BRITISH COLUMBIA

PROSPECTORS ASSISTANCE PROGRAM

MINISTRY OF ENERGY AND MINES

GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR:	1999/2000
REPORT #:	PAP 99-32
NAME:	LINDA CARON

PROSPECTOR'S ASSISTANCE PROGRAM

FINAL PROJECT REPORT

for

Linda Caron
Reference # 99/2000 P73

Part A – Summary of Prospecting Activities

Part B – Techincal Report
- Cherryville area
- Lower Granby area
- Upper Granby/Kettle area

Prepared by:
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Dec 10, 1999

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
PROSPECTING REPORT FORM (continued)

B. TECHNICAL REPORT

- One technical report to be completed for each project area.
- **Refer to Program Requirements/Regulations 15 to 17, page 6.**
- If work was performed on claims a copy of the applicable assessment report may be submitted in lieu of the supporting data (see section 16) required with this TECHNICAL REPORT.

Name Linda Caron Reference Number 99/2000 P73

LOCATION/COMMODITIES

Project Area (as listed in Part A) Cherryville MINFILE No. if applicable

Location of Project Area NTS 82L/1, 2, 6 Lat Long

Description of Location and Access General area east of Vernon to the headwaters of the Kettle River, including the Harris Ck drainage.

Main Commodities Searched For Au

Known Mineral Occurrences in Project Area numerous lode & placer gold occurrences

WORK PERFORMED

1. Conventional Prospecting (area) 23 days spent, primarily regional scale prospecting
2. Geological Mapping (hectares/scale)
3. Geochemical (type and no. of samples) 39 rock samples
4. Geophysical (type and line km)
5. Physical Work (type and amount)
6. Drilling (no. holes, size, depth in m, total m)
7. Other (specify) 12 2-post mineral claims staked in 2 properties

SIGNIFICANT RESULTS

Commodities Au Claim Name Mac

Location (show on map) Lat 50° 04' 30" Long 118° 32' 30" Elevation 4000'

Best assay/sample type Top 99-4 27.9 g/t Au - core sample from old drill core
Top 99-7 22.55 g/t Au - rock sample from Trench 2 area

Description of mineralization, host rocks, anomalies

A shallow dipping mineralized zone, up to 15 metres wide occurs in fine grained volcanics intruded by fresh granitic intrusives. The zone is well tested by drilling and has been bulk sampled via a decline driven in 1990. The mineralization is terminated by post mineral faults. There has been no exploration for the extension of the mineralized zone beyond the faults.

Supporting data must be submitted with this TECHNICAL REPORT

Information on this form is confidential for one year from the date of receipt subject to the provisions of the *Freedom of Information Act*.

PART B – TECHNICAL REPORT

Cherryville Area (082L/01, 02, 06)

There are numerous lode and placer gold occurrences in the area east of Vernon, to the headwaters of the Kettle River. The geology of the region is dominated by Proterozoic to Paleozoic metamorphic rocks, intruded by Jurassic - Cretaceous granodiorite intrusives and the area was felt to be favorable for Intrusion Related Gold occurrences. A total of 23 days were spent prospecting in this area, with an additional 6 days of non-prospecting time spent compiling data. In total, 39 samples were collected and submitted for analysis. A list of sample descriptions and locations is attached, along with copies of the analytical results.

The majority of the time was spent doing regional type prospecting. There are many known mineral occurrences in this area, and in the regional prospecting, only a few areas of new mineralization were discovered. A number of days were spent examining known mineral occurrences, many of which were open for staking. Two of these occurrences were subsequently staked, the Lav (Minfile #082LSW120) and the Mac (Minfile #082LSE017).

A significant effort was put into getting into the Monashee Mountain area, where a number of known mineral occurrences have characteristics which match that of Intrusion Related gold deposits. These occurrences are hosted within Jurassic – Cretaceous intrusives and within the surrounding Paleozoic metasediments and metavolcanics. Creeks draining this area on three sides contain placer gold and have anomalous Au and W in RGS data. The area proved to be extremely difficult to access, and efforts to prospect this area were further hampered by the snow very early in the fall at this elevation. This is a high priority target for further work next year.

Regional prospecting was completed in the Harris – McAuley area, looking for possible bedrock sources for the placer gold in these drainages. The lack of bedrock hampered prospecting efforts. There is a large network of logging roads which give good access to the plateau south of Harris Creek. This area was not fully prospected due to time constraints. There are no known mineral occurrences in this area, however with the new access it is felt that follow up in this area would also be warranted next season.

During the course of prospecting an undocumented Tertiary coal occurrence was discovered within the Cherryville area. This coal was sampled and the results are attached. The coal is sub bituminous to lignite in rank, with low sulfur content and good heat value, for its rant. It has a low ash content, and would be suitable for use as local thermal coal, or in cement making. There is little outcrop in the area the coal was discovered. We are investigating the possibility of using a pack back auger type drill to attempt to determine the extent of the coal next summer.

The first property staked was the Lav property, where a thick quartz-sericite-pyrite (+ tourmaline) schist occurs, with anomalous gold values. Previous work had identified a Au + multi-element soil anomaly over 2 km long. Six 2-post mineral claims were staked to cover the occurrence, and 8 samples were collected from the property. A summary report describing the property is attached. During property examinations, two additional samples were collected by a third party. Analytical results for these samples, as well as a petrographic description of one of them, are also included.

The Mac claims were staked to cover a known mineral occurrence, where drilling in the late 1980's had returned values to 0.47 oz/t Au over 13 metres. There was a significant amount of past work on this property, and a considerable amount of non-prospecting time was spent compiling this data, and preparing the summary report on the property, which is attached. Eight samples were collected from the property, as described in the enclosed list of sample descriptions and plotted on the maps in the summary report. During property examinations by 2 companies, an additional 5 samples were collected. Analytical results, as well as petrographic descriptions of two of these samples are also included. The best results included Top 99-4 and 99-7 (27.9 g/t Au and 22.55 g/t Au, respectively).

Lav Property Summary

- 2.5 km long Au soil anomaly (+ As, Sb, Ag, W, Cd, Zn, Pb, Fe, La, Mn, P), with values to 750 ppb Au
- only minor outcrop in area of soil anomaly
- corresponding alteration zone (quartz-sericite-tourmaline-mariposite in quartz-sericite schist) identified by limited drilling and surface mapping
- Au values in rock to 2520 ppb over 2 m (with anomalous Cu, Ag) and 500 ppb over 34 m
- many features consistent with a transitional porphyry-epithermal Au-Ag deposit, suggesting potential for higher grade areas within the large low grade alteration zone
- no trenching or geophysics completed
- excellent access and infrastructure, no conflicting land use

Location and Terrain:

- 10 km east of Vernon B.C., on NTS 82L/6E and TRIM 082L.025
- excellent road access to property
- gentle topography, moderate forest cover, minimal outcrop
- water on claims for drilling

Claims:

- Six 2-post mineral claims, owned by John Kemp and Linda Caron
- All claims are in good standing to July, 2000

Property Description:

The property was first staked in 1988 in follow-up to a regional heavy mineral sampling program and the claims were subsequently optioned to BP Resources. In 1989 a program of gridding, soil sampling and recce geological mapping was completed, with samples collected at 50 metre intervals on lines spaced 150 metres apart. A major Au (+ As, Sb, Ag, W, Cd, Zn, Pb, Fe, La, Mn, P) soil anomaly was identified. The grid was then extended to the west, and additional sampling done, which extended the anomaly to 2.5 km in strike length, with a width of 200 – 400 metres (see compilation map attached). Maximum gold values within the anomalous area were 750 ppb Au, with a threshold value of 9-15 ppb. A number of other smaller anomalous areas were also defined.

Diamond drilling was then completed during 1989-90 to test the anomalous area for the possibility of a large, low grade deposit. Eight holes were completed (4 in one fence), as shown on the compilation map, for a total of 1008 metres. All drill core is in excellent condition and is stored on the property. Wong (1990) summarizes the results as follows:

"Drilling has indicated that the soil anomaly is underlain by pyritic sericite schist containing variable amounts of quartz, chlorite, tourmaline and mariposite. The schist is pervasively enriched in gold with drill results ranging from 50 m averaging 113 ppb gold in hole 89-4, to 125 m averaging 307 ppb gold in hole 90-7 (or 34 metres @ 500 ppb Au. This interval includes 2 metres which returned 2520 ppb Au, 3.8 ppb Ag and 1548 ppm Cu). *The schist is gradational into graphitic argillite with subordinate mafic tuffaceous beds to the southwest, and gradational into quartz-feldspar porphyry to the northeast. Protolith for the schist, which has a minimum width of 250 m, appears to be a felsic rock, perhaps originally a volcanic in origin, which localized deformation and alteration possibly related to the emplacement of Jurassic plutons."*

Although follow-up work was recommended, BP relinquished the option on the claims following the 1990 drill program, and the claims were subsequently allowed to lapse. The current claims were acquired by staking during the summer of 1999.

The Lav property exhibits many of the characteristics of a transitional porphyry-epithermal Au-Ag (+Cu, As, Sb) system. Specifically the host rocks, alteration, ore controls, and geochemical signatures and zonation suggest that this model could be applied to guide exploration on the property, and suggests the potential for a sizeable target of higher grade, within the area of alteration.

Sampling during 1999 has indicated that Hg is also anomalous in the system. Mercury was not analyzed for during the previous programs on the property. Geochemical zonation of Hg and of other elements, both lateral and vertical, may help to guide exploration on the property. An outcrop of siliceous sinter was also identified during the past season which does not appear to have been recognized previously, and may be useful in further indicating level within a larger hydrothermal system.

There has not been any geophysics completed on the property, nor has any trenching been done to test the area of anomalous soils. Both are recommended as methods of exploring for a focus to the gold mineralization.

References:

Minfile 082LSW120 - Lavington, Lav

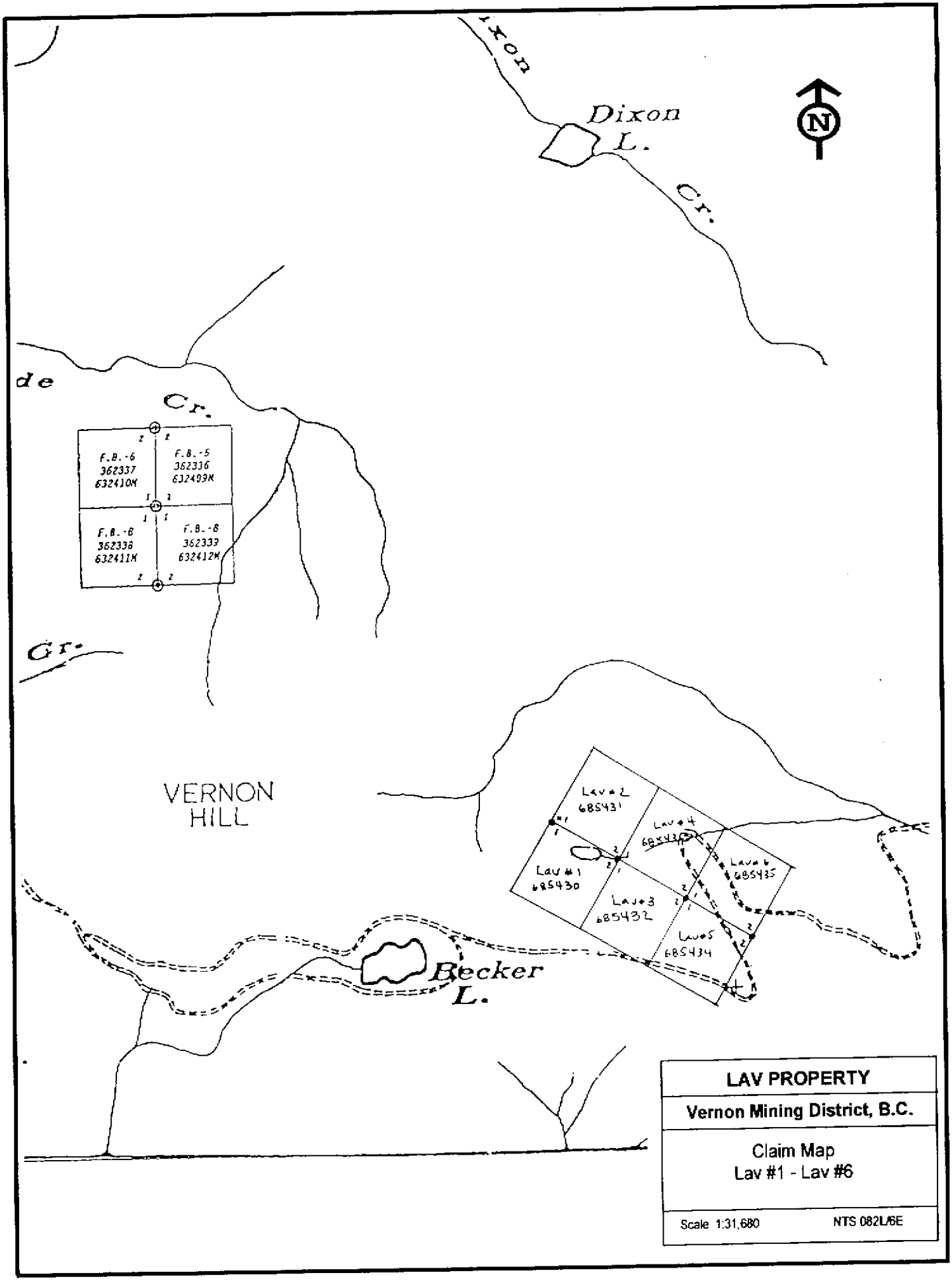
Panteleyev, A., 1996. (see copy attached)
Subvolcanic Au-Ag-Cu: Transitions from Porphyry to Epithermal Environments. Short Course Notes and Mineral Deposit Profile from: New Mineral Deposit Models of the Cordillera, January 1996, Vancouver, B.C.

Wong, R.W., 1989.
Linecutting and Geochemical Report on the Mag Claim Group, Vernon, B.C. BP Resources Canada Ltd. Assessment Report 19,578.

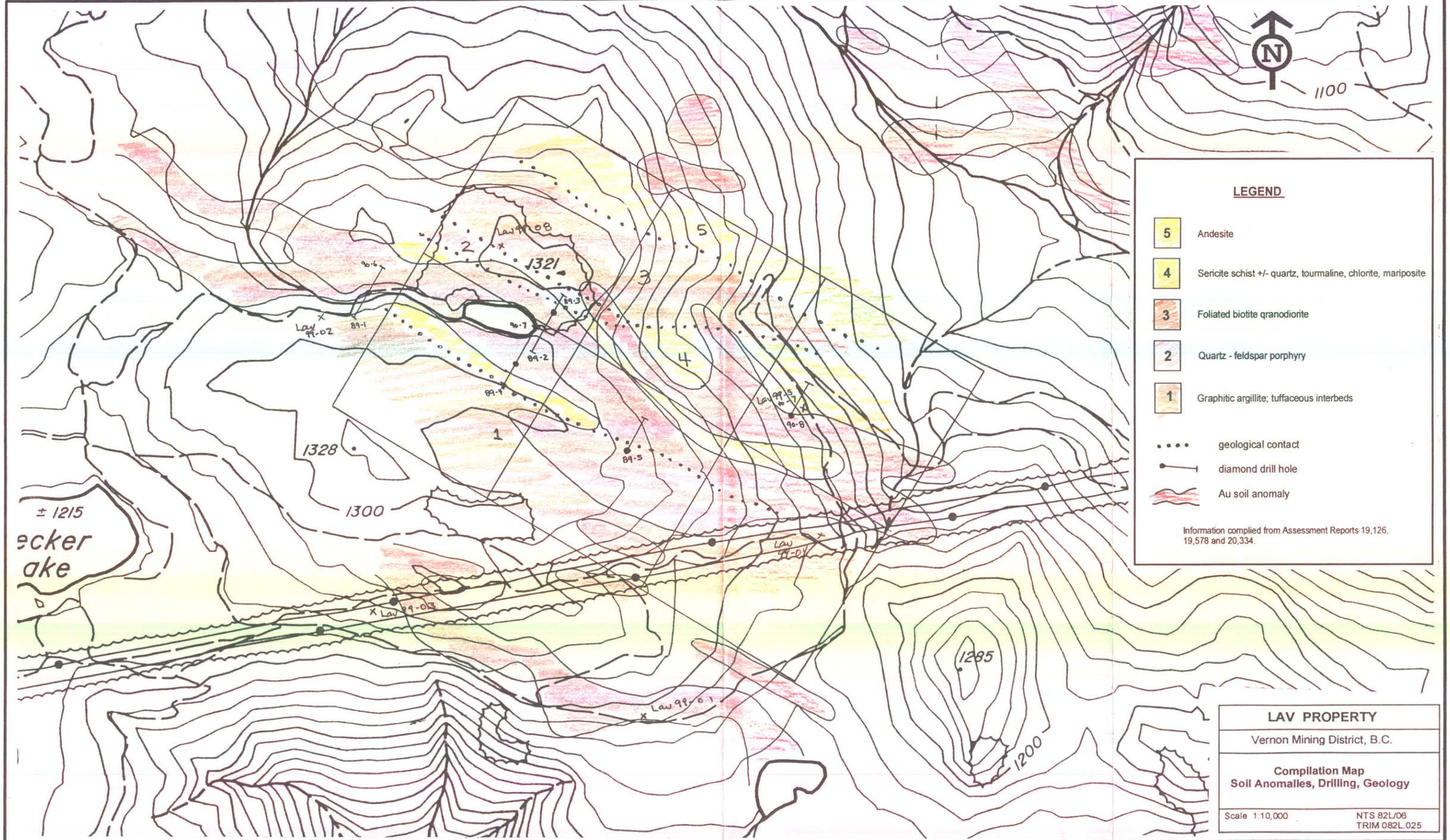
Wong, R.W. and S.J. Hoffman, 1989.
Geological and Geochemical Report on the Lavington Claim Group, Vernon, B.C. BP Resources Canada Ltd. Assessment Report 19,126.

Wong, R.W., 1990.
Diamond Drilling on the Lavington Project, Vernon, B.C. BP Resources Canada Ltd. Assessment Report 20.334.

Prepared by Linda Caron
September 10, 1999



LAV PROPERTY	
Vernon Mining District, B.C.	
Claim Map Lav #1 - Lav #6	
Scale 1:31,680	NTS 082L/6E



LEGEND

5	Andesite
4	Sericite schist +/- quartz, tourmaline, chlorite, mariposite
3	Foliated biotite qranodiorite
2	Quartz - feldspar porphyry
1	Graphitic argillite; tuffaceous interbeds
....	geological contact
—|	diamond drill hole
	Au soil anomaly

Information complied from Assessment Reports 19,126, 19,578 and 20,334.

LAV PROPERTY

Vernon Mining District, B.C.

Compilation Map
Soil Anomalies, Drilling, Geology

Scale 1:10,000 NTS 82L/06
TRIM 082L.025

99-32 P9.30

SUBVOLCANIC Au-Ag-Cu: TRANSITIONS FROM PORPHYRY TO EPITHERMAL ENVIRONMENTS

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Ministry of Energy, Mines and Petroleum Resources

notes for presentation for the short course on

New Mineral Deposit Models of the Cordillera

organized by the
British Columbia Geological Survey,
Mineral Deposit Research Unit (The University of British Columbia),
and
Geological Survey of Canada

in
conjunction with the
1996 Cordilleran Roundup
in Vancouver, British Columbia

SUBVOLCANIC Cu-Au-Ag (As-Sb) L01

by Andre Panteleyev

IDENTIFICATION

SYNONYMS: Transitional, intrusion-related (polymetallic) stockwork and vein.

COMMODITIES (*BYPRODUCTS*): Cu, Au, Ag (*As, Sb*).

EXAMPLES (British Columbia - *Canada/International*): Equity Silver (93L001); Thorn prospect (104K031,116); Limonite Creek (93L075); *Rochester District (Nevada, USA), Kori Kollo (Bolivia), the 'epithermal gold' zones at Lepanto (Philippines), parts of Recsk (Hungary) and Bor (Serbia).*

GEOLOGICAL CHARACTERISTICS

CAPSULE DESCRIPTION: Pyritic stockworks and veins in subvolcanic intrusive bodies with stratabound to discordant massive pyritic replacements, veins, stockworks, disseminations and related hydrothermal breccias in country rocks. These deposits are located near or above porphyry Cu hydrothermal systems and commonly contain auriferous polymetallic mineralization with Ag sulphosalt and other As and Sb-bearing minerals.

TECTONIC SETTINGS: Volcano-plutonic belts in island arcs and continental margins; continental volcanic arcs. Subvolcanic intrusions are abundant. Extensional tectonic regimes allow high-level emplacement of the intrusions, but compressive regimes are also permissive.

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING: Uppermost levels of intrusive systems and their adjoining fractured and permeable country rocks, commonly in volcanic terrains with eroded stratovolcanoes. Subvolcanic domes and flow-dome complexes are common; their uppermost parts are exposed without much erosion.

AGE OF MINERALIZATION: Mainly Tertiary, a number of older deposits have been identified.

HOST/ASSOCIATED ROCK TYPES: Subvolcanic (hypabyssal) stocks, rhyodacite and dacite flow-dome complexes with fine to coarse-grained quartz-phyric intrusions are common. Dike swarms and other small subvolcanic intrusions are likely to be present. Country rocks range widely in character and age. Where coeval volcanic rocks are present, they range from andesite to rhyolite in composition and occur as flows, breccias and pyroclastic rocks with related erosion products (epiclastic rocks). LAV

DEPOSIT FORM: Stockworks and sets of sulphide-bearing veins in zones within intrusions and stratabound or bedding plane replacements along permeable units and horizons in hostrocks. Veins and stockworks form in transgressive hydrothermal fluid conduits that can pass into pipe-like and planar breccias. Breccia bodies are commonly tens of metres and, rarely, a few hundred metres in size. Massive sulphide zones can pass outward into auriferous pyrite-quartz-sericite veins and replacements.

SUBVOLCANIC Cu-Ag-Au (As-Sb) L01

TEXTURE/STRUCTURE: Sulphide and sulphide-quartz veins and stockworks. Open space filling and replacement of matrix in breccia units. Bedding and lithic clast replacements by massive sulphide, disseminations and veins. Multiple generations of veins and hydrothermal breccias are common.

ORE MINERALOGY [Principal and *subordinate*]: Pyrite commonly as auriferous pyrite, chalcopyrite, terahedrite/tennantite; *enargite/luzonite, covellite, chalcocite, bornite, sphalerite, galena, arsenopyrite, argentite, sulphosalts, gold, stibnite, molybdenite, wolframite or scheelite, pyrrhotite, marcasite, realgar, hematite, tin and bismuth minerals.* Depth zoning is commonly evident with pyrite-rich deposits containing enargite near surface, passing downwards into tetrahedrite/tennantite + chalcopyrite and then chalcopyrite nearer porphyry intrusions at depth.

GANGUE MINERALOGY [Principal and *subordinate*]: Pyrite, sericite, quartz; *kaolinite, tourmaline, alunite, jarosite.* LAV

ALTERATION MINERALOGY [Principal and *subordinate*]: Pyrite, sericite, quartz; kaolinite, dickite, pyrophyllite, andalusite, diaspore, corundum, tourmaline, alunite, anhydrite, barite, chalcedony, dumortierite, lazulite (variety scorzalite), rutile and chlorite. Tourmaline as schorlite (a black Fe-rich variety) can be present locally; it is commonly present in breccias with quartz and variable amounts of clay minerals. Late quartz-alunite veins may occur. LAV

WEATHERING: Weathering of pyritic zones can produce limonitic blankets containing abundant jarosite and goethite.

GENETIC MODEL: These deposits represent a transition from porphyry copper to epithermal conditions with a blending and blurring of porphyry and epithermal characteristics. Mineralization is related to robust, evolving hydrothermal systems derived from porphyritic, subvolcanic intrusions. Vertical zoning and superimposition of different types of ores is typical due, in large part, to overlapping stages of mineralizations. Ore fluids with varying amounts of magmatic-source fluids have temperatures generally greater than those of epithermal systems, commonly in the order of 300° C and higher. Fluid salinities are also relatively high, commonly more than 10 weight per cent NaCl-equivalent and rarely in the order of 50 %, and greater.

ORE CONTROLS: Strongly fractured to crackled zones in cupolas and flow-dome complexes or along faulted margins of high-level intrusive bodies. Permeable lithologies, both primary and secondary in origin, in the country rocks. Primary controls are porous volcanic units, bedding plane contacts and unconformities. Secondary controls are structural features such as faults, open fractures, crackled zones and breccias. Breccia pipes provide channelways for hydrothermal fluids originating from porphyry Cu systems and commonly carry elevated values of Au and Ag. The vein and replacement style deposits can be separated from the deeper porphyry Cu mineralization by 200 to 700 m. LAV

ASSOCIATED DEPOSIT TYPES: Porphyry Cu-Au±Mo (L04); epithermal Au-Ag commonly both high-sulphidation (H04) and low-sulphidation (H05) pyrite-sericite-bearing types; auriferous quartz-pyrite veins, enargite massive sulphide also known as enargite gold.

SUBVOLCANIC Cu-Ag-Au (As-Sb) L01

COMMENTS: This deposit type is poorly defined and overall, uncommon. It is in large part a stockwork or vein system with local massive to disseminated replacement sulphide zones. It forms as a high-temperature, pyrite-rich, commonly tetrahderite or enargite-bearing, polymetallic affiliate of epithermal Au-Ag mineralization. Both low and high-sulphidation epithermal styles of mineralization can be present. As and Sb enrichments in ores are characteristic. If abundant gas and gas condensates evolve from the hydrothermal fluids there can be extensive acid leaching and widespread, high-level advanced argillic alteration. This type of alteration is rarely mineralized.

