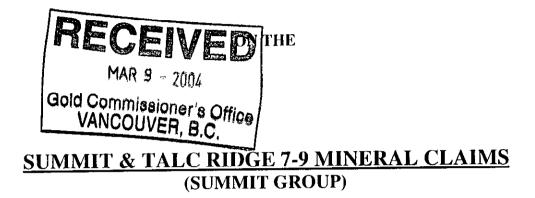
## GEOLOGICAL ASSESSMENT REPORT



# A RECONNAISSANCE GEOLOGY SURVEY

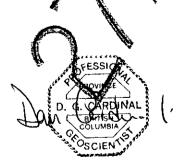
### LOCATED IN THE

KAMLOOPS & NEW WESTMINSTER MINING DIVISION N 5547500 E 595500 (Lat. 50 04' 15''; Long. 121 39' 50'') UTM ZONE: 10 (NAD 83) Mineral Titles Reference Map: M0921002

**REPORT PREPARED BY:** 

D.G. CARDINAL, P.GEO. P.O. BOX 2082 HOPE, BC V0X 1LO

February 20, 2004



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## A. INTRODUCTION

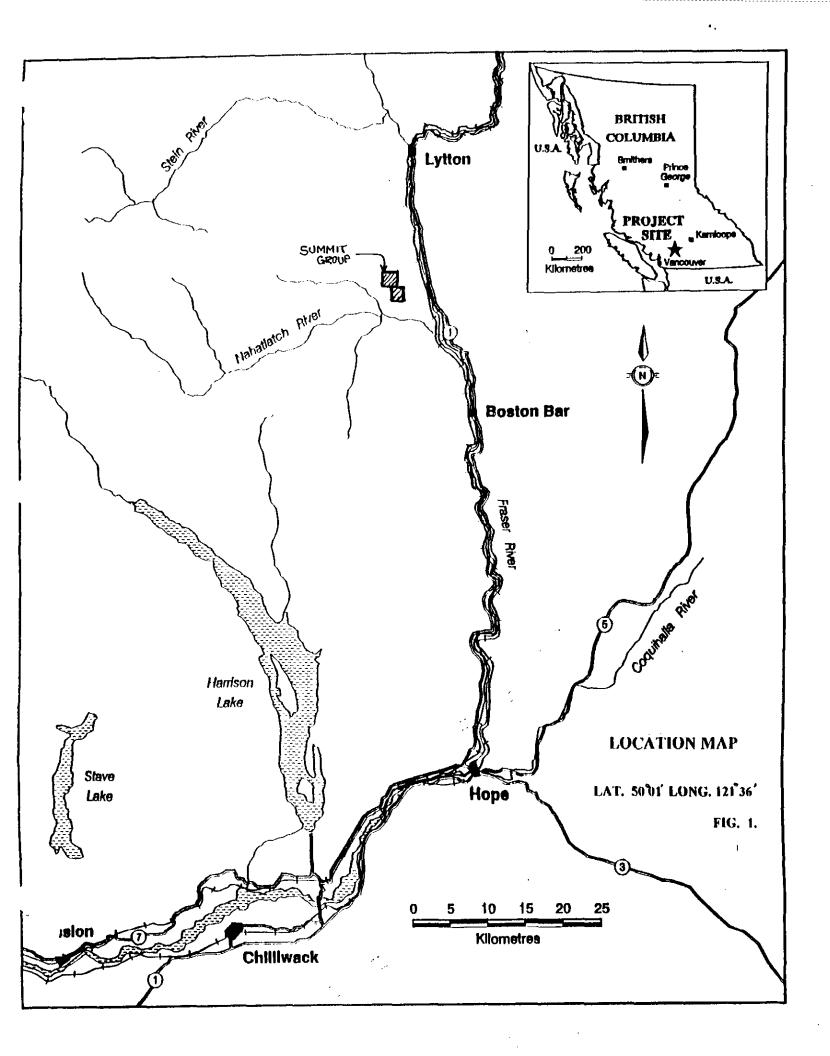
The Summit Gold group consists of 4 contiguous mineral claims known as: Summit and, Talc Ridge 7, 8 and 9. Geological reconnaissance surveys were carried out on the Summit and Talc Ridge 9. The surveys were orientated towards exploring for gold and identifying gold potential targets.

