

**GEOLOGICAL ASSESSMENT
REPORT**

on the

VALLEY MINERAL CLAIMS
(Valley 200-203 & 205-209)
N.T.S. 92I/4W
Kamloops Mining Division
(Work Conducted Between 5th - 7th, 1997)

for

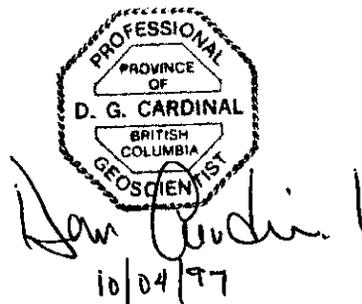
HELIGOLD CANADA INC.
63235 Flood Hope Road
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Prepared by:

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GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

October 4, 1997



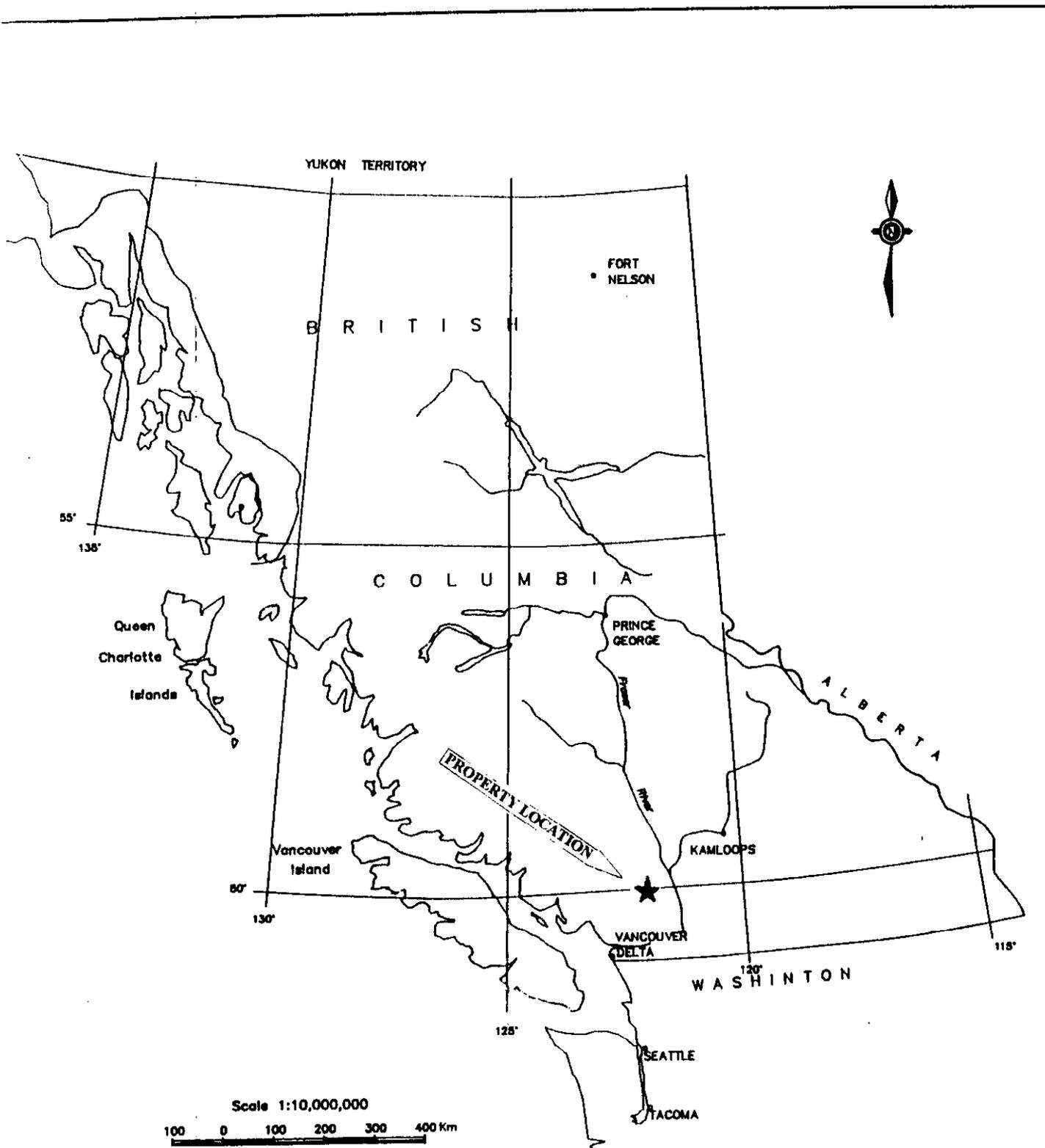
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| | | | | |
|------------------------------|-------------------------|-------------------------|----------------|----------|
| HELIGOLD CANADA INC. | | | | |
| VALLEY MINERAL CLAIMS | | | | |
| FRONTISPIECE | | | | |
| LOCATION MAP | | | | |
| SCALE as shown | DATE June '97 | N.T.S. 92H/4W | Figure: | 1 |

A. INTRODUCTION

The author was requested by Heligold Canada Inc. of Hope, B.C. to examine the Valley mineral claims and document the geology and mineralization for assessment work purposes. Three days (August 5, 6 & 7, 1997) of field reconnaissance surveys were conducted on the claims by the author. The author also has previous experience of the geology in the area which aided in compiling this assessment report.

Over the years, the ground covering several old gold workings which the Valley claims now cover, have been staked and restaked at different times and held by different owners. Heligold Canada Inc. is the most recent claim staker of the area and the current registered claim owner.

The old workings which consist of a short adit and some trenches, partly expose a gold-bearing quartz vein. Previous reports documenting sampling of the adit and the trenches, including previous samples collected by the author, have returned economic values in gold. As well, talc mineralization was subsequently identified in the area now covered by the Valley claims.

