

**GEOLOGICAL AND GEOCHEMICAL ASSESSMENT REPORT**

**ON THE FISSURE PROPERTY**

**FISSURE GROUP**

**AVOLA - TUM TUM LAKE AREA**

**KAMLOOPS MINING DIVISION, NTS 082M/14E**

**LAT. 51° 50' 0" N, LONG. 119° 11' 30" W**

**BRITISH COLUMBIA**

**by**

**J.E.L. (LEO) LINDINGER. P.Geo.**

**MAY 19, 2000**

**GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT**

**26,249**

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## SUMMARY

Geochemical sampling and geological mapping programs were carried out from July 26 to July 30, 1999 on parts of the Fissure property between 4 and 8 kilometers southwest of Tum Tum Lake and 15 kilometers east of Avola. The property is in the Kamloops Mining Division, British Columbia.

The Tum Tum Lake area has no recorded exploration history. There is evidence for two post claim staking near the north end of the Fissure claims and west of Ground Hog Mountain. However no work was ever recorded. In September 1998 Mr. Leo Lindinger (the writer) discovered the Bizar-Goldstrike gold-bismuth-copper-arsenic veins two kilometers west of Tum Tum Lake. This style of mineralization has similarities to distal end members of the intrusive associated gold deposit model recently developed for numerous deposits in Alaska and the Yukon Territory. The Bizar discovery was staked as the Bizar and Biz claims and was optioned to Cassidy Gold Corporation as the Goldstrike project later that year.

Additional prospecting by the writer on the northern end of the Otter Creek Logging road immediately south of the Goldstrike property during a one day trip in early November 1998 resulted in the discovery of clay altered zones adjacent to a large north trending linear depression. Several samples returned anomalous arsenic and gold values. The Fissure 1-22 claims were staked from February 22 to 29, 1999.

The Fissure property is located within rocks of the Kootenay Terrane. The Kootenay Terrane is comprised of Proterozoic continentally sourced offshore marine metasedimentary deposits. These rocks have undergone multiepisodic deformation, metamorphism with accompanying intrusive activity during Devonian, Jurassic, Cretaceous and Tertiary orogenic events. Metamorphic grades range from upper greenschist to amphibolite grades and generally increase from west to east to the spine of the Monashee mountains 10 km east of Tum Tum Lake.

The geology of the Fissure property is dominated by a major north trending structure of unknown dip (steep east?) and displacement. This linear can be traced for over 20 km. Moderately to intensely clay altered and variably pyritized and brecciated zones occur along the west side of this linear often near mapped NW striking cross structures. Samples of this altered material returned weakly anomalous gold and arsenic values. The northeast part of the property is underlain by a highly brecciated intensely altered but barren fine grained Tertiary? stock. This intrusive continues to the northwest onto the neighbouring Golden Lion and Goldstrike properties.

Although only weakly anomalous concentrations of gold and arsenic were obtained from the exploration to date, further work is recommended. The property is less than 5% explored. The intensity of the alteration in several areas on and surrounding the property that have associated gold mineralization indicate that prospecting and sampling on the remainder of the claims should be completed.

## **INTRODUCTION**

*This report documents the details and results of a geochemical sampling and geological mapping program undertaken from July 27 to July 30 1999, on the Fissure claims.*

## **LOCATION AND ACCESS**

The claims are located four to eight southwest of Tum Tum Lake on NTS map sheet 082M/14E. They are centered at 51 degrees 50 minutes north and 119 degrees 11.5 minutes west. They straddle the north end of the north trending active Otter Creek Logging road from km 34.5 to km 39 which accesses from the south, the mountains south west of Tum Tum Lake. Current access to the north end of the Otter Creek Logging Road is via the Shannon Creek Logging road at Km 30. The Shannon Creek logging road originates from Avola.

## **CLIMATE, VEGETATION AND TOPOGRAPHY**

The property lies in the wet Columbia Mountain climatic zone. Rainfall is greater than 2 meters per year, and temperatures range from - 30 to +20 degrees centigrade. Vegetation in flat areas is red and yellow cedar. Sloping and upper elevation areas host balsam, black spruce and some interior fir predominate. Some white pine is planted in logged off areas. The lowest point in the area is the upper Adams River at 700 meters. The highest point in the area is Ground Hog Mountain at 2,150 meters.

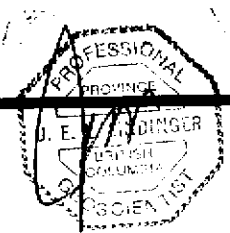
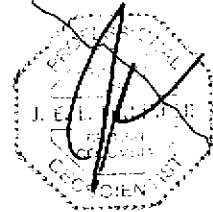
Topography is usually sloping and locally steep with up to 30 meter high cliffs. The highest point on the property is about 1,500 meters along the west side of the claims. The lowest point is at 1,250 meters in an east draining creek valley draining to the Adams River.

# BRITISH COLUMBIA

FISSURE PROJECT

KAMLOOPS

VANCOUVER



J.E.L. LINDINGER, P.Geo.	
RENAISSANCE GEOSCIENCE SERVICES	
FISSURE PROPERTY	
FISSURE PROJECT	
LOCATION MAP	
KAMLOOPS M.D.	
FIGURE 1	J.E.L. Lindinger, P.Geo.
DATE MAY 20, 2000	

BIZ 5

370056

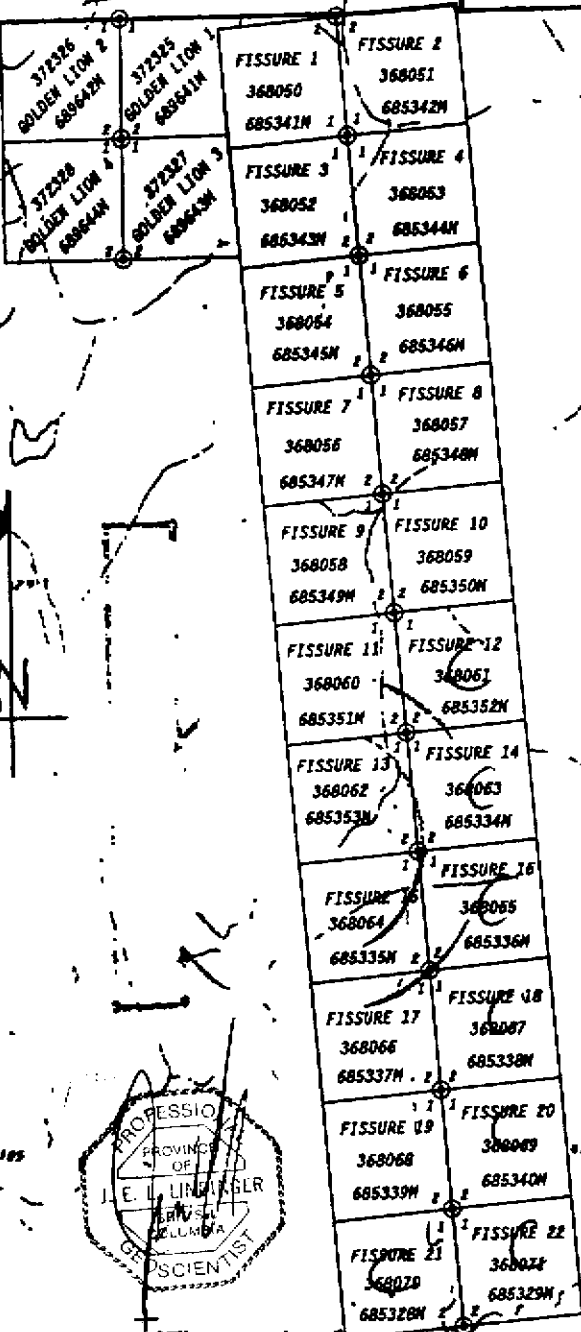
369519

5SX3E

5SX4E

**UPPER ADAMS  
RIVER PARK**

5SX4W



ADAMS RIVER

J.E.L. LINDINGER, P.Geo.

