

GEOLOGICAL
ASSESSMENT REPORT

LOG NO:	JUN 16 1993	RD.
ACTION:		
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on the

GOLDEN LIME 1&2 MINERAL CLAIMS

KAMLOOPS LAKE AREA

KAMLOOPS MINING DIVISION

by

MURRAY MORRISON, B.Sc.

Claims: Golden Lime 1&2 (2 units)

Location: The Golden Lime Mineral Claims are situated 2 km south of Kamloops Lake, 25 km due west of Kamloops, B.C.
Lat. 50°43'; Long. 120°42';
N.T.S. 92-I-10E

Owner: Murray Morrison

Operator: Murray Morrison

Date Started: March 13, 1993

Date Completed: March 14, 1993

Kelowna, B.C.

GEOLOGICAL BRANCH May 25 1993
ASSESSMENT REPORT

22,903

TABLE OF CONTENTS

	<u>PAGE</u>
Summary	1
Introduction	4
Location and Access	5
Physical Features and Climate	5
Claim Status	7
History	7
Regional Geology and Mineralization	8
Property Geology and Mineralization	11
Introduction	11
Summary	11
Upper Triassic Nicola Group Metasediments (Unit 1)	12
Late Cretaceous(?), or Early Tertiary(?) Felsic Dykes (Unit 2)	15
Late Cretaceous(?), or Early Tertiary(?) Rhyolite(?) Dykes (Unit 2c)	16
Structural Geology and Faulting	16
Alteration and Mineralization	17
The Main Replacement Zone on the Golden Lime 1 Mineral Claim	19
The 1993 Mapping and Sampling Program	19
Results	19
Discussion	21
Conclusions and Recommendations	23
References	25

Continued . . .

TABLE OF CONTENTS - Continued

		<u>PAGE</u>
Appendix A	Description of Rock Samples Collected During 1993 Program	27
Appendix B	Geochemical Analysis Certificate	29
Appendix C	Statement of Qualifications	30
Appendix D	Statement of Expenditures	31

ILLUSTRATIONS

Figure 1	Location Map (British Columbia)	3
Figure 2	Claims and Access	6
Figure 3	Regional Geology	9
Figure 4	Geology - Golden Lime 1 Mineral Claim (1:2500 scale)	13
Figure 5	Geology - Golden Lime 2 Mineral Claim (1:2500 scale)	14
Figure 6	Golden Lime 1 Mineral Claim Carbonate Replacement Zones	20

SUMMARY

The Golden Lime Property located 2 km south of Kamloops Lake, or 25 km due west of Kamloops hosts several carbonate/silica replacement zones within Upper Triassic Nicola Group volcanoclastic metasediments. The zones are believed to represent the upper (low temperature) horizons of strong Late Cretaceous(?), or Early Tertiary(?) epithermal systems that could contain precious metal values at depth.

The property, staked by the writer in March, 1981, has been optioned to Placer Development (1981-1984) and to Goldstone Exploration Ltd. (1984-1988), both of Vancouver. Placer Development conducted a widely-spaced soil geochemical survey over the property in 1981, and in 1984 allowed their option to lapse. Goldstone Exploration Ltd. drilled one vertical reverse circulation drill hole into the largest replacement zone on the Golden Lime #1 mineral claim, and proved that the zone extends to 80 metres in depth. However, the precious metal values obtained from intercepts of the replacement zone were insignificant and Goldstone Exploration allowed their option to lapse.

A ground magnetometer survey conducted over the property by the writer in 1989 confirmed low magnetic readings over the largest replacement zones.

Geological mapping in 1991 at a scale of 1:2500 yielded some evidence to suggest that a northeast-striking fault zone called, "the Brussels Fault Zone," may be a structural control for most of the carbonate/silica epithermal replacement zones on the property. The mapping also indicated that a second, later, northwest-striking fault, called "the Main Valley Fault" may have offset the Brussels Fault Zone by as much as 75 metres near the centre of the Golden Lime 1 mineral claim.

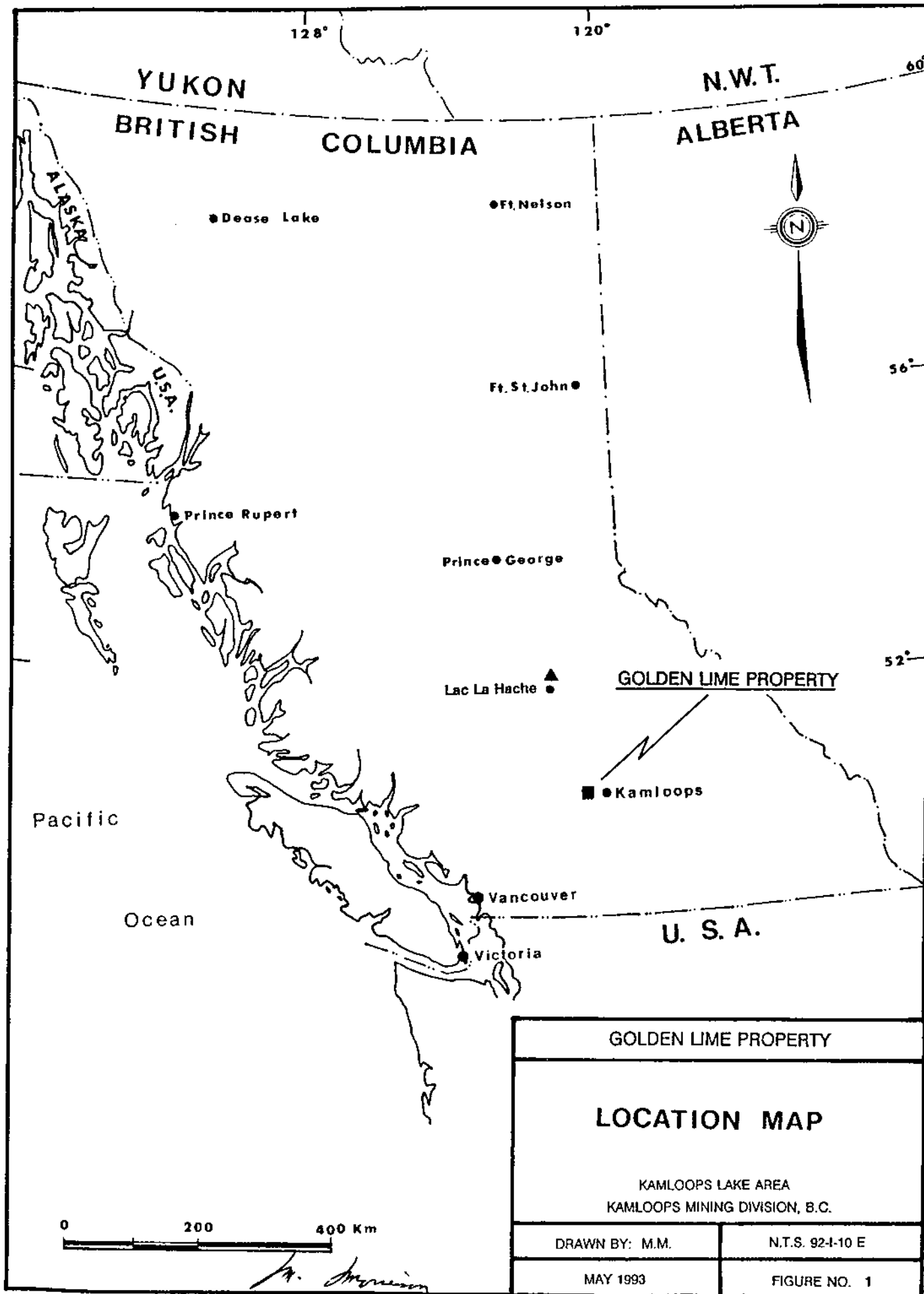
Continued . . .

