ASSESSMENT REPORT

LINECUTTING, GEOLOGY AND GEOCHEMISTRY

ON THE

FLUKE PROPERTY

NTS: 94F/7W

BY: TECK EXPLORATION LTD.

FOR: CIRQUE OPERATING CORP.

R. Farmer
October, 1997

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SUMMARY

A program comprising linecutting along with grid controlled geological mapping and soil geochemical sampling was carried out on the Fluke property between July 17 and July 24, 1997.

Work was restricted to the southern portion of the property where an additional 3.075 line kilometres of grid were added to the existing Fluke 3 Grid, established in 1995. The entire grid was then geologically mapped (7.475 line km) and soil sampled (228 soil samples).

Geological mapping has confirmed the presence of a sequence of variably siliceous shales locally containing nodular barite and disseminated to finely laminated pyrite, located in the south-central portion of the grid. Exposures of strongly siliceous shale containing barite or pyrite are more erratically distributed than previously thought. Base metal mineralization was not observed.

Soil geochemical results generally show a pattern of small, isolated, low contrast anomalies scattered over the grid area. Lead and silver generally corresponds to the boundaries of the siliceous shale sequence with zinc and barium more distal. Soil results are likely subdued due to a general lack of soil horizon development, with talus fines being the most common soil type sampled.

Geological and geochemical results indicate that the grid area is likely more distal from significant mineralization than previously thought.

RECOMMENDATIONS

1. Drill test the down dip extension of the siliceous shale sequence identified on the Fluke 3 grid, with one or two holes. Target for drilling should be at least 200 metres down dip.

INTRODUCTION

The Fluke property is located within the Gataga Pb-Zn district, northeastern B.C. and covers a thick succession of Upper Devonian Gunsteel Formation siliceous shale and chert. The Cirque deposit (38.5 mt @ 8.0% Zn, 2.2% Pb, 47.2g/t Ag), located 30 kilometres to the northeast, is hosted by these same shales and chert .

During July, 1997 an exploration program was undertaken on the Fluke Property in northeastern B.C. Exploration was carried out to assess sedex-style lead-zinc-silver-barite mineralization in the southern portion of the property, in an area identified by previous operators as warranting followup.

Grid controlled geological mapping, geochemical sampling and linecutting comprised the exploration program in 1997.

This report will describe the work done and provide an interpretation of the results.

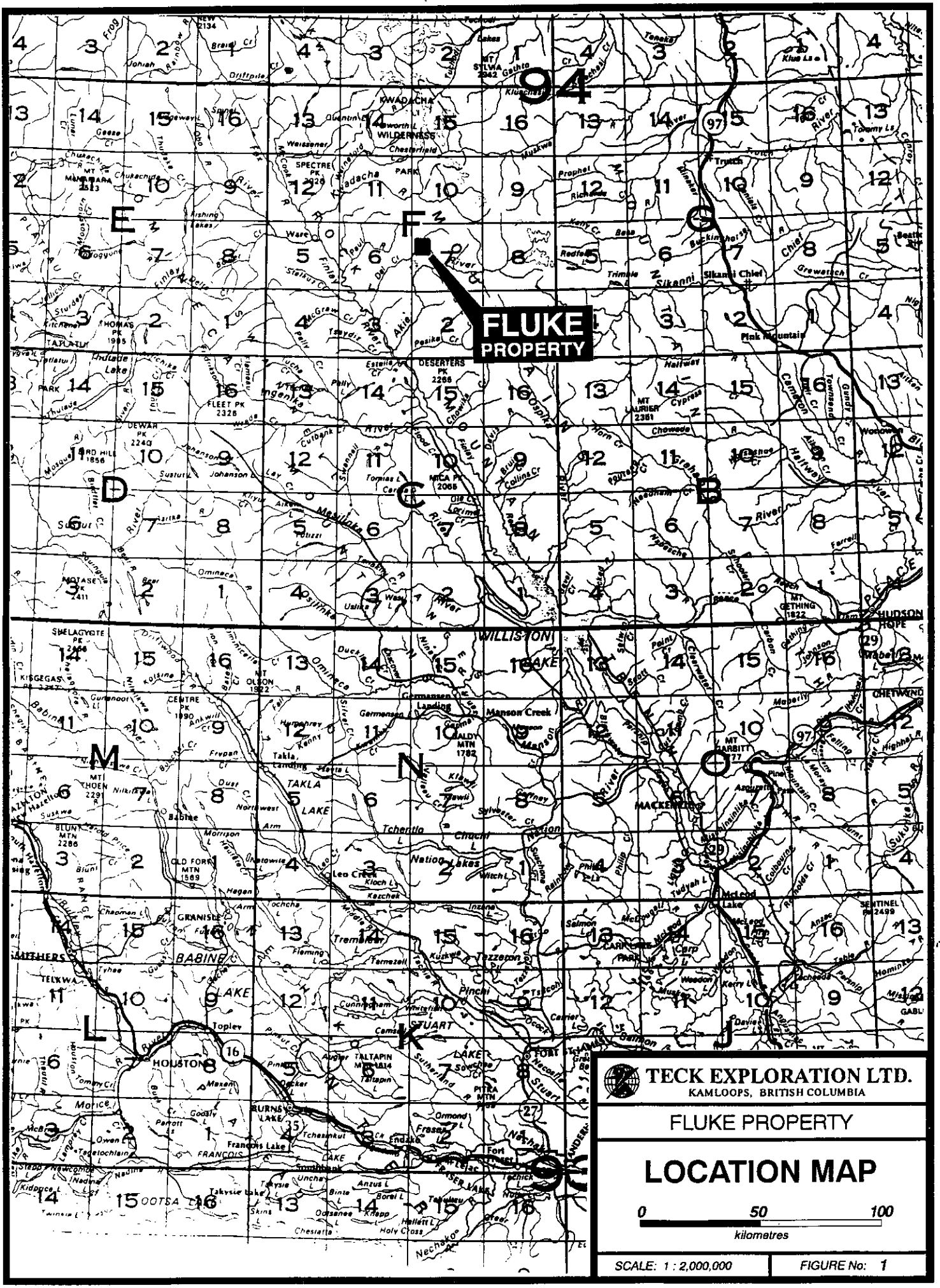
LOCATION AND ACCESS

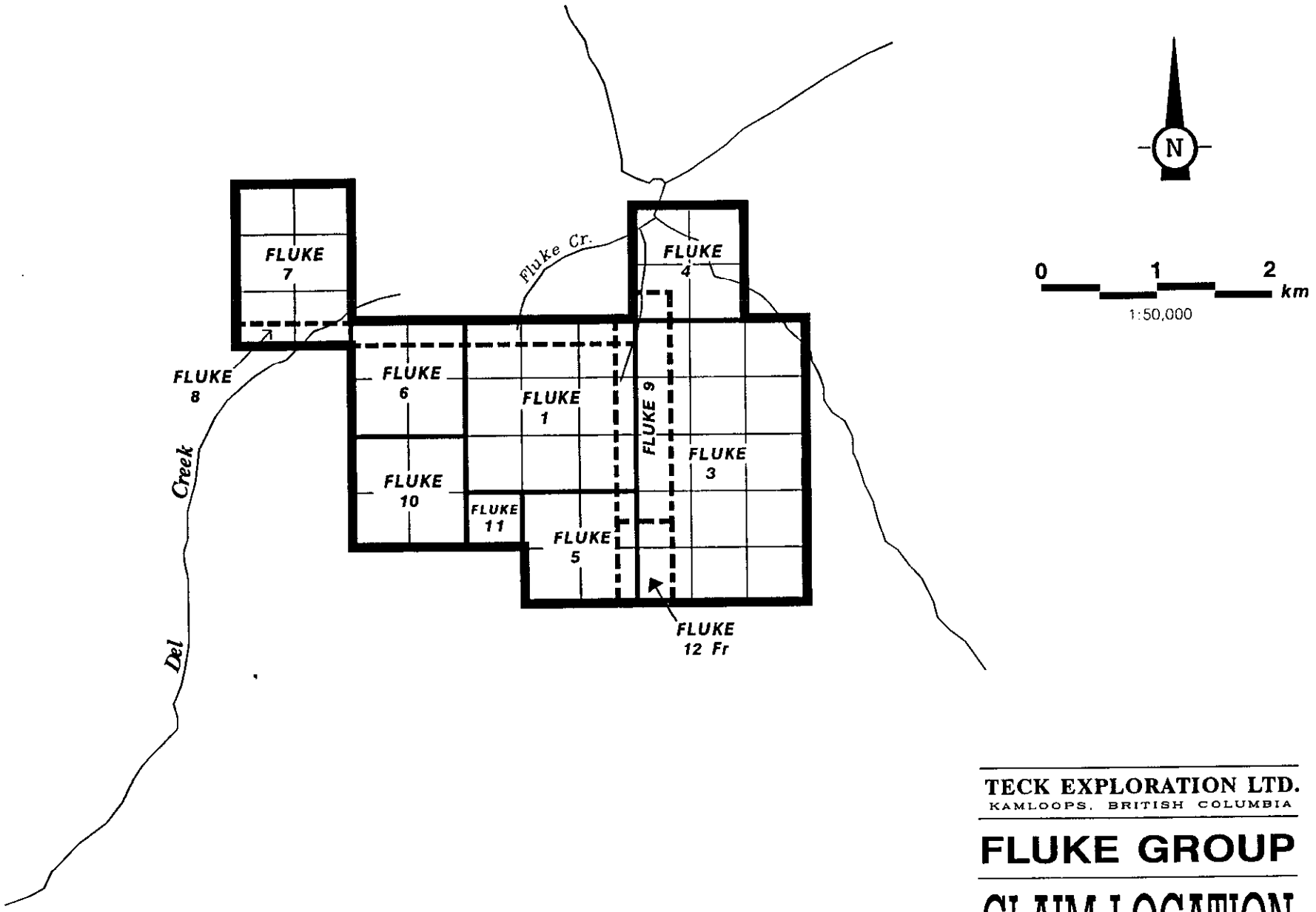
The Fluke property is located approximately 40 kilometres east of Fort Ware, in northeastern B.C. (figure 1). The claims cover the headwaters of Del Creek, an easterly tributary of the Finlay River (NTS 94F/7). The claims are only accessible by helicopter, the nearest base being a seasonal base at Finbow logging camp, 30 kilometres to the southwest. The Finbow camp area is accessed via fixed wing aircraft or barge from Mackenzie, 250 kilometres to the south.

Topography is rugged, with elevations varying from 1100 metres to 2000 metres. Approximately 70% of the property is above tree line and consists of rocky ridge lines, grassy alpine meadows and ravines choked with scrub hemlock and juniper. Lower elevations are heavily forested with spruce and fir.

CLAIMS

The property consists of the Fluke # 1, 3-11, 12fr claims comprising 61 units (figure 2). Cirque Operating Corp. is the registered owner of the claims. A summary of claim statistics is presented in Table 1 below.


