

# **GEOLOGICAL ASSESSMENT REPORT**

**(Lineament Array Analysis)**

(Event Number ID 4134116)

on the

## **DANSEY CLAIM**

(Tenure No. 528848)

(Centre at 649673E 5598225N)

**Kamloops Mining Division**

**NTS M092I.056**

**Vancouver, B.C. Canada**

**Laurence Sookchoff, PEng**

**Table of Contents**

	<b>page</b>
Summary -----	3.
Introduction -----	4.
Property Description & Location -----	4.
Accessibility, Climate, Local Resources, Infrastructure & Physiography -----	4.
History – Regional -----	5.
History – DANSEY Claim -----	5.
Geology: Regional -----	6.
Geology: DANSEY Claim -----	6.
Mineralization: Regional -----	6.
Geological Map Legend -----	7.
Mineralization: DANSEY Claim -----	8.
2006 Lineament Array Analysis -----	9.
Conclusions -----	9.
Selected References -----	10.
Certificate of Author -----	11.
Statement of Costs -----	12.

**Illustrations**

Figure 1. Location -----	following page 4.
Figure 2. Claim Location -----	following page 5.
Figure 3. Geology -----	following page 6.
Figure 4. Orthophoto -----	following page 7.
Figure 5. Claim Lineaments -----	following page 7.
Figure 6. Rose Diagram -----	page 8.

## **SUMMARY**

The 493.128 hectare DANSEY mineral claim located 200 kilometres northeast of Vancouver, British Columbia Canada, and within six kilometres of the major productive copper-moly porphyry deposits of the Highland Valley.

The Highland Valley copper porphyry mineral deposits are hosted by the Guichon Batholith with the Afton mine copper-gold mineral deposit hosted by the Iron Mask Batholith. Both Batholiths intrude the Nicola Group of predominant volcanics in a northerly trending volcanic belt some 40 kilometres wide extending from near the United States border in the south to Kamloops Lake in the north. The Nicola Group is united by similar stratigraphy and tectonics, and is noted for its associated copper mines and prospects.

The Dansey property is located at the eastern edge of the Late Triassic-Middle Jurassic Guichon Creek batholith and overlies the contact between Hybrid phase and Guichon variety rocks. Three main rock types are evident and comprise diorite, quartz diorite and granodiorite. Fracturing and shearing are abundant in the diorite and quartz diorite but markedly less in the granodiorite.

Mineralization on the Dansey property is associated with diorite and quartz diorite. The main minerals include chalcopyrite and pyrite, with minor amounts of molybdenite, specularite, chalcocite and bornite. Malachite, azurite and chrysocolla occur as secondary minerals. Areas of moderate copper-molybdenum mineralization (>0.1 per cent copper) occur near the contact between diorite and quartz diorite with weak zones of coppermolybdenum mineralization scattered throughout the diorite.

The Lineament Array Analysis has indicated eight localized areas of potential mineral controlling structures where potential economic mineral zones may occur. One of these zones is the DANSEY mineral prospect where areas of moderate copper-molybdenum mineralization (>0.1 per cent copper) occur near the contact between diorite and quartz diorite with weak zones of coppermolybdenum mineralization scattered throughout the diorite.

The mineralization at the DANSEY prospect may be an indication of surface seepage from a structurally controlled, potentially economic zone of mineralization at depth.

## **INTRODUCTION**

A lineament array analysis was completed on the DANSEY claim for the purpose of determining the potential structural controls for economic mineral zones on the claim and to fulfill the assessment requirements of Event Number (4134116). Based on historical development and/or production of copper/gold/silver minerals from this area, the geology of the area is conducive to the location of economic structurally controlled mineral zones

## **PROPERTY DESCRIPTION & LOCATION**

The property consists of one claim with an area of 493.128 hectares. Particulars are as follows:

<u>Claim Name</u>	<u>Hectares</u>	<u>Tenure No.</u>	<u>Expiry Date</u>
DANSEY	493.128	528848	2009/feb/14

The DANSEY claim is located 200 kilometres northeast of Vancouver, a port city at the southwest corner of the Province of British Columbia and the third largest city in Canada, and 54 kilometres north of Merritt, a city that may provide the necessary infrastructure for a mining operation in the area. The Coquihalla 4-lane highway, passing through Merritt, connects Kamloops to the northeast and Vancouver to the southwest. Logan Lake is 40 kilometres north of Merritt. A paved road is taken northerly from Logan Lake for five kilometres to the DANSEY claim.. Secondary roads provide access to the DANSEY mineral prospect and to other areas of the DANSEY claim.

The DANSEY property is also located within NTS 92I.056, within the Kamloops Mining Division, and with central coordinates of 649673E 5598225N. The major copper-moly porphyry deposits of the Highland Valley are within six kilometres west of the DANSEY claim. The formerly productive Afton deposit is 30 kilometres to the northeast.