SUMMARY - Continued

The Newmont Showing located 550 metres southwest of the Main Replacement Zone on the Golden Lime 1 mineral claim also falls within the Brussels Fault Zone if allowance for another late northwest-striking fault is made (Morrison, 1990). It is suggested that the carbonate replacement zone which is cut by a narrow vertical breccia zone with quartz and chalcedony veining at the Newmont Showing could be genetically related to the Main Replacement Zone on the Golden Lime 1 mineral claim. The Newmont Showing has produced samples of pyrite, stibnite, galena and sphalerite which have assayed 3.2 g/tonne gold and 65 g/tonne silver. It is considered that the much larger Golden Lime replacement zone could host a sizeable precious metal deposit at depth.

The single vertical reverse circulation drill hole (RCDH 85-1) drilled into the carbonate/silica replacement zone at grid 9+50S, 10+75W in 1985 is not considered an adequate test of the large zone. This year's data indicates that the drill hole was drilled at a distance of 80 metres from the breccia zone at the north end of the Main Replacement Zone, which is now considered to mark the main conduit for hydrothermal solutions on the property.

A recommendation has been made to drill at least four reverse circulation drill holes from two sites to test the brecciated target zone at depths of 30 and 60 metres and that the drill cuttings be analyzed for base and precious metals.



INTRODUCTION

This report, written for government assessment work requirements, discusses the results of a detailed geological mapping and sampling program conducted over a portion of the Golden Lime 1 mineral claim by the writer during March, 1993.

The Golden Lime 1&2, two-post mineral claims, owned by the writer, were surrounded by a larger claim group "the Brussels Claim Group" staked by the writer in 1981. The Brussels Claim Group (now lapsed) was comprised of 7 modified-grid mineral claims (37 units), located 2 km south of Kamloops Lake, 25 km due west of Kamloops, B.C.

The large claim group was originally staked to cover a widespread system of highly faulted and carbonate/silica replaced zones that were found to occur within metasedimentary rocks of the Upper Triassic Nicola Group. The Golden Lime 1 mineral claim, in particular, was staked to cover a zone of intensely faulted and replaced rock measuring 60 by 90 metres in surface dimensions.

A single Reverse Circulation Drill Hole on the Golden Lime 1 mineral claim in 1985 proved that the strong, near-surface carbonate (ankerite) replacement grades into strong silica replacement with depth (Morrison, 1986).

The apparent carbonate-to-silica zoning observed in the 1985 drill hole results is believed to indicate that higher temperature silica (with possible associated precious metal values) may occur at some moderate depth below the exposed replacement zone.

This year's geological mapping, at a scale of 1:500, was conducted over the main replacement zone on the Golden Lime 1 mineral claim in an attempt to find the direction of origin of the replacement solutions. Fault directions were mapped, and six samples of bedrock were collected from silicified replacement zones (specifically) for geochemical analysis.

Continued . . .

INTRODUCTION - Continued

The ultimate purpose of this year's work program was to select drill targets to test the replacement zone for epithermal precious metals.

Figures 4&5, illustrating the geology of the Golden Lime 1&2 mineral claims at a scale of 1:2500 have been reproduced from the 1991 Assessment Report to show the location of this year's detailed geological mapping relative to the mineral claim boundaries. Figure 6, accompanying this report, outlines the replacement zone mapped this year and shows the position of the six bedrock sample sites.

LOCATION AND ACCESS

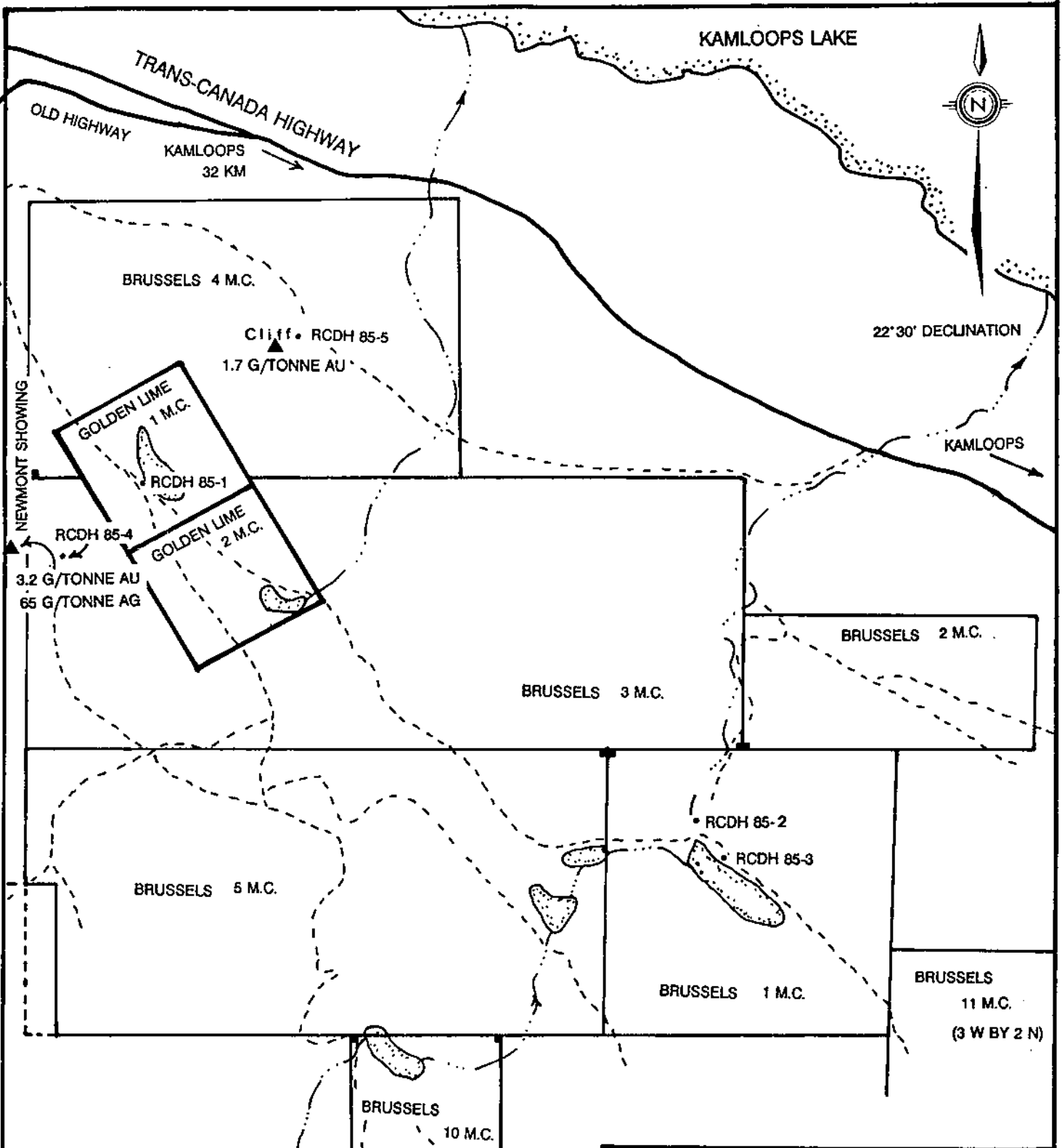
The Golden Lime 1&2 mineral claims lie 2 km south of Kamloops Lake, or 1 km south of the Trans-Canada Highway, 25 km due west of Kamloops, B.C. (Lat. 50°43'; Long. 120°42'; N.T.S. Map 92-I-10E). Access to the property is via a segment of old highway which leaves the Trans-Canada Highway at a point 32 km west of Kamloops, or 3 km southeast of the Savona Highway Lookout. An access road runs south 1 km from the old highway to the Golden Lime mineral claims as illustrated on Figure 2.

PHYSICAL FEATURES AND CLIMATE

The Golden Lime mineral claims overlie a shallow northwesterly trending valley at the 600 metre elevation, 2 km south of Kamloops Lake (at 350 m elevation). Vegetation on the property is typical of that of the bunch grass and sagebrush covered hills surrounding Kamloops Lake. Large Ponderosa pine also dot the landscape, while Douglas fir are restricted to thick groves on northeastern slopes where moisture is better retained.