B. PROPERTY INFORMATION

At present, the Alpine claims consists of 9, 2-post contiguous mineral claims. The claims were staked and are currently 100% owned by Heligold Canada Inc. of Hope, British Columbia.

The claims are in the Kamloops Mining Division. The NTS map sheet number is NTS 92I/4, co-ordinates are: latitude 50° 09'N and longitude 121° 50'W. Pertinent claim information is outlined below.

| <u>Claim Name</u> | <u>Tenure No.</u> | <u>No. of Units</u> | <u>Anniversary Date</u> |
|-------------------|-------------------|---------------------|-------------------------|
| Valley 200 | 349864 | 1 | August 25, 1999 |
| Valley 201 | 349865 | 1 | August 25, 1999 |
| Valley 202 | 349866 | 1 | August 25, 1999 |
| Valley 203 | 349867 | 1 | August 25, 1999 |
| Valley 205 | 349868 | 1 | August 25, 1999 |
| Valley 206 | 349869 | 1 | August 25, 1999 |
| Valley 207 | 350109 | 1 | August 29, 1999 |
| Valley 208 | 350110 | 1 | August 29, 1999 |
| Valley 209 | 350111 | <u>1</u> | August 29, 1999 |
| | Total | 9 | |

C. LOCATION AND ACCESS

The claims are situated in southwestern B.C. along the rugged coast range mountains. They are located 47km northwest of the community of Boston Bar which is on the Trans Canada Highway and the Fraser River canyon.

Access is via Boston Bar across the Fraser River, on a permanent bridge, to North Bend for a distance of 1.5km. From North Bend a secondary year-round access road is taken to the Nahatlatch River for 14.5km and crossing a permanent bridge. From this point, a road leading to the right at the Reo Rafting sign junction is taken, which heads northward past Keefers, an old trading post settlement, and follows the hydro power right-of-way and the Fraser Canyon for 15km to Kwoiek Creek. From here, a rugged 4-wheel drive, unmaintained logging road leading to the left or westerly, is taken. The road is followed up Kwoiek Creek and then up North Kwoiek Creek for a total distance of 18km. A branch of the logging road ends within 1km of the property. The author has hiked in from the end of this logging road which takes approximately 1.5hrs to reach the claims.

However, the gold workings and talc mineralization are located between 1900m-2200m elevation, and a less arduous journey to the claims is by helicopter. A possible tote road could be constructed in the future to reach the lower portions of the property.

D. INFRASTRUCTURE

The nearest infrastructure is Boston Bar which is within a 2.5 hour drive from the claims. Boston Bar is a logging and lumber mill community with a number of heavy equipment contractors based in the area. The CN Railway is about 20km east of the property along the Fraser River and is accessible by the Kwoiek Creek logging road. Sections of the road leading to the property is in rough condition since logging companies are not presently maintaining the road. It can however easily be upgraded to improve access.

Presently, for drilling and mineral exploration purposes, a helicopter company based in Hope can be hired to ferry both crews and equipment to and from the property. A return trip by helicopter is approximately 1 hour ferry time. Drilling equipment and personnel can be mobilized to the North Kwoiek Creek logging road by 4-wheel drive and ferried onto the site.

The claims are situated along the rugged Lilloote Mountain Range which forms part of the coast mountains. Elevation on the claims ranges between 1800m to 2500m with both the gold workings and the talc mineralization found along alpine regions. There is ample water supply for base camp exploration purposes. The area has a relatively short exploration season with snow free conditions usually between late June to early October.

E. BRIEF PROPERTY HISTORY

The Valley mineral claims cover several old gold and silver workings which were first documented in 1915 and again in 1929, by-then B.C. Minister of Mines. By 1929, numerous

open-cuts and a 13m adit had already been completed. This work was also further documented in 1935, by the Geological Survey of Canada (H.C. Horwood, Preliminary Report on the Nahatlatch Region, G.S.C. Paper 36-7).

An old horse pack trail which can still be observed winding along the alpine region, leads to the old workings. The trail initially started from Keefers (a former trading post along the Fraser River) a distance of some 25km. Remanents of a log cabin probably constructed during the early 1900s, can be found near timberline just below the workings. Activity on the property appears to have remained dormant during the war and post war eras. The author was informed that some attempt was made in the mid-1960s to work the gold showings but the project was halted.

In 1970, an area immediately east of the property was staked and worked by Magnetron Mining Ltd for potential asbestos. The surveys delineated talc and tremolite mineralization. In 1977, the old gold workings and surrounding ground was staked by Aquarius Resources Ltd. Between 1977 and 1982, the company conducted geological and geochemical surveys and the author participated in some of this work. Assessment reports during this period document encouraging results including samples taken from the quartz vein in the adit which assayed as high as 0.227 oz/ton gold. In 1984, the claims lapsed and the ground was staked and subsequently transferred to Westerra Resources Ltd. Between 1985-87, the author conducted geological and limited geophysical (VLF-EM) surveys for Westerra. The surveys produced encouraging results which outlined an EM anomaly over the gold workings. As well, chip samples collected from the old trench above the adit assayed 0.338 oz/ton gold across 2.5m. A large exposed body of talc was also discovered by Westerra, located approximately 600-800m east of the workings. The company mapped, trenched and sampled the talc zone. Several continuous chip samples collected

from the trenches and analysed for talc returned encouraging values, ranging between 41.6% and 57.6% talc.

