

# ARCHER, CATHRO

A ASSOCIATES (1981) LIMITED

CONSULTING GEOLOGICAL ENGINEERS

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## ASSESSMENT REPORT

describing

## GEOLOGICAL MAPPING, PROSPECTING AND GEOCHEMICAL SURVEYS

on the

## STICK PROPERTY

Stick 1-30 Claims YB60484-YB60513

Latitude 61°25' N; Longitude 131°14' W

NTS 105G/6

in the

WATSON LAKE MINING DISTRICT

YUKON TERRITORY

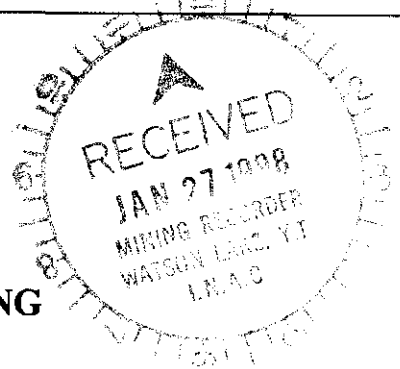
Prepared by

Archer, Cathro & Associates (1981) Limited

for

**EXPATRIATE RESOURCES LTD.**

W.A. Wengzynowski, B.A.Sc.  
November, 1997



093 809

This report has been examined by  
the Geological Evaluation Unit  
under Section 53 (4) Yukon Quartz  
Mining Act and is allowed as  
representation work in the amount  
of \$ 12,000.

*M. B. B.*

*for* Regional Manager, Exploration and  
Geological Services for Commissioner  
of Yukon Territory.

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## INTRODUCTION

Expatriate Resources Ltd. has a 100% interest in the Stick property which protects a previously unstaked target selected from a regional geochemical data base documenting results of 1973 exploration by a joint venture managed by Archer, Cathro & Associates Limited. Thirty claims were staked in August 1995 over a series of soil sample sites that had yielded moderately to strongly anomalous lead and zinc values. Prospecting in 1973 located two gossans but did not explain the geochemical anomalies.

Exploration conducted by Expatriate during the 1996 field season consisted of reconnaissance soil geochemistry, geological mapping and prospecting. This work outlined scattered weak to moderate multi-element geochemical anomalies, one of which was located downslope from a gossanous, foliaform galena-bearing outcrop.

The 1997 program was performed by Expatriate and included geological mapping, prospecting and detailed contour soil sampling to better define the area of anomalous geochemical response. Most of the work was done by a two-person crew between August 2 and 6 from a fly camp on the property. Additional follow-up traverses were performed on September 14.

The work was managed by Archer Cathro & Associates (1981) Limited and was supervised by the author. Appendix I contains the Author's Statement of Qualifications.

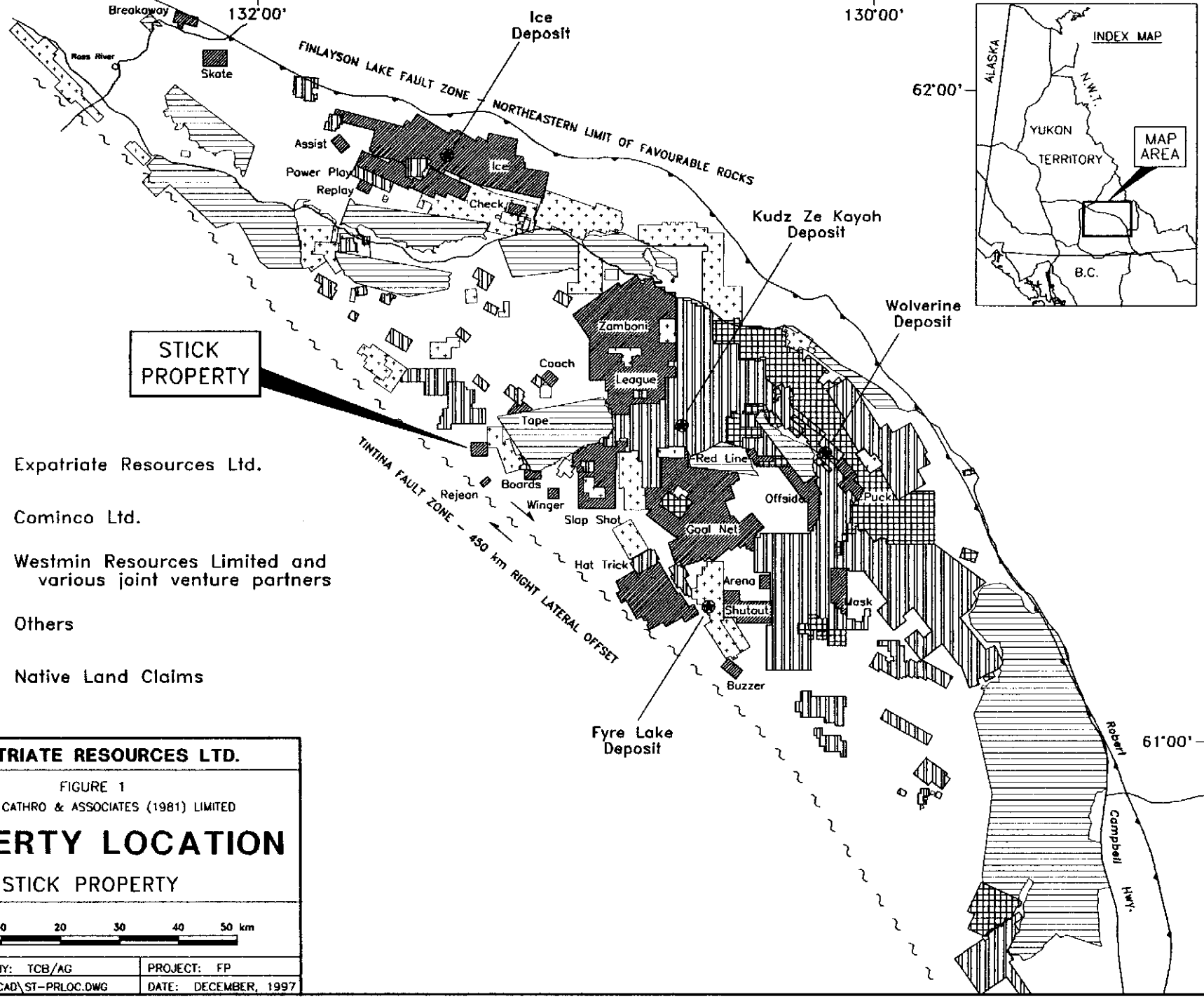
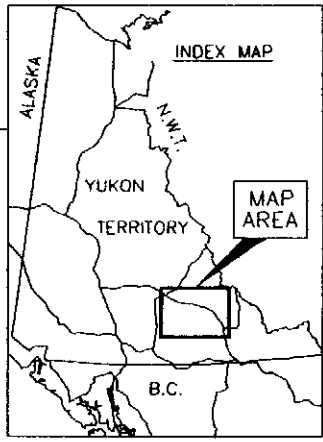
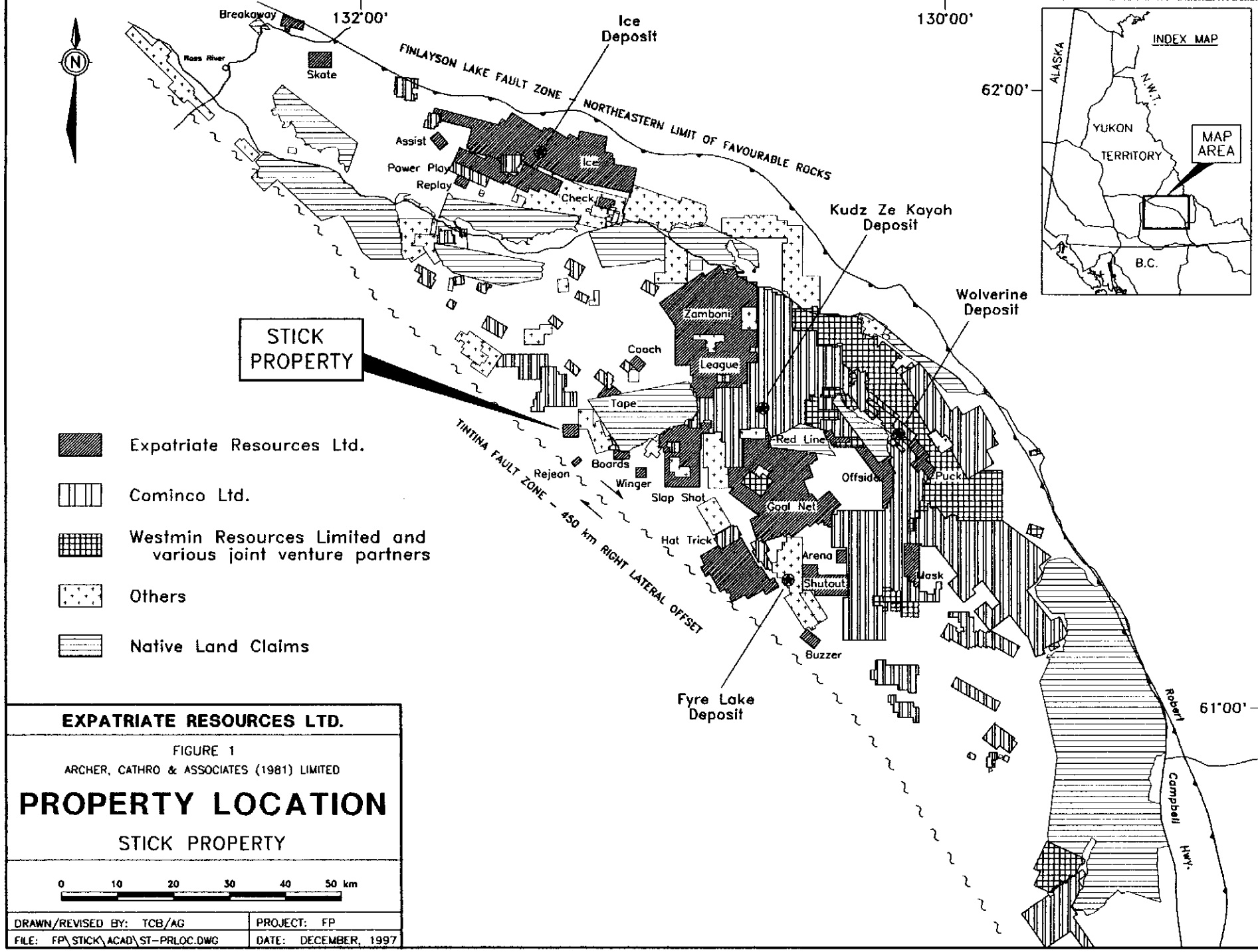
**PROPERTY, LOCATION AND ACCESS**

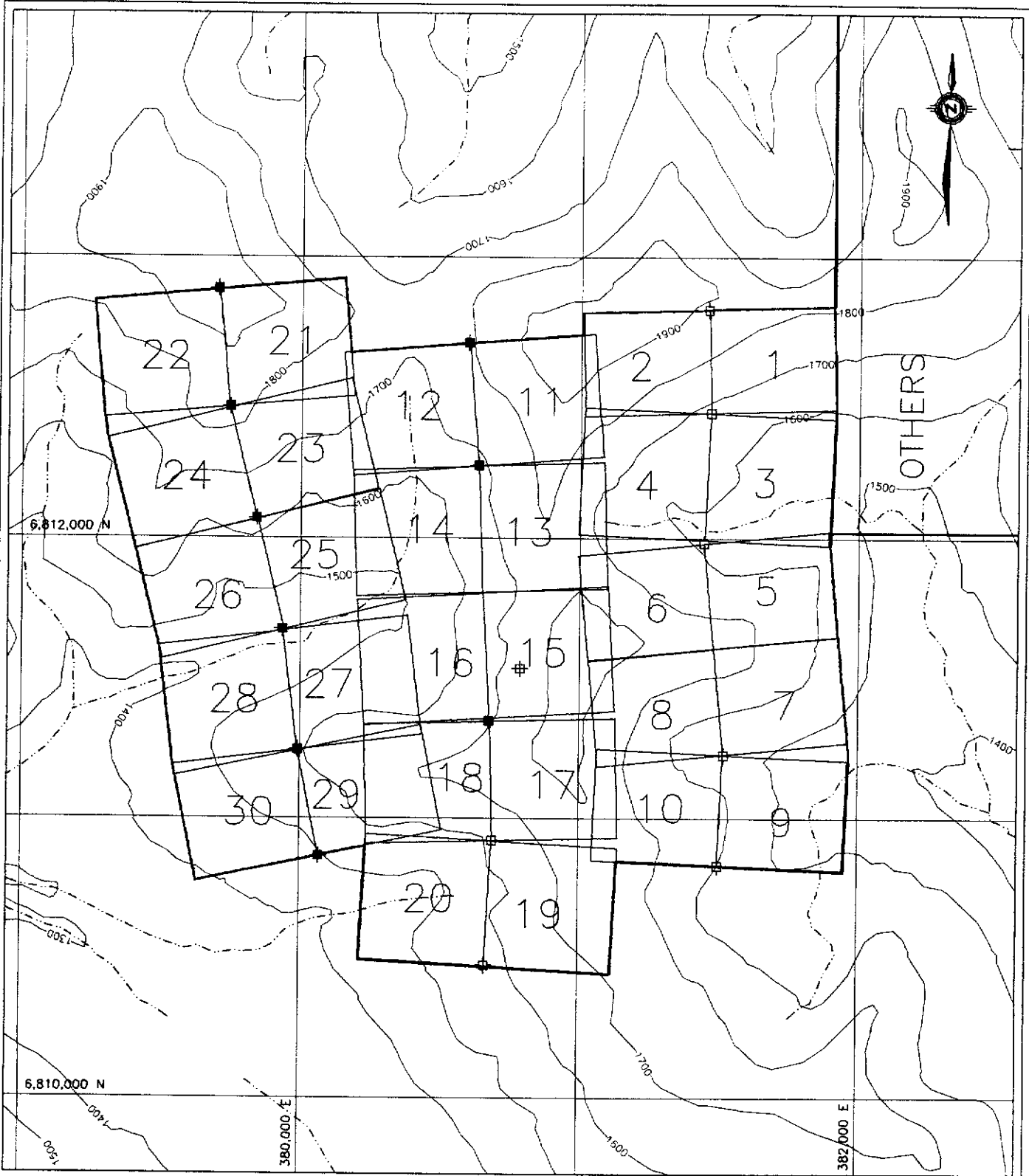
The property is located in southeastern Yukon at latitude 61°25'N and longitude 131°14'W on NTS map sheet 105G/6 (Figure 1). It is comprised of thirty contiguous mineral claims (Figure 2) registered with the Watson Lake Mining Recorder in the name of Archer, Cathro & Associates (1981) Limited which holds them in trust for Expatriate Resources Ltd. Claim registration data is listed below.

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date*</u>
Stick 1-30	YB60484-YB60513	March 17, 2004

\*Expiry date includes 1997 work which been filed for assessment credit but not yet accepted.

In 1997 the property was accessed by helicopter. The fly camp was supported by a Bell 206B Jet Ranger contracted from Trans North Helicopters and operated from Expatriate's drill camp at the Ice property, 50 km due north of the property. The crew which did the follow-up traverses in September were positioned with an Aerospatiale B1 owned by Kluane Helicopters from a second Expatriate drill camp located on Finlayson Lake, 48 km to the northeast.