The climate immediately adjacent Kamloops Lake is semi-arid. Precipitation equals less than 30 cm per year; much of it falling as

Continued . . .



LEGEND

- ACCESS ROADS, DIRT
- INTERMITTENT CREEKS
- LAKES
- REVERSE CIRCULATION DRILL HOLES (1985)
- LEGAL CORNER POSTS

J.M. Morrison

0 200 400 600 METRES

GOLDEN LIME PROPERTY

GOLDEN LIME 1+2 MINERAL CLAIMS
CLAIMS AND ACCESS

KAMLOOPS LAKE AREA
KAMLOOPS MINING DIVISION, B.C.

DRAWN BY: M.M.

N.T.S. 92-1-10 E

MAY 1993

FIGURE NO. 2

PHYSICAL FEATURES AND CLIMATE - Continued

late spring rain. The winter snow pack rarely exceeds 25 cm, and generally covers the property from late November until early March.

A small lake located near the southeastern corner of the Golden Lime 2 mineral claim provides water for grazing cattle throughout the summer season. The lake level has been raised by the building of an earthen dam.

CLAIM STATUS

The Golden Lime 1&2 mineral claims are 2-post mineral claims which were staked by the writer on March 16, 1981 (Tenure Nos. 216982, 216983). The claims are presently owned 100% by the writer, M. Morrison of Kelowna, B.C.

The position of the Initial Post for the Golden Lime 1&2 mineral claims was verified by a government Claims Inspector in 1981.

The new expiry date for the Golden Lime 1&2 mineral claims (based on the acceptance of this Assessment Report) is March 16, 1996.

HISTORY

The Golden Lime 1&2 mineral claims were staked by the writer March 16, 1981 to cover a large rusty carbonate replacement zone found within Nicola Group rocks during routine prospecting. The mineral claims (inclusive within the Brussels Group of Claims) were optioned to Placer Development Ltd. soon after staking.

During 1981 crews from Placer Development Ltd. conducted a widely spaced (25x100 to 250 metre) soil geochemical survey over the property. Elements typical of epithermal systems (mercury, antimony, and arsenic) were found in moderate concentrations on and

Continued . . .

HISTORY - Continued

near the Golden Lime mineral claims, but no follow-up programs were conducted by Placer Development Ltd. and the mineral claims were returned to the writer in April, 1984.

The property was next optioned to Goldstone Exploration Ltd. of Vancouver in May 1984, and during May 1985 Goldstone Exploration conducted a reverse circulation percussion drill program on their Brussels property with one drill hole of 86.0 metres being drilled into the carbonate replacement zone on the Golden Lime 1 mineral claim. The drill hole intercepted 79.9 metres of intense carbonate and/or silica replaced Nicola metasediments before passing into a quartz monzonite intrusive. No significant precious metals were encountered in the drill hole and Goldstone Exploration allowed their option to lapse in 1988.

Ground Magnetometer and Geological Mapping Surveys have been conducted over the Golden Lime 1&2 mineral claims by the writer in recent years (Morrison, 1989 & 1991).

REGIONAL GEOLOGY AND MINERALIZATION

The Savona Mercury Belt, illustrated on Figure 3 accompanying this report, extends 50 km from Criss Creek on the North, to Tunkwa Lake on the South. Several of the historic mercury occurrences are located within a 15 km radius of Savona near the western end of Kamloops Lake.







The map indicates that the mercury prospects occur within either Upper Triassic Nicola Group or Cretaceous(?) metavolcanics and metasediments that lie in close proximity to the Copper Creek Intrusions.



The mercury showings are all associated with carbonate replacement zones within highly faulted country rock. The mercury content at

Continued . . .

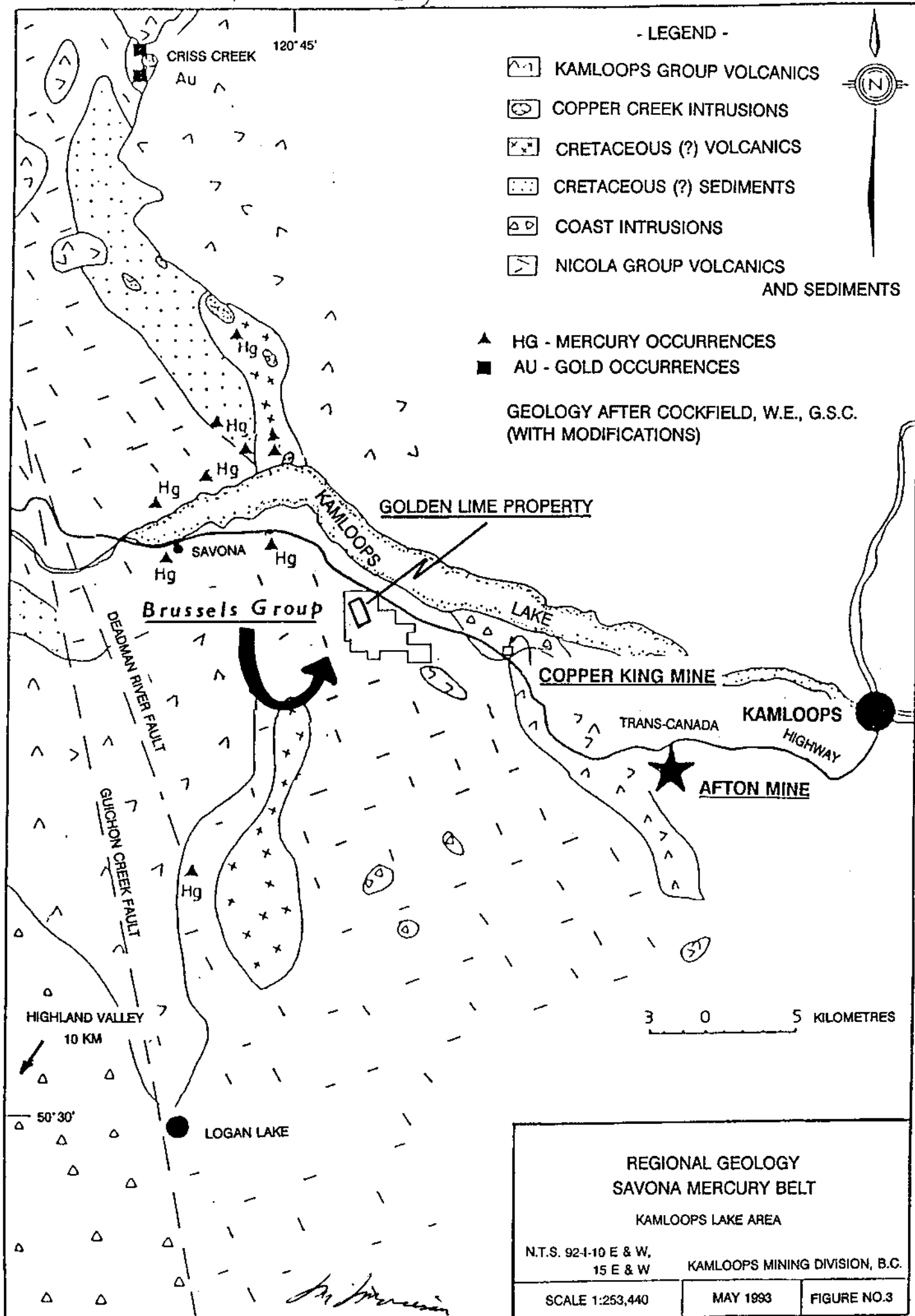
- LEGEND -



-  KAMLOOPS GROUP VOLCANICS
-  COPPER CREEK INTRUSIONS
-  CRETACEOUS (?) VOLCANICS
-  CRETACEOUS (?) SEDIMENTS
-  COAST INTRUSIONS
-  NICOLA GROUP VOLCANICS AND SEDIMENTS

-  HG - MERCURY OCCURRENCES
-  AU - GOLD OCCURRENCES

GEOLOGY AFTER COCKFIELD, W.E., G.S.C. (WITH MODIFICATIONS)



REGIONAL GEOLOGY
 SAVONA MERCURY BELT
 KAMLOOPS LAKE AREA

N.T.S. 92-1-10 E & W,
 15 E & W KAMLOOPS MINING DIVISION, B.C.

