Regional Geologist, Kamloops

Date Approved: 2005.04.04 **Off Confidential:** 2005.12.08

ASSESSMENT REPORT: 27564

Mining Division(s): Nicola, Similkameen

Property Name: Ketchan

Location:								
NAD 27	**Latitude:**	49 49 00	**Longitude:**	120 34 00	**UTM:**	10	5520869	675049
NAD 83	**Latitude:**	49 49 00	**Longitude:**	120 34 04	**UTM:**	10	5521085	674963
NTS:	092H15E							
BCGS:	092H088							

Camp: 012 Nicola Belt

Claim(s): Thor 2-4, Boss, Boss 1-3, Thalia, Ketchan 1-4, Dest 1-10, Bluey

Operator(s): *Brown, Gary*
Author(s): Bergey, William

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GEOLOGICAL REPORT ON THE KETCHAN PROPERTY

NICOLA & SIMILKAMEEN MINING DIVISIONS

[NTS 92H078, 92H 088]

PREPARED FOR COPPER HILL EXPLORATION CORPORATION

By

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FOR COPPER HILL EXPLORATION CORPORATION

INTRODUCTION

A geological reconnaissance of the large Ketchan property in preparation for detailed mapping of specific mineralized zones indicated that intrusive breccia was present in several areas that were depicted as underlain by volcanic rocks on published geological maps. My cursory photo-geological study outlined a number of distinctive elongated, crudely dome-shaped areas that were interpreted as being underlain by breccia and associated intrusive rocks. Since intrusive breccia is found in association with many of the porphyry copper-gold deposits of the alkalic type within the Quesnellia Terrane of interior British Columbia, it was decided to direct the exploration for the remainder of the field season on reconnaissance mapping of the property. The aim of the work was to provide a sufficient amount of field data to determine whether the interpreted widespread distribution of the intrusive breccia in domains previously thought to be underlain by volcanic rocks could be authenticated. This data could then be used to support a detailed photogeological interpretation which, in turn, would provide a more accurate geological map as the basis for the planning of ongoing exploration.

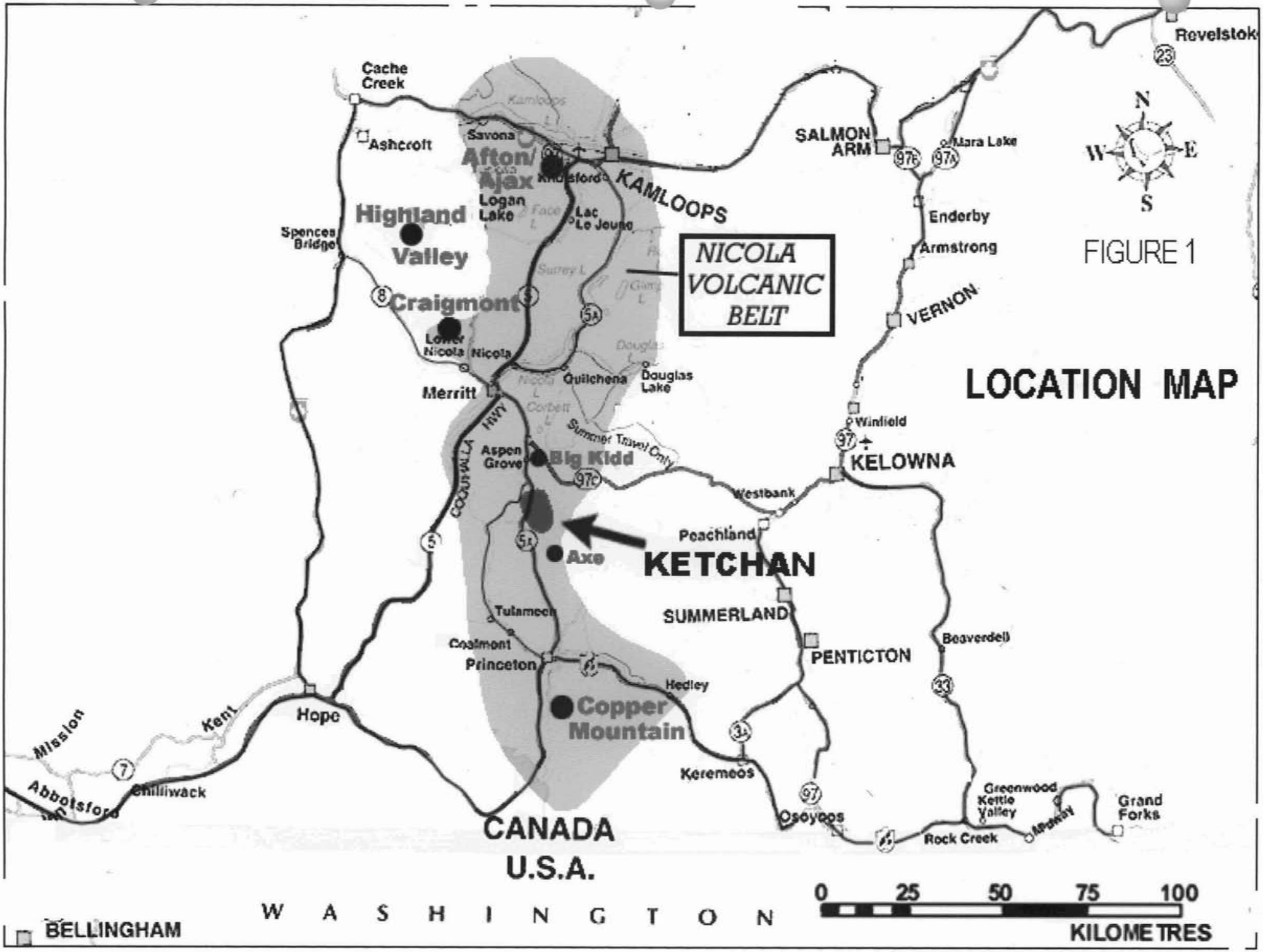
LOCATION, ACCESS, CHARACTER OF THE REGION