FLUKE
PROPERTY
TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA
FLUKE PROPERTY
LOCATION MAP
0
50
100
kilometres
SCALE: 1 : 2,000,000
FIGURE No: 1



TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

FLUKE GROUP

CLAIM LOCATION

FIGURE 2

Table 1
Claim Statistics

CLAIM NAME	RECORD NUMBER	NUMBER OF UNITS	OWNER	EXPIRY DATE*
Fluke # 1	238024	9	Cirque Operating Corp.	August 1, 2001
Fluke # 3	238025	15	Cirque operating Corp.	August 1, 2001
Fluke # 4	238026	4	Cirque Operating Corp.	August 1, 2001
Fluke # 5	238027	4	Cirque Operating Corp.	August 1, 2001
Fluke # 6	238028	4	Cirque Operating Corp.	August 1, 2000
Fluke # 7	238130	8	Cirque Operating Corp.	July 16, 2000
Fluke # 8	238131	7	Cirque Operating Corp.	July 16, 2000
Fluke # 9	238132	4	Cirque Operating Corp.	July 16, 2001
Fluke # 10	238133	4	Cirque Operating Corp.	July 16, 2000
Fluke # 11	238134	1	Cirque Operating Corp.	July 16, 2001
Fluke # 12fr	337621	1	Cirque Operating Corp.	July 8, 2001

Total: 61 Units

* Expiry date based on acceptance of this report

* Grouped as the Fluke Group

PREVIOUS WORK

Cyprus Anvil Mining Corporation carried out exploration on the Fluke property during the period 1978 to 1982. This exploration included, geological mapping, stream and soil geochemical sampling, linecutting, orthophoto mapping, prospecting and diamond drilling. Seven holes totalling 3295.4 metres have been drilled to date on the property. There has been no work carried out on the property between 1982 and 1995.

In 1995 Teck Exploration Ltd. carried out exploration comprising property wide geological mapping, limited geochemical sampling and linecutting.

1997 PROGRAM

During the period July 17 to 24, 1997 an exploration program consisting of, grid controlled geological mapping, soil geochemical sampling and linecutting was carried out on the Fluke property. The purpose of the program was to assess the southern portion of the property for potential to host sedex Zn-Pb-Ag mineralization. Previous operators had identified a large lead in soil anomaly and barite mineralization in this area and competitors intersected mineralization in drill holes on the Akie property, along strike to the south. The 1997 program was designed to re-locate the soil anomaly identified in 1982 as well as to undertake detailed geological mapping, not previously carried out on this portion of the property.

Linecutting was undertaken to complete the grid started in 1995, and the entire grid was then geologically mapped and soil sampled. Details of linecutting, geological mapping and soil sampling are provided in the following sections.

LINECUTTING

Linecutting was carried out by Twin Mountain Enterprises Ltd. of Whitehorse, YT. Linecutting in 1997 consists of a total of 3.075 line kilometres comprising a 400 metre extension of the baseline to the northwest as well as completion of lines 107N and 108N east of the baseline, the completion of lines 101N and 102N as well as the addition of lines 109N-112N. Lines were established at an azimuth of 050° and spaced 100 metres apart. Location of the Fluke 3 grid is shown on figure 4 and lines completed in 1997 are indicated on Figure 5. All lines were cut using a power saw. Azimuths were turned off using a brunton compass and maintained utilizing sight pickets. Distances were chained and slope corrected. Stations were established every 25 metres on cross lines and the baseline and are marked by wooden pickets with metal tags. The linecutting was done from July 17 to July 22, 1997 (6 days).

GEOLOGY

A. Regional Geology (Figure 3)

The best description of the geology of the Gataga district - Akie River area, including the Fluke property area is provided by MacIntyre (1981, 1992).

The Fluke property is located within the Rocky Mountain Fold and Thrust belt of northeastern B.C. The property is located within Paleozoic, miogeoclinal basinal facies rocks of ancestral North America affinity (MacIntyre, 1992). These rocks were deposited in the Kechika Trough, a southeast extension of the Selwyn Basin, and are bounded to the east by platformal carbonates of the Macdonald Platform and to the west by carbonates of