SCALE 1:253,440 MAY 1993 FIGURE NO.3

REGIONAL GEOLOGY AND MINERALIZATION - Continued

the Savona mercury prospects is generally much less than 0.1%, and non-economic. However, it is the large size of some of the carbonate replacement zones and the intensity of repeated faulting that suggests that the mercury prospects could represent the upper horizons of strong epithermal systems which could host precious metal deposits at depth.

Precious metals and base metals have been found within chalcedony and quartz veins cutting some of the replacement zones in the region, suggesting that at least some of the replacement zones do represent strong Late Cretaceous or Early Tertiary mineralized epithermal systems. Gold, in particular, has been found within quartz veins at Criss Creek (see Figure 3).

The Newmont Showing, discovered by Newmont Exploration geologists in 1982, 500 metres west of the Golden Lime property, represents another example of precious metal and base metal mineralization that occurs within sheared chalcedony and quartz veins associated with a carbonate replacement zone within Nicola Group Metasediments. Sulphide minerals at the Newmont Showing include pyrite, galena, stibnite, sphalerite, arsenopyrite and tetrahedrite.

Another occurrence of anomalous gold (1755 ppb) and arsenic (400 ppm) values associated with a carbonate replacement zone is located 400 metres northeast of the Golden Lime 1&2 mineral claims on a steep bluff (see Figure 2).

PROPERTY GEOLOGY AND MINERALIZATION

INTRODUCTION

The geology of the Golden Lime 1&2 mineral claims was mapped at a scale of 1:2500 in 1991 and the 1991 maps have been reproduced for this report (see Figures 4&5). A description of the 1991 geology has also been copied for this report.

This year's detailed (1:500 scale) geological mapping was confined to the main carbonate/silica replacement zone on the Golden Lime 1 mineral claim (see Figure 6). A discussion of this year's mapping and sampling program will follow the description of the property geology in general.

Summary

The Golden Lime 1&2 mineral claims are underlain by Upper Triassic Nicola Group metasediments comprised of volcanoclastic conglomerates with minor sandstone and siltstone interbeds. The metasediments (metamorphosed to the greenschist facies) appear to occur as a monoclinial sequence which crosses the property at an average 145 degrees. The metasediments dip vertically to steeply east, east of the Baseline, and moderately southwest, west of the Baseline. A broad drift-filled valley crossing the property, parallel to the Baseline, may conceal a northwest striking fault which separates the easterly dipping metasediments from the westerly dipping metasediments.

Late Cretaceous(?) or Early Tertiary?), discordant, felsic dykes, with or without quartz-eye phenocrysts, intrude the metasediments across the northern half of the Golden Lime #1 mineral claim. Moderate to strong carbonate and/or silica replacement of the conglomerates and sandstones occurs adjacent the felsic dykes. Both the country rocks and the felsic dykes are often faulted and cut by 1 to 5%, banded, ankerite, dolomite, chalcedony and quartz veins. The felsic dykes are also often altered to pink carbonates, clay minerals and 10% pore space.

Continued . . .

PROPERTY GEOLOGY AND MINERALIZATION - Continued

Summary - Continued

A light green, highly siliceous, amorphous rock (possibly rhyolite) occurs as late dykes or irregular zones within the most intensely faulted replacement zones.

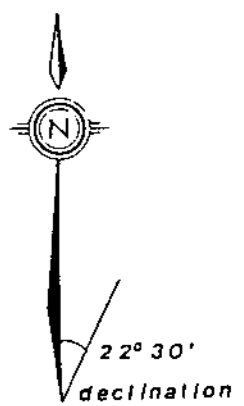
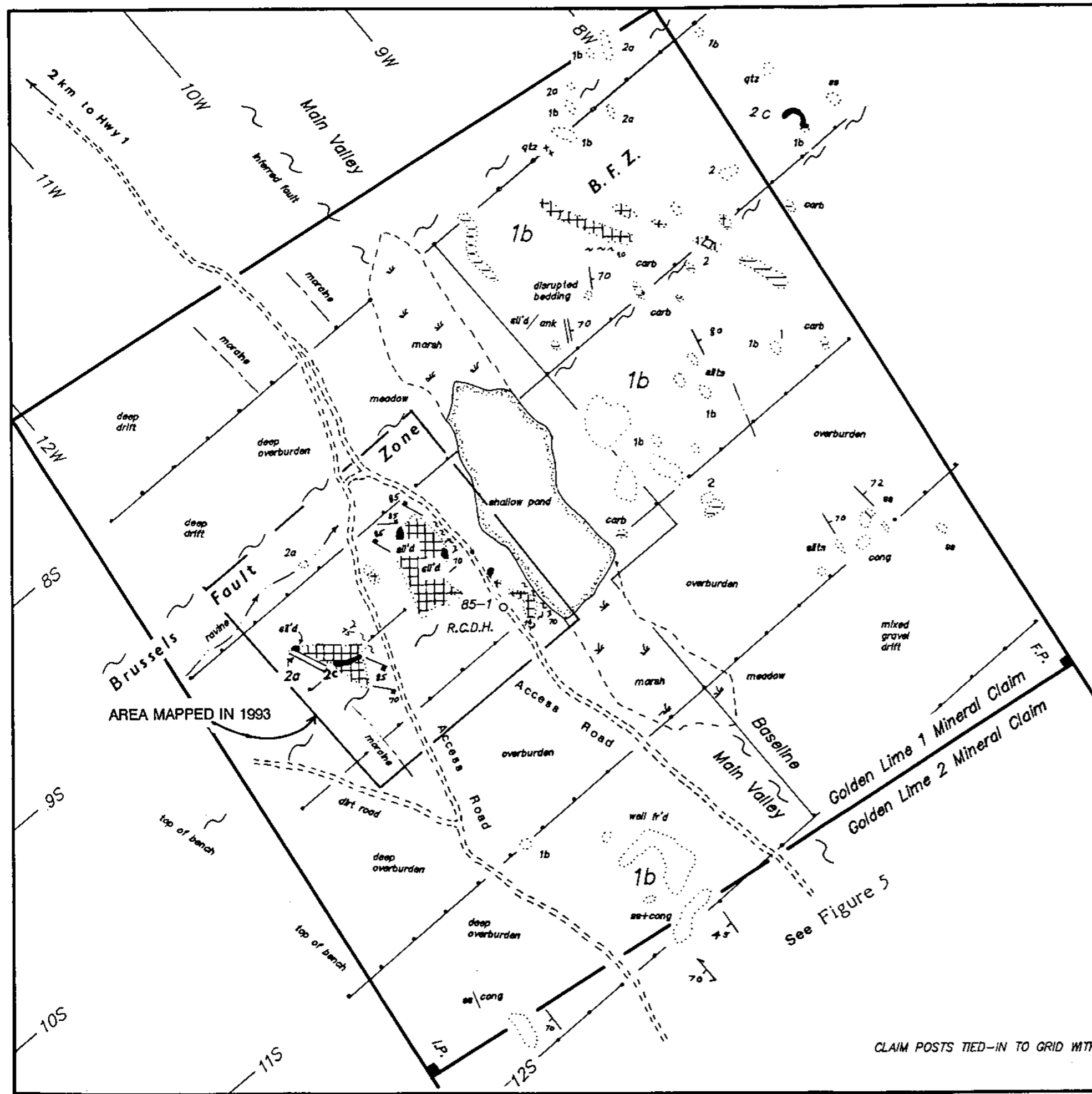
The most intensely faulted replacement zone on the property is centred at grid 9+50S, 10+80W on the Golden Lime 1 mineral claim. This zone (the subject of this year's detailed study) falls within a northeast-striking fault zone which has been called the "Brussels Fault Zone" in earlier reports by the writer (Morrison, 1990, 1991). It is expected that the Brussels Fault Zone has allowed for the intrusion of the felsic dykes, and that it has also served as a conduit for the hydrothermal solutions believed to have been responsible for the intense replacement of the metasediments on the Golden Lime 1 mineral claim.