The Ketchan property is located midway between the towns of Merritt and Princeton in south-central British Columbia, about 200 kilometres east of Vancouver. The northern boundary lies six kilometres south of the hamlet of Aspen Grove, and it extends south for about 14 kilometres along the eastern side of Highway 5A. .

All parts of the Ketchan claim group are accessible from the highway via a network of gravel and dirt roads. In addition to the roads shown on Figure 3, there are a large number of logging roads and tracks that are seasonably accessible to 4x4 vehicles.

The Ketchan claims occupy a dissected upland area, the southern extension of the Fairweather Hills, with a maximum elevation of 1500 metres. Local relief is relatively moderate in most of the area.. However, the most southerly part of the property in the vicinity of the old Shamrock Mine, follows the steep-sided gorge occupied by Summers Creek, which flows south from the southern end of Missezula Lake; here the local relief exceeds 300 metres. Rock exposures are common to abundant along the main ridges. A deep north-trending paleovalley, underlain by valley basalt in its northern part, bisects the southern uplands.

A mixture of fairly open forest and grassland characteristic of the semi-arid environment is found throughout the region. Ranching and logging are the main economic activities. Large areas devoted to grazing are particularly apparent in the area surrounding Ketchan Lake and on the till-covered hills west of the property.


Revelstoke
Cache Creek
Ashcroft
Savona
Afton/
Ajax
Kamloops
KAMLOOPS
SALMON ARM
Mara Lake
N
W
E
S
Highland
Valley
Logan Lake
Lac Le Jeune
Spences Bridge
Enderby
Armstrong
FIGURE 1
NICOLA VOLCANIC BELT
Craigmont
VERNON
Lower Nicola
Nicola
Quilchena
Douglas Lake
LOCATION MAP
Merritt
Winfield
KELOWNA
COQUIHALLA HWY
Summer Travel Only
Aspen Grove
Big Kidd
Westbank
Peachland
Axe
KETCHAN
Tulameen
SUMMERLAND
Coalmont
Princeton
PENTICTON
Beaverdell
Hedley
Copper Mountain
Hope
Mission
Kent
Keremeos
Abbotsford
Chilliwack
Osoyoos
Greenwood
Kettle Valley
Grand Forks
Rock Creek
CANADA
U.S.A.
WASHINGTON
BELLINGHAM
0 25 50 75 100
KILOMETRES

.PROPERTY

The Ketchan property comprises 27 unpatented mineral claims containing 272 units. The claims cover 6800 hectares. Title to all of the claims is registered in the name of Gary Robert Brown of North Vancouver.

The surface rights on part of the Ketchan property are owned by Douglas Lake Cattle Company. These lands are shown on Figure 2 along with the outlines of the claims.

PREVIOUS WORK

Geological & Geophysical

The most detailed regional study of the volcanic and intrusive rock units that underlie the area between Princeton and Aspen Grove was carried out by the British Columbia Geological Survey (BCGS) and published as Bulletin 69 (Preto, 1979). The map was published at a scale of 1:50,000. Mining industry geologists, myself included, have relied on this work for many years.

The other published geological maps of the general area are reconnaissance in scope. The most recent of these is a 1:250,000 sheet published by the Geological Survey of Canada (GSC) in 1989 (Monger,1989). This map is mainly a synthesis of older published and unpublished data along with newer information based on localized mapping and laboratory studies. Monger's map replaced earlier GSC Map 888A (Rice, 1947) that more accurately portrayed the geology in this part of the region.

An aeromagnetic map published by the G.S.C. in 1973 at a scale of One Inch to One Mile (Aspen Grove Sheet – 92H/15) has proven to be useful in interpreting certain geological features.

Exploration History

The Ketchan property covers a portion of a highly mineralized belt of rocks that has received a great deal of attention from prospectors and mining companies over the years. The items pertaining to the Ketchan Lake area are listed separately.

1929: A small shipment from the Shamrock "mine" averaged 5.78% Cu.

1963: Consolidated Woodgreen carried out trenching on the Shamrock prospect and completed 3 diamond drill holes,

1979: Cominco Ltd. drilled 6 percussion holes in the central part of present claims, based on I.P., magnetic and geochemical surveys. Only two holes reached bedrock, both intersecting "altered diorite." One hole averaged 0.141% Cu over32 metres.

1985: Vanco Explorations Ltd. carried out geochemical and geological mapping on central part of present claims. They also mapped and sampled the Shamrock prospect (Lisle, 1985).

