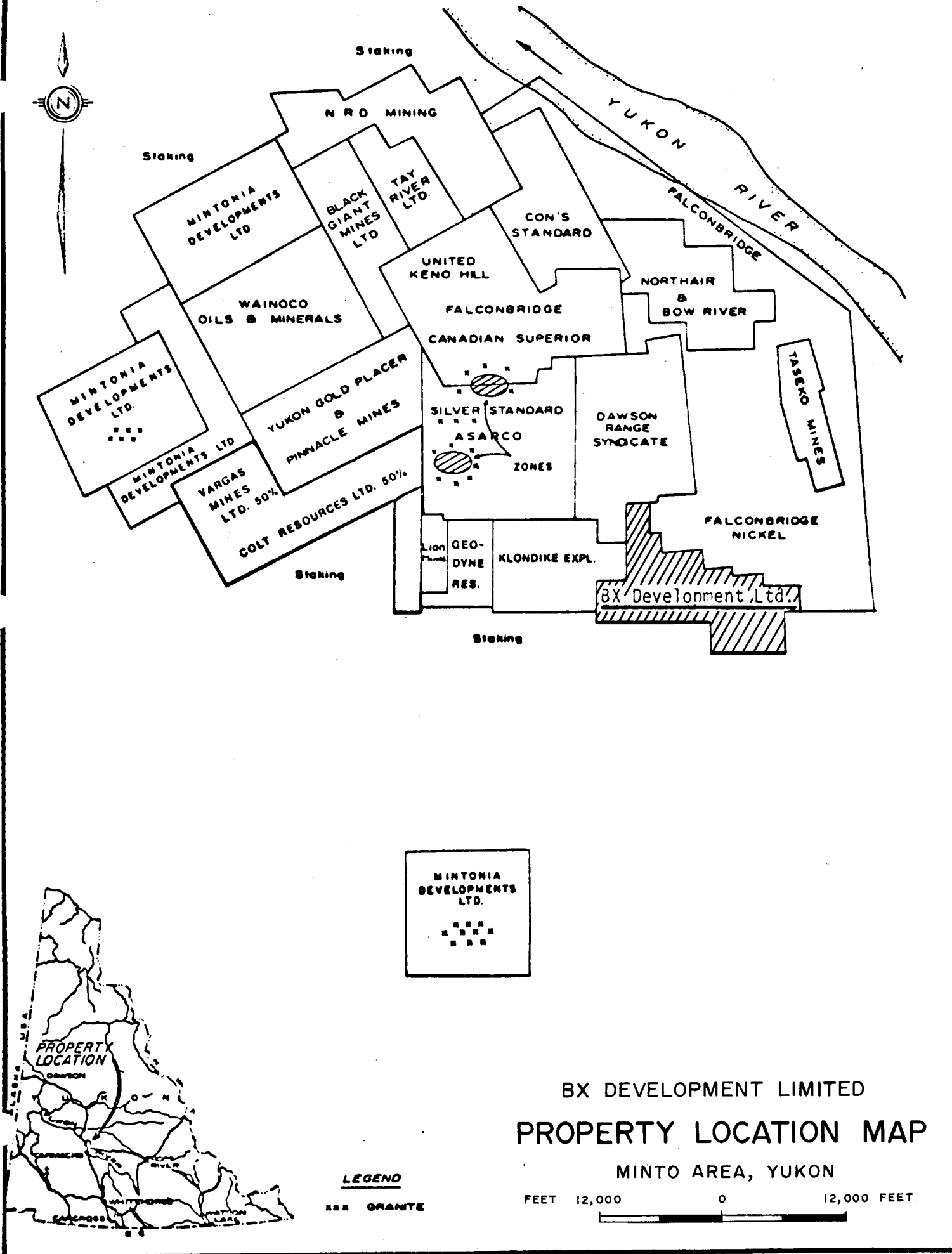
Claims I.R. 1 - 8 inclusive	Grant Nos. Y77276 - Y77284 inclusive
I.R. 9 - 16 "	Y77582 - Y77589 "
I.R. 17 - 36 inclusive	Y77440 - Y77459 "
Jim 1 - 22 "	Y77806 - Y77827 "
Jim 31 - 40 "	Y77828 - Y77837 "
Tim 1 - 8 "	Y77270 - Y77277 "

They are shown on Yukon Claim May 115 I/11, part of which is reproduced as Figure 2 in this report.

LOCATION AND ACCESS

The property is approximately forty-five air miles northwest of the town of Carmacks, on the south side of the Yukon River, and about eight miles west-southwest of the Minto airstrip, on the Carmacks 1:250,000 topographic map sheet (N.T.S. Reference 115 I). A prominent hill shown on the topographic maps as spot height 3,639 ft. lies at the most northerly point of the claim group. Dark Creek flows in a fairly broad valley in an east-southeasterly direction about one half a mile south of the property at its nearest point. The co-ordinates of a point roughly at the centre of the property are 62° 34'N, 137° 09'W.

The Minto airstrip is easily accessible via a good gravel road which leaves the Klondike Highway about five miles north of Midway Lodge, approximately fifty miles north of Carmacks. Access to the property must be by air from Minto airstrip. In 1974 a Hiller 12E helicopter, owned by Yukon Airways of Whitehorse, and stationed at Minto airstrip, was used to reach the BX Development Limited property.