- Claim posts with corrected GPS location
- ⊠ Claim posts with uncorrected GPS data
- ⊠ Claim posts with poor GPS data; location suspect

<b>EXPATRIATE RESOURCES LTD.</b>	
FIGURE 2 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED	
<b>CLAIM LOCATION</b>	
STICK PROPERTY	
SCALE 1:20,000	
0    200    400    600    800    1000m	
DRAWN/REVISED BY: AB/AG	PROJECT: FP
FILE: FP/STICK/MCH067/ST20K-CL.DWG	DATE: DECEMBER 1997

## GEOMORPHOLOGY

The Stick property covers a ridge in the Pelly Mountains about 5 km northeast of the Tintina Trench. Creeks draining the property flow southward into the Hoole River, part of the Yukon River watershed.

Elevations range from 1400 m in a valley at the property's southwestern margin to 1860 m atop a ridge near the centre of the claim block. Topographic relief is moderately steep, typically 20 to 35°. The valley bottom is covered with Pleistocene glacial till.

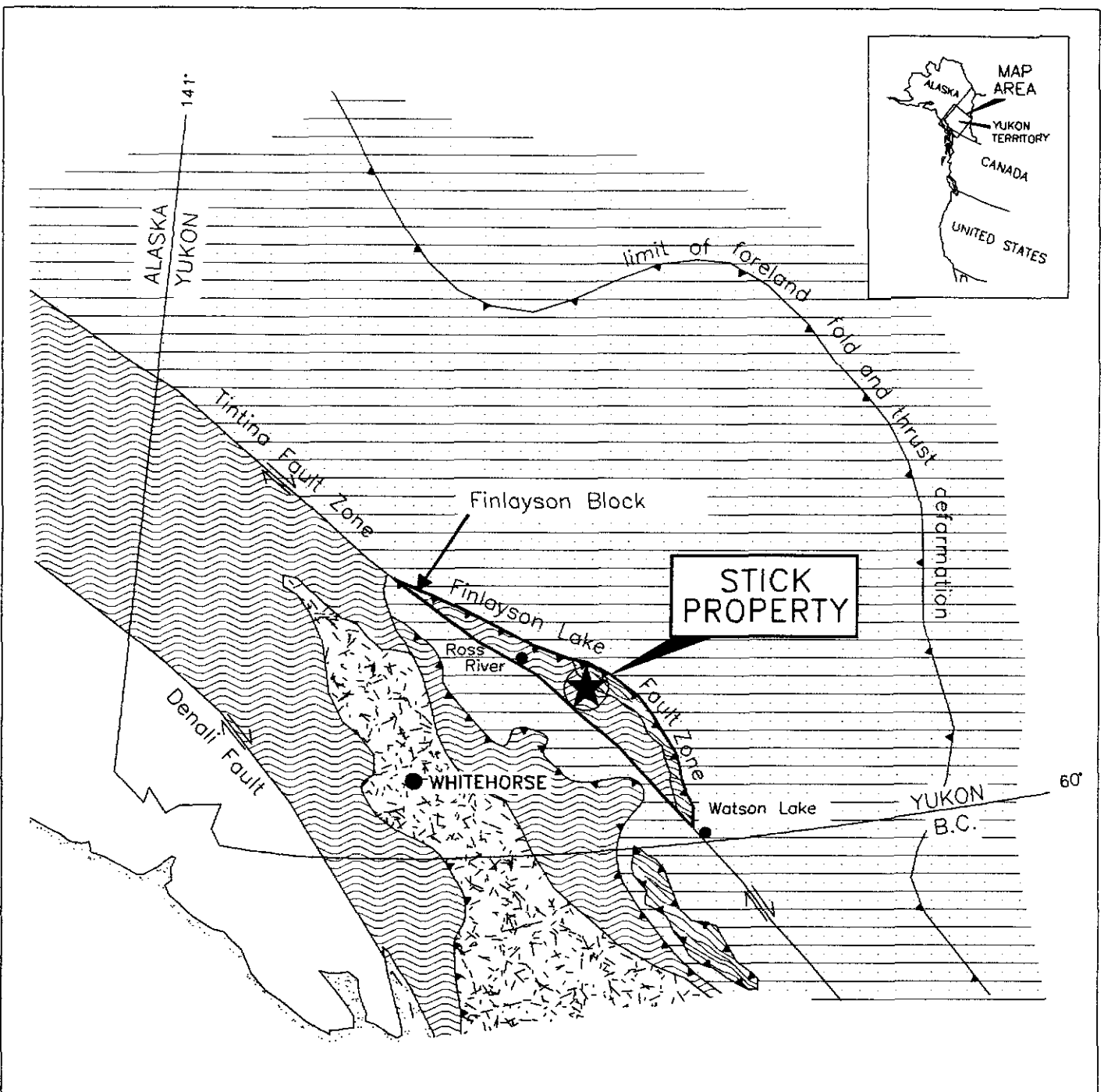
Vegetation consists of moderately dense growths of balsam and black spruce in the valley, giving way to buckbrush, willow and moss above 1550 m and eventually to scattered buckbrush, alpine grass and lichen at elevations exceeding 1700 m. Steep talus slopes are vegetated only by lichen.







## REGIONAL GEOLOGY


The Stick property is located within the Finlayson Block, a 380 by 60 km area comprised primarily of the Yukon-Tanana and Slide Mountain geologic terranes (Figure 3). These terranes represent the innermost of the accreted or "suspect" terranes in the Canadian Cordillera (Mortensen and Jilson, 1985). The northeastern margin of the block is the Finlayson Lake Fault Zone, a complex zone of steep and shallow faults related to transpressive suturing. The southwestern boundary of the block is the Tintina Fault, a major strike-slip fault with at least 450 km of dextral displacement during Late Cretaceous and/or Early Tertiary time (Tempelman-Kluit et al, 1976).

Regional mapping of the Finlayson Lake area was completed by the Geological Survey of Canada (GSC) in the mid to late 1970's (Tempelman-Kluit, 1977, 1979). More recent regional studies have been published by Mortensen and Jilson (1985) and Mortensen (1992). The following discussion of the regional geology (Figure 4) is based partly on the published work and partly on unpublished mapping completed in 1996 (Tempelman-Kluit, personal communication, 1996).

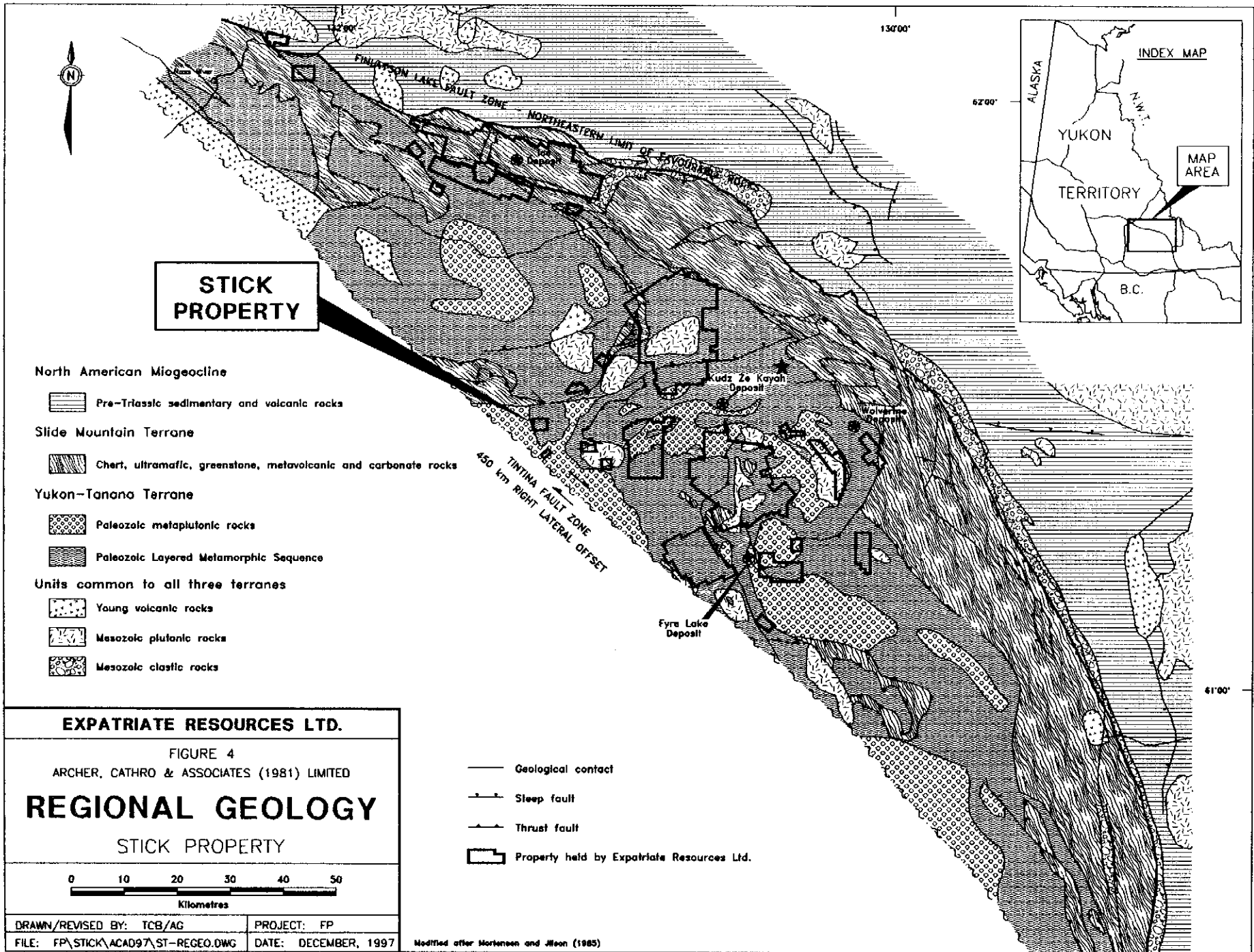
The Yukon-Tanana Terrane consists of largely Paleozoic continental margin and/or arc stratigraphy deposited on a continental basement of uncertain origin (Mortensen, 1992). The Yukon-Tanana Terrane in the Finlayson Lake area contains three major packages, collectively termed the Layered Metamorphic Sequence. The lowermost unit consists of garnet-mica schist with interbanded marbles, calc-silicates and calcareous schists near the top. The middle unit is a carbonaceous quartzite, schist or phyllite with rare conglomerates and locally extensive felsic and mafic volcanic interbands. Radiometric dating of the felsic metavolcanics in the Finlayson Block has consistently resulted in Late Devonian to Mississippian crystallization ages. Immediately south of



-  Thrust fault
-  Steep fault
-  Yukon-Tanana Terrane
-  Slide Mountain Terrane
-  Stikinia and other Terranes
-  North American Miogeoclinal Strata

<b>EXPATRIATE RESOURCES LTD.</b>	
FIGURE 3 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED	
<b>TECTONIC SETTING</b>	
STICK PROPERTY	
 0      100      200      300      400 KILOMETRES	
DRAWN/REVISED BY: TCB/AG	PROJECT: FP
FILE: FP\STICK\ACAD97\ST-TECTO.DWG	DATE: DECEMBER, 1997

Modified after Mortensen and Jilson (1985), Mortensen (1992) and Johnston and Mortensen (1994).



**STICK PROPERTY**

**North American Miogeocline**

Pre-Triassic sedimentary and volcanic rocks

**Slide Mountain Terrane**

Chert, ultramafic, greenstone, metavolcanic and carbonate rocks

**Yukon-Tanana Terrane**

Paleozoic metaplutonic rocks

Paleozoic Layered Metamorphic Sequence

**Units common to all three terranes**

Young volcanic rocks

Mesozoic plutonic rocks

Mesozoic clastic rocks

TINTINA FAULT ZONE  
450 km RIGHT LATERAL OFFSET

Fyre Lake Deposit

Kudz Ze Koyah Deposit

Wolverine Deposit

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FIGURE 4

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

**REGIONAL GEOLOGY**

STICK PROPERTY



- Geological contact
- Sleep fault
- Thrust fault
- Property held by Expatriate Resources Ltd.

DRAWN/REVISED BY: TCB/AG PROJECT: FP  
 FILE: FP\STICK\ACAD97\ST-REGEO.DWG DATE: DECEMBER, 1997

Modified after Mortensen and Jilon (1985)

Finlayson Lake, large isolated outcrops of marble and quartzite which are poorly dated as Early Pennsylvanian to Early Permian (Tempelman-Kluit, 1979) form the uppermost unit of the Yukon-Tanana Terrane.

This sequence of units is generally correlative with a similar stratigraphic sequence in ancestral North America (Mortensen and Jilson, 1985; Tempelman-Kluit, personal communication, 1996). The lowermost is correlated with the Lower Cambrian Atan Group and the middle carbonaceous assemblage is correlated with the offshelf, Silurian-Devonian Nasina quartzite assemblage. The felsic volcanics are most similar to locally extensive Mississippian siliceous volcanics in the North American stratigraphy. Local calcareous phyllites and massive greenstones near the top of the lower unit are lithologically similar to the Kechika Group and Lower Paleozoic alkalic and potassic greenstones, respectively.

Gneiss and augen gneiss invariably occur low in the Yukon-Tanana succession beneath either the lowermost calcareous unit or the middle carbonaceous unit. Mortensen and Jilson (1985) considered the gneisses to be metamorphosed Mid-Paleozoic plutonic rocks. Conversely, Tempelman-Kluit (personal communication, 1996) considers these gneisses to be at least in part recrystallization of earlier stratigraphy. Radiometric dating of the gneisses has consistently resulted in Late Devonian to Mississippian ages (Mortensen, 1992). The gneisses occur in structural culminations with diameters on the order of 10 km and structural relief up to about 1 km.

The Devonian-Mississippian Simpson Suite (Mortensen, 1992) forms thick intervals of hornblende granodiorite and quartz monzonite higher in the Yukon-Tanana stratigraphic sequence. Mortensen and Jilson (1985) interpreted this suite as intrusive. Tempelman-Kluit (1979, personal communication, 1996) mapped the suite as an allochthonous slice emplaced on top of the structural pile.

Slide Mountain Terrane consists of Late Devonian to Late Triassic disrupted oceanic crust (Mortensen, 1992). Lithologies include massive and sheared greenstone, chert and mafic to ultramafic plutonic rocks occurring as fault-bounded slices along thrust faults and steep faults. These units are most abundant near the northeastern edge of the Finlayson Block but are also found throughout it.

Younger units unconformably overlie units from Slide Mountain, Yukon-Tanana and North American Terranes. Mesozoic clastic rocks are Late Triassic, immature sediments containing cobbles from both Slide Mountain and Yukon-Tanana Terranes. Young volcanic rocks consist of Late Cretaceous to Tertiary felsic volcanic flows and volcanoclastic deposits. They are usually found in close proximity to the Tintina Fault Zone.

Mesozoic intrusive activity in the Finlayson Block includes two suites. The first is comprised of several unmetamorphosed Early Jurassic mafic and intermediate composition plutons. The second suite consists of Late Cretaceous two-mica quartz monzonite and granite (Mortensen and Jilson, 1985).

Structurally Yukon-Tanana schists and gneisses contain a pervasive, flat- to gently-dipping foliation. Close examination of this fabric indicates that it commonly is a closely spaced crenulation cleavage. Large scale folds related to this fabric can rarely be mapped in the field. In most cases bedding and earlier fabrics are transposed into near parallelism with this dominant fabric. Later crenulation cleavages are present only locally. Some of the Cretaceous intrusions have a mild deformation fabric, others are massive and do not contain a foliation.