FISSURE PROPERTY

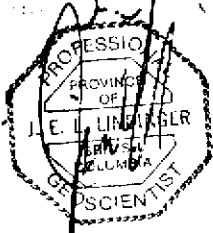
FISSURE PROJECT

CLAIM MAP

KAMLOOPS M.D. 51D 50' N 119D 11.5' W

FIGURE 3 J.E.L. Lindinger, P.Geo.

DATE 00/05/16



SCALE 1:31360

## PROPERTY

The following claims are owned 100% by Leo J. Lindinger, of Kamloops, B.C.

The claims upon which the work was completed are part of the Fissure Group (Event# 3144768).

CLAIM	RECORD NUMBER	UNITS	EXPIRY DATE
Fissure 1	368050	1	February 22, 2001*
Fissure 2	368051	1	February 22, 2001*
Fissure 3	368052	1	February 22, 2001*
Fissure 4	368053	1	February 22, 2001*
Fissure 5	368054	1	February 22, 2001*
Fissure 6	368055	1	February 22, 2001*
Fissure 7	368056	1	February 22, 2001*
Fissure 8	368057	1	February 22, 2001*
Fissure 9	368058	1	February 25, 2001*
Fissure 10	368059	1	February 25, 2001*
Fissure 11	368060	1	February 25, 2001*
Fissure 13	368062	1	February 25, 2001*
Fissure 15	368064	1	February 25, 2001*
Fissure 17	368066	1	February 25, 2001*
Fissure 19	368068	1	February 25, 2001*



(\*) upon approval of the work for assessment purposes under Event # 3144769 that this report documents.

## HISTORY

The area surrounding the Fissure claims have no recorded exploration history prior to 1998.

Claims were staked near the north end of the Fissure property in the 1980's, but were abandoned. Claims were staked during the 1970's and 1980's northwest of Groundhog Mountain, but again no work has been recorded. The nearest significant metallic mineral properties prior to 1998 are the syngenetic Ruddock Creek zinc, lead, silver sulphide deposits 17 km east south east and the Finn zinc, lead, silver sulphide occurrence 12 km to the north west.

In September 1998, the writer discovered the Bizar high grade gold-bismuth-copper sulphide-quartz breccia veins 2.5 km west of Tum Tum Lake. This discovery was subsequently staked and optioned to Cassidy Gold Corp. later that year.

During November 1998 the writer, while on a late season prospecting trip up the Otter Creek Logging road which terminated about 4 km south of the Bizar showing, discovered semi massive



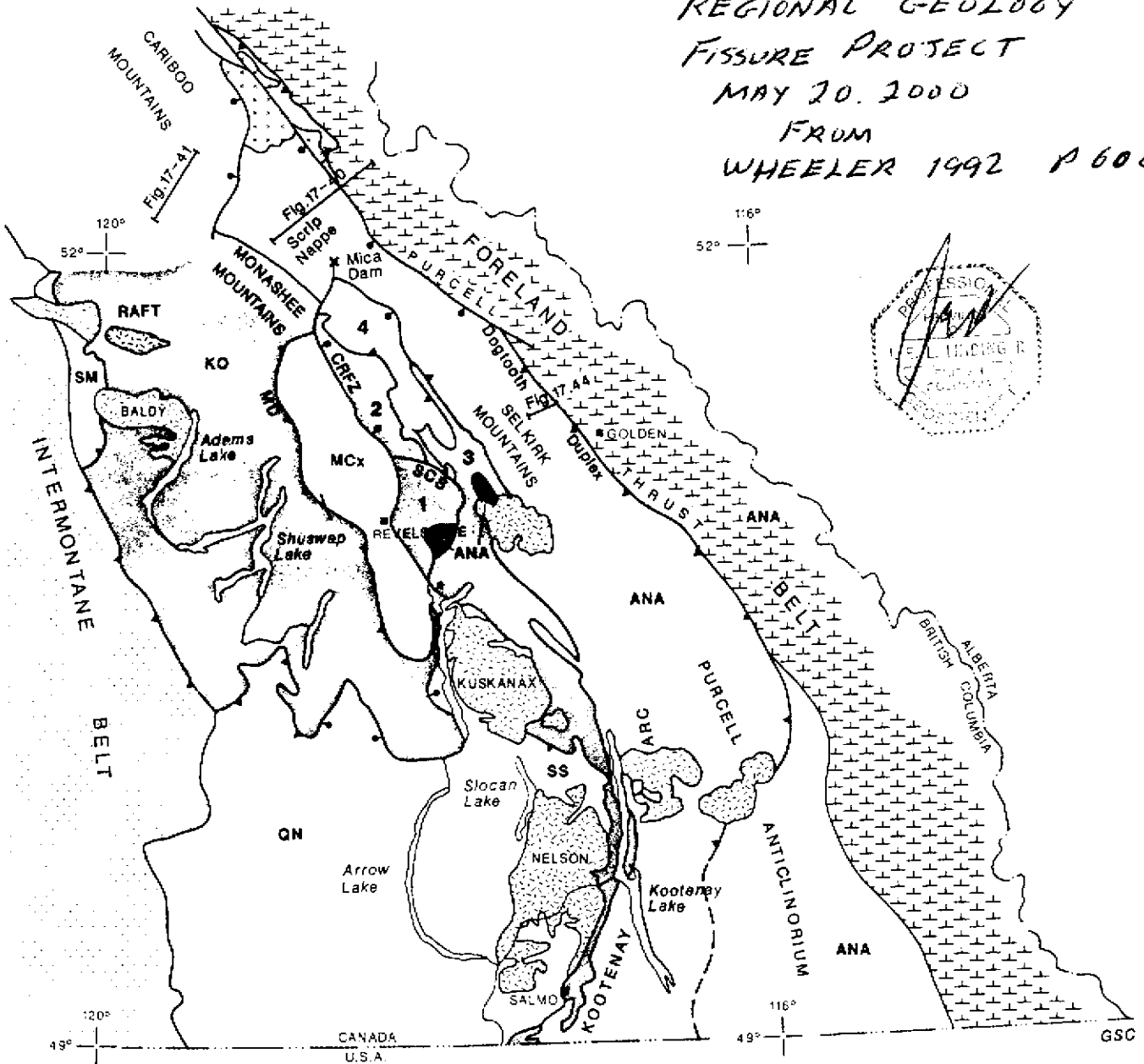
and disseminated sulphide and oxide zones within intensely clay altered hydrothermally brecciated gneiss and intrusive host rocks. Several silt samples were also taken. Several analyzed samples returned weakly anomalous in gold and arsenic values. Although the results were 'weak' the writer decided to stake the area as the Fissure claims in February 1999 due to totally unexplored nature of the area, the proximity to the Bizar discovery and the fact that in only 3 hours of prospecting in an area with over 20 cm of new snow, 4 silt and rock samples reporting over 10 ppb gold were obtained.

During 1999 the Bizar (now Goldstrike property) had prospecting, preliminary soil sampling and diamond drilling programs completed. These preliminary surface programs resulted in several rock and soil samples returning highly anomalous gold mineralization with associated bismuth-copper and arsenic mineralization over a five by one kilometer south trending area (Gruenwald, 1999). The Goldstrike occurrence is near the north end and the area immediately north west of the Fissure claims is at the south end.