## **ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE & PHYSIOGRAPHY**

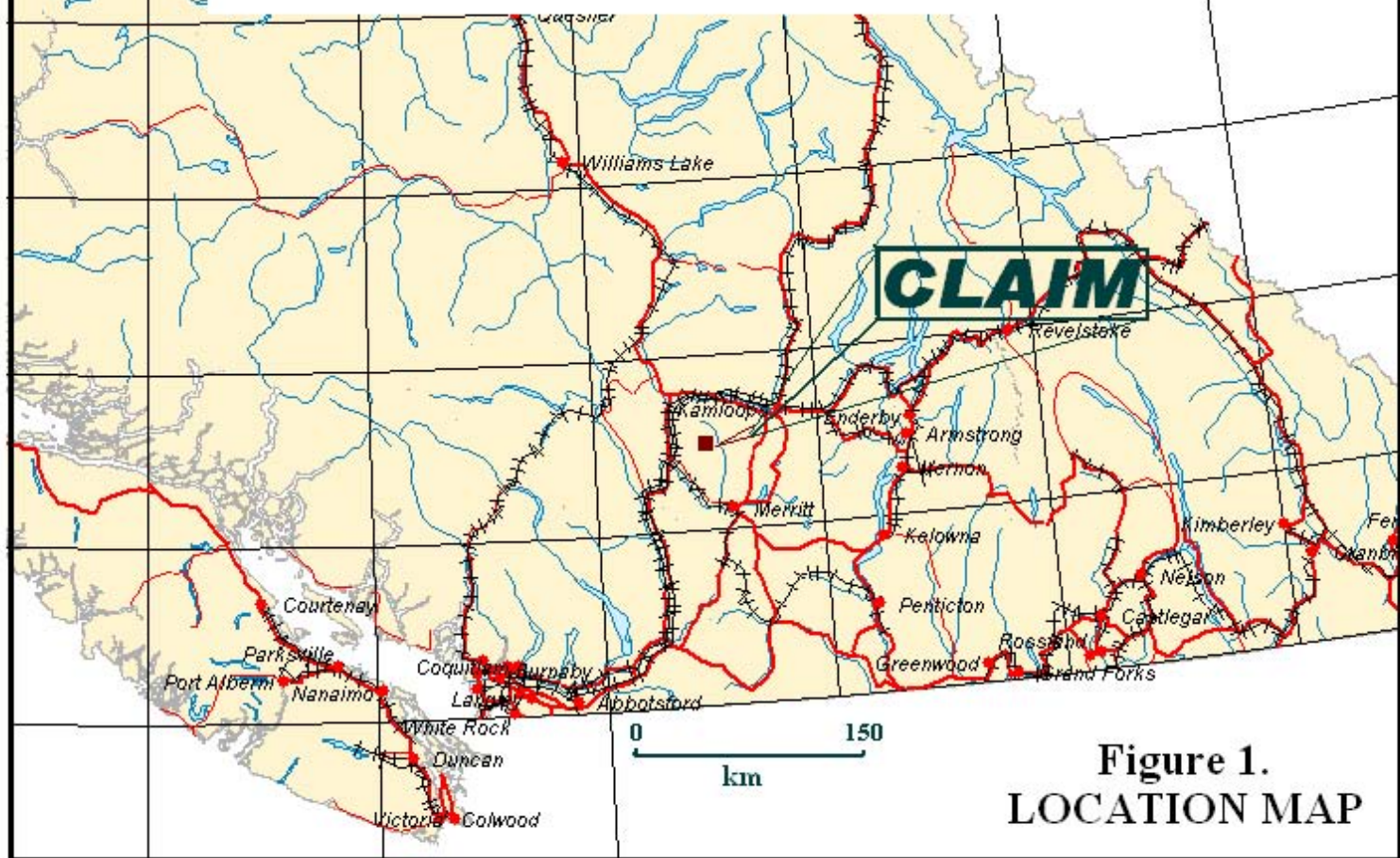
Access to the DANSEY claim is from Logan Lake northward for five kilometres. The paved road passes through the eastern portion of the Claim

The DANSEY claim occupies an area characterized by gently sloping hills with elevations ranging from 1,085 to 1,345 metres above sea level. The Dansey claim is covered with a moderate stand of pine, fir and spruce, with very little or no underbrush. The area, within the B.C. dry belt, has a continental climate characterized by cold winters and hot summers.

Logan Lake, five kilometres south of the property, which provides the infrastructure for the Highland Valley mines, would be a source of experienced and reliable exploration and mining personnel. Kamloops is serviced daily by commercial airline and is a hub for road and rail transportation. Vancouver, a port city on the southwest corner of, and the largest city in the Province of British Columbia, is four hours distant by road and less than one hour by air from Kamloops.

Sufficient water for all phases of the exploration program could be available from streams, ponds, and lakes within the confines of the property.

# DANSEY CLAIM: TENURE 528848



## **HISTORY -Regional**

Current and former porphyry copper mining in the Logan Lake area stemmed from the discovery of copper mineralization in the Highland Valley area in 1899. The following historical account is summarized from a publication entitled, “The Discoverers”.