Thrust faults within the Finlayson Block juxtapose lithologic sequences with similar deformation fabrics. Thrusting postdates the Late Paleozoic Slide Mountain lithologies and predates the Cretaceous intrusives. Recent mapping also suggests, but does not definitively prove, the presence of major late extensional faults juxtaposing differing sequences (Tempelman-Kluit, personal communication, 1996). East-northeasterly trending, steep normal faults disrupt all earlier deformation fabrics.

Metamorphic grades range from lower greenschist facies to middle amphibolite facies. Contact hornfels around plutonic units occur locally.

Metamorphism and deformation are tentatively correlated with transpressive suturing of these suspect terranes with ancestral North America. Suturing is restricted to the time interval of post-Triassic continuing into the Cretaceous. Whether deformation is continuous or sporadic has not been fully verified at present.

The discovery of the Kudz Ze Kayah and Wolverine Deposits within the Finlayson Block in the last few years (Johnston and Mortensen, 1994) has refocused exploration activities in the area. Both deposits occur within metasedimentary and metavolcanic sequences of the Yukon-Tanana Terrane and are associated with felsic volcanics present in the middle unit of that terrane.

During the 1996 field season regional mapping was done in the vicinity of the Kudz Ze Kayah Deposit by government mappers at 1:50,000 scale (Murphy and Timmerman, 1997). This work confirmed the general stratigraphic position of the Kudz Ze Kayah Deposit and assigned it to an undifferentiated felsic schist unit. Murphy continued mapping to the south and east in 1997 to determine the regional extent of this favourable stratigraphy. Results for this work will not be published until spring 1998.

## REGIONAL MINERALIZATION

A total of fifty-one mineral occurrences have been reported within the Finlayson Block (DIAND, 1995). Of these, twenty-one are known or suspected to be volcanogenic in origin while veins, skarns and asbestos occurrences comprise most of the remainder. Although the better known volcanogenic occurrences are thought to be of the Kuroko-type, some Besshi-type mineralization is also present (Morin, 1981; Johnston and Mortensen, 1994) and the recently discovered Ice Deposit appears to be Cyprus-type. Two occurrences have definite economic potential, the Kudz Ze Kayah and Wolverine Deposits (Figure 4). These Kuroko-type occurrences are the main "type-deposits" for Expatriate's exploration in the district and are briefly described below.

The Kudz Ze Kayah (ABM) Deposit lies within Yukon-Tanana Terrane near the centre of the block (Cominco Exploration, 1995; Whiteway, 1995). It is a VMS deposit hosted by an overturned assemblage of felsic pyroclastics, aphanitic massive rhyolites and metasiliclastic rocks belonging to the middle unit of the Layered Metamorphic Sequence. Although both the sulphides and wallrocks are highly strained and exhibit pervasive schistosity, compositional layering in the vicinity of the deposit is relatively undeformed with a consistent, shallow northerly dip. Sphalerite, chalcopyrite and galena are the main economic minerals while the gangue includes various mixtures of magnetite, barite, pyrrhotite, pyrite and carbonate. The deposit averages about 18 m thick and has been traced 700 m along strike and up to 400 m downdip. Open pit mineable ore reserves are reported to be 11 million tonnes grading 5.9% zinc, 0.9% copper, 1.5% lead, 130 g/t silver and 1.3 g/t gold (Schultze, 1996). Preliminary studies suggest that satisfactory

lead, zinc and copper concentrates can be produced using conventional flotation processes (Cominco Exploration, 1995). The mineralization responds well to magnetic and electromagnetic surveys but geochemical response is somewhat erratic because the entire deposit is covered by 2 to 10 m of glacial till.

The Wolverine Deposit is located 25 km east of the Kudz Ze Kayah property near a contact between Yukon-Tanana and overlying Slide Mountain rocks. It consists of the Wolverine and Lynx Zones which are hosted by rhyolitic metavolcanics and argillites lying within the middle unit of the Layered Metamorphic Sequence. The mineralization consists primarily of semi-massive to massive pyrite and sphalerite with varying amounts of galena, chalcopyrite, tetrahedrite and native gold. The surface expression of the Wolverine Zone is marked by a vegetation kill zone containing weakly malachite-stained argillite while the Lynx Zone is blanketed by glacial till. Westmin has traced the deposit 700 m along strike and up to 450 m downdip and it is still open. The mineralization averages 6.1 m thick and dips shallowly to the north. The Sable Zone, which lies about 1500 m to the southeast, was discovered in late 1997 when two holes yielded high grade intersections over narrow widths. All three zones contain significantly more zinc and precious metals than Kudz Ze Kayah. The current geological inventory is reported to be 5,311,000 tonnes grading 12.96% zinc, 1.41% copper, 1.53% lead, 359.1 g/t silver and 1.81 g/t gold (Westmin News Release, November 30, 1996). Soil geochemistry outlined weakly to moderately anomalous values along the projected surface trace of the deposit while magnetic surveys easily traced a laterally extensive, banded iron formation which occurs about 80 m up-section from the massive sulphide horizon. Interpretation of electromagnetic results is complicated by the presence of graphite within the argillite.

## REGIONAL GEOCHEMISTRY

Published geochemical data for the Finlayson Lake area are limited to reconnaissance scale stream sediment sampling conducted in the late 1980's by the GSC (Hornbrook and Friske, 1988; Friske et al, 1990). The sampling was done at an approximate density of one sample per 10 sq km. Each sample was analyzed for twenty elements including common indicator elements for VMS deposits such as copper, lead, zinc, silver and arsenic. Anomalous results were obtained from creeks draining some previously known VMS occurrences (DIAND, 1995, Yukon Minfile 105G/32, 34 and 40) but many others, including the streams draining the Wolverine Deposit, produced near background values. Anomalous results were also obtained from several drainages where there were no known mineral occurrences. Follow-up exploration has since located showings in many of the anomalous creeks with the most significant discovery to date being the Kudz Ze Kayah Deposit.

Expatriate was able to supplement the published reports with private data summarizing results of 1973 exploration managed by Archer Cathro on behalf of a joint venture (Cathro, 1973). The reconnaissance prospecting and geochemical sampling program explored for lead-zinc mineralization in the lower unit of the Layered Metamorphic Sequence but because the data provide relatively uniform coverage over the entire region, it is also suitable for evaluating areas underlain by the favourable middle unit. The Archer Cathro samples included approximately 5000 soils and stream sediments collected at a density of approximately one sample per sq km. They were all analyzed for lead, zinc, copper and molybdenum. As might be expected, this closer

spaced sampling outlined many more areas of anomalous geochemical response than the government survey. Almost all of the known volcanogenic occurrences showed up as anomalies on this survey, including Kudz Ze Kayah and Wolverine.

The following table illustrates regional geochemical backgrounds for the metals and anomalous thresholds used for target selection.

**GEOCHEMICAL BACKGROUNDS AND ANOMALOUS THRESHOLDS**

	<u>Background</u>	<u>Anomalous Thresholds (ppm)</u>			<u>Peak Value</u>
		<u>Weak</u>	<u>Moderate</u>	<u>Strong</u>	
Copper	25	50	100	200	1720
Lead	30	50	100	200	>4000
Zinc	80	200	500	1000	>4000
Molybdenum	<1	2	5	10	65

The Stick property was staked to protect a target selected from the Archer Cathro data. Peak values from 1973 sampling at Stick were 675 ppm copper, 260 ppm lead, 2124 ppm zinc and 39 ppm molybdenum.

Copper, lead and zinc are major metals in most VMS occurrences in the Finlayson Lake area and are obvious indicator elements. Molybdenum is present in anomalous quantities in the banded iron formation overlying the Wolverine Deposit (Meade, personal communication, 1995) and appears to be slightly enriched in the felsic metavolcanic rocks. Based on the geochemical signature in the vicinity of known occurrences its presence can be used to distinguish copper anomalies associated with volcanogenic mineralization from those derived from ultramafic rocks.

## REGIONAL GEOPHYSICS

The only published geophysical data for the Finlayson Lake area resulted from airborne magnetic surveys conducted in 1961 by the GSC on behalf of the Department of Mines and Technical Surveys. The surveys were flown with fixed-wing aircraft at a nominal elevation of 300 m above ground level on east-west lines spaced approximately 1.6 km apart. Results are presented on a 1:250,000 scale map (DMTS, 1961) and in more detail on a series of 1:50,000 maps.

The largest, most intense areas of positive magnetic response are associated with obducted ultramafic rocks belonging to the Slide Mountain Terrane. Within the Campbell Range Belt where dips are usually moderate to steep, the anomalies are narrow and elongate while in the remainder of the block where the ultramafic rocks occur along shallowly-dipping thrust faults, they are much broader.

A series of secondary positive anomalies was also recorded over Yukon-Tanana rocks but until recently they had no obvious explanation. Prospecting and mapping have now shown that magnetite occurs locally within schists of the middle unit of the Layered Metamorphic Sequence. The greatest documented concentration of magnetite is found in the hanging wall of the Wolverine Deposit where it forms several thin horizons approximately 80 m up-section from the massive sulphide mineralization. Magnetite is also a significant constituent of the mineralization at Kudz Ze Kayah. The Stick property lies near the centre of a broad, horseshoe-shaped aeromagnetic high.

## **PROPERTY GEOLOGY AND MINERALIZATION**

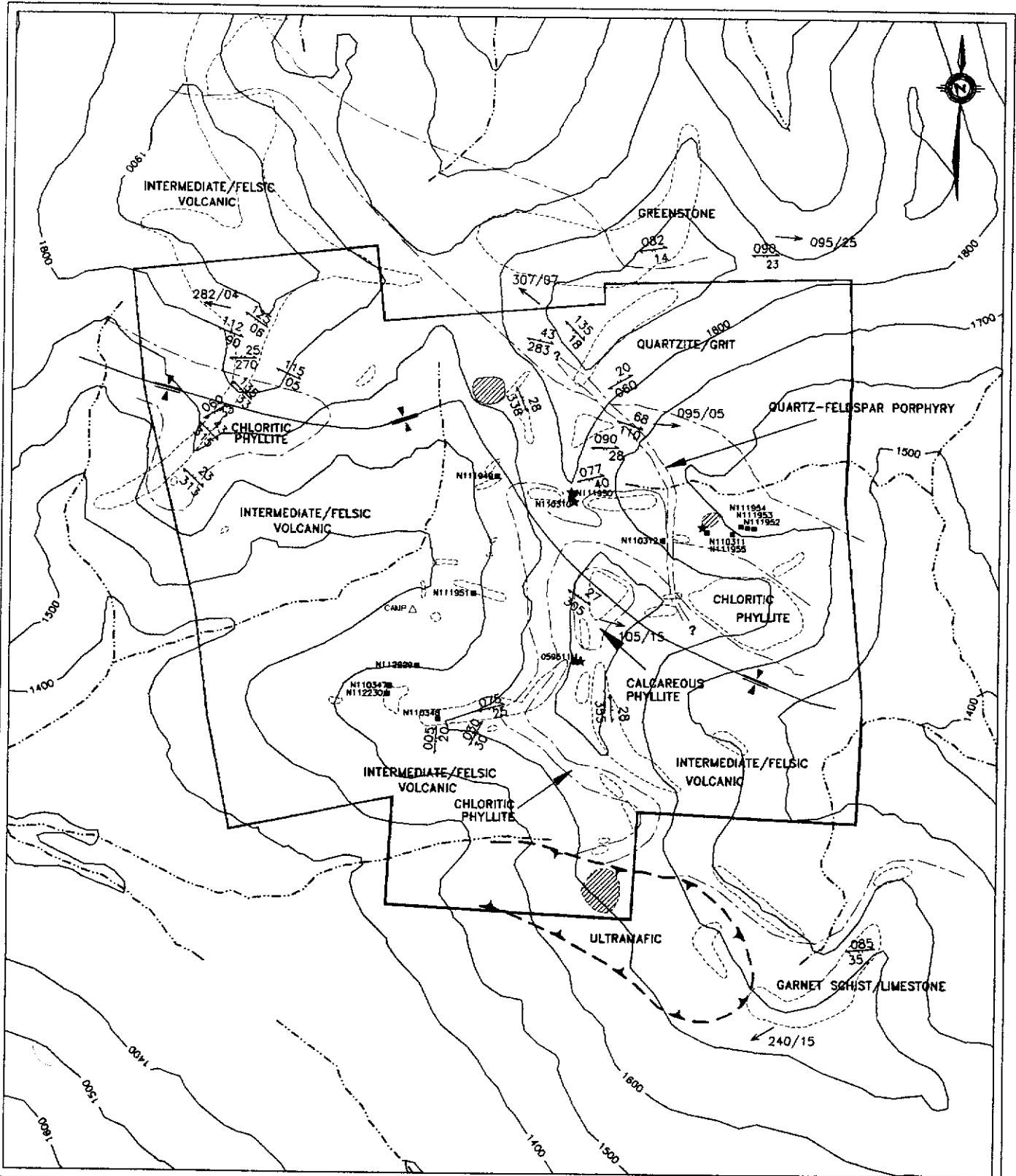
This section summarizes the geology as compiled after completion of the 1997 exploration program. It combines information from both the 1996 (Burgert, 1997) and 1997 (Pigage, 1997) field work. Property geology is illustrated on Figure 5.

Bedrock exposure is good on northerly-facing slopes and along ridge tops but poor to non-existent on talus covered hillsides. Most of the claim block is underlain by interbanded metamorphosed volcanics and sediments that are part of the Yukon-Tanana Terrane. These rocks have been metamorphosed to garnet phase greenschist facies and exhibit two phases of deformation. Along the southern property boundary this sequence is structurally overlain by a thrust slice of ultramafic rocks belonging to the Slide Mountain Terrane. A post deformation quartz-feldspar porphyry dyke has intruded the Yukon-Tanana rocks. Specific lithologies mapped on the property are described below.

### **STRATIGRAPHIC UNITS**

#### **Greenstone**

Greenstone is the structurally lowest unit encountered on the claims and consists of a pale silvery green, calcareous, chloritic phyllite. This unit outcrops immediately north of the claims and dips southerly onto the property. It appears to be quite a thick package. Interbanded with the chloritic phyllite are thin intervals of grey quartzite containing disseminated biotite. Minor white bull quartz veins are common. The Greenstone likely had a mafic volcanic protolith.



- N110347 Rock sample location with sample number
- ★ Mineral showing
- ▨ Gossan
- △ 1997 camp
- Outcrop
- $\frac{090}{43}$  S<sub>1</sub> foliation
- $\frac{090}{05}$  S<sub>2</sub> foliation
- 090/25 Lination
- Geologic contact
- ▲— Thrust fault
- ∩ Syncline

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FIGURE 5

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

**PROPERTY GEOLOGY**

STICK PROPERTY

DRAWN/REVISED BY: LCP/AB	PROJECT: FP
FILE:C:\PP\STICK\ACAD97\ST-GEO.DWG	DATE: DECEMBER, 1997

### **Quartzite/Grit**

Immediately south of the Greenstone are dark grey to white, micaceous (biotite and/or muscovite) quartzites with quartzose grit interbands. The interbedded grits are medium to coarse grained, medium to dark grey with coarse quartz clasts up to 5 mm across. Locally some of the quartz clasts are a bluish grey colour. Occasional rusty brown spots in both the grits and quartzites indicate the presence of sparsely disseminated pyrite. Minor intervals of dark brown biotite phyllite up to 4 m thick are found within the quartzites and grits. These phyllites are interpreted as mafic greenstone sills or dykes. Map patterns at the northern end of the claim block suggest the Quartzite/Grit has a maximum thickness of 500 m.