1988: Laramide Resources Ltd.carried out a geochemical survey for gold in the northern part of the present claims (Watson, 1988).

1990: Minequest Exploration carried out 56 kilometres of I.P. surveying on central part of present claims.

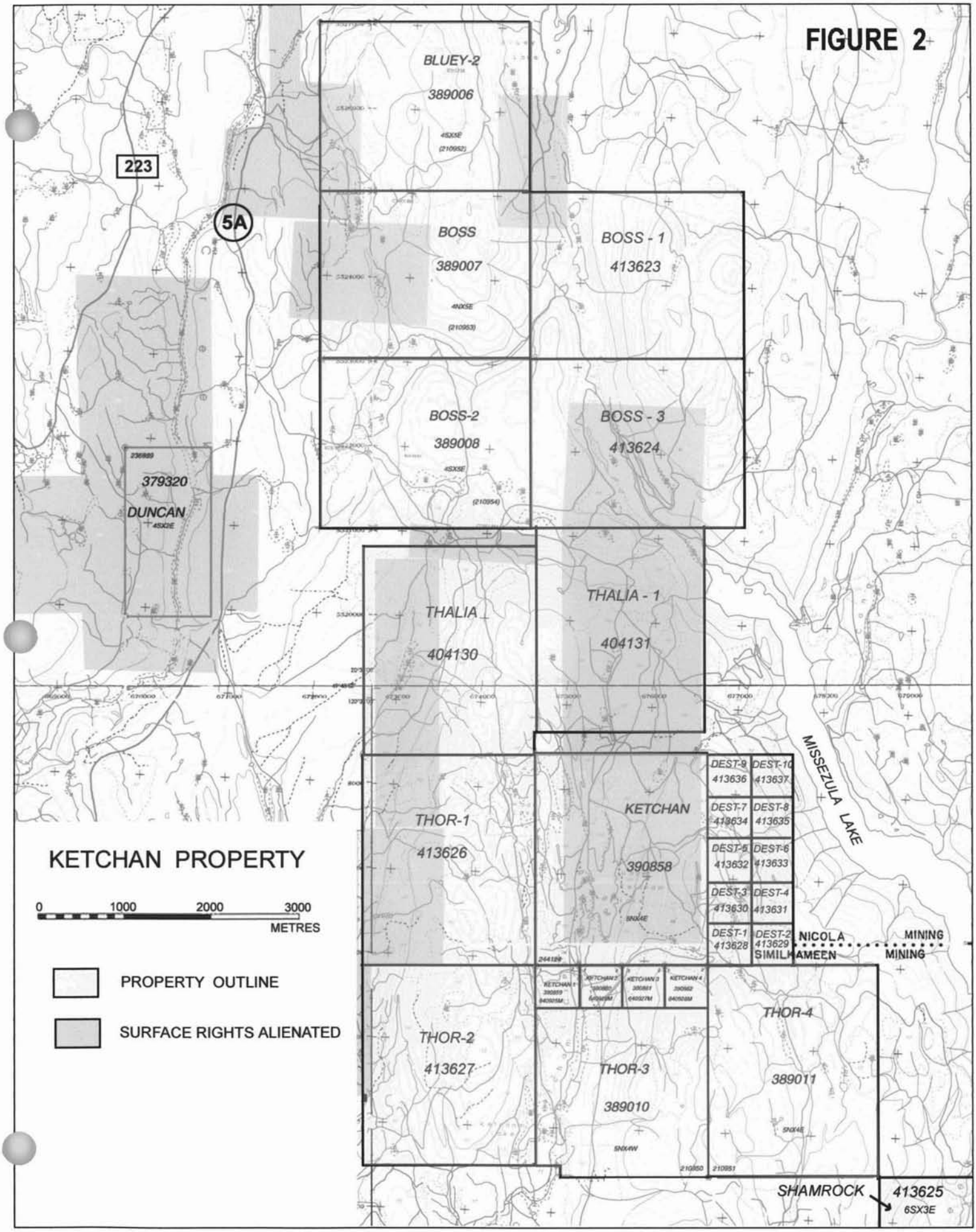


FIGURE 2
BLUEY-2
389006
223
5A
BOSS
389007
BOSS - 1
413623
BOSS-2
389008
BOSS - 3
413624
379320
DUNCAN
THALIA
404130
THALIA - 1
404131
THOR-1
413626
KETCHAN
390858
DEST-9
413636
DEST-10
413637
DEST-7
413634
DEST-8
413635
DEST-5
413632
DEST-6
413633
DEST-3
413630
DEST-4
413631
DEST-1
413628
DEST-2
413629
MISSEZULA LAKE
NICOLA
MINING
SIMILKAMEEN
MINING
THOR-2
413627
THOR-3
389010
THOR-4
389011
SHAMROCK
413625
KETCHAN PROPERTY
0
1000
2000
3000
METRES
PROPERTY OUTLINE
SURFACE RIGHTS ALIENATED

1991: Rayrock Yellowknife Mines drilled 9 percussion holes on the Minequest property. No significant Cu or Au values are reported, but a significant untested copper prospect is noted (Gourlay, 1991).