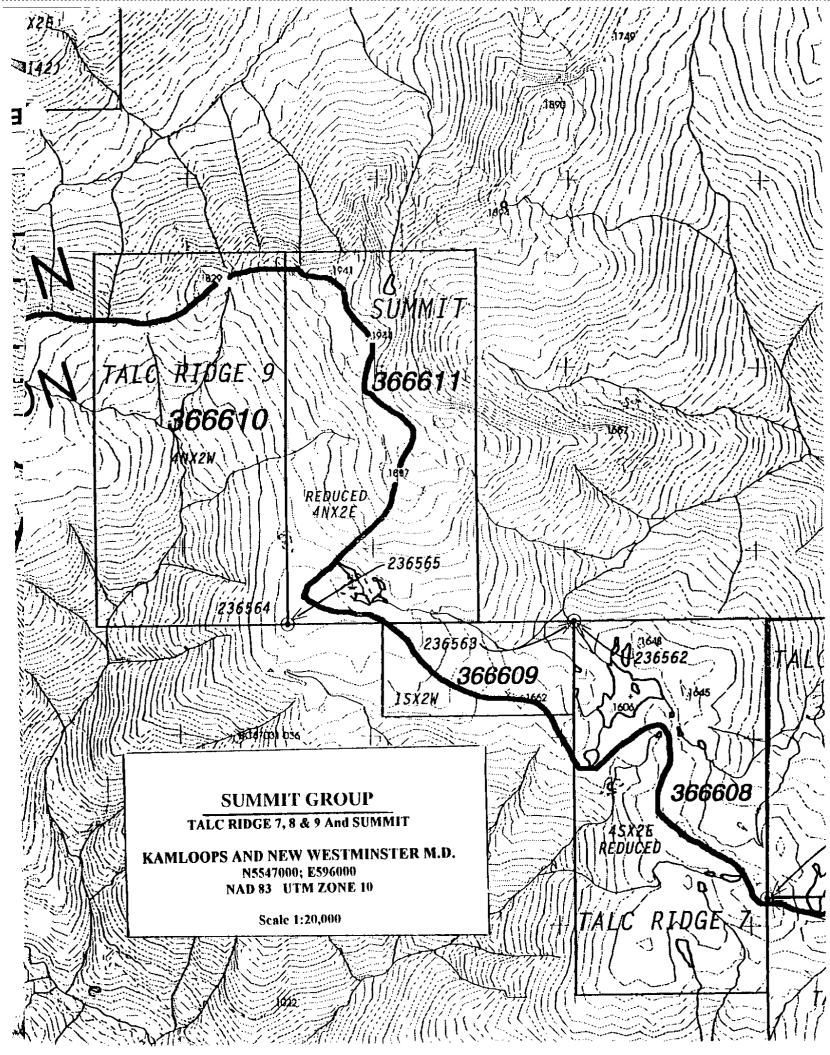
Majority of the work was conducted on the Summit, which is known to host an auriferous quartz-bearing structure. Talc Ridge 9 claim covers a talcose deposit hosted in an ultramafic structure. Previous reconnaissance prospecting on the claim located a quartz float along one of the small streams containing fine, disseminated free gold with associated talc flakes in quartz cavities.

A small crew consisting of a geologist and a field assistant conducted the surveys. Access to the claims was by a 4-wheel driveable, partly deactivated logging road. Initially, 4 days of reconnaissance surveys and prospecting were carried out during carly July, 2003 (July 5th-8th). In October, 3 additional days (Oct. 17th-19th) of follow-up work were conducted.

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A Statement Of Work was recorded on October 24, 2003 - Event No. 3201677.





#### **B. LOCATION AND ACCESS**

The claims are located some 28 km due northwest of the community of Boston Bar and the hamlet of North Bend. Boston Bar in turn, is situated along the Fraser River and Trans Canada Highway, about 235 highway kilometres from the city of Vancouver (Figure 1).

Geographically, the claims are positioned along height-of-land that also acts as a dividing line between 2 mining divisions - Kamloops and New Westminster. The heighest part of land is on the Summit claim at an elevation of 1,944 metres.