MINTONIA DEVELOPMENTS LTD.

•••••

BX DEVELOPMENT LIMITED  
**PROPERTY LOCATION MAP**  
 MINTO AREA, YUKON

**LEGEND**

••• GRANTE

FEET 12,000 0 12,000 FEET

A road from Carmacks to the Asarco/Silver Standard and United Keno Hill properties on which copper orebodies were discovered in 1972/73 was begun during winter 1973, however, it became un-usable during spring break-up and was not open for traffic during 1974 field season. It follows a route on the south side of the Yukon River and passes just to the northeast of the JIM/I.R. / TIM claims so that it can probably be used for access in future years.

### TOPOGRAPHY

Locally the relief is quite marked and elevations on the property vary from about 2,000 ft. to the high point of 3,639 ft. at the northernmost boundary. Stream valleys are deeply incised with steep sides although the hills are generally rounded. A heavy growth of timber covers the entire property. Soil cover is light to moderate with bedrock on most of the higher, north-south trending ridges, being either exposed or covered with only a few inches of soil and rubble.

### 1974 FIELD WORK PROGRAM

The work completed on the TIM, I.R., and JIM claims in 1974 consisted of line cutting, geological mapping, and magnetometer and EM 16 surveys.

Line Cutting Approximately thirteen (13) miles of line were cut on contract by Eastern Associates Ltd., of Whitehorse, to establish control for a more complete grid which was established by compass and chain methods in conjunction with the geophysical surveying.

The lines cut and chained by Eastern Associates were:

1. A base line extending from a point 700 feet east of Post 1, Jim #2 claim on a bearing  $330^{\circ}$  (northwesterly) for a length of 15,600 feet approximately. The northernmost picket on this line is at 272N.

The line itself was arbitrarily designated 200E.

2. A second base line, at right angles to B. L. 200E, extended on a bearing  $060^{\circ}$  ( $240^{\circ}$ ) across the widest part of the property, and was arbitrarily designated 200N, so that the point of intersection of the two base lines is 200N, 200E and all locations within the boundaries of the property show only East chainages or North chainages. Base Line 200N extends for a total length of approximately 15,000 feet.

3. Three tie lines, parallel to B. L. 200E were turned off from B. L. 200N at 3,000 ft. intervals and were designated 170E, 230E, and 260E. These tie lines were compassed, blazed and chained, but not picketed along their entire length in order to economize on line cutting costs.

4. A second NE-SW base line, parallel to 200N, i. e. on bearing  $060^{\circ}$  ( $240^{\circ}$ ), and eight thousand feet south of it, i. e. at 120N, was also cut, chained and picketed to provide tie-in points for the three tie lines 170E, 230E, and 260E at the southern end of the property. Base Line 120N is at least 10,100 feet long and extends from 194E to 295E.

This framework of cut lines was used to tie together a complete grid of lines spaced 400 feet apart established using compass and chain by the geophysical survey crew in conjunction with the magnetometer/EM 16 surveys. These grid lines were marked by flagging at 50 foot intervals with chainages marked on the flagging at 100 foot intervals.

#### GEOLOGICAL MAPPING

Geological mapping was completed by traverses over all of the cut base lines and tie lines and most of the flagged grid lines. After initial coverage of the whole property area was completed, it was apparent that most, if not all, of the property was underlain by

Carmacks Group volcanics and that the only area in which the gneissic intrusive rocks which host ore grade mineralization on the Asarco/Silver Standard, and United Keno Hill properties, might be found was at the extreme northern end of the property. Consequently exhaustive traversing of every line was not attempted but attention was paid to the northern extremity of the property, and to one or two other areas of the property which on the basis of regional structure, local relief, or geophysical indications, appeared to be of interest.

Results of the mapping are discussed more fully below under Geology, and Discussion, and the interpreted field data are presented on the accompanying geological map at a scale of 1 inch equals 400 feet.

#### GEOPHYSICAL SURVEYS

All of the geophysical work was done by Mr. S. Presunka, a geophysicist of over twenty years' experience, assisted by two helpers, Messrs. P. Presunka and D. McLean. The technical details of the surveys and the interpretation and evaluation of the geophysical readings given below are by Mr. S. Presunka. Geological interpretation and overall evaluation are the joint responsibility of the writer and Mr. Presunka.

##### a) Magnetometer Survey

The instrument used is a Sharpe MF-1, fluxgate type magnetometer, Serial Number 905454. Readings were taken at 50 foot intervals along all base lines, tie lines and grid lines with Base Stations used to make diurnal corrections established at 400 foot intervals along the base lines and tie lines.

##### b) Electromagnetic Survey

The instrument used is a Ronka E. M. 16 unit. Transmissions

from the Seattle VLF station on a frequency of 18.6 MHz. were used to take the readings. The instrument was orientated so as to face the direction  $050^{\circ}$  for all readings, which were taken normally at 100 foot intervals. In conductive areas the station interval was reduced to 50 feet to provide greater detail.