1962: Plateau Metals staked the present Ketchan Lake prospect area. Later the same year, they carried out a magnetometer survey and completed 3 diamond drill holes.
1966: Adera Mining Ltd. optioned the property and carried out geological and geophysical surveys along with 512 metres of diamond drilling and 512 metres of trenching. All of the records pertaining to the Adera Mining/Plateau Metals work have been lost.
1973: Bethlehem Copper Corporation staked the Log Group of mineral claims following a large-scale regional exploration program.
1974: Bethlehem Copper carried out geological mapping and geochemical sampling, followed by drilling of 10 percussion holes.
1975: Bethlehem Copper completed 351 metres of diamond drilling in 4 holes (Anderson, 1975).
1980: Bethlehem Copper completed 410 metres in 2 diamond drill holes to test the results of an I.P. survey carried out earlier in the year (Simpson, 1980).
1991: Cominco Ltd., following its takeover of Bethlehem Copper, completed 16 percussion drill holes, totaling 1067 metres (Aulis, 1991).

REGIONAL GEOLOGY

The property covered by the present report is located within Quesnellia, an accreted terrane in the Intermontane Belt of the Canadian Cordillera. In the southern part of Quesnellia, volcanic rocks assigned to the Upper Triassic Nicola Group crop out within a north-trending belt, up to 50 kilometres in width, that extends for more than 200 kilometres from south of Princeton to north of Kamloops. The Location Map (Figure 1) shows a generalized outline of the belt as well as the location of the four major copper and copper-gold camps in the region (Afton/Ajax, Highland Valley, Craigmont and Copper Mountain).

The rocks of the Nicola Group were invaded by a large number of alkaline plutons that appear to be co-magmatic in part with the volcanic assemblage that they intrude. The largest of these, the Iron Mask batholith, is the host for the Afton and Ajax copper-gold deposits. Large bodies of somewhat younger calc-alkaline intrusive rocks are found along the margins of the Nicola Volcanic Belt. These include the Guichon batholith that hosts the immense copper deposits of the Highland Valley and may be the source for the copper at the Craigmont mine along margin of the intrusion. Similar calc-alkaline granitoids of the Allison Lake suite, believed to be Late Triassic to Early Jurassic in age, are exposed west and southwest of the Ketchan property.

The Nicola Belt encloses several large inliers of younger sedimentary and volcanic rocks. Since these appear to be irrelevant to the matter at hand, no further description will be offered..

Regional Subdivision of the Nicola Volcanic Rocks

The Nicola volcanic assemblage was divided into three north-trending facies by Preto (1979) as a result his study of this unit within the area between Merritt and Princeton. His partitioning was grounded on field observations that indicated that major changes in the character of the volcanic assemblage took place at two regional north-south fault zones – the Summers Creek/Kentucky-Alleyne /Quilchena fault zone [shortened hereinafter to Summers Creek] and the Allison fault. I have designated the latter "Otter Creek fault" since my work in that area suggested that the fault along Allison Creek was a much younger structure that diverged toward the northeast.

According to Preto (1979), the Western Belt comprises a succession of calc-alkaline andesitic to dacitic volcanic rocks with minor amounts of limestone and chert. Alkaline basaltic and andesitic volcanic rocks dominate both the Central and Eastern Belts. However, the alkaline plutons that are coeval with the volcanic rocks appear to be confined mainly to the Central Belt. The volcanic rocks in the two eastern belts were deposited in both marine and non-marine environments. Although the distribution pattern is fairly complex, Preto was able to divide the contrasting depositional environments into several broad units. The abrupt termination of these divisions against the bounding faults provided evidence to support the credibility of his conclusions. Most of the Ketchan property lies within the Central Belt, as defined by Preto.

Monger (1989) carried out a geological synthesis, supported by field studies, that covered an area of nearly 5000 square kilometres. While he retained the terminology of the three Nicola volcanic facies, he denied that they had any association with regional faulting, and he eliminated the "Otter Creek" fault completely. The legend on his maps defined the Central and Eastern facies as andestic and basaltic respectively. My recent mapping at Otter Creek suggests that Monger's conclusions regarding the major faults and their lack of relationship to the Nicola volcanic facies are at least partly erroneous. I have no opinion to offer on the significance of the Summers Creek fault at this time.

GEOLOGICAL MAPPING & PHOTOGEOLOGY

Scope of the Work

My initial tour of the property disclosed a hitherto unmapped intrusive breccia in the northern part of the claims. Mapping in the area indicated that the breccia was by no means a local phenomenon, and I carried out a a brief photogeological interpretation on small-scale photographs (ca. 1:75,000) in the hope of determining its overall extent. The interpretation revealed that distinctive topographic features, interpreted to reflect intrusive breccia and associated intrusive rocks, extended nearly continuously from the northern edge of the property to its southern boundary.

Field mapping was carried out intermittently during October, 2004. The aim of the survey was to obtain as much geological information as possible on the areas interpreted to be underlain by the breccia complex. A total of 93 rock samples were collected and examined under the binocular microscope. Subsequently, I undertook a more detailed photo-geological interpretation on aerial

photographs at a scale of 1:17,000. The results were plotted on a controlled photo-mosaic at a scale of 1:20, 000.

Although my interpretation differs greatly from that shown on the BCGS map (Preto, 1979), there is close agreement (after the fact) in areas where the latter was supported by petrographically and chemically analyzed samples. These sample sites are shown on Figure 3. Data from the BCGS map were used in the interpretation of the monzonite and granite bodies shown in the southeastern and southwestern corners of the map.