Accessibility is by a combination of all season forestry service road and seasonal logging roads. Alternately, a helicopter can be utilized from the town of Hope, approximately 30-35 minute ferry time to the claim site.

Normally, the claim site is gained by road from North Bend. From here an all weather road leads 15 km north to Nahatlatch River. The road then heads westerly along the north side of the river. At 24.5 km, the Log Creek mainline logging road is taken (turn right) heading northerly. At the 6 km signage, the logging road branches off to the northwest, this branch road is taken to reach the claims. The road climbs steadily for additional 5 km, about 500 metres in elevation, until it reaches the western boundary of Talc Ridge 9. A partly deactivated logging road leads into the claim where a small base camp was established. From here prospecting and reconnaissance surveys were carried out.

#### C. CLAIMS INFORMATION

The Summit group consists of 4 contiguous mineral claims: Talc Ridge 7, 8 and 9 and, Summit. LCPs for Talc Ridge 7 & 8 fall within the Kamloops M.D. Common LCP for Talc Ridge 9 and Summit is in New Westminster M.D (Figure 2).

<u>Claim Name</u>	Mining Division	Tenure Number	No. of Units	Expiry Date
Talc Ridge 7	Kamloops	366608	8	Oct. 27, 2004
Talc Ridge 8	Kamloops	366609	2	Oct. 26, 2005
Talc Ridge 9	New Westminster	366610	8	Oct. 29, 2004
Summit	New Westminster	366611	8	Nov. 1, 2004

Pertinent claims information is outlined below:

#### **D. BRIEF BACKGROUND**

Since the turn of the century various local prospectors and the occassional miningexploration company, have periodically been attracted to this area, mainly because the favourable geology and the potential for gold. However, although past exploration surveys have outlined anomalous amounts gold in soil and in rock, none of the surveys have ever been seriously followed up or the anomalies properly defined.

During the early 1920s, prospectors were reported to have uncovered gold mineralization along quartz vein structures. Also, placer gold was found along certain streams that originate from this area, which is underlain by a major ultamafic-serpentine structure. Perhaps it is the result of these early findings that spurred the Geological Survey of Canada to conduct its' first preliminary surveys of this region in the early 1930s.

As a result, in 1936, H.C. Horwood (GSC Paper 36-7) first documented gold workings along height-of-land presently covered by the Summit claim group. Horwood referred to the workings as the Serpentine and Summit claims and briefly describes the mineralization as follows: "......a 60 foot shear zone, with quartz veins up to 5 feet wide. In places the veins contain a few specks of pyrite, which is said to carry small amounts of gold. The intervening bands of schist carry a much larger amount of pyrite, and all exposures are rusty and weathered. Other veins and shear zones similar to those mentioned, occur on the property". His preliminary surveys also identified a serpertine structure, which subsequently became a target for gold exploration. Then, between 1945-47, S. Duffell and K.C. McTaggart of the GSC conducted a more comprehensive study of the area (1952, GSC Memoir 262 - Ashcroft Map Area, B.C.).

Between 1950s-60s, the odd interested company carried out sporadic, cursory regional investigation of the serpentine belt. However, some years lapsed before interest attracted others to the area again. In 1973-74, Nahatlatch Resources Ltd. (J.A. Chamberlain, Assessment Rpt. No. 4985) conducted a series of reconnaissance nickel surveys along parts of the ultramafic-serpentine belt. During these surveys a large body of talc-magnesite was discovered. Talc samples were sent to Cyprus Industrial Minerals Ltd. for testing, which showed talc 62% and magnesite 34%. Any nickel values identified occurred as background values in the ultramafic.

In 1986-87, Westerra Resources Ltd. re-staked part of the ground and conducted limited reconnaissance geochemical and mapping surveys. This work was centered around the old Serpentine and Summit gold workings. Although the data was never disclosed, the author

was able to obtain a private report of the work. The data show encouraging results. Both soil and rock samples collected over the old workings and open-cuts showed anomalous gold and arsenic values. For example, values ranged as high as: 3.5-4.7 gram/tonne Au and 1.2-2.3% As. However, the results were never followed up such as proper trenching and sampling.