## **REGIONAL GEOLOGY**

The area of the fissure claims lies within the east edge of the Shuswap Highland physiographic province. East across the Adams River the Monashee Mountain physiographic province begins. (Wheeler 1992). Although some recent structural and stratigraphic mapping has taken place in surrounding areas (Brown and Psutka, Journey, Scammell, and Sevigny and Simony), the immediate area has not been mapped. The oldest rocks are schists and gneisses derived from Proterozoic continentally sourced sediments of the Kootenay Terrane (Wheeler 1992). These rocks have suffered multiepisodic metamorphism and accompanying intrusive activity during Devonian, Jurassic, Cretaceous and Tertiary orogenic events. The upper greenschist to granulite metamorphic grades present on the oldest rocks on the property reveal that significant exhumation has taken place. Metamorphic grades generally increase from west to east to the spine of the Monashee mountains 10 km east of Tum Tum Lake. The second oldest rocks in the area are deformed meta-intrusive quartz diorite and granodiorites tentatively categorized as northerly equivalents of Devonian gneiss mapped in the Shuswap Lake area, however they may be much younger (mapped as Mesozoic on regional maps, Sevigny and Simony, page 608). Later intrusives (not present in any published maps), include fine grained felsic intrusives common in

FIGURE 3  
 REGIONAL GEOLOGY  
 FISSURE PROJECT  
 MAY 20, 2000  
 FROM  
 WHEELER 1992 P 608



LEGEND

Selkirk Allochthon

TERRANES

KO Kootenay

QN Quesnellia

SM Slide Mountain

MCx Monashee Complex

SS Slokan Synclinorium

ANA Ancestral North America

Mesozoic Intrusions

Malton Gneiss

CRFZ Columbia River Fault Zone

SCS Standfast Creek Slide

MD Monashee Décollement

1 Clachnacunn Slice

2 Goldstream Slice

3 Illecillewaet Slice

4 French Creek Slice

Figure 17.30. Southeastern Omineca Belt showing the distribution of terranes, some of the regional structures, and the location of structural cross-sections in Figures 17.40, 17.41 and 17.44.

the Groundhog Mountain area, tentatively assigned to the early Tertiary Ladybird Suite (Scammell, page 104). Very common throughout the region are late multi-event syntectono-metamorphic pegmatite dykes and sills (personal observations, Mike Cathro personal communication). The latest notable intrusive located in the area is a fresh appearing (Pleistocene?) basalt dyke 600 meters east of Km 35 that may be related to the Clearwater Volcanics more commonly exposed in Wells Gray Park, and Quesnel Lake to the west. The area has historically been most prospective for metamorphosed and deformed base metal deposits of probable syngenetic origin such as the nearby Ruddock Creek and Finn Occurrences. The gold potential of the region was unknown prior to the discovery of the Bizar-Goldstrike gold-bismuth-copper +/- arsenic sulphide-quartz veins 2.5 km west of Tum Tum Lake in 1998. With increased prospecting and interest in 1999 several new gold-bismuth-tungsten occurrences have been found in the region. These deposits have a tentative temporal and spatial relationship with Cretaceous (or later?) felsic intrusives.

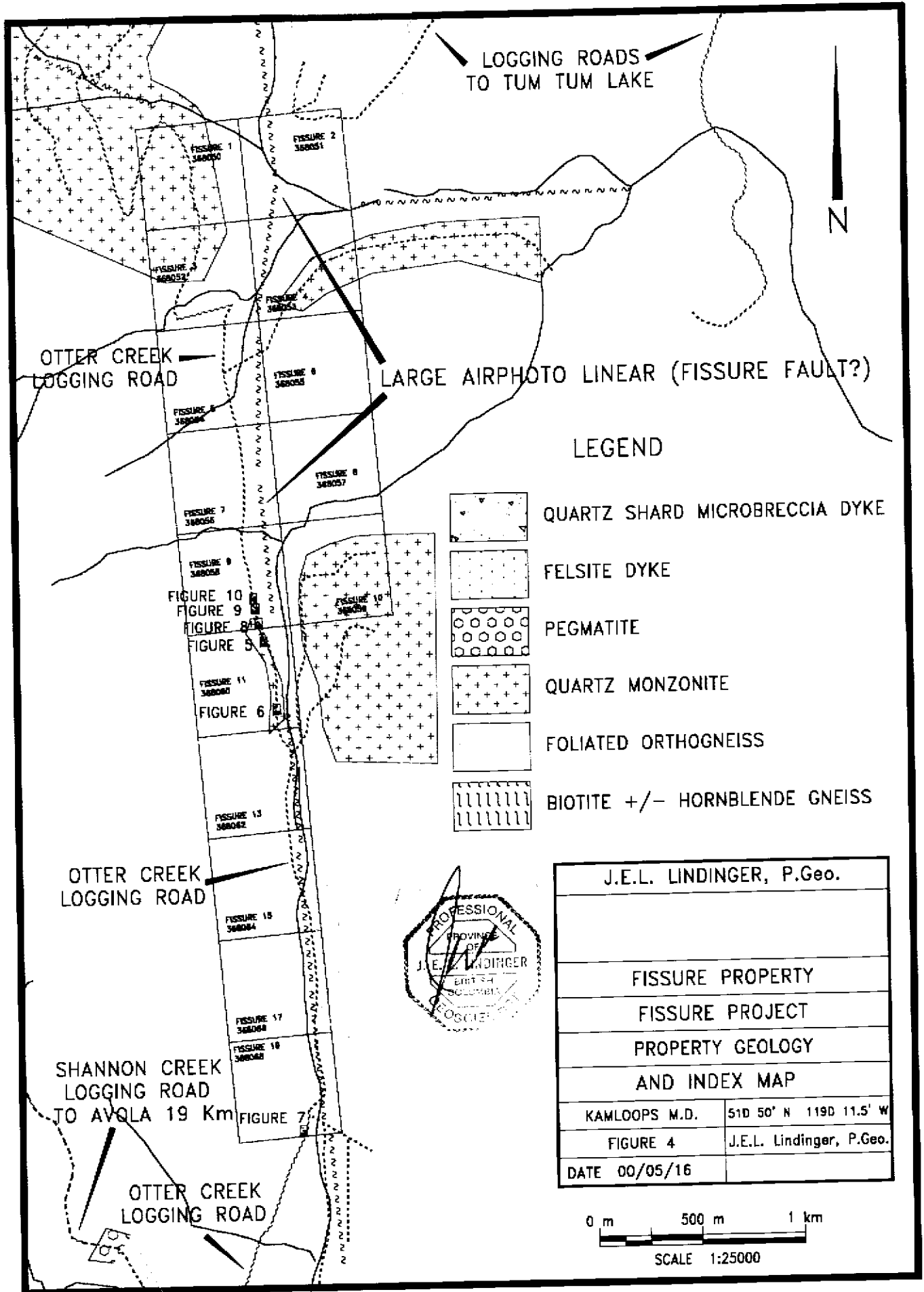
#### **PROPERTY GEOLOGY**

The Fissure property is located within rocks of the Kootenay Terrane. These rocks are interpreted to be subaqueous Proterozoic metasediments of continental affinity. These rocks have been metamorphosed to amphibolite grades on the property.

Several intrusive bodies representing at least five (or more) distinct events are present on the property. The oldest are deformed medium grained quartz diorite-granodiorite bodies similar to the 'Devonian Gneiss' mapped farther south in the Shuswap Lake area. The next intrusive is a locally widespread fine grained felsic intrusive of quartz monzonite to granite. The original composition is often obscured by sericite-quartz +/- carbonate +/- pyrite alteration and hydrobrecciation. Elsewhere, off the property preliminary sampling of these altered intrusives returned weakly to moderately anomalous gold and arsenic values.

The third major intrusive phase is characterized by innumerable pegmatitic dykes and sills that separate and cross cut all older lithologies. There are possibly three (interrelated) phases of pegmatitic intrusives.

A fourth mapped intrusive are dark stockwork vein like fine grained felsic microbreccia dykes and sills with white quartz shards. This rock has been mapped at km 37.41 and is anomalous in copper, silver, arsenic and lead. The latest intrusive located near the property is a fresh



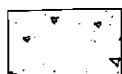
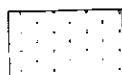
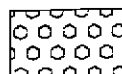
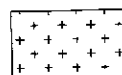
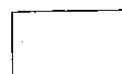
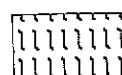
LOGGING ROADS  
TO TUM TUM LAKE



OTTER CREEK  
LOGGING ROAD

LARGE AIRPHOTO LINEAR (FISSURE FAULT?)