Results of both magnetometer and EM 16 surveys are presented on plans drawn to a scale of 1 inch equals 400 feet. The magnetometer results are presented on two plans. The first is a detailed plot showing all of the corrected readings at every station on the grid. The second plot shows only the magnetic contours using a 500 gamma contour interval and has been coloured to emphasize the magnetic relief. On this magnetic contour plan the EM 16 conductors are also shown as a heavy black line.

The EM 16 results are presented on a single plan. The in-phase readings are plotted to the left of the line and are contoured every 5%. Quadrature readings are plotted to the right of the line. The zero cross over contours are indicated by converging arrows and are coloured red. The reverse cross overs are marked R.O., are coloured blue, and are indicated by diverging arrows.

#### REGIONAL GEOLOGY

The most recent geological map of the area is a compilation prepared by Tempelman-Kluit of G.S.C. and published as Open File 200 in April 1974. It incorporates earlier work by H.S. Bostock for G.S.C., both published and unpublished, including the earlier Map 340A, re-interpretation of ages, and correlations with more recent mapping on adjacent map sheets.

The dominant geological feature of the general Minto area is seen from this map to be the batholithic mass of hornblende granodiorite and related rocks, of probable Triassic age, which has intruded Precambrian and lower Palaeozoic metasediments and occupies much of the central part of the map area. This intrusive is foliated and the sulphide mineralization discovered to date, e. g., on Asarco/Silver Standard and United Keno Hill properties appears to be associated with, and probably localized by, the more strongly developed foliation. These older intrusives are covered to varying degrees by a series of volcanic flows ranging from Triassic to Eocene in age which are the products of an extended period of vulcanism along the Teslin lineament, a major northwest trending structural feature of the area.

Reference to this map shows that the Tim/I. R. /Jim claims lie entirely within an area underlain by some of the younger volcanics known as the Carmacks Group, and described as brown-weathering basalt and andesite flows and flow breccias. Observations on the claims themselves confirm this. The intrusive rocks outcrop to the north, south, and southwest, and undoubtedly persist below the volcanic cover also.

#### GEOLOGY OF THE TIM, I. R. AND JIM CLAIM GROUP

As stated above, all of the rocks mapped on the Tim, I. R. and Jim claims are volcanics of the Carmacks Group.

For the purposes of field mapping two types of lavas were distinguished, and were termed basalt, and andesite. Whether there is any significant compositional difference can only be determined by thin section study but is of no real significance in terms of sulphide mineralization and the economic potential of the property.

The basalts are hard, fine grained rocks, dark greenish to near black in colour. They are generally massive with very little textural variation. In one or two places fine laths of plagioclase can be distinguished in an aphanitic matrix, and in rare outcrops chalcedony filled vugs occur.

The andesites are lighter brown to purplish in colour, fine to medium grained, and little less resistant to weathering than the basalts. In places they are amygdaloidal in texture, and carry chalcedony. The basalts weather to an intense brown colour and the andesites a lighter brown to reddish colour.

In some outcrops a cleavage is developed and where observed has a generally north-south strike, and vertical to steep dips. Occasionally a banding striking roughly east-west can be observed in the basalts.

There appears to be no consistent pattern to the distribution of the two types. In general the central and southeastern parts of the property are underlain by andesites with basalts occupying the western, northwestern and extreme eastern parts of the property.

Some structural disturbance appears to have affected the central part of the property, immediately south and east of the camp. Outcrops of andesite in the creek immediately south of the camp (around 188N, 200E) are brecciated and an altered zone in this vicinity covers an area of about 400 ft. by 400 ft. This brecciation and alteration appears to be due to faulting as indicated on the accompanying map. Locally here also the rocks are coarser grained, a greenish alteration of the feldspars is developed to a slight degree, and one or two small blebs and specks of malachite and/or chrysocolla occur.

At the extreme northern end of the property, a small fault scarp is developed along an east-west direction. This scarp, which has a face up to thirty feet in height crosses lone 244N at approximately 212E. Some very minor malachite mineralization, disseminated magnetite and one or two minute specks of sulphide, possibly chalcopryrite, occur along this faulted zone.

Other than the very minor copper oxide stains noted at the two locations above, no significant mineralization was observed on the property.

## GEOPHYSICAL RESULTS AND INTERPRETATION

### Magnetics

As can be seen from the magnetic contour plan, most of the property displays a fairly intense magnetic relief with readings of +1000 gammas to +4000 gammas with the typical "thumb print" contour pattern characteristic of many volcanic terrains. Undoubtedly these are reflecting the underlying Carmacks Group volcanics. This pattern is, however, broken up by four areas of much lower magnetic intensity, shown by the predominantly yellow colours on the contour map, and a broader, more open contour pattern. Three of these have a north-northeasterly to northeasterly trend and also coincide with topographic valleys.

The first lies approximately 5,000 feet west of B. L. 200E, i. e. at 150E and extends to about 130 E. Its trend is NNE and it runs the entire length of the area surveyed from 172N to 232N. The second area has a more northeasterly trend and extends from 175E, 152N to 232E, 216N. A number of roughly north-south trending EM conductors, the A Conductor Zone, lie on the northwest side of this magnetic low and appear to be cut off by it.