### **Intermediate/Felsic Volcanic**

Structurally overlying the Quartzite/Grit unit is a predominantly silvery brown weathering, non-calcareous, muscovite-chlorite±biotite phyllite which is interpreted as a metamorphosed intermediate volcanic. Weathered phyllite locally exhibits a strong, dark brown manganese oxide stain. Porphyritic intervals are found throughout the unit but are most abundant in the lower half. The porphyritic rocks typically contain up to 20% white feldspar phenocrysts which are up to 3 cm across.

The intermediate volcanic package is a maximum of 400 m thick and contains a number of noteworthy intervals. Pale cream, muscovite-quartz phyllite forms bright orange weathering bands up to 5 m thick. These rocks are thought to be metamorphosed felsic volcanics. On a ridge in the central part of the property the muscovite-quartz phyllite contains scattered laminae

of fine foliaform galena and disseminated pyrite. Other lithologies include dark grey to black quartzites which are thinly interbanded with the muscovite-chlorite phyllite in the uppermost part of the section and a dark green chloritic phyllite which forms a distinctive marker horizon within the centre of the unit. The chloritic phyllite is about 40 m thick and contains minor disseminated biotite.

### **Calcareous Phyllite**

The structurally highest metasedimentary unit occurring on the claims is a silver to dark grey calcareous phyllite which characteristically weathers patchy opaque white. The main lithology is thinly interbanded with orange-brown to tan weathering calcareous quartz-calcite siltstone and non-calcareous muscovite-chlorite phyllite. The top of this unit is not preserved and the remaining portion is at least 40 m thick.

### **Garnet Schist/Limestone**

Gritty limestone with interbanded garnet schist outcrops southeast of the claim block and is believed to be stratigraphically equivalent to the Calcareous Phyllite. The garnet schist weathers brownish grey and is comprised of about 10% garnet porphyroblasts up to 2 cm across. This unit is at least 160 m thick.

## **INTRUSIVE UNITS**

### **Ultramafic**

A coarse-grained, magnetic, strongly serpentinized ultramafic structure overlies the Yukon-Tanana rocks. The lower contact of the ultramafic is interpreted as a thrust fault. Immediately above the lower contact, the ultramafic exhibits strong quartz-carbonate alteration with scattered occurrences of sulphides and mariposite. The quartz-carbonate alteration forms intense orange gossans on the hillside.

### **Quartz-Feldspar Porphyry**

Stratigraphic units on the central ridge of the property are intruded by a 5 to 7 m thick, fine-grained, dark grey, unfoliated, quartz-feldspar porphyry dyke. Feldspar phenocrysts commonly have rounded rims and are up to 5 cm long. Rounded quartz phenocrysts are up to 2 cm across. Fine, white feldspar microlites and scattered biotite grains occur within a fine-grained matrix. Contact on the margins of the porphyry are sharp.

## **STRUCTURE**

All metasedimentary and metavolcanic units contain two visible foliations (S1 and S2) which are correlated with two phases of fold deformation. Both foliations strike in a general east-west direction.

The earliest S1 foliation is a pervasive planar fabric parallel to compositional banding. No minor folds have been noted in association with the S1 foliation. On the northern part of the claims S1 dips steeply to the north or south and is at a high angle to the later S2 crenulation cleavage. On the southern portion of the claims S1 is gently dipping to the east and southeast and is crudely parallel with the S2 cleavage.

The later S2 foliation forms a spaced crenulation cleavage which dips gently to either the north or south. This foliation is axial planar to recumbent isoclinal phase 2 folds. Phase 2 folds noted in outcrop generally verge to the south. Minor fold axes and lineations formed by the intersection of S1 and S2 plunge gently to the west-northwest or east-southeast. These lineations define the general L2 lineation associated with the S2 cleavage.

The transition between the gentle (south) and steep (north) S1 foliation orientation defines a phase 2 synformal fold trace which trends east-west through the central part of the property. The S2 crenulation cleavage is axial planar to this synform. The synform is a macroscopic structure with the steep northern limb extending off the property to the north.

The contact between the ultramafic and underlying metasediments and metavolcanics has been interpreted as a regional thrust fault placing the ultramafic on top of the other units.

### **GOSSANS AND MINERAL SHOWINGS**

Three gossans and three mineral showings have been mapped and prospected on the Stick claims as shown on Figure 5. Rock specimens collected were sent to Chemex Labs Ltd. of North Vancouver, B.C. and geochemically analyzed for 32 elements by the Induced Coupled Plasma (ICP) technique. Samples returning values above the detection limit for silver, lead, zinc or copper were automatically reanalyzed for total contained metal. Select samples were also analyzed for gold by fire assay and atomic absorption. Certificates of Analysis are documented in Appendix II.

The southern gossan coincides with a zone of quartz-carbonate alteration in the ultramafic unit. The altered zone contains small amounts of mariposite and pyrite in an orange weathering matrix of strongly veined quartz and carbonate. The northern gossan occurs within a pyritic quartzite which contains more than 10% pyrite in the immediate vicinity of the gossan. The eastern gossan consists of rust coated fractures developed in muscovite-chlorite phyllite containing finely disseminated pyrite.

Lead-zinc mineralization is found in blocky pyritic quartzite talus in the eastern part of the property. Specimens contain 1 to 2 cm thick foliaform bands of disseminated pyrite (2 to 5%), sphalerite (2 to 5%) and galena (trace to 1%). A specimen of this material returned 3.49% zinc, 1.2 g/t silver and low values for copper and lead.

Fine-grained foliaform galena, pyrite and arsenopyrite occur in a felsic volcanic outcrop located on a central ridge top approximately 500 m west of the eastern gossan zone. The mineralized section is about 2 m thick and extends 3 m along the length of the outcrop. Sulphides comprise about 10% of this section. Random chips taken across the section (N111950) returned 40.7 g/t silver, 0.36% lead, 1240 ppm arsenic, 3.23% ppm barium and 425 ppm zinc.

Scorodite-altered arsenopyrite vein material was observed at several localities within the south-central part of the claim block. Vein material is strongly oxidized and weathers out into dispersed float trains no more than 1 m wide at the leading edge. One float specimen (059511M) returned 0.78 g/t gold and low values for all other metals.

## **REGIONAL CORRELATION**

Lithologies present on the Stick claims are generally similar to those encountered on the Coach, Tape, League, and northern Slap Shot claims however, there are problems with the correlations. All five claim groups contain a calcareous unit consisting of thinly interlaminated non-calcareous phyllite and calcareous siltstone. On the northern Slap Shot claims this calcareous unit has been metamorphosed to a hard, pale green calc-silicate unit. Regionally this unit would be correlated with Murphy's Unit 1 (Murphy and Timmerman, 1997).

If the rocks on the Stick claims are structurally upright, all other metasedimentary and metavolcanic units on the claims are older than the Calcareous Phyllite. These older(?) units do not correlate well with Murphy's description for Unit 1 as they contain significant amounts of chloritic phyllite (Greenstone) and muscovite-chlorite phyllite (Intermediate/Felsic Volcanic). Murphy's Unit 1 is dominantly light coloured quartzites and psammites.

The Greenstone on the northern side of the Stick claims correlates well with a greenstone occurring in the northeastern corner of the Tape property and the central portion of the Coach claims. The Coach property also contains an interval of porphyritic muscovite-chlorite phyllite. On the Coach however, the porphyritic phyllite occurs structurally above the calcareous phyllite rather than below it.

## PROPERTY GEOCHEMISTRY

In 1996 reconnaissance soil sampling was carried out at 100 m intervals along the claim lines. Additional contour sampling was done in 1997 at 100 m intervals over most of the property. Sample locations (Figure 6) are marked with 50 cm lath pickets bearing aluminum tags inscribed with the sample numbers.

Soil samples were sent to Chemex Labs where they were screened to -80 mesh, digested in nitric-aqua regia and geochemically analyzed for 32 elements using the ICP technique. The 1996 samples were also analyzed for gold by atomic absorption. Certificates of Analysis appear in Appendix II. Results for indicator elements (copper, lead, zinc, silver and arsenic) are plotted on Figures 7 to 11, respectively, while anomalous thresholds and peak values are as follows.

### ANOMALOUS THRESHOLDS AND PEAK VALUES

<u>Element</u>	<u>Threshold Values (ppm)</u>			<u>Peak Value</u>
	<u>Weak</u>	<u>Moderate</u>	<u>Strong</u>	
Copper	50	100	NA*	190
Lead	50	100	200	528
Zinc	200	500	1000	2200
Silver	1	2	NA*	4.2
Arsenic	20	50	100	5000

\*NA = not applicable

Scattered weak to strong multi-element anomalies occur in several areas on the property. The largest, most consistent anomaly is located in the northwestern portion of the property where a continuous line of samples taken over a length of 600 m across a southerly-facing slope returned

strongly anomalous lead values with weak to moderate zinc support. The target is underlain by the favourable Intermediate/Felsic Volcanic but no mineralization has been discovered in the area.

Gold analyses were not routinely performed on the 1997 samples however, a 1996 analysis returned up to 455 ppb from samples taken in the northern part of the property. Arsenic values are erratic ranging from 0 to 5000 ppm and are only poorly correlated with gold.

The majority of the soil geochemical anomalies on the property occur along the trace of the Intermediate/Felsic Volcanic. Samples taken in the vicinity of known mineral occurrences returned only weakly anomalous results.

## CONCLUSIONS AND RECOMMENDATIONS

The Stick property is underlain by a sequence of metamorphosed volcanic and sedimentary rocks belonging to the Yukon-Tanana Terrane. The most voluminous unit is the Intermediate/Felsic Volcanic which trends northwesterly across the claim block. This unit hosts pyritic gossans, foliaform mineral showings and the strongest soil geochemical anomalies. Regional correlations suggest that the Intermediate/Felsic Volcanic is not the same unit as hosts the Kudz Ze Kayah Deposit. The most significant mineral occurrence discovered to date consists of foliaform pyrite-sphalerite-galena observed in float and outcrop. The lateral extent of this mineralization is not known. Soil geochemical response is relatively subdued in the vicinity of this occurrence compared to anomalies in other areas where no mineralization has been found.

Although the presence of favourable volcanic stratigraphy coinciding with unexplained lead-zinc soil geochemical anomalies suggests potential for Kuroko-type VMS mineralization, the known occurrences are small and relatively low grade. Further exploration should be done on a low priority basis and include hand trenching along strike of the known mineral showings and in areas of anomalous soil geochemical response.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED



W.A. Wengzynowski, B.A.Sc.

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**APPENDIX I**

**AUTHOR'S STATEMENT OF QUALIFICATIONS**

## **STATEMENT OF QUALIFICATIONS**

I, William A. Wengzynowski, geological engineer, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia and residential address in North Vancouver, British Columbia, do hereby certify that:

1. I graduated from the University of British Columbia in 1993 with a B.A.Sc. in geological engineering, option 1, mineral and fuel exploration.
2. From 1983 to present, I have been actively engaged in mineral exploration in the Yukon Territory and am presently employed with Archer, Cathro & Associates (1981) Limited.
3. I have personally participated in and supervised the field work reported herein.

  
W.A. Wengzynowski, B.A.Sc.

**APPENDIX II**  
**CERTIFICATES OF ANALYSIS**



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

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## CERTIFICATE OF ANALYSIS A9737016

SAMPLE	PREP		Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo
	CODE		ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm
BB18954	201	202	< 0.2	1.07	206	90	< 0.5	< 2	0.07	< 0.5	3	12	7	2.08	< 10	< 1	0.12	40	0.13	285	1
BB18955	201	202	< 0.2	1.28	170	90	< 0.5	< 2	0.07	< 0.5	4	18	8	3.47	< 10	< 1	0.23	60	0.20	395	1
BB18956	201	202	0.2	1.30	140	160	0.5	< 2	0.24	0.5	6	7	13	3.13	< 10	< 1	0.22	80	0.27	790	2
BB18957	201	202	0.2	1.48	136	130	0.5	< 2	0.33	1.0	9	13	13	3.84	< 10	< 1	0.25	50	0.44	785	2
BB18958	201	202	0.2	1.23	20	130	0.5	< 2	0.35	< 0.5	7	8	9	4.75	< 10	< 1	0.30	30	0.21	875	2
BB18959	201	202	< 0.2	2.09	74	100	0.5	< 2	0.35	< 0.5	13	22	11	4.95	< 10	< 1	0.17	40	0.73	975	< 1
BB18960	201	202	< 0.2	1.73	102	140	0.5	< 2	0.20	< 0.5	9	22	14	3.38	< 10	< 1	0.15	40	0.54	905	1
BB18961	201	202	< 0.2	1.48	58	90	0.5	< 2	0.27	< 0.5	9	20	13	3.15	< 10	< 1	0.10	40	0.55	555	< 1
BB18962	201	202	< 0.2	1.21	28	100	< 0.5	< 2	0.46	0.5	6	16	10	3.39	< 10	< 1	0.13	30	0.35	560	1
BB18963	201	202	< 0.2	1.57	100	110	0.5	< 2	0.11	< 0.5	8	23	13	3.37	< 10	< 1	0.10	50	0.52	555	1
BB18964	201	202	< 0.2	1.60	116	130	0.5	< 2	0.43	< 0.5	9	26	14	3.37	< 10	< 1	0.18	50	0.62	615	1
BB18965	201	202	0.2	0.84	18	320	< 0.5	< 2	0.22	0.5	4	5	8	3.01	< 10	< 1	0.26	80	0.14	465	3
BB18966	201	202	< 0.2	2.57	8	200	< 0.5	< 2	0.75	< 0.5	29	121	97	4.80	< 10	< 1	0.10	< 10	1.78	1145	< 1
BB18967	201	202	< 0.2	1.52	46	140	0.5	< 2	0.31	0.5	12	48	21	3.15	< 10	< 1	0.17	40	0.78	865	1
BB18968	201	202	1.4	1.83	516	200	0.5	< 2	0.81	5.5	25	46	110	4.08	< 10	< 1	0.09	30	1.34	2740	< 1
BB18969	201	202	0.4	2.23	140	200	0.5	< 2	0.36	0.5	15	71	30	4.20	< 10	< 1	0.17	80	1.46	890	< 1
BB18970	201	202	< 0.2	1.46	138	120	1.0	< 2	0.09	2.0	6	4	12	3.05	< 10	< 1	0.13	140	0.43	1135	3
BB18971	201	202	0.2	1.29	40	90	0.5	< 2	0.34	1.0	11	7	15	3.90	< 10	< 1	0.20	60	0.35	1270	1
BB18972	201	202	< 0.2	1.94	90	90	0.5	< 2	0.15	0.5	15	69	19	4.34	< 10	< 1	0.09	30	1.11	820	< 1
BB18973	201	202	< 0.2	2.72	126	170	0.5	< 2	0.42	0.5	24	112	71	4.92	< 10	< 1	0.10	30	2.01	945	< 1
BB18974	201	202	< 0.2	1.81	128	130	1.0	< 2	0.28	< 0.5	16	20	32	3.14	< 10	< 1	0.18	60	1.01	705	1
BB18975	201	202	< 0.2	2.19	12	110	1.0	< 2	0.29	< 0.5	12	42	10	3.33	< 10	< 1	0.07	10	1.72	450	< 1
BB18976	201	202	< 0.2	2.49	46	150	1.0	< 2	0.24	< 0.5	14	55	20	3.99	< 10	1	0.07	20	0.99	800	< 1
BB18977	201	202	< 0.2	1.46	150	60	< 0.5	< 2	0.13	< 0.5	6	13	18	2.75	< 10	< 1	0.05	10	0.35	280	< 1
BB18978	201	202	< 0.2	2.43	294	130	0.5	< 2	0.28	< 0.5	19	75	23	5.13	< 10	< 1	0.08	10	0.98	1035	< 1
BB18979	201	202	< 0.2	1.90	226	220	1.0	< 2	0.22	< 0.5	9	25	13	3.38	< 10	< 1	0.11	30	0.63	380	< 1
BB18980	201	202	< 0.2	2.44	112	230	< 0.5	< 2	0.53	1.0	20	96	43	4.42	< 10	< 1	0.11	20	1.69	895	< 1
BB18981	201	202	< 0.2	2.03	918	120	0.5	< 2	0.35	< 0.5	15	80	22	5.61	< 10	< 1	0.14	20	1.07	760	2
BB18982	201	202	< 0.2	2.46	158	130	0.5	< 2	0.48	< 0.5	21	123	27	5.17	< 10	< 1	0.11	10	1.62	1090	< 1
BB18983	201	202	< 0.2	2.54	150	140	0.5	< 2	0.60	< 0.5	25	116	72	4.47	< 10	< 1	0.24	40	1.83	910	< 1
BB18984	201	202	0.2	1.28	236	110	0.5	< 2	0.57	0.5	3	9	11	1.83	< 10	< 1	0.14	80	0.20	355	1
BB18985	201	202	< 0.2	1.67	144	100	0.5	< 2	0.15	0.5	8	25	12	3.00	< 10	< 1	0.12	40	0.49	475	< 1
BB18986	201	202	< 0.2	1.50	58	90	0.5	< 2	0.31	< 0.5	8	17	11	3.02	< 10	< 1	0.12	40	0.39	820	1
BB18987	201	202	< 0.2	0.72	26	120	< 0.5	< 2	0.26	1.0	8	9	8	2.73	< 10	< 1	0.17	20	0.10	1590	4
BB18988	201	202	< 0.2	0.85	122	90	< 0.5	< 2	0.02	< 0.5	4	9	14	2.02	< 10	< 1	0.14	50	0.05	415	2
BB19176	201	202	0.6	1.12	92	260	< 0.5	< 2	0.12	13.0	8	4	17	7.98	< 10	< 1	0.50	20	0.21	1425	7
BB19213	201	202	0.2	3.67	534	200	2.0	< 2	0.46	2.0	74	120	92	8.37	< 10	< 1	0.21	30	1.90	3580	1
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BB19215	201	202	< 0.2	1.97	380	210	1.0	< 2	0.10	0.5	11	41	22	4.25	< 10	< 1	0.20	40	0.64	740	1
BB19216	201	202	0.2	0.94	96	180	< 0.5	< 2	0.05	< 0.5	4	6	8	2.83	< 10	< 1	0.34	40	0.10	530	1