From the first discovery of mineralization in the Highland Valley area in 1899, exploration was not revived until 1915. It was not until 1954 that Spud Huestis and associates formed a syndicate, staked about a hundred claims and the Bethlehem Copper Corporation Limited came into being. Subsequently, a partnership was formed with Sumitomo, additional exploration and development followed, and by the end of 1962, the Bethlehem mine was in production.

Another “Explorer”, Egil Lorntzsen, commenced exploration in the Highland Valley in 1954 “discovered” the Lornex porphyry copper deposit. Lornex was brought into production by Rio Algom Mines in 1972 and at that time was the largest base metal mining operation in Canada, as well as the most modern and efficient. Additional significant porphyry deposits were discovered and put into production. These productive deposits included the Highmont, which mill was the fourth such mill in the Highland Valley, and the Valley Copper deposit, the largest deposit of the Highland Valley. The Highland Valley had now become one of the world’s largest and most prolific copper–moly producing areas in the world.

## **HISTORY –DANSEY Claim**

The MINFILE (092INE034) reports that:

“Mines Ltd. held the Witches Brook group of 24 claims in the vicinity of the JB showing in 1956. Noranda Exploration Company Limited held the PG group of 99 claims along and mainly west of Guichon Creek to the north of Witches Brook in 1962. This property was partly a relocation of the claims held by Deerhorn Mines Ltd. Geological, geochemical and geophysical surveys were carried out during 1963. The CL group, apparently staked by C.W. Dansey in 1964, was located partially on ground formerly part of the PG group. North Pacific Mines Limited carried out a program of trenching, soil sampling, magnetometer and geological surveying on the property during 1964. In 1965, North Pacific Mines Ltd. carried out an induced polarization survey which outlined an anomaly about 914 metres long over a width of 244 metres. Other work consisted of trenching, road building and 8 diamond-drill holes totalling 1280 metres. In 1968, an airborne magnetometer survey (202 kilometres) was flown on behalf of North Pacific Mines Ltd. and Comet-Krain Mines Ltd. In 1969, Noranda Exploration Company Limited conducted a soil geochemical survey and induced polarization surveys over the Mike, Bill, Tom and JB claims. In 1974, North Pacific Mines Ltd. conducted percussion drilling in 5 holes totalling 384 metres on the Tom claims.”