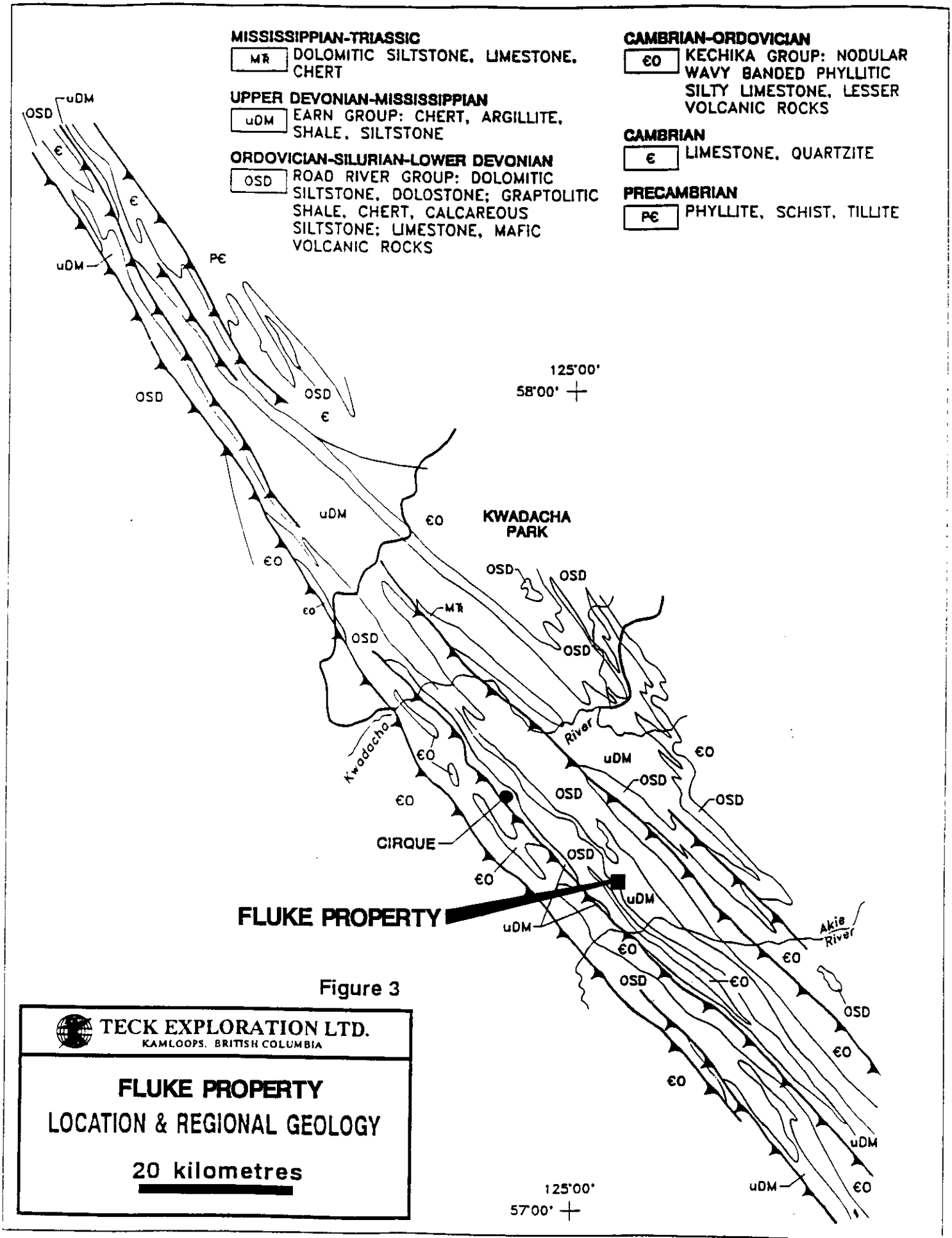


Figure 3

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

FLUKE PROPERTY
LOCATION & REGIONAL GEOLOGY

AFTER MacINTYRE, 1983

FLUKE PROPERTY
GENERAL GEOLOGY

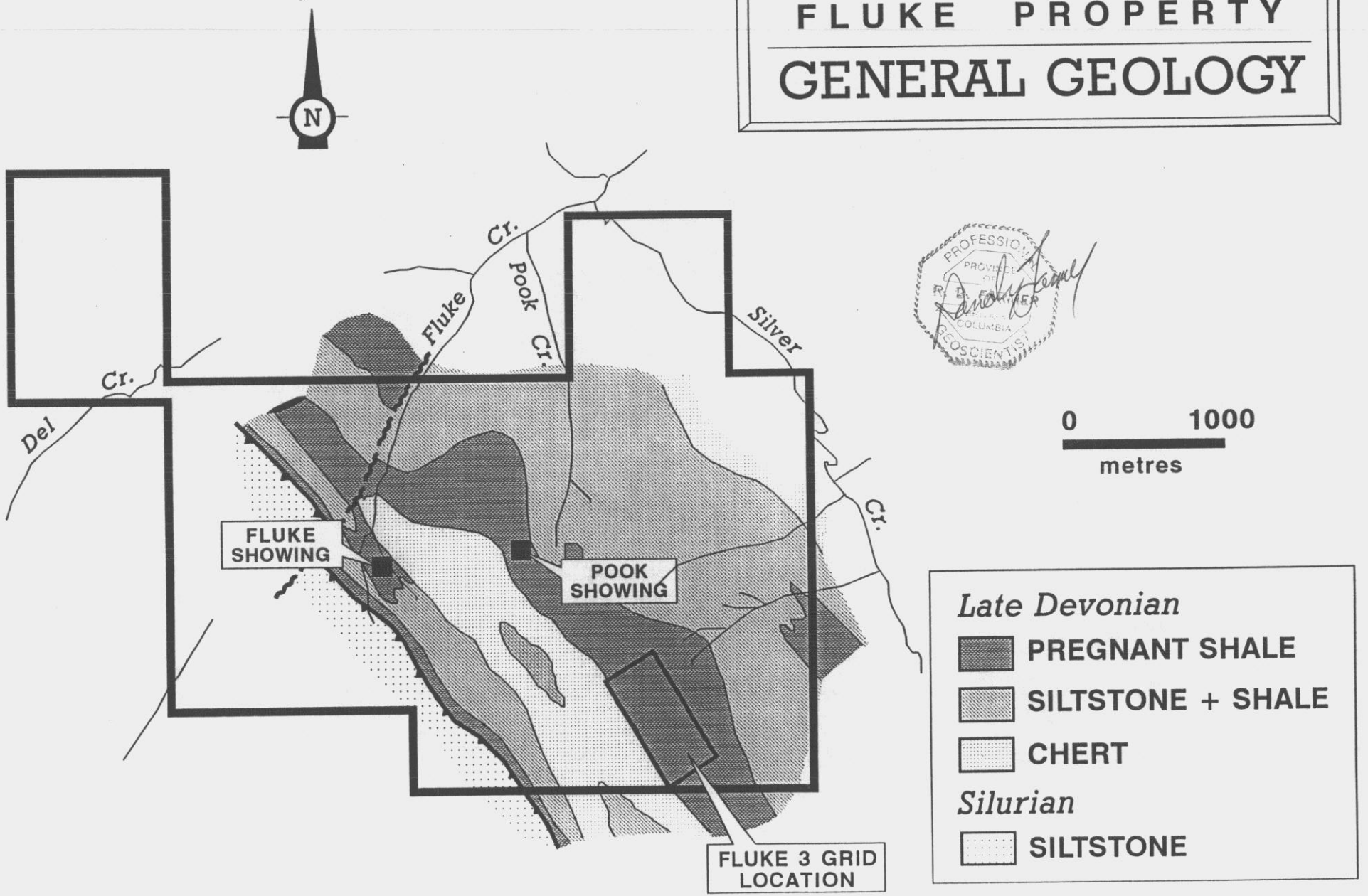


FIGURE 4

1989	SOIL SAMPLES			PROPERTY PROJECT FLUKE								SAMPLER BW
SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	FRAGMENTS COMP	SLOPE	SEEPAGE	COMMENTS
F-102N	9925E	40		BF	BR		60	SA				
F-102-N	9950-E	40		BT	GR		60	VA				
F-102-N	9975-E	50		BT	GR		60	SA				
F-102-N	10000-E	50		BT	GR		70	SA				GR
F-103-N	9525-E	20		BF	RB		20	SA				
F-103-N	9550-E	60		T	GR		10	VA				
F-103-N	9575-E	50		BF	RB		20	SA				
F-103-N	9600-E	60		BF	RB		20	SA				10% GR
F-103-N	9625-E	50		BF	RB		40	SA				10% GR
F-103-N	9650-E	50		BF	RB		40	SA				
F-103-N	9675-E	60		BF	RB		40	SA				10% GR
F-103-N	9700-E	60		BF	RB		30	SA				
F-103-N	9725-E	40		BF	RB		30	SA				15% GR
F-103-N	9750-E	60		BF	RB		35	SA				
F-103-N	9775-E	60		BF	RB		20	SA				
F-103-N	9800-E	60		BF	RB GR		30	VA SA				POOR
F-103-N	9825-E	40		BF	RB		25					VERY RED
F-103-N	9850-E	50		BF	RB		20					
F-103-N	9875-E	60		BF	RB		25					15% GR
F-103-N	9900-E	70		BF	RB		25					POOR
F-103-N	9925-E	60		BF	RB		30					
F-103-N	9950-E	30		BF	RB		30					LOTS OF QUARTZS
F-103-N	9975-E	40		BF	RB		25					
F-103-N	10000-E	40		BF	RB		20					
F-103+50N	10000-E	40		BF	RB		20					
F-104-N	10000-E	50		BF	RB		20					
F-104-N	9975-E	40		BF	RB		30					
F-104-N	9950-E	30		BF	RB		20					
F-104-N	9925-E	70		BF	RB		30					POOR
F-104-N	9900-E	80		BF	RB		40					
F-104-N	9875-E	50		T	GR		30					
F-104-N	9850-E	25		T	GR BR							20% ORGANIC

1989 SOIL SAMPLES PROPERTY PROJECT FLUKE SAMPLER BW

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	FRAGMENTS COMP	SLOPE	SEEPAGE	COMMENTS
F-104-N	9775-E	30		T	GR							
F-104-N	9750-E	30		T	GR		40					
F-104-N	9725-E	30		T	GR		40					
F-104-N	9700-E	50		BF	RB		40					
F-104-N	9675-E	50		BF	GR RB							POOR
F-104-N	9650-E	40		BF	GR RB							POOR
F-104-N	9625-E	30		T	BL		60					POOR
F-104-N	9600-E	20		T	BL GR							POOR
F-104-N	9575-E	20		T	BL GR							POOR POSSIBLE BM?
F-104-N	9550-E	50		BF	BR GR							
F-105-N	10000-E	50		BF	GR RB		20					
F-105-N	9975-E	40		T	GR							10% ORGANIC
F-105-N	9950-E	50		T	GR BL							
F-105-N	9925-E	20		T	GR							
F-105-N	9925-E	50		T	GR							POOR
F-105-N	9550-E	[illegible]		BF	RB							
F-105-N	9575-E	[illegible]		T	GR							
F-105-N	9600-E	40		BF	RB		20					POOR DEFINITION
F-105-N	9625-E	30		T	GR		80					
F-105-N	9650-E	30		BF	RB		30					
F-105-N	9675-E	20		T	GR		60					
F-105-N	9700-E	60		T	GR		50					
F-105-N	9725-E	40		T	GR		30					
F-105-N	9750-E	50		T	GR		25					
F-105-N	9775-E	40		T	GR		30					
F-105-N	9825-E			NO SAMPLE								
F-105-N	9850-E	60		T	GR		30					
F-105-N	9875-E	50		T	GR		30					
F-105-N	9900-E	40		T	GR		30					
F-105-N	9925-E	40		T	GR		25					
F-105-N	9950-E	50		BF	GR		26					POOR
F-105-N	9975-E	60		T	GR		20					CLAEY

1989 SOIL SAMPLES PROPERTY PROJECT FLUKE SAMPLER BW

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	FRAGMENTS COMP	SLOPE	SEEPAGE	COMMENTS
F-105N	10000E											
F-106-N	10000E	25		T	GR		20	VA				
F-106-N	9975-E	100		T	GR		05					SLIGHTLY CLAEY
F-106N	9950E	80		T	GR		30					LOT OF QUARTZ FLOAT SLIGHTY CLAEY
F-106-N	9925-E	30		T	GR		40					SLIDE
F-106N	9900-E			NO SAMPLE								
F-106-N	9875-E	60		T	GR		30					SLIGHTLY CLAEY
F-106-N	9850-E	70		T	GR		25					" "
F-106-N	9825-E				NO	SAMPLE						
F-106-N	9800-E	90		T	GR		30					SLIGHTLY CLAEY
F-106-N	9775-E	66		T	GR		50					" "
F-106-N	9750-E	76		T	GR		40					" "
F-106N	9725-E	80		T	GR		50					" "
F-106N	9700-E	60		T	GR		70					" "
F-106-N	9675-E				NO	SAMPLE						
F-106-N	9650-E	50		T	GR		60					" "
F-107-N	9475-E	30		T								
F-107-N	9500-E	35		T								
F-107-N	9525-E	20		T								
E-107-N	9550-E	30		T								
F-107-N	9575-E	30		T								
F-107-N	9600-E	30		T								
F-107-N	9625-E	35		T								
F-107-N	9650-E	30		T								
F-107-N	9675-E	35		T								
F-107-N	9700-E	35		T								
F-107N	9725-E	35		T								
F-107-N	9800-E	40		T								
F-107-N	9850-E	45		T								
F-107-N	9925-E	25		T								
F-107N	9950-E	30		T								
F-107-N	9975-E	30		T								

1989	SOIL SAMPLES			PROPERTY PROJECT FLUKE								SAMPLER BW
SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	FRAGMENTS COMP	SLOPE	SEEPAGE	COMMENTS
F-107-N	10000-E	40		T	GR							
F-107-N	100+50-E	40		BF	BR							
F-107-N	101+00-E	30		BF	BR							
F-107-N	101+25-E	35		T	BL		20	VA				
F-107-N	101+50-E	20		T	BL		20	VA				
F-107-N	101+75-E	20		T	BL		20	VA				
F-107-N	102-00-E	40			BL		15	VA				
F-108-N	10000-E	30		T	GR		10					
F-108-N	9975-E	40		T	GR		30					
F-108-N	9950-E	45		T	GR		5					
F-108-N	9925-E	50		T	GR		5					
F-108-N	9900-E	30		T	GR		5					
F-108-N	9875-E	30		T	GR		5					
F-108-N	9850-E	40		T	GR		5					
F-108-N	9825-E	35		T	GR		5					
F-108-N	9800-E	25		T	GR		5					
F-108-N	9775-E	20		T	GR		50					
F-108-N	9750-E	20		T	GR		10					
F-108-N	9725-E	20		T	GR		5					
F-108-N	9712-E											
F-108-N	9700-E	20		T	GR							
F-108-N	9675-E	20		T	GR							
F-108-N	9625-E	25		T	GR		50					
F-108-N	9600-E	26		T	GR							
F-108-N	9575-E	20		T	GR							
F-108-N	9525-E	30		T	GR		25					
F-108-N	9500-E	25		T	GR		40					
F-108-N	9475-E	25		T	GR		50					
F-108-N	9450-E	25		T	GR		60					
F-108-N	9425-E	20		T	GR		30					
F-108-N	100+25E	50		BF	BR GR		30					
F-109-N	100+50E	30		T								

1989 SOIL SAMPLES PROPERTY PROJECT ELUKE SAMPLER BM

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	FRAGMENTS COMP	SLOPE	SEEPAGE	COMMENTS
F-108-N	100+75-E	60		BF	BR GR		30					
F-109-N	101+00-E	40		T	GR		30					
F-109-N	101+25-E	40		BF	GR		30					POOR
F-109-N	101+50-E	30		T	GR		40					
F-109-N	101+75-E	50		T	GR		35					
F-109-N	100+[illegible]E	30		BF	RB 70% GR			VA				POOR
F-109-N	100+[illegible]E	70		BF	RB 20% GR			VA				POOR
F-109-N	100+75-E	60		BF	RB 20% GR			VA				POOR
F-109-N	101+00-E	40		BF	RB 10% GR			VA				POOR
F-109-N	101+25-E	50		BT	GR			VA				
F-109-N	101+50-E	50		BF	RB 10% GR			VA				POOR
F-109-N	101+75-E	40		BF	RB			VA				
F-109-N	102+00-E	60		BF	RB			VA				
F-109-N	9975-E	60		BT	GR			VA				
F-109-N	9950-E	70		BT	GR			VA				
F-110-N	100+25-E	50		BT	GR			VA				
F-110-N	100+50-E	[illegible]		BT	GR			VA				OUT CROP ?
F-110-N	100+75-E	[illegible]		BT	GR			VA				" "
F-110-N	101+00-E	[illegible]		BT	GR			VA				" "
F-110-N	101+25-E	90		BF	RB GR 20%							
F-110-N	101+50-E	[illegible]		BT	GR			VA				
F-110-N	101+75-E	[illegible]		BF	RB			SA				
F-110-N	102+00-E	[illegible]		BF	RB			VA				
F-110-N	9975-E	[illegible]		BE	RB			VA				
F-110-N	9950-E	30		EE	RB			VA				
F-110-N	9925-E	30		BT	GR			VA				
F-110-N	9900-E	30		BT	GR			VA				
F-110-N	9875-E	40		BT	GR			VA				
F-110-N	9850-E	80		BT	BL			SR				
F-110-N	9825-E	90		BT	GR			VA				POOR
F-110-N	9800-E	80		BT	GR			VA				
F-110-N	9775-E	70		BT BF	GR RB			VA				