The Brussels Fault Zone has been projected 550 metres southwest of the Main Golden Lime Replacement Zone by the writer (Morrison, 1990) to include the Newmont Showing where precious metal values are associated with base metals in a narrow quartz/chalcedony breccia zone which cuts through carbonate-replaced Nicola Group metasediments.

Upper Triassic Nicola Group Metasediments (Unit 1)

Upper Triassic Nicola Group Metasediments, comprised of conglomerates predominantly, underlie the entire Golden Lime property. They are made up of Nicola Group volcanic clasts of andesite and basalt. The most common clasts are dark green augite andesite and light grey plagioclase microphenocryst andesite. The subrounded to subangular clasts range from pebble, to cobble, to boulder size and are set in a matrix of 40% coarse sand.

Locally the conglomerates are poorly sorted and massive, but on the eastern side of the property pebble and cobble conglom-



LEGEND

EARLY TERTIARY ? or LATE CRETACEOUS ?

- 2 Felsic intrusives
 - 2a greater than 2% quartz eyes
 - 2b highly altered
 - 2c rhyolite

UPPER TRIASSIC - NICOLA GROUP

- 1 Volcanoclastic sediments
 - 1a boulder conglomerate
 - 1b cobble conglomerate
 - 1c pebble conglomerate
 - 1d sandstone
 - 1e siltstone

CARBONATE ALTERATION

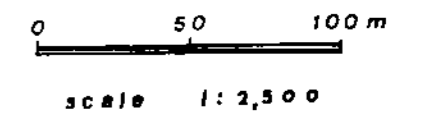
- ||| weak
- ≡ moderate
- ≡≡ strong

SYMBOLS

- outcrop
- ∗ angular float, talus
- bedding, joints
- ∩ foliation, faulting
- ∥ veins, shear zones
- ~ contacts

ABBREVIATIONS

- alt'd altered
- ank ankerite
- bx'd brecciated
- carb carbonate alteration
- fr'd fractured
- py pyrite
- qtz quartz
- sil silicified
- slt slight
- v vein



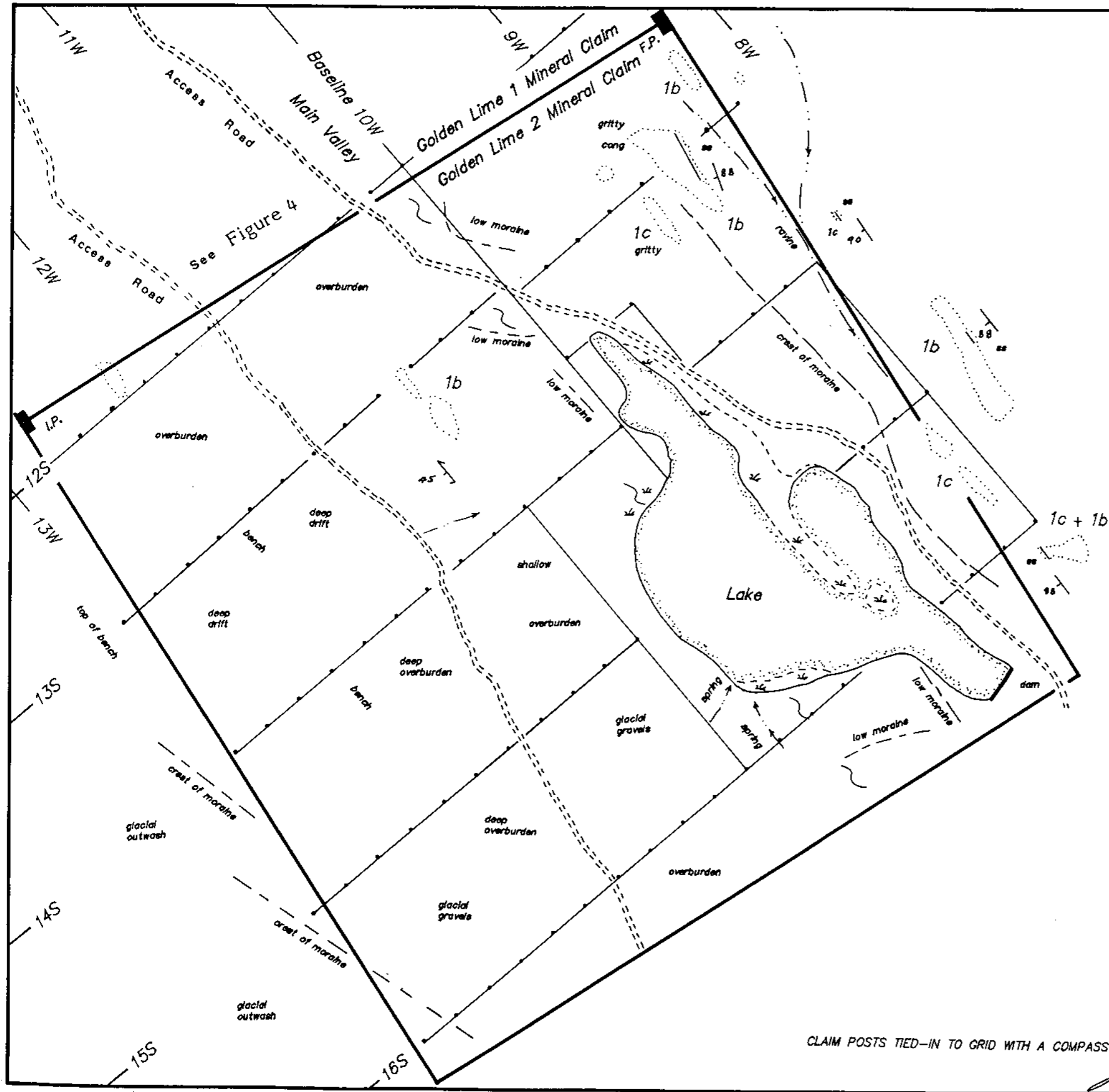
Golden Lime Property	
Geology	
Golden Lime 1 Mineral Claim	
Kamloops Lake Area	
Kamloops Mining Division, B.C.	
Geology by M.M.	N.T.S. 92-1-10E
June 1991	Figure No. 4

CLAIM POSTS TIED-IN TO GRID WITH A COMPASS AND BELT CHAIN

M. Morrison

See Figure 5

AREA MAPPED IN 1993



LEGEND

EARLY TERTIARY ? or LATE CRETACEOUS ?

- 2 Felsic intrusives
 - 2a greater than 2% quartz eyes
 - 2b highly altered
 - 2c rhyolite

UPPER TRIASSIC - NICOLA GROUP

- 1 Volcanoclastic sediments
 - 1a boulder conglomerate
 - 1b cobble conglomerate
 - 1c pebble conglomerate
 - 1d sandstone
 - 1e siltstone

CARBONATE ALTERATION

- ||| weak
- ≡ moderate
- ≡≡ strong

SYMBOLS

- outcrop
- ∗ angular float, talus
- bedding, joints
- foliation, faulting
- veins, shear zones
- contacts

ABBREVIATIONS

- | | |
|-------|----------------------|
| alt'd | altered |
| ank | ankerite |
| bx'd | brecciated |
| carb | carbonate alteration |
| fr'd | fractured |
| py | pyrite |
| qtz | quartz |
| sil | silicified |
| sl | slight |
| v | vein |



scale 1:2,500

CLAIM POSTS TIED-IN TO GRID WITH A COMPASS AND BELT CHAIN

M. Morrison

Golden Lime Property	
Geology	
Golden Lime 2 Mineral Claim	
Kamloops Lake Area	
Kamloops Mining Division, B.C.	
Geology by M.M.	N.T.S. 92-1-10E
June 1991	Figure No. 5

PROPERTY GEOLOGY AND MINERALIZATION - Continued

Upper Triassic Nicola Group Metasediments (Unit 1) - Continued

erates are interbedded with $\frac{1}{2}$ to 1 metre sandstone and siltstone beds.