# DANSEY CLAIM TENURE 528848

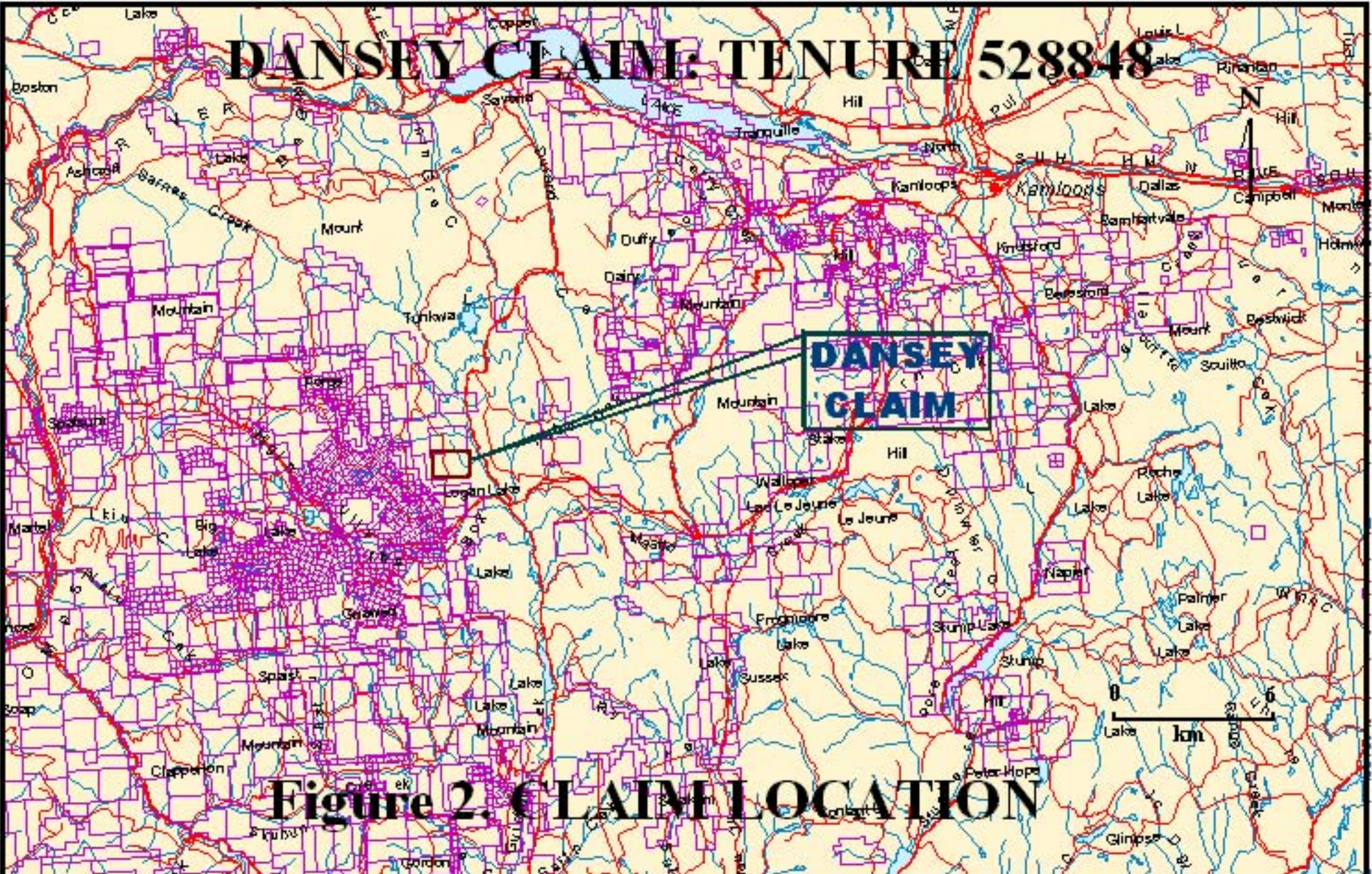


Figure 2. CLAIM LOCATION

## **GEOLOGY: REGIONAL**

Regionally, the property is situated within the Quesnel Trough, a 30 to 60 km wide belt of Lower Mesozoic volcanic and related strata enclosed between older rocks and much invaded by batholiths and lesser intrusions (Campbell and Tipper, 1970). The southern part is the well-known Nicola belt, continuing nearly 200 km to its termination at the U.S. border. The Nicola belt is enveloped by the Guichon Creek Batholith, host to the major porphyry copper mines of the Highland Valley, to the west, the Wild Horse Batholith to the east, and the Iron Mask Batholith, host to the former Afton Mine, to the north northeast.

The Guichon Batholith is comprised of varying phases of intrusive with the ore-bodies of the Highland Valley not restricted to any one phase. The Bethlehem Copper JA deposit occurs in and adjacent to a quartz plagioclase aplite stock which intruded rocks of the Guichon variety and Bethlehem phase of the Guichon Creek Batholith. The largest deposit of the camp, the Valley Copper deposit, is entirely in quartz monzonite of the Bethsaida phase and is west of the Lornex fault.

The Lornex and the Valley Copper ore-bodies in the Highland Valley are located at the low edge of an airborne magnetic high. The magnetic high traces the Highland Valley and the Lornex fault systems and clearly indicates the fault pattern of the system and the ore-bodies occurring within a magnetic low due to the supergene and dynamic related destruction of magnetite.

The ore-deposits of the Highland Valley are structurally controlled. Movements on the Lornex and Highland Valley faults occurred simultaneously and alternatively in the final phases of intrusion of the Guichon Batholith. The fault planes provided the openings for the admission and deposition of mineral and igneous matter.

