GEOPHYSICAL ASSESSMENT REPORT

on the

GOLD KEY CLAIM GROUP
KAMLOOPS LAKE AREA
KAMLOOPS MINING DIVISION

by

MURRAY S. MORRISON, B.Sc.

CLAIMS:	Golden Lime 1&2, Gold Key 1-14, 16, 17 and Gold Key 15 FR (19 units).
LOCATION:	The Gold Key Claim Group is situated 2 km south of Kamloops Lake, 25 km due west of Kamloops, B.C. Lat. 50°43'; Long. 120°41'; N.T.S.: 92-I-10E
OWNER:	Murray Morrison
OPERATOR:	Murray Morrison
DATE STARTED:	March 4, 1997
DATE COMPLETED:	March 12, 1997

Kelowna, B.C.

June 5, 1997

25 040

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SUMMARY

The Gold Key Claim Group located 2 to 3 km south of Kamloops Lake, or 25 km due west of Kamloops hosts several carbonate/silica replacement zones within Upper Triassic Nicola Group volcano-clastic 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, owned by the writer, overlies ground previously covered by the Brussels Claim Group. The Brussels Claim Group was explored over a period of eleven years by Placer Development (1981-84), Goldstone Explorations Ltd. (1984-88) and the writer, (1989-92).

Placer Development conducted a widely-spaced soil geochemical survey in 1981, and discovered several areas across the property with elevated mercury, arsenic, antimony and gold values. Placer Development carried out limited follow-up work and allowed their option to lapse in 1984. During 1984, lithogeochemical samples collected by Goldstone Explorations Ltd. yielded elevated values for the same elements that were discovered by Placer Development. In 1985 a Reverse Circulation Percussion drilling program carried out by Goldstone Explorations tested five widely separated targets across the property with one drill hole each. Two strong zones of carbonate/silica replacement were drilled over lengths of 80 metres, proving the size and strength of the zones, but precious metal values were found to be negligible and Goldstone Explorations abandoned the property in 1988.

A series of geochemical, geophysical (magnetometer) and geological surveys were conducted over the property by the writer from 1989 until 1992, and five key areas considered worthy of detailed exploration were identified.

A detailed geological mapping and sampling program was conducted over the Golden Lime 1 replacement zone in 1993 and in 1995 four more zones were mapped and sampled in detail.

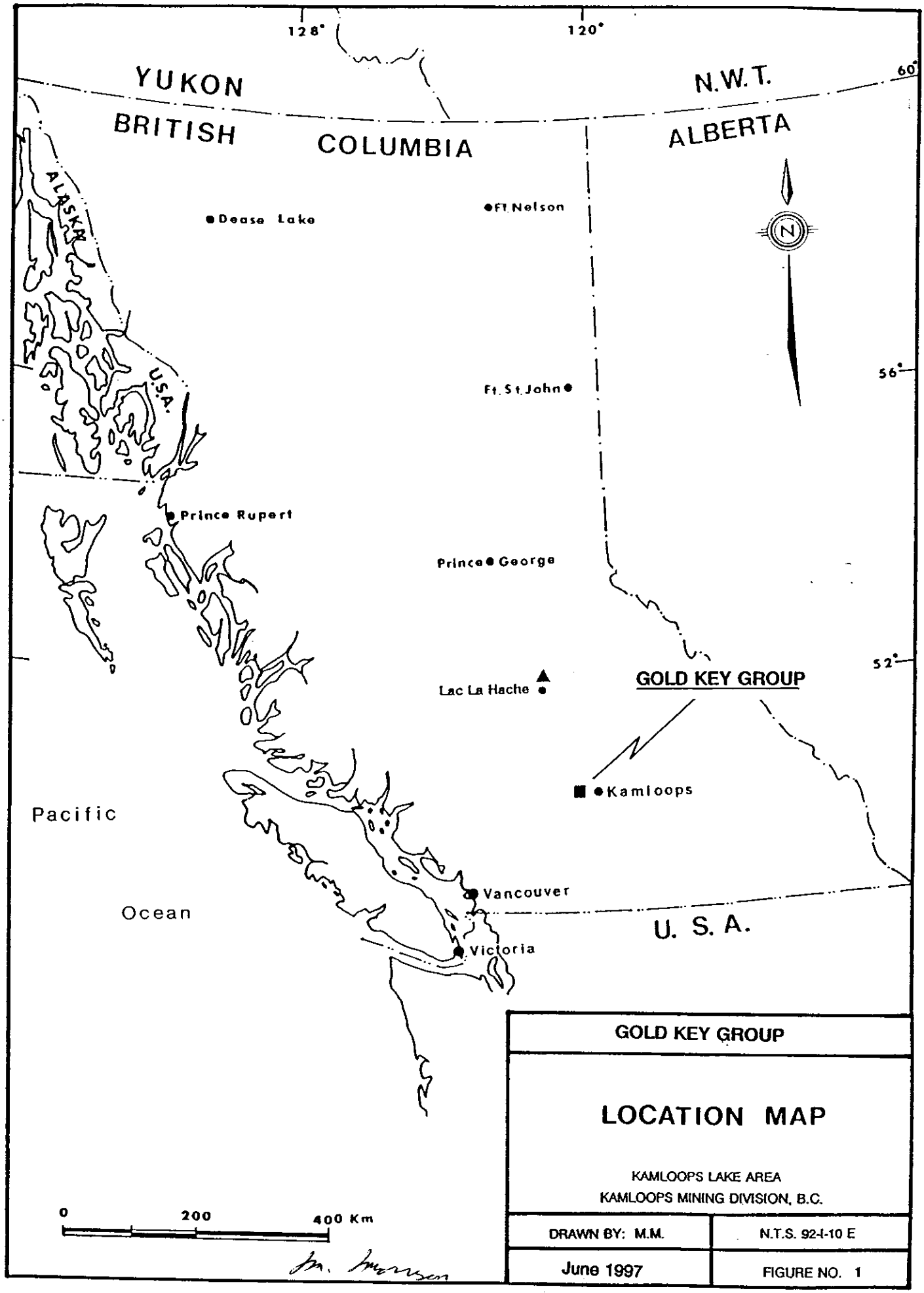
SUMMARY continued

The 1995 lithogeochemical sampling proved that only the uppermost horizons of the replacement zones (epithermal systems) have been exposed by erosion and that drilling will be required to test the zones for possible economic precious metal values at moderate depths.

The Newmont Showing, located immediately west of the Gold Key 5 mineral claim, is an example of a precious metal deposit that is associated with a relatively small carbonate replacement zone. A 1 metre wide shear zone at the Newmont Showing has been infilled with late quartz and chalcedony veins which contain 3 g/tonne gold and up to 180 g/tonne silver.

Several of the carbonate/silica replacement zones on the Gold Key Claim Group are much larger than that at the Newmont Showing and four have been selected for a Reverse Circulation Percussion drilling program to test for precious-metal-bearing siliceous stockwork "feeder" zones that could occur below the carbonate replacement zones.

This year's two ground VLF-EM surveys which were designed to traverse the inferred Main Valley Fault and Brussels Fault Zone at the northern end of the claim group failed to distinctly trace these faults. The surveys were also ineffective in outlining the large, highly-faulted carbonate/silica replacement zones that have been mapped on the property.



GOLD KEY GROUP	
LOCATION MAP KAMLOOPS LAKE AREA KAMLOOPS MINING DIVISION, B.C.	
DRAWN BY: M.M.	N.T.S. 92-I-10 E
June 1997	FIGURE NO. 1

INTRODUCTION

This report, written for government assessment work requirements, discusses the results two ground VLF-EM surveys conducted over portions of the Golden Lime 1 & 2 and Gold Key 2, 5, 12 & 15 FR mineral claims by the writer during March, 1997.