EXPLORATION GUIDES

GEOCHEMICAL SIGNATURE: Elevated values of Au, Cu, Ag, As, Sb, Zn, Cd, Pb, Fe and F; at deeper levels Mo, Bi, W and locally Sn. In some deposits there is local strong enrichment in B, Co, Ba, K and depletion of Na. Both depth zoning and lateral zoning are evident.

GEOPHYSICAL SIGNATURE: Induced polarization to delineate pyrite zones. Magnetic surveys are useful in some cases to outline lithologic units and delineate contacts. Electromagnetic surveys can be used effectively where massive sulphide bodies are present.

OTHER EXPLORATION GUIDES: Association with widespread sericite-pyrite, quartz-sericite-pyrite and advanced argillic (acid sulphate) alteration that might be high-level leakage from buried porphyry Cu ± Au ± Mo deposits. Extensive overprinting of sericite/illite by kaolinite. In some deposits, high-temperature aluminous alteration minerals pyrophyllite and andalusite are present but are generally overprinted by abundant sericite and lesser kaolinite. There is commonly marked vertical mineralogical and geochemical depth-zoning.

ECONOMIC FACTORS

GRADE AND TONNAGE: The deposits have orebodies of various types; vertical stacking and pronounced metal zoning are prevalent. Small, high-grade replacement orebodies containing enargite or tetrahedrite can form within larger zones of pyritization. Ores of this type at the Lepanto, Mankayan district, the Philippines, range from 2 to 27 Mt with typically ~2% Cu, 1 to ~3 g/t Au and 10 to 20 g/t Ag. The massive sulphide replacement ores have associated smaller peripheral, structurally controlled zones of sericitic alteration that constitute pyritic orebodies grading ~ 4 g/t gold. Similar tetrahedrite-bearing ores with bulk mineable reserves at Equity Silver were in the order of 30 Mt with 0.25% Cu and ~86 g/t Ag and 1 g/t Au. At the Recsk deposit, Hungary, shallow breccia-hosted Cu-Au ores overlie a porphyry deposit containing ~1000 Mt with 0.8 % Cu. The closely spaced pyritic vein systems at Kollo, La Joya district, Bolivia contained 10 Mt oxide ore with 1.62 g/t Au and 23.6 g/t Ag and had sulphide ore reserves of 64 Mt at 2.26 g/t Au and 13.8 g/t Ag.

REFERENCES

Baksa, C., Cseh-Nemeth, J., Csillag, J., Foldessy, J. and Zelenka, T. (1980): The Recsk Porphyry and Skarn Deposit, Hungary; *in* European Copper Deposits, Jankovic, S. and Sillitoe, R.H., Editors. *Society for Geology Applied to Mineral Deposits (SGA)*, Special Publication No. 1, pages 73-76.

Columba, M. and Cunningham, C.G. (1993): Geologic Model for the Mineral Deposits of the La Joya District, Oruro, Bolivia; *Economic Geology*, Volume 88, pages 701-708.

SUBVOLCANIC Cu-Ag-Au (As-Sb) L01

Cyr, J.B., Pease, R.B. and Schroeter, T.G. (1984): Geology and Mineralization at Equity Silver Mine; *Economic Geology*, Volume 79, pages 947-968.

Garcia, J.S., Jr. (1991): Geology and Mineralization Characteristics of the Mankayan Mineral District, Benguet, Philippines; *Geological Survey of Japan*, Report No. 277, pages 21-30.

Jankovic, S., Terzic. M., Aleksic, D., Karamata, S., Spasov, T., Jovanovic, M., Milicic, M., Grubiv, A. and Antonijevic, I. (1980): Metallogenic Features of Copper Deposits in the Volcano-Intrusive Complexes of the Bor District, Yugoslavia; *in* European Copper Deposits, Jankovic, S. and Sillitoe, R.H., Editors, *Society for Geology Applied to Mineral Deposits (SGA)*, Special Publication No. 1, pages 42-49.

Learned, R., Allen, M.S., Andre'-Ramos, O. and Enriquez, R (1992): A Geochemical Study of the La Joya District; *U. S. Geological Survey*, Bulletin 1975, pages 25-46.

Long, K., Ludington, S, du Bray, E., Andre'-Ramos, O. and McKee, E.H. (1992): Geology and Mineral Deposits of the La Joya District, Bolivia, SEG Newsletter, *Society of Economic Geologists*, Volume 10, Number 1, pages 13-16.

Sillitoe, R.H. (1983): Enargite-bearing Massive Sulfide Deposits High in Porphyry Copper Systems; *Economic Geology*, Volume 78, pages 348-352.

Vikre, P.G. (1981): Silver Mineralization in the Rochester District, Pershing County, Nevada; *Economic Geology*, Volume 76, pages 580-609.

Mac Property Summary

The property was acquired by staking in the summer of 1999 as part of a regional prospecting program in the Cherryville area aimed at identifying:

a) possible sources for the extensive placer gold in the area, and
b) potential Intrusive-Related Gold Deposits

The Mac Property was staked to cover a known gold occurrence in Cretaceous granodiorite, with **values to 0.47 oz/t Au over 13 metres**. As well as having **favorable host rocks, good gold values** and occurring in an area of **extensive placer gold**, the chemistry of the system and host rocks compares favorably with those from the Tintina Gold Belt.

Location and Terrain:

- property is on NTS 82L/2E and TRIM 082L008
- excellent road access (85 km east from Vernon on Hwy 6)
- moderate topography, generally heavy forest cover with patchy rock exposure
- water on claims for drilling

Claims:

- Six 2-post mineral claims, owned by John Kemp and Linda Caron
- All claims are presently in good standing to July, 2000

Property Description:

The Mac Property was staked to cover a known gold occurrence near McIntyre Lake (Minfile 082LSE017). A shallow dipping mineralized shear zone occurs on the property, ranging up to about 15 metres in width. Mineralization occurs in a complex zone of faulting and dyking within fresh granodiorite of probable Cretaceous age The zone has been tested by trenching on surface, where it has returned up to an average of **0.124 oz/t Au over a 12 metre wide zone**. Down dip from this, drilling has returned a number of good intersections, including:

ddh 83-6 **10.2 m @ 0.3 oz/t Au**
ddh 88-30 **13 m @ 0.47 oz/t Au**

The mineralized zone has a strike length of perhaps 50-75 metres, before being truncated by steep north trending faults on both the east (at surface) and west (at depth). There has been essentially no effort to attempt to find the faulted extension of the mineralized zone to the northeast or southwest. The accompanying map and schematic section are useful in visualizing the geometry of the mineralized zone.

Mineralization consists of pyrite, arsenopyrite and quartz-carbonate veinlets in an intensely altered (clay + gouge) shear zone cutting fresh granodiorite. The shear trends northeast and dips to the west at about 30-45°. Both the granodiorite and the shear zone are cut by trachyte and biotite lamprophyre dykes. The dykes and the granodiorite may be altered within the mineralized shear. The extent of alteration and abundance of syn- and post-mineral faulting within the mineralized zone makes identification of the host rock difficult, and previous workers have widely differing descriptions of the zone. Some workers have suggested that mineralization is Tertiary, post-dating the intrusion of biotite lamprophyre dykes. Alternately, alteration of these dykes may be a late event, distinct from the mineralizing event.

The occurrence was discovered in the late 1960's, and optioned to New Cinch Uranium in 1973. New Cinch Uranium completed a program of backhoe trenching and drilled 6 holes before dropping the option in 1974. Brican Resources optioned the property in 1980, and during the period 1980-83 completed soil and rock sampling, ground geophysics (mag), trenching and drilling (6 holes). One drill hole (83-6) returned 10.2 m averaging 0.3 oz/t Au. The property was then optioned by Brican to Kerr Addision who drilled 13 holes in 1984, before returning the claims to Brican. Brican drilled a further 8 holes in 1986, before relinquishing the option on the property. In 1988 it was optioned by Commonwealth Gold Corp who completed additional ground geophysics (VLF, IP), and drilled 13 holes. Highlights of the drill program were:

ddh 88-28	2.8 m @ 0.23 oz/t Au
ddh 88-29	11.7 m @ 0.13 oz/t Au
ddh 88-30	13 m @ 0.47 oz/t Au

Commonwealth Gold then undertook to drive a decline into the mineralized zone, aiming to hit the zone in the vicinity of the 88-30 drill hole intercept. At the base of the decline, the mineralized zone averaged **10 metres in width and returned an average grade of about 0.42 oz/t Au.**

The accompanying map shows the extent of work on the property. Note that this is a 1:500 scale map, and while there have been 46 holes drilled on the property, all 46 are within an area of less than 225 x 125 metres in size (ie. essentially all test the mineralization within Block B, shown on the accompanying map). Furthermore, 34 of the 46 holes are within an area that measures less than 100 x 50 metres in size. The decline tests the mineralized zone within this same small area. While the early work truly did further the understanding of the mineralization and structure on the property, much of the work completed since 1986 has really advanced the property very little.

The structural geology of the property is poorly understood. Two steeply dipping faults (left lateral movement?) are inferred to truncate the mineralized zone on the east (at surface) and west (at depth), offsetting it to the north and south respectively. There has been little attempt to determine the extent of offset on these faults. This may be possible by careful mapping, paying particular attention to dykes, which are also in some cases offset by the faults. A number of relatively flat structures have been observed both on surface and underground. The affect of these on the mineralized zone is unknown.

A program of detailed surface mapping, in conjunction with re-logging the drill holes (with an emphasis on structure) would be a good first step at understanding the offsets to the mineralized zone, and identifying drill or trench targets within Blocks A and C. The exploration target is a zone in the order of 10-15 metres in width, with an average grade of 0.3-0.5 oz/t Au. To the west, in Block A, the zone will be buried and hence geophysical or geochemical methods will be of little use in identifying targets. In Block C, the zone should surface. Two anomalous gold-in-soil sites (100 ppb Au and 370 ppb Au) may be a further indication of mineralization in Block C, and should be followed up.

Model: Intrusion-Related Gold Deposit?

The chemistry of the Tintina Gold Belt plutons is well documented. It is interesting to compare the chemistry of the Mac pluton with plutons associated with gold deposits in Alaska and the Yukon. A plot of $Na_2O + K_2O$ versus SiO_2 for Yukon-Alaska intrusives is attached. The Mac intrusive plots central to the cluster of Yukon-Alaska intrusives in the sub-alkaline field. On the same page, a plot of Na_2O versus K_2O for gold associated plutons in Interior Alaska is shown. Again, the similar chemistry of the Mac pluton is apparent, with it plotting within the cluster of prospective I-type intrusives from Alaska.

Average whole rock and trace element analyses for the Fort Knox Pluton are shown, and a comparison with the chemistry of the Mac intrusion again reveals the similar composition of the host rocks. The Mac pluton is also shown on a plot of Rb versus Y+Nb for Southwestern Alaska Plutons, where it again plots within the same field as these plutons.

A plot of Bi versus Au for the Fort Knox deposit is also included, with data from the Mac shown on the plot. McCoy (1999) indicates that the strength of correlation of Bi:Au helps distinguish between *deep and/or hot systems and shallow/distal systems. Shallow/distal deposits tend to have:*

lower Bi (up to ~ 10's of ppm Bi),
very abundant As (+10,000 ppm).

Furthermore, the Cretaceous Tintina Gold Belt arc-related systems can be distinguished from small Tertiary Sn-Ag-(Au) systems (typically 10:1 Ag:Au), on the following basis:

Ag:Au ratio < 1:1,
little Sn, and
Bi:Au ratio of <25:1

Mineralization at the Mac property has:

Ag:Au ~ 0.5–1.3 : 1
low Bi (5 – 15 ppm)
Bi:Au ~ 0.2–0.3 : 1
10,000's ppm As
low Sn (<20 ppm)

These characteristics are consistent with the characteristics of shallow/distal Cretaceous Intrusive-Related system in the Tintina Gold Belt. Such a model may be useful in guiding exploration on the property.

References:

Minfile 082LSE017 - Top

Chisholm, E.O., 1974.
Drilling Report on the Gold 1-10 Claims Group, McIntryre Lake Area; for New Cinch Uranium Ltd. Assessment Report 4,946.

Clendenan, A.J., 1984.
Diamond Drilling Assessment Report on the Top Property, McIntryre Lake; for Kerr Addison Mines Ltd and Brican Resources Ltd. Assessment Report 12,749.

Daughtry, K.L., 1984.
Diamond Drilling Assessment Report on the Top Property, McIntyre Lake; for Brican Resources Ltd. Assessment Report 12,093.

Gilmour, W.R., 1981.
Geochemical Assessment Report on the Top Property, McIntryre Lake; for Brican Resources Ltd. Assessment Report 9,304.

Gilmour, W.R., 1982.
Geological and Geochemical Assessment Report on the Top Property, McIntryre Lake; for Brican Resources Ltd. Assessment Report 10,414.

Gilmour, W.R., 1983.
Geophysical Assessment Report on the Top Property, McIntryre Lake; for Brican Resources Ltd. Assessment Report 11,191.

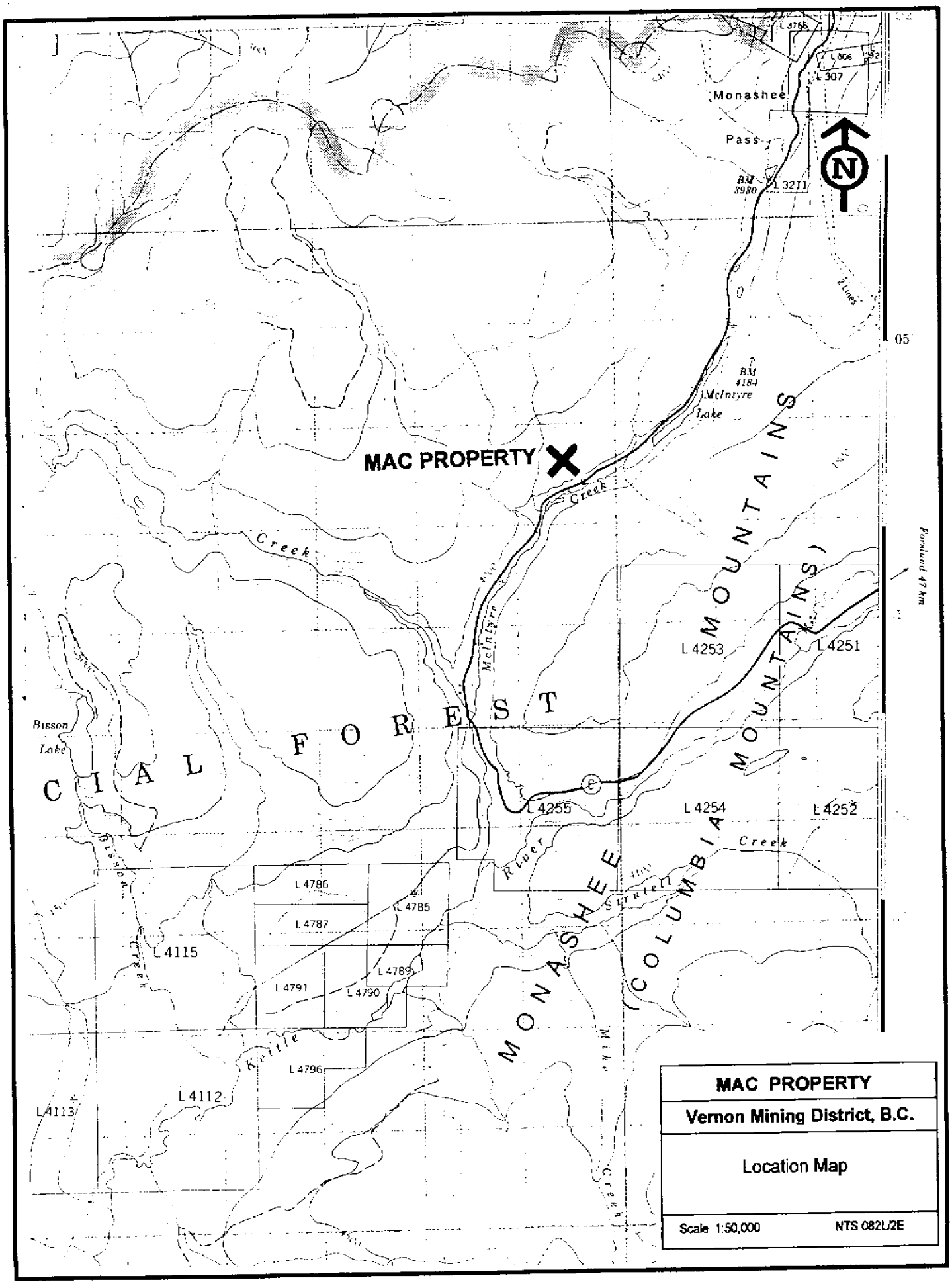
KEG Short Course Notes.
Short Course on Intrusion-Related Gold, Kamloops, B.C. April 9, 1999.

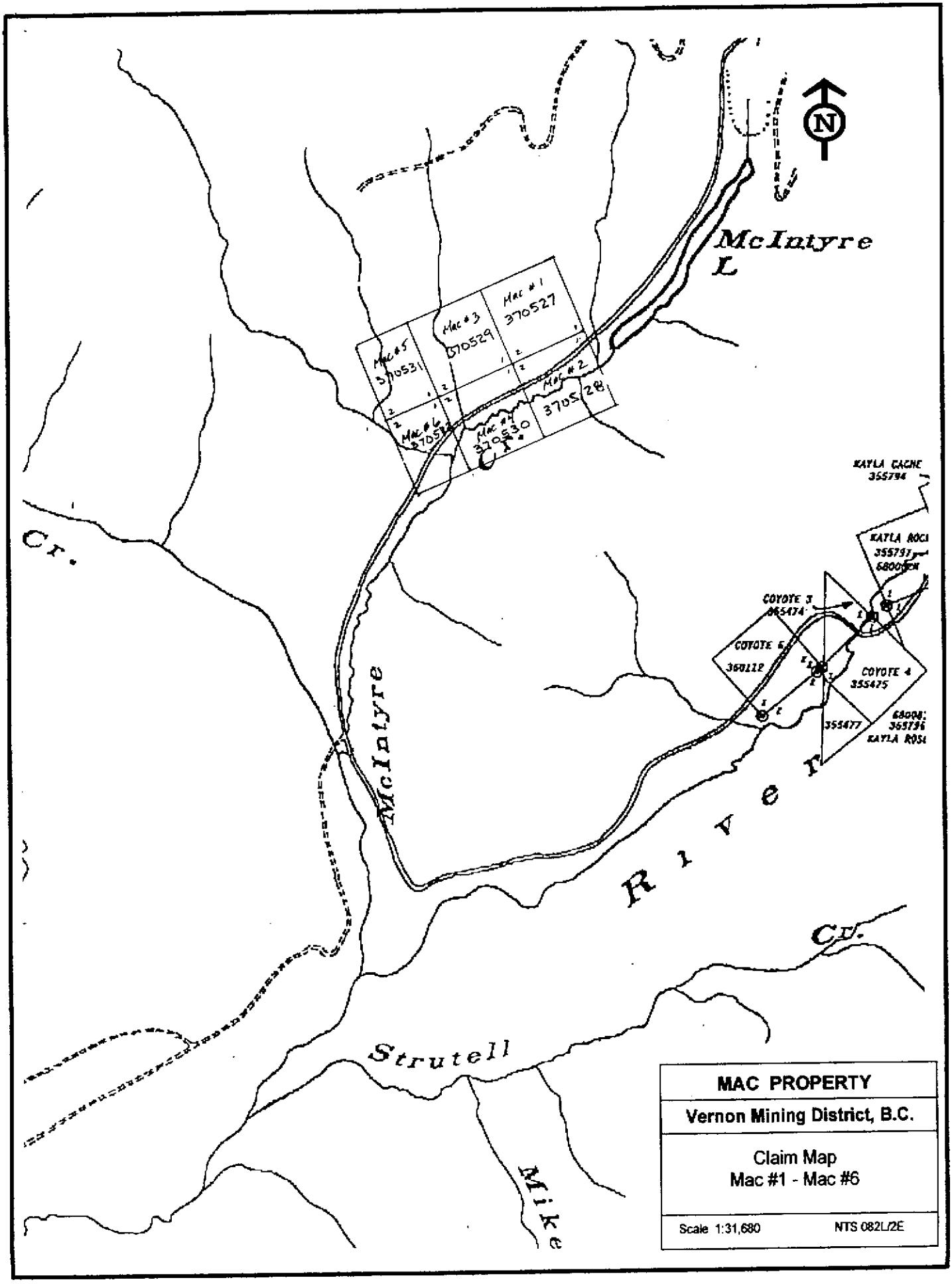
McCoy, D., 1999.
Tintina Gold Belt – Alaska Side, in KEG Short Course on Intrusion-Related Gold, Kamloops, B.C., April 9, 1999.

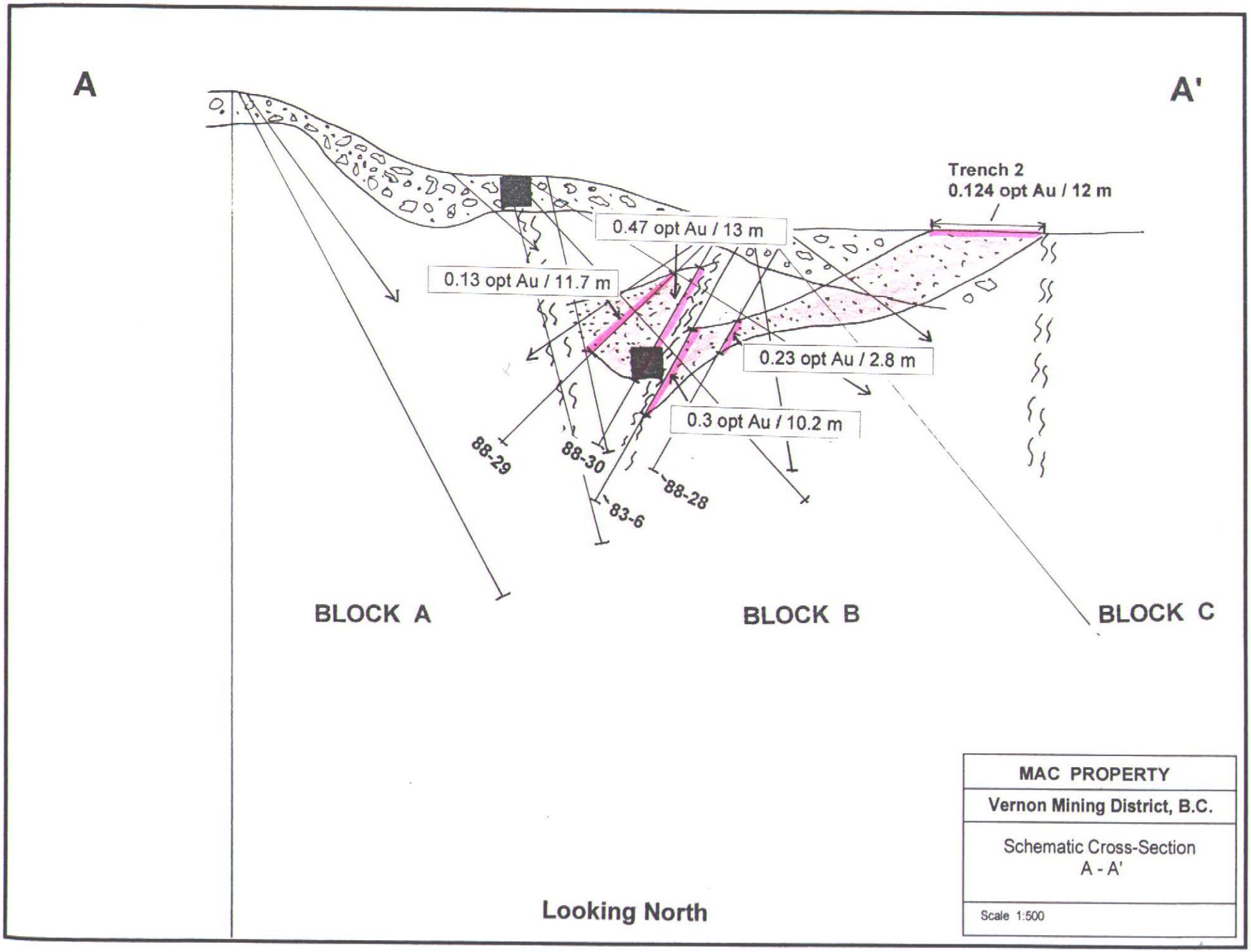
Peto, P., 1989.
Geological, Geophysical, Geochemical, Drilling and Physical Work on the Top Property; for Commonwealth Gold Corp. Assessment Report 18,426.

Twyman, M.P., 1991.
Assessment Report on the Geochemical Survey and Decline Workings and Sampling Program, Top Property; for Commonwealth Gold Corp. Assessment Report 21,656.

