

REPORT

RECEIVED

MAR 3 - 2003

Gold Commissioner's Office
VANCOUVER, B.C.

on the

**Ketchan & Ketchan 1-4
Mineral Claims**

**Missezula Lake Area
Similkameen and Nicola Mining Divisions
British Columbia**

**Latitude 49° 46' 30" N., Longitude 120° 33' 45" W.
NTS map sheet 92H/15E**

by

James W. McLeod, P.Geo.

on behalf of

Gary Brown

March 1, 2003
GEOLOGICAL SURVEY BRANCH
Delta, British Columbia
ASSISTANT REPORT

27,086

TABLE OF CONTENTS

	<u>Page</u>
SUMMARY	3
INTRODUCTION	4
LOCATION AND ACCESS	4
TOPOGRAPHICAL AND PHYSICAL ENVIRONMENT	4
PROPERTY AND OWNERSHIP	5
HISTORY	5
REGIONAL GEOLOGY	7
LOCAL GEOLOGY	9
PREVIOUS WORK PROGRAMS	10
PRESENT WORK PROGRAM	10
CONCLUSIONS	10
RECOMMENDATIONS	11
COST ESTIMATE	12
STATEMENT OF COSTS	13
CERTIFICATE	14
REFERENCES	15

FIGURES

	<u>After Page</u>
1. LOCATION MAP	3
2. CLAIM MAP	5
3. MAGNETOMETER SURVEY MAP	10

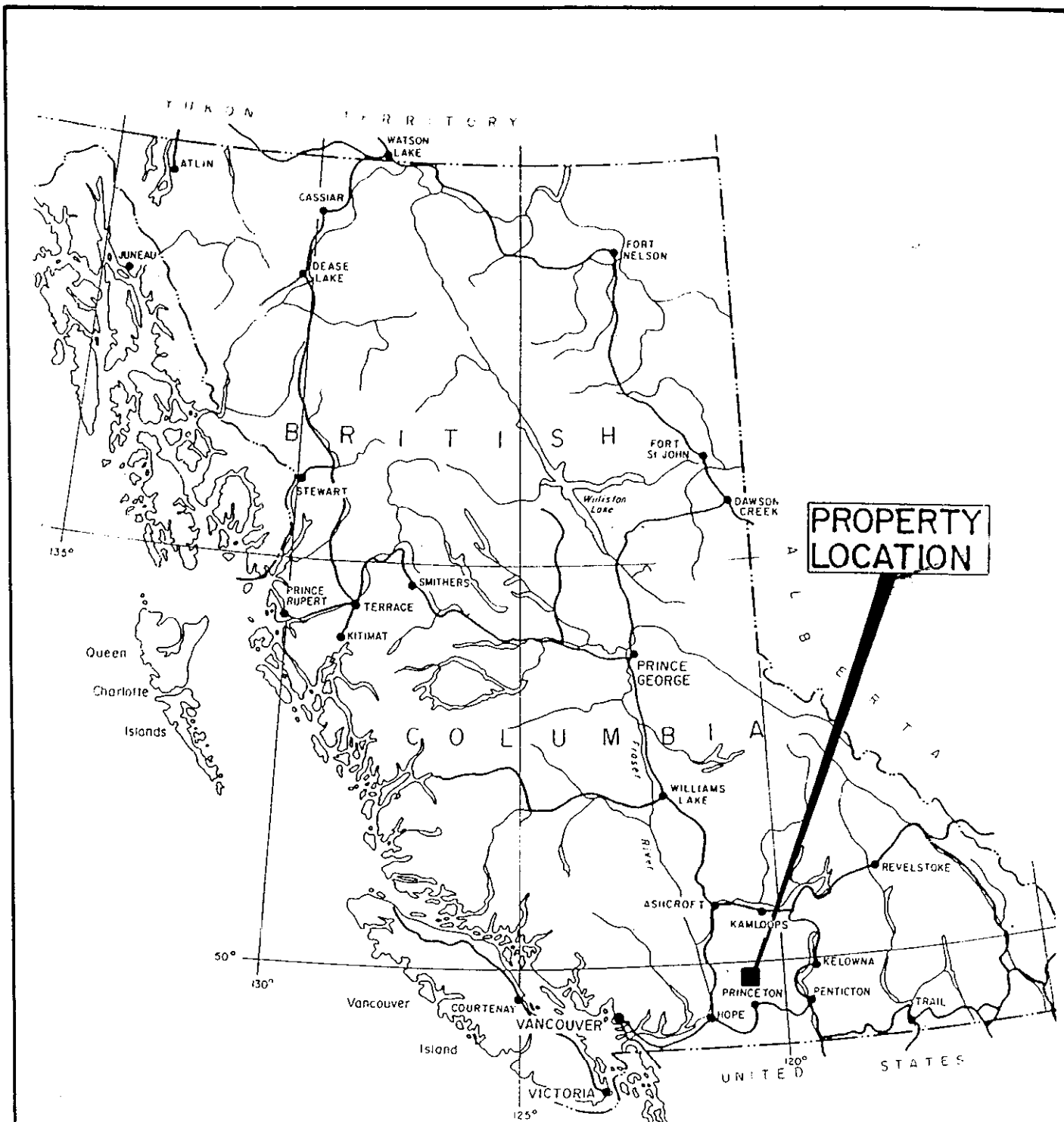
SUMMARY

The Ketchan and Ketchan 1-4 mineral claims (Ketchan property) described in this report are located immediately west of Missezula Lake in the Similkameen & Nicola Mining Divisions, southern British Columbia, Canada.

The property is underlain by volcanic and igneous rock units that are described as Nicola Central Belt volcanoclastics of Upper Triassic age and alkalic igneous crystalline and porphyritic rocks of Upper Triassic–Lower Jurassic age, respectively. These rock units are seen to host many of the porphyry and volcanic skarn copper-gold-platinum group elements (PGE) occurrences and deposits in the general area. In addition significant property mineralization, a good geological setting, the property lies in or very near strong structurally effected zones and many other known mineral occurrences.