The mineral claims on which the surveys were conducted are located on the northern portion of the Gold Key Claim Group that is comprised of a total of 19 contiguous 2-post mineral claims. The claim group is located 2 to 3 km south of Kamloops Lake, 25 km due west of Kamloops, B.C., and is owned by the writer, M. Morrison, of Kelowna, B.C.

Several zones of carbonate/silica replacement occur within faulted metasediments of the Upper Triassic Nicola Group on the property. These replacement zones have been the focus of attempts to locate epithermal previous metal deposits on the property over a period of years. Exploration has included geological, geochemical (soil and rock) and geophysical (magnetometer) surveys (see References).

In 1995, five percussion drill holes were drilled at five widely separated sites to test the carbonate/silica replacement zones to depths of 80 metres for precious metals. To date, only moderately elevated concentrations of gold, silver, mercury, arsenic and antimony have been found on the property, although just a few tens of meters to the west of the property a shear zone located within similar geology contains 3 g/tonne gold and up to 180 g/tonne silver at the old Newmont Showing (see section on Regional Geology).

Geological mapping of the property by the writer during 1991 & 92 yielded evidence suggesting that several northwest, northeast and east-west trending faults cross the property and that these faults played a major role in the development of the carbonate/silica replacement zones.

INTRODUCTION continued

Some of the more significant inferred faults were given names (see Map GK-95-1). Two faults crossing the Golden Lime 1 & 2 mineral claims (i.e. the northwest trending Main Valley Fault and the northeast trending Brussels Fault Zone) were selected as test areas for this year's VLF-EM survey. It was hoped that an alignment of VLF-EM conductors in either a northeast or northwest direction would confirm the presence of the faults.

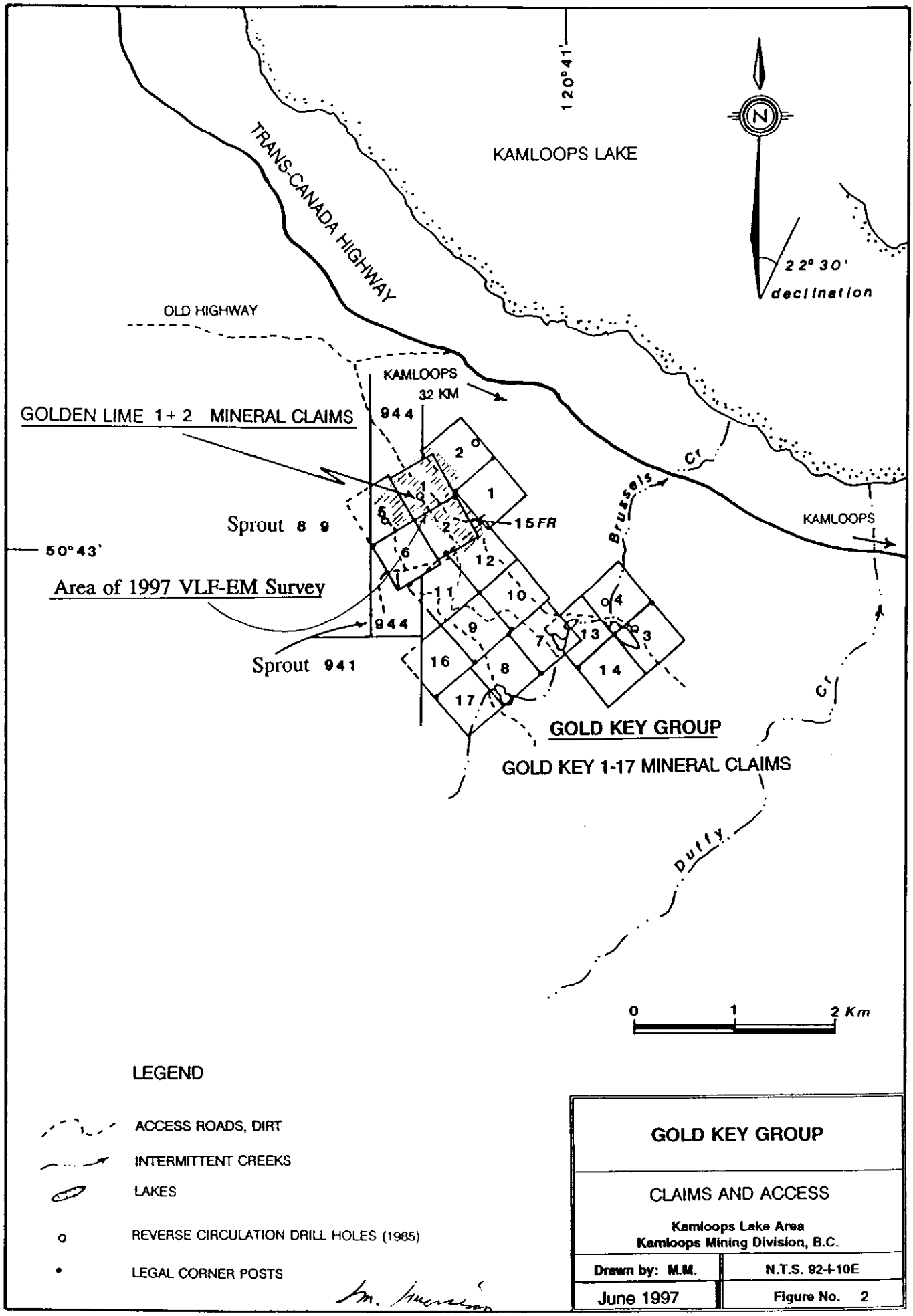
A grid was measured out over the northern portion of the Main Valley Fault and the Annapolis, Maryland VLF signal station was used to survey the new grid. A second orthogonal grid was established over the Brussels Fault Zone and the Seattle, Washington VLF signal station was used to survey this grid.

Figures 4 & 6 show the Dip Angle and Field Strength data of each survey, while Figures 5 & 7 represent the VLF-EM data in a Fraser Filtered and contoured format for each survey.

Figures 8 & 9 and Map GK-95-1 from earlier Assessment reports have been included with this report to illustrate some of the geological features on the property.

LOCATION AND ACCESS

The Gold Key Claim Group lies 2 to 3 km south of Kamloops Lake, or 1 to 2 km south of the Trans-Canada Highway, 25 km due west of Kamloops, B.C. (Lat. 50°43'; Long. 120°41'; 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 Gold Key Claim Group and several dirt roads give access to most areas of the Claim Group as illustrated on the Map GK-95-1.



GOLD KEY GROUP	
CLAIMS AND ACCESS Kamloops Lake Area Kamloops Mining Division, B.C.	
Drawn by: M.M.	N.T.S. 92-I-10E
June 1997	Figure No. 2

PHYSICAL FEATURES AND CLIMATE

The Gold Key Claim Group with an average elevation of 600 metres above sea level lies 2 to 3 km south of Kamloops Lake (350m elv.). The property features low relief with rounded rocky ridges and shallow, gravel-filled valleys. An exception to the rolling topography is a 150 metre bluff which crosses the eastern side of the property from northwest to southeast.

Vegetation on the property is typical of that of the bunch grass and sagebrush-covered hills that surround 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 late spring rain. The winter snow pack rarely exceeds 25 cm, and generally covers the property from late November until early March.

Several small lakes, deepened by the building of earthen dams, supply water for grazing cattle during summer months. One of the larger lakes is Brussels Lake, located on the Gold Key 3 & 4 mineral claims.