In 1991, Highland Talc Minerals Ltd. obtained the ground and between 1992-95 carried out a systemmatic talc-magnesite evaluation program. This work included: mapping surveys, diamond drilling through to bulk sampling and pilot scale testing. Drilling outlined a drill indicated resource of 20 million tonnes of 60-65% talc and 30-35% magnesite (Assessment Rpt. No. 23691).

In the summer of 2001, a local prospector found a gold-bearing quartz float on one of the streams, which originates from the talc-serpentine belt. The author had the opportunity to examine the float sample. The sample is well rounded and contained abundant, finely disseminated free gold in quartz, associated with occasional fine, pearly lustre flakes of talc.

The claims, which partly cover the ultramafic-serpentine belt and anomalous gold-bearing structures, are currently registered to the author. During the 2003 field season reconnaissance surveys were conducted in order to maintain the claims in good standing. The author believes the claims cover deep-seated structures that may host economic values of gold and, that the limited geochemical data obtain to date may reflect such mineralized potential.

#### E. REGIONAL GEOLOGY

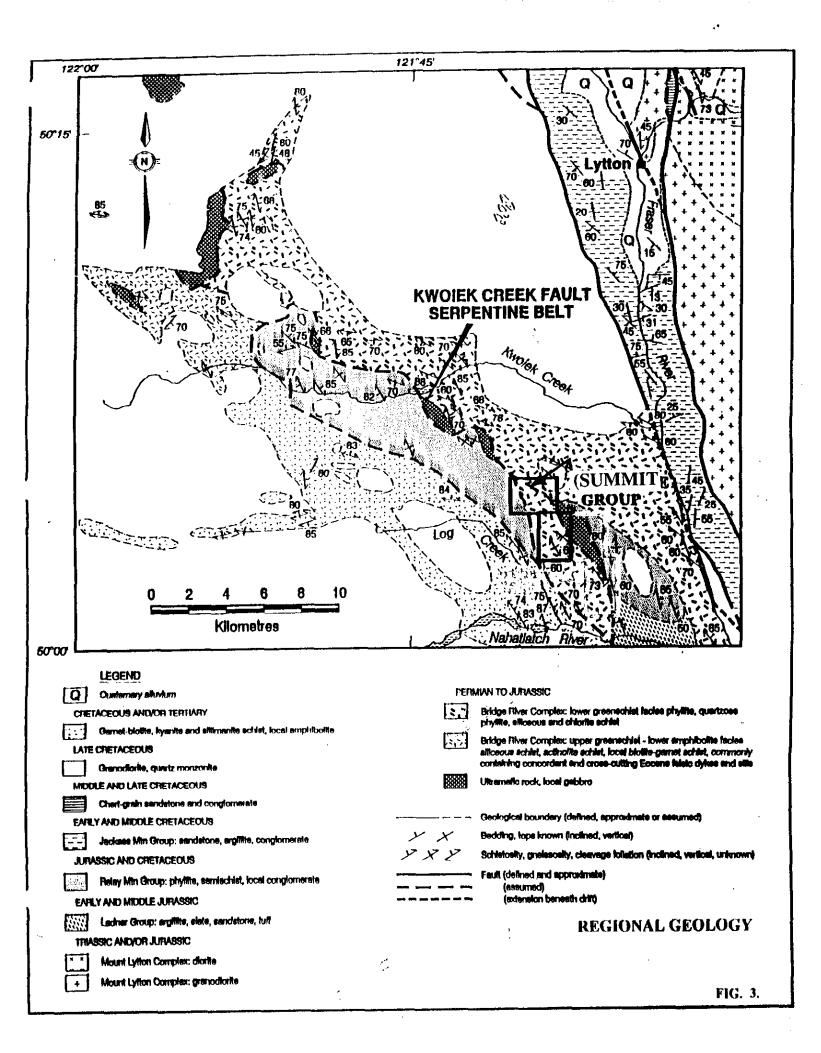
The regional geological setting is comprised of a major northwest-southeast trending structural break referred to as the Kwoiek Creek Fault (J.W.H. Monger & W.J. McMillan, 1989, GCS). The fault is represented by a semi-continuous belt of serpentinized ultramafic bounded by metamorphosed sedimentary and volcanic rocks (Figure 3).