The sandstones and siltstones are dark green to black and are also comprised of volcanoclastic material.

The conglomerates are more highly indurated west of the Baseline than they are to the east.

All of the metasediments are metamorphosed to the greenschist facies and chlorite and epidote are the dominant minerals of both the matrix particles and clasts.

Late Cretaceous(?), or Early Tertiary(?) Felsic Dykes (Unit 2)

Late Cretaceous(?) or Early Tertiary(?) felsic dykes intrude faulted metasediments at scattered locations from grid line 10S to the northern border of the property. Many of the dykes are poorly exposed, or highly altered and difficult to distinguish from the rocks they intrude. There appears to be a general north and northwest strike of the narrow (5 to 10 metre wide) dykes.

The dykes are made up of fine to medium crystals of orthoclase feldspar (80%) and muscovite (15%) with or without (0 to 5%) quartz-eye phenocrysts, 0.2 to 1 cm.

The dykes are most often highly altered to pink carbonates, clay, and 10% pore space with or without the quartz-eye phenocrysts.

The dykes are sheared by faulting and often cut by up to 5% late ankerite, dolomite, chalcedony and quartz veinlets like the metasediments they intrude.

Continued...

PROPERTY GEOLOGY AND MINERALIZATION - Continued

Late Cretaceous(?), or Early Tertiary(?) Rhyolite(?) Dykes
(Unit 2c)

Dykes and irregular zones of a light green, highly siliceous, amorphous rock (possibly rhyolite) cut carbonate replacement zones at several locations on the Golden Lime #1 mineral claim north of grid L10S. The rhyolite(?) dykes appear to be later than the felsic dykes although the two are often intimately associated.

Structural Geology and Faulting

The structural geology of the Golden Lime property is not clear. Only minor sandstone or siltstone units are interbedded within the massive conglomerates and attitudes of the metasediments are often difficult to determine. Many of the thin-bedded sediments have been disturbed. In general, the metasediments appear to strike at an average 145 degrees across the property. East of the Baseline, the dips are very steep to the southwest or northeast, or vertical. West of the Baseline, the dips are moderate to the southwest.

The mapped geology suggests that the Nicola Group metasediments are made up of a monoclinial sequence (rather than an anticline) and that the difference in dip angles from steeply northeast, east of the Baseline, to moderately southwest, west of the Baseline, might be accounted for by rotation along a major fault striking northwesterly across the property parallel with the Baseline, as illustrated on Figures 4&5. A fault surface mapped at grid 9140S, 10161W this year parallels the direction of the Main Valley Fault at 135 degrees and dips 55 degrees southwest.

A second major fault, "the Brussels Fault Zone" (Morrison,

Continued . . .

PROPERTY GEOLOGY AND MINERALIZATION - Continued

Structural Geology and Faulting - Continued

1990) is inferred to cross the Golden Lime 1 mineral claim at 050 degrees. The Brussels Fault Zone is considered to be an early fault. It is believed to have provided a conduit for the felsic intrusions and associated hydrothermal solutions that brought about the intensive replacement of the metasediments by carbonate and silica.

The Brussels Fault Zone is believed to have been offset approximately 75 metres to the north, east of the Main Valley, by a late northwest-striking fault which has been named the "Main Valley Fault" in this report (see Figure 4).

The Brussels Fault Zone is comprised of the many replacement zones that all show evidence of repeated faulting and brecciation. Further evidence for the fault is the dislocation of a siltstone unit within the fault zone at grid 8+80S, 9+00W. The siltstone has a strike of 173 degrees compared with the predominant strike direction of 145 to 155 degrees for the metasediments across most of the Golden Lime property.

Alteration and Mineralization

Several zones of carbonate alteration and replacement of Nicola Group metasediments occur on the Golden Lime property over an area extending from grid 10+20S to the north border of the Golden Lime 1 mineral claim. The carbonate alteration demonstrates a close spacial relationship with Late Cretaceous (?), or Early Tertiary(?) felsic dyking and is most probably genetically related. Felsic dykes have not been recognized at all alteration zones, but all of the felsic dykes that have been mapped have carbonate alteration haloes. The felsic dykes themselves are often highly altered to pink carbonates, clays and pore space making them difficult to distinguish

Continued . . .

PROPERTY GEOLOGY AND MINERALIZATION - Continued

Alteration and Mineralization - Continued

from altered metasediments. A prolonged period of post-intrusive hydrothermal activity is indicated.

The felsic dykes are often faulted and cut by banded ankerite, dolomite, quartz and chalcedony veinlets (up to 5%) like the metasediments they intrude.

The metasediments display all degrees of carbonate alteration from weak to intense. Weakly carbonate altered rocks are light pink and weather rusty, and they are cut by 1 to 2% banded carbonate and silica veinlets. The original rock texture is recognizable. Intense alteration zones are often cut by 5 to 10% banded ankerite, dolomite, chalcedony and quartz veinlets and the original constituents of the rock have been totally replaced by ankerite (up to 70%) and/or silica (sometimes up to 90%). The ankerite replacement zones are pink to white and weather rusty. The silica replacement zones are light green, to white, to grey and do not discolour with weathering. The original texture of the rock is barely discernible within the zones of total replacement.

Several zones of carbonate and/or silica replacement are illustrated on Figure 4 accompanying this report. The strongest replacement zone, centred at grid 9+50S, 10+80W, will be discussed in the following section of this report.

PROPERTY GEOLOGY AND MINERALIZATION - Continued

The Main Replacement Zone on the Golden Lime 1 Mineral Claim.

The 1993 Mapping and Sampling Program

The main carbonate/silica replacement zone centred at grid 9+50S, 10+80W on the Golden Lime 1 mineral claim was the focus of the 1993 mapping and sampling program.

A 10 by 10 metre grid, totalling 800 metres, was measured out over the replacement zone with a Silva compass and a Topolite belt chain to facilitate mapping at a scale of 1:500. A total of 6 bedrock samples were collected from well silicified zones within the replacement zone (see sample locations on Figure 6) and sent to Acme Laboratories in Vancouver for analysis (see Appendix A for sample descriptions and Appendix B for Geochemical Analysis).

Results

Figure 6 illustrates the zoned composition of the Main Replacement Zone on the Golden Lime 1 mineral claim. The percentages of carbonate and silica content were estimated during the course of mapping as illustrated on Figure 6. Total replacement of the andesitic volcanoclastic conglomerate is widespread. Carbonate replacement (predominantly ankerite) ranges up to 95%, while silica replacement is estimated to equal up to 80% over portions of the outcrop.

The carbonate replaced rock is generally white to pink and weathers rusty. The silica replaced rock is white to light green or grey, and is not stained by weathering. There is a distinct increase in silica replacement at the lowermost levels of the exposed replacement zone, and in particular, on the eastern and northwestern edges of the outcrop. There is, therefore, a suggestion of vertical zoning as well as a noted increase in silica content from south to north.

Continued . . .