Prepared by Linda Caron
October 18, 1999

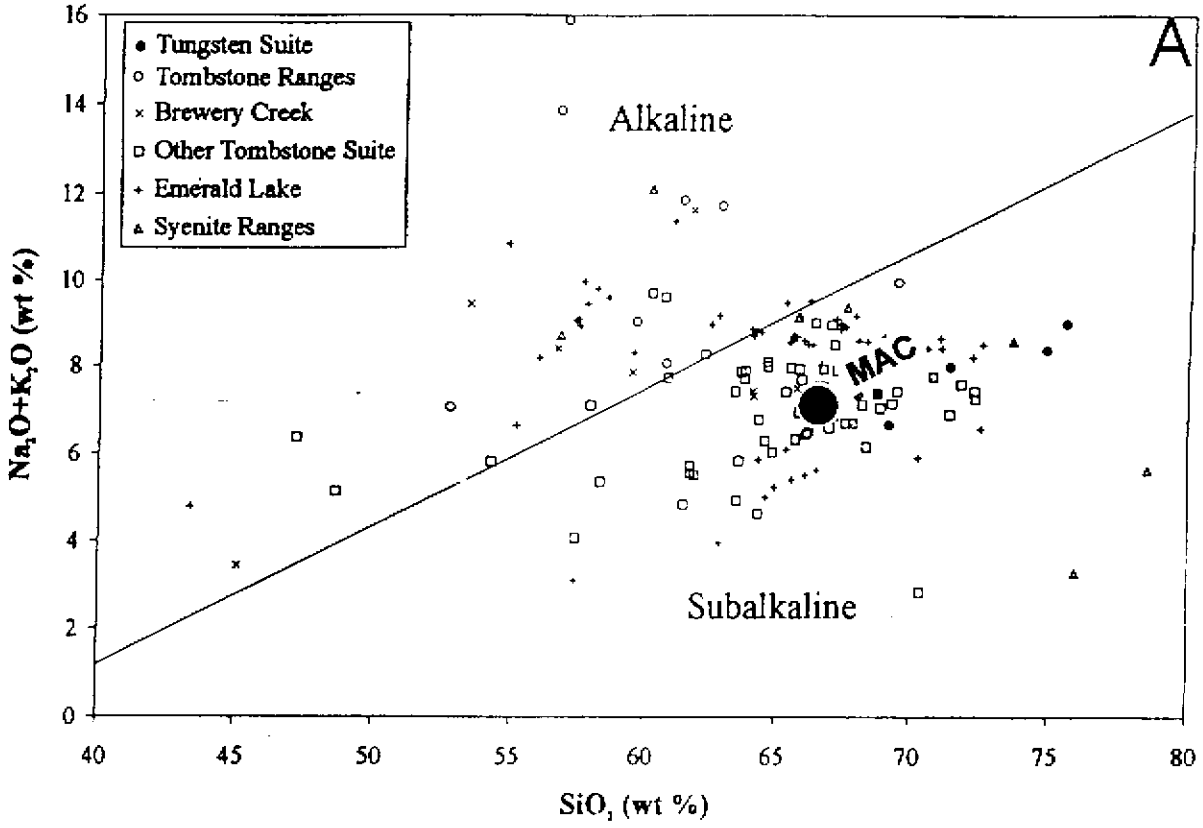

MAC PROPERTY
Monashee Pass
BM 3980
L 3211
L 3765
L 307
N
BM 4184
McIntyre Lake
Creek
McIntyre
River
Bisson Lake
Bisson
Creek
Kettle
River
Strutell
Creek
C I A L F O R E S T
MONASHEE MOUNTAINS
COLUMBIA MOUNTAINS
L 4253
L 4251
L 4255
L 4254
L 4252
L 4786
L 4785
L 4787
L 4115
L 4789
L 4791
L 4790
L 4796
L 4112
L 4113
05
Forslund 47 km
MAC PROPERTY
Vernon Mining District, B.C.
Location Map
Scale 1:50,000
NTS 082L/2E


N
McIntyre
L
Mac #1
370527
Mac #3
370529
Mac #5
370531
Mac #2
370528
Mac #6
370532
Mac #4
370530
KAYLA CACHE
355794
COYOTE 3
365474
COYOTE 5
360112
COYOTE 4
355475
355477
McIntyre
River
Cr.
Cr.
Strutell
Mike
MAC PROPERTY
Vernon Mining District, B.C.
Claim Map
Mac #1 - Mac #6
Scale 1:31,680
NTS 082L/2E

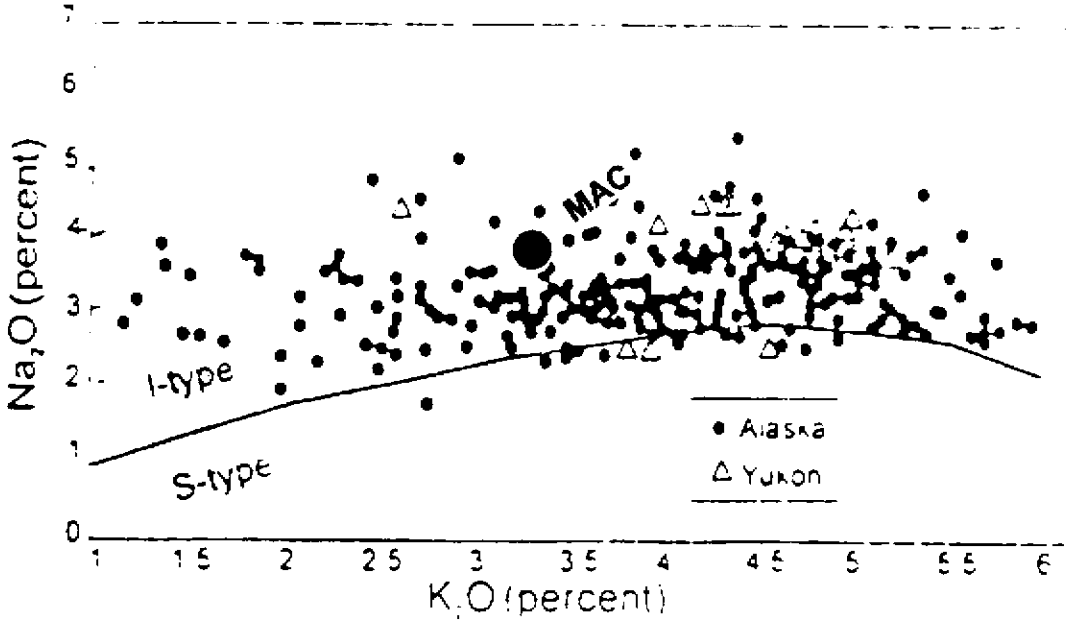


MAC PROPERTY
Vernon Mining District, B.C.
Schematic Cross-Section A - A'
Scale 1:500

Na2O + K20 versus SiO2, for Yukon-Alaska Intrusives



Gold Associated Plutons in Interior Alaska - Na2O vs K2O

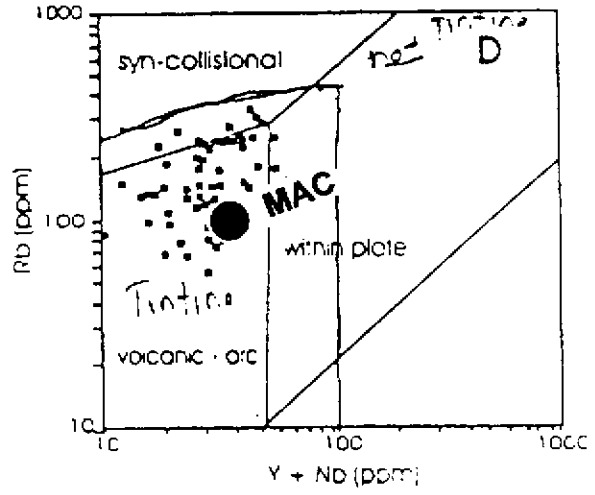


From Short Course Notes. KEG, April 9/99. Short Course on Intrusion-Related Gold.

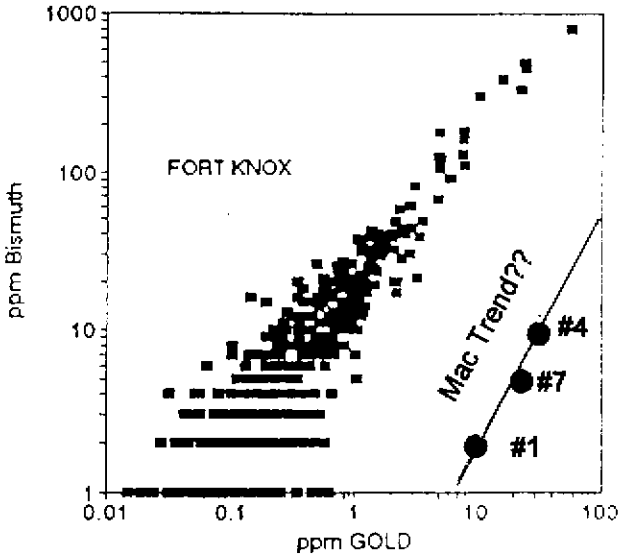
Average Whole Rock and Trace Element Analyses - Fort Knox Pluton

Rock type	grf	grm	grc	grmaf	Mac Pluton
No. of samples	6	8	6	1	
SiO_2	70.56	69.80	69.95	64.85	66.70
Al_2O_3	15.69	15.54	15.15	15.15	16.12
Fe_2O_3	0.83	0.85	0.83	1.62	1.74
FeO	1.38	1.42	1.66	2.70	1.46
MgO	0.55	0.74	0.72	2.77	0.89
Cao	2.44	2.74	2.37	4.24	3.33
Na_2O	3.75	3.62	3.60	3.74	3.87
K_2O	3.99	4.50	4.46	3.21	3.24
TiO_2	0.38	0.37	0.36	0.51	0.39
P_2O_5	0.15	0.16	0.17	0.29	0.17
MnO	0.04	0.05	0.07	0.13	0.12
BaO	0.16	0.17	0.13	0.17	0.07
LOI	0.76	1.03	1.46	0.95	1.50
Bi (ppm)	1.9	1.9	2.1	0.6	< 2
Cu (ppm)	< 1.0	2.0	< 1.0	2.0	20
Mo (ppm)	0.5	0.5	0.5	0.5	3
F (ppm)	397	404	407	1600	not analyzed
Au (ppb)	13	36	43	45	15

Rb (ppm) versus Y + Nb (ppm) for Southwestern Alaska Plutons



Bi (ppm) versus Au (ppm) at Fort Knox Deposit



PROJECT AREA: CHERRYVILLE

SAMPLE LOCATIONS AND DESCRIPTIONS

Sample #	NTS Map Sheet	UTM Coordinates	Property or Area	Sample Description
CV99-01	082L/02	388491 E 5543794 N	Kettle Forest Service Road	~ 56 km on Kettle Forest Service road, major clay alt'd rusty shear zone in intrusive visible in roadcut, trends 008/75 E. CV99-01 is chip across ~3 m shear. Minor narrow grey gougy zones.
CV99-15	082L/02	387475 E 5543900 N	Bisson Lake area	Just S of Spruce Grove, before sample CV99-01, take road heading west. 0.3 m wide qtz vn, trends 090/90, (+ several smaller veins) in pinkish potassic? altered intrusive. Tr py. Massive white, high T looking qtz.
CV99-16	082L/02	385125 E 5544180 N	Bisson Lake area	up Bisson Lk road. Par qtz vn, to 10 cm wide, up to 1/metre, in grungy granodiorite with muscovite/sericite alt'n. Veins trend 090/65 N. High T looking white qtz with trace py.
CV99-17	082L/02	386214 E 5544840 N	Bisson Lake area	Take N fork on way down from Bisson Lake. 50+ m wide zone of v sheared gdior in roadcut. Parallel white qtz vns, trend 095-100/90, up to 0.3 m wide and up to ~ 1/m. Str seric/musc on fracs in gdior. Tr py in vns. Most of veining is in a 15 m wide zone. Sample is a random grab from numerous qtz vns.
CV99-18	082L/02	384400 E 5546450 N	Bisson Lake area	Further along same road, past CV99-17. 10+ m wide rusty clay zone in roadcut. Sample of buff-grey clay gouge + rusty oxidized ????
CV99-19	082L/01	393506 E 5551906 N	Monashee Mtn area	Very rusty zone, probably altered intrusive, in road cut. Cuts grey limestone. Oxidized.
CV99-30	082L/02	390400 E 5549390 N	Coalgoat Creek area	On old road in logging slash. V odd looking rock ... brown grungy looking, will defined porphyritic? texture with euhedral square fsp? in grungy pale green gmass. Local glassy qtz. Patch v fine and diss magnetite. Tr py. Tr qtz vnlts.
CV99-38	082L/06	~ 349600 E ~ 5570000 N	Lav area	Black arg bx with qtz vnlts from road to Lav claims @ ~ 6km.
Lav99-01	082L/06	347903 E 5569327 N	Lav claims	Qtz vein in roadcut, south of powerline. 0.5-0.6 m wide. White, v fing grained, bluey-tinged massive vn with tr fine euhedral diss py. Minor patches of fine silvery py. Another vn in roadcut ~ 150 m up road – looks parallel to schistocity and to 99-01 vein.
Lav99-02	082L/06	347299 E 5570495 N	Lav claims	Siliceous qtz-sericite schist, streaky black siliceous bands with fine sulfides and silica in sericite schist with diss euhedral py.
Lav99-03	082L/06	347232 E 5569650 N	Lav claims	Abundant qtz vn subcrop and float under powerline, as in 99-01. White, massive qtz with rusty fracs, V fine grained qtz, minor patchy py. Hosted in grey-black fng slate – graphic pyrite schist. Fol'n at 292/60N. Vns par to fol'n.
Lav99-04	082L/06	348211 E 5569840 N	Lav claims	On powerline right of way – outcrop of tufa? or sinter? Dark grey-black on fresh surfaces, v vuggy with hollow tubes, avg 3 mm across. Mod soft. Calcareous. Finely banded. White, powdery on weathered surfaces.

Lav99-05	082L/06	345100 E 5569850 N	Lav claims	In road cut on main road, just N of access road to ddh 90-8. Rusty oxidized qtz-py-seric schist with 2 cm vitreous clear-white rusty qtz vn.
Lav99-06	082L/06	345100 E 5569900 N	Lav claims	In road cut on main road, about 50 m N of sample 99-5. Well foliated seric schist, fol'n at ~90-110/90. W white, soft, rusty sheared surfaces. 2-5% rem py cubes. Minor str oxidized py vnlts par to fol'n.
Lav99-07	082L/06	345100 E 5569910 N	Lav claims	In road cut, 10 m N of 99-06. Chip across 1.5 m in seric schist. White, mod soft. Rusty surfaces and yellow jarosite stain. 10-15% fine silvery diss py and py along fol'n.
Lav99-08	082L/06	347590 E 5570350 N	Lav claims	Grab over about 10 square metres, on knoll north of small pond. White vitreous massive brittle qtz vn. Minor rusty surfaces. No sulfides. Bull type qtz.
Top 99-01	082L/02	~ 389500 E ~ 5547500 N	Mac claims	Decline dump. Grab of dark grey, fine grained, strongly clay alt'd py rich boulder from minz'd zone. 5-10% fine diss py, minor 2-5 mm qtz vnlts.
Top 99-02	082L/02	~ 389500 E ~ 5547500 N	Mac claims	Decline dump. Grab of unalt'd granodiorite intrusive for whole rock assay and trace element suite. Med grained massive granodiorite, qtz + 2 fsp, mafics chl-py alt'd. Rel fresh.
Top 99-03	082L/02	389836 E 55474050 N	Mac claims	Qtz vn in granodiorite in Highway roadcut. Vn trends 315/40 SW, 10-20 cm wide, par to jointing in intrusive, minor diss py, partic on vn selvages. Minor parallel qtz vnlts.
Top 99-04	082L/02	~ 389500 E ~ 5547500 N	Mac claims	Resample first row ~8.5 – 9.75m, Box 2 ddh 88-30 (1.06 oz/t Au in drill logs), part of 13 m @ 0.47 oz/t Au interscept. Fine grained, grey pyritic diorite? dyke – not trachyte. Finer grained, more mafic phase than granodiorite.
Top 99-05	082L/02	~ 390500 E ~ 5548500 N	Mac claims	On old skid trail ~ 1 km NW of old camp. Rusty fine grained limey float with qtz vnlts and 5% fine py flood.
Top 99-06	082L/02	~ 389500 E ~ 5547500 N	Mac claims	Chip across shear zone at portal to decline. Shear on NE side of portal, 3 m wide, trends 030/75 E, clay alt'd coarse grained granodiorite. Shear looks unmineralized. This is shear that terminates mineralized zone on west side.
Top 99-07	082L/02	~ 389500 E ~ 5547500 N	Mac claims	Sample of minz'd zone from Trench 2 area. Trench is filled and zone is not exposed, but several mineralized boulders are still on surface. Fine grained, grey, pyritic material, sim to CV99-04.
Top 99-08	082L/02	~ 389500 E ~ 5547500 N	Mac claims	Sample of clay alt'd granular granodiorite with diss py from decline dump.
BB99-01	082L/02	~362200 E ~ 5561650 N	Harris Ck area - Bluebell showing	Series of pits follow narrow vns in intrusive and metaseds. Vns are roughly parallel. Not much o/c, but shallow o/b. Found ~ 6-8 pits on 3 ~ parallel vns, over about 100 metre width. BB99-01 is grab from dump of one trench, of a narrow rusty qtz vn.
Heck99-01	082L/02	387985 E 5556950 N	Heckman Creek Area	On Inches Rd, up Heckman Ck road from Gold Panner Campground. Large rusty o/c in roadcut. Shear zone 060/70N. 1.5 m wide, v. rusty, broken up shear zone in clay alt'd py intrusive.
Heck99-02	082L/02	387985 E 5556950 N	Heckman Creek Area	~ same loc as Heck99-01. White, schistose talc-seric alt'd intrusive with rusty streaks from major flat lying shear zone @ contact of rusty alt'd intrusive and green, massive but alt'd itrusive.

Heck99-03	082L/02	387985 E 5556950 N	Heckman Creek Area	~ same loc as Heck99-01. Pale green, mod soft, mod-str seric alt'd intrus, weak-mod schistosity, 2-5% diss py and minor vnlts and bands of py along fol'n.
Heck99-04	082L/02	387710 E 5557330 N	Heckman Creek Area	~ 100 m up road from Heck 99-01, 02, 03. V rusty o/c of seric-silic fng schistose intrusive with diss and rare vnlts of py. Pale green, rusty & yellow jarosite weathering. Rare qtz vnlts.
Heck99-05	082L/02	388134 E 5558150 N	Heckman Creek Area	Major fault 290/90. 30-50 m wide, int alt'd py fine grained intrusive, talc-seric shears, minor qtz vnlts, etc. –05 is sample of white barren looking qtz vn material.
Heck99-06	082L/02	388134 E 5558150 N	Heckman Creek Area	Same loc as Heck99-06. Sample of int. sheared, rusty alt'd rx from near N end of roadcut.
Heck99-07	082L/02	389490 E 5556520 N	Heckman Creek Area	Up other fork in road, takes off between samples 01-03 and –05,06. Very coarse grained pyroxenite. Strongly magnetic with 50% 0.5-1 cm py.
Heck99-08	082L/02	389223 E 5553395 N	Heckman Creek Area	Past –07 … Near Mad 1 IP (tag #663633M). ~ 150 m N on rd from Ip is v rusty dyke/shear cutting grey limestone. 10 m wide. Fine grained, dark grey, siliceous, with fine diss and patchy py, to 20%.
McA 99-01	082L/02	363469 E 5556516 N	McAuley Ck Area	100 m long road cut of bull-pale orange/tan str clay alt'd intrusive. Med grained. Rem qtz, avg 3 mm, 20% fsp, alt'd to clay, mica alt'd to seric. Minor py and oxid rem euhedral py.
VH 99-01	082L/06	345045 E 5572773 N	Vernon Hill Area	Upper trench at old workings on John Park rd. Select grab from shear on NW side of deep trench. Shear trends 160/75 SW in fspar porph. Shear is 1 – 1.5 m wide. VH99-01 is grab of qtz vn, knots, clay alt'd intrusive and sulfidic material from within shear. Selectively sample material with > sulfides. Fine black py, up to 20%, in local patches.
VH 99-02	082L/06	345045 E 5572773 N	Vernon Hill Area	same loc as VH99-01. 1 m chip across rusty oxidized shear on SE side of trench.
VH 99-03	082L/06	345045 E 5572773 N	Vernon Hill Area	~ 10 m NE along trench from VH99-02. On SE side of trench is another minz'd shear, 0.5-1 m wide. Knots of fng massive-semi-massive py in intensely siliceous groundmass.
VH 99-04	082L/06	345045 E 5572773 N	Vernon Hill Area	~10 m NE along trench, massive py vein in S wall of trench. ~ 10 m S of trench is shallow digging on qtz & mass fng py+cpy vein. Up to 40% fng py, 5% cpy.
Coal #1	082L/02	373700 E 5560470 N	Vidler Creek Area	Large blocks of black coal in creek @ culvert under road.

SAMPLE RESULTS – CHERRYVILLE AREA

Samples: CV99-01, CV99-15 to –19, CV99-30, CV99-38
Lav 99-01 to –08
Top 99-01 to –08
BB99-01
Heck 99-01 to –08
McA 99-01
VH 99-01 to –04
Coal #1

plus sample results and descriptions from property examinations by Ascot/Leicester and by Teck

17-Aug-99

ECO-TECH LAI TORIES LTD.
10041 East Trans Canada Highway
KAMLOOPS, B.C.
V2C 6T4

Phone: 250-573-5700
Fax : 250-573-4557

ICP CERTIFICATE OF AN. JIS AK 99-359

LINDA CARON
BOX 2493
GRAND FORKS
V0H 1H0

ATTENTION: LINDA CARON

No. of samples received: 27
Sample type: Rock
PROJECT #: CV
SHIPMENT #: None Given
Samples submitted by: L. Caron

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Tl %	U	V	W	Y	Zn
1	CV99-1R	<5	<0.2	0.74	<5	70	<5	0.20	<1	5	91	9	1.45	10	0.23	554	3	0.02	9	310	22	<5	<20	24	0.02	<10	21	<10	16	36
2	CV99-2R	20	0.6	0.03	<5	10	<5	<0.01	<1	2	212	32	1.47	<10	<0.01	63	8	<0.01	7	<10	8	<5	<20	<1	<0.01	<10	6	<10	<1	<1
3	CV99-3R	>1000	>30	0.10	<5	45	155	0.05	794	17	158	63	>10	<10	<0.01	214	<1	<0.01	10	<10	>10000	<5	<20	<1	<0.01	10	2	<10	<1	>10000
4	CV99-4R	55	0.6	0.17	<5	20	<5	0.02	<1	<1	139	7	0.49	<10	<0.01	212	5	0.02	4	<10	48	<5	<20	<1	<0.01	<10	1	<10	<1	32
5	CV99-5R	25	1.0	0.34	<5	15	<5	0.58	<1	28	58	203	2.68	<10	0.33	253	4	0.06	13	340	28	<5	<20	6	0.07	<10	36	<10	11	32
6	CV99-6R	5	<0.2	0.37	<5	25	<5	0.83	<1	3	98	4	0.89	30	0.28	417	1	0.06	4	930	14	<5	<20	18	0.04	<10	15	<10	45	35
7	CV99-7R	15	<0.2	0.11	10	<5	<5	9.07	<1	1	119	2	0.24	<10	0.09	82	<1	0.02	6	260	6	<5	<20	112	0.02	<10	2	<10	9	1
8	CV99-8R	10	<0.2	0.13	<5	<5	5	6.85	<1	5	134	5	1.75	10	1.28	672	3	0.01	16	320	4	20	<20	131	<0.01	<10	29	<10	33	42
9	CV99-9R	>1000	>30	0.11	630	40	10	0.37	>1000	12	127	299	8.21	<10	<0.01	236	<1	<0.01	5	<10	3212	<5	<20	7	<0.01	10	1	<10	<1	>10000
10	CV99-10R	20	1.0	0.12	50	10	<5	0.03	3	1	225	4	0.77	<10	<0.01	100	4	<0.01	7	160	24	<5	<20	<1	<0.01	<10	3	<10	<1	89
11	CV99-11R	5	0.6	1.13	<5	85	<5	0.33	<1	12	81	5	5.39	40	0.34	1977	3	0.01	5	1120	18	<5	<20	15	0.04	<10	35	<10	27	93
12	CV99-12R	90	0.6	0.37	5	45	20	9.41	<1	17	127	12	3.95	20	2.57	1014	5	<0.01	37	1000	10	15	<20	590	<0.01	<10	45	<10	<1	31
13	CV99-13R	25	0.4	0.08	<5	10	10	0.06	<1	103	206	4	3.83	<10	0.04	71	7	0.01	10	<10	<2	<5	<20	<1	<0.01	<10	4	<10	<1	<1
14	CV99-15R	10	0.4	0.05	<5	<5	<5	<0.01	<1	1	206	4	0.45	<10	<0.01	132	11	<0.01	6	20	2	<5	<20	<1	<0.01	<10	<1	<10	<1	<1
15	CV99-16R	50	0.2	0.26	<5	50	<5	1.27	<1	2	133	45	0.71	10	0.05	643	1	0.01	6	410	4	<5	<20	58	<0.01	<10	3	<10	20	6
16	CV99-17R	>1000	0.8	0.07	<5	10	<5	0.01	<1	2	194	4	0.73	<10	<0.01	136	9	<0.01	5	20	12	<5	<20	<1	<0.01	<10	<1	<10	<1	<1
17	CV99-18R	5	0.4	0.54	<5	70	10	0.20	<1	7	66	22	5.07	20	0.04	746	6	0.01	3	470	8	<5	<20	27	<0.01	<10	24	<10	77	48
18	CV99-19R	10	0.4	5.16	<5	65	20	2.78	<1	24	36	154	9.26	<10	0.44	88	7	0.19	10	1760	48	<5	<20	78	0.04	10	53	<10	<1	11
19	CV99-20R	5	<0.2	0.37	<5	25	<5	2.12	1	11	82	32	2.40	<10	0.23	262	4	0.03	20	810	10	20	<20	21	0.07	<10	25	<10	31	26
20	CV99-21R	5	0.2	0.16	20	275	<5	0.08	<1	<1	134	3	0.97	<10	0.01	72	5	<0.01	3	310	6	<5	<20	6	<0.01	<10	3	<10	<1	3