CLAIM STATUS

The Gold Key Claim Group is comprised of 18 contiguous 2-post mineral claims and one fractional mineral claim all staked and owned by the writer, M. Morrison of Kelowna, B.C. The mineral claims are located near Savona, B.C. in the Kamloops Mining Division and are listed in the Table that follows:

CLAIM NAME	UNITS	DATE OF RECORD	TENURE NUMBER	MINING DIVISION	EXPIRY* DATE
Golden Lime 1	1	Mar. 16/81	216982	Kamloops	Mar. 16/99
Golden Lime 2	1	Mar. 16/81	216983	Kamloops	Mar. 16/99
Gold Key 1	1	May 15/94	325691	Kamloops	May 15/99
Gold Key 2	1	May 15/94	325692	Kamloops	May 15/99
Gold Key 3	1	May 15/94	325693	Kamloops	May 15/99
Gold Key 4	1	May 15/94	325694	Kamloops	May 15/99
Gold Key 5	1	May 15/94	325695	Kamloops	May 15/99
Gold Key 6	1	May 15/94	325696	Kamloops	May 15/99
Gold Key 7	1	May 15/94	325697	Kamloops	May 15/99
Gold Key 8	1	May 15/94	325698	Kamloops	May 15/99
Gold Key 9	1	Mar. 22/95	334413	Kamloops	Mar. 22/98
Gold Key 10	1	Mar. 22/95	334414	Kamloops	Mar. 22/98
Gold Key 11	1	Mar. 22/95	334415	Kamloops	Mar. 22/98
Gold Key 12	1	Mar. 22/95	334416	Kamloops	Mar. 22/98
Gold Key 13	1	Mar. 22/95	334417	Kamloops	Mar. 22/98
Gold Key 14	1	Mar. 22/95	334418	Kamloops	Mar. 22/98
Gold Key 15 FR.	1	Mar. 24/95	334805	Kamloops	Mar. 24/98
Gold Key 16	1	May 7/95	335438	Kamloops	May 7/98
Gold Key 17	1	May 7/95	335439	Kamloops	May 7/98

Note: the new Expiry Dates are based on the acceptance of this report for Assessment Work Credits.

CLAIM STATUS continued

It should be recognized that the northwest corner of the Gold Key 5 mineral claim overlaps ground covered by the pre-existing Sprout 89 mineral claim; that the northwest corner of the Gold Key 11 mineral claim overlaps a portion of the Sprout 944 mineral claim; and that the northwest corner of the Gold Key 16 mineral claim overlaps a portion of the Sprout 941 mineral claim (see Map GK-95-1).

The Sprout mineral claims are not owned by the writer.

HISTORY

The Golden Lime 1 & 2 and Brussels 1-11 mineral claims (now partially covered by the Gold Key 1-17 mineral claims) were staked by the writer in March and April 1981 to cover several large rusty carbonate/silica replacement zones found within Nicola Group rocks during routine prospecting.

The ground was transferred to Placer Development Ltd. soon after staking and during 1981 crews from Placer Development Ltd. conducted a widely spaced (25 x 100 to 250 metre) soil geochemical survey over the central portion of the property. Elements typical of epithermal systems (mercury, antimony and arsenic) were found to occur in moderate concentrations on the Brussels 3 & 4 mineral claims, and gold was found on the Brussels 1 & 3 mineral claims, but no drilling was done 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 widely spaced reverse circulation percussion drill program across the Brussels property (see drill hole locations on Map GK-95-1). Drill holes 85-1 and 85-4 encountered up to 80 metres of intensely carbonate and/or silica replaced Nicola metasediments, but no significant precious metal values were encountered during the drill program and in 1988 Goldstone Exploration allowed their option to lapse.

Since 1989 the writer has conducted a series of geochemical, geophysical (magnetometer) and geological surveys over portions of the Golden Lime 1 & 2 and Brussels 1-11 mineral claims in an attempt to develop drill targets on the property (see References).

The Brussels Claim Group was allowed to lapse in 1992, and portions of the ground have subsequently been restaked as the Gold Key 1-17 mineral claims by the writer in 1994 & 95.

HISTORY continued

Detailed geological mapping and lithogeochemical sampling was conducted over some of the larger replacement zones on the Gold Key 1, 3, 5 & 7 mineral claims by the writer in 1995, and a ground magnetometer survey was conducted over portions of the Gold Key 7 & 8 mineral claims in 1996 (Morrison, 1995 & 96).

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.

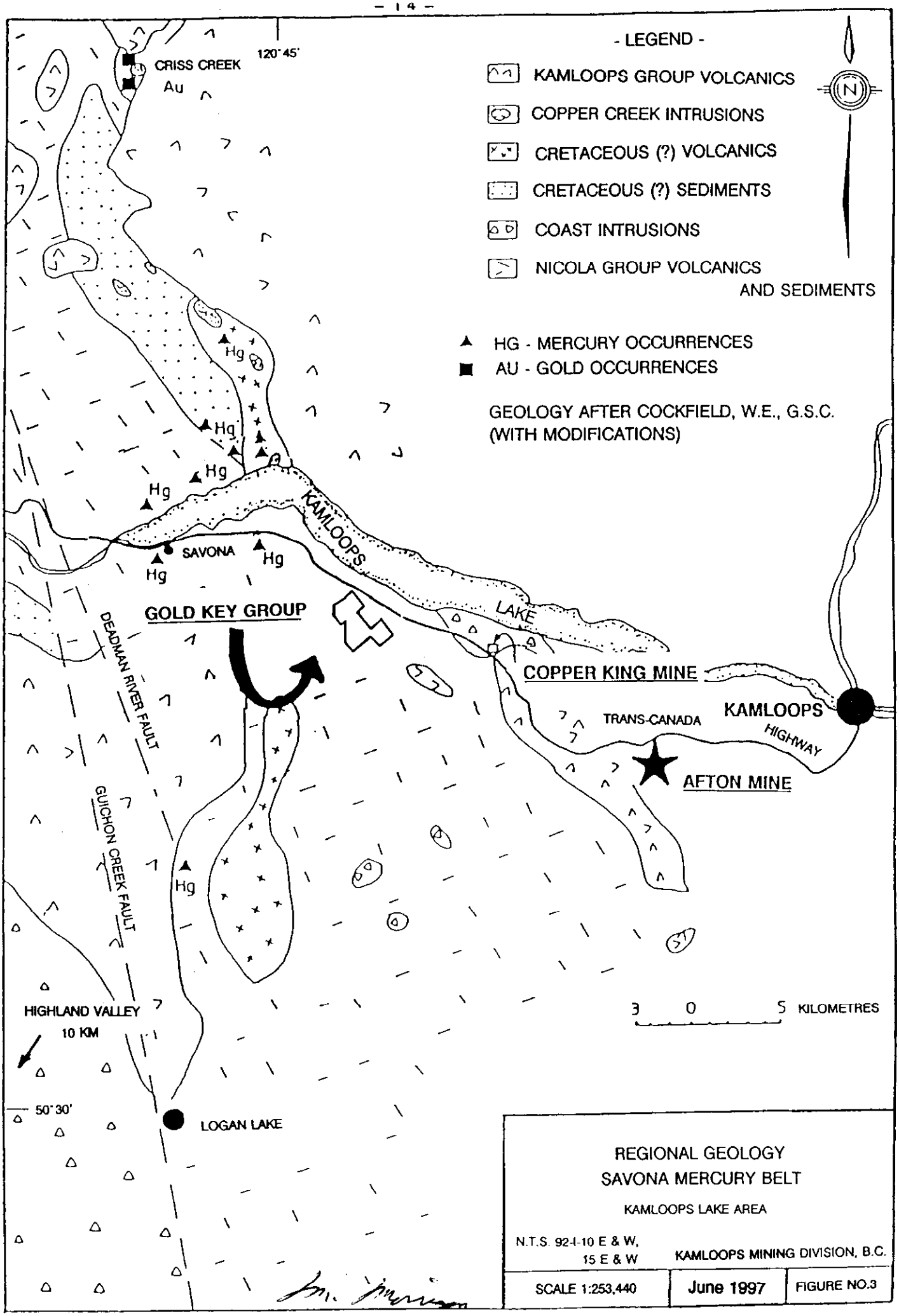
The mercury showings are all associated with carbonate replacement zones within highly faulted country rock. The mercury content at the Savona mercury prospects is generally much less than 0.1%, and non-economic. However, it is the large size of some of the carbonate replacement zones and the intensity 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).