The third zone of lower magnetic relief also trends NNE and appears to be slightly offset to the east along a line corresponding approximately with line 156N. It runs approximately from 112N, 200E to 208N, 255E. This zone is broader and possibly is reflecting a change of rock type (Presunka). Since surface mapping shows the area to be underlain by Carmacks volcanics, this magnetic pattern could be indicating a much thinner cover of volcanics along this trend. A number of EM conductors, similarly trending NNE, are associated with this magnetic low area, including conductor B, which is discussed more fully below. A narrow "ridge" of higher magnetic intensity flanks this third zone to the southeast but the general level of magnetic intensity in this southeastern corner of the grid is lower, except for a sharp intense high (up to 6300 gammas) at the southeastern extremity of the grid, from 291E to 298E on lines 104N to 116N.

Perhaps the most marked change in magnetic relief occurs at the northern end of the property along a line corresponding approximately with line 248N. The change in magnetic intensity along this line is over 1000 gammas with the area to the north showing the lower readings. The abruptness of this change suggests a geological contact.

#### E. M. 16 Survey

A considerable number of conductive zones were detected by the electromagnetic survey. Most of them, particularly those with greatest overall length, are probably due to topographic effects. They occur mainly along the crests of the more prominent topographic ridges and are coincident with the strongest linear magnetic features. Examples of conductors of this type are: a) the conductor which runs from 124N, just east of the 200E base line to 176N, 218E, and b) on the west of B. L. 200E, from 172N, 168E to 224N, 183E.

Four conductors, labelled A, B, C, D, appear to be reflecting something more than just topography and are considered to be worthy of further investigation. These are described by Mr. Presunka as follows:-

Conductor A - The A conductor zone consists of a series of short N-S striking conductors occurring along the northwestern flank of one of the NNE trending magnetic troughs described above. The conductors actually cut the northeast trending magnetic high and appear to end abruptly to the south against the magnetic low. This zone of conductors starts on line 184N at 194E and extends across B. L. 200E at 188N to line 204N at 214E, for a total length of about 2,700 feet

These short conductors are probably reflecting cross faults, however, their spatial association with a broad magnetic low is of interest and this is strengthened by the fact that this is one of the two areas on the whole property where some very minor copper oxide (?) staining was observed.

B Conductor - starts on line 136N at 227E and extends in a north-northeasterly direction for approximately 2,000 feet to 152N, 232E. At this point it appears to be offset to the east about 500 feet by a fault which has also interrupted the trend of the third and broadest of the magnetic troughs described above, in which Conductor B lies. The estimated depth to this conductor on line 236N is 250 ft. and on line 240N, about 350 ft.

C Conductor - lies within an area of higher magnetic intensity but appears to be transgressive to the magnetic trend. Starting on line 220N at 216E it extends on a bearing N15<sup>o</sup> E to line 236N at 224E and then swings northwesterly ending on line 244N at 218E.

D Conductor - on the south end of the grid starts at 104N, 213E and extends northeastwards to 116N, 226E. It coincides with the southeastern edge of a magnetic high and may thus be reflecting topography, or a geological contact zone.

At the northern end of the claims, north of the sharp break in magnetic intensity, there are two weak E. M. conductors. They do not appear to have any importance on strictly geophysical grounds but may be significant in the light of the possible geological conditions existing there, of which the magnetic pattern is probably a reflection. One conductor strikes NE-SW parallel to B. L. 200E and about 1,100 feet east of it, extending from line 248N to line 264N. The second conductor is much smaller. It crosses line 260N at 206+50E and extends only about two hundred feet to the south.

### DISCUSSION OF RESULTS

Obviously the geological and geophysical work completed to date has not revealed directly any significant mineralization on the BX Development Limited Minto property, and it is apparent that the foliated intrusive rocks which host the nearby copper ore zones on the Asarco/Silver Standard, and United Keno Hill Explorations properties are not exposed within the property boundaries. There are, however, geological and geophysical features which suggest that favourable situations for sulphide mineralization may exist on this property, and these features warrant some further investigation and exploration.

The E. M. conductors A and B, and the area at the northern extremity of the claim group lie in areas of lower magnetic intensity and also in relative topographic lows. The thickness of the overlying blanket of Carmacks volcanics is unknown, however, it is reasonable to suppose that this cover would be relatively thinner over old topographic "highs" such as might be formed by intrusive plugs on the pre-volcanic surface, and/or in areas where erosion has produced valleys in the present day topography. In general, any geophysical "signature" due to structures or to mineralization in the bedrock below the volcanics will be masked by them. In places where the volcanic cover is relatively

thin, this masking effect will be reduced and one would expect to see variations in the overall geophysical pattern. The NNE to NE trending zones of lower magnetic relief described above may be reflecting such a condition and it is of interest to note that the general level of magnetic intensity and more open contour pattern (as opposed to the typical volcanic tight "thumb print" pattern), in the area of conductor B, is similar to that which is produced in the vicinity of the sulphide zones on the properties to the north in this Minto area. In terms of purely geophysical characteristics Conductor B itself is probably the most interesting of all the conductors on the BX Development Ltd. property and should be investigated in more detail. The Geophysical results here could be reflecting conditions below an area of relatively thin volcanic cover. The break in the magnetic and electromagnetic patterns which are probably due to structural features, faulting or folding, also adds interest to this local area.