LEGEND

-  QUARTZ SHARD MICROBRECCIA DYKE
-  FELSITE DYKE
-  PEGMATITE
-  QUARTZ MONZONITE
-  FOLIATED ORTHOGNEISS
-  BIOTITE +/- HORNBLende GNEISS

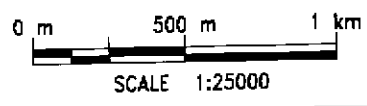
OTTER CREEK  
LOGGING ROAD



SHANNON CREEK  
LOGGING ROAD  
TO AVOLA 19 Km

OTTER CREEK  
LOGGING ROAD

J.E.L. LINDINGER, P.Geo.	
FISSURE PROPERTY	
FISSURE PROJECT	
PROPERTY GEOLOGY	
AND INDEX MAP	
KAMLOOPS M.D.	51D 50' N 119D 11.5' W
FIGURE 4	J.E.L. Lindinger, P.Geo.
DATE 00/05/16	



appearing Pleistocene basalt dyke outcrop east on the Fissure 8 claim that may be related to the Clearwater volcanics, more commonly exposed in the Wells Gray Park to the west.

The linear shape of the fissure property results from efforts to tenure outcrops of intensely clay altered and locally mineralized rocks that extended along and adjacent to the west side of a major north trending air photo and topographic linear. This linear is thought to be the depressed surface expression of a major fault that originates in the Adams River valley about 10 km south of the center of the property and continues north to at least Finn Creek 12 km north of the center of the property. This linear actually forms the Adams River valley between Gold and Sunset Creeks. The best RGS gold in stream sediment anomalies are from tributaries draining into the Adams River from the west part of the Adams River valley and may be related to this assumed structure.

#### **1999 WORK PROGRAM**

The 1999 work program consisted of mapping and sampling the rock exposures along the portion of the Otter Creek logging road that crosses the property. The exposures mapped are depicted in Figures 4 to 10.

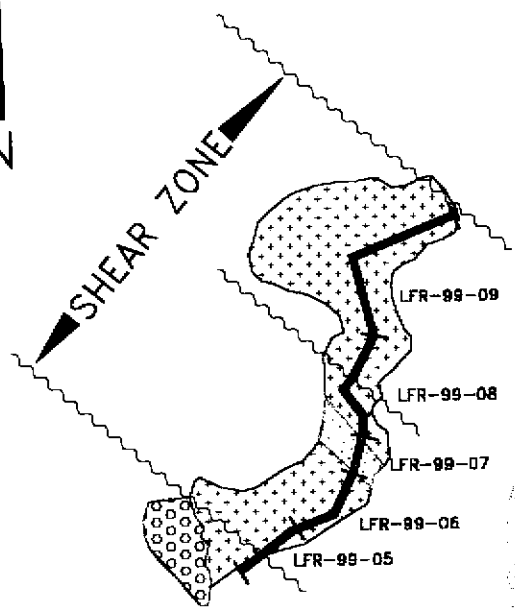
The samples chosen for analyses were sent to Chemex Laboratories Ltd. in August 1999 and analyzed by ICP-ES techniques from a 0.5 gm subsample and gold by ICP-MS from a 30 gm, subsample. See Appendix II for rock sample descriptions and analytical summaries.

#### **RESULTS**

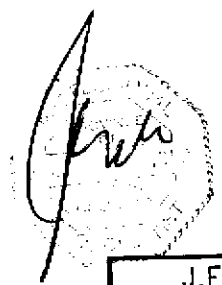
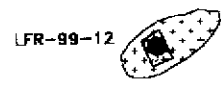
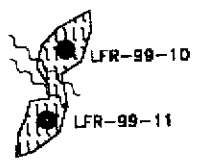
Geological Mapping of rock exposures along the Otter Creek Logging road were mapped at 1:200 scale. Rock and residual soil samples were taken from exposures of altered and mineralized rock.

##### **Rock Sampling Program.**

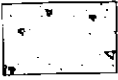

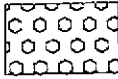
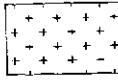
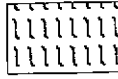

Results of the rock sampling program confirmed that anomalous gold, arsenic, silver, lead and copper values are present in an intensely clay altered and sulphide stockworked felsic dyke and the host quartz monzonite at the 37.42 km mark on the Otter Creek logging road. The felsic dyke was tested by sample LFR-99-07 and returned 15 ppb gold and 59 ppm arsenic. The



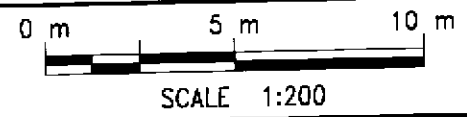
OTTER CREEK LOGGING ROAD  
KM 37.42



### LEGEND

-  QUARTZ SHARD MICORBRECCIA DYKE
-  FELSITE DYKE
-  PEGMATITE
-  QUARTZ MONZONITE
-  BIOTITE =/- HORNBLLENDE GNEISS
-  CONTINUOUS AND SPOT CHIP SAMPLE

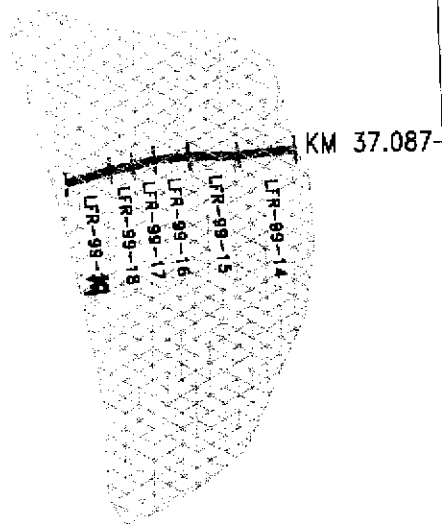
J.E.L. LINDINGER, P.Geo.	
FISSURE PROPERTY	
FISSURE PROJECT	
DETAILED GEOLOGY AND	
GEOCHEMICAL SAMPLING PLAN, Km 37.4	
KAMLOOPS M.D.	51D 50' N 119D 11.5' W
FIGURE 5	J.E.L. Lindinger, P.Geo.
DATE 00/05/16	



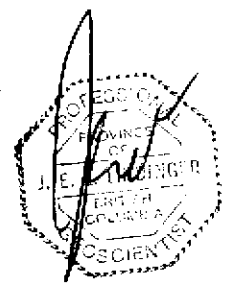


SHEAR ZONE


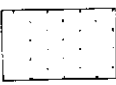
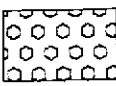
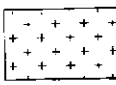
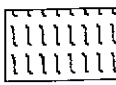

OTTER CREEK  
LOGGING ROAD



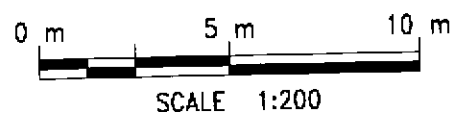
CLAY ALIGNED  
METASOMATIC  
HYDROTHERMAL  
BRECCIA  
ZONE

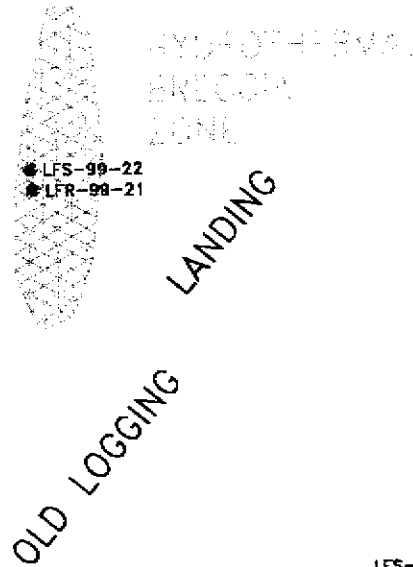


LEGEND

-  QUARTZ SHARD MICROBRECCIA DYKE
-  FELSITE DYKE
-  PEGMATITE
-  QUARTZ MONZONITE
-  BIOTITE +/- HORNBLLENDE GNEISS
-  CONTINUOUS AND SPOT CHIP SAMPLE