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
21	CV99-22R	5	0.4	0.26	<5	25	<5	0.08	<1	1	135	3	1.04	40	0.01	36	6	<0.01	5	610	22	<5	<20	4	<0.01	<10	1	<10	12	<1
22	TOP99-3R	25	<0.2	0.09	25	10	<5	0.04	<1	5	208	4	1.48	<10	<0.01	127	6	<0.01	8	80	4	<5	<20	3	<0.01	<10	2	<10	<1	<1
23	TOP99-4R	>1000	>30	0.41	>10000	45	10	1.56	193	43	59	55	6.16	10	0.17	912	6	<0.01	178	4300	34	100	<20	96	<0.01	<10	13	<10	6	164
24	TOP99-5R	30	<0.2	2.21	40	90	<5	3.46	<1	24	70	243	3.54	<10	1.42	782	<1	0.10	49	1260	26	10	<20	97	0.10	<10	116	<10	17	49
25	TOP99-6R	10	0.6	1.36	15	60	15	0.11	<1	14	173	19	3.16	<10	0.69	377	11	<0.01	12	500	18	<5	<20	<1	<0.01	<10	58	<10	<1	31
26	GF99-1R	<5	0.2	0.89	5	40	5	1.70	<1	5	65	9	1.97	20	0.46	779	2	0.02	3	690	14	<5	<20	63	<0.01	<10	28	<10	32	53
27	CV99-14R	5	<0.2	2.39	10	165	25	1.70	<1	37	40	19	5.04	<10	2.58	580	<1	0.09	7	640	28	20	<20	31	0.30	<10	210	<10	42	61
QC DATA:																														
Resplit:																														
1	CV99-1R	<5	<0.2	0.77	<5	65	5	0.20	<1	5	83	9	1.45	10	0.23	566	3	0.02	8	290	20	<5	<20	20	0.02	<10	21	<10	16	36
Repeat:																														
1	CV99-1R	5	<0.2	0.73	5	65	5	0.19	<1	5	89	8	1.42	10	0.22	538	3	0.02	8	290	22	<5	<20	20	0.02	<10	20	<10	14	40
10	CV99-10R	20	0.8	0.13	55	15	<5	0.03	3	2	224	4	0.77	<10	<0.01	90	4	<0.01	6	160	22	<5	<20	1	<0.01	<10	3	<10	<1	82
19	CV99-20R	5	<0.2	0.37	<5	20	5	2.13	<1	11	81	33	2.40	<10	0.24	255	1	0.03	16	820	10	15	<20	15	0.10	<10	25	<10	32	25
Standard:																														
GEO'99		120	1.4	1.73	65	170	15	1.88	1	21	64	86	3.86	<10	0.98	716	<1	0.02	22	760	22	5	<20	58	0.11	<10	77	<10	8	76

df/347
XLS/99

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

RTIFICATE OF ANALYSIS AK 99-359

LINDA CARON
BOX 2493
GRAND FORKS
V0H 1H0

16-Sep-9

ECO-TECH LABORATORIES LTD.
10041 East Trans Canada Highway
KAMLOOPS, B.C.
V2C 6T4

Phone: 250-573-5700
Fax : 250-573-4557

ICP CERTIFICATE OF ANALYSIS AK 99-473

LINDA CARON
BOX 2493
GRAND FORKS, BC
V0H 1H0

ATTENTION: LINDA CARON

No. of samples received: 11
Sample type: Rock
PROJECT #: CV
SHIPMENT #: None Given
Samples submitted by: L. Caron

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	CV99-23	35	>30	0.10	690	35	<5	0.62	948	15	77	345	>10	<10	0.01	506	<1	<0.01	1	<10	>10000	270	<20	30	<0.01	<10	1	<10	<1	>10000
2	CV99-24	5	2.2	0.07	<5	<5	<5	0.02	3	<1	203	5	0.36	<10	0.01	123	4	<0.01	5	<10	832	<5	<20	<1	<0.01	<10	<1	<10	<1	440
3	CV99-25	<5	0.6	0.68	<5	60	<5	0.35	<1	25	102	466	8.41	<10	0.26	244	777	0.02	13	330	130	<5	<20	9	0.04	<10	51	310	<1	78
4	CV99-26	15	8.4	0.37	15	25	<5	0.13	3	3	293	10	1.22	<10	0.16	102	22	<0.01	9	240	2094	<5	<20	3	<0.01	<10	7	<10	<1	369
5	CV99-27	10	0.4	0.73	25	25	10	0.92	<1	5	67	5	1.82	<10	0.45	209	10	<0.01	6	610	132	<5	<20	29	<0.01	<10	12	<10	7	71
6	CV99-28	55	1.6	0.83	10	230	<5	0.48	<1	12	190	14	2.38	<10	0.72	526	8	<0.01	48	600	140	<5	<20	9	<0.01	<10	31	<10	13	71
7	CV99-29	20	0.2	0.43	25	35	<5	0.03	<1	1	70	2	1.23	<10	<0.01	34	4	<0.01	6	160	34	<5	<20	<1	<0.01	<10	2	<10	6	37
8	CV99-30	<5	<0.2	0.39	<5	85	<5	3.13	<1	3	85	4	1.80	<10	0.10	958	6	0.02	5	740	46	<5	<20	135	<0.01	<10	10	<10	22	51
9	CV99-31	45	0.4	0.47	75	40	<5	0.18	<1	2	87	9	1.91	<10	<0.01	119	8	<0.01	3	1080	94	<5	<20	<1	<0.01	<10	5	<10	11	36
10	CV99-32	80	8.0	0.21	35	20	5	0.03	31	2	119	6	2.70	<10	<0.01	132	4	<0.01	4	190	756	<5	<20	<1	<0.01	<10	<1	<10	<1	1295
11	TOP99-7	>1000	12.0	0.13	>10000	30	5	1.99	228	19	141	33	4.89	<10	0.45	573	9	<0.01	56	600	36	225	<20	111	<0.01	<10	6	<10	<1	88
QC DATA:																														
Resplit:																														
1	CV99-23	35	>30	0.11	740	45	<5	0.66	933	16	90	315	>10	<10	<0.01	512	<1	<0.01	2	<10	>10000	270	<20	33	<0.01	<10	1	<10	<1	>10000
Repeat:																														
1	CV99-23	45	>30	0.09	710	40	<5	0.63	953	15	76	324	>10	<10	<0.01	492	<1	<0.01	2	<10	>10000	305	<20	32	<0.01	<10	1	<10	<1	>10000
Standard:																														
GEO'99		120	1.0	1.76	65	145	<5	1.86	1	20	64	77	3.82	<10	0.97	680	1	0.02	24	660	24	5	<20	54	0.07	<10	76	<10	8	74

df/470
XLS/99

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

15-Nov-99

ECO-TECH LABORATORIES LTD.
10041 East Trans Canada Highway
KAMLOOPS, B.C.
V2C 6T4

Phone: 250-573-5700
Fax : 250-573-4557

ICP CERTIFICATE OF ANALYSIS AK 99-642

LINDA CARON
BOX 2493
GRAND FORKS
V0H 1H0

ATTENTION: LINDA CARON

No. of samples received: 8
Sample type: Rock
PROJECT #: CV
SHIPMENT #: 1
Samples submitted by: L. Caron

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	BC99-01	<5	<0.2	0.56	<5	10	<5	1.59	<1	32	37	194	4.38	20	0.43	184	15	0.01	133	3840	4	<5	<20	73	0.04	<10	26	<10	31	53
2	CV99-33	75	2.4	0.16	<5	50	10	0.01	<1	3	137	4	1.59	<10	<0.01	27	6	<0.01	3	270	16	<5	<20	9	<0.01	<10	2	<10	<1	1
3	CV99-34	>1000	>30	0.09	<5	55	85	0.27	<1	21	110	23	>10	<10	0.02	314	14	<0.01	4	<10	230	<5	<20	7	<0.01	<10	1	<10	<1	9
4	CV99-35	5	0.8	0.02	<5	<5	<5	<0.01	<1	<1	200	3	0.41	<10	<0.01	45	6	<0.01	4	<10	<2	<5	<20	<1	<0.01	<10	<1	<10	<1	<1
5	CV99-36	10	2.2	0.08	<5	15	5	0.03	<1	3	175	4	1.26	<10	0.01	231	6	<0.01	4	100	6	<5	<20	<1	<0.01	<10	2	<10	<1	16
6	CV99-37	40	7.2	0.13	<5	10	10	0.01	<1	2	214	3	0.99	<10	0.03	88	7	<0.01	5	90	52	<5	<20	<1	<0.01	<10	3	<10	23	3
7	CV99-38	10	0.6	0.30	5	125	<5	>10	<1	5	32	19	1.26	<10	1.07	287	6	0.01	24	770	<2	15	<20	2752	<0.01	<10	22	<10	33	51
8	TOP99-8	340	0.8	0.23	455	25	<5	0.24	3	3	110	6	1.35	<10	<0.01	38	7	<0.01	2	550	16	5	<20	42	<0.01	<10	2	<10	<1	54
QC DATA:																														
Resplit:																														
1	BC99-01	<5	<0.2	0.54	<5	10	<5	1.54	<1	31	36	185	4.24	20	0.42	175	15	0.01	128	3740	4	<5	<20	68	0.02	<10	23	<10	30	52
Repeat:																														
1	BC99-01	<5	0.4	0.52	<5	10	<5	1.52	<1	30	30	183	4.10	20	0.38	176	15	0.01	127	3760	2	<5	<20	70	0.02	<10	23	<10	30	48
Standard:																														
GEO'99		115	1.0	1.80	65	160	10	1.86	<1	18	64	80	3.86	<10	0.94	684	3	0.02	24	760	20	10	<20	56	0.10	<10	71	<10	8	67

df/607B
XLS/99
cc. John Kemp

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

Eco-Tech
LABORATORIES LTD.

ASSAYING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 6T4
Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@mail.wkpowerlink.com

CERTIFICATE OF ASSAY AK 99-473

LINDA CARON
BOX 2493
GRAND FORKS, BC
V0H 1H0

17-Sep-99

ATTENTION: LINDA CARON

No. of samples received: 11
Sample type: Rock
PROJECT #: CV
SHIPMENT #: None Given
Samples submitted by: L. Caron

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)	As (%)	Pb (%)	Zn (%)
1	CV99-23	-	-	1090.0	31.79	-	34.45	9.50
11	TOP99-7	22.55	0.658	-	-	3.50	-	-

QC/DATA:

Repeat:

11	TOP99-7	22.90	0.668	-	-	-	-	-

Standard:

STD-M		1.40	0.041	-	-	-	-	-

per

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

XLS/99

Eco-Tech
LABORATORIES LTD.

ASSAYING
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ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 6T4
Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@mail.wkpowerlink.com

CERTIFICATE OF ASSAY AK 99-359

LINDA CARON
BOX 2493
GRAND FORKS
V0H 1H0

19-Aug-99

ATTENTION: LINDA CARON

No. of samples received: 27
Sample type: Rock
PROJECT #: CV
SHIPMENT #: None Given
Samples submitted by: L. Caron

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)	As (%)	Cd (%)	Pb (%)	Zn (%)
3	CV99-3R	53.25	1.553	154.2	4.50	-	-	1.66	2.10
9	CV99-9R	8.10	0.236	153.8	4.49	-	0.116	-	3.42
16	CV99-17R	1.24	0.036	-	-	-	-	-	-
23	TOP99-4R	27.90	0.814	37.2	1.09	2.64	-	-	-
QC/DATA:									
Standard:									
STD-M		1.45	0.042	-	-	-	-	-	-
Mp-IA		-	-	70.0	2.04	0.84	-	4.32	-

ECO-TECH LABORATORIES LTD.
per Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

KLS/99

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: CARON, LINDA **

PO BOX 2493
GRAND FORKS,BC
V0H 1H0

Project :
Comments: ATTN: LINDA CARON FAX: JOHN KEMP

Page Number :1-A
Total Pages :1
Certificate Date: 09-AUG-1999
Invoice No. :19924106
P.O. Number :
Account :PVL

CERTIFICATE OF ANALYSIS A9924106

SAMPLE	PREP CODE		Au ppb FA+AA	Au FA g/t	Au ppb AFS	Pt ppb AFS	Pd ppb AFS	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm
BB 99-01	205	226	130	-----	-----	-----	-----	< 0.2	0.15	2	< 10	< 10	< 0.5	< 2	0.03	< 0.5
HECK 99-01	205	226	< 5	-----	-----	-----	-----	< 0.2	1.92	4	< 10	50	< 0.5	< 2	0.19	< 0.5
HECK 99-02	205	226	30	-----	-----	-----	-----	1.2	1.66	26	< 10	250	< 0.5	< 2	0.12	< 0.5
HECK 99-03	205	226	10	-----	-----	-----	-----	0.2	1.41	12	< 10	60	< 0.5	< 2	2.00	< 0.5
HECK 99-04	205	226	25	-----	-----	-----	-----	< 0.2	2.16	< 2	< 10	40	< 0.5	< 2	< 0.01	< 0.5
HECK 99-05	205	226	< 5	-----	-----	-----	-----	< 0.2	0.15	< 2	< 10	< 10	< 0.5	< 2	0.06	< 0.5
HECK 99-06	205	226	50	-----	-----	-----	-----	0.8	0.86	< 2	< 10	40	< 0.5	< 2	0.07	< 0.5
HECK 99-07	205	226	< 5	-----	< 2	10	14	< 0.2	1.25	< 2	< 10	30	< 0.5	< 2	1.36	< 0.5
HECK 99-08	205	226	5	-----	-----	-----	-----	0.2	5.41	6	< 10	20	< 0.5	< 2	2.98	< 0.5
LAV 99-01	205	226	< 5	-----	-----	-----	-----	< 0.2	0.07	12	< 10	< 10	< 0.5	< 2	0.71	< 0.5
LAV 99-02	205	226	440	-----	-----	-----	-----	7.4	0.27	62	< 10	100	< 0.5	6	0.03	< 0.5
LAV 99-03	205	226	< 5	-----	-----	-----	-----	0.2	0.04	< 2	10	10	< 0.5	< 2	0.78	0.5
LAV 99-04	205	226	< 5	-----	-----	-----	-----	< 0.2	0.14	98	< 10	60	< 0.5	< 2	>15.00	< 0.5
LAV 99-05	205	226	15	-----	-----	-----	-----	1.6	0.40	62	< 10	60	< 0.5	< 2	0.12	< 0.5
LAV 99-06	205	226	40	-----	-----	-----	-----	0.2	0.50	16	< 10	60	< 0.5	< 2	0.75	< 0.5
LAV 99-07	205	226	120	-----	-----	-----	-----	1.4	0.63	20	< 10	50	< 0.5	< 2	0.07	< 0.5
LAV 99-08	205	226	< 5	-----	-----	-----	-----	< 0.2	0.24	12	< 10	10	< 0.5	< 2	0.23	< 0.5
MCA 99-01	205	226	< 5	-----	-----	-----	-----	< 0.2	0.25	2	< 10	10	< 0.5	< 2	0.09	< 0.5
TOP 99-01	205	226	>10000	10.24	-----	-----	-----	5.8	0.62	>10000	< 10	40	0.5	< 2	1.07	< 0.5
TOP 99-02	205	226	15	-----	-----	-----	-----	< 0.2	0.94	32	< 10	40	< 0.5	< 2	0.71	< 0.5
VH 99-01	205	226	105	-----	-----	-----	-----	6.0	0.11	110	< 10	< 10	< 0.5	< 2	0.82	< 0.5
VH 99-02	205	226	15	-----	-----	-----	-----	2.4	1.22	8	< 10	40	0.5	< 2	3.42	0.5
VH 99-03	205	226	5690	-----	-----	-----	-----	7.8	0.93	32	< 10	< 10	< 0.5	< 2	0.38	0.5
VH 99-04	205	226	760	-----	-----	-----	-----	29.8	0.96	< 2	< 10	< 10	< 0.5	6	0.51	1.0

CERTIFICATION: 

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: CARON, LINDA **

PO BOX 2493
GRAND FORKS,BC
V0H 1H0

Project :
Comments: ATTN: LINDA CARON FAX: JOHN KEMP

Page Number :1-B
Total Pages :1
Certificate Date: 09-AUG-1999
Invoice No. :19924106
P.O. Number :
Account :PVL

CERTIFICATE OF ANALYSIS A9924106

SAMPLE	PREP CODE		Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm
BH 99-01	205	226	4	191	22	1.56	< 10	< 10	0.03	< 10	0.04	90	7	< 0.01	3	50
HECK 99-01	205	226	12	31	27	3.48	< 10	10	0.08	< 10	1.84	725	4	0.03	6	410
HECK 99-02	205	226	3	43	65	3.60	< 10	230	0.10	< 10	2.00	235	6	< 0.01	3	300
HECK 99-03	205	226	16	26	42	2.55	< 10	< 10	0.27	< 10	1.69	895	1	0.01	11	390
HECK 99-04	205	226	8	43	37	2.91	< 10	< 10	0.13	< 10	1.85	590	9	0.03	7	190
HECK 99-05	205	226	5	197	10	0.51	< 10	< 10	0.01	< 10	0.10	130	< 1	< 0.01	6	120
HECK 99-06	205	226	7	18	48	4.51	< 10	190	0.12	< 10	0.52	210	6	0.04	8	470
HECK 99-07	205	226	16	109	37	4.03	< 10	< 10	0.12	< 10	0.93	285	1	0.14	22	760
HECK 99-08	205	226	33	38	237	4.19	10	< 10	0.04	< 10	0.96	95	4	0.11	17	860
LAV 99-01	205	226	5	191	30	0.93	< 10	< 10	< 0.01	< 10	0.05	100	1	< 0.01	7	20
LAV 99-02	205	226	4	55	14	2.82	< 10	270	0.40	< 10	0.03	5	15	0.05	1	110
LAV 99-03	205	226	15	215	38	2.19	< 10	< 10	0.01	< 10	0.01	290	1	< 0.01	13	100
LAV 99-04	205	226	28	5	6	0.70	< 10	< 10	0.04	< 10	0.73	3140	< 1	0.01	92	110
LAV 99-05	205	226	4	85	37	4.53	< 10	50	0.21	10	0.02	125	3	< 0.01	4	940
LAV 99-06	205	226	1	47	9	2.07	< 10	10	0.22	< 10	0.04	120	< 1	0.01	5	1060
LAV 99-07	205	226	6	58	23	4.83	< 10	160	0.25	< 10	0.03	30	1	0.05	4	830
LAV 99-08	205	226	1	213	1	0.52	< 10	< 10	0.04	< 10	0.03	155	< 1	< 0.01	3	90
MCA 99-01	205	226	< 1	72	3	0.85	< 10	< 10	0.10	90	0.03	405	2	0.05	1	140
TOP 99-01	205	226	25	67	20	3.92	< 10	120	0.33	10	0.05	90	3	< 0.01	105	3210
TOP 99-02	205	226	4	85	11	1.89	< 10	< 10	0.17	10	0.51	670	< 1	0.06	3	590
VH 99-01	205	226	104	78	77	13.85	< 10	< 10	0.05	< 10	0.03	55	385	< 0.01	6	50
VH 99-02	205	226	25	97	435	5.19	< 10	< 10	0.11	40	1.04	545	140	0.01	59	1990
VH 99-03	205	226	202	50	3990	>15.00	< 10	< 10	0.53	< 10	0.67	280	1705	< 0.01	46	770
VH 99-04	205	226	106	68	4000	>15.00	< 10	< 10	0.04	< 10	0.68	435	2310	< 0.01	35	400

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: CARON, LINDA **

PO BOX 2493
GRAND FORKS,BC
V0H 1H0

Project :
Comments: ATTN: LINDA CARON FAX: JOHN KEMP

Page Number :1-C
Total Pages :1
Certificate Date: 09-AUG-1999
Invoice No. :I9924106
P.O. Number :
Account :PVL

CERTIFICATE OF ANALYSIS A9924106

SAMPLE	PREP CODE		Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm			
BB 99-01	205	226	4	0.02	< 2	< 1	1	< 0.01	< 10	< 10	3	< 10	4			
HECK 99-01	205	226	2	0.08	< 2	3	13	0.14	< 10	< 10	34	< 10	66			
HECK 99-02	205	226	366	0.09	< 2	1	7	< 0.01	< 10	< 10	15	< 10	242			
HECK 99-03	205	226	4	0.82	< 2	1	36	< 0.01	< 10	< 10	11	< 10	80			
HECK 99-04	205	226	12	0.90	< 2	1	7	0.01	< 10	< 10	25	< 10	82			
HECK 99-05	205	226	2	0.01	< 2	< 1	2	0.01	< 10	< 10	3	< 10	6			
HECK 99-06	205	226	42	0.11	< 2	1	15	0.03	< 10	< 10	12	< 10	40			
HECK 99-07	205	226	< 2	0.02	< 2	8	33	0.18	< 10	< 10	204	< 10	28			
HECK 99-08	205	226	< 2	2.20	< 2	6	42	0.10	< 10	< 10	119	< 10	22			
LAV 99-01	205	226	2	0.24	< 2	< 1	51	< 0.01	< 10	< 10	4	< 10	2			
LAV 99-02	205	226	108	1.28	50	< 1	9	< 0.01	< 10	< 10	4	< 10	6			
LAV 99-03	205	226	2	0.05	< 2	< 1	29	< 0.01	< 10	< 10	1	< 10	24			
LAV 99-04	205	226	< 2	0.34	2	< 1	1025	< 0.01	< 10	< 10	4	< 10	28			
LAV 99-05	205	226	16	0.05	< 2	1	46	< 0.01	< 10	< 10	6	< 10	180			
LAV 99-06	205	226	28	0.18	< 2	< 1	34	< 0.01	< 10	< 10	3	< 10	8			
LAV 99-07	205	226	114	2.13	< 2	< 1	28	< 0.01	< 10	< 10	4	< 10	92			
LAV 99-08	205	226	4	0.01	< 2	< 1	68	< 0.01	< 10	< 10	4	< 10	10			
MCA 99-01	205	226	6	< 0.01	< 2	1	11	< 0.01	< 10	< 10	8	< 10	24			
TOP 99-01	205	226	16	3.19	74	3	95	< 0.01	< 10	< 10	10	< 10	96			
TOP 99-02	205	226	< 2	0.01	< 2	2	52	0.06	< 10	10	32	< 10	62			
VH 99-01	205	226	16	>5.00	< 2	< 1	42	< 0.01	< 10	< 10	4	< 10	6			
VH 99-02	205	226	4	1.46	< 2	4	210	< 0.01	< 10	< 10	50	< 10	74			
VH 99-03	205	226	2	>5.00	< 2	6	14	0.05	< 10	< 10	127	50	46			
VH 99-04	205	226	10	>5.00	< 2	5	18	< 0.01	< 10	< 10	78	10	98			

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: CARON, LINDA **

PO BOX 2493
GRAND FORKS,BC
V0H 1H0

Project :
Comments: ATTN: LINDA CARON FAX: JOHN KEMP

Page Number : 1-A
Total Pages : 1
Certificate Date: 16-AUG-1999
Invoice No. : I9924108
P.O. Number :
Account : PVL

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9924108

SAMPLE	PREP CODE		Al2O3 % XRF	CaO % XRF	Cr2O3 % XRF	Fe2O3 % XRF	K2O % XRF	MgO % XRF	MnO % XRF	Na2O % XRF	P2O5 % XRF	SiO2 % XRF	TiO2 % XRF	LOI % XRF	TOTAL %	Ba ppm
TOP 99-02	299	--	16.12	3.33	< 0.01	3.44	3.24	0.89	0.12	3.87	0.17	66.70	0.39	1.50	99.77	740

* Fe2O3 CALC. % IS CALCULATED FROM TOTAL Fe MINUS Fe++.

CERTIFICATION: _____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: CARON, LINDA **

PO BOX 2493
GRAND FORKS,BC
V0H 1H0

Project :
Comments: ATTN: LINDA CARON FAX: JOHN KEMP

Page Number : 1-B
Total Pages : 1
Certificate Date: 16-AUG-1999
Invoice No. : I9924108
P.O. Number :
Account : PVL

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9924108

SAMPLE	PREP CODE		Rb ppm	Sr ppm	Nb ppm	Zr ppm	Y ppm	Fe % tot.dig	FeO %	Fe2O3 % calc.
TOP 99-02	299	--	94	602	14	120	24	2.35	1.46	1.74

* Fe2O3 CALC. % IS CALCULATED FROM TOTAL Fe MINUS Fe++.

CERTIFICATION:_____

LORING LABORATORIES LTD.

629 Beaverdam Road N.E. Calgary, Alberta T2K 4W7
Tel : (403) 274-2777 Fax : (403) 275-0541

TO : LINDA CARON
Box 2493
Grand Forks, B.C.,

LLL FILE # : 41359
DATE : 18 Aug, 99
REPORT BY : DAVID KO

SAMPLE TYPE : RAW COAL

P.O.#

		%					
TAILINGS	BASIS	H2O	ASH	V.M.	F.C.	S	J/Gm
COAL # 1	A.R.	15.06	2.16	45.25	37.53	0.38	23279
	Dry	-------	2.54	53.27	44.18	0.45	27406

A.R. = AS RECEIVED

ASSAYER

LEICESTER DIAMOND MINES LTD.