The claims eventually expired and the ground remained opened until August 1996, when Heligold Canada Inc. staked the Valley claims. The author was then subsequently retained by Heligold to examine the claims

F. FIELD SURVEY PROCEDURES

The author was flown to the claims via a helicopter based in Hope, and an overnight camp established near the old workings. Three (3) days were spent tying in the old workings and trenches. Local bed rock exposures and trenches were also tied in at a scale of 1:500 and 1:1000. The centre claim line with a combined hip chain - brunton - altimeter survey was used for control and tie-ins. Helicopter was briefly utilized for orientation to locate some of the Valley initial and final claim posts as well as some of the trenches. The author's knowledge from previous work in the area was also an advantage.

G. GEOLOGY AND MINERALIZATION

Geology:

The geology underlying the claims consists of at least 2 structurally complicated rock units. It includes part of the Bridge River Complex of Permian to Jurassic age, in fault contact with the Relay Mountain Group of Jurassic-Cretaceous age. The fault which separates the 2 rock units, forms the northern extension of a fault system referred to as the Kwoiek Creek Fault (J.W.R.

Monger, G.S.C., 1989, Geology of Hope and Ashcroft Map Areas, British Columbia). The entire complex north of the property is then intruded and cut off by the coast range granites of Cretaceous age. The mineral claims straddle and follow a section of the Kwoiek Creek fault system.

The Kwoiek Creek Fault system is a major structural belt represented by a northwest trending, discontinuous band of serpentine that is traceable for some 30km along strike. The Kwoiek serpentine belt-fault system can be traced southeast from the Nahatlatch River area and striking northwest through the claims where it begins to swing northeasterly before being truncated by the coast range granites. The northwest extension of the fault system, as can be observed within the claim area, splits into a complex series of subparallel structures and imbricated faults.

The belt is an important structure because it is spatially related to a number of precious metal (gold-silver) and industrial mineral (talc-magnesite) occurrences. It also structurally resembles that of other gold related belts found in southwestern B.C. namely, the Coquihalla Gold Belt to the southeast and the Bralorne Gold Belt to the northwest.

The Bridge River rocks found on the claims consist of: faulted serpentine, and a thick sequence of steeply dipping, undifferentiated andesitic volcanics and phyllites, which have been partly metamorphosed to actinolite-chlorite schist and mica schist facies. The serpentine is also associated with a number of talc lenses. Both the talc and serpentine occur as discontinuous lensoid bodies along a complex series of imbricated thrust faults. The Relay Mountain Group consists of a thick sequence of steeply dipping phyllites and argillites. These rocks locally are not as structurally complex and faulted as the Bridge River unit.

Both the Bridge River and Relay Mountain rock units are intruded by granites along the northern boundary of the claims. Granites intruding the metasediments may have been partly responsible for generating the mineralization found in the area. Localized thermal contacts and associated mineralized quartz veins can be observed at or near the granite-phyllite contact.

Vein Mineralization:

The claims cover a number of old gold and silver showings along with more recently discovered talc mineralization (see figures 3, 4 & 5). The author, while conducting work for Aquarius Resources Ltd. (1982) and Westerra Resources Ltd. (1987), had the opportunity examine the workings and mineralization.

The main workings have exposed a mineralized quartz vein which is hosted in altered phyllites. An adit which was sunk some time during the early 1900s, tested the vein for 13m. The vein in the adit is 1.8m wide. Several samples obtained by the author in 1987, both from the adit and from an open-cut above the adit, returned economic values in gold. Three (3) continuous chip samples taken from inside the adit assayed: 0.235 oz/ton (near the portal entrance), 0.132 oz/ton (from the back) and, 0.088 oz/ton (at the face). A chip sample from the open-cut across 2.5m assayed 0.338 oz/ton (see figure 3).

The quartz vein is hosted in and concordant with steeply dipping phyllites. The vein, in part, resembles a sandstone orthoquartzite and displays a granular sugar-texture. Localized thermal contact developed by the vein has altered the phyllite to a more chloritic schist. At the contact walls the phyllite is partly altered to garnetiferous-actinolite schist. Hydrothermal quartz veins cut the primary (orthoquartzite) vein to form a network quartz vein system. The vein system is

mineralized with disseminated sulphides. Higher concentration of sulphides can be along the contact walls.

An iron oxidized tailings pile is located just outside the adit entrance. Most of the samples observed from the tailings are well mineralized. The sulphide assemblage consists predominately of arsenopyrite, with lesser pyrite and pyrrhotite. Occasional fine visible gold can be observed with the sugary textured quartz. The vein because of its granular texture appearance, may have provided a porous channel way for migrating hydrothermal auriferous-bearing solutions.

Although the property at this elevation (2200m) has abundant rock outcrop, the vein itself has limited exposure along strike. Much the exposed vein is centered around the workings and for about 50m along strike. It is covered by both talus and thin alpine glacial till along strike. A limited VLF-EM survey conducted over the workings by Westerra Resources in 1987, traced an EM conductor some 100m eastward along strike of the vein. There other narrower and irregular quartz veins to the south of the main vein system which are hosted in argillites and phyllites, some appear to be remobilized quartz veins. Samples collected from old trenches have marginal to low gold values. Mineralization generally consists of minor pyrite and pyrrhotite.