1989 SOIL SAMPLES PROPERTY PROJECT FLUKE SAMPLER BW

SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	FRAGMENTS COMP	SLOPE	SEEPAGE	COMMENTS
F-III-N	9750-E	50		B1=	RB GR			VA				
F-III-N	9800-E	30		BT	GR			VA				
F-III-N	9825-E	50		BT	GR			VA				
F-III-N	9850-E	50		BT	GR			VA				
F-III-N	9875-E	40		BT	GR			VA				
F-III-N	9900-E	50		T	GR			SA				
F-III-N	9925-E	60		BF	RB 15% GR			VA				POOR
F-III-N	9950-E	50		BF	RB 15% GR			SA				POOR
F-III-N	9975-E	40		BF	RB 15% GR			SA				POOR
F-III-N	10000-E	30		BF	RB			SA				
F-III-N	100+25E	50		T	GR			SA				
F-III-N	100+50E	20		T	BL							MUSH / PO. VERIZED SHALE?
F-III-N	100+75-E	50		T	GR			VA				
F-III-N	101+00-E	30		T	GR BL			VA				
F-III-N	101+25-E	30		T	GR BL			VA				
F-III-N	101+50-E	20		T	GR			VA				
F-III-N	101+75-E	30		BF	RB			VA				
F-III-N	102+00-E	30		BF	RB			VA				LOTS OF QUARTZ

July 19 Soiling on flake

L112N - 99E
30cm depth, dk grey angular shale frags, Talus fines 80%

99+25E - 20CM OR-BR Poor BF (BOR)
IN TALUS
POOR SAMPLE
ANG SHALE FRAGS 80%

99+50E 25cm LT BR, 60% ang sh frags
prob Talus but may be poor
'B development

99+75E 30cm M BR Poss 'B' 40%
angular shale frags. sample
taken below a grey (leached?)
horizon @ root depth.

100E 40cm 40% angular sh + QV frags
lt BR to Gy brown
Poss B or leached?
Soils generally only show weak
B horizon development

111+50N - 100+00E BL
- 25cm depth. 20% subang frags
+ horizon is M. BR to R.BR
BUT IS SANDY
POSSIBLY A POORLY DEV BF?

the Cassiar Platform. The Kechika Trough is underlain by predominanly clastic rocks, ranging from Proterozoic to Triassic in age which form a northwest trending linear belt. The Fluke property is underlain by black shale, siliceous shale and chert of the Gunsteel Formation, Lower Earn Group, of Upper Devonian age. The Stronsay (Cirque) deposit, located 30 kilometres to the northwest (38.5 mt @ 8.0% Zn, 2.2% Pb, 47.2g/t Ag), is hosted by the same Gunsteel Formation shales. Northeast directed compression has resulted in complex thrusting and related folding, resulting in difficult srtatigraphic correlation.

Cyprus Anvil Mining Corporation carried out extensive work on the Fluke property during the period 1978-1982, including regional and detailed mapping and diamond drilling. From this work two showings were discovered on the Fluke property, a laminated pyrite occurrence in Fluke Creek (Fluke showing), and a massive barite-galena occurrence in the cliff above Pook Creek (Pook showing). Both showings are associated with black, siliceous shale (Figure 4), and are located northwest of the Fluke 3 Grid and 1997 work.

B. Property Geology Fluke 3 Grid - 1997 Work

Geological mapping in 1997 comprised detailed, grid controlled mapping of the entire Fluke 3 Grid, a total of 7.475 line kilometres and is plotted on figure 5. Work was carried out from July 17 to July 24, 1997. A single moss mat sample from a small stream was collected in conjunction with mapping to assess a talus covered area adjacient to outcropping siliceous pyritic shale. Sample location and results are plotted on figure 5. Topography is rugged and exposure is often masked by talus. Measurements for both cleavage and bedding were collected whenever possible to permit examination of cleavage/bedding relationships as a method of identifying fold geometry.

The Gunsteel sequence on the property trends in a northwest - southeast manner across the grid area and is bounded to the southwest by Silurian calcareous siltstone, which has been thrust northeastwards onto the younger Gunsteel shales. To the northeast the Gunsteel shales are overlain by a siltstone/shale package termed by previous operators as the Conundrum Siltstone. The nature of the contact is not clear however, at one location in South Fluke Bowl, the contact is clearly a fault (figure 5).

Gunsteel shales underly most of the grid area, however structurual repetition is likely. Previous mapping (Farmer,1995), has shown that the thrust contact with Silurian dolomitic siltstone is located approximately 200 metres southwest of the Fluke 3 grid. The contact with Conundrum siltstone (map unit 3), is located along the baseline south of L107N, and near the northeast edge of the grid north of L107N. On lines 111N and 112N shale chip conglomerate (unit 3a), tennatively correlated with unit 3, is in fault contact with the Gunsteel shale sequence. The fault occupies a narrow draw cutting through the ridge in a northwest-southeast direction. The conglomerate shows shearing and bedding rotation adjacent to the draw. The shale chip conglomerate is only exposed

over an approximate 50 metre width and passes eastwards into dolomitic siltstone of unit 1. The contact between units 3a and 1 is not exposed but is presumed to be a thrust fault.

Five subdivisions of Gunsteel stratigraphy are recognizable in the grid area and these include; undivided shales (unit 2a), chert (unit 2b), interbedded siliceous and nonsiliceous shale (unit 2c), siliceous, graphitic shale (unit 2d) and grey to black "paper" shale (unit 2e). Siliceous graphitic shale of unit 2d is the host to mineralization elsewhere on the property. A description of lithological units is included in the "Lithology" section below. These different lithologies are distinctive in the field, however contacts are gradational resulting in areas with characteristics of more than one lithology. Several outcrops are often necessary to distinguish lithological units. A well developed slaty cleavage is present and is often the dominant recognizable structure. Previous work on the property suggests the cleavage is axial planar to northwest trending isoclinal folds.

The shales have a general northwest strike with moderate dips to the southwest. Locally variable strikes and dips indicate complex structure, in terms of both folding and faulting. Small scale (centimetre to10's of metres), open and tight to isoclinal, often overturned folding is common, suggesting multiple folding events. Open folds are the least common and were only observed in one location on the grid (folding a black chert horizon near L106N-97E). Tight to isoclinal folding is common elsewhere on the property (Farmer 1995), and is suggested in the grid area by strike variations, dip direction reversals and structural facing directions derived from bedding/cleavage relationships. A synform is indicated in the area of L108N-96E and an antiform near 98E on lines 107N to 110N. This folding may account for the presence of a distinctive black chert horizon located in three areas across the grid. Cleavage-bedding intersection lineations suggest a shallow northwest plunge (20-30°). Faulting, both thrust and high angle styles, is common. Thrust faults are generally characterized by abrupt lithological change, often across a recognizably flat dipping structure. Thrust faults in the grid area are northeast directed. High angle faults generally have north to northwest trends and are generally thought to have little movement. Locally bedding rotation is evident, suggesting larger movement.

Extensive chert is present, locally forming a discrete lithological unit (2b on figure 5), and varies from massive grey to black chert with abundant quartz veins to, a distinctive ribbon bedded chert containing thin shale interbeds. Chert beds varying from a few 10's of centimetres to 10's of metres thick occur throughout the sequence, both above and below siliceous shales of units 2c and 2d, however it is not clear whether these represent separate horizons throughout the shale stratigraphy or, fold repetitions of a single horizon.

Grid controlled mapping on the Fluke 3 grid indicates that siliceous shale containing nodular barite and/or laminated to disseminated pyrite, shown to be the host to mineralization elsewhere on the property, is not as extensive as previously thought. Moreover, when present, siliceous shale (unit 2d) tends to be thin, discontinuous and interbedded with other shales (unit 2c). Siliceous shales containing significant barite and

pyrite in the grid area, have only been recognized on the cliffs southeast of L101N, near L102N-99E, near L105N-97E in the creek and near L107N-97E. Siliceous shale lacking barite and pyrite tend to link these exposures, however the sequence appears thin and weak. A general impression is that the sequence comprising units 2d and 2c on figure 5, trending southeastwards from L108N-97E to L101N-96E, likely represents the mineralized horizon as seen elsewhere, however, here alteration and mineralization seem much weaker.

C. Lithology

The following section describes lithologic units used on maps included in this report. Units are numbered from stratigraphically lowest to highest, although stratigraphic relationships within the Gunsteel Formation are not known at this time. Contacts between units belonging to the Gunsteel Formation (2a-2e) are gradational.

UNIT 1 - SILURIAN SILTSTONE

This is a distinctive package of rocks, including several lithologies which have not been subdivided. The most common and distinctive lithology consists of brown to buff weathering dolomitic siltstone. The siltstone varies from thin to thick bedded and locally contains thin interbeds of grey calcareous, shale. Occasionally, dark grey massive limestone is present as beds varying from a few centimetres to several ten's of metres thick. Rocks of Unit 1 have been thrust in a northeast direction over Devonian Gunsteel stratigraphy.

UNIT 2 - GUNSTEEL SHALES

Gunsteel shales are Upper Devonian in age and consist of grey to black shale, mudstone and chert. The sequence is host to Sedex Pb-Zn-Ag-Ba mineralization throughout the Kechika Trough and Selwyn Basin. Units described here (2a-2e) represent lithologies recognized during geological mapping on the Fluke 3 grid in 1997 and may vary slightly from recognizable lithologies elsewhere on the property.

Unit 2e consists of black to dark brown non-siliceous shale fractured into paper thin plates by intense cleavage development. Local millimetre scale grey siltstone laminations are present. Ease of recognition and the likelihood that a slightly different composition has contributed to the development of the "papery" texture, led to assignment of a separate lithological designation.

Unit 2d consists of siliceous, graphitic black shale which locally contains carbonate concretions, nodular barite and/or laminated pyrite. This subunit is the direct

host to mineralization on the property, however it can be present some distance laterally and seems to represent a variably distal expression of the mineralized horizon. Due to the very siliceous to cherty nature of these rocks they tend to be non-fissile, in spite of being intensly graphitic. In addition, when present, concretions, barite nodules and pyrite laminations make this subunit readily identifiable. Carbonate concretions vary from less than one centimetre to in excess of one metre in diameter.

Subunit 2c grades into 2d which is similar but exhibits some important differences. Subunit 2c is variably siliceous and graphitic and can still contain pyrite laminations or barite nodules. It can be distinguished from 2d by the common presence of siltite laminations, a granular "silty" appearance, and the occasional presence of grey to black siltstone beds, generally less than 10 cm thick. Siltite laminations are usually less than one centimetre thick and grey in colour, locally imparting a striped appearance to the shales. Due to the generally decreasing silica content, rocks of this unit are also variably fissile in appearance. Occasionally, a "spotted" texture is present, comprising millimetre scale white, flaky looking spots. The composition of the spots is unknown, but the texture is readily identifyable with a hand lens.