J.E.L. LINDINGER, P.Geo.	
FISSURE PROPERTY	
FISSURE PROJECT	
DETAILED GEOLOGY AND	
GEOCHEMICAL SAMPLING PLAN, Km 37.1	
KAMLOOPS M.D.	51D 50' N 119D 11.5' W
FIGURE 6	J.E.L. Lindinger, P.Geo.
DATE 00/05/16	





LFS-99-23  
 IRON OXIDE  
 SEEPS

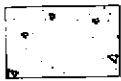
LFS-99-24

Km 35.0

OTTER CREEK LOGGING ROAD



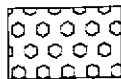
LEGEND



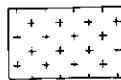
QUARTZ SHARD MICROBRECCIA DYKE



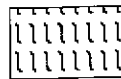
FELSITE DYKE



PEGMATITE



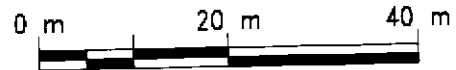
QUARTZ MONZONITE



BIOTITE +/- HORNBLende GNEISS

- LFS-99-22 SOIL SAMPLE
- LFR-99-21 ROCK CHIP SAMPLE

J.E.L. LINDINGER, P.Geo.	
FISSURE PROPERTY	
FISSURE PROJECT	
DETAILED GEOLOGY AND	
GEOCHEMICAL SAMPLING PLAN, Km 35.0	
KAMLOOPS M.D.	51D 50' N 119D 11.5' W
FIGURE 7	J.E.L. Lindinger, P.Geo.
DATE 00/05/16	

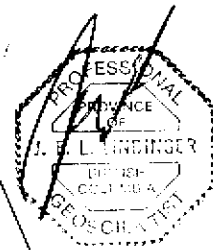


SCALE 1:1000





OTTER CREEK LOGGING ROAD

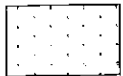


KM 37.5

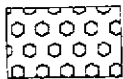
LEGEND



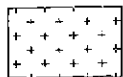
QUARTZ SHARD MICROBRECCIA DYKE



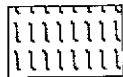
FELSITE DYKE



PEGMATITE



QUARTZ MONZONITE



BIOTITE +/- HORNBLLENDE GNEISS



CONTINUOUS AND SPOT CHIP SAMPLE

J.E.L. LINDINGER, P.Geo.

FISSURE PROPERTY

FISSURE PROJECT

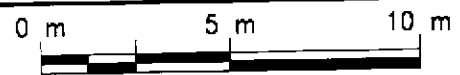
DETAILED GEOLOGY AND

GEOCHEMICAL SAMPLING PLAN, Km 37.5

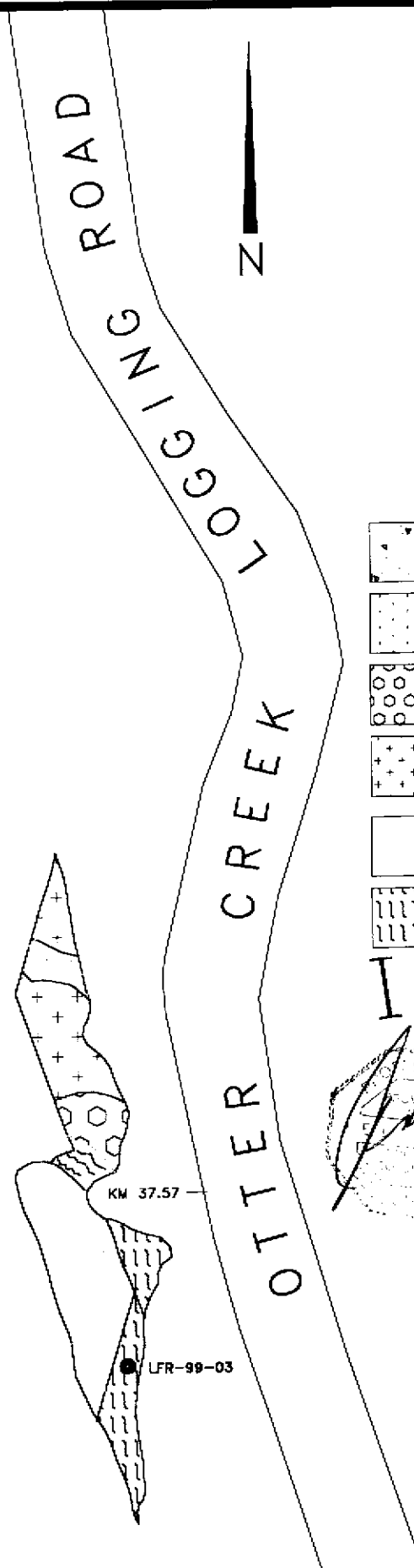
KAMLOOPS M.D. 51D 50' N 119D 11.5' W

FIGURE 8 J.E.L. Lindinger, P.Geo.


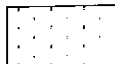
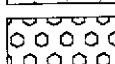
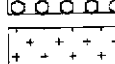
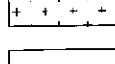

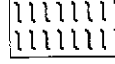
DATE 00/05/16

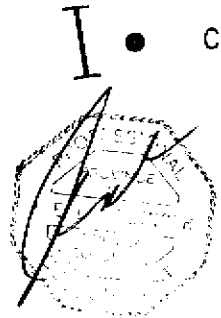


SCALE 1:200

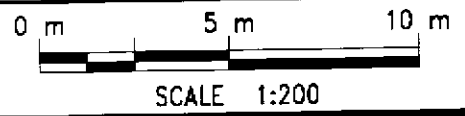


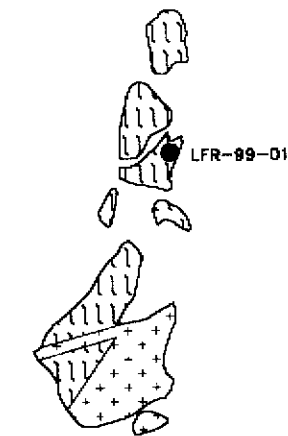
LEGEND

-  QUARTZ SHARD MICROBRECCIA DYKE
-  FELSITE DYKE
-  PEGMATITE
-  QUARTZ MONZONITE
-  FOLIATED ORTHOGNEISS
-  BIOTITE +/- HORNBLENDE GNEISS
-  CONTINUOUS AND SPOT CHIP SAMPLE



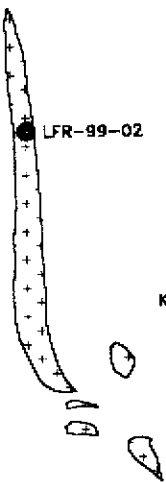
J.E.L. LINDINGER, P.Geo.	
FISSURE PROPERTY	
FISSURE PROJECT	
DETAILED GEOLOGY AND	
GEOCHEMICAL SAMPLING PLAN, Km 37.57	
KAMLOOPS M.D.	51D 50' N 119D 11.5' W
FIGURE 9	J.E.L. Lindinger, P.Geo.
DATE	00/05/16





LFR-99-01

KM 37.64



LFR-99-02

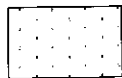
KM 37.62

O T T E R C R E E K L O G G I N G R O A D

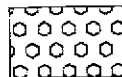
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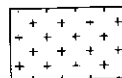
QUARTZ SHARD MICROBRECCIA DYKE



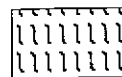
FELSITE DYKE



PEGMATITE



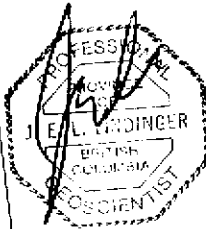
QUARTZ MONZONITE



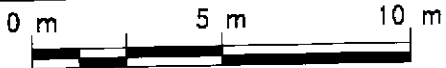
BIOTITE +/- HORNBLENDE GNEISS



CONTINUOUS AND SPOT CHIP SAMPLE



J.E.L. LINDINGER, P.Geo.	
FISSURE PROPERTY	
FISSURE PROJECT	
DETAILED GEOLOGY AND	
GEOCHEMICAL SAMPLING PLAN, Km 37.6	
KAMLOOPS M.D.	51D 50' N 119D 11.5' W
FIGURE 10	J.E.L. Lindinger, P.Geo.
DATE 00/05/16	



SCALE 1:200

adjacent altered quartz monzonite was anomalous in arsenic, silver, lead and sometimes copper and often had detectable traces of gold.