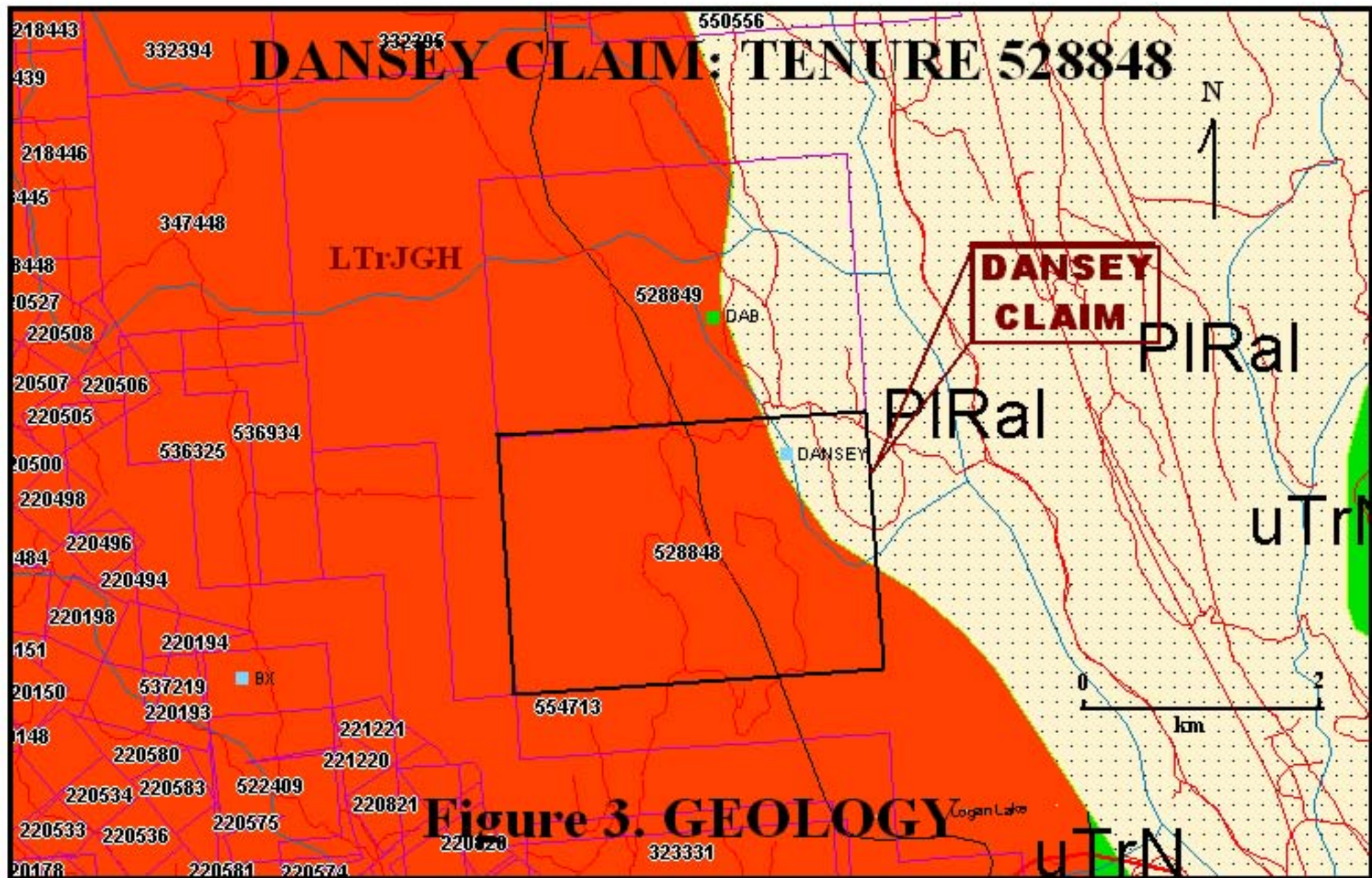
## **GEOLOGY: DANSEY CLAIM**

The Dansey property is located at the eastern edge of the Late Triassic-Middle Jurassic Guichon Creek batholith and overlies the contact between Hybrid phase and Guichon variety rocks. Three main rock types are evident and comprise diorite, quartz diorite and granodiorite. Fracturing and shearing are abundant in the diorite and quartz diorite but markedly less in the granodiorite.

## **MINERALIZATION: REGIONAL**

Highland Valley Copper operates two distinct mines, the Valley mine and the Lornex mine, and between the two has measured and indicated ore reserves of 761 million tonnes of 0.408 per cent copper and 0.0072 molybdenum. The ore reserves of each mine are: Valley mine - 627 million tonnes at 0.418 per cent copper and 0.0056 per cent molybdenum; Lornex mine - 135 million tonnes at 0.364 per cent copper and 0.0144 per cent molybdenum. The individual mine reserves are calculated at an equivalent cutoff grade of 0.25 per cent copper using a molybdenum multiplying factor of 3.5 (CIM Bulletin July/August 1992, pages 73,74).