The current method of reconnaissance exploration using magnetometer ground surveying and prospecting is to quickly explore relatively large areas. This method should at some stage be augmented with rock and soil geochemistry, testing for multi-elements including precious metals as not all such occurrences are seen to be associated or accompanied by base metals, although a very significant number are. The magnetometer survey may define underlying rock-type features and relative, localized variations of intensity or change of gradient may indicate changes in rock alteration, mineralization and/or igneous dyke concentrations.

The recommended program is expected to take approximately two months to complete at an estimated cost of \$ 300,000.



**PROPERTY
LOCATION**



KETCHAN CLAIMS LOCATION MAP	
N.T.S. 92H-15E NICOLA & SIMILKAMEEN M.D., B.C.	
SCALE : AS SHOWN	DATE : FEB. 2003
DRAWN BY : J.M.	FIGURE : I

INTRODUCTION

The reconnaissance magnetometer and prospecting fieldwork initiated during this survey is thought to be an effective method by which to explore relatively large areas of interest.

The program was carried-out under the writers' supervision during the period October 18-26, 2002.

This report is being prepared at the request of Gary Brown of North Vancouver, BC.

LOCATION AND ACCESS

The claim area may be located on NTS map sheet, 92H/15E at latitude 49° 46' 30" north and longitude 120° 33' 45" west. The property is situated approximately 21 km. south-southeast of the Village of Aspen Grove, B.C. and 3 km. west of the N-S midway point of Missezula Lake. The property lies in the Nicola and Similkameen Mining Divisions, British Columbia, Canada.

Access to the mineral claims is gained by traveling 26 km. south southeast of Aspen Grove, B.C. on Provincial Highway 5 to the Hornet Lake cut-off and then east and north for 10 km. on the Ketchan Creek road to the center of the Ketchan mineral claim. A due west traverse for 500 metres along the south boundary line of the Ketchan mineral claim takes you to the legal corner post (LCP). A due east traverse from the same position i.e. the junction of the Ketchan road and the south-end of Ketchan Lake along the south boundary of the mineral claims (see Figure 3) takes you to baseline 0+00 on the grid.