#1300 - 409 Granville Street
Vancouver, British Columbia, V6C 1T2
Telephone: (604) 685-5015 ● Facsimile: (604) 684-9877

MEMORANDUM

To: Linda Caron **Date:** November 15, 1999

From: Ken Carter

Re: **Hand Sample Descriptions - Vernon Gold Properties**

MAC 1 Boulder of mineralized zone from portal, described variously as altered trachyte, andesite - shear zone, clay altered
- needs petrography
- assay Au, Ag + petrographic description

MAC 2 Rubble from Trench 2 in an area 50 m north and downslope of portal, same description as MAC 1
- assay Au, Ag

MAC 3 Core from "ore zone" of hole 30, same description as MAC 1
- assay Au, Ag

MAC 4 Core from granodiorite host, hole 31
- petrographic description needed
- Au, Ag assay

Kettle 1 Kettle South Zone - quartz vein, galena, pyrite, sphalerite
- assay Au, Ag

Kettle 2 Kettle high grade zone - quartz, massive pyrite, malachite stain, chalcopyrite, bornite, galena
- assay Au, Ag

Kettle 3 Main Stockwork zone - quartz, ± biotite, weakly disseminated, coarse pyrite, possible carbonate (Fe carbonate) alteration

Kettle 4 Stockwork area, Switchback vein, quartz, bull quartz, pyrite, weathered pyrite
- assay Au, Ag

Kettle 5	Altered intrusives, feldspar porphyry + quartz stockwork,, 1-5% sulphide - assay Au, Ag
Kettle 6	South Zone wall rock, granodiorite, feldspar veinlets - assay Au, Ag

---

LAV 1	Felsic schist, pyrite weathered, fine dissemination
LAV 2	Core samples, felsic schist, disseminated pyrite, pale grey, fine grained

LEICESTER DIAMONDS-X99
Job V990785R

KETTLE/LAV/MAC Date 991110

LAB NO	FIELD NUMBER	Au(3) g/t	Ag(2) g/t
R9912026	KETTLE-1	8.311	528.2
R9912027	KETTLE-2	32.971	521.4
R9912028	KETTLE-3	0.105	2.3
R9912029	KETTLE-4	0.056	1.6
R9912030	KETTLE-5	0.044	0.8
R9912031	KETTLE-6	0.035	0.6
R9912032	LAV-1	0.118	1.2
R9912033	LAV-2	0.1	0.9
R9912034	MAC-1	5.025	10.3
R9912035	MAC-2	2.577	17.3
R9912036	MAC-3	21.326	32.6
R9912037	MAC-4	0.066	0.6

ANALYTICAL METHODS

Au(3) Fire Assay Lead Collection / AA Finish (low level) 1/2 A.T.

Ag(2) Acid decomposition / AAS

Cominco Ltd. / Exploration Research Laboratory / 1486 East Pender Street / Vancouver, B.C. / Canada V5L 1V8
Phone: (604) 685-3032 / Fax: (604) 844-2486

Cominco

Mr. Ken Carter
Leicester Diamond Mines Ltd.
#1300 - 409 Granville Street
Vancouver, B.C.
V6C 1T2

1 December, 1999

Dear Ken: ***RE: Vernon Area Microscopy / E.R.L. Job V990785R***

Three samples were submitted as part of a larger suite for preparation into thin sections and petrographic study. The samples are numbered as follows:

LAB NO.	*FIELD NO.*
R99:12032	LAV-1
R99:12034	MAC-1
R99:12037	MAC-4

Following are brief microscopic descriptions:

SAMPLE R99:12032 (LAV-1).

In transmitted light, very fine grained sericite and fine grained sutured quartz (possibly feldspathic in part) is sheared or otherwise foliated. Equant to tabular grains of what is now believed to be sillimanite after/retrograde from kyanite are in the 0.5 - 1.0 mm size range. These tabular to equant features form aggregates to several mm's in size. Several percent of cubic forms, now limonite, are believed to have been pyrite. They are in the 0.5 - 1.0 mm size range.

The rock is believed to be a sheared, weathered meta-volcanic or related rock.

SAMPLE R99:12034 (MAC-1).

In transmitted light quartz crystal fragments/phenocrysts are noted up to 2 mm in size. Circular features to 2 - 3 mm consist of crystalline and fine grained "fresh" sericite. As well, a 5 mm diameter feature consisting of lath shaped features, now altered to very fine turbid sericite and fresh quartz is present.

The host or matrix to these minerals and alteration minerals is a mixture of quartz, sericite and laths of a turbid to opaque phase, possibly a Fe-Ti oxide rich sericite.

The rock appears to be an altered (quartz-sericite) volcanic of indeterminate composition.

SAMPLE R99:12037 (MAC-4).

In transmitted light the mode is approximately as follows:

Potash feldspar:	35%
Plagioclase:	30%
Biotite:	5%
Quartz:	25%
Epidote:	1%
Carbonate:	1%
Chlorite:	1.5%
Opaques:	1.5%

Subhedral grains of orthoclase (microcline) are seen up to 10 mm in maximum dimensions and are tabular in form. They are seen to engulf some grains of plagioclase. Plagioclase grains as tabular, subhedral grains are typically in the 1 - 3 mm size range. They are often seen to be altered (albitized) and some are replaced by carbonate, epidote and sericite/clay (saussurite). Irregular, anhedral grains of quartz are developed interstitial to the feldspars. These grains may be up to 3 mm in size and are sometimes sutured, forming aggregates. Biotite, generally anhedral and ragged is interstitial to quartz and feldspars. These grains are in the 0.5 - 1.5 mm size range and tend to be associated with granular epidote, carbonate and opaques. Some biotite is altered to chlorite.

The rock is a medium to coarse grained igneous material. Compositionally it is a granite.

DISCUSSION:

The three samples are intrusive related and in fact the third is an intrusive. The first two are either volcanics or sediments derived from a volcanic host.

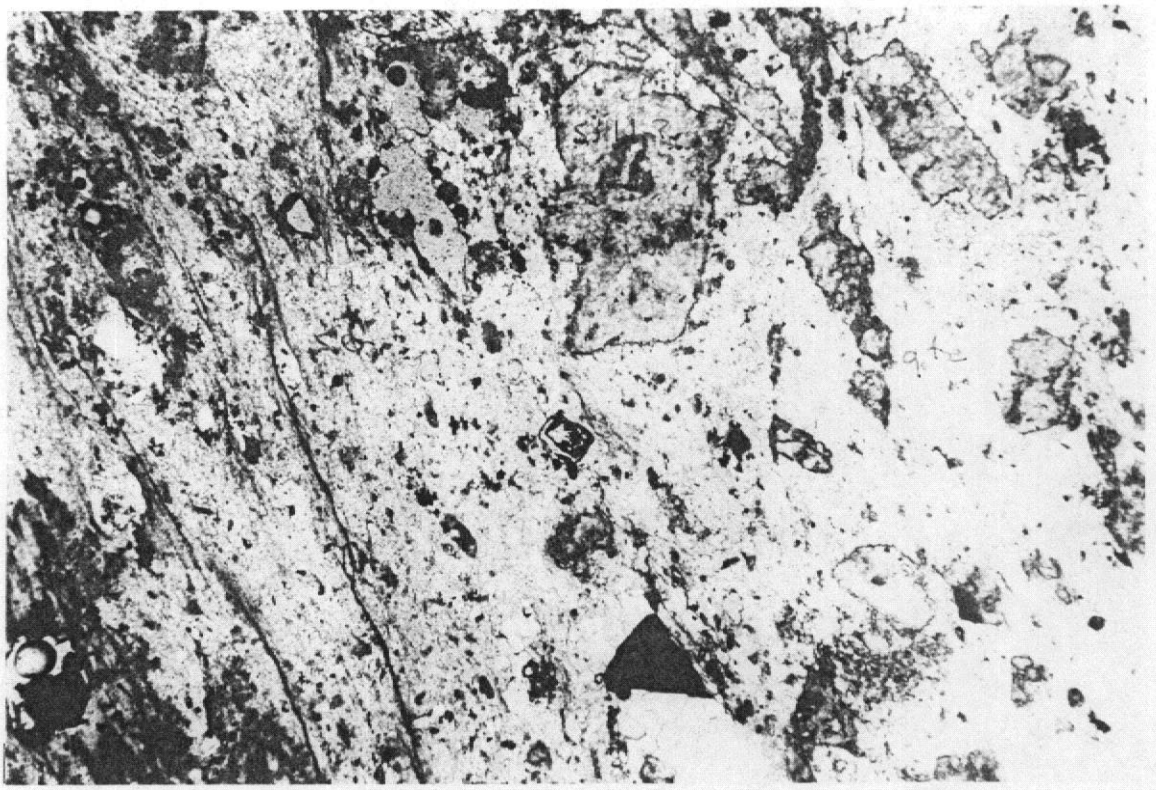
A few photomicrographs have been taken to illustrate mineralogy and texture. These are captioned and appended.

Yours truly,

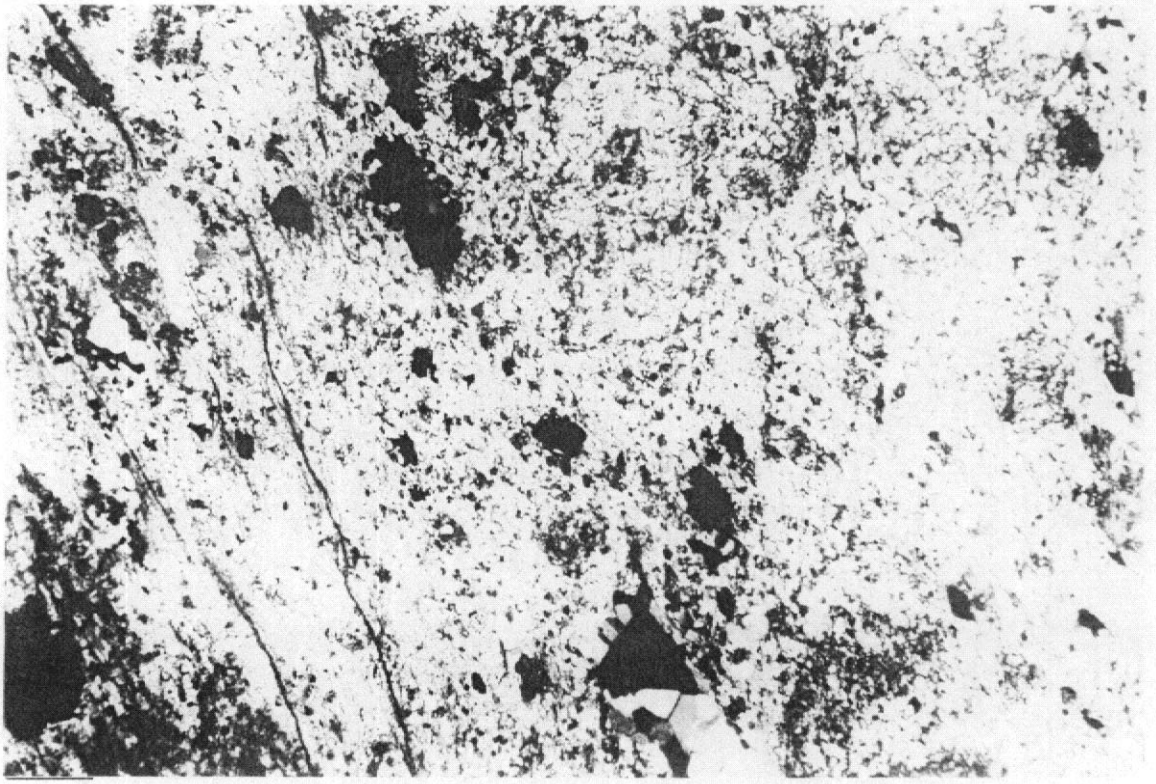
J.A. McLeod, M.A.Sc., P.Eng.
E.R.L. Manager

JAM/skw

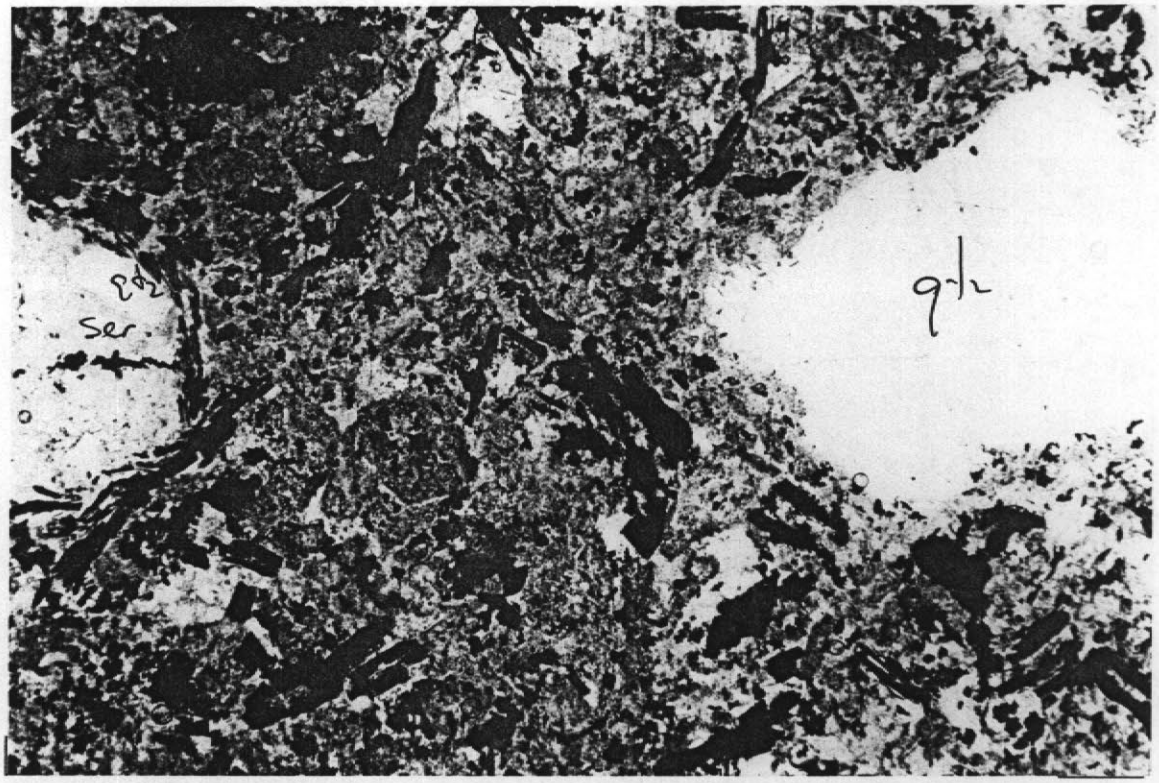
App. (photos)



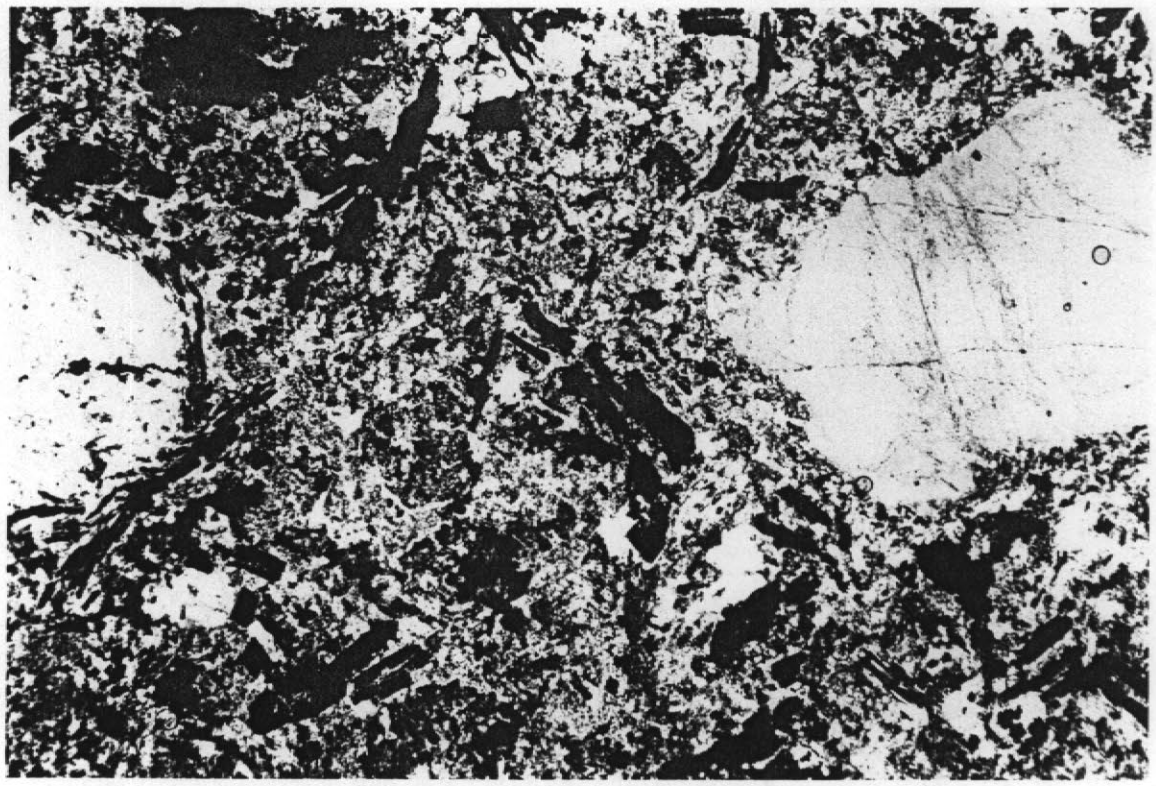
R99:12032. Fine grained foliated sericite and quartz contains equant to tabular sillimanite (?) after kyanite (?). Iron oxide after pyrite. Transmitted light, magnification 25x.



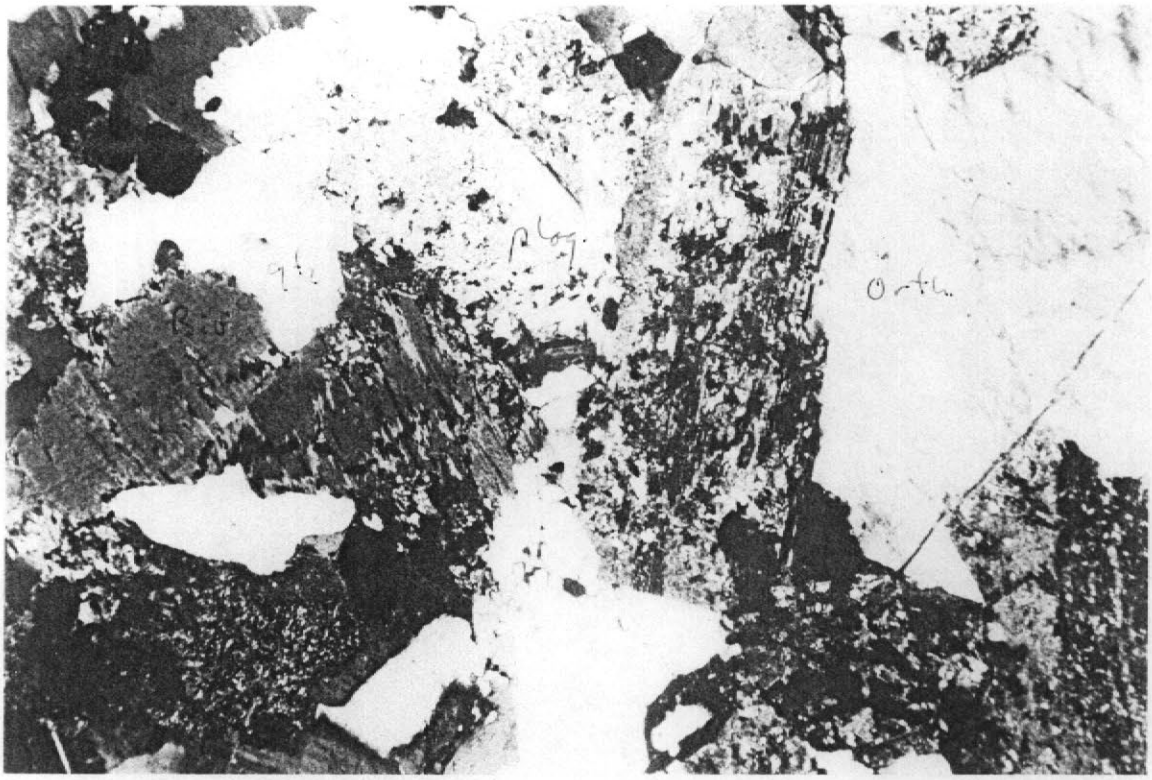
R99:12032. As previous photomicrograph but crossed nicols.



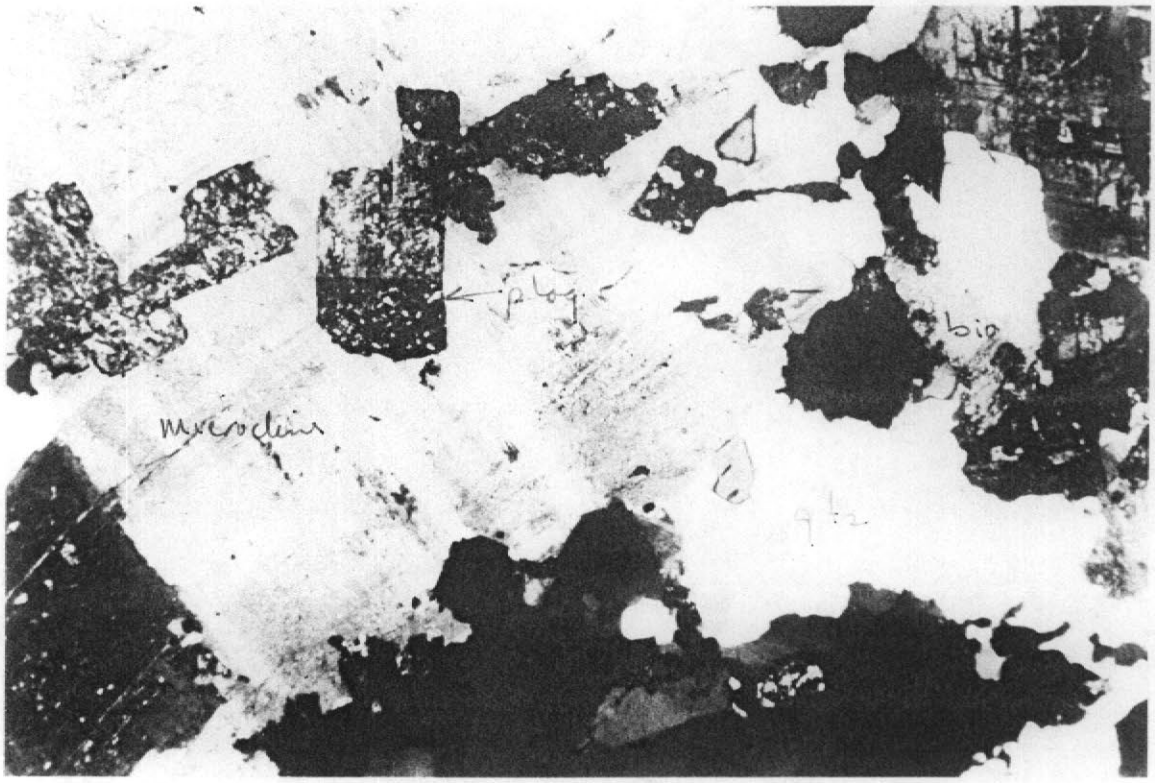
R99:12034. Quartz fragments, quartz-sericite replacement in a quartz-feldspar-Ti(Fe) oxide. Transmitted light, magnification 25x.



R99:12034. As previous photomicrograph but crossed nicols.



R99:12037. Orthoclase, altered plagioclase, biotite, quartz. Transmitted light, crossed nicols, magnification 25x.



R99:12037. Large microcline engulfs altered plagioclase, also present is quartz and biotite. Transmitted light, crossed nicols, magnification 25x.

MEMORANDUM

DATE: November 15.1999

TO: **LINDA CARON** **CC:**

FROM: **GREG THOMSON**

RE: Kettle Property

Hi Linda,

Here are the sample results of the rock material I sampled at the Kettle property on October 26, 1999.

7701	grab from caved trench on Mac property; fine grain altered intrusive/dyke, greenish with pervasive fine grain arsenopyrite
	7702 to 7711 (Kettle property)
7702	grabs of stock pile from Lead zone, propylitic altered intrusive with 10-15% blebs coarse galena with pyrite
7703	south veins. grab of roadside quartz piles, sampled material contained 10-20% of mixed py, gal, sphal
7704	high grade vein grab of footwall green qtz-ser altered intrusive, 5-10% medium -coarse pyrite + trc. Cpy
7705	high grade vein, 1.0-1.5 m chip across flattish vein exposure, 1-3% fine –med. grain pyrite
7706	high grade vein, 0.5 m chip across weakly altered intrusive harging wall, trc.py (same sample area as 7704.7705)
7707	high grade vein same vein as 7705, but located approx. 5 m NW from 7705 location, only 0.5 m exposed for sample 7707 location (may be more extensive than trenched exposure, 3-5% coarse py with trc cpy
7708	stockwork zone. 0.5 m chip.(arbitrary location) trc. Py
7709	stockwork zone. 1 m chip
7710	stockwork zone. grab from road/trench bank
7711	bluff vein, 1.5 m chip

If you need more details, please give me a call at (604) 640-5316

Regards,

Greg Thomson

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: TECK EXPLORATIONS LTD.