Another quartz structure occurs near the northwest boundary of the property. The vein is hosted in phyllites and argillites and it is immediately adjacent to a granite contact. Although the vein appears to be on strike with the main vein system and gold workings, located some 300m to the east, it does not display the same characteristics. There is limited sulphide mineralization with minor disseminated blebs of tetrahedrite (copper-silver). A "selected" sample collected from one of the old trenches by the author in 1987, assayed 15.10 oz/ton silver with low gold. The vein is

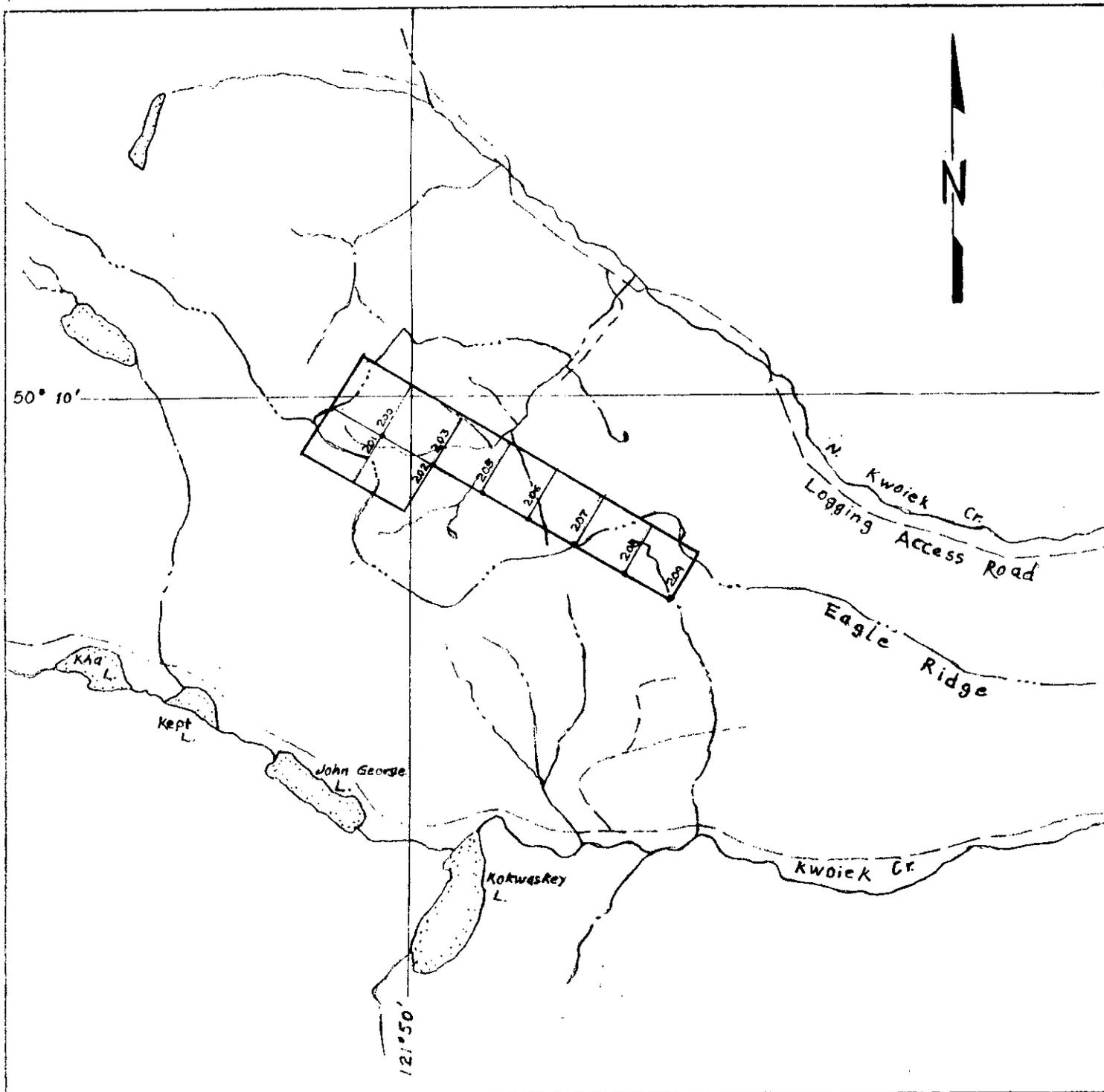
lost in talus cover along strike.

Talc Mineralization:

Substantial amount of crude talc mineralization was discovered on the claims by the author during the 1987 surveys. The talc is closely associated with the serpent belt which forms part of the above-noted Kwoiek Creek fault structure.

One prominent talc lense occurs about 150m north of the gold workings. It is well exposed along a steep cliff face and as a result is some what difficult to access. The lense is covered by talus and morainal till at the base. However, further to southeast and along strike, more lensoid bodys of crude talc were found. The talc lenses are controlled by a fault-shear structure (a splay of the Kwoiek Creek fault system) and are hosted in steeply dipping phyllite and chloritic schist. A large zone of crude talc was also discovered further to the east and at lower elevation (see figure 5). The zone is probably related to, and appears to be, a faulted or offset section of the fault-shear and talc lense sytem.

Previous mapping and trenching of the zone has delineated a potentially large volume of crude talc. The zone outcrops for at least 200m along strike and is open further to southeast before dropping down into a small creek valley. It is at least 80m wide. On outcrop, the talc displays a rusty cream colour and has a thin crust of oxidized coating. Fresh samples are greyish-green in colour and a matrix of fine light-green, pearly lustre talc flakes can be observed. Other accessory minerals including magnesite and iron carbonates (siderite/ankerite) are associated with the talc. In 1987, the author collected 4 continuous chip samples from 4 different trenches over the zone



HELIGOLD CANADA INC.