CERTIFICATION:

*Hart Buchler*



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## CERTIFICATE OF ANALYSIS A9737016

SAMPLE	PREP		Na	Ni	P	Pb	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
	CODE		%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
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BB18955	201	202	< 0.01	9	880	58	< 2	< 1	10	< 0.01	< 10	< 10	28	< 10	132
BB18956	201	202	0.02	7	770	152	< 2	2	44	< 0.01	< 10	< 10	11	< 10	154
BB18957	201	202	< 0.01	12	920	56	< 2	5	40	< 0.01	< 10	< 10	28	< 10	270
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BB18959	201	202	< 0.01	13	1210	24	< 2	4	21	0.02	< 10	< 10	53	< 10	90
BB18960	201	202	< 0.01	16	800	34	< 2	3	16	0.02	< 10	< 10	33	< 10	90
BB18961	201	202	< 0.01	16	960	20	< 2	3	19	0.02	< 10	< 10	32	< 10	86
BB18962	201	202	< 0.01	10	990	24	< 2	< 1	29	0.01	< 10	< 10	30	< 10	102
BB18963	201	202	< 0.01	17	550	20	< 2	2	11	0.03	< 10	< 10	34	< 10	76
BB18964	201	202	< 0.01	15	640	44	< 2	4	24	0.03	< 10	< 10	37	< 10	124
BB18965	201	202	0.03	5	990	202	< 2	1	109	< 0.01	< 10	< 10	8	< 10	192
BB18966	201	202	< 0.01	44	1000	14	< 2	10	25	0.14	< 10	< 10	129	< 10	80
BB18967	201	202	< 0.01	18	950	248	< 2	4	26	0.02	< 10	< 10	45	< 10	288
BB18968	201	202	< 0.01	86	1090	316	< 2	7	42	< 0.01	< 10	< 10	45	< 10	684
BB18969	201	202	< 0.01	26	630	126	< 2	11	32	0.04	< 10	< 10	68	< 10	288
BB18970	201	202	< 0.01	5	450	264	< 2	2	12	< 0.01	< 10	< 10	5	< 10	780
BB18971	201	202	< 0.01	7	520	100	< 2	4	22	< 0.01	< 10	< 10	13	< 10	190
BB18972	201	202	< 0.01	24	560	202	< 2	5	12	0.05	< 10	< 10	92	< 10	426
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BB18974	201	202	< 0.01	18	820	16	< 2	3	16	< 0.01	< 10	< 10	29	< 10	86
BB18975	201	202	< 0.01	27	360	10	< 2	4	18	0.08	< 10	< 10	54	< 10	66
BB18976	201	202	< 0.01	27	1420	16	< 2	1	25	0.01	< 10	< 10	58	< 10	68
BB18977	201	202	0.03	8	720	10	< 2	< 1	11	0.03	< 10	< 10	34	< 10	50
BB18978	201	202	< 0.01	24	1170	16	< 2	3	24	0.06	< 10	< 10	97	< 10	104
BB18979	201	202	< 0.01	13	740	14	< 2	2	17	0.03	< 10	< 10	49	< 10	76
BB18980	201	202	< 0.01	34	720	30	< 2	8	24	0.09	< 10	< 10	105	< 10	158
BB18981	201	202	< 0.01	28	710	26	< 2	5	19	0.09	< 10	< 10	97	< 10	78
BB18982	201	202	< 0.01	35	880	12	< 2	6	23	0.10	< 10	< 10	113	< 10	106
BB18983	201	202	< 0.01	45	630	44	< 2	12	29	0.09	< 10	< 10	91	< 10	150
BB18984	201	202	0.01	6	1260	82	< 2	1	29	< 0.01	< 10	< 10	13	< 10	118
BB18985	201	202	< 0.01	18	490	30	< 2	3	14	0.03	< 10	< 10	33	< 10	106
BB18986	201	202	< 0.01	13	530	36	< 2	1	21	0.02	< 10	< 10	26	< 10	110
BB18987	201	202	0.01	7	750	32	< 2	< 1	15	< 0.01	< 10	< 10	32	< 10	114
BB18988	201	202	< 0.01	8	430	14	< 2	< 1	9	< 0.01	< 10	< 10	38	< 10	82
BB19176	201	202	0.01	4	710	40	< 2	4	54	< 0.01	< 10	< 10	20	< 10	2200
BB19213	201	202	< 0.01	75	600	24	< 2	29	23	< 0.01	< 10	< 10	134	< 10	254
BB19214	201	202	< 0.01	25	740	158	< 2	7	39	< 0.01	< 10	< 10	49	< 10	198
BB19215	201	202	< 0.01	16	960	80	< 2	5	36	< 0.01	< 10	< 10	43	< 10	186
BB19216	201	202	< 0.01	4	950	256	< 2	1	73	< 0.01	< 10	< 10	9	< 10	144

CERTIFICATION:

*Hart Buchler*



# 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: EXPATRIATE RESOURCES LTD.  
 C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
 P.O. BOX 4127  
 WHITEHORSE, YT  
 Y1A 3S9

Page Number : 2-A  
 Total Pages : 2  
 Certificate Date: 18-AUG-97  
 Invoice No. : I9737016  
 P.O. Number :  
 Account : MPO

Project : FP-STICK  
 Comments:

## CERTIFICATE OF ANALYSIS A9737016

SAMPLE	PREP CODE		Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo
			ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm
BB19217	201	202	< 0.2	1.49	198	160	< 0.5	< 2	0.09	0.5	9	27	14	4.22	< 10	< 1	0.22	30	0.47	625	1
BB19218	201	202	0.6	4.70	170	340	< 0.5	< 2	0.71	< 0.5	64	171	190	7.86	10	< 1	0.16	10	4.03	2340	< 1
BB19219	201	202	< 0.2	3.24	76	140	0.5	< 2	0.70	< 0.5	42	116	111	6.13	< 10	< 1	0.11	30	2.20	1590	< 1
BB19220	201	202	0.2	2.44	382	200	0.5	< 2	0.59	7.0	29	71	73	5.39	< 10	< 1	0.23	50	1.61	1035	< 1
BB19221	201	202	< 0.2	1.85	218	180	0.5	< 2	0.34	1.0	19	37	51	4.62	< 10	< 1	0.15	80	1.05	1090	1
BB19222	201	202	< 0.2	1.36	126	130	0.5	< 2	0.29	0.5	13	21	33	3.91	< 10	< 1	0.16	80	0.65	725	2
BB19223	201	202	0.2	2.91	204	200	0.5	< 2	0.66	2.5	35	109	108	6.12	< 10	< 1	0.13	60	2.21	1575	< 1
BB19224	201	202	< 0.2	3.73	82	160	< 0.5	< 2	0.84	< 0.5	34	152	137	6.00	10	< 1	0.19	< 10	3.15	1210	< 1
BB19225	201	202	< 0.2	0.92	14	80	0.5	< 2	0.20	< 0.5	6	16	12	1.51	< 10	< 1	0.19	80	0.35	640	< 1
BB19226	201	202	< 0.2	1.02	72	80	0.5	< 2	0.21	0.5	6	13	16	2.92	< 10	< 1	0.16	60	0.25	1640	1
BB19227	201	202	0.4	1.61	72	160	1.0	< 2	0.58	0.5	17	9	11	5.29	< 10	< 1	0.40	50	0.27	2600	1
BB19228	201	202	< 0.2	1.06	18	100	0.5	< 2	0.13	< 0.5	8	24	12	2.43	< 10	< 1	0.15	40	0.36	565	1
BB19229	201	202	< 0.2	2.51	24	70	< 0.5	< 2	0.45	< 0.5	21	91	68	4.03	< 10	< 1	0.09	< 10	1.85	615	< 1
BB19230	201	202	< 0.2	0.48	24	60	< 0.5	< 2	0.10	< 0.5	3	5	8	0.65	< 10	< 1	0.16	70	0.13	330	< 1
BB19231	201	202	< 0.2	3.08	354	100	0.5	< 2	0.40	< 0.5	42	145	85	7.04	< 10	< 1	0.09	10	1.97	1345	< 1
BB19232	201	202	< 0.2	3.59	12	160	< 0.5	< 2	0.63	< 0.5	33	139	102	5.61	< 10	< 1	0.08	< 10	2.91	920	< 1
BB19233	201	202	0.2	2.82	26	190	0.5	< 2	0.27	0.5	32	134	74	5.25	< 10	< 1	0.08	< 10	1.70	2050	< 1
BB19234	201	202	< 0.2	2.80	20	200	0.5	< 2	0.26	< 0.5	30	126	46	5.31	< 10	< 1	0.15	< 10	1.61	1670	< 1
BB19235	201	202	< 0.2	2.48	280	140	0.5	< 2	0.27	0.5	30	80	50	4.97	< 10	1	0.16	50	1.36	1220	< 1
BB19236	201	202	< 0.2	1.72	114	100	0.5	< 2	0.55	2.0	16	30	32	4.52	< 10	< 1	0.10	50	0.83	670	< 1
BB19237	201	202	0.2	2.78	154	230	0.5	< 2	0.51	1.0	38	125	66	5.56	< 10	< 1	0.25	40	1.62	1595	< 1
BB19238	201	202	< 0.2	3.00	102	160	0.5	< 2	0.69	1.5	28	122	71	4.75	< 10	< 1	0.21	40	1.97	1100	< 1
BB19239	201	202	< 0.2	3.90	30	260	< 0.5	< 2	0.64	0.5	34	149	147	5.47	< 10	< 1	0.34	10	2.58	1005	< 1
BB19240	201	202	0.2	4.15	42	180	1.0	< 2	0.94	3.0	35	113	71	5.36	10	< 1	0.36	40	1.92	1045	< 1
BB19241	201	202	0.4	6.34	66	540	0.5	< 2	2.53	< 0.5	34	45	49	7.43	10	< 1	1.14	10	1.85	840	< 1
BB19242	201	202	1.0	1.62	< 2	250	1.0	< 2	0.26	0.5	30	29	79	5.82	< 10	< 1	0.18	30	0.31	1010	6
BB19243	201	202	0.2	4.00	34	270	0.5	< 2	0.99	0.5	24	90	48	4.76	10	< 1	0.44	30	1.85	725	< 1
BB19244	201	202	0.6	3.64	136	170	0.5	< 2	1.07	5.5	35	328	72	4.87	< 10	< 1	0.26	30	2.80	860	< 1

CERTIFICATION:

*David Buchler*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver  
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PHONE: 604-984-0221 FAX: 604-984-0218

To: EXPATRIATE RESOURCES LTD.  
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
P.O. BOX 4127  
WHITEHORSE, YT  
Y1A 3S9

Project : FP-STICK  
Comments:

Page Number : 2-B  
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Certificate Date: 18-AUG-97  
Invoice No. : I9737016  
P.O. Number :  
Account : MPO

## CERTIFICATE OF ANALYSIS A9737016

SAMPLE	PREP CODE		Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
	BB19217	201	202	< 0.01	14	850	70	< 2	1	36	0.01	< 10	< 10	38	< 10
BB19218	201	202	< 0.01	97	540	2	< 2	38	20	0.22	< 10	< 10	216	< 10	118
BB19219	201	202	< 0.01	109	1630	10	< 2	12	27	0.07	< 10	< 10	93	< 10	154
BB19220	201	202	0.01	61	940	28	< 2	7	51	0.08	< 10	< 10	56	< 10	862
BB19221	201	202	< 0.01	35	810	54	< 2	8	33	0.01	< 10	< 10	42	< 10	198
BB19222	201	202	0.01	23	1080	62	< 2	3	48	< 0.01	< 10	< 10	21	< 10	170
BB19223	201	202	< 0.01	59	800	70	< 2	9	45	0.18	< 10	< 10	106	< 10	242
BB19224	201	202	< 0.01	60	610	4	< 2	10	18	0.29	< 10	< 10	155	< 10	114
BB19225	201	202	< 0.01	8	480	54	< 2	1	13	0.01	< 10	< 10	14	< 10	62
BB19226	201	202	0.03	8	620	40	< 2	4	13	0.01	< 10	< 10	14	< 10	142
BB19227	201	202	< 0.01	8	770	52	< 2	7	57	< 0.01	< 10	< 10	17	< 10	86
BB19228	201	202	< 0.01	12	530	54	< 2	1	10	0.06	< 10	< 10	41	< 10	92
BB19229	201	202	< 0.01	37	830	4	< 2	8	14	0.17	< 10	< 10	105	< 10	68
BB19230	201	202	< 0.01	3	390	42	< 2	< 1	7	< 0.01	< 10	< 10	5	< 10	134
BB19231	201	202	< 0.01	65	560	14	< 2	32	16	0.03	< 10	< 10	117	< 10	124
BB19232	201	202	< 0.01	53	540	< 2	< 2	10	15	0.25	< 10	< 10	146	< 10	94
BB19233	201	202	< 0.01	50	960	4	< 2	6	15	0.07	< 10	< 10	112	< 10	100
BB19234	201	202	< 0.01	57	830	8	< 2	7	14	0.08	< 10	< 10	108	< 10	92
BB19235	201	202	< 0.01	70	720	60	< 2	5	22	0.07	< 10	< 10	64	< 10	228
BB19236	201	202	< 0.01	34	820	34	< 2	4	29	0.01	< 10	< 10	29	< 10	350
BB19237	201	202	< 0.01	94	1090	76	< 2	10	31	0.08	< 10	< 10	84	< 10	262
BB19238	201	202	0.01	77	1010	24	< 2	8	37	0.11	< 10	< 10	82	< 10	260
BB19239	201	202	< 0.01	69	620	8	< 2	6	22	0.24	< 10	< 10	129	< 10	200
BB19240	201	202	0.04	84	880	38	< 2	10	63	0.11	< 10	< 10	87	< 10	602
BB19241	201	202	0.27	25	1810	8	< 2	15	213	0.08	< 10	< 10	153	< 10	226
BB19242	201	202	< 0.01	92	1110	68	< 2	6	14	< 0.01	< 10	< 10	69	< 10	254
BB19243	201	202	0.03	66	870	20	< 2	7	43	0.10	< 10	< 10	74	< 10	222
BB19244	201	202	0.02	194	600	42	< 2	11	50	0.08	< 10	< 10	68	< 10	686