Extensive exposures of chert (unit 2b) were also identified during geological mapping. Chert is present in two distinct forms, as massive, thick bedded grey to black chert and as black ribbon bedded chert. Both occur as interbeds within shale dominant sequences and as thick, chert dominant intervals. Massive cherts are often rusty on fracture surfaces and characteristically are cut by abundant, white, quartz veins and veinlets. Ribbon bedded chert consists of 1-10 cm thick black chert beds separated by millimetre - scale black shale interbeds. Although chert horizons occur throughout the grid area, it is not clear whether they represent different horizons or repetition by folding.

Unit 2a includes all undivided Gunsteel shales. These shales are grey to black in colour, non-siliceous and non-graphitic. They often have a "silty" appearance and may locally grade into siltstone or mudstone. A ubiquitous slaty cleavage is particularily well developed in unit 3d, producing commonly fissile shale.

UNIT 3 - CONUNDRUM SILTSTONE

Unit 3 overlies the Gunsteel shales but is likely still of Upper Devonian age. This unit probably correlates with the Conundrum Siltstone as described by Cyprus Anvil geologists (Roberts, 1981; Pigage, 1982), and consists of a siltstone dominant sequence. Main rock types include; grey, brown, to black weathering, grey to black thick bedded (2-50cm) siltstone; locally grey shale interbeds produce a well bedded siltstone- shale lithology. Occasional coarser, gritty beds may be present. The siltstone and shale are often, but not always, mildly calcareous. Contact relationships between units 2 and 3 are not known on the grid area, however, the contact is faulted in the northeast corner of the grid. There is some suggestion of a broad transition between upper Gunsteel Fm. and Conundrum siltstone. This transition is in the form of increasing siltstone content

towards the top of the Gunsteel Fm., becoming siltstone dominant in Unit 3. Additional work is necessary to confirm this however, if correct, may be indicative of a marine regression in the uppermost Devonian, allowing a rapid influx of coarser clastic material.

D. Mineralization

Two showings are presently known on the property, both discovered by Cyprus Anvil Mining Corp. during the period 1978 -1982. The showings are known as the Fluke Creek and Pook occurrences, respectively and are about 750 metres apart along strike. Both showings are located north of the Fluke 3 grid, with the nearest being the Pook showing, located approximately 600 metres northwest of the grid.

At the Fluke Creek occurrence mineralization consists of semi-massive to massive, laminated pyrite with interbedded siliceous, graphitic shale laminations. Mineralization is pyrite dominant, barite is not apparent and only a trace of sphalerite was noted. The exposed mineralization is a maximum of 2.0 metres thick. Mineralization is immediately overlain by siliceous, graphitic shale containing 1 cm thick beds of black chert, and is underlain by thick, poorly bedded black chert, strongly invaded by quartz veins. This is contained within a broader area characterized by siliceous black shale which is variably graphitic and locally contains pyrite

The Pook showing is located in Pook Bowl, near the base of a high cliff on the northwest side of the bowl. The showing consists of a 1.8 metre thick mineralized zone, the central 1.0 metre of which is massive, well laminated barite containing galena as disseminations and millimetre scale laminations. This is surrounded on both sides by interlaminated black, graphitic, silty shale; barite and rare pyrite. The mineralization is overlain by black, very graphitic shale containing local pyrite laminations, in turn overlain by well bedded siliceous shale. Ribbon bedded chert 2-3 metres thick is exposed approximately 20 metres upsection. Underlying mineralization is again black graphitic shale, in turn underlain by black, poorly bedded chert cut by abundant quartz veins, and a thick section of well bedded siliceous shale with common concretions to one metre.

A narrow interval of base metal mineralization was reportedly intersected in drilling south of the grid area on the adjacent Akie property of Ecstall Mining. This mineralization should project onto the Fluke property in the area of the Fluke 3 grid.

Although siliceous shale and chert have been identified in the grid area along with local nodular barite and pyrite, a significant mineralized occurrence was not identified. The sequence which hosts mineralization at the Fluke Creek and Pook showings has been identified on the Fluke 3 grid, however the sequence seems to be more distal from mineralization in this area.

GEOCHEMISTRY

A total of 228 soil samples and one moss mat strcam sample were collected as part of the 1997 exploration program. Soil samples were collected at 25 metre intervals along grid lines and at 50 metre intervals along the baseline. An attempt was made to sample the "B" soil horizon whenever possible, however much of the grid area is underlain by shale talus with little or no horizon development and this was sampled when necessary. Thick boulder talus prevented the collection of samples in some locations. A hand type soil auger was utilized for soil collection and proved effective for penetrating talus and reaching deep "B" horizons in some areas. Sampling was carried out brtween July 17 and 24, 1997.

All samples were placed in Kraft paper bags and sent to Cominco laboratories in Vancouver, B.C. for analysis where all were analysed for Pb, Zn, Ag, and total Ba. Sample locations and results for Pb, Zn, Ag, Ba are shown on figures 6, 7, 8 and 9 and complete results are listed on the Certificates of Analyses located in Appendix III. Analytical proceedures are included in Appendix IV, and Soil Sample Descriptions in Appendix V.

The following section provides an interpretation and description of the geochemical results. Figures 6-9 show plotted values for the elements Pb, Zn, Ag and Ba respectively and anomalous values have been contoured. Grid station numbers are the sample numbers and as such, a separate sample location map is not included. The anomalous threshold was determined by visual examination of the plotted data. A background was estimated and the anomalous threshold was selected at two times the estimated background. Experience in the belt has shown that discrimination of anomalies by visual examination of data is an effective method of determining anomalous thresholds for soil geochemical data. Threshold values for the Fluke 3 grid are; Pb - 100ppm, Zn - 200ppm, Ag - 1.0ppm and Ba - 10,000ppm.

Soils were found to be very poorly developed over the grid area. The iron-enriched "BF" soil horizon, when present, tends to be thin and weakly developed and is generally found at depths of 40 cm or greater. Topography is rugged and much of the grid area is underlain by shale talus with little or no soil development. Talus fines were sampled if a better horizon was not present.

Pb in soils (figure 6), displays a series of small, isolated, relatively low contrast anomalies. These anomalies generally do not exceed two or three stations in size or 300ppm in concentration. The majority of responses (A-D, fig. 6) are spacially related to units 2c and 2d, the prospective portion of Gunsteel stratigraphy, although two of these anomalies occur slightly upslope from the mapped contact. Responses E and F are not related to units 2c or 2d and a geological explanation for the anomalies is not apparant.

Ag in soils (figure 7), generally shows a broad area of very low contrast anomalous response. Peaks in Ag response generally correspond to the Pb anomalies or

are located slightly downslope of them, especially for Pb anomalies A, C and D. The strong response on line 103N at about 96+50E has a weak single sample lead response associated with it. In the north portion of the grid, Ag is anomalous coincident with Pb anomaly F on L110N but not on L111N. Cause of the Ag anomaly along the baseline south of 106N and the anomaly east of the baseline between lines 107N and 109N is not known. Both responses are spacially related to the contact with siltstone of unit 3, suspected to be a fault.

Zn in soil (figure 8), in general shows a similar pattern to Pb, consisting of a number of small, isolated, low contrast anomalies. The Zn anomalies however are located peripheral to Pb and in general, peripheral to Ag. Concentration levels for Zn are unusually low (generally <400ppm) for Gunsteel stratigraphy which in the Fluke area generally produce anomalies >1000ppm from pyritic, siliceous shales. Zn anomaly A is spacially related to the baseline Ag anomaly, which is likely related to a fault forming the contact between units 2 and 3. Zn geochemistry seems to have been severely affected by the combination of weakly altered and mineralized stratigraphy, and poor talus dominated soils.

Ba in soil (figure 9), also shows a pattern similar to Pb. Anomalies A and B are related to the siliceous shale sequence (units 2c,d) and are spacially related to Pb anomalies A and D. These anomalies overly exposures of siliceous, graphitic shale containing nodular barite and pyrite (figure 5). Anomaly C coincides with the southern end of Pb anomaly F and with Ag. A source for this multielement response in not known. Anomaly D is the largest response for Ba and corresponds to the baseline responses for Ag and Zn, likely fault related.

Overall soil geochemical response is disappointing, the low contrast, small, isolated anomalies are not typical of Gunsteel shales. This response is likely due in part to the weak alteration and silicification, but perhaps in larger part to the very poor soil quality sampled. Results are inconclusive and do not aid greatly in determining the potential of the grid area.

CONCLUSIONS

A program comprising linecutting, geological mapping and soil geochemical sampling was carried out on the Fluke property during 1997. The program was confined to the southern portion of the property on the Fluke 3 grid.

Linecutting consisted of extending the grid partially established in 1995. A total of 3.075 line kilometres of new grid were established in 1997. Lines are spaced 100 metres apart with pickets established every 25 metres. The grid was established to provide control for geological mapping and soil geochemical sampling in an area identified by previous operators (1982) as warranting additional exploration.

Geological mapping comprised grid controlled mapping of the entire grid, a total of 7.475 line kilometres. Mapping identified a sequence of variably siliceous and graphitic shales, locally containing nodular barite and pyrite, trending NW-SE through the west-central portion of the grid. Black chert flanks this sequence on both sides, although it is not clear if these represent separate horizons or a fold repetition. This stratigraphy is similar to that associated with two mineral occurrences located further to the north on the Fluke property. Siliceous shale is more frequently interbedded with non-siliceous shale, and less overall barite and pyrite are present in the grid area than is the case near the known showings. This is interpreted to reflect a more distal location from mineralization for the grid area. Mineralization is present within one kilometre along strike in both directions, and does not outcrop to the south. If significant mineralization is present in the grid area the data suggests it would lie downdip, probably at some distance from surface.

Geochemistry, comprising soil sampling was carried out over the entire grid area, for a total of 228 samples collected. All samples were analysed for Pb, Zn, Ag, Ba. Results were generally disappointing, with small, isolated, low contrast anomalies identified. While anomalies do flank the prospective siliceous shale sequence, they do not indicate more favourable portions of that sequence. The subdued geochemical response is likely due to overall weak alteration and mineralization in the siliceous shale sequence and, to very poorly developed soil horizons, largely consisting of shale talus.

The 1997 program has confirmed that the sequence of siliceous and graphitic shales which host mineralization elsewhere on the property, are present in the Fluke 3 grid area. Lower barite and pyrite contents and frequent interbedded non-siliceous shale in the sequence suggests a more distal location relative to significant mineralization. The most likely location for mineralization is downdip, and a drill hole is the only way to test this possibility.