TOPOGRAPHICAL AND PHYSICAL ENVIRONMENT

The mineral claims lie within the Thompson plateau area of the larger Interior plateau region. The physiographic setting of the area is defined as the Dry Interior and/or Sub-Alpine belt, depending on the local elevation within the property boundaries. The property covers low, rounded hilly terrain, exhibiting a north-south fabric about Ketchan Lake.

Patches of coniferous and deciduous trees interspersed with open range areas cover the property. The elevations of the claim area range from 1,265 metres (4,150 feet) to 1,433 metres (4,700 feet).

The general area receives about 60-90 cm. (25"-35") of precipitation annually depending mainly on it's local elevation, of which 20% may occur as a snow equivalent. The winter weather is generally moderately cold. The summer weather could be described as variable, but most often dry and fairly hot with squally precipitation.

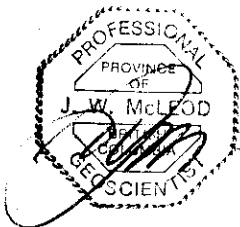
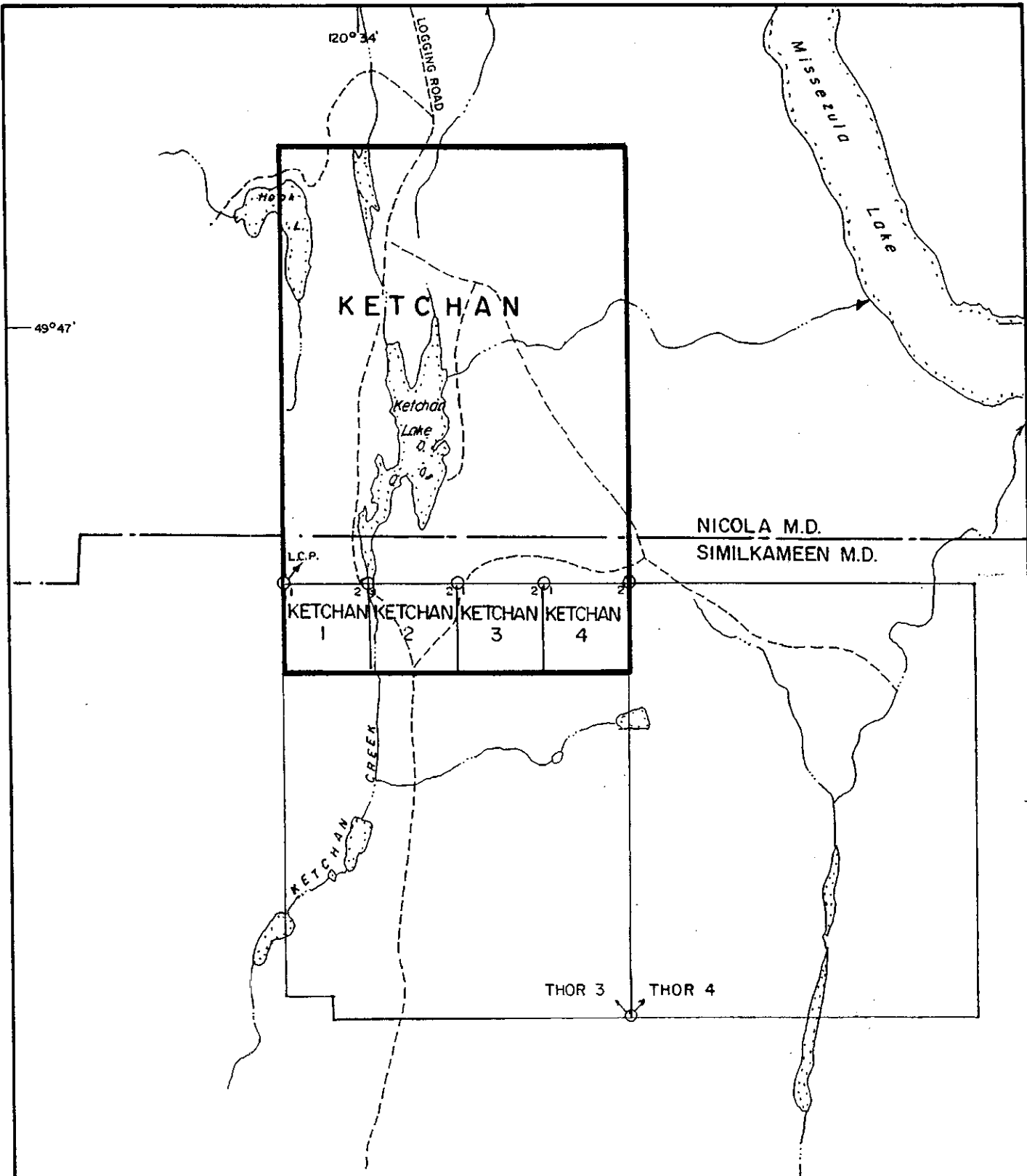
PROPERTY AND OWNERSHIP