Northwest of Conductor B the NE trending belt of lower magnetic relief immediately south of the A Conductor zone could similarly be due to a thinning of the volcanic cover. The pattern of conductors in this zone is almost certainly reflecting a structural condition, and with the brecciated volcanics noted on the geological map and report, suggests a series of north-south trending cross faults. The very minor copper oxide staining noted in the breccia zone, although of little importance in itself, adds some interest to this zone and could be due to a leakage up the fault zones from an underlying source.

The general northeasterly trend of the E. M. conductors and of the broad magnetic lows is in conformity with the major trends on the properties to the north and in the Minto area in general. It should perhaps be noted here that the magnetic contours themselves tend in places to display a misleading north-south trend which is due to a bias imposed by the close (50 ft.) spacing of stations along the lines.

One of the more interesting areas of the property is that at the extreme northern boundary. The abrupt change in magnetic relief north of 248N approximately is probably due to a thinning of the volcanic cover at its northern edge. Intrusive rocks mapped on the Dawson Range Joint Venture "Ben and Pal Claims" would project into this northern end of the TIM claims below the volcanic cover. The scarp face described above probably results from local faulting at or near the intrusive contact. Malachite was observed here along the face and as may be the case at the A Conductor zone, probably results from leakage along the fault zone from a buried source. The evidence for this type of condition is much clearer in this northern area than elsewhere on the property. The absence of any strong electromagnetic conductors might be considered a negative factor but is not necessarily so.

Conductor D may be located along a contact zone and although of lowest priority of the four is probably worth some follow-up by soil sampling initially.

### CONCLUSIONS

From all of the work and results described above, the following conclusions can be drawn:-

1. The BX Development TIM/I. R. /JIM claims lie within an area underlain by volcanic rocks of the Carmacks Group (Eocene).
2. The results of the magnetometer survey suggest that in places this cover of volcanic rocks may be relatively thinner. Some of the electromagnetic conductors, lying within zones of lower magnetic relief, such as Conductor B, may be reflecting conditions below the volcanic cover. The overall pattern of geophysical features conforms to the known regional pattern with local exceptions, such as the A conductor zone, and the extreme northern end of the property.

3. Most of the many E. M. 16 conductors defined by the survey are due to local terrain conditions but four of them, A, B, C, & D, warrant further investigation.
4. Soil sampling, more detailed E. M. surveying using alternative systems, and possibly induced polarization methods, would be suitable methods for follow-up work.
5. Minor copper oxide staining at the northern end of the property could be due to leakage of copper in solution along fault or fracture planes from a buried source. In the vicinity of the A Conductor Zone similar conditions may prevail. The pattern of the conductors in the A Zone suggests a series of local cross faults and this interpretation is supported by the occurrence of brecciated volcanic material in outcrop.

#### RECOMMENDATIONS

Some further exploration on the TIM, I. R., JIM claim group of BX Development Limited is warranted on the basis both of its location in a general area of recent discoveries of ore grade mineralization, and of the results of the field work completed in the 1974 field season. The fact that the intrusive rocks which host sulphide ores on other claim groups in the Minto area are not exposed on this property, does not negate this recommendation.

Further work should include the following:-

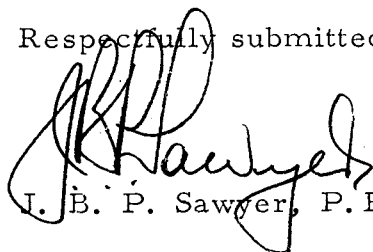
1. Soil sampling over parts of the property to delineate any areas where copper may be concentrated in the soil derived from possible leakage areas, or over copper-bearing bedrock, volcanic or intrusive, not exposed at surface. The areas soil sampled should be extensive enough to cover the four conductors, A, B, C, D, and provide adequate data on background levels of copper in the soils. It need not cover all

of the grid surveyed by geophysical methods in 1974. Soil sampling should also be carried out at the northern end of the property and should cover all of the grid from 240N to the north boundary. If necessary, the grid should be extended in this area.

All soil samples should be analysed for total copper.

2. Any areas which return anomalous results from the soil sampling recommended in (1) above should be covered by additional, more detailed geophysical surveys; including a more precise electromagnetic method and/or induced polarization methods.
3. Further geophysical work should be carried out over E. M. 16 conductors, A, B, & C at least, whether or not copper geochemical soil anomalies occur in association with them.
4. More detailed mapping and prospecting could be attempted in areas of interest derived from 1 to 3 above but is limited by the amount of outcrop. Particular attention should be paid to the northernmost end of the property.
5. Any targets developed by the geochemical and/or geophysical work called for above should be tested by diamond drilling.
6. In the event that such targets are developed a claim boundary survey should be undertaken as early as possible.