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APPENDIX I:

COST STATEMENT

COST STATEMENT

1. **Linecutting** (Twin Mountain Enterprises)
   July 17-22, 1997
   2 men for 6 days @ $260.00/man/day $3,120.00

   Subtotal: **$3,120.00**

2. **Mobilization/Demobilization** (Proportionate Share)
   1/3 of Personnel time $1,300.00
   1/3 of Transportation Cost (1 flight Mackenzie to Finbow) $1,100.00

   Subtotal: **$2,400.00**

3. **Accomodation and Food** (July 17-22)
   2 linecutters, geologist, soil sampler, helicopter pilot
   a) 5 men for 6 days @ $96.30/man/day $2,889.00
   b) July 24, 2 geologists, soil sampler; 3men @ $96.30/man/day $288.90

   Subtotal: **$3,177.90**

4. **Geology and Geochemistry** (July 17-22, 24)
   a) Geologist (R. Farmer) 7 days @ $300.00/day $2,100.00
   b) Geologist (S. Smith) 1 day @ $250.00/day $250.00
   c) Soil Sampler 7 days @ $260.00/day $1,820.00

   Subtotal: **$4,170.00**

5. **Analytical**
   a) 228 soil samples @ $8.00 ea. $1,824.00
   b) 1 moss mat stream sample @ $8.00 ea. $8.00

   Subtotal: **$1,832.00**

6. **Helicopter** (Northern Mtn Helicopters)
   a) Hourly; A-Star; 8.2 hours @ $875.00/hr. $7,175.00
   b) Fuel; 1554.5 liters @ $1.15/liter $1,787.68

   Subtotal: **$8,962.68**

7. **Report and Drafting**

a) Report (report writing and interpretation)

R. Farmer, 5 days @ $300.00/day $1,500.00

b) Drafting, 3 days @ $100.00/day $300.00

Subtotal: $1,800.00

Total Cost of program: $25,462.58

APPENDIX II:

STATEMENT OF QUALIFICATIONS

I, Randy Farmer, do hereby certify that:

1) I am a geologist and have practised my profession for more than 17 years.

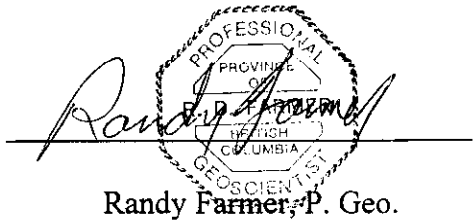
2) I graduated from Lakehead University in Thunder Bay, Ontario with an Honours Bachelor of Science degree, (Geology), in 1980.

3) I conducted the exploration program on the Fluke Property, interpreted the results, and authored the report contained herein.

4) All data contained within this report and conclusions drawn from it are true and accurate to the best of my knowledge.

5) I hold no personal interest, direct or indirect, in the Fluke Property or its results, which is the subject of this report.

6) I am a Professional Geoscientist registered in the Province of British Columbia (Registration No. 20192).



Randy Farmer, P. Geo.
District Manager, Kamloops
September, 1995

APPENDIX III:

CERTIFICATES OF ANALYSES

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9716553		+9525	F102	50	93	<.4	4159
S9716554		+9550	F102	200	115	1.2	4159
S9716555		+9575	F102	201	105	1.6	5535
S9716556		+9600	F102	91	177	.6	6913
S9716557		+9625	F102	56	170	.5	E11152
S9716558		+9650	F102	62	142	.7	6656
S9716559		+9675	F102	11	57	<.4	2644
S9716560		+9700	F102	22	158	.9	3541
S9716561		+9725	F102	45	66	2.8	4929
S9716562		+9750	F102	61	123	1.1	3455
S9716563		+9775	F102	45	90	.5	4929
S9716564		+9800	F102	9	35	.8	5136
S9716565		+9825	F102	39	86	1.7	5779
S9716566		+9850	F102	19	41	1.2	5042
S9716567		+9875	F102	48	96	1.1	5992
S9716568		+9900	F102	19	101	1.1	4964
S9716569		+9925	F102	57	120	.9	7358
S9716570		+9950	F102	13	25	.6	3035
S9716571		+9975	F102	31	136	.4	3785
S9716572		+10000	F102	22	270	.8	3916
S9716573		+9625	F101	108	209	1.8	8647
S9716574		+9650	F101	20	92	1.3	4202
S9716575		+9675	F101	26	79	1.8	3798
S9716576		+9700	F101	133	117	.8	3828
S9716577		+9725	F101	80	168	.8	3387
S9716578		+9750	F101	44	196	1.1	4751
S9716579		+9775	F101	27	170	2.1	4636
S9716580		+9800	F101	58	386	1	5000
S9716581		+9825	F101	58	447	1.2	5436
S9716582		+9850	F101	70	453	1.1	5323
S9716583		+9875	F101	68	311	.9	6166
S9716584		+9900	F101	51	282	.7	6286
S9716585		+9925	F101	27	222	.8	6556
S9716586		+9950	F101	9	92	.9	4406
S9716587		+9975	F101	18	136	<.4	6439
S9716588		+10000	F101	63	377	<.4	3152

I-insufficient sample X-small sample E-exceeds calibration C-being checked R-revised
If requested analyses are not shown ,results are to follow

ANALYTICAL METHODS

Pb Reverse Aqua Regia / AAS
Zn Reverse Aqua Regia / AAS
Ag Reverse Aqua Regia / AAS
Ba X-Ray fluorescence / loose powder

TECK/ELF-X97

Job V 97-0702S

IAN

Report date 20 AUG 1997

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9718330		+10000	F11150	71	136	1.3	4888
S9718331		+10000	F10350	25	109	2.6	4050
S9718332		F110	+9950	61	135	.8	E10214
S9718333		F100	10050	66	102	.5	5449
S9718334							
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S9718338							
S9718339							
S9718340							
S9718341							
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S9718376							
S9718377							
S9718378							
S9718379							
S9718380							

TECK/FLUKE-X97

Job V 97-0624S

PROJECT #1755

Report date 29 JUL 1997

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9713932		+10025	F109	45	45	.7	5799
S9713933		+10050	F109	42	97	1.7	6536
S9713934		+10075	F109	43	49	.8	7403
S9713935		+10100	F109	29	46	.5	6724
S9713936		+10125	F109	37	8	.7	8554
S9713937		+10150	F109	30	126	1	6501
S9713938		+10175	F109	30	116	.7	6431
S9713939		+10200	F109	37	86	<.4	7020
S9713940		+9750	F110	25	140	<.4	4076
S9713941		+9775	F110	37	60	<.4	6125
S9713942		+9800	F110	31	131	<.4	4143
S9713943		+9825	F110	48	83	.7	6858
S9713944		+9850	F110	190	66	3.7	E14014
S9713945		+9875	F110	33	70	.9	E48963
S9713946		+9900	F110	32	90	.6	E16395
S9713947		+9925	F110	82	97	2.3	5146
S9713948		+9975	F110	70	177	.8	6125
S9713949		+10025	F112	48	32	.9	6427
S9713950		+10075	F112	49	68	<.4	7845
S9713951		+10100	F112	35	50	<.4	8610
S9713952		+10125	F112	26	96	.6	5538
S9713953		+10150	F112	52	36	.6	7227
S9713954		+10175	F112	14	109	<.4	2748
S9713955		+10200	F112	16	102	<.4	2651
S9713956		+7650	F106	120	65	2	6408
S9713957		+7725	F106	35	71	2.6	5522
S9713958		+9700	F106	60	81	1.4	5862
S9713959		+9750	F106	55	79	1.3	5316
S9713960		+9775	F106	36	27	.7	6859
S9713961		+9800	F106	35	13	.4	5064
S9713962		+9850	F106	112	38	1.2	5176
S9713963		+9875	F106	150	29	1.6	4776
S9713964		+9925	F106	72	52	1.1	5842
S9713965		+9950	F106	40	26	.4	6024
S9713966		+9975	F106	32	42	.7	9389
S9713967		+100	F10650	28	44	.9	E19319
S9713968		+100	F106	23	27	1.1	E28274
S9713969		+100	F10050	95	49	1.1	6016
S9713970		+100	F100	100	441	2.7	5363
S9713971		+100	F109	29	67	1.1	6371
S9713972		+100	F10950	76	61	1.4	E15466
S9713973		+9450	F105	17	100	<.4	4126
S9713974		+9475	F105	11	226	.9	3558
S9713975		+9500	F105	67	413	1.1	3500
S9713976		+9525	F105	30	25	.4	5367
S9713977		+9550	F105	18	72	<.4	4733
S9713978		+9575	F105	29	58	.5	5006
S9713979		+9600	F105	44	54	1.1	3249
S9713980		+9625	F105	9	29	1.3	3637
S9713981		+9650	F105	29	93	1	3318
S9713982		+9675	F105	16	64	1.5	4997

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9713983		+9700	F105	30	92	.8	4396
S9713984		+9725	F105	14	165	1	4287
S9713985		+9750	F105	131	88	3.5	7560
S9713986		+9825	F105	32	14	2.1	5832
S9713987		+9850	F105	62	14	.5	3885
S9713988		+9875	F105	26	26	1.9	2993
S9713989		+9900	F105	38	127	.7	6804
S9713990		+9925	F105	18	10	1.1	E15821
S9713991		+9950	F105	24	65	.5	E20476
S9713992		+9775	F105	234	53	2.6	5782
S9713993		+9975	F105	29	77	.8	E15439
S9713994		+100	F105	38	194	1.3	E19548
S9713995		+100	F10550	18	34	8.1	E16816
S9713996		+9475	F107	21	222	1.2	7643
S9713997		+9500	F107	27	417	.6	4604
S9713998		+9525	F107	20	225	1.9	4204
S9713999		+9550	F107	32	424	.5	4491
S9714000		+9575	F107	11	92	.8	5211
S9714001		+9600	F107	9	184	.5	3810
S9714002		+9625	F107	24	92	1.1	4094
S9714003		+9650	F107	88	48	.9	7088
S9714004		+9675	F107	198	130	<.4	7534
S9714005		+9700	F107	103	167	3.7	E13553
S9714006		+9725	F107	52	40	2	5729
S9714007		+9800	F107	67	29	1.9	4048
S9714008		+9850	F107	96	85	1	5750
S9714009		+9925	F107	65	52	1.6	6530
S9714010		+9950	F107	41	30	.7	5587
S9714011		+9975	F107	53	18	.9	E13300
S9714012		+10000	F107	15	54	.6	E17644
S9714013		+10025	F107	29	30	.7	E13961
S9714014		+100	F10750	16	448	.8	8797
S9714015		+9400	F108	34	208	.4	4427
S9714016		+9425	F108	35	125	<.4	3411
S9714017		+9450	F108	30	104	.5	2902
S9714018		+9475	F108	35	113	.6	3663
S9714019		+9500	F108	27	147	<.4	5237
S9714020		+9525	F108	23	220	.7	4363
S9714021		+9575	F108	18	177	.5	3656
S9714022		+9600	F108	32	216	.4	3061
S9714023		+9625	F108	19	135	1.2	3385
S9714024		+9675	F108	43	218	.6	7334
S9714025		+9700	F108	17	84	.9	4800
S9714026		+9712	F108	14	97	1	I
S9714027		+9725	F108	27	23	2.1	8669
S9714028		+9750	F108	13	95	1	6118
S9714029		+9775	F108	72	187	1.8	6128
S9714030		+9800	F108	63	88	3	9260
S9714031		+9825	F108	47	38	.9	5417
S9714032		+9850	F108	61	38	1.1	6219
S9714033		+9875	F108	60	33	.4	5070
S9714034		+9900	F108	110	92	1.6	8868
S9714035		+9925	F108	34	38	.6	5736
S9714036		+9950	F108	48	30	1	4847