CLAIMS MAP
(VALLEY 200-203 and 205-209)

Kamloops Mining Division
NTS 92I/4

SCALE 1 : 50,000

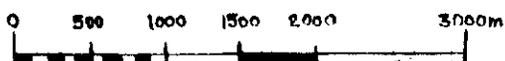
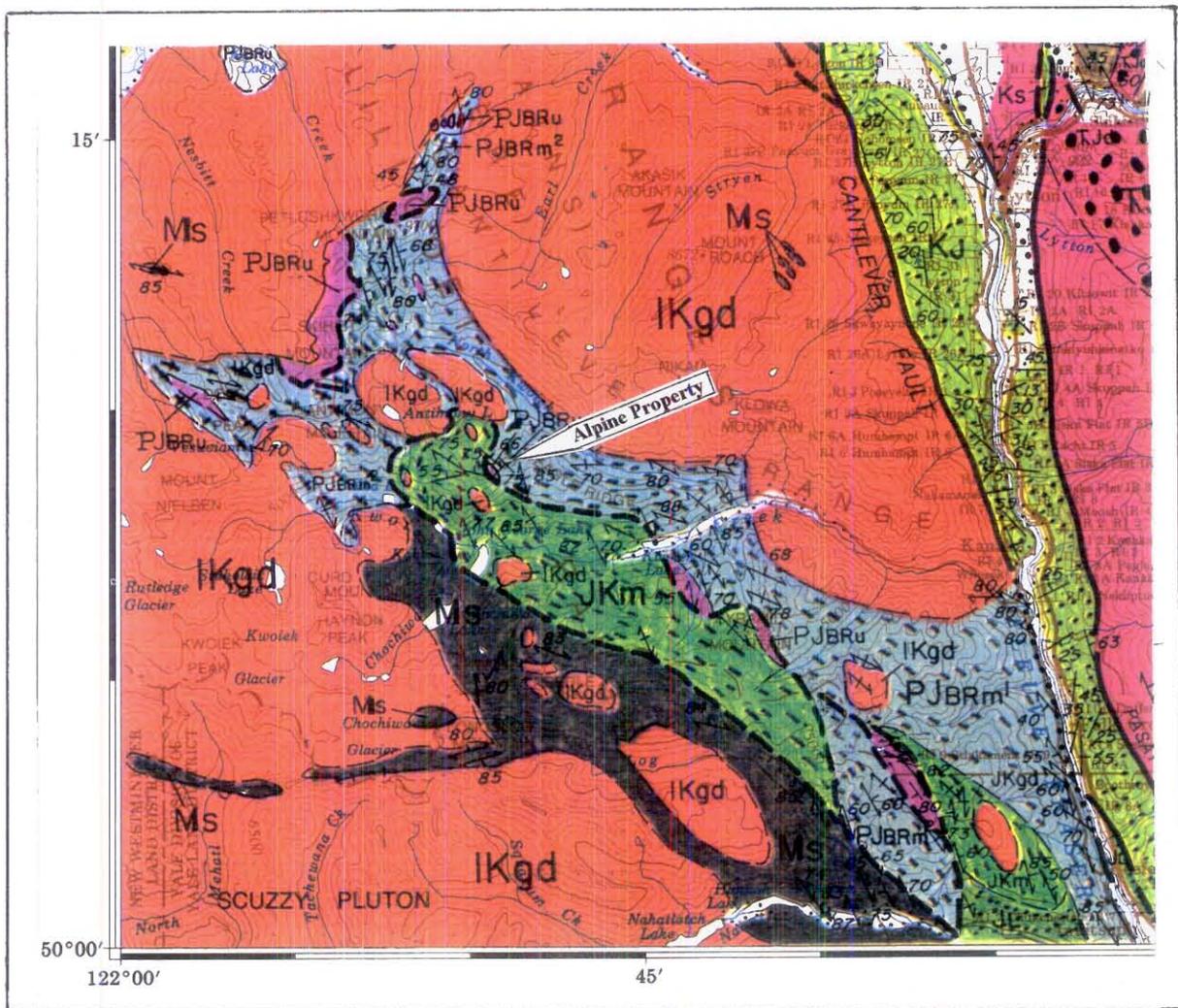


Figure 2

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MAY, 1997



Ms Garnet-biotite, kyanite and sillimanite schist, local amphibolite

CRETACEOUS
LATE CRETACEOUS

IKgd,qm Granodiorite (gd), quartz monzonite (qm)

EARLY AND MIDDLE CRETACEOUS
JACKASS MOUNTAIN GROUP

KJ Sandstone, argillite, conglomerate

JURASSIC AND CRETACEOUS
RELAY MOUNTAIN GROUP (JKm-JKR)

JKR Argillite, siltstone, sandstone, local conglomerate

JKm Phyllite, semischist, local conglomerate

PERMIAN TO JURASSIC

BRIDGE RIVER COMPLEX

PJBR Radiolarian chert, argillite, basalt, pillow basalt, local carbonate, gabbro and serpentinite; typically disrupted with broken formation

PJBRm Lower greenschist facies part of BRIDGE RIVER COMPLEX, phyllite, quartzose phyllite, siliceous and chlorite schist

PJBRm² Upper greenschist-lower amphibolite part of BRIDGE RIVER COMPLEX, siliceous schist, actinolite schist, local biotite-garnet schist, commonly containing concordant and cross-cutting Eocene felsic dykes and sills

PJBRu Ultramafic rock, local gabbro

- Geological boundary (defined, approximate, assumed)
- Bedding, tops known (inclined, vertical)
- Schistosity, gneissosity, cleavage foliation (inclined, vertical, unknown)
- Lination, axis of minor fold, mineral/clast elongation (horizontal, inclined)
- Major fold axis (syncline, anticline, overturned fold; arrow indicates plunge)
- Lineament (from airphoto)
- Fault (defined and approximate, assumed and extension beneath drift)