CERTIFICATION:



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
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To: EXPATRIATE RESOURCES LTD.  
 C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
 P.O. BOX 4127  
 WHITEHORSE, YT  
 Y1A 3S9

Page Number : 1-A  
 Total Pages : 1  
 Certificate Date: 18-AUG-97  
 Invoice No. : 19737035  
 P.O. Number :  
 Account : MPO

Project : FP-STICK  
 Comments:

## CERTIFICATE OF ANALYSIS A9737035

SAMPLE	PREP CODE		Au g/t	Ag	Cu	Pb	Zn	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K
	FA+AA		g/t	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	
N111949	208	226	< 0.005	0.8	< 0.01	0.04	0.03	< 1	0.86	< 10	200	< 5	< 10	0.12	< 5	< 5	40	25	3.50	< 10	0.45
N111950	208	226	< 0.005	40.7	< 0.01	0.36	0.04	38	2.31	1240	32300	< 5	90	0.10	< 5	< 5	100	10	2.63	< 10	0.67

CERTIFICATION: Hart Bickler



# Chemex Labs Ltd.

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P.O. BOX 4127  
WHITEHORSE, YT  
Y1A 3S9

Project: FP-STICK  
Comments:

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Total Pages : 1  
Certificate Date: 18-AUG-97  
Invoice No. : I9737035  
P.O. Number :  
Account : MPO

## CERTIFICATE OF ANALYSIS

### A9737035

SAMPLE	PREP CODE		Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
			%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
N111949	208	226	0.11	50	5	0.03	< 5	900	365	< 10	< 5	30	< 0.01	< 20	< 20	< 20	< 20	275
N111950	208	226	0.01	30	5	0.04	< 5	700	4940	< 10	< 5	105	< 0.01	20	100	< 20	< 20	425

CERTIFICATION:

*Hart Bisher*



# Chemex Labs Ltd.

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Y1A 3S9

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Total Pages : 1  
Certificate Date: 24-AUG-97  
Invoice No. : 19738317  
P.O. Number :  
Account : MPO

Project : F.P.-STICK  
Comments:

## CERTIFICATE OF ANALYSIS A9738317

SAMPLE	PREP CODE	Ag ppm	Al %	As 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	Mo ppm
N111951	205 294	0.2	0.68	86	70	< 0.5	< 2	0.16	< 0.5	6	65	13	3.56	< 10	< 1	0.31	30	0.13	75	4
N111952	205 294	1.2	1.35	12	30	< 0.5	< 2	4.50	>100.0	29	53	25	7.34	< 10	< 1	0.27	< 10	0.67	1715	1
N111953	205 294	0.4	0.48	14	80	< 0.5	< 2	0.87	36.0	13	96	14	3.61	< 10	< 1	0.27	< 10	0.17	620	3
N111954	205 294	0.6	0.82	6	50	< 0.5	< 2	0.52	>100.0	13	77	13	2.53	< 10	< 1	0.45	10	0.14	350	1
N111955	205 294	0.2	0.09	38	20	< 0.5	< 2	< 0.01	< 0.5	1	83	1	3.72	< 10	< 1	0.09	< 10	< 0.01	5	6

CERTIFICATION: *B. Coughlin*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

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WHITEHORSE, YT  
Y1A 3S9

Project : F.P.-STICK  
Comments:

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Certificate Date: 24-AUG-97  
Invoice No. : 19738317  
P.O. Number :  
Account : MPO

## CERTIFICATE OF ANALYSIS

### A9738317

SAMPLE	PREP CODE	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N111951	205 294	0.03	4	670	24	< 2	1	9	< 0.01	< 10	< 10	8	< 10	12
N111952	205 294	< 0.01	16	1240	170	4	8	100	< 0.01	< 10	< 10	30	< 10	>10000
N111953	205 294	< 0.01	12	630	36	< 2	3	24	< 0.01	< 10	< 10	8	< 10	5910
N111954	205 294	< 0.01	9	850	38	< 2	2	20	< 0.01	< 10	< 10	6	< 10	>10000
N111955	205 294	0.03	3	30	58	< 2	< 1	10	< 0.01	< 10	< 10	< 1	< 10	54

CERTIFICATION:



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WHITEHORSE, YT  
Y1A 3S9

Project : FP-STICK  
Comments:

Page Number : 1-A  
Total Pages : 1  
Certificate Date: 24-AUG-97  
Invoice No. : 19738318  
P.O. Number :  
Account : MPO

## CERTIFICATE OF ANALYSIS

### A9738318

SAMPLE	PREP CODE		Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo
			ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm
BB19245	201	202	< 0.2	1.08	126	100	< 0.5	< 2	0.05	1.0	6	14	16	3.53	< 10	< 1	0.16	20	0.22	350	3
BB19246	201	202	< 0.2	1.30	1145	240	< 0.5	< 2	0.06	0.5	4	11	18	3.64	< 10	< 1	0.16	30	0.16	340	2
BB19247	201	202	< 0.2	1.22	1870	220	0.5	< 2	0.29	4.0	15	5	15	4.19	< 10	< 1	0.19	70	0.27	1650	3
BB19248	201	202	0.2	0.97	30	100	0.5	< 2	0.33	3.0	8	3	11	3.00	< 10	< 1	0.34	50	0.16	1035	3
BB19249	201	202	< 0.2	1.31	460	90	0.5	< 2	0.29	3.5	11	5	11	4.12	< 10	< 1	0.24	60	0.34	1625	4
BB19250	201	202	< 0.2	1.46	78	70	0.5	< 2	0.39	1.5	12	5	15	4.98	< 10	< 1	0.16	50	0.57	2810	2
BB19251	201	202	< 0.2	1.16	66	50	0.5	< 2	0.26	0.5	10	18	14	2.83	< 10	< 1	0.17	50	0.53	640	< 1
BB19252	201	202	< 0.2	0.74	38	50	0.5	< 2	0.28	0.5	5	6	9	1.73	< 10	< 1	0.13	30	0.35	515	1
BB19253	201	202	< 0.2	0.79	152	60	0.5	< 2	0.19	< 0.5	6	5	16	2.21	< 10	< 1	0.15	40	0.30	620	4
BB19254	201	202	0.2	2.36	66	150	0.5	< 2	0.58	1.5	22	86	34	4.84	< 10	< 1	0.49	40	1.53	995	< 1
BB19255	201	202	0.6	1.45	40	110	0.5	< 2	0.37	0.5	12	18	22	4.02	< 10	< 1	0.25	30	0.53	695	3
BB19256	201	202	< 0.2	1.74	56	100	0.5	< 2	0.24	1.5	14	25	33	3.69	< 10	< 1	0.15	40	0.54	765	3
BB19257	201	202	< 0.2	1.30	180	100	0.5	< 2	0.30	< 0.5	9	17	15	2.90	< 10	< 1	0.17	40	0.39	545	1
BB19258	201	202	< 0.2	2.75	78	140	0.5	< 2	0.66	0.5	22	42	17	5.80	10	< 1	0.74	30	1.18	1235	< 1
BB19259	201	202	< 0.2	1.53	232	100	0.5	< 2	0.28	< 0.5	11	20	8	3.47	< 10	< 1	0.22	30	0.53	590	3
BB19260	201	202	< 0.2	1.68	316	90	< 0.5	< 2	0.08	0.5	12	55	23	3.97	< 10	< 1	0.13	40	0.77	630	2
BB19261	201	202	< 0.2	1.45	628	80	0.5	< 2	0.33	0.5	14	27	25	3.06	< 10	< 1	0.22	80	0.74	745	1
BB19262	201	202	0.2	1.91	1815	90	1.5	< 2	0.60	0.5	12	20	19	4.12	< 10	< 1	0.26	70	0.73	860	1
BB19263	201	202	< 0.2	1.85	750	70	1.0	< 2	0.18	< 0.5	14	17	23	4.89	< 10	< 1	0.19	70	0.55	815	1
BB19264	201	202	0.2	1.64	1975	100	1.5	2	0.27	0.5	15	32	18	4.19	< 10	< 1	0.21	70	0.67	1140	< 1
BB19265	201	202	< 0.2	2.06	234	190	0.5	< 2	0.21	1.0	15	59	29	4.02	< 10	< 1	0.11	50	1.01	760	3
BB19266	201	202	< 0.2	1.39	408	120	< 0.5	< 2	0.17	0.5	10	55	19	3.47	< 10	< 1	0.12	10	0.56	985	1
BB19267	201	202	0.2	0.99	684	190	0.5	< 2	0.11	1.0	6	11	22	2.80	< 10	< 1	0.26	50	0.22	490	3
BB19268	201	202	0.2	1.22	860	160	0.5	< 2	0.08	0.5	6	17	27	2.92	< 10	< 1	0.19	40	0.27	345	3
BB19269	201	202	< 0.2	1.20	200	120	1.0	< 2	0.06	< 0.5	7	5	18	2.09	< 10	< 1	0.28	60	0.23	795	3
BB19270	201	202	0.2	1.07	772	200	0.5	< 2	0.20	2.0	10	11	25	3.00	< 10	< 1	0.29	50	0.30	1195	3
BB19271	201	202	1.0	1.52	1220	220	0.5	2	0.17	2.5	16	42	37	3.53	< 10	< 1	0.17	30	0.62	615	1
BB19272	201	202	< 0.2	1.66	444	110	0.5	< 2	0.04	0.5	19	39	49	5.04	< 10	< 1	0.11	40	0.39	825	4
BB19273	201	202	< 0.2	1.47	448	80	< 0.5	< 2	0.07	0.5	17	29	123	6.08	< 10	< 1	0.11	40	0.33	700	3
BB19274	201	202	< 0.2	1.24	780	150	0.5	< 2	0.12	1.5	7	37	30	3.24	< 10	< 1	0.10	30	0.33	385	3
BB19275	201	202	0.2	1.10	382	180	< 0.5	< 2	0.06	0.5	5	26	43	3.14	< 10	< 1	0.10	20	0.26	300	3
BB19276	201	202	1.0	1.63	514	260	0.5	< 2	0.07	1.0	7	31	74	3.95	< 10	< 1	0.12	30	0.34	275	6
BB19277	201	202	0.6	0.88	1060	120	< 0.5	< 2	0.06	0.5	5	16	35	2.91	< 10	< 1	0.10	10	0.18	270	3
BB19278	201	202	< 0.2	1.02	376	100	< 0.5	< 2	0.04	0.5	7	32	30	2.85	< 10	< 1	0.06	10	0.18	555	1
BB19279	201	202	< 0.2	1.17	328	90	< 0.5	< 2	0.05	< 0.5	8	47	22	2.95	< 10	< 1	0.08	10	0.35	800	1
BB19280	201	202	1.2	0.88	4640	250	1.5	< 2	0.14	17.0	37	11	68	6.64	< 10	< 1	0.42	30	0.07	1010	7

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: EXPATRIATE RESOURCES LTD.  
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
P.O. BOX 4127  
WHITEHORSE, YT  
Y1A 3S9

Project: FP-STICK  
Comments:

Page Number : 1-B  
Total Pages : 1  
Certificate Date: 24-AUG-97  
Invoice No. : 19738318  
P.O. Number :  
Account : MPO

## CERTIFICATE OF ANALYSIS A9738318

SAMPLE	PREP CODE	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
BB19245	201 202	< 0.01	9	560	36	< 2	1	40	0.01	< 10	< 10	23	< 10	146
BB19246	201 202	< 0.01	9	1040	86	< 2	1	45	< 0.01	< 10	< 10	20	< 10	216
BB19247	201 202	0.01	9	1160	146	< 2	2	91	< 0.01	< 10	< 10	9	< 10	612
BB19248	201 202	< 0.01	4	1050	188	< 2	1	75	< 0.01	< 10	< 10	5	< 10	260
BB19249	201 202	< 0.01	6	770	96	< 2	3	56	< 0.01	< 10	< 10	11	< 10	462
BB19250	201 202	< 0.01	7	900	14	< 2	5	26	< 0.01	< 10	< 10	18	< 10	136
BB19251	201 202	< 0.01	14	420	24	< 2	4	14	< 0.01	< 10	< 10	19	< 10	68
BB19252	201 202	< 0.01	7	950	28	< 2	1	17	< 0.01	< 10	< 10	8	< 10	56
BB19253	201 202	< 0.01	11	620	36	< 2	1	20	< 0.01	< 10	< 10	8	< 10	62
BB19254	201 202	< 0.01	50	1290	28	< 2	9	32	0.09	< 10	< 10	71	< 10	180
BB19255	201 202	< 0.01	16	1050	68	< 2	4	30	0.01	< 10	< 10	37	< 10	114
BB19256	201 202	< 0.01	18	720	18	< 2	3	15	0.04	< 10	< 10	49	< 10	198
BB19257	201 202	< 0.01	12	910	16	< 2	2	16	0.01	< 10	< 10	38	< 10	52
BB19258	201 202	< 0.01	14	1780	22	< 2	12	27	0.15	< 10	< 10	142	< 10	70
BB19259	201 202	< 0.01	7	1040	16	< 2	3	15	0.03	< 10	< 10	76	< 10	40
BB19260	201 202	< 0.01	19	700	68	< 2	2	23	0.01	< 10	< 10	63	< 10	122
BB19261	201 202	< 0.01	15	890	30	< 2	5	21	0.03	< 10	< 10	32	< 10	92
BB19262	201 202	< 0.01	11	850	28	< 2	5	29	0.01	< 10	< 10	36	< 10	104
BB19263	201 202	< 0.01	10	740	24	< 2	3	14	0.02	< 10	< 10	35	< 10	70
BB19264	201 202	< 0.01	23	710	44	< 2	4	18	0.01	< 10	< 10	33	< 10	100
BB19265	201 202	< 0.01	33	840	54	< 2	5	22	0.01	< 10	< 10	50	< 10	264
BB19266	201 202	< 0.01	28	880	74	< 2	< 1	13	0.03	< 10	< 10	58	< 10	112
BB19267	201 202	< 0.01	10	740	74	< 2	1	61	< 0.01	< 10	< 10	13	< 10	120
BB19268	201 202	< 0.01	17	750	140	< 2	1	52	< 0.01	< 10	< 10	19	< 10	190
BB19269	201 202	< 0.01	5	680	38	< 2	1	23	< 0.01	< 10	< 10	9	< 10	78
BB19270	201 202	< 0.01	13	830	54	< 2	2	64	< 0.01	< 10	< 10	13	< 10	184
BB19271	201 202	< 0.01	49	700	406	< 2	3	59	0.02	< 10	< 10	30	< 10	312
BB19272	201 202	< 0.01	47	580	64	< 2	3	11	< 0.01	< 10	< 10	40	< 10	252
BB19273	201 202	< 0.01	45	1040	20	< 2	2	8	< 0.01	< 10	< 10	37	< 10	174
BB19274	201 202	< 0.01	29	800	70	< 2	< 1	18	< 0.01	< 10	< 10	35	< 10	188
BB19275	201 202	< 0.01	24	460	44	< 2	1	18	0.02	< 10	< 10	37	< 10	184
BB19276	201 202	< 0.01	33	570	230	< 2	3	34	0.02	< 10	< 10	34	< 10	260
BB19277	201 202	< 0.01	18	630	190	< 2	1	37	0.01	< 10	< 10	22	< 10	176
BB19278	201 202	< 0.01	20	740	26	< 2	< 1	13	< 0.01	< 10	< 10	38	< 10	90
BB19279	201 202	< 0.01	26	840	20	< 2	< 1	9	< 0.01	< 10	< 10	42	< 10	82
BB19280	201 202	0.01	14	1880	96	< 2	1	217	< 0.01	< 10	10	6	< 10	528