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9714037		+9975	F108	39	36	1.1	9303
S9714038		+100	F108	41	201	1.7	6597
S9714039		+10000	F112	65	92	.6	5238
S9714040		+9900	F112	83	89	1	5927
S9714041		+9925	F112	74	527	.8	8224
S9714042		+9950	F112	82	100	.7	4795
S9714043		+9975	F112	118	140	1.2	6466
S9714044		+10025	F108	33	117	.7	7287
S9714045		+10050	F108	19	190	1.8	5072
S9714046		+10075	F108	20	199	<.4	6779
S9714047		+10100	F108	30	37	3.8	9718
S9714048		+10125	F108	30	103	2.1	5207
S9714049		+10150	F108	39	9	1.4	8833
S9714050		+10175	F108	15	24	3	E21413
S9714051		+100	F111	47	139	.6	4445
S9714052		+10025	F111	23	28	.9	9675
S9714053		+10050	F111	9	9	.9	5626
S9714054		+10075	F111	18	32	1	7219
S9714055		+10100	F111	<4	4	.4	3124
S9714056		+10125	F111	5	23	.7	5125
S9714057		+10150	F111	25	28	.7	8208
S9714058		+10175	F111	14	200	.4	3705
S9714059		+9800	F111	45	146	.5	5645
S9714060		+9825	F111	57	45	1	5567
S9714061		+9850	F111	272	35	.8	6378
S9714062		+9875	F111	44	100	<.4	6863
S9714063		+9900	F111	47	87	.5	6920
S9714064		+9925	F111	36	178	1.6	6820
S9714065		+9950	F111	36	199	1	8121
S9714066		+9975	F111	68	104	2.7	6370
S9714067		+10200	F111	14	210	.6	2886
S9714068		+9550	F104	43	76	.9	4247
S9714069		+9575	F104	10	35	<.4	4578
S9714070		+9600	F104	401	34	<.4	7728
S9714071		+9615	F104	31	107	.6	7494
S9714072		+9650	F104	89	140	1.2	5726
S9714073		+9675	F104	36	103	.5	4070
S9714074		+9700	F104	62	73	.7	4776
S9714075		+9725	F104	<4	41	1.1	2986
S9714076		+9750	F104	175	141	6.2	4416
S9714077		+9775	F104	36	121	.8	3348
S9714078		+9800	F104	17	156	.6	2896
S9714079		+9875	F104	4	15	1.2	8189
S9714080		+9900	F104	19	23	2.1	E10727
S9714081		+9925	F104	17	24	1.4	8241
S9714082		+9950	F104	17	320	.7	4972
S9714083		+9975	F104	10	443	1.5	3865
S9714084		+100	F104	9	251	<.4	4198
S9714085		+9950	F109	50	72	.9	8806
S9714086		+9975	F109	39	63	.9	6374
S9714087		+10025	F110	44	18	.5	9119
S9714088		+10050	F110	<4	26	<.4	4579
S9714089		+10075	F110	17	28	.7	5109
S9714090		+10100	F110	15	32	.4	5879

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9714091		+10125	F110	30	22	.9	E16102
S9714092		+10150	F110	33	38	.6	6576
S9714093		+10175	F110	4	408	<.4	5518
S9714094		+10200	F110	14	146	<.4	2314
S9714095		+10050	F107	37	280	<.4	6342
S9714096		+10075	F107	6	15	<.4	8670
S9714097		+10100	F107	8	28	.4	7001
S9714098		+10125	F107	14	70	1.5	9327
S9714099		+10150	F107	8	192	.8	8471
S9714100		+10175	F107	13	347	1.6	5268
S9714101		+10200	F107	14	257	<.4	8106
S9714102		+9525	F103	41	46	.8	2757
S9714103		+9550	F103	35	45	<.4	6319
S9714104		+9575	F103	47	64	.7	4121
S9714105		+9600	F103	20	418	<.4	5060
S9714106		+9625	F103	54	80	<.4	7222
S9714107		+9650	F103	131	137	4.9	E13376
S9714108		+9675	F103	81	134	2.7	E22104
S9714109		+9700	F103	47	206	.4	5578
S9714110		+9725	F103	44	140	.8	4508
S9714111		+9750	F103	49	114	.6	5502
S9714112		+9775	F103	36	104	<.4	4699
S9714113		+9800	F103	50	84	.5	4982
S9714114		+9825	F103	86	75	2.2	3597
S9714115		+9850	F103	42	107	1	5630
S9714116		+9875	F103	76	125	1.2	6168
S9714117		+9900	F103	62	128	1.3	6389
S9714118		+9925	F103	56	989	1.2	7897
S9714119		+9950	F103	92	222	1.1	8325
S9714120		+9975	F103	42	159	.4	4611
S9714121		+100	F103	34	115	1	5870

I=insufficient sample X=small sample E=exceeds calibration C=being checked R=revised
If requested analyses are not shown ,results are to follow

ANALYTICAL METHODS

Pb Reverse Aqua Regia / AAS
Zn Reverse Aqua Regia / AAS
Ag Reverse Aqua Regia / AAS
Ba X-Ray fluorescence / loose powder

LAB NO.	FIELD NUMBER	East+ West-	North+ South-	Pb ppm	Zn ppm	Ag ppm	Ba ppm
S9716589	51251 MOSSMAT	+0	+0	86	170	3	6596

I=insufficient sample X=small sample E=exceeds calibration C=being checked R=revised
If requested analyses are not shown ,results are to follow

ANALYTICAL METHODS

Pb Reverse Aqua Regia / AAS
Zn Reverse Aqua Regia / AAS
Ag Reverse Aqua Regia / AAS
Ba X-Ray fluorescence / loose powder

APPENDIX IV:

ANALYTICAL PROCEEDURES

COMINCO EXPLORATION RESEARCH LABORATORY
ANALYTICAL METHODS PERFORMED ON TECK SAMPLES

Reverse Aqua Regia / AAS (Cu, Pb, Zn analysis)

0.5 grams per sample is weighed into clean dry test tubes. 1 mL of concentrated Nitric acid and 3 mL concentrated Hydrochloric acid are added. Test tubes are placed on a sand bath at 90° - 95° for 3 hours and shaken at intervals of 20 minutes. Samples are cooled to room temperature then diluted to 20 mLs with de-ionized distilled water. Solids are given time to settle. The samples are then analyzed on a Atomic Absorption Spectrophotometer. Quality control standards are inserted every 15 samples and repeats every 10 samples.

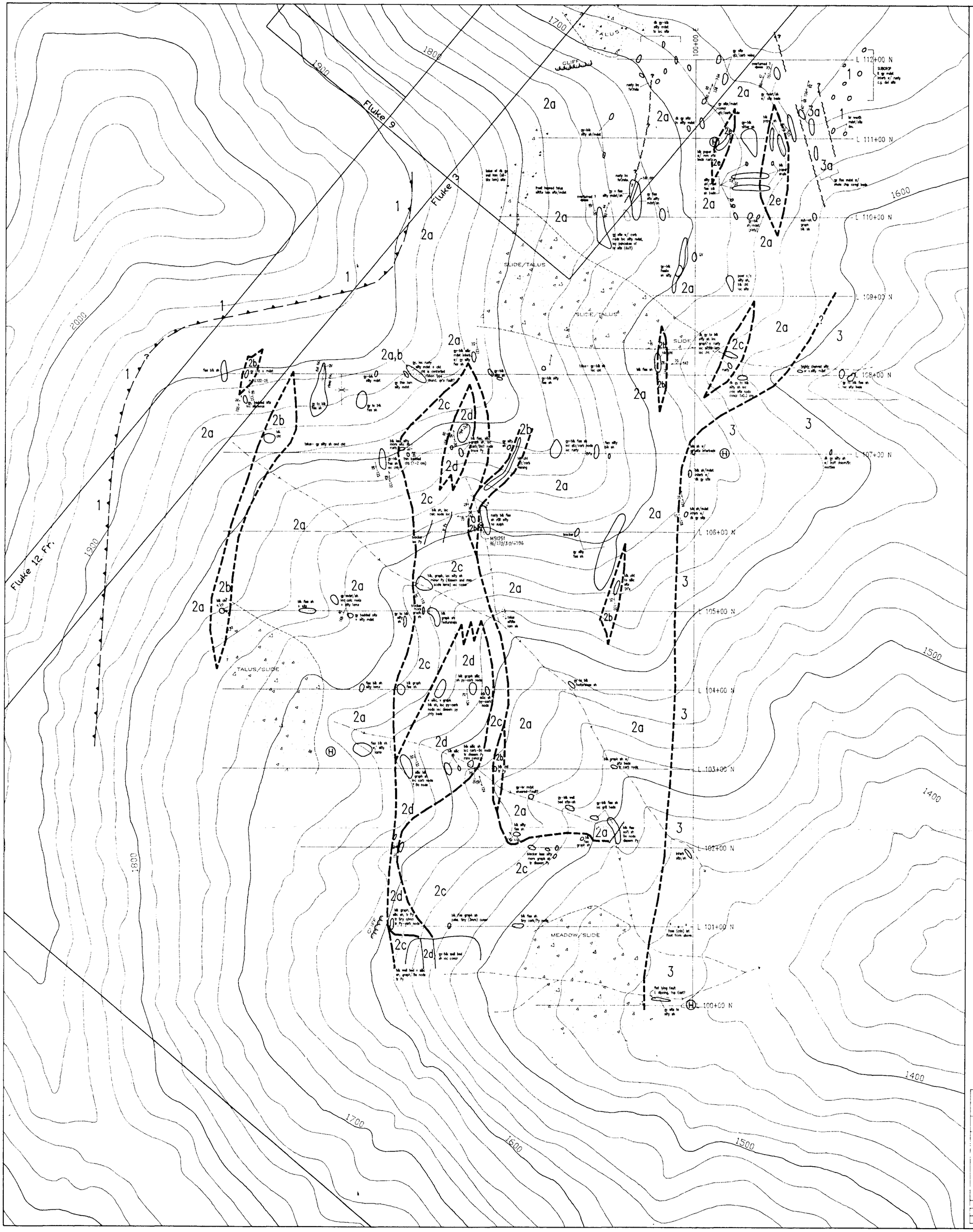
X-RAY FLUORESCENCE / LOOSE POWDER (Ba - pressed pellet)

5 grams of 100 - 200 mesh sample are milled with 5 grams Boric acid for 3 minutes. The milled samples are then pressed at a pressure of 20 tonnes per square inch for 50 seconds to produce 40 mm pressed pellets. Different excitation X-ray tubes are employed to analyze different trace elements to try to get the maximum intensities and high resolution with overlapped element peaks. All trace element analysis calibration curves are set up by using commericial standards. Compton scattering calculation is used to compensate absorption and anhancement effects. Every 25 samples prepared includes 1 repeated sample and every 10 samples analysed includes running 1 commerical standard.