A second area at the 37.037 kilometer mark is a wide exposure of clay altered heterolithic breccia. 6.1 meters of this exposure was sampled. Vanadium and zinc were the only enriched metals noted here. All other metals were depleted from normal rock concentrations.

A third area at the 35 km mark on the Otter Creek logging road where a pronounced hematitic stain (which was sampled in November 1998 and returned anomalous gold (10 ppb), silver, bismuth and arsenic values) was resampled and prospected in detail. The results of this sampling returned a similar anomalous metal suit but with less than one half the values of the original sampling. The resample returned above trace gold. Subcrop exposures of highly weathered intensely brecciated argillically altered quartz breccia vein 80 meters northwest of the seep were sampled but not analyzed. A residual soil sample above this exposure did not return anomalous metal concentrations.

### Geology

The geological mapping discovered widespread multiphased intrusives of presumed Tertiary age, that have undergone widespread low to moderate temperature hydrothermal clay alteration accompanied or followed by quartz +/- sericite brecciation and stockworking +/- sulphide (pyrite +/- chalcopyrite +/- molybdenite mineralization). The extent of this alteration is very large and extends off the property in all directions. Much of this hydrothermal alteration appears related to northwest striking structures near northerly trending linears. The nature of this alteration may represent the upper, metal depleted levels of porphyry to epithermal mineralizing systems.

### CONCLUSIONS

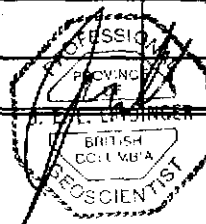
The geochemical sampling program of some of the rock exposures exhibiting evidence of hydrothermal alteration, veining and brecciation failed to located economic grades of gold mineralization. The values, metal suite (Au-As-Bi-W+/-Cu), and style of mineralization has some similarities to the developing 'intrusion associated or hosted gold' model. The best results were from a large altered shear zone at Km 37.42 where weakly anomalous gold-arsenic-copper-lead mineralization is present within intensely clay-quartz+/- pyrite stockworked quartz monzonite and felsite dykes. It is apparent that a large, intense and complex hydrothermal event

occurred in the area partly covered by the Fissure claims. It may be possible that the alteration and weak mineralization represents the upper metal depleted levels of a porphyry to epithermal mineralized system.

## EXPENDITURES

The following expenditures were made in completing the work program and report.

ITEM	RATE	QUANT.	CHARGE
Lindinger 2.5 days at \$300 /day	\$ 300.00	2.5	\$ 750.00
Geological assistant Dene Tarkyth 3 days, at 150/day	\$ 150.00	3.0	\$ 450.00
Camp 3 days at \$100 per day	\$ 100.00	3	\$ 300.00
Vehicle, 2 days (4x4 with winch)	\$ 50.00	2	\$ 100.00
Supplies, equipment, and shipping			\$ 70.00
Report and copying charges			\$ 400.00
Analytical Charges (Chemex)			\$ 276.86
Total			\$ 2,346.86
Applied to PAC account			\$ 846.86
Total applied for assessment purposes			\$ 1,500.00



## RECOMMENDATIONS

Based on the information obtained to date, the virtually unexplored nature of the area, and the presence of much stronger gold mineralization immediately north of the property further, work in the form of prospecting and rock, soil and seep sampling be should be completed on the property to further target gold mineralization.

## SELECTED REFERENCES

- Brown, R.L. and Psutka, J.F. 1979. Stratigraphy of the east flank of Frenchman Cap Dome, Shuswap Complex, British Columbia: In: Current research, part A. Geological Survey of Canada, Paper 79-1a: 35-36.
- Cathro, M.S. and Lefebure, D.V. 2000: Several New Plutonic-related Gold, Bismuth and Tungsten Occurrences in Southern British Columbia; in Geological Fieldwork 1999, B.C.M.E.M Paper 2000-1, pages 207-223
- Gruenwald W. 1999: Geological, Geochemical and diamond drilling report on the Goldstrike Property for Cassidy Gold Corp, 9 pages plus attachments. Unpublished company report.  
AR 26127
- Scammell, R.J. 1990: Preliminary results of stratigraphy, structure, and metamorphism in the southern Scrip and northern Seymour ranges, southern Omineca Belt, British Columbia. In Current Research, Part E, Geological Survey of Canada, Paper 90-1E: pp 97-106.
- Sevigny, J.H. and Simony, P.S. 1988: Geometric relationship between the Scrip Nappe and metamorphic isograds in the northern Adams River Area, Monashee Mountains, British Columbia. Canadian Journal of Earth Sciences, Volume 26, pp 606-610
- Wheeler J.O., & Palmer A.R. ed, 1992: Geology of the Cordilleran Orogen in Canada. Geology of North America, Volume G-2; Geology of Canada No. 4, pages 293, 545-546,607-610, 619, 621-622.

**STATEMENT OF QUALIFICATIONS**

I, J E. L.(Leo) Lindinger, hereby do certify that:

I am a graduate of the University of Waterloo (1980) and hold a BSc. degree in honours Earth Sciences.

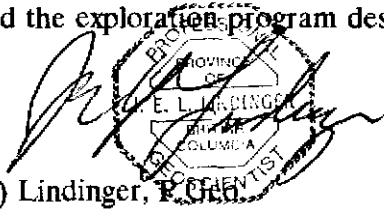
I have been practicing my profession as an exploration and mine geologist continually for the past 20 years.

I am a registered member, in good standing as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia (1992).

I own the mineral claims described as the Fissure Group.

I completed the exploration program described in the above report.

J.E.L.(Leo) Lindinger, F. Geol.



## **APPENDIX I**





# 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: CASSIDY GOLD CORP

141 VICTORIA ST., STE. 220  
 KAMLOOPS, BC  
 V2A 1Z5

Project: FISSURE  
 Comments: ATTN: JIM GILLIS FAX: LEO LINDLINGER

Page Number : 1-A  
 Total Pages : 1  
 Certificate Date: 13-AUG-99  
 Invoice No. : 19924972  
 P.O. Number :  
 Account : RET

## CERTIFICATE OF ANALYSIS A9924972

SAMPLE	PREP CODE	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	Mg %	Mn ppm
LPR-99-05	205 226	< 0.2	0.35	50	< 10	30	0.5	< 2	0.21	< 0.5	5	76	12	1.41	< 10	< 1	0.18	10	0.04	320
LPR-99-06	205 226	0.2	0.35	< 2	< 10	30	0.5	< 2	2.53	< 0.5	10	53	163	2.49	< 10	< 1	0.18	10	0.71	825
LPR-99-08	205 226	< 0.2	0.32	26	< 10	30	0.5	< 2	1.53	< 0.5	6	56	9	1.60	< 10	< 1	0.16	< 10	0.33	445
LPR-99-09	205 226	< 0.2	0.42	28	< 10	40	1.0	< 2	0.32	< 0.5	8	61	13	2.17	< 10	< 1	0.19	20	0.05	725
LPR-99-12	205 226	0.6	0.43	2	< 10	40	0.5	8	0.07	< 0.5	8	55	189	1.69	< 10	< 1	0.20	10	0.04	115
LPR-99-14	205 226	< 0.2	2.24	< 2	< 10	70	0.5	< 2	0.56	< 0.5	22	119	40	2.75	< 10	< 1	0.10	< 10	1.23	375
LPR-99-15	205 226	< 0.2	0.51	< 2	< 10	20	< 0.5	< 2	0.41	< 0.5	1	54	6	0.69	< 10	< 1	0.13	10	0.14	190
LPR-99-16	205 226	< 0.2	0.89	2	< 10	30	0.5	< 2	0.16	< 0.5	4	50	9	1.03	< 10	< 1	0.09	< 10	0.38	140
LPR-99-17	205 226	< 0.2	3.44	< 2	< 10	80	1.0	< 2	0.58	< 0.5	24	106	23	3.79	< 10	< 1	0.07	< 10	1.81	540
LPR-99-18	205 226	< 0.2	0.71	< 2	< 10	20	< 0.5	< 2	0.09	< 0.5	3	58	3	0.97	< 10	< 1	0.08	< 10	0.25	185
LPR-99-19	205 226	< 0.2	3.78	< 2	< 10	80	1.5	< 2	0.60	< 0.5	25	73	26	4.23	< 10	< 1	0.11	10	2.18	625