350 - 272 VICTORIA ST.
KAMLOOPS, BC
V2C 1Z8

Project : 004100
Comments: ATTN: R. FARMER CC: GREG THOMSON

Page Number : 1-A
Total Pages : 1
Certificate Date: 12-NOV-99
Invoice No. : I9932616
P.O. Number :
Account : HPQ

CERTIFICATE OF ANALYSIS A9932616

SAMPLE	PREP CODE		Au ppb FA+AA	Au FA oz/ton	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm
07701	205	226	3060	-----	18.6	0.90	>10000	< 10	30	< 0.5	< 2	1.36	< 0.5	31	83	38	5.72	< 10	3	0.40	10
07702	205	226	835	-----	>100.0	0.57	710	40	10	< 0.5	< 2	3.14	>500	27	87	384	7.99	10	< 1	0.17	< 10
07703	205	226	790	-----	>100.0	0.05	26	< 10	< 10	< 0.5	< 2	0.01	>500	20	155	248	3.51	10	< 1	0.04	10
07704	205	226	4070	-----	72.6	0.90	18	< 10	40	< 0.5	4	0.28	5.0	10	103	1000	7.72	< 10	< 1	0.56	< 10
07705	205	226	4900	-----	74.4	0.55	10	< 10	50	< 0.5	4	0.48	4.5	9	115	221	4.48	< 10	1	0.36	< 10
07706	205	226	60	-----	1.9	0.82	6	< 10	60	< 0.5	< 2	1.29	< 0.5	7	111	9	2.87	< 10	< 1	0.38	20
07707	205	226	>10000	0.441	>100.0	0.16	22	< 10	10	< 0.5	36	0.01	1.5	15	197	703	11.60	< 10	1	0.09	< 10
07708	205	226	20	-----	1.4	1.67	6	< 10	110	< 0.5	< 2	0.25	< 0.5	11	166	6	3.21	< 10	< 1	0.46	10
07709	205	226	130	-----	6.4	0.64	4	< 10	90	< 0.5	< 2	0.06	< 0.5	4	207	7	2.48	< 10	< 1	0.34	10
07710	205	226	10	-----	0.6	1.12	2	< 10	240	< 0.5	< 2	0.68	< 0.5	6	195	4	1.80	< 10	< 1	0.50	10
07711	205	226	60	-----	11.0	0.45	10	< 10	60	< 0.5	4	0.05	< 0.5	5	212	4	4.59	< 10	< 1	0.27	10

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: TECK EXPLORATIONS LTD.

350 - 272 VICTORIA ST.
KAMLOOPS, BC
V2C 1Z8

Project: C04100
Comments: ATTN: R. FARMER CC: GREG THOMSON

Page Number : 1-A
Total Pages : 1
Certificate Date: 11-NOV-99
Invoice No. : I9933283
P.O. Number :
Account : HPQ

CERTIFICATE OF ANALYSIS A9933283

SAMPLE	PREP CODE	Ag FA g/t	Pb %	Zn %
07702	212 --	420	9.32	13.40
07703	212 --	145	4.65	9.98
07707	212 --	208	-----	-----

Chemex Labs Ltd.

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British Columbia, Canada V7J 2C1
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To: TECK EXPLORATIONS LTD.

350 - 272 VICTORIA ST.
KAMLOOPS, BC
V2C 1Z8

Project : 004100
Comments: ATTN: R. FARMER CC: GREG THOMSON

Page Number : 1-B
Total Pages : 1
Certificate Date: 12-NOV-99
Invoice No. : I9932616
P.O. Number :
Account : HPQ

CERTIFICATE OF ANALYSIS A9932616

SAMPLE	PREP CODE		Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
07701	205	226	0.05	180	5	< 0.01	138	2930	50	4.22	196	3	109	< 0.01	< 10	30	16	< 10	122
07702	205	226	0.24	950	20	0.64	< 1	270	>10000	>5.00	36	< 1	149	< 0.01	< 10	50	5	< 10	>10000
07703	205	226	0.04	5	3	0.45	< 1	650	>10000	>5.00	78	< 1	12	< 0.01	< 10	110	< 1	< 10	>10000
07704	205	226	0.05	40	3	< 0.01	4	1070	214	>5.00	< 2	< 1	11	< 0.01	< 10	10	1	< 10	200
07705	205	226	0.14	520	4	< 0.01	4	360	162	4.40	< 2	< 1	19	< 0.01	< 10	< 10	5	< 10	128
07706	205	226	0.43	1190	3	0.02	3	1050	14	1.17	< 2	2	64	< 0.01	< 10	< 10	23	< 10	48
07707	205	226	0.01	25	1	< 0.01	4	< 10	112	>5.00	< 2	< 1	3	< 0.01	< 10	10	4	< 10	38
07708	205	226	0.59	670	< 1	0.03	4	1100	10	0.97	< 2	2	12	< 0.01	< 10	< 10	23	< 10	60
07709	205	226	0.05	335	1	0.02	3	310	28	0.29	< 2	< 1	9	< 0.01	< 10	< 10	1	< 10	20
07710	205	226	0.27	505	3	0.03	4	620	2	0.64	< 2	1	33	< 0.01	< 10	< 10	10	< 10	30
07711	205	226	0.05	365	< 1	0.01	3	480	20	0.62	< 2	< 1	12	< 0.01	< 10	< 10	7	< 10	14

NOTE: 1. ROADS SHOWN ARE PRE-DECLINE AND PRE-RECLAMATION. ROAD PATTERNS HAVE CHANGED SOMEWHAT IN THE DECLINE AREA.

2. INFORMATION COMPILED FROM ASSESSMENT REPORTS 4946; 9,304; 11,191; 10,414; 12,093; 12,749; 18,424; 21,656.

3. NO DIRECTIONAL DATA FOR DDH 86-21 to 86-24.

OLD CAMPSITE

+370 ppb Au in Soil

Possible extension to mineralized zone ???

+100 ppb Au in Soil

CREEK

PUMP SITE

CLAIM LINE

TRENCH 8

TRENCH 7

TRENCH 6 overburden

TRENCH 3
0.19 oz/t Au over 1.7 m

TRENCH 2
0.124 oz/t Au over 12 m

TRENCH 1

MINERALIZED ZONE

steep slope, zone surfaces

ddh 88-28
2.8 m @ 0.23 oz/t Au

ddh 88-29
11.7 m @ 0.15 oz/t Au

ddh 88-30
15 m @ 0.47 oz/t Au

ddh 83-6
10.2 m @ 0.3 oz/t Au

A — A'

BLOCK A

BLOCK B

BLOCK C

Possible extension to mineralized zone at depth??

HIGHWAY 6

MAC #3
370529

MAC #4
370530

N

MAC PROPERTY
NTS 82L/2E
SCALE 1:500

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
PROSPECTING REPORT FORM (continued)

B. TECHNICAL REPORT

- One technical report to be completed for each project area.
- **Refer to Program Requirements/Regulations 15 to 17, page 6.**
- If work was performed on claims a copy of the applicable assessment report may be submitted in lieu of the supporting data (see section 16) required with this TECHNICAL REPORT.

Name Linda Caron Reference Number 99/2000 P73

LOCATION/COMMODITIES

Project Area (as listed in Part A) Lower Granby MINFILE No. if applicable —

Location of Project Area NTS 82E/1, 2 Lat _____ Long _____

Description of Location and Access General Greenwood - Grand Forks area, particularly E of Granby River and N of Greenwood up Boundary Creek

Main Commodities Searched For Au

Known Mineral Occurrences in Project Area numerous

WORK PERFORMED

1. Conventional Prospecting (area) 6 days regional prospecting
2. Geological Mapping (hectares/scale) _____
3. Geochemical (type and no. of samples) 2 rock samples
4. Geophysical (type and line km) _____
5. Physical Work (type and amount) _____
6. Drilling (no. holes, size, depth in m, total m) _____
7. Other (specify) _____

SIGNIFICANT RESULTS

Commodities _____ Claim Name _____

Location (show on map) Lat _____ Long _____ Elevation _____

Best assay/sample type _____

Description of mineralization, host rocks, anomalies _____

Supporting data must be submitted with this TECHNICAL REPORT

Information on this form is confidential for one year from the date of receipt subject to the provisions of the *Freedom of Information Act.*

PART B – TECHNICAL REPORT

Lower Granby Area (082E/01,02)

This area includes the Greenwood Camp, a highly mineralized district with historical production of over 1.2 million oz Au. There are some good Au and W anomalies in prospective rocks which remain unexplained.

Two main areas were identified for prospecting in the Lower Granby Area, the area underlain by the Grand Forks Group gneisses and Cretaceous/Jurassic intrusions, east of the Granby River, and the Wallace-Henderson Creek area, up the Boundary Creek valley. Six days was spent prospecting in these areas, however no areas of significant mineralization were discovered. Only two rock samples were collected for analysis, as detailed in the attached list of sample descriptions. Analytical results for these samples are also included.

Given the lack of encouraging results from this area, a greater amount of time was devoted to the Upper Granby/Kettle and the Cherryville areas.

PROJECT AREA: LOWER GRANBY

SAMPLE LOCATIONS AND DESCRIPTIONS

Sample #	NTS Map Sheet	UTM Coordinates	Property or Area	Sample Description
BC99-01	082E/02	375460 E 5452350 N	Boundary Creek Area – Old Camp Rd	@ 2 km sign on Old Camp Rd is rusty metamorphic rx with up to 10% py. Locally grey frothy py. Lst, gneiss, qtzite … Lots of clear, v soft non-fizz coating and crystals (gypsum?) Several shallow pits on rusty py fng siliceous rx just up hill. 50 m to N is contact with dior/gd intrusive. Looks like a contact skarn developed in the metamorphic rocks.
GF99-01	082E/01	399910 E 5449116 N	Miller Creek Area	On steep SW facing slope above creek. Hairline to 1 cm qtz vnlts, both sheeted and x-cutting, up to 5 per 15 cm in buff-orange, altered, sandy intrusive. Veining exposed over 15 m in roadcut. Veins are clear, xtalline to vuggy, no visible sulfides. Intrusive has 5% glassy 1 mm qtz eyes, 30-40% 1 mm blocky sauc plag, in fng gmass.

SAMPLE RESULTS – LOWER GRANBY AREA

Samples: BC99-01
GF99-01

15-Nov-9[illegible]

ECO-TECH LABORATORIES LTD.
10041 East Trans Canada Highway
KAMLOOPS, B.C.
V2C 6T4

Phone: 250-573-5700
Fax : 250-573-4557

ICP CERTIFICATE OF ANALYSIS AK 99-642

LINDA CARON
BOX 2493
GRAND FORKS
V0H 1H0

ATTENTION: LINDA CARON

No. of samples received: 8
Sample type: Rock
PROJECT #: CV
SHIPMENT #: 1
Samples submitted by: L. Caron

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	BC99-01	<5	<0.2	0.56	<5	10	<5	1.59	<1	32	37	194	4.38	20	0.43	184	15	0.01	133	3840	4	<5	<20	73	0.04	<10	26	<10	31	53
2	CV99-33	75	2.4	0.16	<5	50	10	0.01	<1	3	137	4	1.59	<10	<0.01	27	6	<0.01	3	270	16	<5	<20	9	<0.01	<10	2	<10	<1	1
3	CV99-34	>1000	>30	0.09	<5	55	85	0.27	<1	21	110	23	>10	<10	0.02	314	14	<0.01	4	<10	230	<5	<20	7	<0.01	<10	1	<10	<1	9
4	CV99-35	5	0.8	0.02	<5	<5	<5	<0.01	<1	<1	200	3	0.41	<10	<0.01	45	6	<0.01	4	<10	<2	<5	<20	<1	<0.01	<10	<1	<10	<1	<1
5	CV99-36	10	2.2	0.08	<5	15	5	0.03	<1	3	175	4	1.26	<10	0.01	231	6	<0.01	4	100	6	<5	<20	<1	<0.01	<10	2	<10	<1	16
6	CV99-37	40	7.2	0.13	<5	10	10	0.01	<1	2	214	3	0.99	<10	0.03	88	7	<0.01	5	90	52	<5	<20	<1	<0.01	<10	3	<10	23	3
7	CV99-38	10	0.6	0.30	5	125	<5	>10	<1	5	32	19	1.26	<10	1.07	287	6	0.01	24	770	<2	15	<20	2752	<0.01	<10	22	<10	33	51
8	TOP99-8	340	0.8	0.23	455	25	<5	0.24	3	3	110	6	1.35	<10	<0.01	38	7	<0.01	2	550	16	5	<20	42	<0.01	<10	2	<10	<1	54
QC DATA:																														
Resplit:																														
1	BC99-01	<5	<0.2	0.54	<5	10	<5	1.54	<1	31	36	185	4.24	20	0.42	175	15	0.01	128	3740	4	<5	<20	68	0.02	<10	23	<10	30	52
Repeat:																														
1	BC99-01	<5	0.4	0.52	<5	10	<5	1.52	<1	30	30	183	4.10	20	0.38	176	15	0.01	127	3760	2	<5	<20	70	0.02	<10	23	<10	30	48
Standard:																														
GEO'99		115	1.0	1.80	65	160	10	1.86	<1	18	64	80	3.86	<10	0.94	684	3	0.02	24	760	20	10	<20	56	0.10	<10	71	<10	8	67

df/607B
XLS/99
cc: John Kemp

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
21	CV99-22R	5	0.4	0.26	<5	25	<5	0.08	<1	1	135	3	1.04	40	0.01	36	6	<0.01	5	610	22	<5	<20	4	<0.01	<10	1	<10	12	<1
22	TOP99-3R	25	<0.2	0.09	25	10	<5	0.04	<1	5	208	4	1.48	<10	<0.01	127	6	<0.01	8	80	4	<5	<20	3	<0.01	<10	2	<10	<1	<1
23	TOP99-4R	>1000	>30	0.41	>10000	45	10	1.56	193	43	59	55	6.16	10	0.17	912	6	<0.01	178	4300	34	100	<20	96	<0.01	<10	13	<10	6	164
24	TOP99-5R	30	<0.2	2.21	40	90	<5	3.46	<1	24	70	243	3.54	<10	1.42	782	<1	0.10	49	1260	26	10	<20	97	0.10	<10	116	<10	17	49
25	TOP99-6R	10	0.6	1.36	15	60	15	0.11	<1	14	173	19	3.16	<10	0.69	377	11	<0.01	12	500	18	<5	<20	<1	<0.01	<10	58	<10	<1	31
26	GF99-1R	<5	0.2	0.89	5	40	5	1.70	<1	5	65	9	1.97	20	0.46	779	2	0.02	3	690	14	<5	<20	63	<0.01	<10	28	<10	32	53
27	CV99-14R	5	<0.2	2.39	10	165	25	1.70	<1	37	40	19	5.04	<10	2.58	580	<1	0.09	7	640	28	20	<20	31	0.30	<10	210	<10	42	61
QC DATA:																														
Resplit:																														
1	CV99-1R	<5	<0.2	0.77	<5	65	5	0.20	<1	5	83	9	1.45	10	0.23	566	3	0.02	8	290	20	<5	<20	20	0.02	<10	21	<10	16	36
Repeat:																														
1	CV99-1R	5	<0.2	0.73	5	65	5	0.19	<1	5	89	8	1.42	10	0.22	538	3	0.02	8	290	22	<5	<20	20	0.02	<10	20	<10	14	40
10	CV99-10R	20	0.8	0.13	55	15	<5	0.03	3	2	224	4	0.77	<10	<0.01	90	4	<0.01	6	160	22	<5	<20	1	<0.01	<10	3	<10	<1	82
19	CV99-20R	5	<0.2	0.37	<5	20	5	2.13	<1	11	81	33	2.40	<10	0.24	255	1	0.03	16	820	10	15	<20	15	0.10	<10	25	<10	32	25
Standard:																														
GEO'99		120	1.4	1.73	65	170	15	1.88	1	21	64	86	3.86	<10	0.98	716	<1	0.02	22	760	22	5	<20	58	0.11	<10	77	<10	8	76

df/347
XLS/99

per
ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
PROSPECTING REPORT FORM (continued)

B. TECHNICAL REPORT

- One technical report to be completed for each project area.
- **Refer to Program Requirements/Regulations 15 to 17, page 6.**
- If work was performed on claims a copy of the applicable assessment report may be submitted in lieu of the supporting data (see section 16) required with this TECHNICAL REPORT.

Name Linda Caron Reference Number 99/2000 P73

LOCATION/COMMODITIES

Project Area (as listed in Part A) Upper Granby / Kettle MINFILE No. if applicable

Location of Project Area NTS 82E/15, 16 Lat Long

Description of Location and Access Upper Kettle River area, west of the Upper Granby park, accessible via the Kettle River forest service road and by numerous branch roads.

Main Commodities Searched For Au

Known Mineral Occurrences in Project Area numerous. Area includes the Lightening Peak Camp.

WORK PERFORMED

1. Conventional Prospecting (area) 24 days spent, mostly regional scale prospecting
2. Geological Mapping (hectares/scale)
3. Geochemical (type and no. of samples) 30 rock samples
4. Geophysical (type and line km)
5. Physical Work (type and amount)
6. Drilling (no. holes, size, depth in m, total m)
7. Other (specify) 10 2-post mineral claims staked

SIGNIFICANT RESULTS

Commodities Au Claim Name Kettle

Location (show on map) Lat 49° 55' 30" Long 118° 42' 30" Elevation 4000'

Best assay/sample type CV99-3 53.25 g/t Au; 154.2 g/t Ag - rock sample, South Zone
CV99-34 4.28 g/t Au, 191.2 g/t Ag - rock sample HG Zone
Kettle 2 32.97 g/t Au, 521.4 g/t Ag - rock sample HG Zone

Description of mineralization, host rocks, anomalies

Numerous shallow dipping quartz veins with good precious metal values occur. Other veins with higher base metal content also occur, as well as a large quartz stockwork zone with anomalous gold (to 130 ppb Au)

Supporting data must be submitted with this TECHNICAL REPORT

Information on this form is confidential for one year from the date of receipt subject to the provisions of the *Freedom of Information Act*.

PART B – TECHNICAL REPORT

Upper Granby / Kettle River Area (082E/15,16)

The western portion of the map area appeared to be much more prospective for Intrusion Related Au deposits than the eastern area, and prospecting focused on the area west of the Granby Park. A total of 24 days were spent prospecting in the Upper Granby / Kettle River area. This work was very much regional in nature and prospecting covered large regions that had good logging road access. Outside of the Lightening Peak district, the number of known mineral occurrences was quite small. One day was spent looking at known occurrences in the Lightening Peak camp, but for the most part, work was initially of a much more regional nature.

In total, 30 rock samples were collected for analysis, as detailed in the attached list of sample descriptions. Analytical results are also included.

Many new occurrences of epithermal veining and alteration were discovered, hosted primarily in Jurassic-Cretaceous intrusions. These epithermal occurrences were scattered throughout the map area, as detailed in the attached list of sample descriptions, and consisted of chalcedonic veining and breccia zones, plus areas of pervasive silicification and argillic alteration. Unfortunately, the precious metal content of these occurrences was consistently low. The best sample returned 90 ppb Au (CV99-12), from a narrow chalcedony vein. Detailed follow-up in this area was unsuccessful at finding any occurrence of favorable size or precious metal content.

A significant amount of time was spent prospecting in the vicinity of the Sab Minfile occurrence (083ENE044). This showing had many of the right "earmarks" for Intrusion Related Gold deposits and had recently come open for staking after having been held continuously for almost 30 years. Numerous quartz veins with good precious metal content occur (samples collected returned values to 53.25 g/t Au (CV99-3)) as well as other base metal rich veins. In addition, quartz stringers form a large stockwork zone (with anomalous gold to 130 ppb (sample 7709)), and with reported scheelite. The Kettle #1-10 claims were then staked to cover the key ground. Since a large amount of work had been completed on the property in the past, a significant amount of time was next spent on non-prospecting activities, compiling old data, before completing more detailed prospecting on the claims. A Summary Report for the Kettle Property is included. Seven samples were collected from the Kettle claims, as detailed in the attached list of sample descriptions and plotted on the maps included in the Summary Report. Analytical results for the samples are also included. Two different companies examined the property in late October, and collectively, an additional 16 samples were taken. Results and descriptions from this third party samples are also included.

We were prospecting the Upper Granby/Kettle area, roughly from north to south. Upon staking the Kettle property, the necessary property scale prospecting was completed on the claims. Little regional prospecting has been done south of the Kettle claims, and this should be completed next summer.

Kettle Property Summary

The property was acquired by staking in summer of 1999 as part of a regional prospecting program directed at Intrusive Hosted Gold Deposits. A number of criteria were used to evaluate potential properties, including:

1. Cretaceous intrusions in an arc setting
2. Proterozoic to Paleozoic metamorphic rocks
3. Anomalous Au (+/- As, W, Bi, Sb, Te, Mo), gold placers
4. Au occurrences in sheeted veins, fissure veins, breccias, skarns, disseminations ....
5. Strong regional structures

The Kettle Property fits meets all of the above criteria, as detailed below, and is felt to be a good candidate to host an Intrusive Hosted Gold Deposit.

- high grade Au and Ag+Pb+Zn veins (values to 1.6 oz/t Au and to 56 oz/t Ag, 35% Pb)
- favorable trace element chemistry in veins (anomalous As, Sb, Bi, W)
- intrusives cut favorable Permian Anarchist Group metasediments and metavolcanics
- major regional fault system (Kettle River Fault)
- large area of stockwork quartz veining identified with anomalous Au, Ag values
- occurrence of sheeted veins with high Au values and accessory scheelite
- placer gold occurrence in the Kettle River, immediately downstream of the claims

In addition, the property has:

- extensive alteration (clay, silicification) in Cretaceous intrusives (~ 2 km x 500 m zone)
- numerous Au soil anomalies which remain untested
- numerous IP chargeability anomalies which remain untested
- excellent access and infrastructure, no conflicting land use

Location and Terrain:

- 55 km southeast of Vernon B.C., on NTS 82E/15E and TRIM 082E.097
- excellent road access (100 km east from Vernon on Hwy 6, then 16 km south on the Kettle River Forest Service Road to the property)
- moderate topography, moderate forest cover, generally good rock exposure
- water on claims for drilling

Claims:

- Ten 2-post mineral claims, owned by John Kemp and Linda Caron
- All claims are presently in good standing to August, 2000

Property Description:

Mineralized quartz veins were first discovered on the property in the early 1970's. Mohawk Oil optioned the claims in 1980 and did extensive testing using a porphyry copper model. Later exploration focussed on a structurally controlled epithermal system. Significant drilling has been done on the property, mostly as close spaced shallow holes testing the veins in the South, Pb and HG Zones.

Four main mineralized zones are known to occur on the property, as shown on the attached property map and detailed below. The zones are spatially related to a large zone of intensely altered Cretaceous intrusives which intrudes metasediments and metavolcanics of the Permian Anarchist Group. The alteration occurs over an area of approximately 2 km x 500 m and appears to be largely controlled by the major north trending Kettle River fault.

South Zone

A N-NW striking, shallow W dipping quartz vein is exposed in large open cuts along the main Stove Creek road and in trenches, over a strike length of 185 metres. The vein ranges from 0.5 to 4.1 m in width, and averages about 1.5 m wide. It is hosted in unaltered Kspar megacryst porphyry, and cut by late decomposing biotite-lamprophrye dykes.

Grab samples from the vein have returned **values to 1.6 oz/t Au, 4.5 oz/t Ag, 1.7% Pb and 2% Zn**.

Pb Zone

Several trenches and open cuts expose a mineralized shear zone over a strike length of 300 metres. The shear strikes about 070-080°, with a moderate-steep S dip, and averages about 30 cm in width. The shear hosts a narrow mineralized quartz vein. Drilling has tested the zone to 75 metres depth and it remains open at depth. Surface sampling from the zone has returned grades of:

20.8 oz/t Ag over 2.5 m (in the K1 trench, hangingwall to the main shear)

56.7 oz/t Ag over 2.4 m

and grab samples to **32 oz/t Ag, 35% Pb and 10% Zn** from vein material. Copper and gold are weakly anomalous. Silver reportedly occurs as fine grained ruby silver and as native silver.

A small portable mill set up on the property in the early 1980's largely processed material from the Pb Zone (with minor ore from the South and Hg Zones).

HG (High Grade) Zone

In the HG zone, subparallel quartz veins and veinlets are hosted in altered intrusives. The veins contain about 5% sulfides (py, cpy, bornite and galena), with accessory scheelite mentioned. Grab samples from surface have returned up to **0.61 oz/t Au and 9.3 oz/t Ag**, while more detailed chip sampling from the zone gave an average of 0.24 oz/t Au and 2.4 oz/t Ag from one vein, over an average 0.75 m width. Drilling has returned values to 0.5 oz/t Au, 8.2 oz/t Ag,1.3% Pb, 0.1% Zn, 0.1% Cu over 0.7 m from this zone (ddh 82-13).

The zone has been tested by trenching and drilling and remains open on strike (and at depth?). The full width of the zone is not exposed, with the greatest exposed width being about 3 metres.

A 24.2 ton bulk sample was collected from this zone in the early 1980's and shipped to Slocan City for mill testing. The sample returned an average grade of 0.11 oz/t Au, 4.2 ozt Ag.

Stockwork Zone (Including Vuggy Vein, Switchback Vein, Bluff Vein)

The Stockwork zone is an area of about 300 x 450 metres where sulfide mineralization is associated with a brecciated quartz stockwork in qtz-seric-py altered intrusive. Veins are bull-type quartz with pyrite, plus accessory scheelite and zircon. The zone has a large coincident IP anomaly as well as a coincident Au soil anomaly. Several larger veins within this zone are given individual names (Vuggy Vein, Switchback Vein, Bluff Vein). In general Au and Ag values to date have been low from the Stockwork Zone, however there has been only limited surface sampling and drilling. One drill hole (ddh 80-3) did returned **0.7 m of 0.112 oz/t Au and 1.3 oz/t Ag.**

The property, which had been held continuously since its discovery in the early 1970's, was allowed to lapse in the spring of 1999. The current claims were acquired by staking during the summer of 1999.

As described above, the Kettle property exhibits many of the characteristics of a large Intrusive Hosted Gold system and has the potential to host a large low grade Au deposit as well as higher grade Au or Ag-Pb-Zn veins. Each of the four known areas of mineralization on the property is very different in nature, and each is consistent with the Intrusive Hosted Gold Deposit Model, as shown on the attached schematic section. The South Zone veins are examples of high level Au bearing fault related veins, while the Pb Zone is an example of Ag-Pb-Zn veins, a lower, more distal part of the system. The Au bearing sheeted vein occurrence (with accessory scheelite) at the HG zone may represent the lower portion of the system, while the Stockwork zone to the north characterize of mineralization higher up in the system. Further studies on Au:Ag ratios and trace element chemistry may be useful in better understanding property scale zonation, and hence aid in directing further exploration.