Nicola Group

Volcanic rocks of the Nicola group within the map area are limited to rather narrow north-trending zones marginal to the large bodies of breccia and intrusive rock. Regionally, the Central volcanic facies is described by Preto (1979) as, "*typified by an abundance of massive pyroxene and plagioclase-rich flows of andesitic and basaltic composition, coarse volcanic breccia, conglomerate and lahar deposits, and by lesser amounts of fine-grained pyroclastic and sedimentary rocks.*"

My mapping was directed mainly toward the breccia complex and only incidentally encroached on the adjacent volcanic rocks. In the southeast corner my only field observation was of a large outcrop area of gray-green andesitic and basaltic lavas and tuffs.. The air-photo interpretation indicated a west-dipping bedded unit farther to the east, following a branch of the Summers Creek fault zone. A sample from this area was described in Preto (1979) as bedded crystal tuff. The bedded unit appears to be underlain by a massively stratified, west-dipping sequence that conforms with the crudely layered lahar deposits described by Preto (1979). An outcrop that I examined along Highway 5A west of the property is composed of basaltic pillow lava. An isolated large exposure of southeast-dipping laminated felsic tuff (ca. 1 mm laminae) was found about 1.5 kilometres to the south. This evidently is part of a fairly extensive felsic sequence since dacite lava was reported in drill-testing of an IP anomaly about 800 metres to the southeast by Rayrock Yellowknife Mines (Gourlay, 1991). The cause of the anomaly was not determined.

Volcanic and sedimentary rocks are reported from several drill holes in the overburden-covered area south and west of Ketchan Lake. Of particular interest was Hole L-79-6 drilled by Bethlehem Copper Corp. to test a strong IP anomaly (Simpson,1980). The hole encountered graphitic siltstone fragments within a sequence of andesitic pyroclastic rocks. This offers a possible cause for the southernmost portion of the extensive IP anomaly that has been drilled-tested within an area of more than three square kilometres. .

A distinctive brick-red porphyritic rock containing abundant pyroxene phenocrysts and smaller feldspar laths in a holocrystalline, fine-grained matrix was found along a zone two kilometres in length along the west side of the Summers Creek fault valley in the central part of the claims. Identical material crops out locally along the western border at the foot of a steep-sided "dome." At one locality, quartz amygdules are abundant; both spherical and vermiform types are present (Plate 1D).

The particularly significant aspects of the brick-red unit are that it crops out along the margins of large masses of intrusive breccia and that it is a common constituent of the breccia, both as the matrix for fragments of monzonite, as clasts enclosed in monzonite or in heterolithic breccia. The distribution and texture of the rock suggests that it is a sub-volcanic intrusive, at least in part. [Plate 1D is a specimen from the eastern outcrop area; Plate 1C illustrates brick-red porphyritic rock forming the matrix of a breccia from the northernmost circular area; The fragment along the right side of the specimen in Plate 1C is a stretched pyroxene-phyric, brick-red porphyry clast that appears to be very similar to the material in 1D.]

Only two samples that were collected for analysis by the BCGS (Preto, 1979) were taken from areas that I have included in the intrusive breccia complex. One of these (# 7) apparently is a sample of the brick-red unit. It is described as a reddish grey, hematitic augite andesite porphyry flow of the trachybasalt, potassic alkali series. It came from close to Bluey Lake, near the eastern margin of the northernmost breccia "dome." Presumably, it was a part of a large fragment since it is located well within the breccia "dome." Material of this type is common in the area both as fragments and as matrix material, but in the latter case it usually encloses numerous small clasts.

Diorite

The diorite body (or bodies) that crops out on both sides of the valley near Ketchan and Hook Lakes is host to the most important known copper-gold mineralization on the property. Unaltered pyroxene diorite is a cliff-forming unit that stands out clearly on the air photos against the adjacent more readily eroded altered and brecciated rock. The latter appears to incorporate a large amount of extraneous material, including monzonite and brick-red porphyry, but poor exposures and the apparent abundance of potassic alteration tend to confuse the situation.

The transition from "fresh" to highly fractured and altered diorite is abrupt. However, diorite close to the contact is intruded locally by potassic feldspar dikelets and potassic replacement is fairly common. Overall, propylitic alteration dominates, particularly in the eastern part of the zone of alteration. Much of the apparent potassic alteration may, in fact, be potassium feldspar associated with monzonite and syenite intrusions.

The drill logs in assessment reports are helpful, but are of uneven quality. Logs of holes in the western part of the zone include descriptions of red to pink breccia, red and green fine-grained intrusives, pink and green lava, but apparently no unaltered diorite. Alteration minerals are mainly epidote, chlorite and K-spar, although one log emphasizes sericitic alteration.

Preto (1979) included one sample from the diorite area (# 3) in his list of analyses. (The outline of the diorite shown on his map includes the alteration zone delineated in this report.) This is described as a red pyroxene-plagioclase andesite porphyry flow of the trachybasalt , potassic alkali series. The sample appears to have been taken from a locality within thwe area that I have interpreted to be underlain by altered rocks.