## **GEOLOGICAL MAP LEGEND**

### **PLEISTOCENE TO RECENT**

**PIRal** unnamed alluvium till

**PiRvk** unnamed alkalic volcanic rocks

### **EOCENE**

#### **Penticton Group**

Alkalic volcanic rocks

### **UPPER TRIASSIC**

#### **Nicola Group**

**uTrNW**

##### **Western Volcanic Facies**

unnamed volcanic rocks

**uTrNC**

##### **Central Volcanic Facies**

andesitic volcanic rocks

**uTrNE**

##### **Eastern Volcanic Facies**

lower amphibolite/kyanite grade metamorphic rocks

### **LATE TRIASSIC TO EARLY JURASSIC**

#### **Guichon Creek Batholith**

**LTrJGBqd**

##### **Border Phase**

quartz diorite intrusive rocks

**LTrJGH**

##### **Highland Valley Phase**

granodiorite intrusive rocks

# DANSEY CLAIM: TENURE 528848

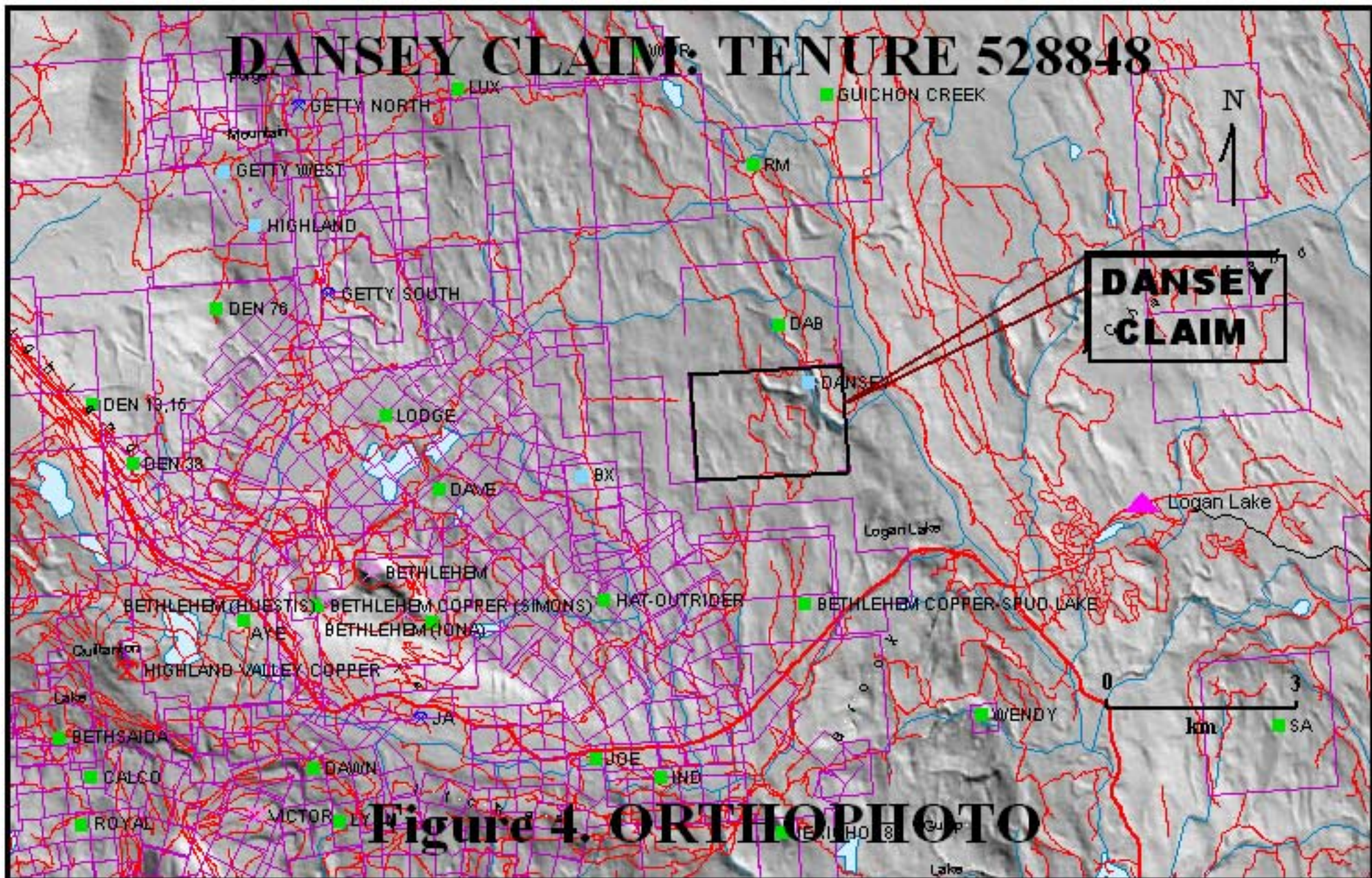
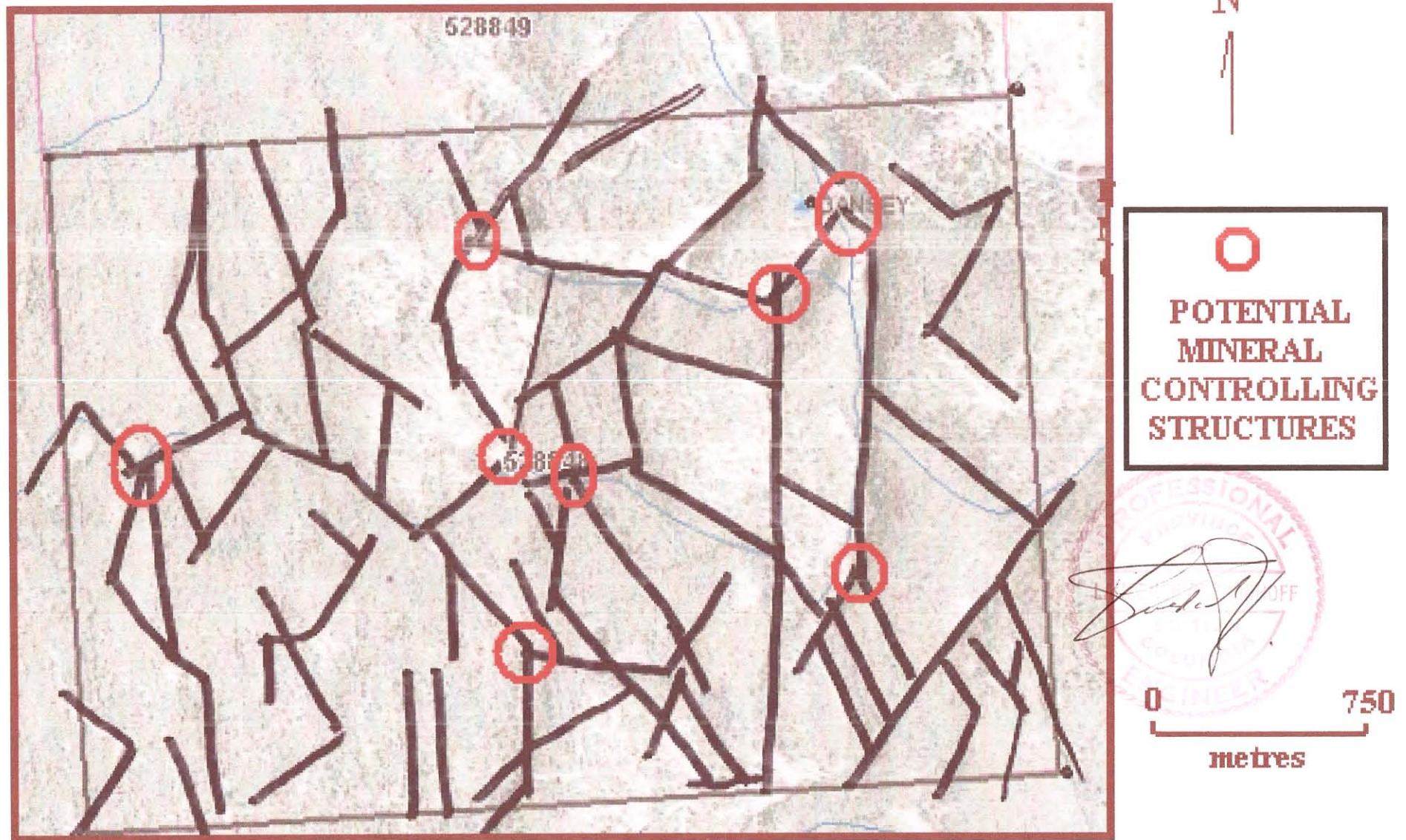