APPENDIX V:

SOIL SAMPLE DESCRIPTIONS

1989	SOIL SAMPLES			PROPERTY PROJECT FLUKE GRID			SAMPLER B.W.					
SAMPLE NO.	GRID LOCATION	DEPTH (cm)	THICK (cm)	HORIZON	COLOUR	PARTICLE SIZE	FRAGMENTS %	FRAGMENTS ROUND	FRAGMENTS COMP	SLOPE	SEEPAGE	COMMENTS
F-101-N	10000-E	40		T	GR		50	V.A.				
F-101-N	9975-E	50		T	GR		50	V.A				
F-101-N	9950-E	50		BT	GR		30	SA.				POOR
F-101-N	9925-E	40		B.T.	GR		10	V.A				SOME SOIL Cr
F-101 N	9900-E	40		T	GR		90	VA				
F-101-N	9875-E	40		T	GR		90	VA				SOME ORGANIC 5%
F-101-N	9850-E	40		T	GR		90	VA				SOME ORGANIC 5%
F-101-N	9825-E	40		T	GR		90	VA				SOME ORGANIC 5%
F-101-N	9800-E	40		T	GR		90	VA				SOME ORGANIC 5%
F-101-N	9775-E	30		T	GR		90	VA				SOME ORGANIC 30%
F-101-N	9750-E	50		BT	GR		20	VA				
F-101-N	9725-E	50		BT	GR		60	VA				
F-101-N	9700-E	60		BF-10% BT. 90%			40	VA				POOR
F-101-N	9675-E	60		BT	GR		40	VA				
F-101-N	9650-E	40		T	GR		99	VA				SOME ORGANIC
F-101-N	9625-E	40		T	GR		80	VA				
F-102-N	9525-E	50		BT	GR		30	SA				SLIGHTLY CLAEY
F-102-N	9550-E	50		BF	RB		15	VA				
F-102-N	9575-E	60		BF BT	RB GR		25	VA				POOR
F-102-N	9600-E	60		T	GR BL		75	SA				POOR
F-102-N	9625-E	70		BF	RB		75	VA				
F-102-N	9650-E	60		BF BT	RB GR		70	VA				
F-102-N	9675-E	60		BT	GR		75	VA				
F-102-N	9700-E	60		T BF	GR BF		60	VA				
F-102-N	9725-E	50		BT	GR		50	VA				
F-102-N	9750-E	60		BF	RB		50	SA				
F-102-N	9775-E	80		BT	GR		40	SA				
F-102-N	9800-E	30		T	GR		70	VA				
F-102-N	9825-E	80		T BT	GR		60	SA				
F102-N	9850-E	70		T BT 70% 30%	GR		50	SA				
F102-N	9875-E	70		T	GR		40	SA				
F-102-N	9900-E	40		BT	GR		50	SA				CR



GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,199

SYMBOLS

- THRUST FAULT
- FAULT
- BEDDING inclined, vertical
- CLEAVAGE inclined, vertical
- ANTIFORM/ANTICLINE axial trace
- SYNFORM/SYNCLINE axial trace
- 1322-26 LINEATION
- CONTACT known, inferred
- OUTCROP
- × FLOAT
- TRAIL
- M51251 ⊗ MOSS MATT Pb/Zn/Ag/Ba (ppm)

LEGEND

Upper Devonian to Mississippian?

3 CONUNDRUM SILTSTONE GREY to BLACK SILTSTONE, SILTY MUDSTONE/SHALE, LOCAL GREY to BLACK SHALE INTERBEDS.

3a SHALE CHIP CONGLOMERATE

Gunsteel Formation

2a UNDIVIDED –GENERALLY GREY to BLACK SHALE to MUDSTONE, OFTEN SILTY OR CONTAINING SILTSTONE BEDS, OFTEN FISSILE to PLATY

2b CHERT –GREY to BLACK, MASSIVE (thick bedded) to RIBBON BEDDED. USUALLY HIGHLY FRACTURED and INVADED BY WHITE QUARTZ VEINING.

2c INTERBEDDED SEQUENCE of; VARIABLY SILICEOUS and GRAPHITIC SHALE, SILTSTONE LAMINATED SHALE, LOCAL DISSEMINATED PYRITE, CONCRETIONS, Py–CARBONATE of Py–QUARTZ NODULES GRADATIONAL FROM

2d SILICEOUS to CHERTY, GRAPHITIC BLACK SHALE LOCAL CONCRETIONS, BARITE NODULES, and PYRITE LAMINATIONS

2e GREY to BLACK 'PAPER' SHALE

Silurian

1 BROWN WEATHERING DOLOMITIC SILTSTONE and MUDSTONE LOCAL LIMESTONE

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA R. D. FARMER GEOSCIENTIST

0 50 100 150 200 250
metres

FIGURE 5

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

FLUKE PROPERTY

FLUKE 3 (MAP 1)
GRID GEOLOGY

COMPILED BY: R. Farmer	SCALE: 1:2,500	DWG. NAME:
DRAWN BY: S.A.	JOB No: 1754	FLU-TOP1
	NTS No: 93F/7W	

(2)

DECLINATION 25°

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,199

Legend

- 100 ppm Pb
- 200 ppm Pb
- 400 ppm Pb
- CREEKS
- Ⓗ HELIPAD

0 50 100 metres

FIGURE 6

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

FLUKE PROPERTY

FLUKE GRID
Soil Geochemistry
Pb ppm

MAP2

DATE DRAWN: SEPT. 3, 1997	SCALE: 1:2,500	DWG. NAME:
COMPILED BY: R. Farmer	JOB No: 1754	FLU-PB
DRAWN BY: S.A.	NTS No: 93F/7W	

3

DECLINATION 25°

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,199

Legend

- 1 ppm Ag
- 2 ppm Ag
- 4 ppm Ag
- 8 ppm Ag
- CREEKS
- (H) HELIPAD

0 50 100 metres

FIGURE 7

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

FLUKE PROPERTY

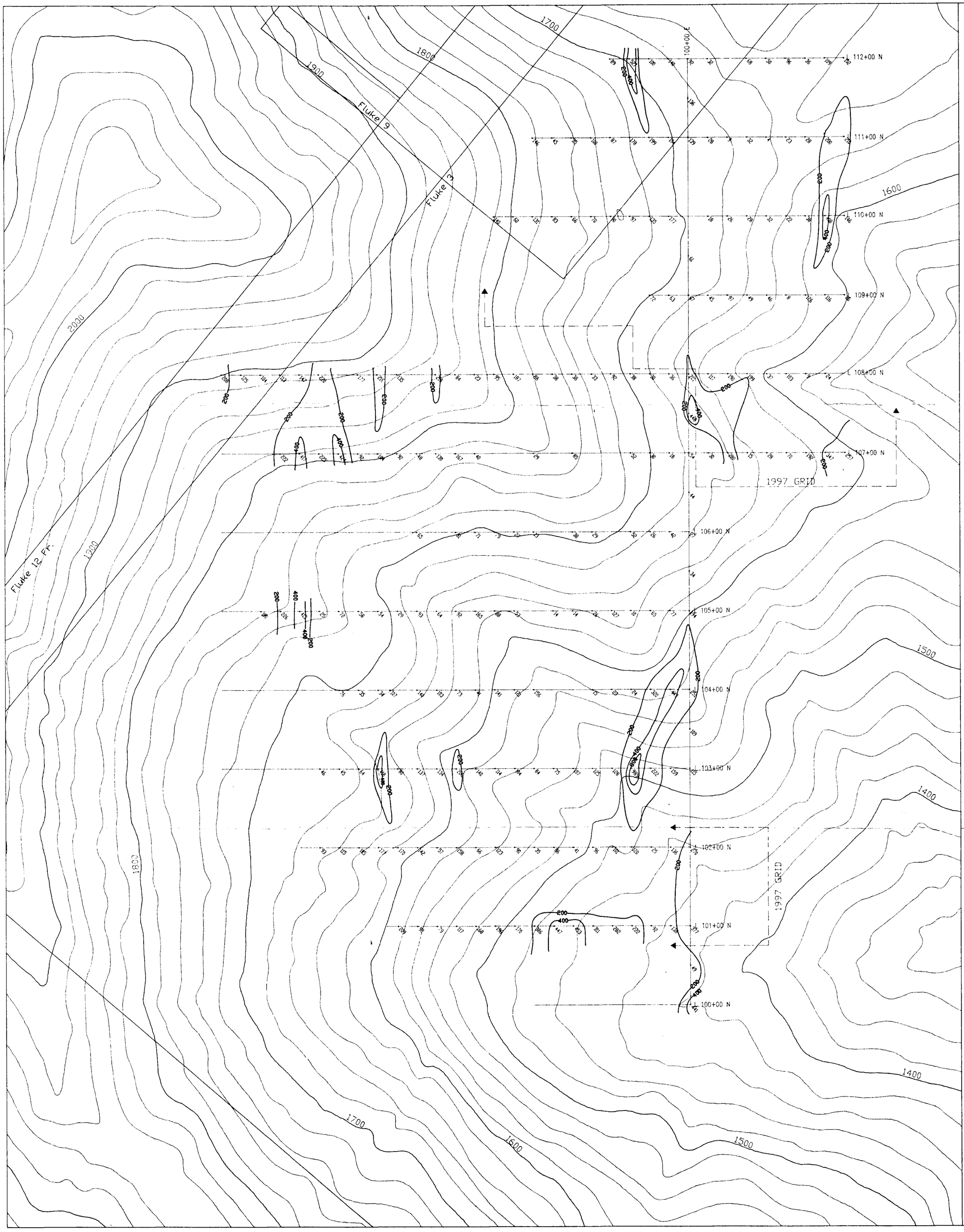
FLUKE GRID
Soil Geochemistry
Ag pm

MAP3

DATE DRAWN: SEPT. 3, 1997	SCALE: 1:2,500	DWG. NAME:
COMPILED BY: R. Farmer	JOB No: 1754	FLU-AG
DRAWN BY: S.A.	NTS No: 93F/7W	

4

DECLINATION 25°



GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,199

Legend

200 ppm Zn

400 ppm Zn

CREEKS

H HELIPAD

0 50 100
metres

FIGURE 8

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

FLUKE PROPERTY

FLUKE GRID
Soil Geochemistry
Zn ppm

MAP 4

DATE DRAWN: SEPT. 3, 1997	SCALE: 1:2,500	DWG. NAME:
COMPILED BY: R. Farmer	JOB No: 1754	FLU-ZN
DRAWN BY: S.A.	NTS No: 93F/7W	

DECLINATION 25°

Legend

- 10,000 ppm Ba
- 20,000 ppm Ba
- 40,000 ppm Ba
- CREEKS
- (H) HELIPAD

0 50 100 metres

FIGURE 9

TECK EXPLORATION LTD.
KAMLOOPS, BRITISH COLUMBIA

FLUKE PROPERTY

FLUKE GRID
Soil Geochemistry
Ba ppm

MAP5

DATE DRAWN: SEPT. 3, 1997	SCALE: 1:2,500	DWG. NAME:
COMPILED BY: R. Farmer	JOB No: 1754	FLU-BA
DRAWN BY: S.A.	NTS No: 93F/7W	