Monzonite and Syenite

Small bodies of monzonite and syenite, the latter less common, were mapped by the BCGS (Preto, 1979). Of the 15 samples of rocks of all types collected for analysis that are shown on the portion of that map that covers the Ketchan property and its environs, no fewer than seven were taken from two of these stocks. All of these are described as micromonzonite porphyry. [In the following discussion of these intrusive rocks and their brecciated equivalents I use the term "monzonite" exclusively (except in the case of individual samples), although lesser amounts of syenite are present in most cases..

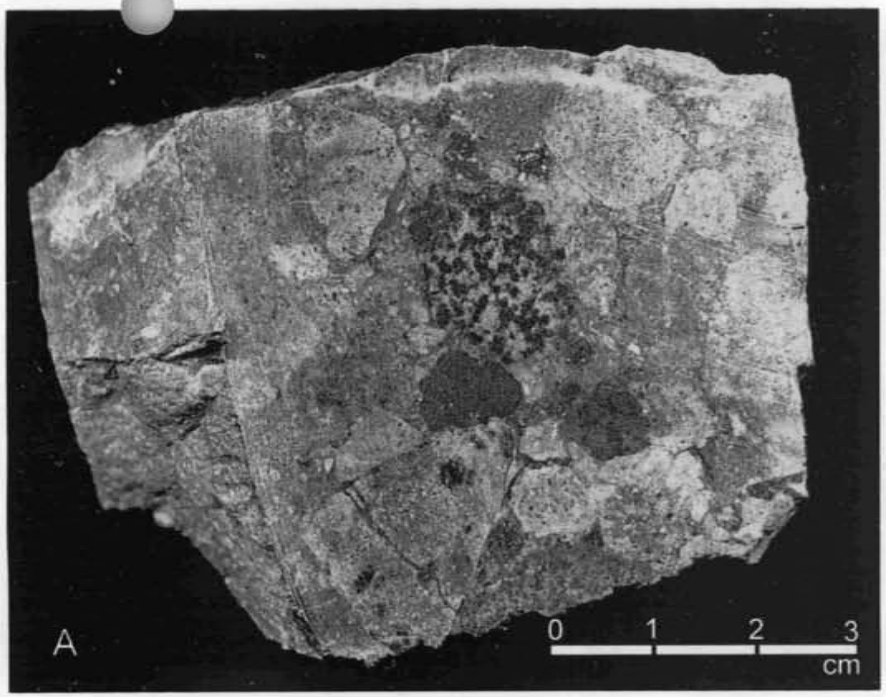
The stock near the centre of the claim group crops out in low ground at the base of two breccia "domes." I located only one small outcrop in a short traverse of the area, evidently one of the BCGS sample sites. The rock is a pinkish, fine-textured (average grain size ca.1 mm), holocrystalline monzonite. As it happens, this is the only sample of monzonite that I collected in the entire project that was from an outcrop that did not show copious evidence of brecciation. A sample from the nearby hill slope was composed of a mixture of monzonite and syenite fragments showing no visible matrix.

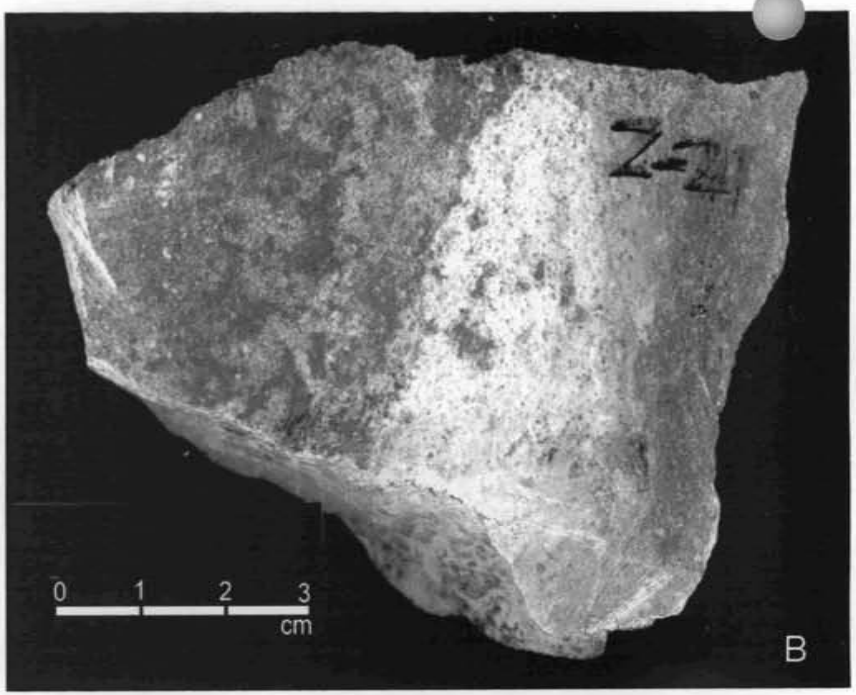
The monzonite stocks in the southeastern corner of my map-area have intruded volcanic rocks and are elongated in the direction of the stratification. Their emplacement may have been controlled to some extent by the Summers Creek fault zone. Unlike the diorite, this rock type is somewhat recessive relative to the enclosing volcanic rocks.