The property is located in the Nicola and Similkameen Mining Divisions of British Columbia at latitude 49° 46' 30" north and longitude 120° 33' 45" west. It is comprised of one 4-post, 5x4 unit mineral claim and 4 two-post mineral claims along the south boundary (see Figure 2). The claims are listed as follows:

<u>Name</u>	<u>Tenure No.</u>	<u>Units</u>	<u>Anniversary Date</u>
Ketchan	390858	20	November 18
Ketchan 1-4	390859-862	<u>4</u>	November 18
	Total	24 units	

The mineral claims have not undergone a legal survey, but the writer has examined the legal corner post and other intermediate posts and they appeared to be in the recorded location. The mineral claims total an area of approximately 600 hectares or 1,483 acres.

The above listed mineral claims are owned by Mr. Gary Brown of North Vancouver, British Columbia.



**KETCHIKAN CLAIMS
CLAIM MAP**

NT.S. 92H-15E NICOLA & SIMILKAMEEN M.D., B.C.

0 1 2 KM.

SCALE: 1:31,680	DATE: FEB. 2003
DRAWN BY: J.M.	FIGURE: 2

HISTORY

Lode gold was discovered in the Hedley area in 1894. By 1904, the Nickel Plate Mine, in the Hedley Camp was producing for the first of three extended periods, the latest of which ended during the 1990's after successful mining by Mascot Gold Mines (Corona Corporation).

The large copper-gold-platinum group elements (PGE), alkalic porphyries of the Copper Mountain area were first discovered in 1884, but not staked until 1892 and did not actually reach production until 1925 when Copper Mountain was brought on stream by the Granby Consolidated Mining, Smelting and Power Company. The mines at Copper Mountain operated between 1925-1930 and 1937-1957 producing 31.5 million tons of ore grading better than 1% copper. The latest episode of this area's production began in 1972 by the Newmont Mining Corporation on the west side of the Similkameen River at the adjacent Ingerbelle volcanic skarn deposit. Newmont later consolidated the Copper Mountain and Ingerbelle operations and were active under the name, Princeton Mining Corporation until 1996 as the Similco Operation.

The Aspen Grove Copper Camp began its' first extended period of mineral exploration activity about 1900 to 1930, but rendered generally uneconomic results. It wasn't until the realization during the late 1950's that large tonnage (100 million tons plus), low grade (0.50% primary copper) deposits could be exploited economically, but British Columbians proved that it could be accomplished. The success of the Bethlehem Copper Corporation in the Highland Valley area of southern British Columbia changed the way this type of deposit was to be exploited on a worldwide basis. An increasing number of larger tonnage, higher grade copper situations were displaying exciting economics during this period, i.e. Craigmont Mines at Merritt, BC, the Phoenix Copper Camp in the Greenwood-Grand Forks area, BC and the beginning of the third extended period of production in 1972 at Copper Mountain, Princeton, BC.

The local mining companies and junior mineral exploration companies soon developed geological models around indicated clusters of mineral occurrences (and types) and tied-in with the development of field

geochemistry kits and later, relatively inexpensive, multi-element analyses, the search was on. The 1960-70's saw a revitalized mining industry and the new discoveries started to come. Ingerbelle, the volcanic skarn satellite of the Copper Mountain porphyries and Afton, the copper-gold porphyry at Kamloops, BC fueled worldwide interest in what was happening in British Columbia.

When the United States of America first lifted the restriction on their citizens directly owning gold as an investment and then un-pegging, the fix on the price of gold in 1973 further excitement and interest was aroused in the porphyry-belts.