TRANS-CANADA HIGHWAY
2.3 km

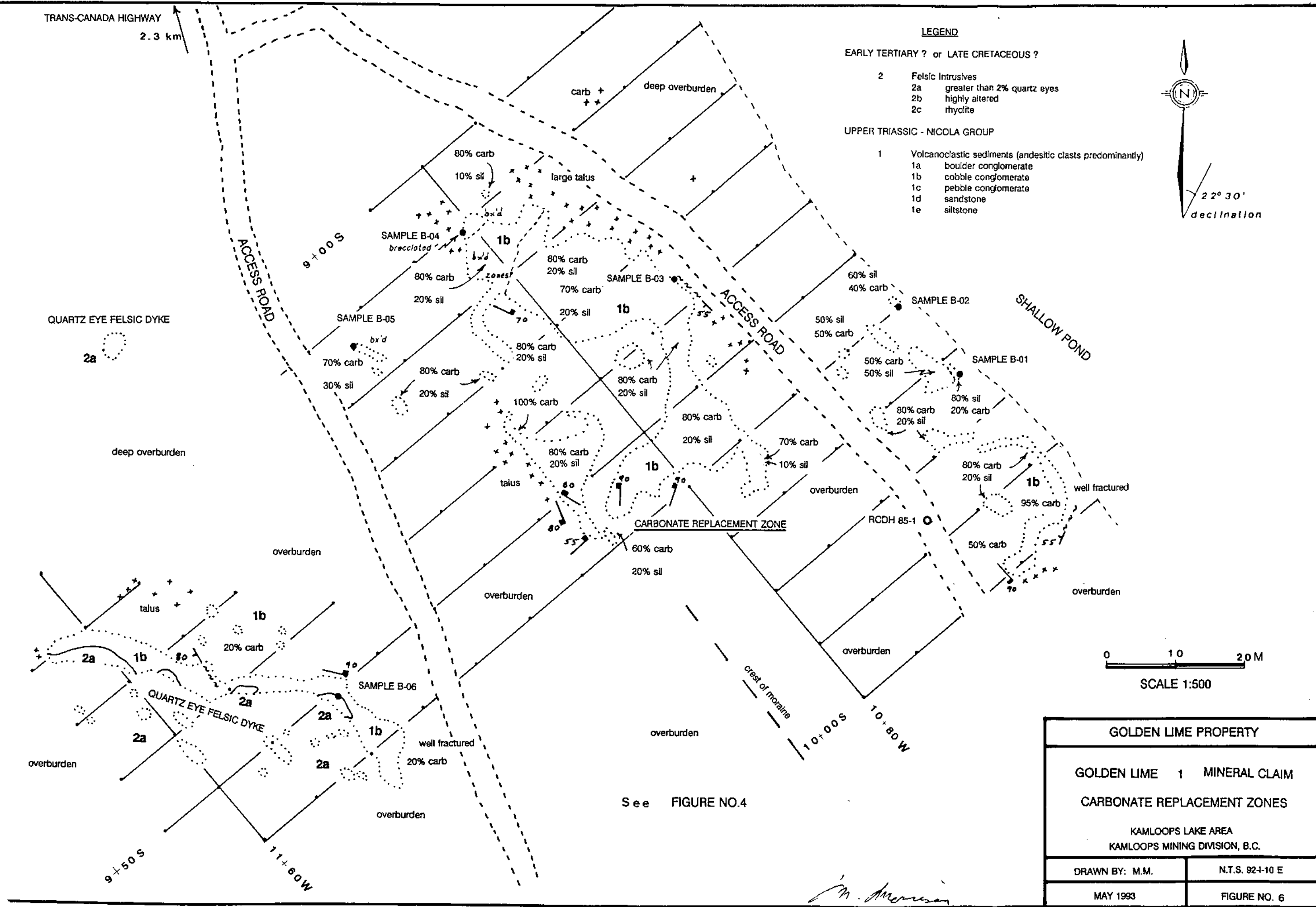
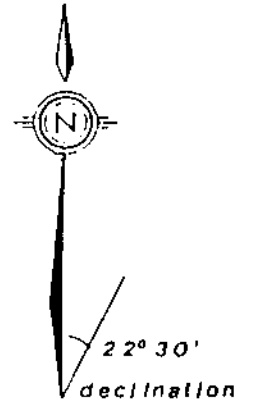
LEGEND

EARLY TERTIARY ? or LATE CRETACEOUS ?

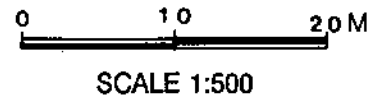
- 2 Felsic Intrusives
- 2a greater than 2% quartz eyes
- 2b highly altered
- 2c rhyolite

UPPER TRIASSIC - NICOLA GROUP

- 1 Volcanoclastic sediments (andesitic clasts predominantly)
- 1a boulder conglomerate
- 1b cobble conglomerate
- 1c pebble conglomerate
- 1d sandstone
- 1e siltstone



See FIGURE NO.4



GOLDEN LIME PROPERTY	
GOLDEN LIME 1 MINERAL CLAIM	
CARBONATE REPLACEMENT ZONES	
KAMLOOPS LAKE AREA KAMLOOPS MINING DIVISION, B.C.	
DRAWN BY: M.M.	N.T.S. 92-1-10 E
MAY 1993	FIGURE NO. 6

M. Morrison

PROPERTY GEOLOGY AND MINERALIZATION - Continued

The Main Replacement Zone on the Golden Lime 1 Mineral Claim - Cont.

Results - Continued

Replacement of the rock is generally so complete that little evidence is left of the original rock constituents. Much of the rock has been brecciated and mended with carbonate in a manner that conceals the brecciation. The brecciation is mapable, however, at the northwestern end of the ridge where siliceous breccia fragments stand out from the weathered carbonate fragments.

Late fractures and slickenside surfaces are generally tight. Late carbonate veining is much less prevalent at this outcrop than at other replacement zones in the district, and banded ankerite-dolomite veinlets seldom exceed 1 cm in thickness.

Fracture directions have been mapped (on Figure 6), but it is recognized that they represent only a late event in the very active tectonic history of the replacement zone.

The geochemical values of the six siliceous samples selected for analysis are generally of no significance (see Appendix B). Of the six samples, only sample B-02 yielded slightly elevated gold (32 parts per billion) and arsenic (84 parts per million) values. (The correlation of gold and arsenic values had already been established on the property during previous surveys).

DISCUSSION

This year's mapping points out a general increase in the intensity of the replacement zone from southeast to northwest. Silica replacement is also noted to increase in favor of carbonate to the northwest. A vertical zonation of carbonate-to-silica has also been noted at the main outcrop site although there is only

Continued . . .

DISCUSSION - Continued

approximately 7 metres of elevation difference. (RCDH85-1 had already confirmed the carbonate-to-silica zoning near the southern end of the outcrop in 1985).

It is suggested that the pattern of carbonate and silica replacement points to a northern source direction for the hydrothermal solutions which brought about the replacement. Late brecciation at the northern end of the main outcrop also suggests late faulting and a possible access route for the hydrothermal solutions.

The Newmont Showing (see Property Geology and Mineralization) represents an example of late shear-zone-filling by quartz, chalcidony, sulphide minerals and precious metals. The northern end of the Main Replacement Zone on the Golden Lime 1 mineral claim may represent the upper horizons of a much larger fault zone which has not yet been eroded down to the level of base and precious metal mineralization.

As mentioned earlier, the Newmont Showing and the Main Replacement Zone on the Golden Lime 1 mineral claim may lie along the same fault zone (the Brussels Fault Zone) and it is suggested (see Property Geology and Mineralization) that the Brussels Fault Zone may have been the main conduit up which hydrothermal solutions ascended. These hydrothermal solutions are believed to have brought about the intense replacement of the country rock and the introduction of base and precious metals into major shear zones (i.e. at least at the Newmont Showing).

At least four inclined Reverse Circulation Drill Holes should be drilled from northwest to southeast to test the highly siliceous replaced, brecciated zones at the northern end of the Main Replacement Zone on the Golden Lime 1 mineral claim.

Rock chips from drilling should be analyzed for 30 elements by ICP and for gold by geochemical analysis.

CONCLUSIONS AND RECOMMENDATIONS

The March, 1993, detailed geological mapping of the Main Replacement Zone on the Golden Lime 1 mineral claim has yielded data that indicates:

- (a) that the hydrothermal solutions that have brought about the ankerite/silica replacement of the Upper Triassic Nicola Group volcanoclastic andesitic conglomerate have originated from the northwest;
- (b) that there is an increase in silica replacement with depth as well as a noted southeast to northwest increase in silica replacement (at the expense of ankerite replacement); and
- (c) that the completely replaced, highly brecciated, rock mapped at the northern end of the main outcrop could represent the latest movement along the Brussels Fault Zone.