REGIONAL GEOLOGY AND MINERALIZATION continued

The Newmont Showing, discovered by Newmont Exploration geologists in 1982, immediately west of the Gold Key 5 mineral claim, 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, while gold equals 3 g/tonne and silver equals up to 180 g/tonne.

Another occurrence of anomalous gold (1755 ppb) and arsenic (400 ppm) values which are associated with a carbonate replacement zone is located on the Gold Key 2 mineral claim on a steep bluff above RCDH 85-5 (Map GK-95-1).



REGIONAL GEOLOGY
SAVONA MERCURY BELT
KAMLOOPS LAKE AREA

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

SCALE 1:253,440	June 1997	FIGURE NO.3

PROPERTY GEOLOGY AND MINERALIZATION

Introduction

The Gold Key Claim Group overlies portions of ground previously covered by the Brussels Claim Group as mentioned earlier in this report. During 1991 and 1992 the geology of the Brussels Claim Group was mapped at a scale of 1:2500 by the writer (Morrison, 1991 & 92) and much of the geological data outlined in the summary that follows was obtained during the earlier mapping programs.

Summary

The Gold Key Claim Group is underlain by Upper Triassic Nicola Group metasediments comprised of volcano-clastic conglomerates with minor sandstone and siltstone interbeds. The metasediments (metamorphosed to the green-schist facies) appear to occur as a monoclinal sequence which crosses the property at an average 145 degrees. The metasediments dip vertically to steeply east, east of the Main Valley Fault, and moderately southwest, west of the Main Valley Fault. A broad drift-filled valley crossing the property in a northwesterly direction is believed to define the Main Valley Fault which separates the easterly dipping metasediments from the westerly dipping metasediments (see Map GK-95-1).

Late Cretaceous(?) or Early Tertiary(?), discordant, felsic dykes, with or without quartz-eye phenocrysts, intrude the metasediments at many locations across the property. 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.

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 located on the Golden Lime 1 mineral claim. This zone (the subject of a 1993 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 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.

Further detail with regard to specific rock types, structural geology, faulting, alteration and mineralization may be found within the 1995 Assessment Report (Morrison, 1995) and will not be repeated here.

VLF-EM SURVEY - 1997

Grid

Two orthogonal grids were established on the northern portion of the Gold Key Claim Group to accommodate the two VLF-EM surveys. The one survey was conducted using the Annapolis, Maryland VLF signal from the east and the other survey was conducted using the Seattle, Washington VLF signal from the south.

The grid for the Annapolis VLF-EM survey was positioned over the Main Valley Fault (see Figures 8 & 9 of Appendix C) with Baseline 10W extending for 1000 metres along the inferred fault at a bearing of 140 degrees. Flagged grid lines were then measured perpendicular from the Baseline for 150 metres to the northeast and southwest at 100 metre intervals as illustrated on Figures 4 & 5.

Grid line 9 south of the Annapolis VLF-EM grid was used as Baseline 9 south for the Seattle VLF-EM survey over the Brussels Fault Zone (see Figures 8 & 9 of Appendix C). The 9 south Baseline was measured 300 metres to the northeast and 600 metres to the southwest of Baseline 10W. Once the new Baseline was established, flagged grid lines were measured perpendicular to the Baseline for 150 metres to the northwest and for 150 to 250 metres to the southeast at 100 metre intervals as illustrated on Figures 6 & 7.

The two grids were designed to overlap on the key area of the property where the Main Valley Fault and the Brussels Fault Zone are expected to intersect.

Survey stations were flagged at each 25 meter measure along all of the grid lines. A Topolite belt chain and a Silva Ranger compass were used to establish the 1.9 km of Baseline and 7.0 km of grid which were laid-out in conjunction with the VLF-EM surveys.

The new grids were designed to match previous grids on the property as closely as possible.

VLF-EM SURVEY - 1997 continued

Grid continued

This early spring's work was hampered by an unusually deep snow pack (30 to 90 cm), but late ice on the two lakes in the survey area allowed for the survey lines to cross the lakes.

Program

The VLF (very low frequency) exploration method makes use of high-powered electromagnetic transmissions broadcast by naval radio communication stations distributed around the world. These transmissions induce electric currents in conductive bodies. The induced current produces secondary magnetic fields which can be detected by measuring deviations in the normal VLF fields. VLF-EM instruments are designed to detect these deviations.

A Sabre, Model 27, VLF-EM instrument made by Sabre Electronic Instruments Ltd. was used to conduct the two surveys over 7.0 km of grid on the Gold Key Claim Group. The Annapolis, Maryland VLF signal (21.4 kHz) was received from a direction of 075 degrees and was used for the survey conducted over the Main Valley Fault. The Seattle, Washington VLF signal (24.8 kHz) was received from a direction of 200 degrees and was used for the survey conducted over the Brussels Fault Zone.

During the Annapolis survey In-Phase Tilt Angle readings were taken facing 075 degrees at each station and southwest tilts were recorded as positive (+), while northeast tilts were recorded as negative (-). The Field Strength readings during the same survey were recorded with the instrument facing 165 degrees.

During the Seattle survey In-Phase Tilt Angle readings were taken facing 200 degrees at each station and the northwest tilts were recorded as positive (+), while the southeast tilts were recorded as negative (-). The Field Strength readings during the same survey were recorded with the instrument facing 290 degrees.

VLF-EM SURVEY - 1997 continued

Program continued

Field Strength readings were taken along the Baselines and all grid station readings were then corrected for diurnal variation using the Base Stations along the Baselines in much the same manner as is used for magnetometer surveys. The corrected Field Strength values for each survey have been contoured on Figures 4 & 6, which also display the In-Phase Tilt Angles.

The In-Phase Tilt Angle values have been Fraser Filtered and contoured for each survey (see Figures 5 & 7). The Fraser Filtering of VLF-EM data has had widespread use for several years, and a full explanation of the technique is given in the geophysical paper by Peterson and Ronka that is listed with the references at the end of this report.

The Fraser filtering technique may be briefly summarized as follows: by means of simple mathematical operations the tilt data can be transformed into contourable form, and the effects of noise and topography can be filtered from data. By averaging pairs of stations and taking differences between pairs separated by the appropriate distance, values may be plotted and contoured in plan that transform cross-overs into peaks, and a low-pass smoothing mathematical operator reduces noise.

Results

Six weak to moderate strength conductors have been identified during the two VLF-EM surveys. Conductors A & B are illustrated on Figure 5 of the Annapolis survey grid, while Conductors C to F are denoted on Figure 7 of the Seattle survey grid.

Conductor A extends for 1000 metres across the survey area from L7S to L17S subparallel to Baseline 10W. The moderately strong conductor is segmented, but there is generally a good correlation between the axis of the conductor and the highest Field Strength values contoured on Figure 4. This correlation is most distinct on lines 11S and 14S.

VLF-EM SURVEY - 1997 continued

Results continued

Conductor A follows the lakes of the Main Valley closely and there is some concern that the conductivity of the clays of the lakes may in part be responsible for Conductor A. The effect of the clays are especially suspect on lines 11S, 14S and 17S where clays are visible. However, Conductor A is also moderately strong on lines 7S and 16S where there are no clays.

Another concern with regard to Conductor A is that it displays a curving pattern across the survey area, whereas the trace of the Main Valley Fault is expected to be straight. Some of the curving pattern could, perhaps, be due to late cross-faulting.

Conductor B on L10S at 10+85W appears to be a small isolated conductor without good Field Strength data support.

Conductor C is a weak to moderate strength conductor that extends only 100 metres from L15W to L16W near Baseline 9S. There is weak Field Strength support for this conductor.