Figure 4. ORTHOPHOTO

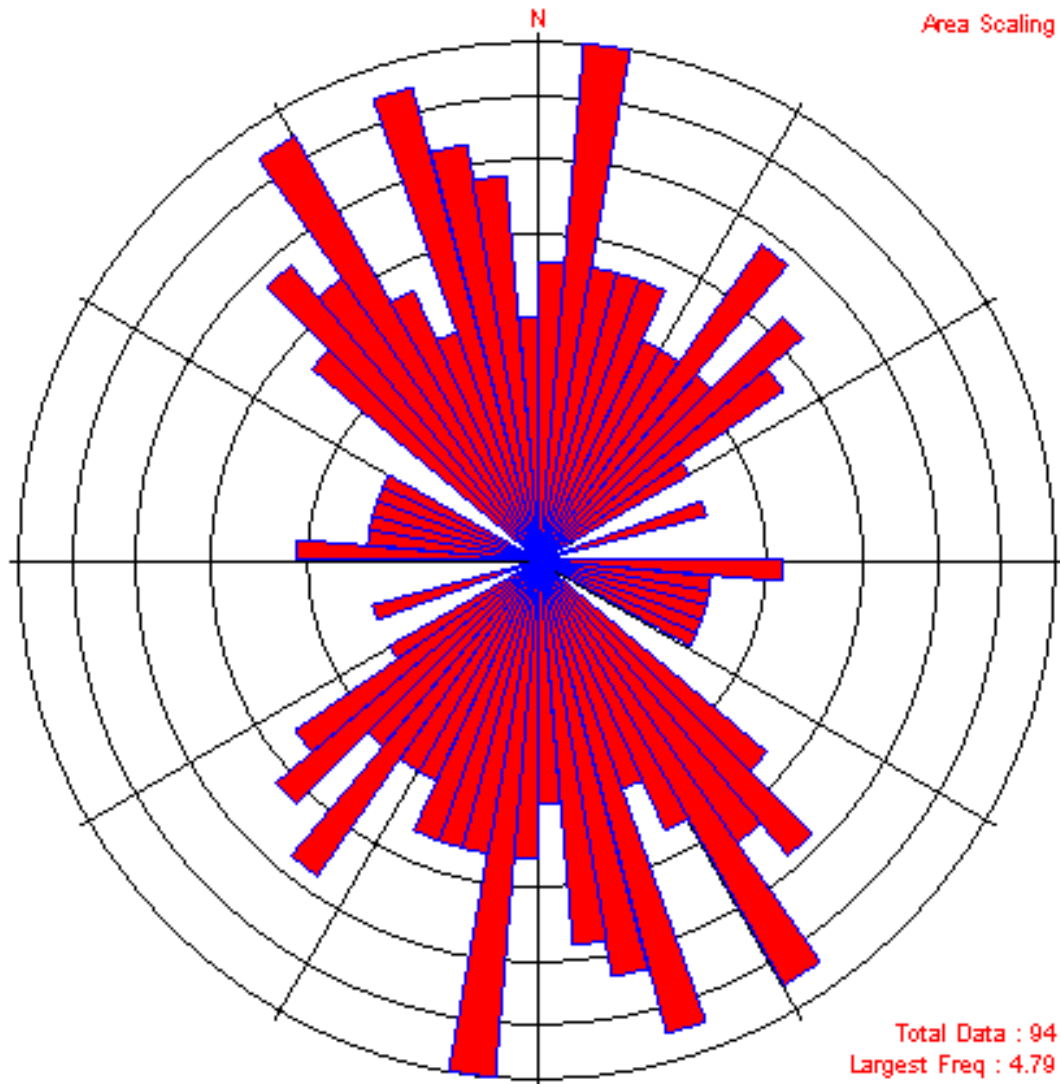
# DANSEY CLAIM: TENURE 528848



**Figure 5. CLAIM LINEAMENTS**

### MINERALIZATION: DANSEY CLAIM

Mineralization on the Dansey property is associated with diorite and quartz diorite. Most of the mineralization occurs along fractures but the majority of it is associated with a second group of fractures that strike from 040 to 080 degrees. The main minerals include chalcopyrite and pyrite, with minor amounts of molybdenite, specularite, chalcocite and bornite. Malachite, azurite and chrysocolla occur as secondary minerals. Areas of moderate copper-molybdenum mineralization (>0.1 per cent copper) occur near the contact between diorite and quartz diorite with weak zones of coppermolybdenum mineralization scattered throughout the diorite.



**Figure 6.** Rose diagram showing the 94 lineaments as determined on the DANSEY claim

## **2006 LINEAMENT ARRAY ANALYSIS**

A lineament array analysis of the DANSEY claim was completed; the purpose of which was to determine structural controls that may have resulted in the localization of the known mineral prospect on the property and to assess the property for other potential mineral controlling structures.

Ortho topographical maps were downloaded from the BC Government supported MapPlace and were utilized for the lineament array analysis in a stereoscopic analysis which was accomplished using a stereographic projection viewing of the topographical maps. The 94 observed lineaments were marked on an overlay (Figure 5). The lineaments were classified into a 5° interval whereupon a RockWare Stereostat software program was utilized to create a rose diagram of the lineaments as indicated on the accompanying Figure 6. The dominant structural trend was indicated predominantly in a northwesterly (310) to a northeasterly (055) direction.

The DANSEY mineral prospect is indicated to occur proximal to an intersection of indicated structures.

## **CONCLUSIONS**

The results of the Lineament Array Analysis have indicated that the DANSEY mineral prospect, where areas of moderate copper-molybdenum mineralization (>0.1 per cent copper) occur near the contact between diorite and quartz diorite with weak zones of copper-molybdenum mineralization scattered throughout the diorite, is located proximal to an indicated potential zone of mineral controlling structural intersections. Seven other localized areas of potential mineral controlling structures have been delineated (Figure 5) where potential economic mineral zones may occur.