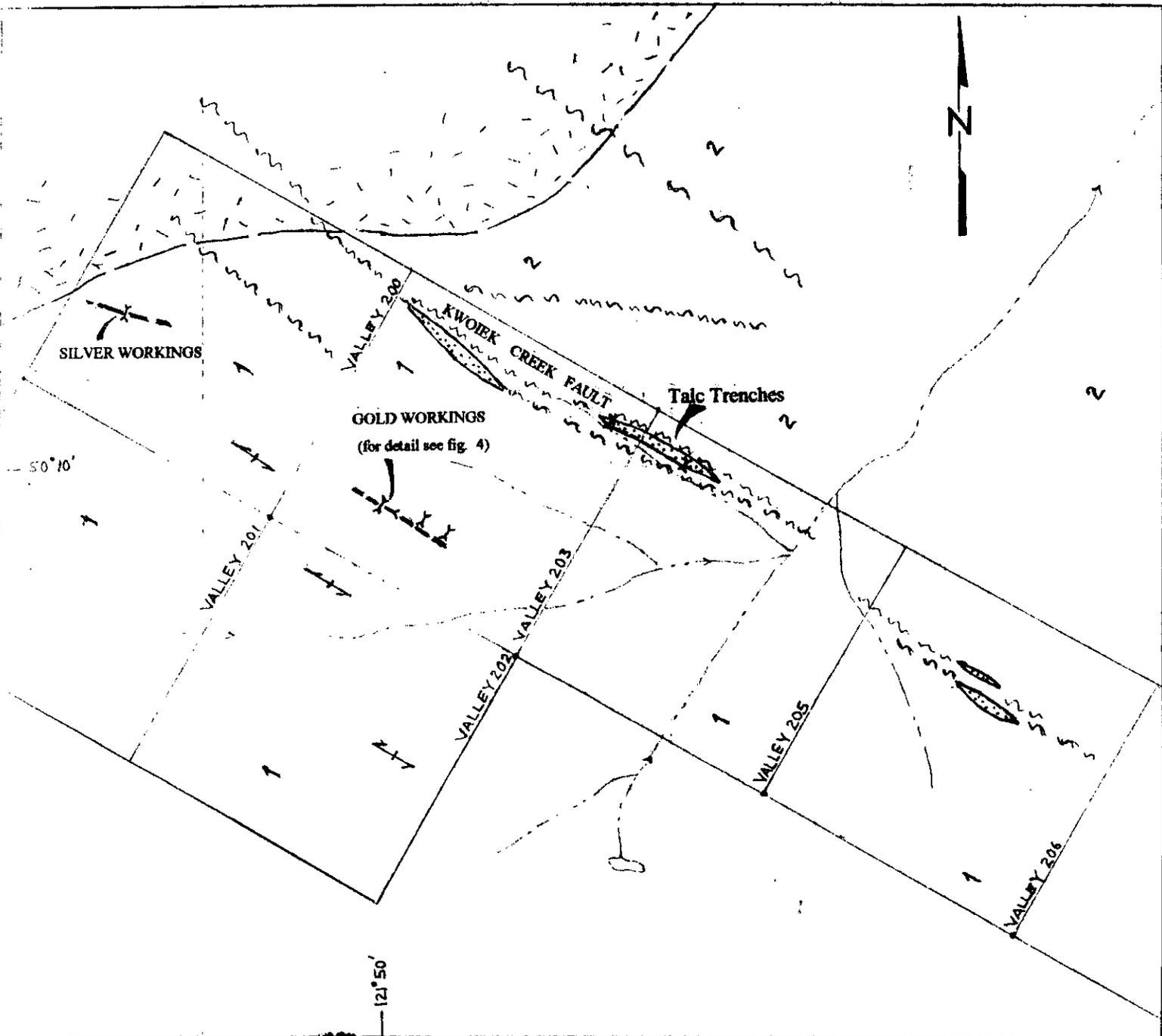
HELIGOLD CANADA INC.

VALLEY MINERAL CLAIMS

REGIONAL GEOLOGY

Figure 1A Scale 1 : 250,000

Cardinal Geoconsulting Ltd. May, 1997
(after JWH Monger, GSC, 1989)



LEGEND:



Granodiorite



RELAY MOUNTAIN GROUP
Phyllite and Argillite



BRIDGE RIVER COMPLEX
Andesite, Phyllite, Chlorite Schist



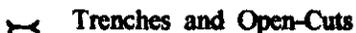
Talc Zone, Talc Schist

Quartz Vein (Gold/Silver)

Workings:



Adit



Trenches and Open-Cuts



Fault System



Foliation of beds
(steeply dipping)

HELIGOLD CANADA INC.

VALLEY CLAIMS

GENERAL GEOLOGY

(GOLD - SILVER and TALC MINERALIZATION)