Conductor D aligns with Conductor C and may represent a weak continuation of Conductor C. Conductor D is expressed over a length of only 100 metres from L12W to L13W at grid 8S.

Conductor E is another weak conductor which extends just 100 metres from L14W to L15W near grid 10S. There is weak Field Strength support for this conductor.

VLF-EM SURVEY - 1997 continued

Results continued

Conductor F is a moderately strong conductor that extends 500 metres from L12W, 11+75S to L7W, 12+15S. There is a break in Conductor F where it crosses the Main Valley and Conductor A (there is also a break in Conductor A where it intersects Conductor F). Except for the break Conductor F is supported with Field Strength data.

Conductor F could represent a northeast trending cross-fault.

DISCUSSION

Although Conductor A crosses the entire Main Valley through the centre of the Golden Lime 1 & 2 mineral claims as a strong feature it may not accurately represent the trace of the inferred Main Valley Fault. The conductor follows a curving pattern, whereas the Main Valley Fault is expected to be straight. Conductor A may in part trace the fault, but may also represent conductive clay beds associated with the two lakes which occupy the valley bottom.

The Seattle signal VLF-EM survey did not prove to be useful in defining the Brussels Fault Zone as it is outlined on the geology map of the area (see Figure 8 of Appendix C). The discontinuous conductors of Figure 7 do not fit well with the fault zone mapped on Figure 8.

The VLF-EM surveys also proved to be of no value in outlining the intensely faulted carbonate/silica replacement zones on the northern portion of the claim group. Several of these zones were covered during the surveys and the VLF-EM instrument showed no response.

Because this year's VLF-EM survey has not proved useful in defining exploration targets it is recommended that the data collected during earlier geological studies be used to direct future programs on the property. The geological data collected during 1985, 91 & 93 (Morrison, 1986, 91 & 93) indicates that the property has considerable exploration potential for hosting epithermal precious metal deposits. The following paragraphs reproduced from the 1995 Assessment Report emphasize this potential.

It has been demonstrated over the years that there is a close association between faulting, late intrusive activity and the strong carbonate/silica replacement zones on the Gold Key Claim Group (see Map GK-95-1).

DISCUSSION continued

It is apparent that the Bluff Fault Zone, Main Valley Fault Zone and the Brussels Fault Zone have had a role in the development of all of the larger carbonate/silica replacement zones on the property. The intersection of the Brussels Fault Zone with northerly-striking fault zones, in particular, has resulted in some of the strongest replacement zones (eg. Golden Lime 1 Showing and Gold Key 5 Showing).

It is thought that the late faults, cutting through the metasediments of the Triassic Nicola Group, have allowed for the intrusion of the Late Cretaceous(?) or Early Tertiary(?) felsic quartz-eye and amorphous rhyolite dykes and plugs. These high-level intrusions are believed to have been very volatile and it is thought that large volumes of hydrothermal solutions passing through the intruded metasediments have replaced the original mineral constituents with carbonate and/or silica. The degree of replacement has been governed not only by the degree of faulting and nearness to the intrusive activity, but also by the inherent porosity of the rock.

There is ample evidence at many sites across the property that there was repeated faulting and repeated introduction of hydrothermal solutions (i.e. there are several phases of banded veining, brecciation, and mending by later veining).

It is thought that the highly volatile solutions brought with them elevated levels of mercury, arsenic, barium and antimony at many locations across the property. It is also believed that gold and silver were introduced into the carbonate replacement zones with late silica-rich phases of hydrothermal solutions, and that the precious metals at the Newmont Showing represent just such a situation.

After several years of study, it is believed that the main geological features of the Gold Key Claim Group are now fairly well understood. It is thought that at least some of the larger carbonate/silica replacement zones may have quartz-chalcedony stockwork "roots", and that

DISCUSSION continued

some of these stockworks could host economic concentrations of precious metals. The Newmont Showing, although restricted in size, serves as an example of the type of mineralogy that might be found within the stockwork systems.

The mapping and sampling of the Golden Lime 1 replacement zone in 1993 and the Gold Key 1,3,5 and 7 replacement zones in 1995 has demonstrated that only the uppermost levels of each replacement zone has been eroded. The lithogeochemical analysis of several of these zones yielded elevated arsenic and antimony values typical of the highest levels of epithermal systems. Mercury content, although not analyzed in 1995, would be expected to be high also (eg. the rhyolite dyke on the Gold Key 7 mineral claim contains up to 1% cinnabar locally).

All five of the main replacement zones illustrated on Map GK-95-1 merit testing at depth with a drilling program. Any one of the replacement zones could be expected to have a precious-metal-bearing quartz stockwork feeder zone associated with it. It is recognized, in hindsight, that the 1985 drill holes were misdirected in seeking-out the roots of the epithermal systems. However, the drill holes did confirm the presence of large volumes of carbonate/silica replaced rock, and the strength of the epithermal systems in general.

Four drill sites have been selected from the six replacement/breccia zones listed below. The drill sites have been listed in order of priority as follows:

Golden Lime 1 Replacement Zone

Two inclined (-45°) drill holes should be drilled from north to south to depths of 60 metres to intercept the siliceous breccia zone that is exposed at the northern end of the carbonate replacement zone.

This drill site features very easy access.

DISCUSSION continued

Gold Key 5 Replacement Zone

Two inclined (-45°) drill holes should be drilled at 225 degrees azimuth (perpendicular to veining and bedding) to depths of 60 metres to test the Gold Key 5 replacement zone.

This zone is located just 150 metres from the Newmont precious - metal-bearing showing.

Gold Key 7 Replacement Zone

Two inclined (-45°) drill holes should be drilled from northeast to southwest to 60 metres depth to test the mineral content of the highly siliceous rhyolite dyke. The dyke contains up to 1% cinnabar and elevated arsenic and antimony values on surface.

Gold Key 3 Replacement Zone

Two inclined (-45°) drill holes should be drilled from north to south to depths of 60 metres to test the ankeritic-siliceous breccia zone that is exposed at surface.

Sample Site GK-12

The poorly exposed highly siliceous rock at site GK-12 yielded 175 ppb gold and 415 ppm arsenic values. This site warrants further exploration with a trenching program.

Gold Key 1 Breccia Zone

The well developed breccia zone on the Gold Key 1 mineral claim is more difficult to access than others on the property. Drilling of this zone should await positive results elsewhere on the property.

CONCLUSIONS AND RECOMMENDATIONS

The results of this year's ground VLF-EM surveys centered over the Golden Lime 1 & 2 and Gold Key 5 mineral claims yielded little data of value for the development of the Gold Key Claim Group. Although several moderately strong conductors were identified during the surveys, none distinctly outlined the fault systems that are inferred to cross the property (based on previous geological mapping).

In particular, this year's VLF-EM surveys were designed to trace and accentuate the Main Valley Fault and the Brussels Fault Zone that are thought to cross the northern portion of the claim group. In neither case were the faults clearly outlined. The VLF-EM instrument also failed to show any significant response on survey lines that crossed the previously mapped highly-faulted carbonate/silica replacement zones. These zones are considered the prime exploration targets on the property and the VLF-EM surveys proved to be of no value for locating them.

The concluding statements of the 1995 Assessment Report are still valid following this year's surveys and they are repeated in the paragraphs that follow.

It has been determined over the years that the large replacement zones occurring within metasediments of the Triassic Nicola Group on the Gold Key Claim Group are related to Late Cretaceous(?) or Early Tertiary(?) intrusives, and that the emplacement of these intrusives has been controlled by late faulting.

It is hypothesized that hydrothermal solutions related to the high-level, volatile intrusives have penetrated the faulted or inherently porous metasediments and have brought about the high degree of carbonate and silica replacement of the original mineral constituents. It is thought that these same hydrothermal solutions have introduced elevated levels of mercury, arsenic, barium and antimony into the metasediments.