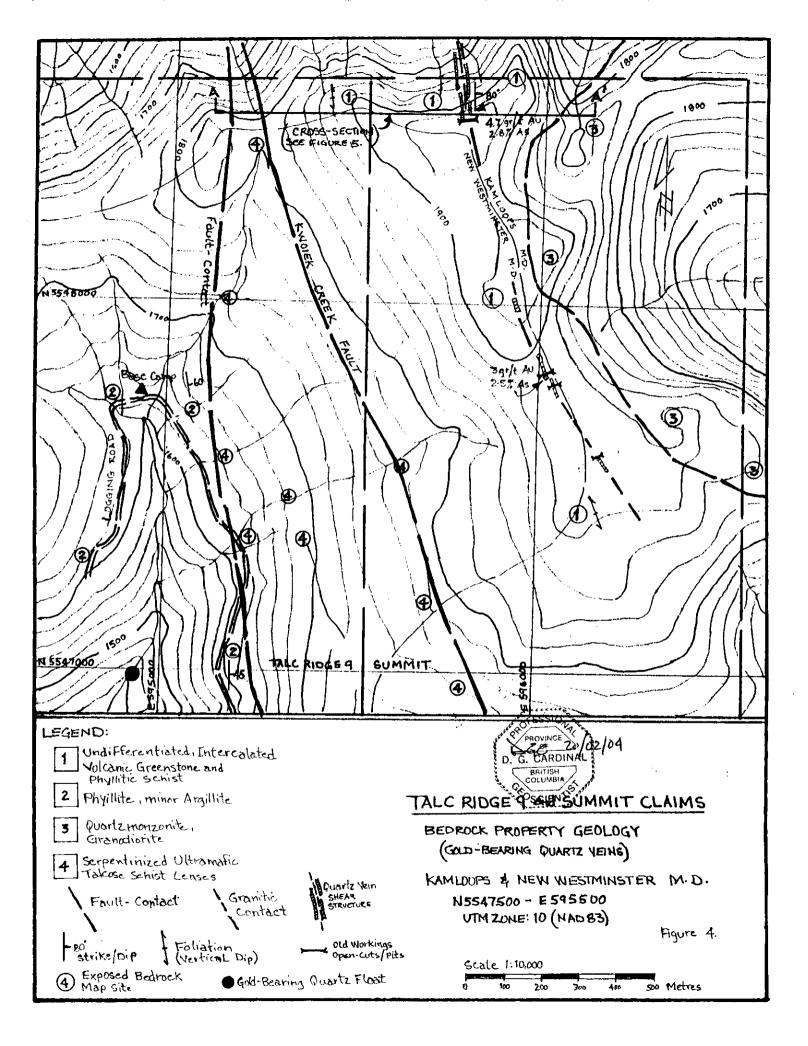
The serpentine structure can be traced for some 30 kilometres along strike. It divides 2 distinct regional lithological units. To the east, are a series of intercalated sediments and volcanics and minor serpentine, believed to be latterly equivalent to the Permian age Bridge River complex. These rocks are comprised of greenstone volcanics and phyllite and are metamorphosed to upper and lower greenschist facies, displayed by bands of chlorite-biotite-actinolite schist. To the west, is the Jurassic to late Cretaceous age Relay Mountain Group, which predominately consist of phyllite and interbeds of argillite, shale, limey shale and lesser sandstone.

Structurally, the belt has experienced a complex series of stress and tension-related multilateral movements overtime. The Kwoiek Creek Fault system displays a number of these features including series of steeply dipping shear zones and sub-paralleling imbricated over-thrust faults. The regional bedrock fabric, as reflected by schistosity, foliation and local bedding structures, trends northwesterly and is steeply dipping.

The final stage of geological events were produced by the Cretaceous age Scuzzy Pluton, and other local coast range granitic intrusions, which are manifested by regional low grade, greenschist metamorphic overprint and local tensional or dilation structures.

A number of important mineralized structures are spatially related to the serpentine belt and to local plug-like intrusions. These include both the anomalous gold, and talcmagnesite bodies found on the Talc Ridge and Summit claims.