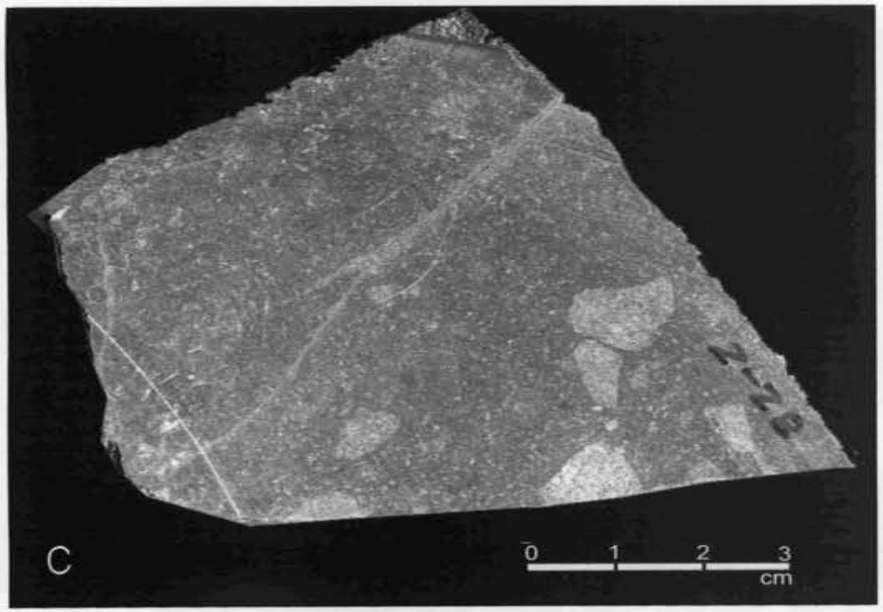
Intrusive Breccia Complex

Although intrusive breccia has not been found a place on published geological maps covering this portion of the Nicola volcanic belt, my interpretation suggests that it underlies just under one-half of the area within the Ketchan claim block. Despite the rather uniform gross composition of the breccia throughout the area, its dominantly intrusive composition, and the obvious breccia texture displayed on the very abundant rock faces, the complex previously has been subdivided into autobrecciated (and unbrecciated) lava, lahar, and crystal tuff, *inter alia.*

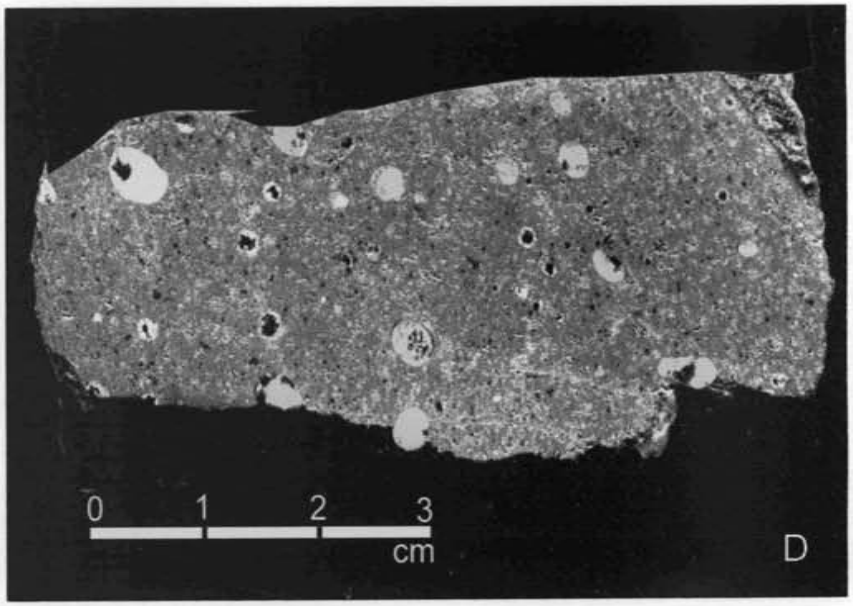
My mapping was not sufficiently detailed to allow subdivision of the breccia complex into mappable units anywhere within its currently recognized 15-kilometre north-south extent. Monzonite is usually the dominant component throughout. Brick-red porphyry appears to be commonest in the area close to the north boundary, where the most detailed mapping was carried out. Other than the porphyry, I have not seen any clasts in the breccia that resemble a volcanic rock. Heterolithic breccia composed of a wide variety of quartz-poor intrusive fragments (and possibly including a very sparse brick-red matrix) also appears to be more abundant in this area than elsewhere). Mafic-rich diorite of the type that is common through the Nicola volcanic belt is uncommon, but paler gray or green rock of similar affinity is widespread. Fragments in the breccia tend to be small, usually less than 5 centimetres . However, since rebrecciation is extremely common, very large fragments composed of brecciated material would go unrecognized. Also, my sampling was fairly selective.







Brick-red-matrix intrusive breccia



Brick-red basaltic lava or sub-volcanic intrusive

ROCKS OF THE INTRUSIVE BRECCIA COMPLEX

A number of circular to elliptical features were noted within the half-dozen sub-rounded uplands that I refer to as "domes". These features have clearly defined boundaries in most cases, and they almost certainly reflect younger breccia pipes. The characteristic "knobby" appearance of the breccia on the detailed air photos is accentuated and coarsened within the circular features. They also are typified by networks of sharply defined linears of limited extent; these seldom continue outside of the circular outline and that do not seem to show evidence of fault offset.