CERTIFICATION: \_\_\_\_\_

08/13/99  
 4:18 PM  
 CHEMEX LABS



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Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
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To: CASSIDY GOLD CORP

141 VICTORIA ST., STE. 220  
 KAMLOOPS, BC  
 V2A 1Z5

Project: FISSURE  
 Comments: ATTN: JIM GILLIS FAX: LEO LINDLINGER

Page Number : 1-B  
 Total Pages : 1  
 Certificate Date: 13-AUG-99  
 Invoice No. : 19924972  
 P.O. Number :  
 Account : RET

## CERTIFICATE OF ANALYSIS A9924972

SAMPLE	PREP CODE	No 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
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LFR-99-06	205 226	< 1	< 0.01	12	830	16	0.33	< 2	1	262	< 0.01	< 10	< 10	8	< 10	72
LFR-99-08	205 226	< 1	< 0.01	7	530	24	0.50	< 2	1	108	< 0.01	< 10	< 10	4	< 10	40
LFR-99-09	205 226	< 1	< 0.01	11	800	20	0.05	< 2	1	14	< 0.01	< 10	< 10	7	< 10	52
LFR-99-12	205 226	< 1	< 0.01	16	210	36	0.04	< 2	1	17	< 0.01	< 10	< 10	6	< 10	46
LFR-99-14	205 226	1	0.09	30	120	2	0.10	< 2	8	56	0.03	< 10	< 10	57	< 10	44
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LFR-99-16	205 226	< 1	0.03	6	80	10	0.12	< 2	2	60	< 0.01	< 10	< 10	13	< 10	26
LFR-99-17	205 226	< 1	0.07	35	160	< 2	< 0.01	< 2	15	77	0.08	< 10	< 10	102	< 10	72
LFR-99-18	205 226	< 1	0.04	3	80	2	< 0.01	< 2	1	12	< 0.01	< 10	< 10	11	< 10	20
LFR-99-19	205 226	< 1	0.08	29	120	< 2	< 0.01	< 2	16	53	0.09	< 10	< 10	118	< 10	82

CERTIFICATION: \_\_\_\_\_



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To: CASSIDY GOLD CORP

141 VICTORIA ST., STE. 220  
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 V2A 1Z5

Project: FISSURE  
 Comments: ATTN: JIM GILLIS FAX: LEO LINDLINGER

Page Number : 1-A  
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 Invoice No. : 19924973  
 P.O. Number :  
 Account : RET

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CERTIFICATION: \_\_\_\_\_

06/13/99 10:05AM CHEMEX LABS



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

To: CASSIDY GOLD CORP  
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 KAMLOOPS, BC  
 V2A 1Z5

Page Number : 1-B  
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 Certificate Date : 12-AUG-99  
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 P.O. Number :  
 Account : RET

Project : FISSURE  
 Comments : ATTN: JIM GILLIS FAX: LEO LINDLINGER

## CERTIFICATE OF ANALYSIS A9924973

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CERTIFICATION: \_\_\_\_\_

08/13/99 10:10AM CHEMEX LABS VAX-FHX

PAGE 003



# 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: CASSIDY GOLD CORP  
 141 VICTORIA ST., STE. 220  
 KAMLOOPS, BC  
 V2A 1Z5

Page Number : 1-A  
 Total Pages : 1  
 Certificate Date : 11-AUG-99  
 Invoice No. : 19924951  
 P.O. Number :  
 Account : RET

Project : FISSURE  
 Comments : ATTN: JIM GILLIS FAX: LEO LINDLINGER

## CERTIFICATE OF ANALYSIS A9924951

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LFS-99-23	201 202	< 1	0.93	< 0.1	1.6	320	0.55	0.19	< 10	0.16	0.29	7	80.2	10.0	4.7	0.2	>15.00	18	2	0.21
LFS-99-24	201 202	4	0.68	< 0.1	5.2	80	1.00	1.59	< 10	0.12	0.26	< 1	12.2	12.6	2.3	0.4	>15.00	40	2	0.06

CERTIFICATION:



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2G1  
 PHONE: 604-964-0221 FAX: 604-964-0218

To: CASSIDY GOLD CORP  
 141 VICTORIA ST., STE. 220  
 KAMLOOPS, BC  
 V2A 1Z5

Page Number : 1-B  
 Total Pages : 1  
 Certificate Date : 11-AUG-99  
 Invoice No. : 10024951  
 P.O. Number :  
 Account : RET

Project : FISSURE  
 Comments : ATTN: JIM GILLIS FAX: LEO LINDLINGER

## CERTIFICATE OF ANALYSIS A9924951

SAMPLE	PREP CODE	Mn PPM	Hg PPM	Mo PPM	Ni PPM	P PPM	K %	Sc PPM	Se PPM	Ag PPM	Na %	Sr PPM	S %	Te PPM	Tl PPM	Ti %	W PPM	U PPM	V PPM	Zn PPM
LFS-99-22	201 202	570	0.01	1.4	7	420	0.08	1	0.5	0.16	0.01	9	0.14	0.05	0.10 < 0.01	0.25	6.60	11	22	
LFS-99-23	201 202	10000	0.03	1.6	12	340	0.07	1	0.5	0.08	0.01	57	0.04 < 0.05	0.12	0.02	0.10	2.70	16	46	
LFS-99-24	201 202	1785	0.01	8.8	6	390	0.03	1	0.5	0.08	0.01	36	0.05	0.10	0.06 < 0.01	0.10	5.15	28	36	

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: CASSIDY GOLD CORP

141 VICTORIA ST., STE. 220  
 KAMLOOPS, BC  
 V2A 1Z5

Project: FISSURE  
 Comments: ATTN: JIM GILLIS FAX: LEO LINDLINGER

Page Number : 1-A  
 Total Pages : 1  
 Certificate Date: 26-AUG-99  
 Invoice No. : 19926513  
 P.O. Number :  
 Account : RET

<b>CERTIFICATE OF ANALYSIS</b>	<b>A9926513</b>
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LFR-99-05	244 --	4							
LFR-99-08	244 --	7							
LFR-99-09	244 --	3							
LFR-99-14	244 --	< 1							
LFR-99-16	244 --	< 1							
LFR-99-17	244 --	< 1							

08/26/99 1:24PM CHEMEX LABS VAX-FAX PAGE 002

CERTIFICATION: \_\_\_\_\_



# Chemex Labs Ltd.

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Project: FISSURE  
 Comments: ATTN: JIM GILLIS FAX: LEO LINDLINGER

Page Number : 1-A  
 Total Pages : 1  
 Certificate Date: 17-AUG-99  
 Invoice No. : 19925896  
 P.O. Number :  
 Account : RET

<b>CERTIFICATE OF ANALYSIS</b>	<b>A9925896</b>
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SAMPLE	PREP CODE	Au ppb EXT-AA								
IFR-99-06	212 --	2								
IFR-99-12	212 --	< 1								