Kamloops Mining Division

NTS 92I/4

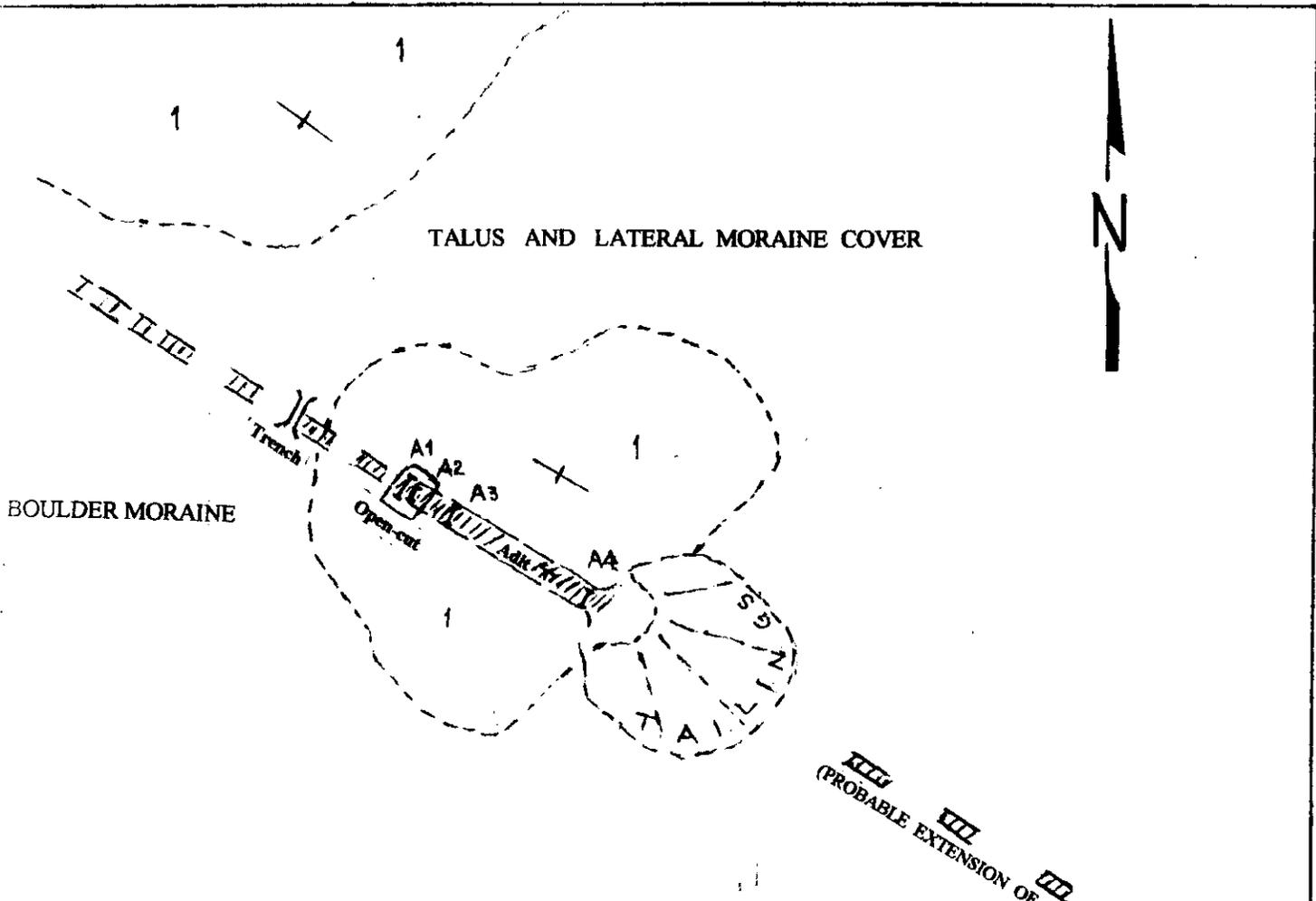
Scale 1 : 10,000



Figure 3

CARDINAL GEOCONSULTING LTD.

MAY, 1997



ADIT CHIP SAMPLES:

| No. | Length(m) | Gold oz/ton |
|-----|---------------------|-------------|
| A1 | 2.5 Open-Cut | 0.338 |
| A2 | 1.5 Face | 0.088 |
| A3 | 1.5 Back | 0.132 |
| A4 | 1.5 Portal Entrance | 0.235 |

- 1 Phyllite, Chlorite schist, Garnetiferous schist
-  Quartz vein system: arsenopyrite, pyrite and pyrrhotite
-  Strike and Dip of bedding

Scale 1 : 500



HELIGOLD CANADA INC.
VALLEY CLAIMS

OLD (circa 1915) GOLD WORKINGS
 (ADIT, OPEN-CUT, TRENCH)

Kamloops Mining Division
 NTS 921/4

Figure 4

CARDINAL GEOCONSULTING LTD.

MAY, 1997

Figure 5

HELIGOLD CANADA INC.

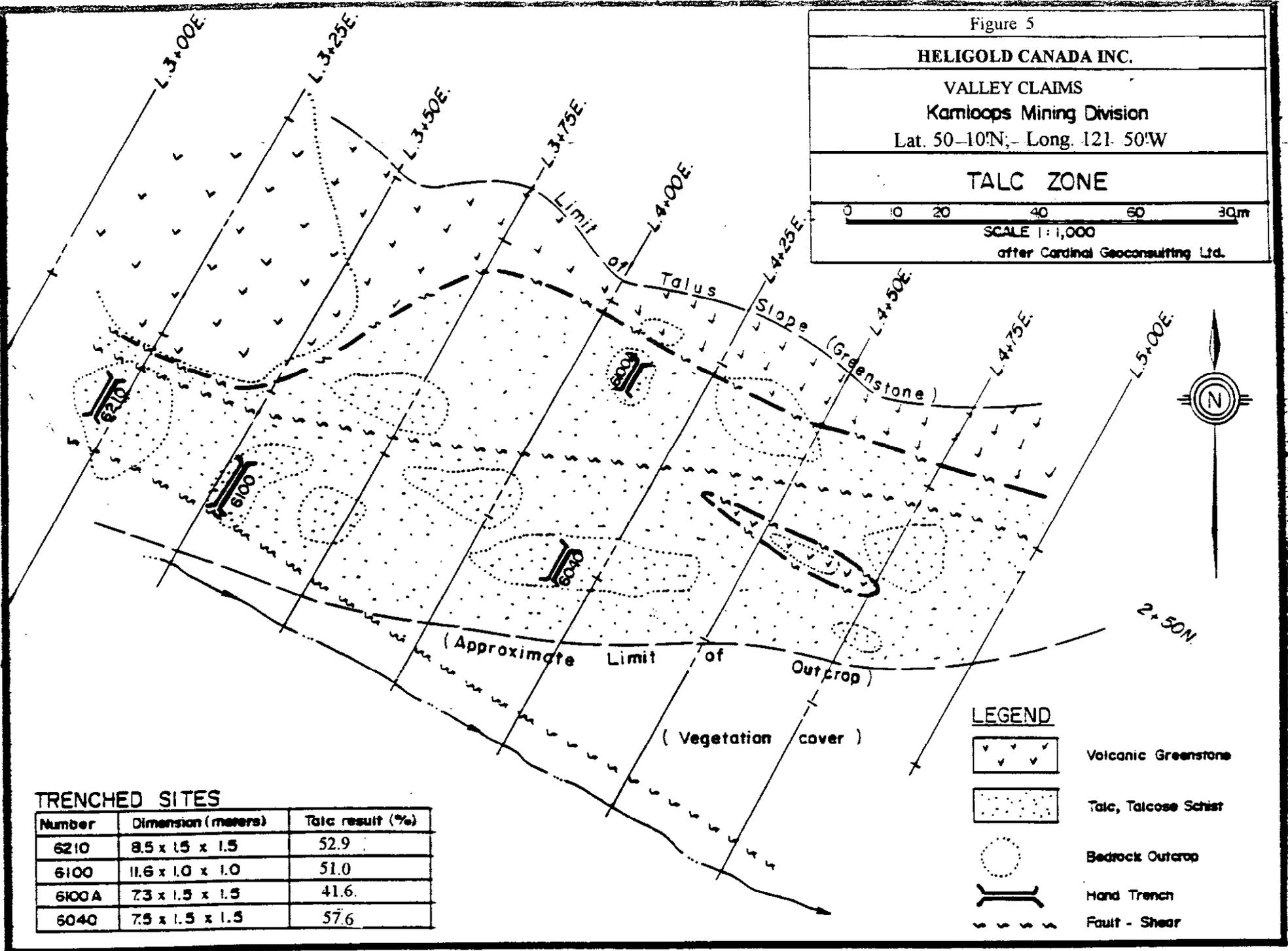
VALLEY CLAIMS
 Kamloops Mining Division
 Lat. 50-10'N; - Long. 121- 50'W