#### F. PROPERTY GEOLOGY

The Talc Ridge and Summit claims are underlain by 4 main rock types: serpentinitetalcose schist, phyllite-schist, greenstone (andesitic) volanics and quartzmonzoniticgranodiorite (Figure 4). Bedrock exposure is limited with most of the good exposures occurring along height-of-land on the Summit claim. However, along lower elevations of the property (i.e. Talc Ridge 9) mappable rock units can be found such as along logging road-cuts, streams and areas where clear-cutting has taken place.

By traversing and mapping a number of the small incise streams, road-cut sections and parts of clear-cut areas found on Talc Ridge 9 claim, a good knowledge of the underlying bedrock was obtained. Much of the claim is comprised of moderate to steeply, westerly dipping and northwesterly striking phyllite and phyllitic schist. Along the eastern portion of the claim, the phyllite comes in fault-contact with a northwest striking, large lenticular body of talc-talcose schist. A little further to the east of the mapped talc body, along the common claim boundary of the Talc Ridge 9 and Summit, are a series of bedrock out crops of massive, dark green serpentine. The concordant serpentine and talc structures probably in part, represent the major northwesterly trending Kwoiek Creek fault system.

At higher elevations along the Summit claim the bedrock is better exposed. Especially along the north and northeastern portion of the claim where steep escarpments have produced a natural window of well exposed rock structures. Underlying the western section of the claim is the above-noted body of faulted serpentine. Further eastward, is a band (300-400 metres wide) of intercalated, steeply dipping and northwest striking, phyllitic schist and andesitic greenstone. Both the greenstone and schist tend to host narrow, irregular lenses and veinlets of remobilized quartz. Along the central portion of the claim, which is also forms the topographic high, the greestone-schist band comes in contact with a quartz monzonitic-granodiorite. This localized intrusive plug is traceable to the east and beyond the eastern boundary of the Summit claim (Figure 4).

A series of sub-paralleling, north-northwest striking quartz structures are hosted in the greenstone-phyllitc schist and adjacent to the contact with the quartz monzonitic plug. Some of the quartz veins are dyke-like in nature and are up to a metre in width. Most tend to be sparse of mineralization, but the contact walls and material hosted between the veins are highly altered and mineralized. The veins are intermittently traceable for about 1000 metres along strike and are steeply dipping. They appear to be in part, related to the quartz monzonitic intrusion, and are probably a result of silica-rich hydrothermal fluids introduced into dilatent-like shear zones, subsequently forming the vein structures (Figure 5).

#### G. MINERALIZATION

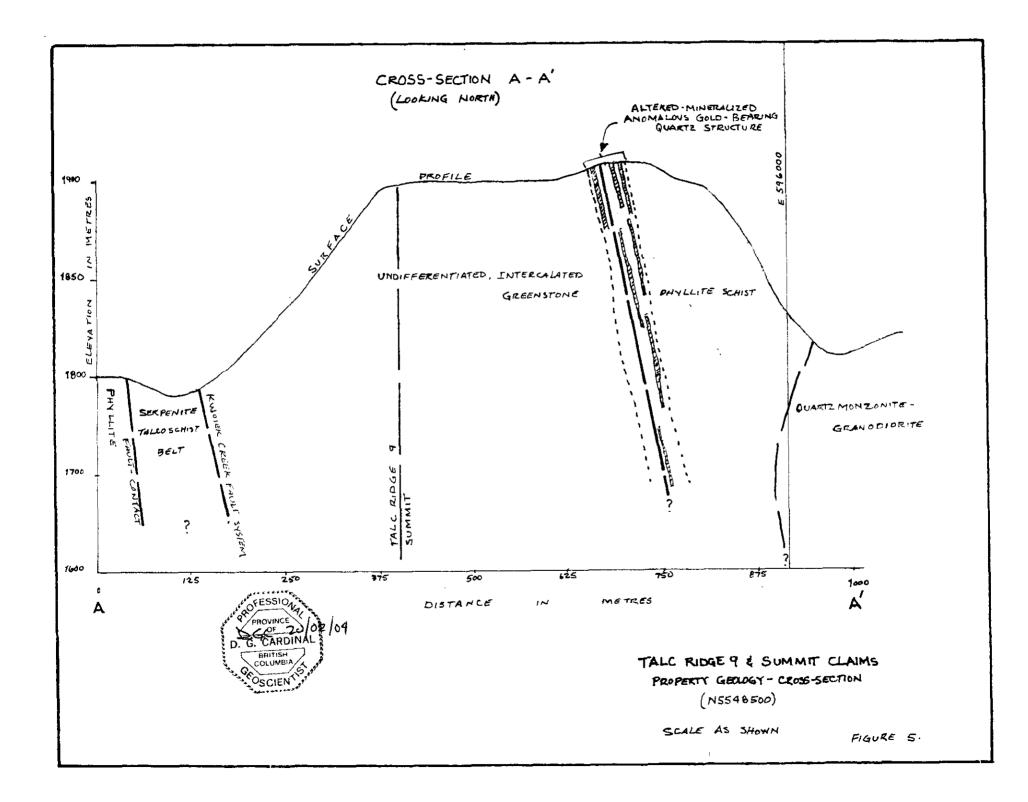
One of the main objectives of the reconnaissance assessment work was to re-examine the above-noted, potentially gold bearing-quartz structures. This included relocating some of the old workings and attempting to indentify some of the gold-arsenic anomalous zones outlined by previous exploration surveys.