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: EXPATRIATE RESOURCES LTD.  
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
P.O. BOX 4127  
WHITEHORSE, YT  
Y1A 3S9

Page Number : 1  
Total Pages : 1  
Certificate Date: 25-AUG-97  
Invoice No. : I9739094  
P.O. Number :  
Account : MPO

Project : F.P.-STICK  
Comments:

\* CORRECTED COPY

## CERTIFICATE OF ANALYSIS

A9739094

SAMPLE	PREP CODE	Zn %										
N111952	244 --	3.49										
N111954	244 --	2.12										

CERTIFICATION:



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 Y1A 3S9

Page Number : 1-A  
 Total Pages : 1  
 Certificate Date: 29-SEP-97  
 Invoice No. : I9743362  
 P.O. Number : NONE  
 Account : MPO

Project : FP STICK  
 Comments:

\* CORRECTED COPY

<b>CERTIFICATE OF ANALYSIS</b>	<b>A9743362</b>
--------------------------------	-----------------

SAMPLE	PREP CODE		Au ppb	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn
			FA+AA	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm
059511M	205	226	780	0.6	0.24	>10000	50	0.5	34	0.05	92.0	10	10	28	>15.00	< 10	< 1	0.19	10	0.01	40
N112229	205	226	-----	3.0	0.49	>10000	130	< 0.5	6	0.03	2.5	4	124	15	1.50	< 10	< 1	0.40	30	0.04	20
N112230	205	226	-----	< 0.2	0.30	2900	90	3.0	< 2	6.75	< 0.5	1	12	24	1.08	< 10	< 1	0.04	< 10	2.96	230

CERTIFICATION: Hart Buehler



# 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: EXPATRIATE RESOURCES LTD.  
 C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
 P.O. BOX 4127  
 WHITEHORSE, YT  
 Y1A 3S9

Page Number : 1-B  
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 Certificate Date: 29-SEP-97  
 Invoice No. : I9743362  
 P.O. Number : NONE  
 Account : MPO

Project : FP STICK  
 Comments:

\* CORRECTED COPY

## CERTIFICATE OF ANALYSIS A9743362

SAMPLE	PREP CODE		Mo	Na	Ni	P	Pb	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
			ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
059511M	205	226	5	< 0.01	< 1	< 10	40	64	1	152	< 0.01	< 10	< 10	1	30	26
N112229	205	226	4	0.01	4	220	438	4	< 1	9	< 0.01	< 10	< 10	3	< 10	18
N112230	205	226	1	< 0.01	4	750	6	< 2	6	381	< 0.01	< 10	< 10	26	< 10	24

CERTIFICATION:

*Hart Bechler*



# 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

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 WHITEHORSE, YT  
 Y1A 3S9

Page Number : 1-A  
 Total Pages : 1  
 Certificate Date: 25-SEP-97  
 Invoice No. : I9743363  
 P.O. Number :  
 Account : MPO

Project : F.P. STICK  
 Comments:

## CERTIFICATE OF ANALYSIS A9743363

SAMPLE	PREP CODE		Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo
			ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm
AA1839	201	202	< 0.2	1.51	48	110	0.5	< 2	0.33	< 0.5	11	6	10	4.16	< 10	< 1	0.21	60	0.46	1575	1
AA1840	201	202	0.2	0.97	20	60	0.5	< 2	0.30	1.5	11	4	13	3.43	< 10	< 1	0.30	60	0.23	1395	3
AA1841	201	202	< 0.2	1.38	226	130	0.5	< 2	0.22	0.5	8	11	11	3.10	< 10	< 1	0.19	50	0.28	985	2
AA1842	201	202	< 0.2	1.18	24	110	< 0.5	< 2	0.17	0.5	6	16	10	3.04	< 10	< 1	0.12	50	0.28	500	2
AA1843	201	202	0.2	1.15	18	130	< 0.5	< 2	0.17	< 0.5	9	7	9	4.17	< 10	< 1	0.29	40	0.19	925	2
AA1844	201	202	0.2	1.19	20	270	0.5	< 2	0.35	< 0.5	7	6	15	4.67	< 10	< 1	0.42	30	0.15	740	3
AA1845	201	202	0.4	1.78	232	160	0.5	< 2	0.59	0.5	7	8	15	3.52	< 10	< 1	0.22	40	0.34	1270	2
AA1846	201	202	0.2	1.80	52	90	0.5	< 2	0.49	< 0.5	8	3	12	4.27	< 10	< 1	0.21	80	0.53	2270	3
AA1847	201	202	0.2	1.47	212	120	0.5	< 2	0.12	< 0.5	8	11	13	3.93	< 10	< 1	0.20	60	0.39	1480	3
AA1848	201	202	0.2	1.58	654	110	0.5	< 2	0.17	< 0.5	7	12	17	3.72	< 10	< 1	0.16	100	0.60	1275	1

CERTIFICATION:

*Hart Bickler*



# 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: EXPATRIATE RESOURCES LTD.  
 C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
 P.O. BOX 4127  
 WHITEHORSE, YT  
 Y1A 3S9

Page Number : 1-B  
 Total Pages : 1  
 Certificate Date: 25-SEP-97  
 Invoice No. : I9743363  
 P.O. Number :  
 Account : MPO

Project : F.P. STICK  
 Comments:

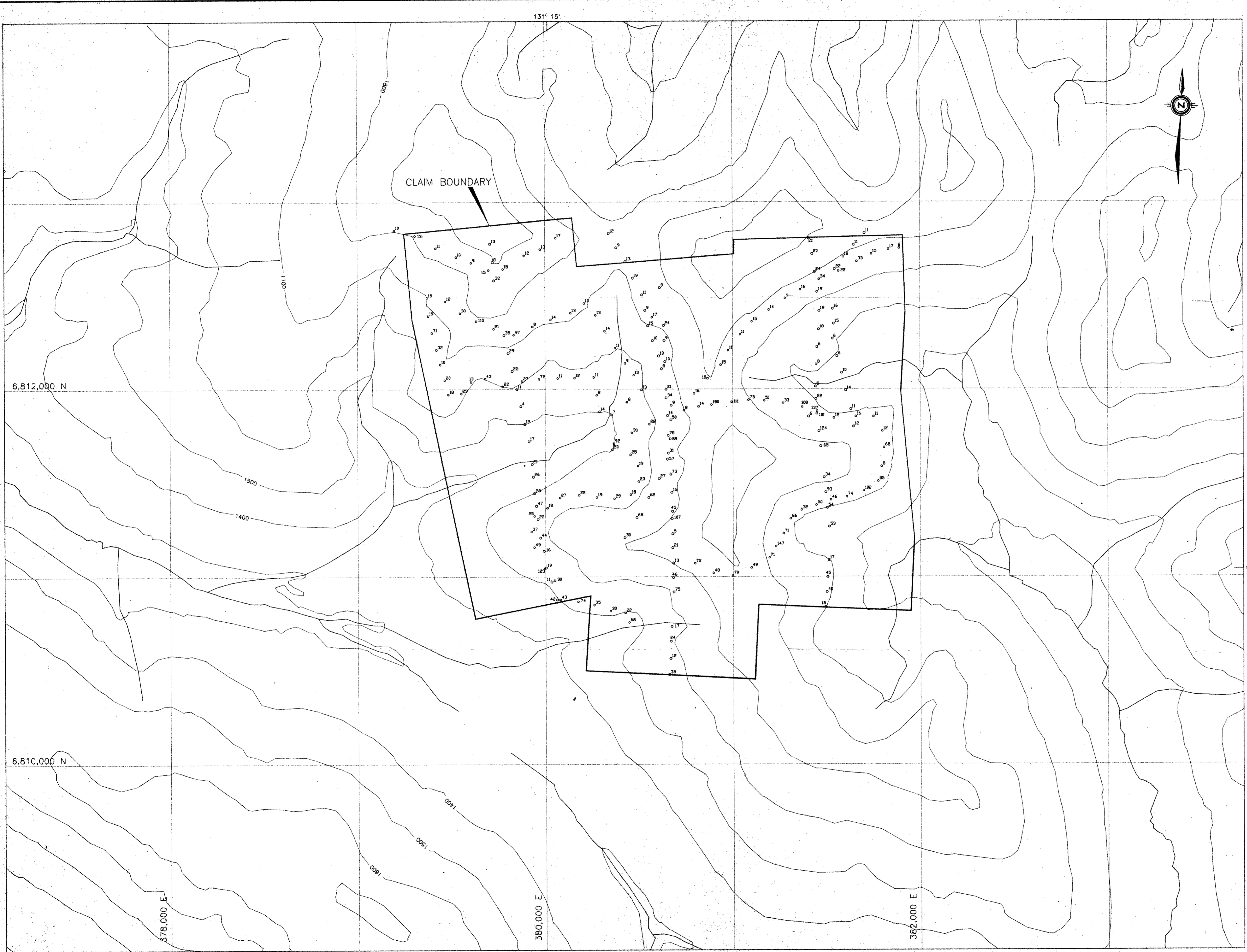
## CERTIFICATE OF ANALYSIS


### A9743363


SAMPLE	PREP CODE		Na	Ni	P	Pb	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
			%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
AA1839	201	202	< 0.01	6	650	18	< 2	5	29	< 0.01	< 10	< 10	28	< 10	54
AA1840	201	202	< 0.01	6	1080	130	< 2	2	56	0.01	< 10	< 10	12	< 10	228
AA1841	201	202	< 0.01	9	750	112	< 2	2	29	< 0.01	< 10	< 10	20	< 10	218
AA1842	201	202	< 0.01	10	660	96	< 2	1	23	0.02	< 10	< 10	34	< 10	182
AA1843	201	202	< 0.01	7	1080	88	< 2	2	61	0.01	< 10	< 10	26	< 10	112
AA1844	201	202	0.01	7	1020	50	2	3	72	< 0.01	< 10	< 10	21	< 10	102
AA1845	201	202	0.01	6	1060	88	< 2	5	33	< 0.01	< 10	< 10	21	< 10	142
AA1846	201	202	< 0.01	5	1220	114	< 2	5	29	< 0.01	< 10	< 10	11	< 10	98
AA1847	201	202	< 0.01	9	600	26	< 2	3	26	0.01	< 10	< 10	22	< 10	102
AA1848	201	202	< 0.01	12	550	38	< 2	4	14	0.01	< 10	< 10	21	< 10	80

CERTIFICATION: Hart Buchler

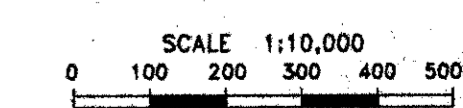




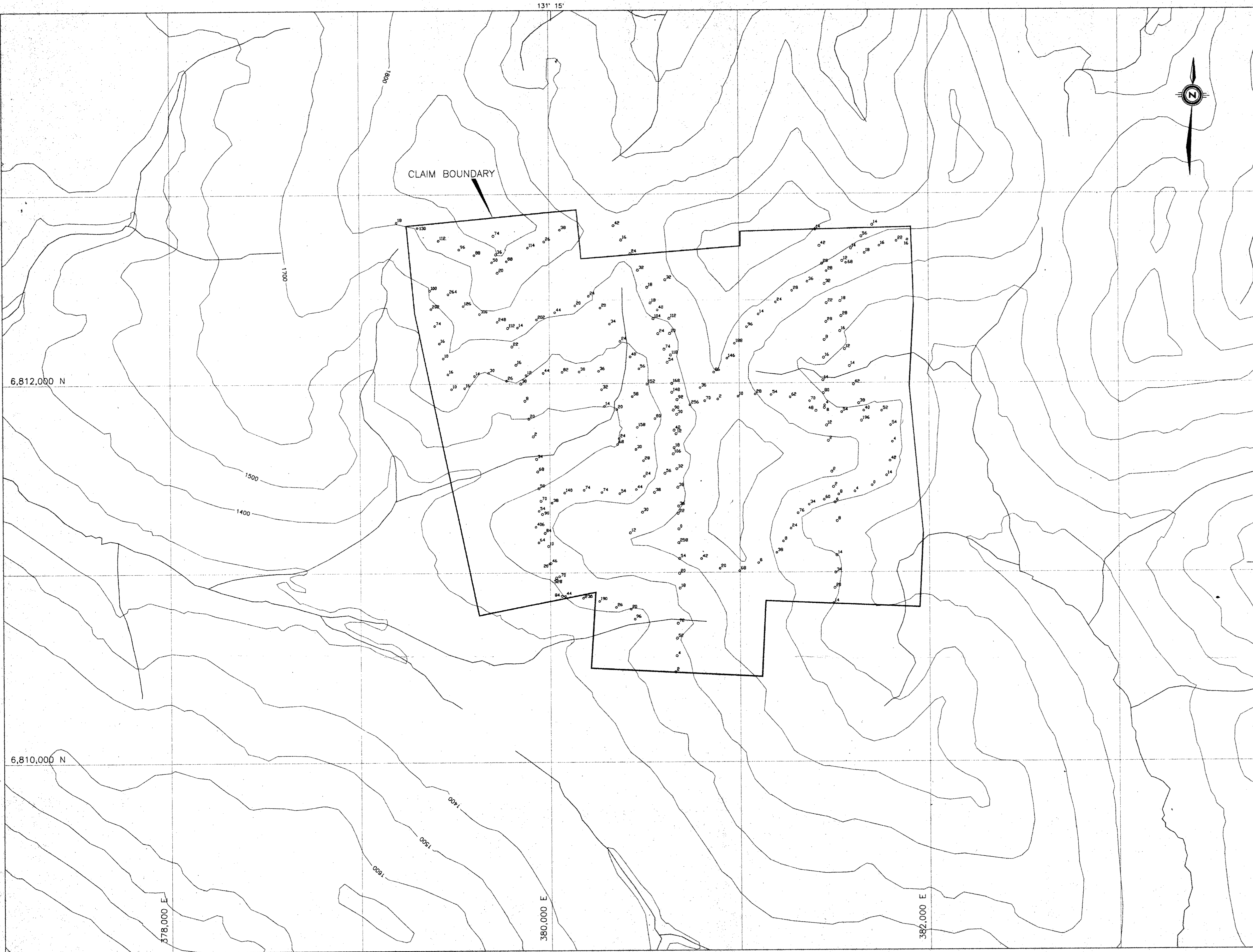
 1' 58"  
 Grid North  
 True North  
  
 NTS 1056/6  
 UTM Zone 9  
 Contour interval 100m

 Soil sample location with copper value in ppm

093809

<b>EXPATRIATE RESOURCES LTD.</b>	
FIGURE 7	
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED	
<b>COPPER GEOCHEMISTRY</b>	
STICK PROPERTY	
SCALE 1:10,000 	
DRAWN/REVISED BY: AG FILE: FP\STICK\ACAD\ST10K-SL.DWG	PROJECT: FP DATE: DECEMBER, 1997