The Princeton-Merritt-Kamloops corridor or synonymously, the southern portion of the Nicola Group volcanic belt and its' coeval intrusions became a very desirable exploration area. The Ketchan mineral claims lie within this belt and the aforementioned reasons explain the ongoing interest in the area.

REGIONAL GEOLOGY

The writer offers a geological synopsis as follows of an area previously described by many other parties (see References) outlining the geological setting which is used in the description of the current work program, as well as their geological model of the occurrence of the copper-gold-PGE mineralization described herein.

The geological history of the underlying rocks in this area is thought to be representative of a northwest-southeast trending island arc depositional environment that is cut by steeply dipping north-south faults. The predominant lithology has the oldest rock units assigned to the Nicola Group of Upper Triassic to Lower Jurassic age. The Nicola Group (Nicola), in this general area has been divided into three distinct, adjacent, elongate (structurally controlled), volcano(igneous)-sedimentary assemblages or belts which are not considered to be of strictly contemporaneous age. These belts are defined as follows: the Central Belt is the oldest while the Eastern Belt is next oldest. Both are thought to be locally derived and are of alkalic igneous (some calc-alkaline) composition. The youngest, Western Belt of the Nicola Group does not appear to be strictly, locally derived and are mainly of calc-

alkaline composition. The origin and composition of the Nicola (the three belts) from oldest to youngest are described as follows:

- a) Central Belt – subaerial and submarine assemblages; pyroxene and plagioclase abundant andesitic to basaltic flows, breccia, conglomerate and lahar deposits; coeval intrusives mainly diorite and lesser syenite.
- b) Eastern Belt – submarine volcano-sedimentary units, lahars, basaltic flows and high-level syenitic stocks.
- c) Western Belt – flow and pyroclastic rocks ranging in composition from andesite to rhyolite and interbedded sediments as limestone, volcanic conglomerate and sandstone (fossiliferous).

The Nicola and its' equivalents form an elongated belt of eugeosynclinal rocks which are observed from near the 49th parallel, trending northward for over 240 kilometres (150 miles) and possibly beyond to northern British Columbia and the Yukon Territory for a possible total distance of 1,300 km (800 miles). The width of the Nicola locally approaches 50 km (30 miles) in places and is often bound on its' east margin by Jurassic or later intrusives and volcanics and on the west by Jurassic/Tertiary aged intrusives and Carboniferous to Tertiary volcanics.

The next oldest rocks in the general area are non-correlated sediments thought to be of Lower Jurassic to Lower Cretaceous age.

The next youngest units are variable units of igneous and sedimentary rocks assigned to the Kingsvale Group of Lower Cretaceous age.

The next youngest units are a variety of well-rounded, boulder conglomerates of post Lower Cretaceous age.

The next youngest rocks observed in the general area are the more acidic, calc-alkaline intrusive rocks which are seen to range in composition from granite through quartz diorite, these units have been assigned an Upper Cretaceous or Lower Tertiary age.

The youngest rocks observed in the general area are those of the Princeton Group, assigned a Tertiary age and comprised of a lower volcanic unit of andesite or basalt and an upper sedimentary unit

composed of shale, sandstone, conglomerate which are sometimes seen to contain economic occurrences of coal. The lower Princeton Group volcanics have been observed, in places to lay, unconformably over portions of the Upper Triassic aged Copper Mountain intrusions that are thought to be coeval with the Nicola volcanic rocks of the area.

The Nicola is found in places to have been cut by small stocks and dykes of ages varying from late Triassic into the Tertiary.

The general area has also experienced widespread faulting which display an east-west and northeasterly trend that in turn have sometimes been cut by younger northerly trending faults. For example in the Copper Mountain-Ingerbelle Mine area, in the southern portion of the Nicola, the western boundary of the Copper Mountain Stock is truncated by the north trending, west dipping "Boundary Fault". East of the Boundary Fault, faulting is generally east-west, northwesterly and northeasterly. The connection, if there is one between the Boundary Fault on the south and the sub-parallel Allison and Summers Creek (Kentucky-Alleyne) Fault(s) on the northside of the Town of Princeton, BC is masked by the large, Tertiary aged Princeton Basin. These faults may have effected the ore control which poses the possibility of much younger hydrothermal sources of mineralization, possibly Tertiary?