CONCLUSIONS AND RECOMMENDATIONS continued

There is evidence of repeated faulting of the rock and the repeated introduction of hydrothermal solutions into the rock. There is also evidence that the later phases were more siliceous, and at the Newmont Showing (located immediately west of the Gold Key 5 mineral claim) gold and silver were deposited with late quartz and chalcedony veining.

A 1995 mapping and sampling program was designed to prioritize and delineate drill targets at four of the larger replacement zones on the Gold Key Claim Group. It is believed that any one of these four zones or the large Golden Lime Zone, mapped in 1993 by the writer, could host epithermal precious metal deposits at moderate depths within quartz/chalcedony stockwork systems hidden below the exposed carbonate replacement zones.

Several easily accessible drill sites have been selected (see Discussion) and a low-cost Reverse Circulation Percussion Drilling Program is recommended to test for economic precious metals at moderate depths at all sites.

All drill chips from replacement zones or stockwork systems should be analyzed for gold, silver, arsenic, antimony and barium.

June 5, 1997
Kelowna, B.C.

Murray Morrison, B.Sc.

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* Assessment Reports filed with the Ministry of Employment and Investment of British Columbia.

APPENDIX A

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-eight years.

3. During the past twenty-eight years, I have intermittently held responsible positions as a geologist with various mineral exploration companies in Canada.

4. I have conducted several geological, geochemical, and geophysical surveys on mineral properties in Southern British Columbia during the past twenty-eight years.

5. I conducted the VLF-EM Ground Surveys outlined in this report.

6. I own a 100% interest in the Golden Lime 1-2, Gold Key 1-14, 16&17 and 15 FR mineral claims.

June 5, 1997
Kelowna, B.C.

Murray Morrison - B.Sc.

APPENDIX B

STATEMENT OF EXPENDITURES - ON THE GOLD KEY CLAIM GROUP

Statement of Expenditures in connection with a VLF-EM Survey carried out on the Gold Key Claim Group, located 25 km west of Kamloops, B.C. (N.T.S. Map 92-I-10E) for the year 1997.

GROUND VLF-EM SURVEY (7.0 km)

M. Morrison, geologist	6 days @ $300.00/day	$ 1,800
Truck, 4 x 4 (including gasoline and insurance)	6 days @ $75.00/day	450
Meals and Lodging	6 days @ $77.00/day	462
Flagging and belt chain thread		25
VLF-EM Instrument rental	6 days @ $25.00/day	150
	Sub-total:	$2,887

REPORT PREPARATION COSTS

M. Morrison, geologist	2 days @ $300.00/day	$ 600
Drafting		53
Typing		107
Copying reports		20
	Sub-total:	$ 780
	Grand Total:	$3,667

I hereby certify that the preceding statement is a true statement of monies expended in connection with the VLF-EM Survey carried out March 4-12, 1997.

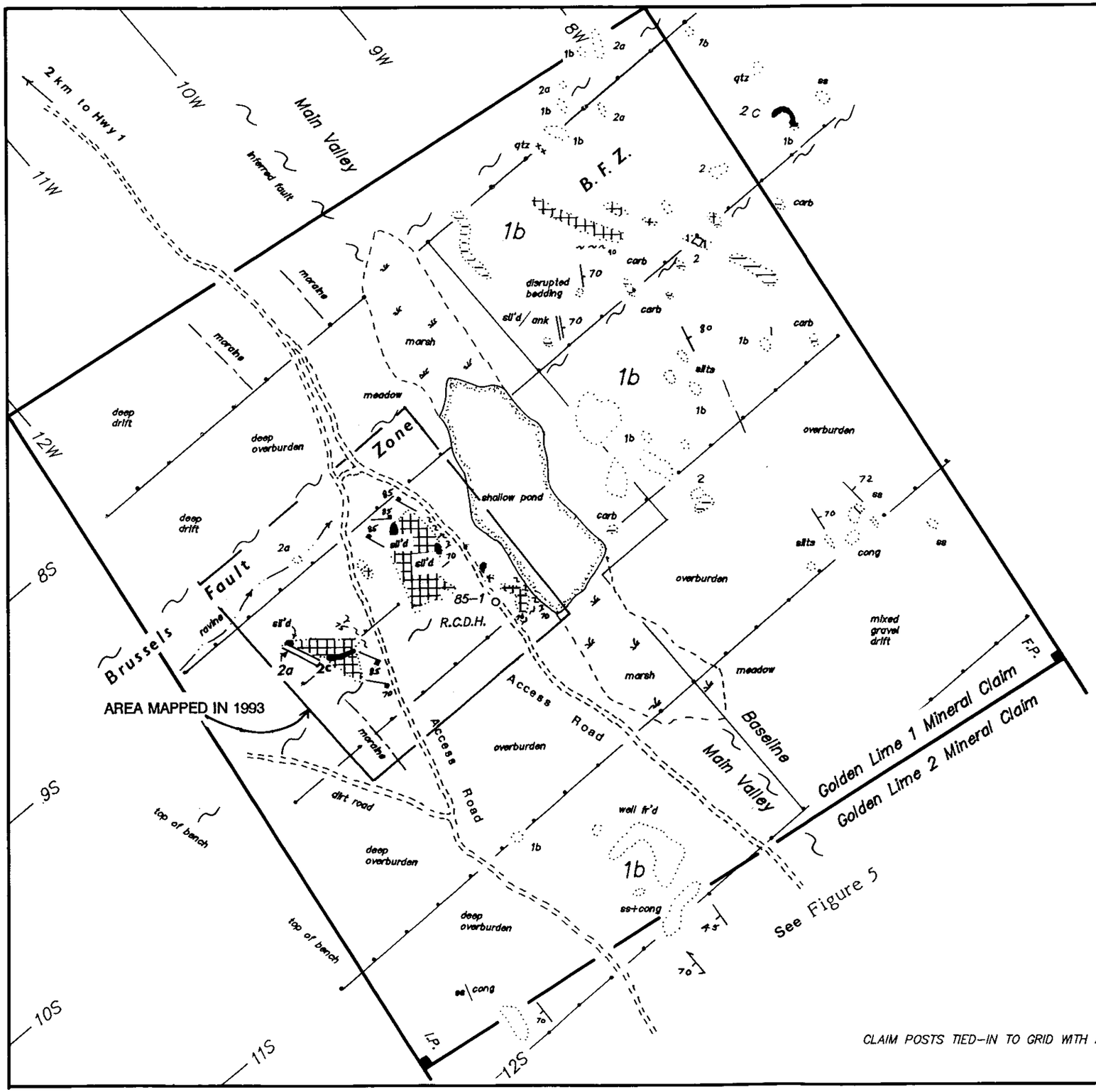
June 5, 1997
Kelowna, B.C.