CERTIFICATION: \_\_\_\_\_

08/18/99 10:46AM CHEMEX LABS VHA-FHXZ



## **APPENDIX II**

1999 PROSPECTORS PROGRAM - FISSURE PROJECT SAMPLE DESCRIPTIONS

FISSURE PROJECT - SAMPLE DESCRIPTION TABLE														
DATE	MAP SHE	SAMPLE ID	UTM E	UTM N	DESCRIPTION	ANALYZE		Au ppb	As ppm	Bi ppm	Ag ppm	Cu ppm	Mo ppm	Other
28-Jul	082m085	LFR-99- 1		FIGURE 10	Otter Ck 37.645 Km. Fine grained quartz monzonite. 30% quartz, 30% kspar, 20% plag, %5 mafics	N	Y	NA	NA	NA	NA	NA	NA	
28-Jul	082m085	LFR-99- 2		FIGURE 10	Otter Ck 37.622 Km. Highly bleached and altered version of 1. Strong albitization and sericitization.	N	Y	NA	NA	NA	NA	NA	NA	
28-Jul	082m085	LFR-99- 3		FIGURE 9	Otter Ck 37.565 Km. Fine grained foliated biotite stager gneiss. Granodioritic in composition.	N	Y	NA	NA	NA	NA	NA	NA	
28-Jul	082m085	LFR-99- 4		FIGURE 8	Otter Ck 37.530 Km. Highly bleached and altered version of 1. Strong albitization and sericitization. strong fracture controlled silicified and sericitized zones.	N	Y	NA	NA	NA	NA	NA	NA	
28-Jul	082m085	LFR-99- 5		FIGURE 5	Otter Ck 37.42 Km. Cont. chip sample 0.0-1.2 m. Intensely altered fine grained quartz monzonite. Strongly albitized then clay altered with pyrite followed by hematite stockwork veining. 1% py. 3% hem. Latest stage is flat lying vitreous quartz veining	N	Y	4	50	T	T	12	T	
28-Jul	082m085	LFR-99- 6		FIGURE 5	Otter Ck 37.42 Km. Cont. chip sample 1.2-1.6 m. Intensely altered fine grained quartz monzonite. strongly albitized then clay altered with pyrite followed by hematite stockwork veining. 1% py. 3% hem. Latest stage is flat lying vitreous quartz veining	Y	N	2	T	T	T	163	T	Sr 262 Zn 72
28-Jul	082m085	LFR-99- 7		FIGURE 5	Otter Ck 37.42 Km. Cont. chip sample 1.6-3.1 m. Intensely altered medium grained felsic dyke. Strongly bleached and clay altered with pyrite stockwork veining. 2% py.	Y	Y	15	50	0.4	0.2	18	T	Zn 56
28-Jul	082m085	LFR-99- 8		FIGURE 5	Otter Ck 37.42 Km. Cont. chip sample 3.1-5.8 m. Intensely altered fine grained quartz monzonite. strongly albitized then clay altered with pyrite followed by hematite breccia veining. 1% py. 3% hem. Latest stage is flat lying vitreous quartz veining	Y	Y	7	26	T	T	9	T	Sr 108
28-Jul	082m085	LFR-99- 9		FIGURE 5	Otter Ck 37.42 Km. Cont. chip sample 5.8-8.7 m. Intensely altered fine grained quartz monzonite. strongly albitized then clay altered with pyrite followed by hematite stockwork veining. 1% py. 3% hem. Latest stage is flat lying vitreous quartz veining	Y	N	3	28	T	T	13	T	
28-Jul	082m085	LFR-99- 10		FIGURE 5	Otter Ck 37.41 Km. Highly bleached and altered version of 1. strong albitization and sericitization.	N	Y	NA	NA	NA	NA	NA	NA	
28-Jul	082m085	LFR-99- 11		FIGURE 5	Otter Ck 37.405 Km. Medium grained felsic intrusive. Highly, bleached albitized with fracture silicification and sericitation.	N	Y	NA	NA	NA	NA	NA	NA	
28-Jul	082m085	LFR-99- 12		FIGURE 5	Otter Ck 37.42 Km. Dark grey felsic heterolithic microbreccia dyke. Flat lying to shallow north dip. up to 10 cm thick. Innumerable quartz shards in black siliceous groundmass.	Y	Y	T	2	8	2	189	T	Pb 36

## 1999 PROSPECTORS PROGRAM - FISSURE PROJECT SAMPLE DESCRIPTIONS

FISSURE PROJECT - SAMPLE DESCRIPTION TABLE					ANALYZE									
DATE	MAP SHEET	SAMPLE ID	UTM E	UTM N	DESCRIPTION	HANDS	Au ppb	As ppm	Bi ppm	Ag ppm	Cu ppm	Mo ppm	Other	
29-Jul	082m085	LFR-99-13	FIGURE 5		Otter Ck 36.793 Km. Plagioclase porphyry orthogneiss? as a rotated fragment in biotite rich shear zone.	N	Y	NA	NA	NA	NA	NA		
29-Jul	082m085	LFR-99-14	FIGURE 6		Otter Ck. 37.087 Km-4.6-6.1m. Dark brown to black manganese altered biotite gneiss(diorite). Sulphide stockwork 5.2-5.3m.	Y	Y	T	T	T	40	T		
29-Jul	082m085	LFR-99-15	FIGURE 6		Otter Ck. 37.087 Km. 3.3-4.6m. Med. grey heterolithic hydrothermal bx. 80%quartz biotite gneiss, 10% Fine grained intrusive, 10%qtz shards. Bx with intensely bleached quartz sericite altered fragments in gritty siliceous ground mass. Plag alt. to w clay	Y	Y	T	2	T	6	T		
29-Jul	082m085	LFR-99-16	FIGURE 6		Otter Ck. 37.087 Km. 2.4-3.3m as 15 except pegmatitic fragments predominate.	Y	Y	T	T	2	9	T		
29-Jul	082m085	LFR-99-17	FIGURE 6		Otter Ck. 37.087 Km. 1.8-2.4m. as 14 except slightly paler brown host rock (diorite) silicified fractures with sericite flakes common.	Y	Y	T	T	T	23	T	V 102 Zn 72	
29-Jul	082m085	LFR-99-18	FIGURE 6		Otter Ck. 37.087 Km 1.2-1.8m. as 15 except fine grained intrusive predominates. white bleached relict biotite in fragment cores.	Y	Y	NA	T	T	3	T		
29-Jul	082m085	LFR-99-19	FIGURE 6		Otter Ck. 37.087 Km. 0-1.2m dark brown heterolithic breccia. 75% biotite gneiss, 20% fine grained intrusive, 5% pegmatite. quartz-pyrite breccia veining at 1.1-1.2 and clay hydrobreccia at 0.1-0.2m.	Y	Y	NA	T	T	26	T	V 118 Zn 82	
29-Jul	082m085	LFR-99-20	FIGURE 6		Otter Ck. 37.1 Km 'Fine grained meta-diorite 5% quartz, 40% plag 55% mafics. Foliation and quartz veining 180/80.	N	Y	NA	NA	NA	NA	NA	NA	
29-Jul	082m085	LFR-99-21	FIGURE 7		Km35+80m@324 Az. Weathered multiphasic breccia vein with argillic alteration. 15% sulfide in rock. Till contains numerous fragments of totally bleached and silica-sericite altered rocks.	N	Y	NA	NA	NA	NA	NA	NA	
29-Jul	082m085	LFS-99-22	FIGURE 7		Km35+80m@324 Az. SOIL SAMPLE Buff rust brown.	Y	Y	T	2	0.8	0.2	30	2	Pb 44 Zn 72
29-Jul	082m085	LFS-99-23	FIGURE 7		15m north of FRS-99-24. SOIL SAMPLE. Red iron rich soil seep.	Y	N	T	1.6	0.2	0.1	10	2	Co 80 Mn >1%
29-Jul	082m085	LFS-99-24	FIGURE 7		7m north of Km 35 site. SOIL SAMPLE. Red iron rich soil seep. Resample of A-R-235 (10 ppb Au, 1.6 ppm Ag, 40 ppm Bi, T As, 39 Cu, 19 Mo)	Y	N	4	5.2	1.6	0.1	13	9	U 9
29-Jul	082m085	LFR-99-25			Felsic fragment heterolithic breccia with dark grey fine grained mafic groundmass. 50% fragments and matrix. Fragments mostly pegmatitic shards.	N	Y	NA	NA	NA	NA	NA		