Within the major southeastern lobe of the Nicola Group some 39 km. east-southeast of Princeton, B.C. occurs the famous lode gold mines of the Hedley area. These deposits are found to occur within metamorphosed limestone units (skarns) of the Nicola near diorite-gabbro intrusive contacts.

LOCAL GEOLOGY

The property area being discussed in this report is underlain by interlayered flows and volcanoclastics that have been assigned to the Central Belt of the Nicola Group and by intrusive crystalline and brecciated rock units that have been assigned an Upper Triassic-Lower Cretaceous age.

Copper sulphide mineralization as chalcopyrite and copper alteration as malachite (copper carbonate) have been identified within the grid area, at L3+75E-10+00N & L4+70E-14+50N with the copper carbonate scattered throughout the east-central and northeast quadrant of the Ketchan claim.

PREVIOUS WORK PROGRAMS

The area covered by the present mineral claims previously underwent intermittent exploration work since the mid-1960's when rock trenched surface copper showings were percussion drilled, the records of which cannot be found. Bethlehem Copper Corp. acquired mineral claims which covered the present claim area in 1973 because of a regional exploration survey they conducted and in 1974 drilled ten percussion, four core and one rotary holes. During the 1970's an induced polarization survey(s) were conducted over the claim area as was a geochemical soil survey for gold and arsenic in 1987 which revealed anomalous results. This led to a mineralized and propylitically altered porphyry copper (gold) discovery. During 1991, Cominco Ltd. which had acquired control of Bethlehem, drilled 15 percussion holes that lend encouragement to a significant copper-gold discovery.

PRESENT WORK PROGRAM

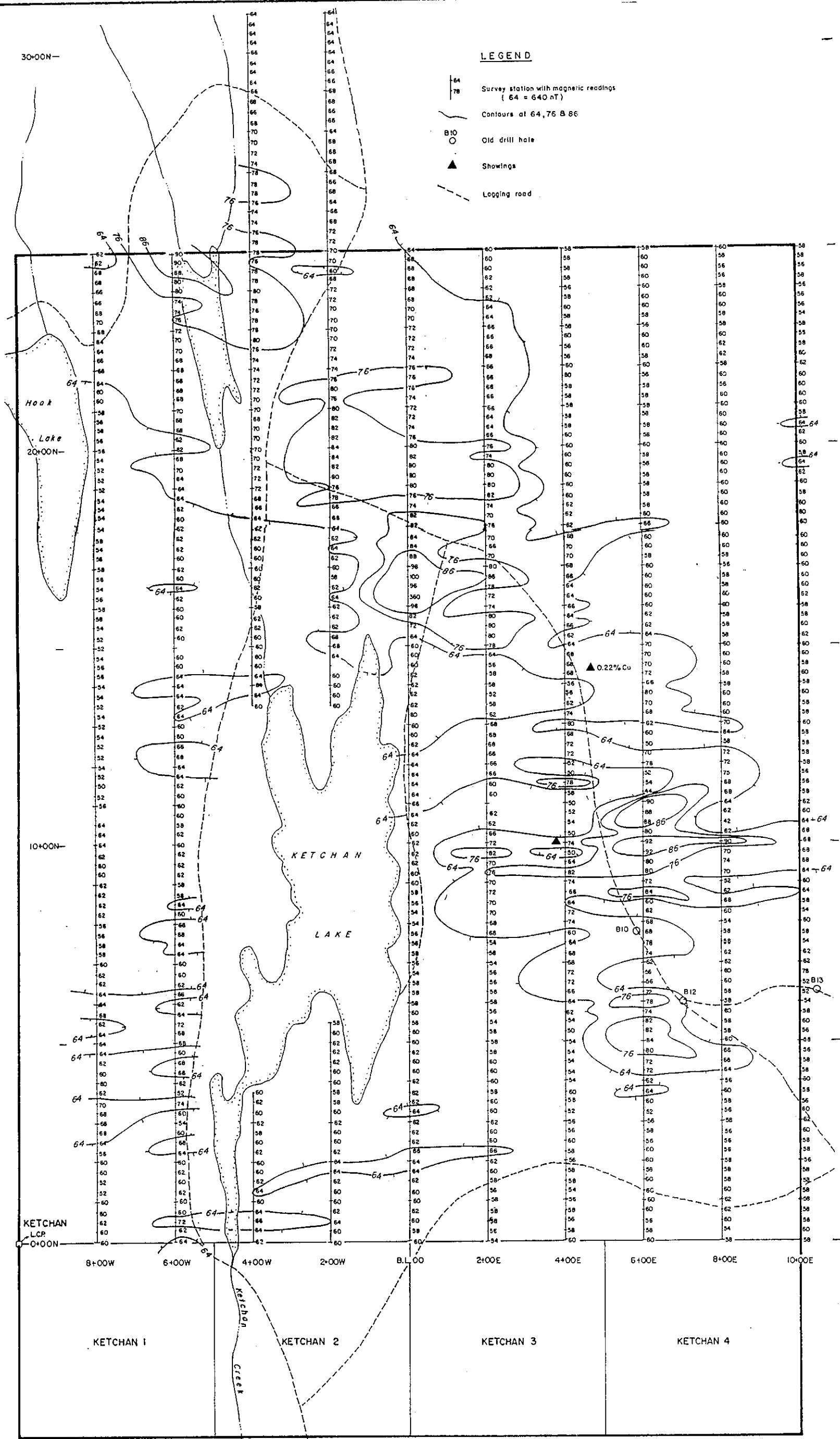
The present fieldwork program was conducted on the Ketchan mineral claim for the larger claim group.