A number of old open-cuts were noted near the central portion of the Summit claim. These workings, which have since sloughed in, were designed to cut across part of the quartz structure. Where the structure is exposed, the contact wall material is well oxidized with associated mariposite-listwanite alteration. Fresh broken rock contains purplish, silicified breccia fragments with stockwork quartz veinlets and very fine iron sulphide mineralization of pyrrhotite and arsenopyrite. Previous samples collected from this area contained highly anomalous amounts of arsenic and gold. Some of the higher values include: 2.5% As and 3,610ppb (about 3 gram/tonne) Au (Figure 4).

Near the northern boundary of the claim and about 600 metres north of the above-noted mineralized structure, and exposed along a steep escarpment, are a series of subparalleling quartz veins, steeply dipping to the east. Due to the very steep face, the escarpment exposes a very good cross-section of the mineralized structure. The veins occur within an oxidized shear zone, which is 15-20 metres wide. The author noted only minor sulphides in the quartz veins. However, the material between the veins contains lenticular lenses that are highly silicified with finely dissminated pyrrhotite and arsenopryite. The shear structure is traceable for at least 300 metres down the escarpment before it becomes covered in talus debris and overburden. At this point, 300 metres down dip, finely disseminated sulphide lenses were also noted between the quartz veins including some of the veins carrying disseminated chalcopyrite mineralization. It is obvious that the structure is open down dip (Figure 5).

Previous samples collected from this area also returned anomálous amounts of gold and associated arsenic including: 4.7 gram/tonne Au and 2.3% As.

The finely disseminated free gold-bearing quartz float, which was previously found by a prospector in one of the streams on Talc Ridge 9 claim, is believed to come from a different source and not from the above-noted quartz structures. The author believes this float sample probably originated from somewhere along serpentine-talc-schist, fault-contact, as evident by the fine talc flakes associated with the quartz and gold. The sample is also free of any iron sulphides. There appears to be a quartz structure(s) along one or more of the serpentine fault-contacts, which may be hosting fine free gold. It should also be noted that during the talc-magnesite evaluation bulk sampling project, occassional milky quartz veins were observed to occur along sections of fault-contact zones between the talc and serpentinite. It is possible that one or more such veins may be gold-bearing.



#### H. FIELD PROCEDURES

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The field crew consisted of a geologist and a field assistant. A base camp was established along one of the branch logging roads, which leads into the Talc Ridge 9 claim. From here traverses and reconnaissance surveys were carried out along parts of the property.

To aide in the mapping surveys, aerial photos at 1:20,000 were used as well as 1:20,000 scale topographic base map. In order to tie-in bedrock outcrops and man-made features (e.g. clear-cuts, etc.) both hip chain, brunton compass and backed up by hand held GPS unit (Garmin model) were utilized. The reconnaissance survey area covers roughly 1500m by 1000m. A total of 7 field days were spent on the ground between July and October of 2003.