Respectfully submitted,

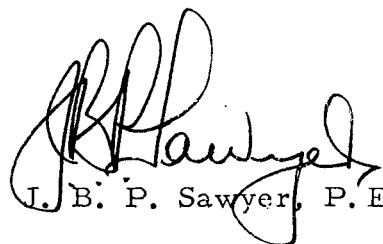


J. B. P. Sawyer, P. Eng.

Certificate

I, J. B. P. Sawyer, of 3212 Connaught Avenue, North Vancouver, British Columbia, DO HEREBY CERTIFY:

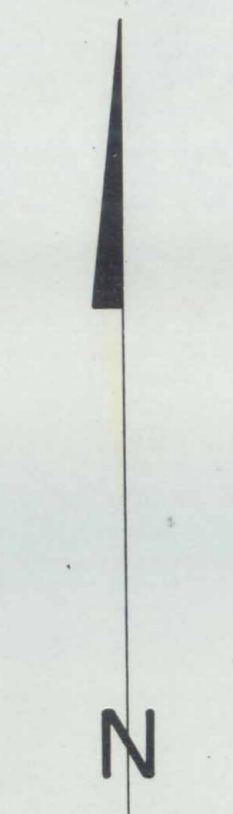
- (1) That I am a consulting geologist with a business office at 1 - 425 Howe Street, Vancouver, B.C. V6C 2A9.
- (2) That I am a graduate in geology of Manchester University (B.Sc. - 1953) and of the University of Western Ontario (M.Sc. - 1957).
- (3) That I am a Registered Professional Engineer (Geological) in the Association of Professional Engineers of the Province of British Columbia, and have permission from the Association of Professional Engineers of the Province of Manitoba to practice in that Province.
- (4) That I have practised my profession as a geologist for the past twenty years.
- (5) That the information and opinions in the attached report are based on personal observations made on the property in the period June and July 1974, on discussions of the geophysical work and results with S. Presunka, and on general knowledge and experience in the Yukon over a number of years.
- (6) That I hold no interest in the shares or securities of BX Development Limited.

  
J. B. P. Sawyer, P. Eng.

Dated at Vancouver, British Columbia this 18th day of October 1974.



276 N  
272 N  
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264 N  
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116 N



**LEGEND**

eTcv1	Andesite	eTcv3	Basalt
eTcv2	Basalt		Basalt weathering
	Outcrop		Zone of almost continuous outcrop and / or fault related rubble in situ
	Geological boundary - definite, approximate, assumed		Geological boundary - definite, approximate, assumed
	Fault, assumed, definite		Fault, assumed, definite
	Basement, strike S dip		Basement, strike S dip
	Cleavage, strike S dip		Cleavage, strike S dip
	Approximate outline of claims		Approximate outline of claims
	Claim post		Claim post

**BX DEVELOPMENT LIMITED**

JIM, I.R., TIM CLAIMS  
MINTO AREA, YUKON

**GEOLOGY**

Geology by: J. Gend, J.B.P. Sawyer - Scale: 1 inch = 400 feet N.T.S. Map 1152/11  
1974  
Drawn by: C.L.C.

To accompany Geological & Geophysical Report  
by J.B.P. Sawyer, P. Eng. dated October 18, 1974



Group 1

Group 2

Group 3

Group 4

Group 5



LEGEND

<b>GROUP 1</b> I.R. 110 8 - Y77278 to Y77285 I.R. 9 30 16 - Y77286 to Y77293	<b>GROUP 4</b> JIM 110 8 - Y77806 to Y77813 JIM 9 30 16 - Y77814 to Y77821 JIM 32 6 34 - Y77822 to Y77831
<b>GROUP 2</b> TIM 1 to 8 - Y77270 to Y77277 I.R. 17 to 26 - Y77440 to Y77449	<b>GROUP 5</b> JIM 9 30 16 - Y77832 to Y77841 JIM 17 to 22 - Y77842 to Y77851 I.R. 18 & 20 - Y77441, Y77443 I.R. 27 to 36 - Y77450 to Y77459 JIM 31 & 33 - Y77828, Y77830 JIM 39 & 40 - Y77836, Y77837