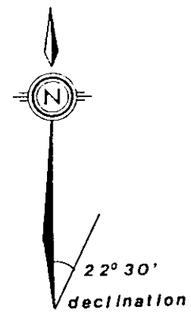
Murray Morrison - Geologist

Appendix C

Figure 8 Geology (1991)
Golden Lime 1 Mineral Claim

Figure 9 Geology (1991)
Golden Lime 2 Mineral Claim





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
sli	slight
vn	vein

0 50 100 m

scale 1:2,500

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

Golden Lime Property

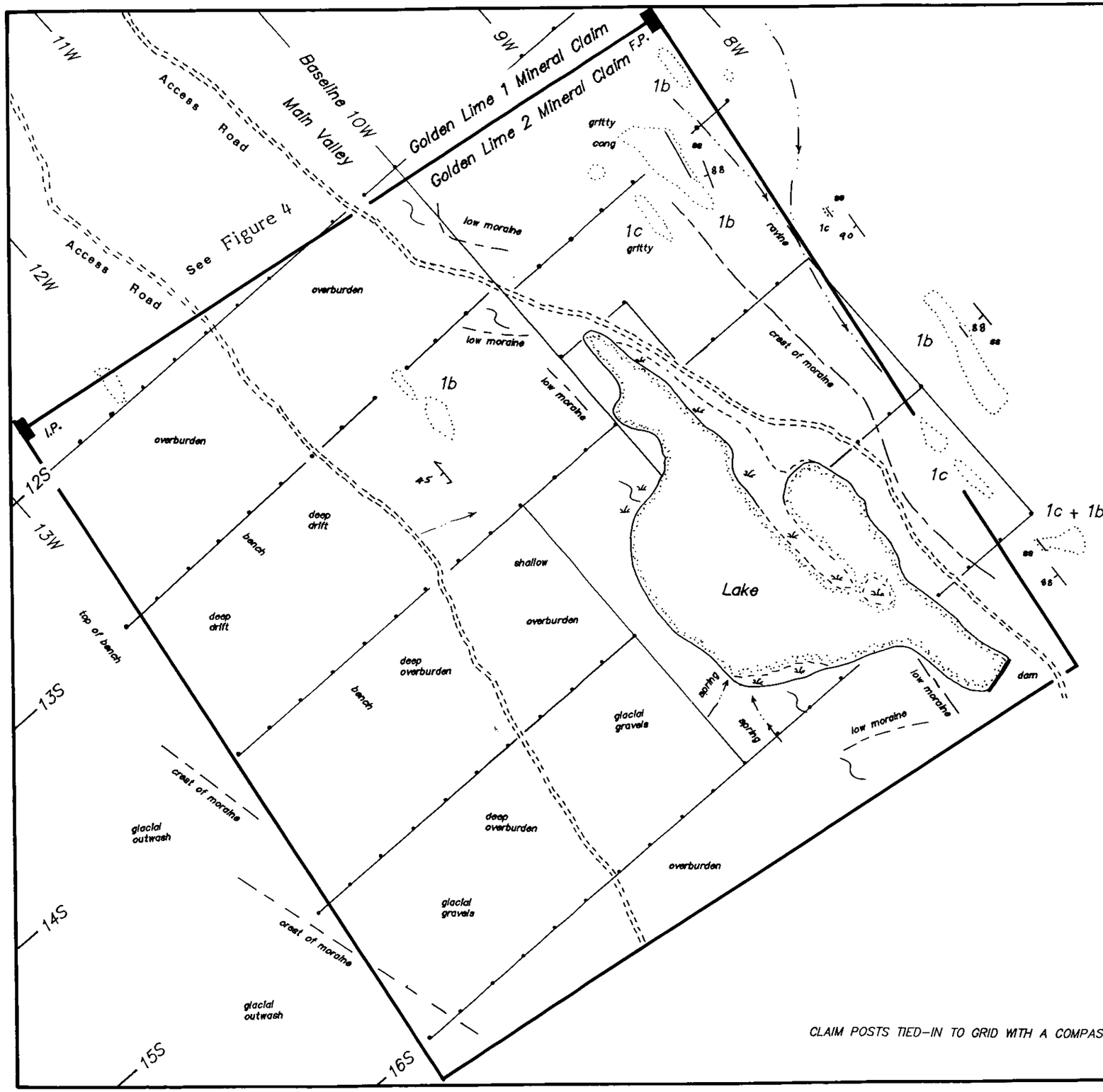
Geology

Golden Lime 1 Mineral Claim

Kamloops Lake Area

Kamloops Mining Division, B.C.

Geology by M.M.	N.T.S. 92-I-10E
June 1991	Figure No. 8



N

22° 30' declination

LEGEND

EARLY TERTIARY ? or LATE CRETACEOUS ?

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

UPPER TRIASSIC – NICOLA GROUP

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ABBREVIATIONS

alt'd	altered
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bx'd	brecciated
carb	carbonate alteration
fr'd	fractured
py	pyrite
qtz	quartz
sil	silicified
sli	slight
vn	vein

0 50 100 m

scale 1:2,500

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

Golden Lime Property

Geology

Golden Lime 2 Mineral Claim

Kamloops Lake Area

Kamloops Mining Division, B.C.

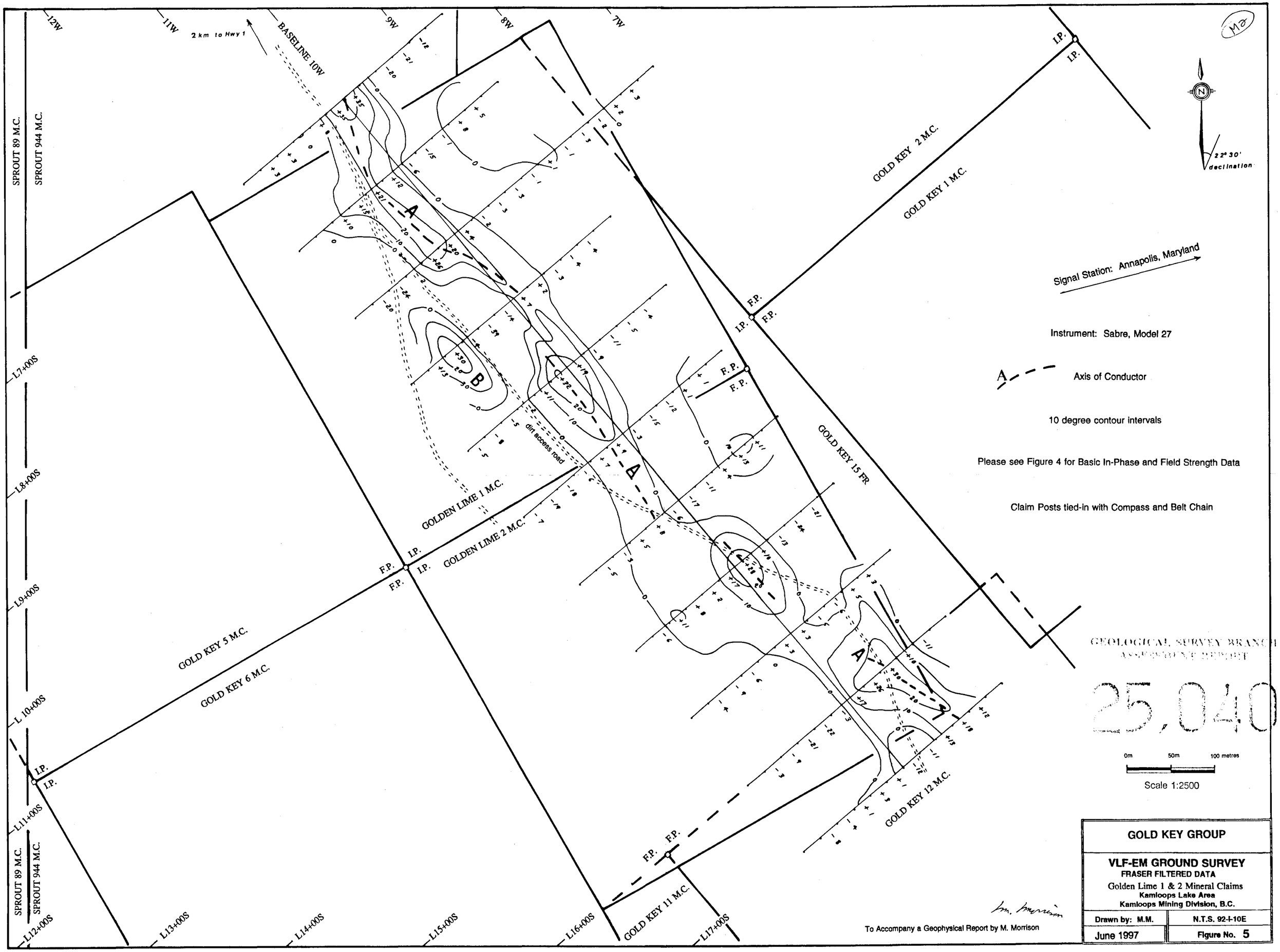
Geology by M.M.	N.T.S. 92-I-10E
June 1991	Figure No. 9

GOLD KEY GROUP

VLF-EM GROUND SURVEY
IN-PHASE & FIELD STRENGTH BASIC DATA
Golden Lime 1 & 2 Mineral Claims
Kamloops Lake Area
Kamloops Mining Division, B.C.