Most past work on the property has focussed on exploring the known veins. Although geophysics was completed over the property, most of the anomalies remain to be tested. One hole which was drilled to test an IP anomaly returned 0.75 m of 0.119 oz/t Au outside of any of the known mineralized zones. No follow-up has been done in this area. Geochemical coverage of the property dates back to the late 1970's and early 1980's. There has been no Au soil coverage in the central part of the property where the known showings are. A number of areas of anomalous Au in soils peripheral to this area were discovered, but have not had any follow-up. Geology and alteration on the property is poorly understood and a detailed mapping program is expected to add much to the understanding of the mineralizing system.

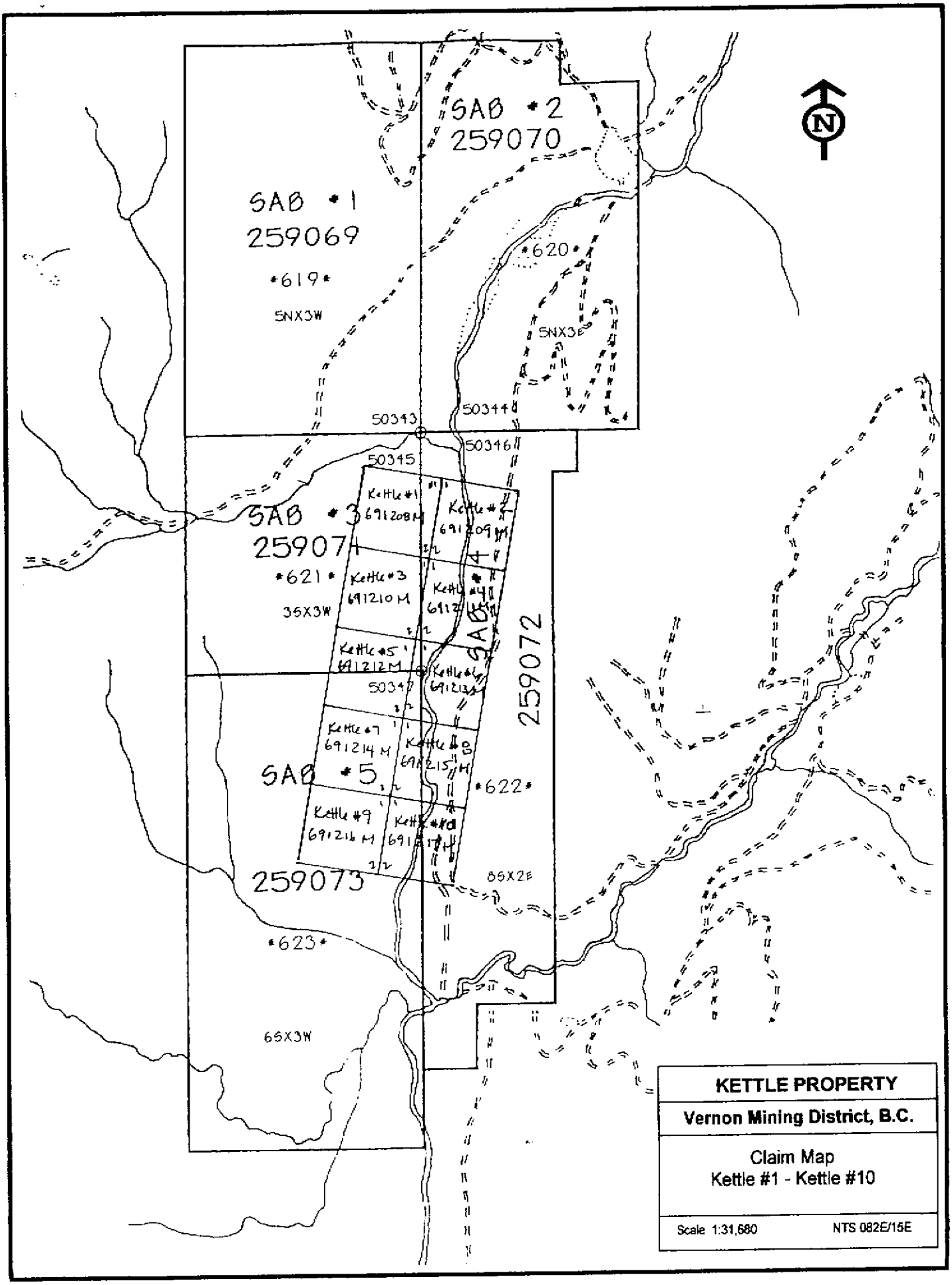
References:

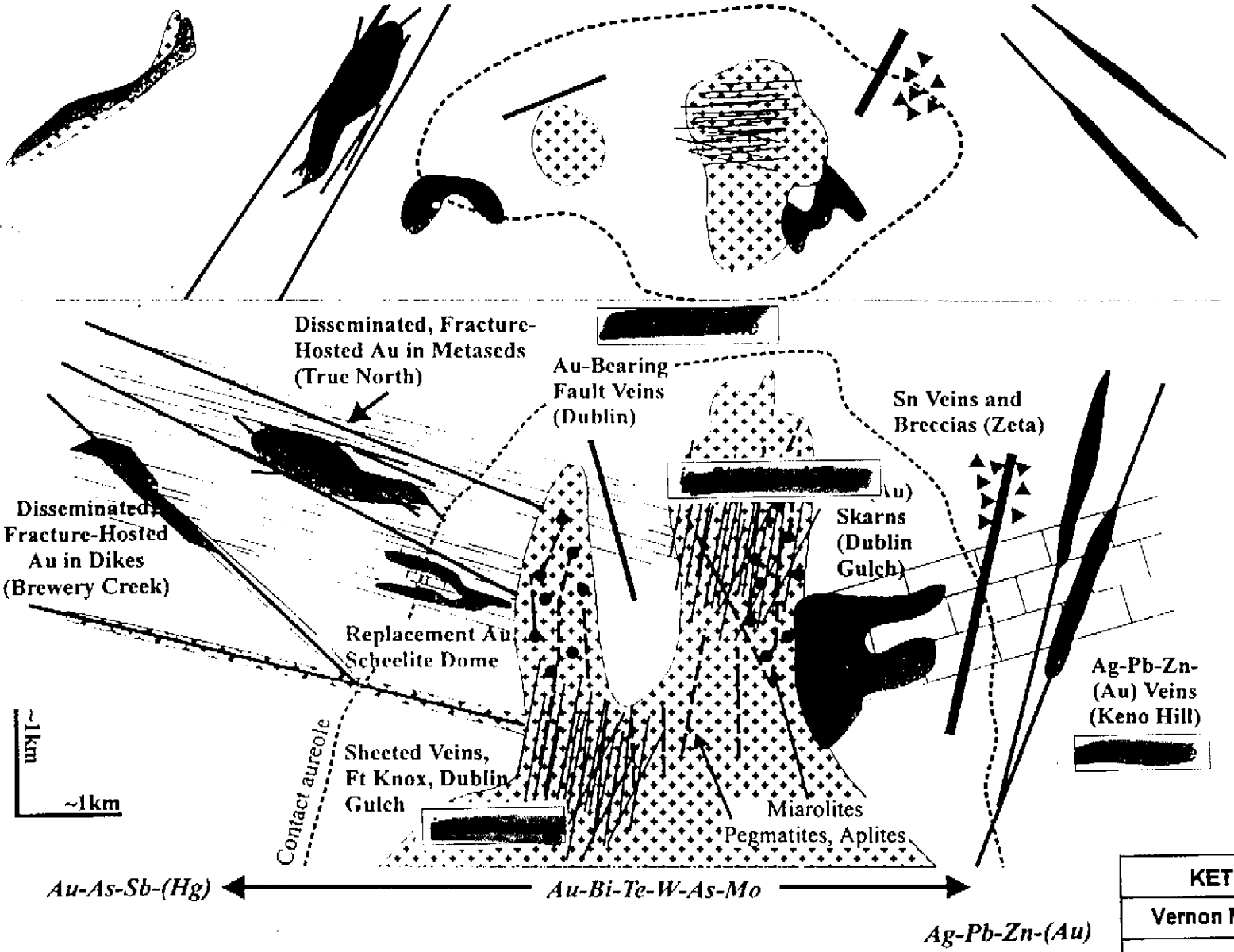
Minfile 082ENE044 - Sab

Callaghan, B. and R.W. Yorke-Hardy, 1996.
Assessment Report of the Sab Mineral Claims. Geological Mapping, Data Compilation & Interpretation, for Y-H Services and Snowflake Mines Ltd. Assessment Report 24.533.

Mark, D., 1989.
Report on Geophysical and Geochemical Surveys Over a Portion of the Sab Claims. Assessment Report 18,533.

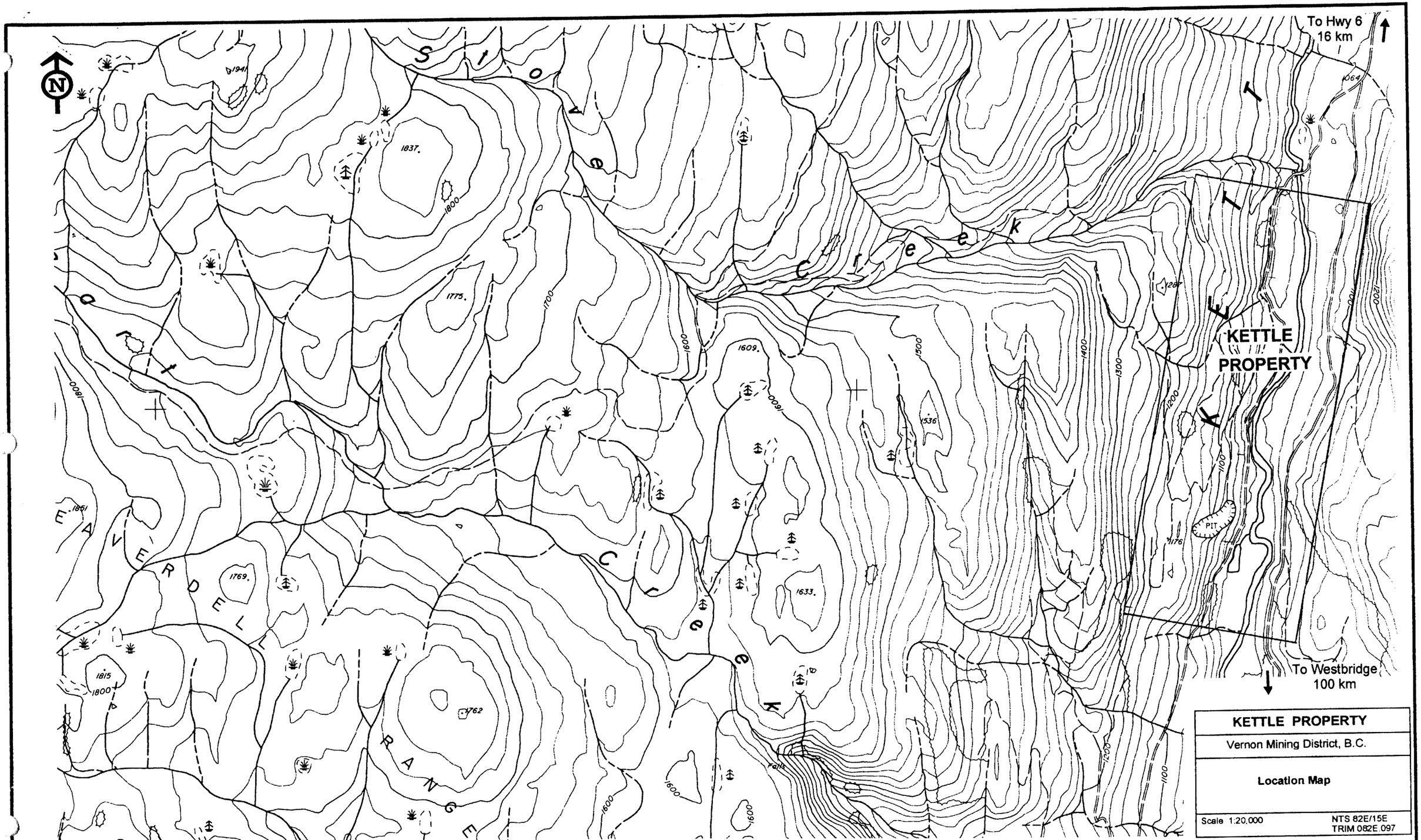
Prepared by Linda Caron
October 1, 1999


SAB #2
259070
SAB #1
259069
619
5NX3W
620
5NX3E
50343
50344
50345
50346
SAB #3
259071
621
3SX3W
Kettle #1
691208 M
Kettle #2
691209 M
Kettle #3
691210 M
Kettle #4
691211 M
Kettle #5
691212 M
Kettle #6
691213 M
Kettle #7
691214 M
Kettle #8
691215 M
SAB #4
259072
SAB #5
259073
622
Kettle #9
691216 M
Kettle #10
691217 M
5SX2E
623
6SX3W
N
KETTLE PROPERTY
Vernon Mining District, B.C.
Claim Map
Kettle #1 - Kettle #10
Scale 1:31,680
NTS 082E/15E



KETTLE PROPERTY
Vernon Mining District, B.C.
Schematic Section
Intrusive Hosted Gold Deposits

from Characteristics of Mineralization Associated with Intrusions of the Mid-Cretaceous Tombstone-Tungsten Magmatice Belt, Yukon. by: T. Baker, J. Lang, J. Mortensen. Submitted to Economic Geology (09/98). From KEG Short Course on Intrusion-Related Gold, April 1999.



KETTLE PROPERTY

Vernon Mining District, B.C.

Location Map

Scale 1:20,000

NTS 82E/15E
TRIM 082E.097

Au Soil Anomaly (>75 ppb)

Au Soil Anomaly (>75 ppb)

Au Soil Anomaly (>75 ppb)

Au Soil Anomaly (>75 ppb)

KETTLE #2

KETTLE #4

KETTLE #3

KETTLE #5

KETTLE #6

KETTLE #7

KETTLE #8

KETTLE #9

KETTLE #10

(SWITCHBACK VEIN) CV99-37

CV99-35

LIMIT OF ALTERED INTRUSIVE

L0

L120S

L240S

L360S

L480S

L600S

L720S

L840S

L960S

L1080S

L1200S

L1380S

L1500S

IP CHARGEABILITY ANOMALY

Au SOIL ANOMALY

80-23

80-3

CV99-38

STOCKWORK ZONE

VUGGY VEINS

80-4

80-21

80-22

BLUFF VEIN CV99-36

NO Au SOIL COVERAGE

old camp

80-6

80-2

80-5

82-9

80-1

80-14

80-17

82-8

80-12

CV99-24

82-7

80-13

80-11

HG ZONE

82-6

82-5

80-16

80-20

82-4

82-3

84-4 or 84-5?

NO Au SOIL COVERAGE

'ore' stockpile

84-4 or 84-5?

80-24,25

82-1

82-2

CV99-23

K-1 TRENCH

84-2

84-3

83-3,4,5

83-1,2

82-11

82-10

84-1

Pb ZONE (81-11 & 81-14)

83-11

83-12

88-10

INTRUSIVE

81-7 to 10

80-10

80-7

CV99-3

SOUTH VEINS

KETTLE RIVER

81-6

81-9

80-8

80-9

81-2

81-8

BASELINE

500 W

250 W

0 TIE

250 E

500 E

750 E

N

KETTLE PROPERTY
NTS 82E/15
SCALE 1:2500

Information compiled from A.R. 24,533, 18,533

PROJECT AREA: UPPER GRANBY / KETTLE RIVER

SAMPLE LOCATIONS AND DESCRIPTIONS

Sample #	NTS Map Sheet	UTM Coordinates	Property or Area	Sample Description
CV99-02	082E/15	380308 E 5535889 N	Kettle Forest Service Road, near Loumark showing	Qtz vein in roadcut. Massive white qtz, rusty, minor vugs, tr py. Not well exposed. Vn is in granodiorite intrusive.
CV99-03	082E/15	377985 E 5530561 N	Kettle claims	Grab of qtz vn material from stockpile at South Zone pit, adjacent to Stove Ck road. Shallow dipping (20-30 degrees) qtz vn, avg ~ 0.5 m thick where visible, in Kspar megacryst porphyry, cut by black decomposing biotite lamprophyre dykes. Vein is minz'd with up to 5-10% sulfides, py, gal sphal. Streaky banded sulfides + pods.
CV99-04	082E/15	375536 E 5528654 N	Stove Ck road	Drive up Stove Ck road to junction at 79 km, take right fork. Qtz stockwork/sulfide zone. Large o/c in roadcut of slightly gneissic granodiorite. Zone of rusty alt'd intrusive with local silic/qtz flooding. Grey-clear qtz patches and vnlts with trace py. Silic'd zone is quite narrow, within a larger (+30 m) weakly alt'd zone. Rare garnets in intrusive.
CV99-05	082E/15	375275 E 5525520 N	Stove Ck road	@ 79 km on Stove Ck rd, @ 326 road junction. Grab from large rusty boulder of bi gneiss/gneissic dior with local silica flood and patchy fine py.
CV99-06	082E/15	375275 E 5525520 N	Stove Ck road	Same loc as CV99-05. Weakly gneissic gdior with grey qtz vnlts and segregations. Tr py.
CV99-07	082E/15	375275 E 5536650 N	Gunnar road	In roadcut on Main Gunnar road. Grey, fng, hard silic'd lst? Weak fizz but can't scratch, tr diss py.
CV99-08	082E/15	375275 E 5536650 N	Gunnar road	Same location as CV99-07. Coarser grungy rusty silic'd / qtz vn with tr py.
CV99-09	082E/16	395450 E 5538960 N	K-10 road area	Active 'mining' site, with cat, airtrack, etc. Large blasted face on shallow narrow qtz vn/shear, trends 000/~30E. Vn avg ~ 0.3 m wide, qtz vn and qtz stockwork in intrusive. Took sample of best minz'd vn with ~10% sulfides (py, sphal, gal).
CV99-10	082E/16	393600 E 5538400 N	K-10 road area	Off branch road from K-10, sev km back from –09 site. White-grey qtz vn in intrusive in cat scrape by rd. In place, but can't see orientation. Looks epithermal – banded, stockworky, minor vugs, nil sulfides.
CV99-11	082E/16	389670 E 5537410 N	K-10 road area (K-145 road)	Rusty shear zone, 0.5 m wide, trends 003/30E, in coarse Kspar porphyry, near contact with granodiorite. Biotite lamprophyre dyke nearby. Sample across shear.
CV99-12	082E/15	383980 E 5537950 N	K-10 road area	on road heading S, near beginning on K-10 road. Epithermal vein in roadcut. One vn in place trends 320/90. Lots of vein float nearby. White-grey chalcedonic bx vns with orange clayey zones. Hosted in granodiorite. Vn in place is 0.3-0.5 m wide.
CV99-13	082E/15	383920 E 5538710 N	K-10 road area	coming back out from CV99-12, take lower branch, heading S. Just after cliffs of black gabbro? but by white granodiorite squirts, come to 2 m wide dyke of gdior, trends ~ 070, with qtz vn on margin of dyke. Vn not well exposed. ~ 0.5 m wide, prob par to dyke. White qtz vn with up to 15% brassy py (euhedral and patchy fine grained).

CV99-14	082E/15	383920 E 5538710 N	K-10 road area	same loc as –13. Black gabbro? hnbld/bi lamprophyre? cut by white gdior "veinlets" and qtz vnlts. 5% diss py + < cpy. Mod magnetic.
CV99-20	082E/15	380710 E 5518165 N	Mohr Creek road area	On switchback of road. Pile of rusty, banded limey seds cut by fine grained sugary rusty intrusive. Minor py vnlts.
CV99-21	082E/15	383330 E 5522576 N	Mohr Creek road area	Up Ohashi road, off Mohr Creek road. Zone of white clay alt'd, rusty sheared intrusive(?) with zones of vuggy silic'n and qtz vnlts. Zone exposed intermittently for ~ 100+ m – can't tell orientation.
CV99-22	082E/15	383330 E 5522375 N	Mohr Creek road area	take spur by CV99-21, by rusty piles. Epithermal qtz stockwork in subcrop at edge of road, in fine grained green, altered volcanics.
CV99-23	082E/15	378060 E 5530960 N	Kettle claims	Pb Zone. Large pit in Kspar megacryst porphryr, cut by fine grained lamp dykes. Minor qtz vns and vnlts, to 5 cm, trending 505-060/90. Zone of vning/shearing is ~ 10 m wide, traceable on strike for ~ 75m. Low density of vnlts, at most 2/ft. CV99-23 is sample of galena rich vein from waste dump/talus below pit. 10-15 cm wide vein. Massive galena (+py, cpy, sphal) in dirty quartz.
CV99-24	082E/15	381270 E 5526380 N	South Winnifred Creek road area	Series of ~ parallel qtz vns, to 10 cm, in white bleached intrusive, near gneiss contact. Veins ~ 0.5 m apart in road cut.
CV99-25	082E/15	382170 E 5525200 N	South Winnifred Creek road area	On branch road off S Winnifred, just below CV99-24.).5-0.75 m wide "vn", trends 320/60 S. V rusty dirty, glassy qtz/met rx with 20% py (+ apy?). V grungy, rusty. In o/c with odd looking grey-green Tertiary looking porphyry and with granodiorite. A few minor white qtz vns to 1 m across, in same roadcut.
CV99-26	082E/15	383680 E 5528900 N	South Winnifred Creek road area	Up 235 Rd, branch off S Winnifred, near end of road. Epithermal qtz bx vein/silic'd zone. 1.5 m wide, in altered intrusive with qtz vns. Vn trends ~ 040/90.
CV99-27	082E/15	383680 E 5528900 N	South Winnifred Creek road area	In ditch, near CV99-26. Grey clay gouge with qtz bx frags.
CV99-28	082E/15	383985 E 5538075 N	K-10 road area	Follow up to CV99-12 (90 ppb Au). Shallow pit/tree root with abundant pieces of silic'd rusty fine grained equigranular intrusive cut by 1 mm – 4 cm chalcedonic qtz vns. Tr fine py + black mineral.
CV99-29	082E/15	382110 E 5541610 N	K-20 road area	Silic'd fine grained equigranular intrusive with chalcedonic qtz vnlts, silica flood, minor patches of py. In road cut. Buff-white with rusty surfaces.
CV99-31	082E/15	~ 387600 E ~ 5532075 N	K-50 / Winnifred Road area (into Lightening Peak camp)	On Winnifred rd, take S road junct at km 76 into L4636. Old camp by road, cairn with BT11, another old camp down old road towards small pond. CV99-31 is from area of extensive silic'd bx, looks epithermal, minor py (diss and fng bands) in fng granodiorite. Sev ddh sites with core, mod old, most not split. Sev cat trenches. Didn't see historic workings.
CV99-32	082E/15	387460 E 5532890 N	K-50 / Winnifred Road area (into Lightening Peak camp)	In roadcut. Minor qtz vns, to 4 cm, with up to 5% py, tr gal, in fine grained, equigranular intrusive with 1-2% diss sulfides in intrusive. Vnlts occur in zone perhaps 2' wide.
CV99-33	082E/15	378075 E 5531840 N	Kettle claims	Stockwork Zone. Silic'd, med grained, granular intrusive with 10-20% qtz as xtalline vnlts, dom subparallel and as flood patches. Tr euhedral py.
CV99-34	082E/15	377960 E 5531575 N	Kettle claims	HG Zone. Large trench/pit. White qtz vein with up to 20% sulfides, py+apy+tr cpy in weakly alt'd Kspar porphyry cut by black lamprophyre dykes. Main vein ~ 0.3 – 0.5 m wide, trends ~ 340/20 W. Poor exposure but looks like sev smaller parallel vns.

CV99-35	082E/15	378164 E 5531860 N	Kettle claims	Stockwork Zone – Switchback vein area. White bull qtz vn / blowout on flats. Lots of smaller vnlts, subparallel and sheeted, in silic'd intrusive with minor py.
CV99-36	082E/15	378290 E 5531830 N	Kettle claims	Bluff Vein. Rusty weathering, coarsely xtalline white qtz vn, locally vuggy. Tr patchy fine py (+apy?). Exposed in bedrock at base of talus slope. O/c is 1.5 m x 2 m, can't tell orientation. Vein at contact of black lamp dyke in Kspar megacryst porphyry.
CV99-37	082E/15	~ 378165 E ~ 5531900 N	Kettle claims	Stockwork Zone, near CV99-35. Rusty boxwork white qtz vn, large coarse qtz xtals, tr py. From blasted?/scaped area in flat cleared (but overgrown) area.