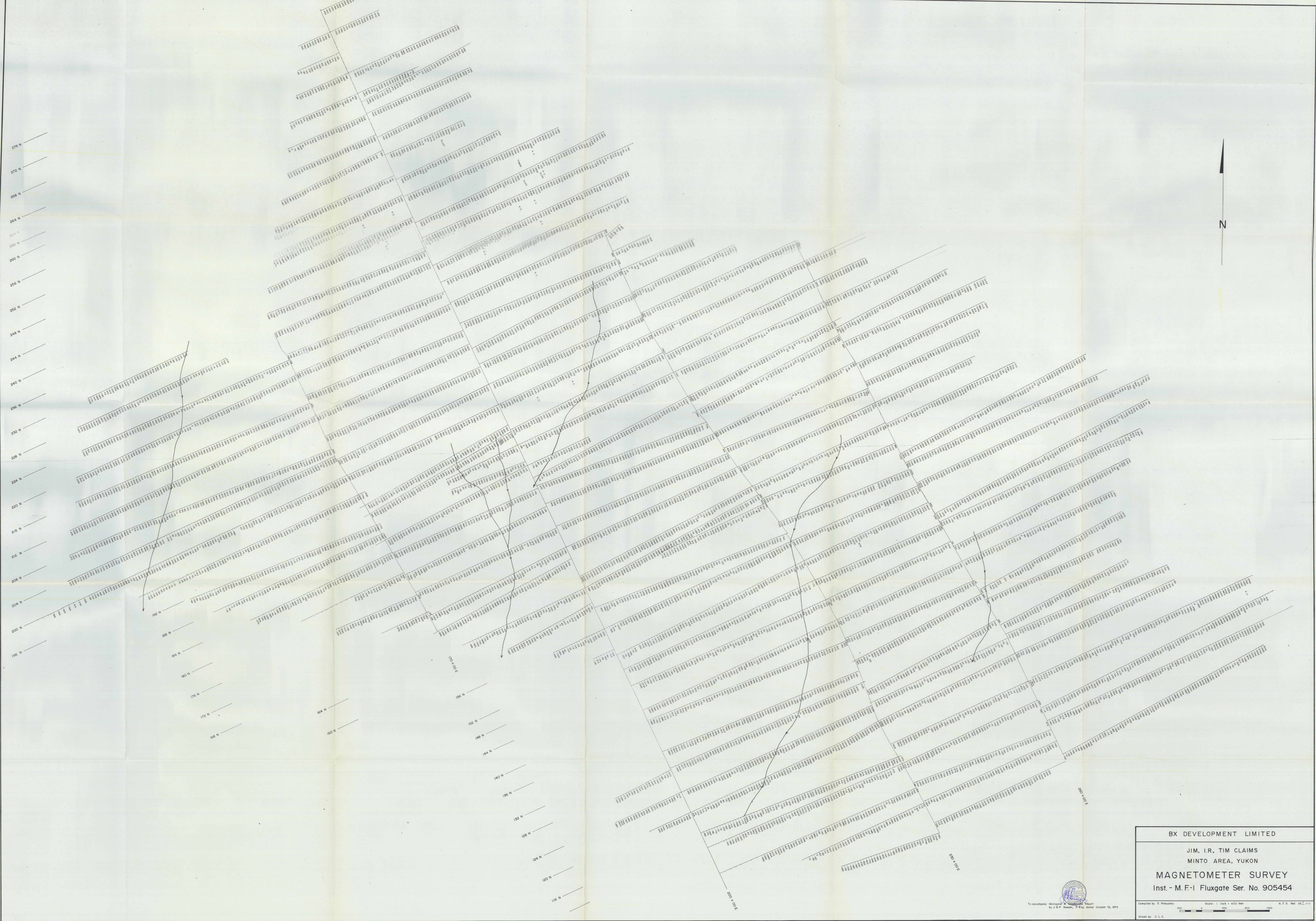
Approximate outline of claims  
Claim post

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PLAN TO SHOW DISTRIBUTION OF 1974 CLAIM GROUPINGS

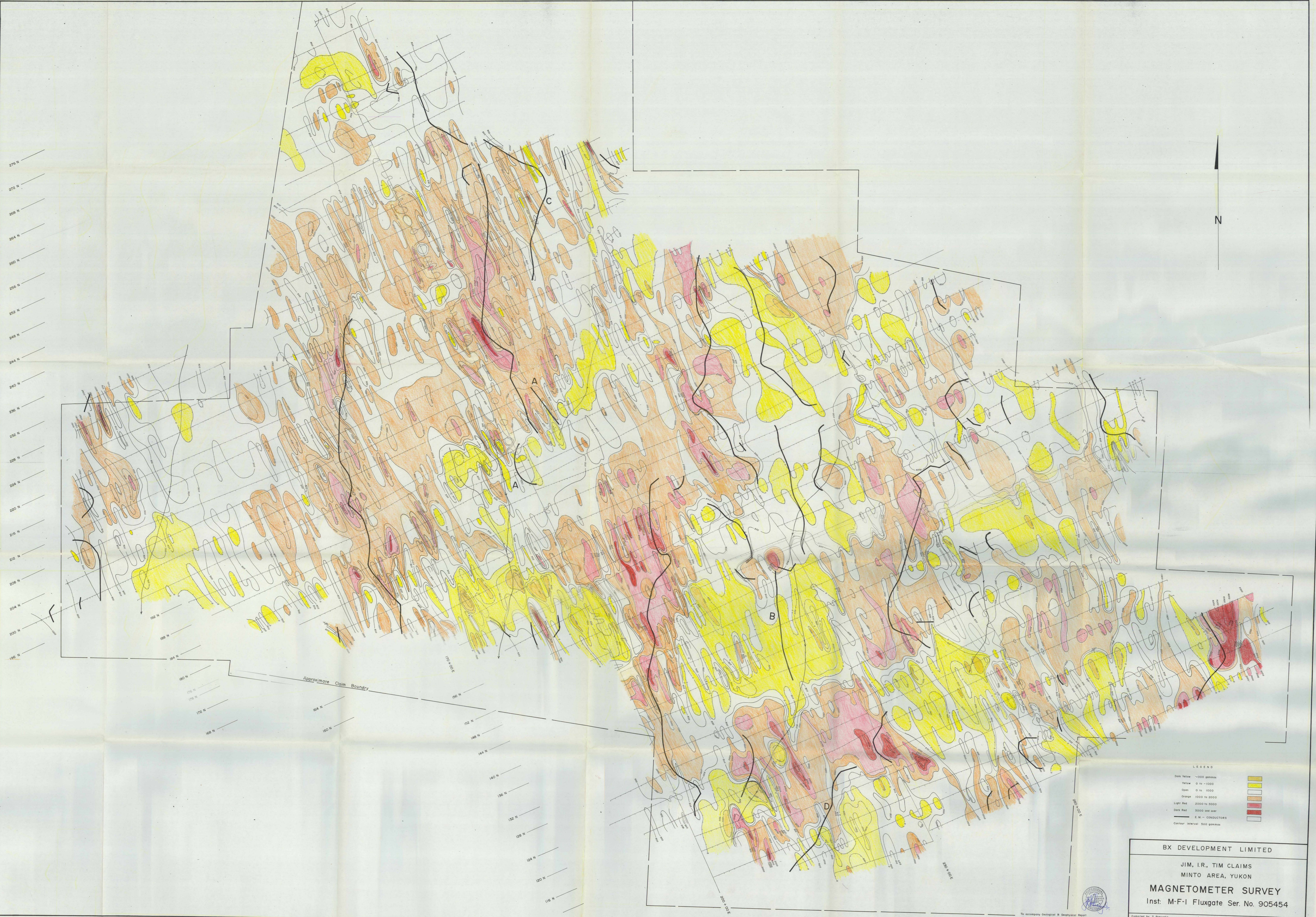
Geology by J. Spence, J.B.P. Sawyer - 1974  
Scale: 1 inch = 400 feet  
N.T.S. Ref. 115/711  
Drawn by C.L.C.