TALC ZONE

0 10 20 40 60 80m

SCALE 1:1,000

after Cardinal Geoconsulting Ltd.



TRENCHED SITES

| Number | Dimension (meters) | Talc result (%) |
|--------|--------------------|-----------------|
| 6210 | 8.5 x 1.5 x 1.5 | 52.9 |
| 6100 | 11.6 x 1.0 x 1.0 | 51.0 |
| 600A | 7.3 x 1.5 x 1.5 | 41.6 |
| 6040 | 7.5 x 1.5 x 1.5 | 57.6 |

and were shipped to the Alberta Research Council in Edmonton for analysis. These samples returned encouraging values of talc which ranged between 41.6% to 57.6%.

G. CONCLUSIONS

The Valley claims consist of 9, 2-post contiguous units. Access is from Boston Bar about 2.5 hours drive, along series of forestry access roads or, by helicopter from Hope.

The claims cover a portion of the northern extension of the Kwoiek Creek Fault, a major structural-serpentine belt. The belt is known to host a number of precious metal occurrences including several major deposits of industrial mineral - talc/magnesite.

Several old gold and silver workings are found on the claims. A gold-bearing quartz vein initially explored around 1915, warrants detail exploration including exploratory drilling. The vein has previously been surveyed and sampled by various companies over the years. Although the results from these surveys proved encouraging no drilling has ever been carried out to test the vein structure. Previous surveys have also defined several talc lenses which indicate potentially significant volumes of crude talc.

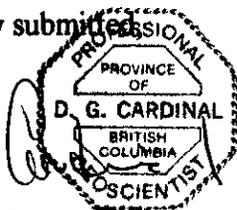
For future field surveys, the author recommends detail grid control mapping followed by exploratory diamond drilling to test both the quartz vein sytem and the talc zones.

H. STATEMENT OF WORK COST BREAKDOWN

Following is the cost breakdown for field work conducted and data compiled into report form by the author.

| | |
|--|---------------------------|
| Geological field surveys, 3 days @ \$300 per day (Field work conducted August 5, 6 & 7, 1997) | \$ 900.00 |
| Helicopter support | 750.00 |
| Report compilation, plotting and word processing | 1,050.00 |
| Total expenses incurred | <u>\$ 2,700.00</u> |

Respectfully submitted,



D.G. Cardinal, P.Geol.

Cardinal Geoconsulting Ltd.

I. REFERENCES

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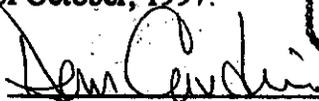
Monger, J.W.H., 1989, Geology of Hope and Ashcroft Map Areas, British Columbia.

STATEMENT OF QUALIFICATIONS

I, DANIEL G. CARDINAL, of 65661 Birch Trees Drive, mailing address P.O. Box 594, postal code VOX 1L0, in the town of Hope, in the Province of British Columbia, do hereby certify:

1. I am a graduate of the University of Alberta, BSc., 1978, and the Northern Alberta Institute of Technology, Exploration-Geology, Technologist diploma, 1972.
2. I am a member in good standing with the: Association of Professional Engineers and Geoscientists of British Columbia ; Association of Professional Engineers, Geologists Geophysicists of Alberta ; and Fellow of the Geological Association of Canada.
3. I have practiced my profession continuously for the past 20 years in western Canada and the United States and have experience in exploration for base and precious metals, industrial minerals and oilsands projects with such companies as: Noranda, Cominco, Aquarius Resources, Westerra Resources Ltd. Syncrude Canada Ltd. and Highland Talc Minerals Ltd.
4. I am an independent consulting geologist employed by Cardinal Geoconsulting Ltd. at 451 Wallace Street, Hope, B.C.
5. I am the author of this report entitled "Geological Assessment Report on the Valley Mineral Claims (Valley 200-203 & 205-209)", dated October 4th, 1997.
6. I do not have any direct or indirect interest in the Valley Claims.

Dated at Hope, British Columbia, this 4th day of October, 1997.



D.G. Cardinal, B.Sc., P.Ge., F.G.A.C.