The DANSEY mineral prospect may be an indication of surface seepage from a structurally controlled, potentially economic zone of mineralization at depth.

Respectfully submitted

Sookochoff Consultants Inc.

A circular professional seal for a Professional Engineer in British Columbia. The seal contains the text "PROFESSIONAL ENGINEER" and "S. SOOKOCHOFF". Overlaid on the seal is a handwritten signature in black ink.

Laurence Sookochoff, P.Eng.

Vancouver, BC

*Sookochoff Consultants Inc.*

*June 10, 2007*

*Page 9 of 12*

**Selected References**

**B.C. Government** – MapPlace Internet Download Files.

**Carr, J.M.** et al – Afton: A Supergene Copper Deposit, in Porphyry Deposits of the Western Cordillera, Special Volume 15, CIM, pp376-387. 1976.

**Hollister, V.F.** – Geology of the Porphyry Copper Deposits of the Western Hemisphere. Society of Mining Engineers of The American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc. New York, New York. 1978.

**Kwong, Y.T.J.** – Evolution of the Iron Mask Batholith and its Associated Copper Mineralization. BC Ministry of Energy, Mines and Petroleum Resources. Bulletin 77. 1987.

**MINFILE** – 092INE034 - DANSEY,JB,FRAN,PG,SOUTH, CL

**The Discoverers** – Monica R. Hanula–Editor, Pitt Publishing Company Limited, Toronto, Ontario, Canada. 1982.

**Geology, Exploration and Mining in British Columbia** – 1972 – pgs 165, 183, 209-220.

**Statement of Costs**

**Detailed Costs**

Analysis:

Laurence Sookochoff, PEng.

Feb 16, 2007 to Feb 18, 2007 ; 1 day @ \$1,000.      \$ 1,000.00

Maps:

4 @ \$150.      600.00

Xerox, printing & compilation      400.00

Report      750.00

\$ 2,750.00

=====



**LAURENCE SOOKOCHOFF, P.Eng.**

**401 850 West Hastings Street**

**Vancouver, BC**

**V6C 1E1**

**CERTIFICATE of AUTHOR**

I, Laurence Sookochoff, P.Eng. do hereby certify that:

1. I am a Consulting Geologist of:  
Sookochoff Consultants Inc. 401-850 West Hastings Street Vancouver, BC V6C 1E1.
2. I graduated with a degree in Bachelor of Science from the University of British Columbia in 1966.
3. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia.
4. I have worked as a geologist for a total of 41 years since my graduation from university.
5. I am responsible for the preparation of this technical report titled Geological Assessment Report on the DANSEY Mineral Claim dated June 10, 2007.
6. I am the registered owner, and hold 100% of the DANSEY claim as described herein.



---

Laurence Sookochoff, P.Eng

*Sookochoff Consultants Inc.*

*June 10, 2007*

*Page 12 of 12*