It is, therefore, concluded that the Brussels Fault Zone has played a role in directing the ascending hydrothermal solutions that have replaced the country rock with carbonate and silica.

It is further suggested that the shear-zone-filling by quartz, chalcedony and sulphide and precious minerals at the Newmont Showing is related to events associated with the Brussels Fault Zone, and that similar shear-zone-filling may occur at some shallow depth below the brecciated north end of the Main Replacement Zone on the Golden Lime 1 mineral claim.


At least four inclined Reverse Circulation Percussion Drill Holes should be drilled from northwest to southeast from two sites to cut the silicified breccia zone at depths of 30 and 60 metres. Samples should be analyzed for base and precious metal mineralization.

Continued . . .

CONCLUSIONS AND RECOMMENDATIONS - Continued

The target area is very accessible.

May 25, 1993
Kelowna, B.C.


Murray Morrison - B.Sc.

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Continued . . .

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APPENDIX A

DESCRIPTION OF ROCK SAMPLES COLLECTED DURING 1993 PROGRAM

General Note

All samples collected were comprised of 2 to 4 cm rock chips broken from bedrock at the grid locations specified. Each sample weighed approximately 1.5 kg. The silica and carbonate content of each sample listed below is based on field estimates.

<u>Sample Number</u>	<u>Grid Location</u>	<u>Description</u>
B-01	9+72S, 10+39W	The sample was collected from a 0.5 x 1 m zone of completely replaced volcanoclastic conglomerate. The sample material was grey to white and fine grained, and estimated to be made up of 70% silica and 30% ankerite.
B-02	9+60S, 10+40W	This sample was also collected from a 0.5 x 1 m zone of completely replaced volcanoclastic conglomerate. The sample material was grey to white and fine grained. The composition of the rock was estimated to be 75% silica, and 20% ankerite. The rock was cut by late quartz veinlets (3%) and ankerite veinlets (3%).
B-03	9+36S, 10+63W	This sample was made up of chips collected from the base of a cliff made up of completely replaced volcanoclastic conglomerate. The white, fine grained, sample material was estimated to contain 50% silica and 45% ankerite with 5% late white ankerite veinlets to 1 cm.
B-04	9+10S, 10+82W	Chips of completely replaced volcanoclastic conglomerate were collected from a 5x5 m area for this sample. The sample was white to light green and grey and comprised of brecciated fragments of fine grained silica (50%) and ankerite 50% material.

Continued . . .

APPENDIX A - Continued

- B-05 9+13S
 11+04W Chips of completely replaced volcanoclastic conglomerate were collected from a 5x5 m area for this sample also. The white to light green fine grained rock showed some brecciation. The rock was estimated to be comprised of 50% silica and 50% ankerite.
- B-06 9+51S,
 11+38W Chips were collected from replaced volcanoclastic conglomerate for 5 metres adjacent a light green, felsic carbonate-siliceous-sericite dyke. The samples were estimated to contain 20% silica, 30% ankerite and 2% late ankerite veinlets.

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GEOCHEMICAL ANALYSIS CERTIFICATE

M.S. Morrison File # 93-0474

684 Baisam Road, Kelowna BC V1W 1B9



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
B-01	1	5	10	56	<.1	19	8	586	1.63	<2	<5	<2	<2	87	<.2	<2	<2	22	4.96	.012	3	11	2.22	208	<.01	6	.20	.01	.07	2	<1
B-02	<1	70	11	87	.3	25	21	1107	3.21	84	<5	<2	<2	170	.9	7	<2	96	8.49	.057	2	53	3.39	274	<.01	4	.35	.01	.05	2	32
B-03	<1	14	8	85	.2	29	21	942	2.82	7	<5	<2	<2	212	.3	<2	<2	51	11.10	.012	<2	5	4.61	810	<.01	2	.22	.02	.05	1	<1
B-04	<1	7	6	83	.2	27	17	853	2.54	7	<5	<2	<2	91	.3	<2	<2	30	9.60	.005	<2	4	4.25	1405	<.01	<2	.20	.02	.06	1	1
B-05	1	6	9	48	<.1	17	8	493	1.36	7	<5	<2	<2	133	<.2	2	<2	14	5.71	.006	<2	5	2.83	53	<.01	4	.17	.01	.07	2	3
RE B-05	1	5	5	48	<.1	17	8	491	1.35	7	<5	<2	<2	133	.3	<2	<2	14	5.68	.006	<2	7	2.81	51	<.01	6	.17	.01	.07	2	3
B-06	1	4	6	16	<.1	4	2	216	.61	4	<5	<2	<2	35	<.2	<2	<2	5	1.41	.005	3	4	.56	141	<.01	8	.28	.01	.14	2	1
STANDARD C/AU-R	18	57	38	130	7.5	67	31	1036	3.96	43	23	7	36	54	18.6	14	19	56	.51	.087	39	59	.90	188	.09	34	1.88	.06	.14	13	460

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.
 ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
 - SAMPLE TYPE: ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: MAR 16 1993 DATE REPORT MAILED: *March 23/93* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

APPENDIX C

STATEMENT OF QUALIFICATIONS

I, Murray Morrison, of the City of Kelowna, in the Province of British Columbia, do hereby state that,

1. I graduated from the University of British Columbia in 1969 with a B.Sc. Degree in Geology.
2. I have been working in all phases of mining exploration in Canada for the past twenty-two years.
3. During the past twenty-two years, I have intermittently held responsible positions as a geologist with various mineral exploration companies in Canada.
4. I have examined many mineral properties in Southern British Columbia during the past twenty-two years.
5. I conducted the geological mapping program outlined in this report.
6. I own a 100% interest in the Golden Lime 1&2 mineral claims.

May 25, 1993

Kelowna, B.C.

A handwritten signature in cursive script, reading "Murray Morrison", is written over a horizontal line.

Murray Morrison - B.Sc.

APPENDIX D

STATEMENT OF EXPENDITURES - ON THE GOLDEN LIME 1&2 MINERAL CLAIMS.

Statement of Expenditures in connection with the Geological Mapping and Sampling Program conducted on the Golden Lime 1&2 mineral claims, located near Kamloops Lake, 25 km west of Kamloops, B.C. (N.T.S. Map 92-I-10E) for the year 1993.

Fieldwork - Geological Mapping (1:500 scale over 0.1 sq. km)

M. Morrison, geologist	2 days @ \$250.00/day	\$ 500.
Truck, 4x4 (including gasoline and insurance)	2 days @ \$ 75.00/day	150.
Meals and Lodging	2 days @ \$ 65.00/day	130.
Flagging and belt chain thread		5.
	sub-total	\$ 785.

Sampling and Analysis Costs

Shipping Samples to Lab		\$ 10.
6 samples - ICP 30 elements, plus gold geochem 6 @ \$16.42 each		98.
	sub-total	\$ 108.

Report Preparation Costs

M. Morrison, geologist	1 day @ \$250.00/day	\$ 250.
Drafting		24.
Typing		24.
Copying reports		20
	sub-total	\$ 318.
	<u>GRAND TOTAL</u>	<u>\$1,211.</u>

I hereby certify that the preceding statement is a true statement of monies expended in connection with Geological Mapping and Sampling Program carried out March 13 & 14, 1993.

May 25, 1993


Murray Morrison - Geologist



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M.S. MORRISON
684 Balsam Road
Kelowna, BC
V1W 1B9

File: **93-0474**
Date: Mar 23 1993

QTY	ASSAY	PRICE	AMOUNT
6	30 ELEMENT ICP ANALYSIS @	4.70	28.20
6	GEOCHEM AU ANALYSIS BY ACID LEACH (10 gm) @	5.25	31.50
6	ROCK SAMPLE PREPARATION @	3.40	20.40
			<hr/>
SURCHARGE FOR UNDER 10 SAMPLES PER EACH ANALYSIS			80.10
			<hr/>
GST Taxable			92.10
7.00 % GST			6.45
			<hr/>
TOTAL			98.55

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