Drawn by: M.M.	**N.T.S. 92-I-10E**
June 1997	**Figure No. 4**

To Accompany a Geophysical Report by M. Morrison


12W
11W
2 km to Hwy 1
BASELINE 10W
9W
8W
7W
SPROUT 89 M.C.
SPROUT 944 M.C.
L7+00S
L8+00S
L9+00S
L 10+00S
L11+00S
L12+00S
L13+00S
L14+00S
L15+00S
L16+00S
L17+00S
GOLDEN LIME 1 M.C.
GOLDEN LIME 2 M.C.
GOLD KEY 2 M.C.
GOLD KEY 1 M.C.
GOLD KEY 15 FR
GOLD KEY 5 M.C.
GOLD KEY 6 M.C.
GOLD KEY 11 M.C.
GOLD KEY 12 M.C.
dirt access road
I.P.
F.P.
A
B
22° 30' declination
Signal Station: Annapolis, Maryland
Instrument: Sabre, Model 27
Axis of Conductor
10 degree contour intervals
Please see Figure 4 for Basic In-Phase and Field Strength Data
Claim Posts tied-in with Compass and Belt Chain
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
25,040
0m 50m 100 metres
Scale 1:2500
GOLD KEY GROUP
VLF-EM GROUND SURVEY
FRASER FILTERED DATA
Golden Lime 1 & 2 Mineral Claims
Kamloops Lake Area
Kamloops Mining Division, B.C.
Drawn by: M.M.
N.T.S. 92-I-10E
June 1997
Figure No. 5
To Accompany a Geophysical Report by M. Morrison

L12+00W
L11+00W
L10+00W
L9+00W
L8+00W
L7+00W
L13+00W
L14+00W
L15+00W
L16+00W
7S
8S
BASELINE 9S
10S
11S
12S

2 km to Hwy 1

SPROUT 89 M.C.
SPROUT 944 M.C.
SPROUT 89 M.C.
SPROUT 944 M.C.

GOLD KEY 2 M.C.
GOLD KEY 1 M.C.
GOLD KEY 5 M.C.
GOLD KEY 6 M.C.
GOLDEN LIME 1 M.C.
GOLDEN LIME 2 M.C.
GOLD KEY 11 M.C.
GOLD KEY 12 M.C.
GOLD KEY 15 FR

dirt access road

Seattle Signal Station

I.P.
F.P.

22° 30' declination

Instrument: Sabre, Model 27

In Phase in degrees +12 84 / +9 78 / +6 72 Field Strength

contour interval 10

Please see Figure 7 for Fraser Filtered Data

Claim Posts tied-in with Compass and Belt Chain

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,040

0m 50m 100 metres

Scale 1:2500

GOLD KEY GROUP

VLF-EM GROUND SURVEY
IN-PHASE & FIELD STRENGTH BASIC DATA
Golden Lime 1 & Gold Key 5 Mineral Claims
Kamloops Lake Area
Kamloops Mining Division, B.C.

Drawn by: M.M.	N.T.S. 92-I-10E
June 1997	Figure No. 6

To Accompany a Geophysical Report by M. Morrison

L12+00W
L11+00W
L10+00W
L9+00W
L8+00W
L7+00W
2 km to Hwy 1
L13+00W
SPROUT 89 M.C.
SPROUT 944 M.C.
L14+00W
L15+00W
L16+00W
7S
8S
BASELINE 9S
10S
11S
SPROUT 89 M.C.
SPROUT 944 M.C.
12S
GOLD KEY 5 M.C.
GOLD KEY 6 M.C.
GOLDEN LIME 1 M.C.
GOLDEN LIME 2 M.C.
GOLD KEY 2 M.C.
GOLD KEY 1 M.C.
GOLD KEY 15 FR
GOLD KEY 12 M.C.
GOLD KEY 11 M.C.
dirt access road
Seattle Signal Station
I.P.
F.P.
D
E
F
H4
N
22° 30' declination

Instrument: Sabre, Model 27

E Axis of Conductor

10 degree contour intervals

Please see Figure 6 for Basic In-Phase and Field Strength Data

Claim Posts tied-in with Compass and Belt Chain

0m 50m 100 metres

Scale 1:2500

GOLD KEY GROUP

VLF-EM GROUND SURVEY
FRASER FILTERED DATA
Golden Lime 1 & Gold Key 5 Mineral Claims
Kamloops Lake Area
Kamloops Mining Division, B.C.

Drawn by: M.M.	N.T.S. 92-I-10E
June 1997	Figure No. 7

To Accompany a Geophysical Report by M. Morrison

M5

1 KM TO HIGHWAY NO. 1

SPROUT 944 M.C.

ZONE

BRUSSELS

GOLD KEY 5 SHOWING (SEE FIGURE 4)

NEWMONT SHOWING

FAULT

GOLDEN LINE SHOWING

ZONE

DRY LAKE

ZONE

BLUFF AU ZONE

85-1

85-4

85-5

I.P. I.P.

GOLD KEY 5 M.C. F.P. I.P.

GOLD KEY 6 M.C. F.P. I.P.

GOLDEN LIME 1 M.C. F.P. I.P.

GOLDEN LIME 2 M.C. F.P.

GOLD KEY 2 M.C. F.P. I.P.

GOLD KEY 1 M.C. F.P. I.P.

RHYOLITE INTRUSIVE

GOLD KEY 1 SHOWING (SEE FIGURES)

FAULT

GOLD KEY 15 FR.

FAULT

LAKE

F.P. F.P.

SPROUT 89 M.C.

SPROUT 944 M.C.

SPROUT 941 M.C.

VALLEY

GOLD KEY 11 M.C. I.P. I.P. GOLD KEY 12 M.C.

F.P. F.P.

MAIN

BLUFF

GOLD KEY 16 M.C. F.P. I.P.

GOLD KEY 17 M.C. F.P. I.P.

GOLD KEY 9 M.C. I.P. I.P. GOLD KEY 10 M.C.

GOLD KEY 8 M.C. I.P. I.P. GOLD KEY 7 M.C.

GOLD KEY 7 SHOWING (SEE FIGURE) GK-86-1

F.P. F.P.

POND

LAKE

85-2

I.P. POND I.P. GOLD KEY 13 M.C. F.P. F.P.

GOLD KEY 14 M.C. F.P. F.P.

GOLD KEY 4 M.C. I.P.

GOLD KEY 3 M.C. I.P.

85-3

BRUSSELS LAKE

GOLD KEY 3 SHOWING (SEE FIGURE 7)

GK-12 SAMPLE SITE

TO DUFFEY CREEK

22° 30'

MAGNETIC DECLINATION

LEGEND

1 TRIASSIC - NICOLA GROUP - METASEDIMENTS (STRONG REPLACEMENT ZONES ONLY SHOWN ON MAP)

2 LATE FELSIC, QUARTZ-EYE DYKES

INFERRED FAULTS

OUTCROP

ACCESS ROADS

85-5 PERCUSSION DRILL HOLES - 1985

0 50 100 200 300 METRES

TO ACCOMPANY A GEOLOGICAL REPORT BY M. MORRISON

GOLD KEY CLAIM GROUP

KAMLOOPS LAKE AREA KAMLOOPS MINING DIVISION B.C.

MINERAL CLAIMS, ACCESS, FAULTING and REPLACEMENT ZONES

GEOLOGY BY: M.M.	AUGUST 1986	N.T.S. 92-I-10E
DRAWN BY: M.M.	SCALE 1:5000	MAP 86-96-1