CLAIM BOUNDARY

Grid North  
True North

NTS 105G/6  
UTM Zone 9  
Contour Interval 100m

Soil sample location with lead value in ppm

093809

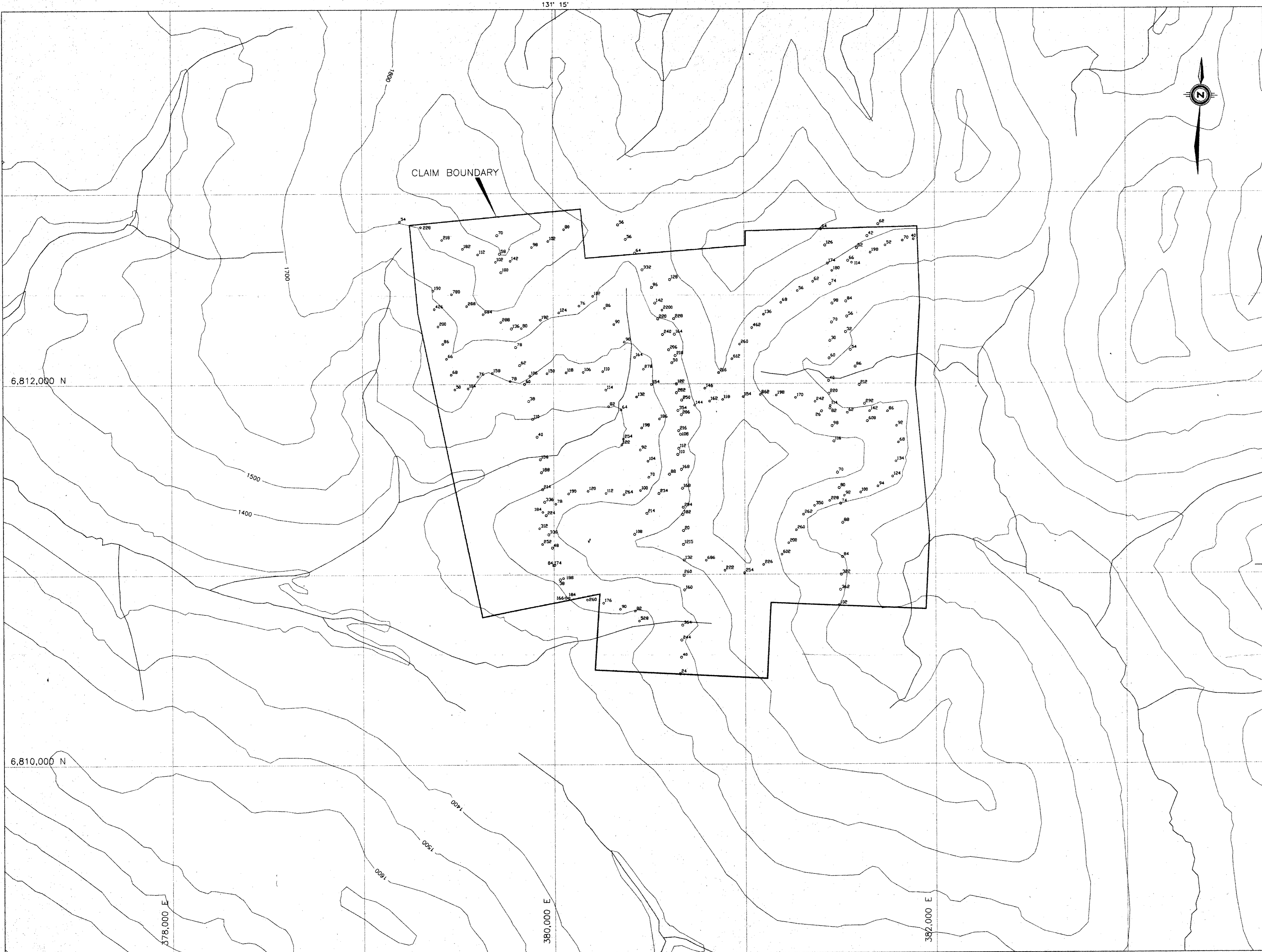
**EXPATRIATE RESOURCES LTD.**  
FIGURE 8  
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
**LEAD GEOCHEMISTRY**  
STICK PROPERTY

SCALE: 1:10,000  
0 100 200 300 400 500m

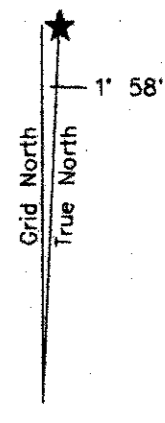
DRAWN/REVISED BY: AG PROJECT: FP  
FILE: FP\STICK\ACAD\ST10K-SLDWG DATE: DECEMBER 1997

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3



CLAIM BOUNDARY

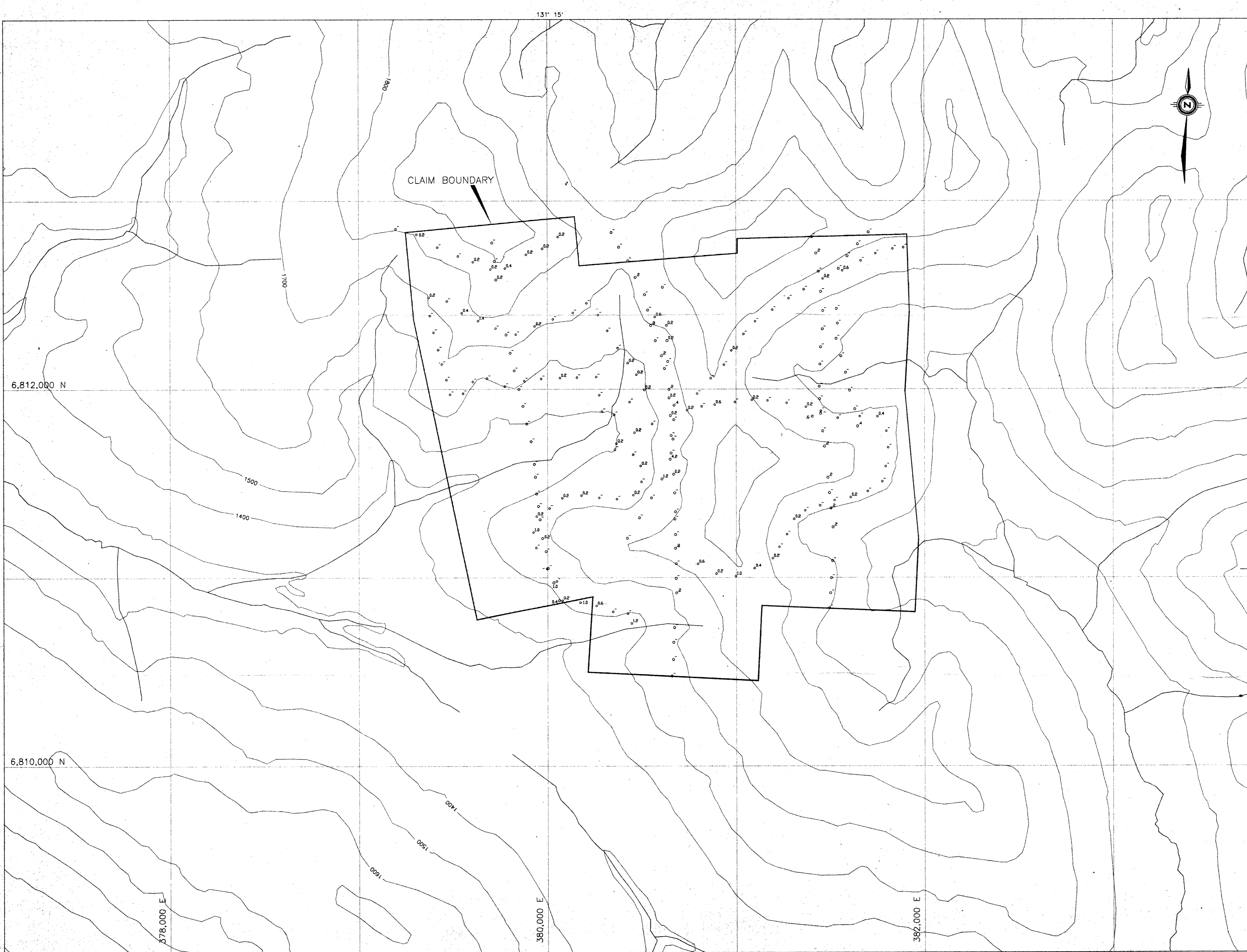


NTS 1056/6  
UTM Zone 9  
Contour interval 100m

Soil sample location with zinc value in ppm

093809

<b>EXPATRIATE RESOURCES LTD.</b>	
FIGURE 9	
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED	
<b>ZINC GEOCHEMISTRY</b>	
STICK PROPERTY	
SCALE 1:10,000 0 100 200 300 400 500m	
DRAWN/REVISED BY: AG	PROJECT: FP
FILE: FP\STICK\ACAD\ST10K-SLD.DWG	DATE: DECEMBER 1997



CLAIM BOUNDARY

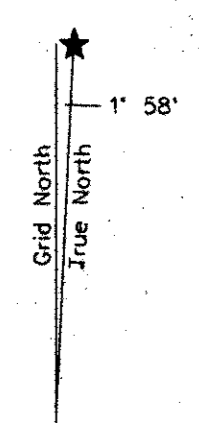
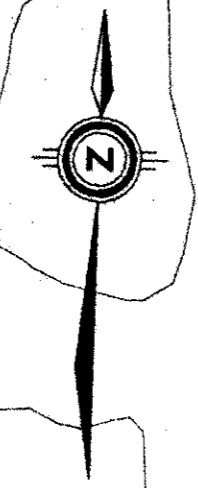
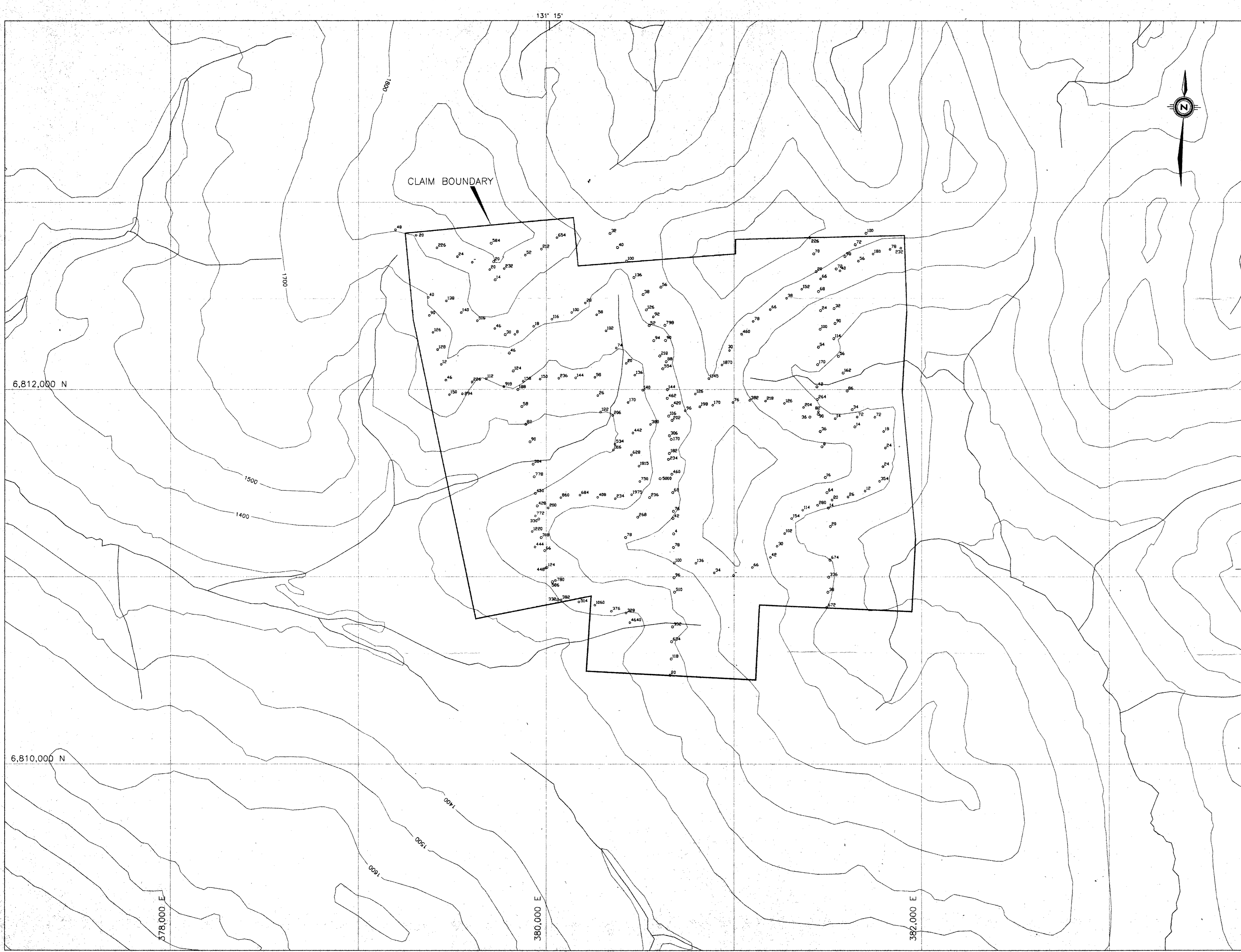
Grid North  
True North  
1" = 50'

NTS 105G/6  
UTM Zone 9  
Contour Interval 100m.

Soil sample location with silver value in ppm

093809

<b>EXPATRIATE RESOURCES LTD.</b>	
FIGURE 10 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED	
<b>SILVER GEOCHEMISTRY</b>	
STICK PROPERTY	
SCALE 1:10,000 0 100 200 300 400 500m	
DRAWN/REVISED BY: AG	PROJECT: FP
FILE: FP\STICK\ACAD\ST10K-SL.DWG	DATE: DECEMBER, 1997



NTS 105G/6  
 UTM Zone 9  
 Contour Interval 100m

Soil sample location with arsenic value in ppm

093809

<b>EXPATRIATE RESOURCES LTD.</b>	
FIGURE 11 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED	
<b>ARSENIC GEOCHEMISTRY</b>	
STICK PROPERTY	
SCALE 1:10,000 0 100 200 300 400 500m	
DRAWN/REVISED BY: AG	PROJECT: FP
FILE: FP\STICK\ACAD\ST10K-SL.DWG	DATE: DECEMBER, 1997