SAMPLE RESULTS – UPPER GRANBY/KETTLE RIVER AREA

Samples: CV99-02 to –14, CV99-20 to -29, CV99-31 to -37

plus sample results and descriptions from property examinations by Ascot and Teck

17-Aug-99

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ICP CERTIFICATE OF ANALYSIS AK 99-359

LINDA CARON
BOX 2493
GRAND FORKS
V0H 1H0

ATTENTION: LINDA CARON

No. of samples received: 27
Sample type: Rock
PROJECT #: CV
SHIPMENT #: None Given
Samples submitted by: L. Caron

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	CV99-1R	<5	<0.2	0.74	<5	70	<5	0.20	<1	5	91	9	1.45	10	0.23	554	3	0.02	9	310	22	<5	<20	24	0.02	<10	21	<10	16	36
2	CV99-2R	20	0.6	0.03	<5	10	<5	<0.01	<1	2	212	32	1.47	<10	<0.01	63	8	<0.01	7	<10	8	<5	<20	<1	<0.01	<10	6	<10	<1	<1
3	CV99-3R	>1000	>30	0.10	<5	45	155	0.05	794	17	158	63	>10	<10	<0.01	214	<1	<0.01	10	<10	>10000	<5	<20	<1	<0.01	10	2	<10	<1	>10000
4	CV99-4R	55	0.6	0.17	<5	20	<5	0.02	<1	<1	139	7	0.49	<10	<0.01	212	5	0.02	4	<10	48	<5	<20	<1	<0.01	<10	1	<10	<1	32
5	CV99-5R	25	1.0	0.34	<5	15	<5	0.58	<1	28	58	203	2.68	<10	0.33	253	4	0.06	13	340	28	<5	<20	6	0.07	<10	36	<10	11	32
6	CV99-6R	5	<0.2	0.37	<5	25	<5	0.83	<1	3	98	4	0.89	30	0.28	417	1	0.06	4	930	14	<5	<20	18	0.04	<10	15	<10	45	35
7	CV99-7R	15	<0.2	0.11	10	<5	<5	9.07	<1	1	119	2	0.24	<10	0.09	82	<1	0.02	6	260	6	<5	<20	112	0.02	<10	2	<10	9	1
8	CV99-8R	10	<0.2	0.13	<5	<5	5	6.85	<1	5	134	5	1.75	10	1.28	672	3	0.01	16	320	4	20	<20	131	<0.01	<10	29	<10	33	42
9	CV99-9R	>1000	>30	0.11	630	40	10	0.37	>1000	12	127	299	8.21	<10	<0.01	236	<1	<0.01	5	<10	3212	<5	<20	7	<0.01	10	1	<10	<1	>10000
10	CV99-10R	20	1.0	0.12	50	10	<5	0.03	3	1	225	4	0.77	<10	<0.01	100	4	<0.01	7	160	24	<5	<20	<1	<0.01	<10	3	<10	<1	89
11	CV99-11R	5	0.6	1.13	<5	85	<5	0.33	<1	12	81	5	5.39	40	0.34	1977	3	0.01	5	1120	18	<5	<20	15	0.04	<10	35	<10	27	93
12	CV99-12R	90	0.6	0.37	5	45	20	9.41	<1	17	127	12	3.95	20	2.57	1014	5	<0.01	37	1000	10	15	<20	590	<0.01	<10	45	<10	<1	31
13	CV99-13R	25	0.4	0.08	<5	10	10	0.06	<1	103	206	4	3.83	<10	0.04	71	7	0.01	10	<10	<2	<5	<20	<1	<0.01	<10	4	<10	<1	<1
14	CV99-15R	10	0.4	0.05	<5	<5	<5	<0.01	<1	1	206	4	0.45	<10	<0.01	132	11	<0.01	6	20	2	<5	<20	<1	<0.01	<10	<1	<10	<1	<1
15	CV99-16R	50	0.2	0.26	<5	50	<5	1.27	<1	2	133	45	0.71	10	0.05	643	1	0.01	6	410	4	<5	<20	58	<0.01	<10	3	<10	20	6
16	CV99-17R	>1000	0.8	0.07	<5	10	<5	0.01	<1	2	194	4	0.73	<10	<0.01	136	9	<0.01	5	20	12	<5	<20	<1	<0.01	<10	<1	<10	<1	<1
17	CV99-18R	5	0.4	0.54	<5	70	10	0.20	<1	7	66	22	5.07	20	0.04	746	6	0.01	3	470	8	<5	<20	27	<0.01	<10	24	<10	77	48
18	CV99-19R	10	0.4	5.16	<5	65	20	2.78	<1	24	36	154	9.26	<10	0.44	88	7	0.19	10	1760	48	<5	<20	78	0.04	10	53	<10	<1	11
19	CV99-20R	5	<0.2	0.37	<5	25	<5	2.12	1	11	82	32	2.40	<10	0.23	262	4	0.03	20	810	10	20	<20	21	0.07	<10	25	<10	31	26
20	CV99-21R	5	0.2	0.16	20	275	<5	0.08	<1	<1	134	3	0.97	<10	0.01	72	5	<0.01	3	310	6	<5	<20	6	<0.01	<10	3	<10	<1	3

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
21	CV99-22R	5	0.4	0.26	<5	25	<5	0.08	<1	1	135	3	1.04	40	0.01	36	6	<0.01	5	610	22	<5	<20	4	<0.01	<10	1	<10	12	<1
22	TOP99-3R	25	<0.2	0.09	25	10	<5	0.04	<1	5	208	4	1.48	<10	<0.01	127	6	<0.01	8	80	4	<5	<20	3	<0.01	<10	2	<10	<1	<1
23	TOP99-4R	>1000	>30	0.41	>10000	45	10	1.56	193	43	59	55	6.16	10	0.17	912	6	<0.01	178	4300	34	100	<20	96	<0.01	<10	13	<10	6	164
24	TOP99-5R	30	<0.2	2.21	40	90	<5	3.46	<1	24	70	243	3.54	<10	1.42	782	<1	0.10	49	1260	26	10	<20	97	0.10	<10	116	<10	17	49
25	TOP99-6R	10	0.6	1.36	15	60	15	0.11	<1	14	173	19	3.16	<10	0.69	377	11	<0.01	12	500	18	<5	<20	<1	<0.01	<10	58	<10	<1	31
26	GF99-1R	<5	0.2	0.89	5	40	5	1.70	<1	5	65	9	1.97	20	0.46	779	2	0.02	3	690	14	<5	<20	63	<0.01	<10	28	<10	32	53
27	CV99-14R	5	<0.2	2.39	10	165	25	1.70	<1	37	40	19	5.04	<10	2.58	580	<1	0.09	7	640	28	20	<20	31	0.30	<10	210	<10	42	61
QC DATA:																														
Resplit:																														
1	CV99-1R	<5	<0.2	0.77	<5	65	5	0.20	<1	5	83	9	1.45	10	0.23	566	3	0.02	8	290	20	<5	<20	20	0.02	<10	21	<10	16	36
Repeat:																														
1	CV99-1R	5	<0.2	0.73	5	65	5	0.19	<1	5	89	8	1.42	10	0.22	538	3	0.02	8	290	22	<5	<20	20	0.02	<10	20	<10	14	40
10	CV99-10R	20	0.8	0.13	55	15	<5	0.03	3	2	224	4	0.77	<10	<0.01	90	4	<0.01	6	160	22	<5	<20	1	<0.01	<10	3	<10	<1	82
19	CV99-20R	5	<0.2	0.37	<5	20	5	2.13	<1	11	81	33	2.40	<10	0.24	255	1	0.03	16	820	10	15	<20	15	0.10	<10	25	<10	32	25
Standard:																														
GEO'99		120	1.4	1.73	65	170	15	1.88	1	21	64	86	3.86	<10	0.98	716	<1	0.02	22	760	22	5	<20	58	0.11	<10	77	<10	8	76

df/347
XLS/99

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

16-Sep-9

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ICP CERTIFICATE OF ANALYSIS AK 99-473

LINDA CARON
BOX 2493
GRAND FORKS, BC
V0H 1H0

ATTENTION: LINDA CARON

No. of samples received: 11
Sample type: Rock
PROJECT #: CV
SHIPMENT #: None Given
Samples submitted by: L. Caron

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	CV99-23	35	>30	0.10	690	35	<5	0.62	948	15	77	345	>10	<10	0.01	506	<1	<0.01	1	<10	>10000	270	<20	30	<0.01	<10	1	<10	<1	>10000
2	CV99-24	5	2.2	0.07	<5	<5	<5	0.02	3	<1	203	5	0.36	<10	0.01	123	4	<0.01	5	<10	832	<5	<20	<1	<0.01	<10	<1	<10	<1	440
3	CV99-25	<5	0.6	0.68	<5	60	<5	0.35	<1	25	102	466	8.41	<10	0.26	244	777	0.02	13	330	130	<5	<20	9	0.04	<10	51	310	<1	78
4	CV99-26	15	8.4	0.37	15	25	<5	0.13	3	3	293	10	1.22	<10	0.16	102	22	<0.01	9	240	2094	<5	<20	3	<0.01	<10	7	<10	<1	369
5	CV99-27	10	0.4	0.73	25	25	10	0.92	<1	5	67	5	1.82	<10	0.45	209	10	<0.01	6	610	132	<5	<20	29	<0.01	<10	12	<10	7	71
6	CV99-28	55	1.6	0.83	10	230	<5	0.48	<1	12	190	14	2.38	<10	0.72	526	8	<0.01	48	600	140	<5	<20	9	<0.01	<10	31	<10	13	71
7	CV99-29	20	0.2	0.43	25	35	<5	0.03	<1	1	70	2	1.23	<10	<0.01	34	4	<0.01	6	160	34	<5	<20	<1	<0.01	<10	2	<10	6	37
8	CV99-30	<5	<0.2	0.39	<5	85	<5	3.13	<1	3	85	4	1.80	<10	0.10	958	6	0.02	5	740	46	<5	<20	135	<0.01	<10	10	<10	22	51
9	CV99-31	45	0.4	0.47	75	40	<5	0.18	<1	2	87	9	1.91	<10	<0.01	119	8	<0.01	3	1080	94	<5	<20	<1	<0.01	<10	5	<10	11	36
10	CV99-32	80	8.0	0.21	35	20	5	0.03	31	2	119	6	2.70	<10	<0.01	132	4	<0.01	4	190	756	<5	<20	<1	<0.01	<10	<1	<10	<1	1295
11	TOP99-7	>1000	12.0	0.13	>10000	30	5	1.99	228	19	141	33	4.89	<10	0.45	573	9	<0.01	56	600	36	225	<20	111	<0.01	<10	6	<10	<1	88
QC DATA:																														
Resplit:																														
1	CV99-23	35	>30	0.11	740	45	<5	0.66	933	16	90	315	>10	<10	<0.01	512	<1	<0.01	2	<10	>10000	270	<20	33	<0.01	<10	1	<10	<1	>10000
Repeat:																														
1	CV99-23	45	>30	0.09	710	40	<5	0.63	953	15	76	324	>10	<10	<0.01	492	<1	<0.01	2	<10	>10000	305	<20	32	<0.01	<10	1	<10	<1	>10000
Standard:																														
GEO'99		120	1.0	1.76	65	145	<5	1.86	1	20	64	77	3.82	<10	0.97	680	1	0.02	24	660	24	5	<20	54	0.07	<10	76	<10	8	74

df/470
XLS/99

per

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

15-Nov-

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ICP CERTIFICATE OF ANALYSIS AK 99-642

LINDA CARON
BOX 2493
GRAND FORKS
V0H 1H0

ATTENTION: LINDA CARON

No. of samples received: 8
Sample type: Rock
PROJECT #: CV
SHIPMENT #: 1
Samples submitted by: L. Caron

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	BC99-01	<5	<0.2	0.56	<5	10	<5	1.59	<1	32	37	194	4.36	20	0.43	184	15	0.01	133	3840	4	<5	<20	73	0.04	<10	26	<10	31	53
2	CV99-33	75	2.4	0.16	<5	50	10	0.01	<1	3	137	4	1.59	<10	<0.01	27	6	<0.01	3	270	16	<5	<20	9	<0.01	<10	2	<10	<1	1
3	CV99-34	>1000	>30	0.09	<5	55	85	0.27	<1	21	110	23	>10	<10	0.02	314	14	<0.01	4	<10	230	<5	<20	7	<0.01	<10	1	<10	<1	9
4	CV99-35	5	0.8	0.02	<5	<5	<5	<0.01	<1	<1	200	3	0.41	<10	<0.01	45	6	<0.01	4	<10	<2	<5	<20	<1	<0.01	<10	<1	<10	<1	<1
5	CV99-36	10	2.2	0.08	<5	15	5	0.03	<1	3	175	4	1.26	<10	0.01	231	6	<0.01	4	100	6	<5	<20	<1	<0.01	<10	2	<10	<1	16
6	CV99-37	40	7.2	0.13	<5	10	10	0.01	<1	2	214	3	0.99	<10	0.03	88	7	<0.01	5	90	52	<5	<20	<1	<0.01	<10	3	<10	23	3
7	CV99-38	10	0.6	0.30	5	125	<5	>10	<1	5	32	19	1.26	<10	1.07	287	6	0.01	24	770	<2	15	<20	2752	<0.01	<10	22	<10	33	51
8	TOP99-8	340	0.8	0.23	455	25	<5	0.24	3	3	110	6	1.35	<10	<0.01	38	7	<0.01	2	550	16	5	<20	42	<0.01	<10	2	<10	<1	54
QC DATA:																														
Resplit:																														
1	BC99-01	<5	<0.2	0.54	<5	10	<5	1.54	<1	31	36	185	4.24	20	0.42	175	15	0.01	128	3740	4	<5	<20	68	0.02	<10	23	<10	30	52
Repeat:																														
1	BC99-01	<5	0.4	0.52	<5	10	<5	1.52	<1	30	30	183	4.10	20	0.38	176	15	0.01	127	3760	2	<5	<20	70	0.02	<10	23	<10	30	48
Standard:																														
GEO'99		115	1.0	1.80	65	160	10	1.86	<1	18	64	80	3.86	<10	0.94	684	3	0.02	24	760	20	10	<20	56	0.10	<10	71	<10	8	67

df/607B
XLS/99
cc. John Kemp

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

Eco-Tech
LABORATORIES LTD.

ASSAYING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 6T4
Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@mail.wkpowerlink.com

CERTIFICATE OF ANALYSIS AK 99-359

LINDA CARON
BOX 2493
GRAND FORKS
V0H 1H0

20-Aug-99

ATTENTION: LINDA CARON

No. of samples received: 27
Sample type: Rock
PROJECT #: CV
SHIPMENT #: None Given
Samples submitted by: L. Caron

ET #.	Tag #	Au (ppb)	Pd (ppb)	Pt (ppb)
27	CV99-14R	5	<5	<5

QC DATA:

Repeat:

27	CV99-14R	-	<5	<5

Standard:

GEO'99	120	-	-

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B.C. Certified Assayer

XLS/99

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10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 6T4
Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@mail.wkpowerlink.com

CERTIFICATE OF ASSAY AK 99-359

19-Aug-99

LINDA CARON
BOX 2493
GRAND FORKS
V0H 1H0

ATTENTION: LINDA CARON

No. of samples received: 27
Sample type: Rock
PROJECT #: CV
SHIPMENT #: None Given
Samples submitted by: L. Caron

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)	As (%)	Cd (%)	Pb (%)	Zn (%)
3	CV99-3R	53.25	1.553	154.2	4.50	-	-	1.66	2.10
9	CV99-9R	8.10	0.236	153.8	4.49	-	0.116	-	3.42
16	CV99-17R	1.24	0.036	-	-	-	-	-	-
23	TOP99-4R	27.90	0.814	37.2	1.09	2.64	-	-	-
QC/DATA:									
Standard:									
STD-M		1.45	0.042	-	-	-	-	-	-
Mp-IA		-	-	70.0	2.04	0.84	-	4.32	-

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Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@mail.wkpowerlink.com

CERTIFICATE OF ASSAY AK 99-473

LINDA CARON
BOX 2493
GRAND FORKS, BC
V0H 1H0

17-Sep-99

ATTENTION: LINDA CARON

No. of samples received: 11
Sample type: Rock
PROJECT #: CV
SHIPMENT #: None Given
Samples submitted by: L. Caron

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)	As (%)	Pb (%)	Zn (%)
1	CV99-23	-	-	1090.0	31.79	-	34.45	9.50
11	TOP99-7	22.55	0.658	-	-	3.50	-	-

QC/DATA:

Repeat:								
11	TOP99-7	22.90	0.668	-	-	-	-	-
Standard:								
STD-M		1.40	0.041	-	-	-	-	-

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per Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

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Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@direct.ca

CERTIFICATE OF ASSAY AK 99-642

15-Nov-99

LINDA CARON
BOX 2493
GRAND FORKS
V0H 1H0

ATTENTION: LINDA CARON

No. of samples received: 8
Sample type: Rock
PROJECT #: CV
SHIPMENT #: 1
Samples submitted by: L. Caron

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
3	CV99-34	4.28	0.125	191.2	5.58

QC DATA:

Standard:				
STD-M	1.69	0.049		
Mpla			70.0	2.04

ECO-TECH LABORATORIES LTD.
per Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

XLS/99

LEICESTER DIAMOND MINES LTD.

#1300 - 409 Granville Street
Vancouver, British Columbia, V6C 1T2
Telephone: (604) 685-5015 ● Facsimile: (604) 684-9877

MEMORANDUM

To: Linda Caron **Date:** November 15, 1999

From: Ken Carter

Re: **Hand Sample Descriptions - Vernon Gold Properties**

MAC 1 Boulder of mineralized zone from portal, described variously as altered trachyte, andesite - shear zone, clay altered
- *needs petrography*
- assay Au, Ag + petrographic description

MAC 2 Rubble from Trench 2 in an area 50 m north and downslope of portal, same description as MAC 1
- assay Au, Ag

MAC 3 Core from "ore zone" of hole 30, same description as MAC 1
- assay Au, Ag

MAC 4 Core from granodiorite host, hole 31
- petrographic description needed
- Au, Ag assay

Kettle 1 Kettle South Zone - quartz vein, galena, pyrite, sphalerite
- assay Au, Ag

Kettle 2 Kettle high grade zone - quartz, massive pyrite, malachite stain, chalcopyrite, bornite, galena
- assay Au, Ag

Kettle 3 Main Stockwork zone - quartz, ± biotite, weakly disseminated, coarse pyrite, possible carbonate (Fe carbonate) alteration

Kettle 4 Stockwork area, Switchback vein, quartz, bull quartz, pyrite, weathered pyrite
- assay Au, Ag

Kettle 5	Altered intrusives, feldspar porphyry + quartz stockwork,, 1-5% sulphide - assay Au, Ag
Kettle 6	South Zone wall rock, granodiorite, feldspar veinlets - assay Au, Ag

---

LAV 1	Felsic schist, pyrite weathered, fine dissemination
LAV 2	Core samples, felsic schist, disseminated pyrite, pale grey, fine grained

LEICESTER DIAMONDS-X99
Job V990785R

KETTLE/LAV/MAC Date 991110

LAB NO	FIELD NUMBER	Au(3) g/t	Ag(2) g/t
R9912026	KETTLE-1	8.311	528.2
R9912027	KETTLE-2	32.971	521.4
R9912028	KETTLE-3	0.105	2.3
R9912029	KETTLE-4	0.056	1.6
R9912030	KETTLE-5	0.044	0.8
R9912031	KETTLE-6	0.035	0.6
R9912032	LAV-1	0.118	1.2
R9912033	LAV-2	0.1	0.9
R9912034	MAC-1	5.025	10.3
R9912035	MAC-2	2.577	17.3
R9912036	MAC-3	21.326	32.6
R9912037	MAC-4	0.066	0.6

ANALYTICAL METHODS

Au(3) Fire Assay Lead Collection / AA Finish (low level) 1/2 A.T.

Ag(2) Acid decomposition / AAS

MEMORANDUM

DATE: November 15.1999

TO: **LINDA CARON** **CC:**

FROM: **GREG THOMSON**

RE: Kettle Property

Hi Linda,

Here are the sample results of the rock material I sampled at the Kettle property on October 26, 1999.

7701	grab from caved trench on Mac property; fine grain altered intrusive/dyke, greenish with pervasive fine grain arsenopyrite
	7702 to 7711 (Kettle property)
7702	grabs of stock pile from Lead zone, propylitic altered intrusive with 10-15% blebs coarse galena with pyrite
7703	south veins. grab of roadside quartz piles, sampled material contained 10-20% of mixed py, gal, sphal
7704	high grade vein. grab of footwall green qtz-ser altered intrusive, 5-10% medium -coarse pyrite + trc. Cpy
7705	high grade vein, 1.0-1.5 m chip across flattish vein exposure, 1-3% fine –med. grain pyrite
7706	high grade vein, 0.5 m chip across weakly altered intrusive hanging wall, trc.py (same sample area as 7704.7705)
7707	high grade vein. same vein as 7705, but located approx. 5 m NW from 7705 location, only 0.5 m exposed for sample 7707 location (may be more extensive than trenched exposure, 3-5% coarse py with trc cpy
7708	stockwork zone. 0.5 m chip.(arbitrary location) trc. Py.
7709	stockwork zone. 1 m chip
7710	stockwork zone. grab from road/trench bank
7711	bluff vein. 1.5 m chip

If you need more details, please give me a call at (604) 640-5316

Regards,

Greg Thomson

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: TECK EXPLORATIONS LTD.

350 - 272 VICTORIA ST.
KAMLOOPS, BC
V2C 1Z8

Project: 004100
Comments: ATTN: R. FARMER CC: GREG THOMSON

Page Number : 1-A
Total Pages : 1
Certificate Date: 12-NOV-99
Invoice No. : I9932616
P.O. Number :
Account : HPQ

CERTIFICATE OF ANALYSIS A9932616

SAMPLE	PREP CODE		Au ppb FA+AA	Au ?? oz/ton	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm
07701	205	226	3060	-----	18.6	0.90	>10000	< 10	30	< 0.5	< 2	1.38	< 0.5	31	83	38	5.72	< 10	3	0.40	10
07702	205	226	835	-----	>100.0	0.57	710	40	10	< 0.5	< 2	3.14	>500	27	87	384	7.99	10	< 1	0.17	< 10
07703	205	226	790	-----	>100.0	0.05	26	< 10	< 10	< 0.5	< 2	0.01	>500	20	155	248	3.51	10	< 1	0.04	10
07704	205	226	4070	-----	72.6	0.90	18	< 10	40	< 0.5	4	0.28	5.0	10	103	1000	7.73	< 10	< 1	0.56	< 10
07705	205	226	4900	-----	74.4	0.55	10	< 10	50	< 0.5	4	0.48	4.5	9	115	221	4.48	< 10	1	0.36	< 10
07706	205	226	60	-----	1.8	0.82	6	< 10	60	< 0.5	< 2	1.29	< 0.5	7	111	9	2.87	< 10	< 1	0.38	20
07707	205	226	>10000	0.441	>100.0	0.16	22	< 10	10	< 0.5	36	0.01	1.5	15	197	703	11.60	< 10	1	0.09	< 10
07708	205	226	20	-----	1.4	1.67	6	< 10	110	< 0.5	< 2	0.25	< 0.5	11	166	6	3.23	< 10	< 1	0.46	10
07709	205	226	130	-----	6.4	0.64	4	< 10	90	< 0.5	< 2	0.06	< 0.5	4	207	7	2.48	< 10	< 1	0.34	10
07710	205	226	10	-----	0.6	1.12	2	< 10	240	< 0.5	< 2	0.68	< 0.5	6	185	4	1.80	< 10	< 1	0.50	10
07711	205	226	60	-----	11.0	0.45	10	< 10	60	< 0.5	4	0.05	< 0.5	5	212	4	4.59	< 10	< 1	0.27	10

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: TECK EXPLORATIONS LTD.

350 - 272 VICTORIA ST.
KAMLOOPS, BC
V2C 1Z8

Project : C04100
Comments: ATTN: R. FARMER CC: GREG THOMSON

Page Number : 1-A
Total Pages : 1
Certificate Date: 11-NOV-99
Invoice No. : I9933283
P.O. Number :
Account : HPQ

CERTIFICATE OF ANALYSIS A9933283

SAMPLE	PREP CODE	Ag FA g/t	Pb %	Zn %
07702	212 --	420	9.32	13.40
07703	212 --	145	4.65	9.98
07707	212 --	208	-----	-----

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: TECK EXPLORATIONS LTD.

350 - 272 VICTORIA ST.
KAMLOOPS, BC
V2C 1Z8

Page Number : 1-B
Total Pages : 1
Certificate Date: 12-NOV-99
Invoice No. : I9932616
P.O. Number :
Account : HPQ

Project : 004100
Comments: ATTN: R. FARMER CC: GREG THOMSON

CERTIFICATE OF ANALYSIS A9932616

SAMPLE	PREP CODE		Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
07701	205	226	0.06	180	5	< 0.01	138	2930	50	4.22	196	3	109	< 0.01	< 10	30	16	< 10	122
07702	205	226	0.24	930	20	0.64	< 1	270	>10000	>5.00	36	< 1	149	< 0.01	< 10	50	5	< 10	>10000
07703	205	226	0.04	5	3	0.45	< 1	650	>10000	>5.00	78	< 1	12	< 0.01	< 10	110	< 1	< 10	>10000
07704	205	226	0.05	40	3	< 0.01	4	1070	214	>5.00	< 2	< 1	11	< 0.01	< 10	10	6	< 10	200
07705	205	226	0.14	520	4	< 0.01	4	560	162	4.40	< 2	< 1	19	< 0.01	< 10	< 10	5	< 10	128
07706	205	226	0.43	1190	3	0.02	3	1050	14	1.17	< 2	2	64	< 0.01	< 10	< 10	23	< 10	68
07707	205	226	0.01	25	1	< 0.01	4	< 10	112	>5.00	< 2	< 1	3	< 0.01	< 10	10	4	< 10	38
07708	205	226	0.59	670	< 1	0.03	4	1100	10	0.97	< 2	2	12	< 0.01	< 10	< 10	23	< 10	60
07709	205	226	0.05	335	1	0.02	3	510	26	0.29	< 2	< 1	9	< 0.01	< 10	< 10	6	< 10	20
07710	205	226	0.27	505	3	0.03	4	620	2	0.64	< 2	1	33	< 0.01	< 10	< 10	10	< 10	30
07711	205	226	0.05	365	< 1	0.01	3	480	20	0.62	< 2	< 1	12	< 0.01	< 10	< 10	7	< 10	14