BX DEVELOPMENT LIMITED  
 JIM, I.R., TIM CLAIMS  
 MINTO AREA, YUKON  
**MAGNETOMETER SURVEY**  
 Inst. - M.F-1 Fluxgate Ser. No. 905454

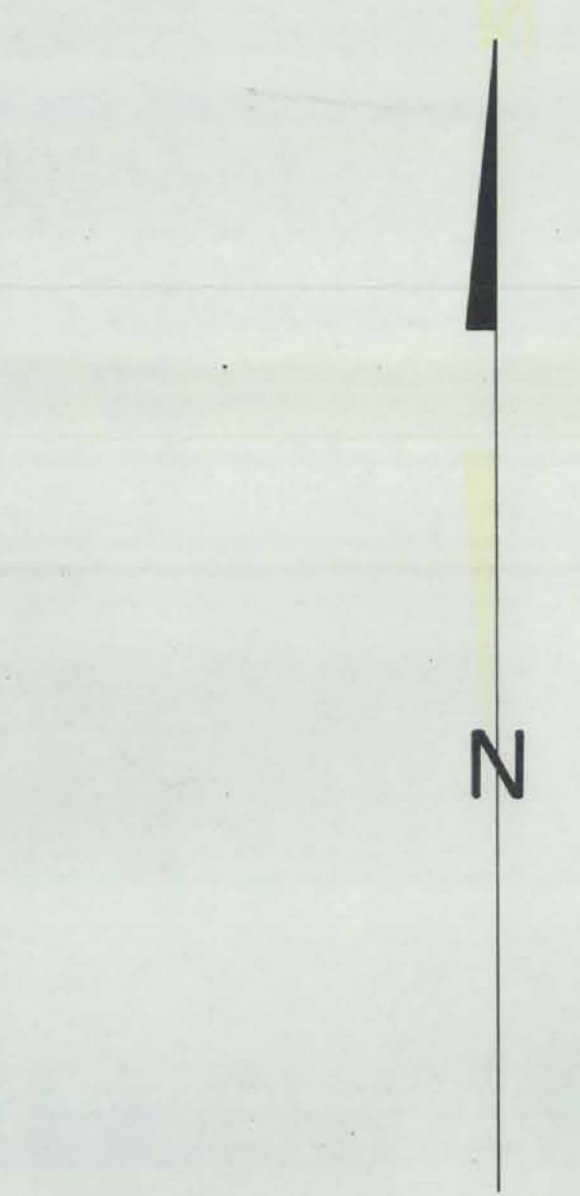
To accompany Geophysical Report  
 by J.S.P. Sawyer, P.Eng. dated October 18, 1974

Compiled by S. Presako      Scale: 1 inch = 400 feet      N.T.S. Ref. 102/11  
 Drawn by C.L.C.



276 N  
272 N  
268 N  
264 N  
260 N  
256 N  
252 N  
248 N  
244 N  
240 N  
236 N  
232 N  
228 N  
224 N  
220 N  
216 N  
212 N  
208 N  
204 N  
200 N  
196 N

180 N  
176 N  
172 N  
168 N  
164 N  
160 N  
156 N  
152 N  
148 N  
144 N  
140 N  
136 N  
132 N  
128 N  
124 N  
120 N  
116 N



LEGEND

Dark White	0 to 1000	
White	0 to 1000	
Green	1000 to 2000	
Light Red	2000 to 3000	
Dark Red	3000 and over	
E.M. - CONDUCTORS		
Contour Interval	500 gamma	

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**MAGNETOMETER SURVEY**  
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Scale: 1 inch = 400 feet

Compiled by S. Preszko  
Drawn by C.L.C.