#### I. SUMMARY AND CONCLUSION

- The property consists of 4 contiguous mineral claims: Talc Ridge 7, 8 and 9 and, Summit (the Summit group).
- Geological reconnaissance surveys were conducted on the Talc Ridge 9 and Summit for a total of 7 days during the 2003 field season.
- The property is underlain by 4 main rock types: phyllitic schist, and esitic greenstone, serpentinite-talcose schist and quartzmonzonitic-granodiorite.
- A major northwest trending structure referred to as the Kwoiek Creek fault runs across the property. It is closely associated with lenticular body of serpentinized ultramafic and talcose schist.
- The Summit claim covers a semi-continuous system of quartz veins, hosted along a shear structure. The structure is traceable for over 1000 metres along strike and is 15-20 metres wide. In places the structure is highly altered and mineralized and hosts anomalous amounts of gold and associated arsenopryite.
- The mineralized structure appears to be a deep-seated hydrothermal system. It is also spatially related to the quartzmonzonitic intrusion, which may have played a major role in introducing and remobilizing auriferous-bearing, silica-rich fluids into the system.

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• A well rounded, milky white, gold-bearing quartz float, associated with fine talc flakes, was found on one of the streams cutting the property. It is believed to have been derived from one of the quartz-bearing, serpentine-talcose fault-contacts.

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• Based on past encouraging exploration results, the author believes the property strongly merits a proper, systemmatic exploration project orientated toward searching for structurally controlled gold mineralization, both along the quartz-shear structure and along the serpentine-talc fault-contacts.

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#### J. COST BREAKDOWN - STATEMENT OF EXPLORATION

Geological reconnaissance surveys were conducted on Summit and Talc Ridge 9 claims. The surveys were carried out over a total of 7 days between July 5th-8th and October 17th-19th. The expenses incurred are as follows:

Field Crew: Geologist: 7 days @ \$350 per day Field Assistant: 7 days @ \$150 per day	\$ 2,450 1,050
Field Camp Expenses: Food, supplies, etc. 7 days @ \$70 per day	490
Transportation: 4-wheel drive truck, 3 days @ \$75 per day	225
Report: Data compilation, plotting, word processing	1,650

Total Expenses Incurred

<u>\$ 5,865.00</u>

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Respectfully-submitted; FESSION PROVINCE CARDINA D. 0 BRITES COLUMBIA D.G. Cardinals D.G.

#### K. REFERENCES

Cardinal, D.G., November 1994, Assessment Report on the Talc Project - Pilot Scale Tests and Diamond Drill Programme, Talc Group. Assessment Report No. 23691.

Chamberlain, J.A., 1973, Geological Report, "H" Claims, Nahatlatch Area, BC, Department of Mines and Petroleum Assessment Report No. 4985.

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Duffel, S. and McTaggart, K.C., 1952, Ashcroft Map Area, British Columbia, Geological Survey of Canada, Memoir 262.

Horwood, H.C., 1936, Preliminary Report on the Nahatlatch Region, GSC Paper 36-7.

Monger, J.W.H., 1989, Geology of Hope and Ashcroft Map Areas, British Columbia, GSC, Maps 41-1989 and 42-1989.

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### L. PROFESSIONAL CERTIFICATE

I, Daniel G. Cardinal of the municipality of Hope, British Columbia, do hereby certify that:

- I am a Professional Geoscientist and reside at 58601 Lougheed Highway, Box 2082 Hope, BC, VOX 1L0.
- I am a graduate of the University of Alberta, Edmonton and hold a BSc. degree in Geology (1978).
- I am member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia (#18455); and the Association of Professional Engineers, Geologists and Geophysicists of Alberta (#M29405); and a Fellow of the Geological Association of Canada (#F4891).
- I have practiced my profession continuously for the past 23 years.
- I supervised and conducted the geological surveys documented in this report.
- I am the author of this report.

Signed in Hope, British Columbia this 20th day of February, 2004.

OFESSION PROVINCE G. CARDINAI SCIEN

D.G. Cardinal, P.GEO.

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