Granite

The northeastern portion of the Allison Lake pluton, which is composed mainly of granite and quartz monzonite along its eastern margin, extends into the extreme southwest corner of the Ketchan property. Outcrops shown on the BCGS map (Preto, 1979) were used as the basis for the interpretation of the contacts of the rock type. The local distribution of the granite is reflected both on the air photos and in the aeromagnetic data.

A sample of granite collected in the extreme southwestern corner of Figure 3 gave an age date of about 200 Ma (Preto, 1979). This date falls within the age spread determined for rocks of the Nicola Group. However, a number of lines of evidence suggest that the granite is younger than the Nicola volcanism and associated intrusion within the region covered in the present report.

Valley Basalt

Dark-gray to red basaltic flows of probable Pleistocene age underlie extensive areas in the southern part of the map-area, but are poorly exposed at surface. They have been encountered in several drill holes. Typically, the lava is overlain by glacial deposits and underlain by semi-consolidated gravel. The lava has a thickness of up to 60 metres in drill holes.

The largest occurrence extends from the vicinity of Ketchan Lake to the cliffs bordering the north ern end of Missezula Lake, where it is interrupted by the deep gorge that follows this portion of the Summers Creek fault. It also is exposed along cliffs on the eastern side of the gorge. Basalt has been intersected in at least one drill hole south of Ketchan Lake, but apparently has been eroded in most of the southern part of the Ketchan Valley.

Valley basalt also underlies portions of the anomalously flat terrain that borders the west-central portion of the Ketchan property.

STRUCTURE

The only data that I obtained on the attitude of the stratified rocks was a single easterly dip near the west boundary and numerous indications of westerly dips in the southeastern portion of the map area. These sparse data support the customary denotation of a north-trending synclinal axis within the Central Volcanic Belt. The intrusive breccia "domes" are aligned along this axis.

Many linear features are indicated on the air photos, most of themshort-lived. I have not plotted any linears that do not add to the clarification of the geological picture.

Most of the continuous linears are related to the Summers Creek fault zone. In the absence of evidence to the contrary, I have interpreted the main strand of the zone to follow the most obvious and continuous of the topographic indications. This location is supported by the aeromagnetic data, although it should be pointed out that the continuous magnetic low presumably is due to hydrothermal alteration and may reflect a younger rupture that also was responsible for the accentuated erosion. I have been unable to locate any continuous linear features in the area of the fault shown on the BCGS map (Preto, 1979) as the dividing line between the Central and Eastern.Nicola volcanic facies.

Except for the interpreted fault in the south-central part of the map area, the breccia "domes" do not appear to have been significantly disrupted by faulting.

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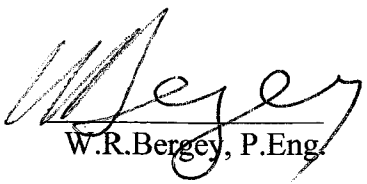
Respectfully submitted,



W.R.Bergey, P.Eng.

November 23, 1004

STATEMENT OF COSTS

Type of Work	Dates	Days	Cost/day	Cost
Geological mapping	1/09/04-2/09/04	2	$400	$ 800
	14/10/04-17/10/04	4		1600
	28/10/04-31/10/04	4		1600
Photogeology		5		2000
Map & Report Preparation		3		1200
			Sub-total	$ 7200
Accommodation & vehicle expense				$ 1000
Air photographs				200
			Sub-total	$ 1200
			TOTAL COST	**$ 8400**

STATEMENT OF QUALIFICATIONS

I, William Richard Bergey of 25789 - 8th Ave., Aldergrove , B.C., do hereby certify that:

1. I am a Professional Engineer (Geological) in the Province of British Columbia.
2. I have been employed in mining and mineral exploration for the past 57 years.
3. I have had many years of experience in geological mapping related to mineral exploration.
4. I have had many years of experience in photogeological interpretation.
5. I personally conducted all of the work described in the above report.

W.R.Bergey, P.Eng.

GEOLOGICAL MAP OF KETCHAN PROPERTY

Nicola & Similkameen Mining Divisions, British Columbia
for
COPPER HILL EXPLORATION CORP.

SCALE 1:20,000

0 1000 2000 3000 Metres

EXPLANATION

- vb — Valley basalt (Pleistocene)
- gr — Granite (calc-alkaline Allison Lake suite)
- bxc — Undifferentiated intrusive breccia
- mz — Monzonite & syenite (alkaline Nicola suite)
- adio — Altered & brecciated diorite
- dio — Diorite (alkaline Nicola suite)

Nicola Group

- Nb — Brick-red basalt lava and/or subvolcanic intrusive rock
- Nf — Felsic volcanic rock
- Ns — Conspicuously bedded volcanic rocks
- Nv — Undifferentiated volcanic rocks
- Outline of circular feature (breccia pipe?)
- Outline of rock type based on photogeology
- Interpreted fault
- a, b — Depth to pre-Tertiary bedrock (a = >60 m; b = >30 m)
- Location of chemically analysed rocks (Preto, 1979)
- Outcrop, outcrop area, sample numbers (this report)