The work program consisted of grid installation with line-spacing of 200 metres and station interval of 25 metres for a total of 26 kilometres of survey grid (see Figure 3). The grid encloses Ketchan Lake and most of the previously surveyed and drilled areas, although the writer suggests that further claims be acquired along the east boundary of the claim group (see Figure 3). The magnetometer traverses intermittently closed-loops to check for diurnal variations in the data. The grid area also underwent prospecting. The magnetometer used for the survey was a Scintrex fluxgate-type, model MF-1.

30+00N

LEGEND

- Survey station with magnetic readings (64 = 640 nT)
- Contours at 64, 76 & 86
- Old drill hole
- Showings
- Logging road

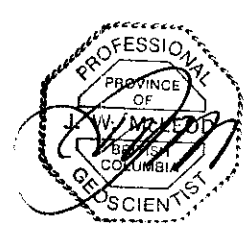


10+00N

KETCHAN LCP 0+00N

8+00W 6+00W 4+00W 2+00W B.L.00 2+00E 4+00E 6+00E 8+00E 10+00E

KETCHAN 1 KETCHAN 2 KETCHAN 3 KETCHAN 4



KETCHAN CLAIMS
 MAGNETOMETER SURVEY
 FIELD DATA

N.T.S. 92H+5E NICOLA & SIMILKAMEEN M.D., B.C.
 0 100 200 400 meters

SCALE 1:10,000 DATE FEB. 2003
 DRAWN BY: J.M. FIGURE NO.: 3

CONCLUSIONS

The present reconnaissance magnetometer program appears to be useful in delineating features that could be related to bedrock characteristics including alteration patterns indicating structural characteristic that may be related to mineralization.

RECOMMENDATIONS

The current exploration method may be effective for covering large areas expediently, but only correlation with known surface mineralization and positive drill results would confirm this.

Drilling should be continued in the drill hole area that encloses percussion drill holes 1991, PDH 91- B10, B12 and B13 (see Figure 3). The drilling should be grid controlled, vertical 150 metre holes at 100 metre step-out intervals from hole B12 done outwardly along the N320° IP-mineralization trend.

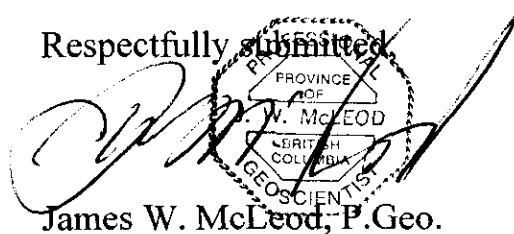
The recommended program is expected to take two months to complete at an estimated, all inclusive cost of \$ 300,000.

COST ESTIMATE

Geologist and supervision	\$ 18,000
Grid and drill site installations	8,000
3,000 metres of double-tube, reverse circulation percussion drilling or 2,000 metres of NQ-wireline diamond core drilling, all inclusive	200,000
Material handling, sampling, preparation and sample transportation	12,000

Room and board, 120 mandays @ \$ 100/md	12,000
Transportation	8,000
Assays and analyses 600 samples	12,000
Report and maps	7,000
Contingency	<u>23,000</u>
	\$ 300,000

Respectfully submitted,



PROVINCE OF BRITISH COLUMBIA
 JAMES W. McLEOD
 GEOSCIENTIST

James W. McLeod, P. Geo.

STATEMENT OF COSTS

Geology, supervision and report	\$ 700
Grid installation and prospecting	1,400
Magnetometer survey	1,100
Transportation (4X4) including mileage & fuel	300
Camp and board	<u>350</u>
Total	\$ 3,850

CERTIFICATE

I, JAMES W. McLEOD, of the Municipality of Delta, Province of British Columbia, hereby certify as follows:

I am a Consulting Geologist with an office at #203 - 1318 56th Street, Delta, B.C., V4L 2A4.

I am a Professional Geoscientist registered in the Province of British Columbia and a Fellow of the Geological Association of Canada.

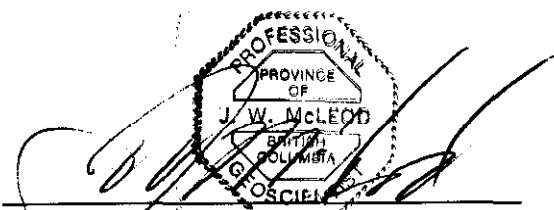
I graduated with a degree of Bachelor of Science, Major Geology, from the University of British Columbia in 1969.

I have practiced my profession since 1969.

I have no beneficial interest nor otherwise in the mineral claims that are the topic of this report.

The above report is based on personal field experience gained by the myself in the specific and general area at various times during the past 33 years, the latest being in 2002.

DATED at Delta, Province of British Columbia this 1st day of March, 2003.



James W. McLeod, P. Geo.
Consulting Geologist

REFERENCES

British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Reports, 5,824 and 21,467.

Camsell, Charles, 1910. Memoir No. 2: Geology, and Ore Deposits of The Hedley Mining District, British Columbia. Geological Survey Branch, Canada. Department of Mines.

Lisle, T.E., 1985. Geological and Geochemical Report on the Bloo, Etc. mineral claims for Vanco Explorations Limited.

Cockfield, W.E., 1961. Memoir No. 249: Geology and Mineral Deposits of the Nicola Map-Area, British Columbia.

McMechan, R. D., 1983. Geology of the Princeton Basin, Paper 1983-3. British Columbia Ministry of Energy, Mines and Petroleum Resources.

Montgomery, Joseph Hilton, 1967. Petrology, Structure and Origin of the Copper Mountain Intrusions near Princeton, British Columbia. Ph.D. Thesis, University of British Columbia.

Mortimer, N., 1987. The Nicola Group: Late Triassic and Early Jurassic subduction-related volcanism in British Columbia. Canadian Journal of Earth Sciences, Vol. 24: 2521 – 2536.

Porphyry Deposits of the Canadian Cordillera – Special Volume 15, 1976. Canadian Institute of Mining and Metallurgy.

Preto, V. A., 1972. Geology of Copper Mountain. Bulletin 59, British Columbia Department of Mines and Petroleum Resources.

Preto, V.A., 1977. The Nicola Group: Mesozoic volcanism related to rifting in southern British Columbia. In Geological Association of Canada, Special Paper 16, pp. 39 – 57.

Preto, V. A., 1979 Geology of the Nicola Group between Merritt and Princeton. Bulletin 69, British Columbia Ministry of Energy, Mines and Petroleum Resources.

Rice, H.M.A., 1947. Memoir 243: Geology and Mineral Deposits of the Princeton Map Area, British Columbia. Mines and Geological Branch, Canada. Department of Mines and Resources.